THIRD FIVE-YEAR REVIEW REPORT FOR

CHEMICAL COMMODITIES, INC. SUPERFUND SITE

JOHNSON COUNTY, KANSAS

Prepared by

U.S. Environmental Protection Agency
Region 7
Lenexa, Kansas

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TABLE OF CONTENTS

I. INTRODUCTION 1
Site Background 1
Five-Year Review Summary Form 2

II. RESPONSE ACTION SUMMARY 2
Basis for Taking Action 2
Response Actions 3
Table 1: COC Cleanup Levels 5
Table 2: Previous and Current Groundwater ARARs For Response Actions 6
Status of Implementation 8
IC Summary Table 11
Systems Operations/Operation and Maintenance 13

III. PROGRESS SINCE THE LAST REVIEW 14

IV. FIVE-YEAR REVIEW PROCESS 16
Community Notification, Involvement and Site Interviews 16
Data Review 17
Site Inspection 38

V. TECHNICAL ASSESSMENT 39
QUESTION A: Is the remedy functioning as intended by the decision documents? 39
QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels, and Remedial Action Objectives (RAOs) used at the time of the remedy selection still valid? 43
QUESTION C: Has any other information come to light that could call into question the protectiveness of the remedy? 47

VI. ISSUES/RECOMMENDATIONS 47
Other Findings 49

VII. PROTECTIVENESS STATEMENT 51

VIII. NEXT REVIEW 52

APPENDIX A – REFERENCE LIST

APPENDIX B – LIST OF FIGURES
Figure 1: Site Map
Figure 2: 2012 Remediation Map
Figure 3: Restrictive Covenant Area
Figure 4: Vapor Intrusion Mitigation Systems Locations
Figure 5: Vapor Intrusion Sampling Locations
Figure 6: 2025 Groundwater Flow Map
Figure 7: TCE Concentration Plume Map
Figure 8: PCE Concentration Plume Map
Figure 9: Carbon Tetrachloride Concentration Plume Map
Figure 10: Mann-Kendall Trends for TCE

Figure 11: Mann-Kendall Trends for PCE
Figure 12: Mann-Kendall Trends for Carbon Tetrachloride

APPENDIX C – LIST OF TABLES

Table 1: Vapor Intrusion Concentrations
Table 2: Monitoring Well Completion Information
Table 3: Historical Groundwater Monitoirng Well Elevations
Table 4: Historical Groundwater Monitoirng Well Analytical Data
Table 5: Mann-Kendal and MNA Evaluation
Table 6: Oxidant Delivery

OTHER APPENDICES

Appendix D: Site Inspection
Appendix E: Interview Records
Appendix F: Restrictive Covenants
Appendix G: City Ordinances
Appendix H: Site Geology/Hydrology
Appendix I: Technical Review Comments Related to Site Cap, Trench System, and Meeting RAOs
Appendix J: Technical Review Comments Related to In Situ Chemical Oxidation

LIST OF ABBREVIATIONS AND ACRONYMS

1,2-DCA	1,2-dichloroethane
ARAR	applicable or relevant and appropriate requirement
BLRA	baseline risk assessment
bgs	below ground surface
BNSF	Burlington Northern and Santa Fe Railway Company
CERCLA	*Comprehensive Environmental Response, Compensation, and Liability Act*
CCI	Chemical Commodities, Inc.
CFR	Code of Federal Regulations
cis-1,2-DCE	cis-1,2-dichloroethylene
COCs	contaminants of concern
COPEC	contaminants of potential ecological concern
EPA	U.S. Environmental Protection Agency
FYR	Five-Year Review
HQ	hazard quotient
ICs	institutional controls
IRIS	Integrated Risk Information System
ISCO	in situ chemical oxidation
KDHE	Kansas Department of Health and Environment
LDA	large diameter auger
MCL	Maximum Contaminant Level
ND	non-detect
mg/kg	milligrams per kilogram
MNA	monitored natural attenuation
MW	monitoring well
NPL	National Priorities List
O&M	Operation and Maintenance
OM&M	Operation, Maintenance, and Monitoring
OU	Operable Unit
PCE	tetrachloroethylene
PFAS	per- and polyfluoroalkyl substances
ppm	parts per million
PRP	potentially responsible party
QAPP	Quality Assurance Project Plan
RAO	Remedial Action Objectives
RCRA	*Resource Conservation and Recovery Act*
ROD	Record of Decision
RPM	Remedial Project Manager
RSL	Regional Screening Level
SOP	Standard Operating Procedures
TCE	trichloroethylene
TBC	to-be-considered
µg/L	micrograms per liter
$\mu g/m^3$	micrograms per cubic meter

UU/UE	unlimited use and unrestricted exposure
VIMS	vapor intrusion mitigation systems
VOC	volatile organic compound

I. INTRODUCTION

The purpose of a Five-Year Review is to evaluate the implementation and performance of a remedy to determine whether the remedy is and will continue to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in FYR reports such as this one. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

The United States Environmental Protection Agency is preparing this FYR pursuant to the *Comprehensive Environmental Response, Compensation, and Liability Act* (*CERCLA*) Section 121, consistent with the *National Oil and Hazardous Substances Pollution Contingency Plan* (40 CFR Section 300.430(f)(4)(ii)) and considering EPA policy.

This is the third FYR for the Chemical Commodities, Inc. Superfund Site. The triggering action for this statutory review is the completion date of the previous FYR, which was signed on September 24, 2021. The FYR has been prepared because hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure (UU/UE).

The site consists of one Operable Unit (OU) that will be addressed in this FYR. OU1 addresses soil and groundwater cleanup at the site. Because the vapor intrusion (VI) pathway is groundwater-driven, indoor air mitigation is included as part of the groundwater remedy.

Stephanie Pfannenstiel, EPA Remedial Project Manager (RPM) led the Chemical Commodities Inc. (CCI) Superfund Site FYR. Participants included Trent Chriestenson, EPA RPM; Andrew Jennings, EPA Hydrologist; Alicia Dunton, EPA Human Health Risk Assessor; Keke Gibb, EPA Ecological Risk Assessor; Katherine Gulley, Attorney-Adviser; Shaylee Borscani, EPA Community Involvement Coordinator; and Sean Hammersburg, Kansas Department of Health and Environment (KDHE), Professional Environmental Geologist Supervisor/Project Manager. The review began on June 19, 2025.

Site Background

The site is located at 320 South Blake Street in the city of Olathe in Johnson County, Kansas. The site consists of a 1.5-acre parcel of land, an adjacent property referred to as the Burlington Northern and Santa Fe (BNSF) Railway Company area of interest, and groundwater contamination that has migrated to nearby neighborhoods. Construction of the site cap, well installations, and site trenches were completed in 2011, and the site property was returned to the community for reuse in 2012. No changes to the existing use of the site or surrounding properties are anticipated within the next 5 years. Figure 1 shows the location of the site.

From 1951 to 1989, a chemical brokerage and recycling facility handled, stored, repackaged, and distributed a variety of chemicals. Investigations by the EPA and KDHE identified soils containing contaminants including volatile organic compounds (VOCs), heavy metals, polychlorinated biphenyls, semi-volatile organic compounds, and polyaromatic hydrocarbons. Groundwater monitoring wells were installed to evaluate whether groundwater had been impacted, and the results identified elevated concentrations of VOCs in groundwater.

The 2005 Record of Decision (ROD) listed contaminants of concern (COCs) for the site's soil as arsenic, chromium and trichloroethylene (TCE), and COCs for the site's groundwater as TCE, tetrachloroethylene (PCE), chloroform, *cis*-1,2-dichloroethylene (*cis*-1,2-DCE), and carbon tetrachloride.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site Name: Chemical Commodities, Inc.		
EPA ID: KSD031349624		
Region: 7	**State:** KS	**City/County:** Olathe / Johnson County
SITE STATUS		
NPL Status: Final		
Multiple OUs? No	**Has the site achieved construction completion?** Yes	
REVIEW STATUS		
Lead agency: EPA		
Author name (Federal or State Project Manager): Stephanie Pfannenstiel		
Author affiliation: EPA Region 7		
Review period: 6/19/2025 - 9/24/2026		
Date of site inspection: 12/10/2025		
Type of review: Statutory		
Review number: 3		
Triggering action date: 9/24/2021		
Due date *(5 years after triggering action date)*: 9/24/2026		

II. RESPONSE ACTION SUMMARY

Basis for Taking Action

The EPA and the potentially responsible parties (PRPs) prepared the site's baseline risk assessment (BLRA) in stages. The first risk assessment in the 1990s focused on soil and groundwater exposures at on-site and near-site areas, including exposures for on-site recreational users, on-site construction workers, and ecological receptors. The 2003 Supplemental BLRA Report summarized earlier risk analyses and evaluated human health and ecological risks associated with groundwater and surface

water. The exposure scenarios evaluated in the Supplemental BLRA included exposure of offsite residents and on-site construction workers to groundwater. The final stage of the Supplemental BLRA prepared in September 2003 evaluated the risks associated with vapor intrusion from volatile contaminants, including contaminants not cited as COCs in the ROD that could contribute to risk.

The results of the risk assessments are summarized below:

- *Soil*: The carcinogenic risk associated with soil exposures for a future on-site recreational user and on-site construction worker exceeded levels considered acceptable by the EPA. The non-cancer hazard, referred to as a hazard index, did not exceed the EPA's level of health concern for a recreational user, but did exceed the level of health concern for an on-site construction worker.
- *Groundwater*: The carcinogenic and non-cancer hazard for ingestion of groundwater by off-site residents exceeded acceptable levels. The carcinogenic and non-cancer hazards for off-site construction workers were within acceptable ranges.
- *Indoor Air*: Non-cancer hazards were identified for indoor air with homes and including crawlspaces. Chloroform and TCE presented the greatest risks. The TCE risk was made evident in a BLRA Addendum that used a finalized TCE inhalation noncancer toxicity value. Carcinogenic risks were within the EPA's acceptable risk range for both individual contaminants and cumulative risk totals.
- *Ecological*: The 2003 ecological risk assessment for the site was thorough. No contaminants of potential ecological concern (COPECs) were identified in groundwater potentially discharging to surface water. However, hazard quotients (HQ) suggested that a minimal potential for adverse impacts to sediment-dwelling biota may exist due to chronic exposures identified in sediments in Drainage B.
- Soil HQs were less than 1.0 for all COPECs for the Prairie vole and Red-tailed hawk receptors, except for arsenic. The arsenic HQ was 1.1 for the Prairie vole and less than one for the Red-tailed hawk.

Response Actions

As indicated above, the site operated as a chemical broker and recycler for approximately 40 years. The chemicals were stored in a variety of containers including tanker trailers, above ground storage tanks, underground storage tanks, drums, barrels, etc. CCI has an extensive regulatory history dating back to 1977 when a fire occurred involving 29 drums of paint stripper. This fire was the seventh occurrence in 10 years and numerous complaints from local citizens were reported relating to the fires and facility runoff. The EPA and KDHE conducted facility inspections. The KDHE ordered the facility to cease disposing of hazardous materials at sanitary landfills. In 1977, the state issued a cleanup order at the facility. Additionally, the city of Olathe obtained a court order requiring CCI to comply with the fire code, install an earth and dike system, remove discharged chemicals, and restore the property to safe conditions.

The EPA conducted an environmental inspection in 1981 after numerous complaints from local and state agencies. The inspection identified several issues including inadequate runoff controls, poor housekeeping and waste storage practices, unknown locations of underground storage tanks, and potential contamination of surface soil and groundwater from site operations (MWH, 2001a). In 1985, the EPA and CCI entered into an Administrative Order on Consent pursuant to Section 106(a) of

CERCLA and Section 3013 of the *Resource Conservation and Recovery Act* (*RCRA*), Docket No. 85-F-0039, for runoff and fugitive dust controls and the removal of three leaking underground storage tanks. In 1989, the EPA issued a Unilateral Administrative Order to CCI and its director pursuant to Section 106 of *CERCLA* and Section 7003 of *RCRA*, Docket No. VII-89-F0008. After the EPA determined that CCI was non-compliant with the Unilateral Administrative Order, the EPA began a three-phased Removal Action in 1990. Phase I consisted of site characterization, stabilization, and segregation of contaminants for disposal. Phase II included the transportation and disposal of hundreds of containers of hazardous chemicals from the site. Phase III included the demolition of the main warehouse building, excavation and consolidation of contaminated soil onsite, and the installation of an interceptor trench and air stripper to remove dissolved groundwater contamination underlying the site.

The site was listed on the National Priorities List (NPL) in 1994. One of the PRPs completed a site characterization study in 1995, which consisted of characterizing on-site soils and groundwater. An Administrative Order on Consent, Docket No. *CERCLA*-7-99-0001, was signed in 1998 pursuant to *CERCLA* Sections 104, 106(a), and 122, requiring additional PRPs to conduct a Time-Critical Removal Action to dismantle the on-site water treatment system and long-term operation of the interceptor trench. Remedial investigations began in 2000 and were completed in 2004, focusing on the off-site groundwater contamination.

The EPA launched an indoor air monitoring campaign in November 2000, coinciding with remedial investigation field activities. Indoor air sampling was conducted periodically by the EPA since at least 1989. During the indoor air monitoring campaign, increasing crawlspace concentrations in several residential properties near the site were identified. As a result, a Time-Critical Removal Action was conducted to install ventilation systems on impacted homes and monitor the performance of the ventilation systems. In June 2003, the EPA conducted another Time-Critical Removal Action to remove the stockpiled contaminated soils from the 1991 Removal Action.

In 2005, the EPA signed the ROD establishing the selected remedy for soil and groundwater and the Remedial Action Objectives (RAOs). The timeframe required to meet the groundwater RAOs was estimated to be on the order of 100 years. A summary of the selected remedy and RAOs is presented below.

The 2005 ROD listed the following RAOs:

- Mitigate risk from ingestion, inhalation, and dermal contact with on-site soils to acceptable levels.
- Minimize further off-site migration of groundwater containing VOCs in excess of target cleanup levels.
- Reduce VOC concentrations in on-site and off-site groundwater to levels that are adequately protective of indoor air quality.
- Prevent ingestion of groundwater containing VOCs in excess of target cleanup levels.
- Mitigate risk from direct contact with groundwater containing VOCs in excess of target cleanup levels.

- Mitigate risk associated with inhalation of residential indoor air containing vapors emanating from groundwater.

The remedy selected in the ROD consisted of the following components:

- Soil remedy:
  - Excavation of soils in the 0-5 feet depth range containing metals above target cleanup levels.
  - Excavation of soils in the 0-5 feet depth range to a level of 110 milligrams per kilogram (mg/kg) TCE.
  - Excavation to bedrock using large diameter drilling of soils containing high concentrations of VOCs.
  - Transportation of excavated soils to an off-site disposal facility.
  - Chemical oxidation treatment of soils and bedrock surface in areas of deep excavation.
  - Chemical oxidation treatment of high VOC area near the bedrock surface in an area of buried tanks.
  - Backfill of excavated areas.
  - Construction of a soil cap over entire fenced area of CCI property.
  - Implementation of land use restrictions.
- Groundwater remedy:
  - Chemical oxidation treatment of on-site and off-site groundwater.
  - Monitored natural attenuation (MNA).
  - Groundwater monitoring.
  - Operation and maintenance of vapor intrusion mitigation systems (VIMS).
  - Institutional controls (IC).

Soil target cleanup levels were calculated for each COC which resulted in an excess cancer risk greater than one in one million or a Hazard Index greater than one for non-cancer risks. Table 1 shows the final COCs identified in the ROD, along with the cleanup level and the basis for the cleanup level for each final COC.

Table 1: COC Cleanup Levels

COC	CLEAUP LEVEL	BASIS FOR CLEANUP LEVEL
Soil	**Milligrams per kilogram (mg/kg)**	
Arsenic	16	Risk Assessment
Chromium, Total	23	Risk Assessment
TCE	110	Risk Assessment

COC	CLEAUP LEVEL	BASIS FOR CLEANUP LEVEL
Groundwater	**micrograms per liter (µg/L)**	
TCE	5	MCL
PCE	5	MCL
Chloroform	80	MCL
cis-1,2-DCE	70	MCL
Carbon Tetrachloride	5	MCL
Notes: MCL = Maximum Contaminant Level Source: 2005 ROD		

Target cleanup levels for VOCs in groundwater are the MCLs, promulgated under the *Safe Drinking Water Act*. The MCLs are considered applicable or relevant and appropriate requirement (ARARs) for this site because the EPA and state consider the groundwater to be a potential drinking water source.

Table 2: Previous and Current Groundwater ARARs for Response Actions

COC	2005 ROD ARARs and TBC Criteria[a] (µg/L)	2021 Groundwater ARARs and TBC Criteria (µg/L)[b]	Standards Changed
TCE	5	5	None
PCE	5	5	None
Chloroform	80	80	None
Cis-1,2-DCE	70	70	None
Carbon tetrachloride	5	5	None
Notes: a. 2005 ROD states that federal MCLs are ARARs. b. Current value based on federal TBC – to be considered			

The PRPs provided Operation and Maintenance (O&M) for the VIMS until 2008, when the EPA took over VIMS O&M. In 2009, the U.S. District Court for the District of Kansas entered a Consent Decree between several PRPs and the EPA, which contained requirements for the PRPs to perform work and pay certain response costs. In 2010, the PRPs purchased and razed residences in areas adjacent to the site to the north in preparation for remedial activities. The PRPs started the Remedial Design in July 2008 and completed it in November 2010. The PRPs began response actions in June 2011 which included soil excavations, trenches, injection wells, and a soil cap over the site.

The EPA designated the site as “construction complete” in January 2012. The PRPs continued the in situ chemical oxidation treatment of on-site and off-site groundwater through 2016. The PRPs continue to collect groundwater samples on an annual basis to monitor groundwater concentrations.

In September 2016, the EPA completed the first FYR in which the EPA deferred making a protectiveness determination until further information could be obtained. Follow-up actions included analyzing and updating sampling and inspection requirements for vapor intrusion systems to ensure adequate evaluation of system performance; determining if chloroform, methylene chloride, and 1,2-Dichloroethane (1,2-DCA) require further response action in groundwater and air; sampling groundwater for 1,4-dioxane and COC breakdown products using methods with appropriate detection limits, and, if present, defining the nature and extent of COCs in groundwater and evaluating potential exposure pathways.

In September 2021, the EPA completed the second FYR. In the second FYR, the EPA determined that the remedy was short-term protective. The EPA noted several issues with remedy performance, including the following: several residences located outside of the 5 µg/L TCE plume exhibited exceedances in indoor air for chloroform, methylene chloride and 1,2-DCA; the groundwater COCs had not met MCLs; there was little or no sustained downward trend in TCE concentration or upward trend in cis-1,2 DCE concentrations; and that groundwater restoration would not be completed in a reasonable timeframe. The EPA recommended that the groundwater remedy needed to be reevaluated.

In 2023, the PRPs conducted a pilot test to assess injectivity and treatment effectiveness of a specific zone within the formation, with the goal of determining whether future in situ injections would provide measurable benefit in the targeted zone.

On January 10, 2025, the EPA approved an Action Memorandum for a Removal Action, after the EPA identified several residences with high VI levels of site-specific COCs within the site boundary in the fall of 2024. Activities authorized in the Removal Action included assessment and sampling of residences and businesses for vapor intrusion pathways, installation and repair of vapor mitigation systems, including the need for enhancements or system modifications, installation of VOC air purifiers, and sampling to determine efficiency and effectiveness of the system. The Removal Action is currently ongoing.

In 2025, the PRPs agreed to perform additional studies and investigations as part of the EPA’s remedy review process and in support of the third FYR, including the following items:

1. Installation of monitoring wells to evaluate the horizontal and vertical distribution of VOCs in lithologic contacts between the Residuum, South Bend Limestone, Rock Lake Shale, and Stoner Limestone.
2. Sample onsite piezometers to evaluate groundwater quality conditions.
3. Complete a mass flux evaluation along South Keeler Street and South Ocheltree Street to determine contamination levels leaving the site boundary and contamination levels west of the injection wells.
4. Slug testing along South Parkway Drive to evaluate hydraulic properties at the lithologic contact points.
5. Update the contaminated soil mass estimate for the site.

6. Complete transport modeling to determine groundwater plume longevity.
7. Provide an updated utility map.
8. Complete soil gas sampling along South Keeler Street, South Ocheltree Street, and East Ceder Street to evaluate site COCs in soil gas.

Items one through seven were completed prior to this FYR. Item eight is still ongoing. The EPA utilized data from items one through seven that were provided in the Phase I 2025-2026 Five-Year Review Support Investigation Report (Haley & Aldrich 2026).

Status of Implementation

The Remedial Actions under the 2005 ROD included activities for soil and groundwater. Because the risk of vapor intrusion is driven by the COC concentrations in the groundwater plume and the migration of the plume, actions to mitigate vapor intrusion were included in the groundwater remedy. The implementation status for the soil and groundwater Remedial Actions is summarized below. The site's institutional controls are discussed in Table 3.

Soil

Soil remediation was conducted through shallow removal and large diameter auger (LDA) excavations. Figure 2 shows the location of the shallow soil removal in addition to the eight LDA locations.

There are two areas where shallow excavations occurred, yielding approximately 1,500 cubic yards of material: shallow soils adjacent to and on the BNSF area of interest, which is the railroad property bounding the site to the east, and shallow soils on the southern portion of the CCI property. VOC impacted shallow soils were removed to a depth of approximately 5 feet and disposed of offsite as hazardous waste. Excavated areas were backfilled with compacted soil from an approved off-site borrow source. The excavation on the BNSF area of interest was also covered with 12 inches of topsoil. A soil cover with vent layer was constructed within the bounds of the CCI property to prevent exposure to contaminated soils that remain within the subsurface.

LDA excavations removed hot spots of contaminated soil and applied oxidant in backfill to depths of 15 to 20 feet below ground surface (bgs) at eight locations. Removed soils were disposed of offsite as hazardous material. Approximately 116 cubic yards of soil were removed using this method. The holes were filled with uniform and intermittent layers (2 feet) of aggregate with dry granular permanganate spread on top of the gravel, followed by mixing each layer with the LDA rig.

During the 2025 field activities, soil samples were collected at specific lithologic contacts to evaluate the distribution of contaminant mass. Analytical results confirmed the presence of VOCs in multiple borings and depth intervals, with TCE identified as the most widely distributed COC in soil. The results indicate that VOC impacts occur within the residuum, weathered South Bend Limestone, the South Bend Limestone/Rock Lake Shale transition, and the upper Rock Lake Shale, generally corresponding with groundwater impacts. An estimated 9,796 pounds of COC soil mass were removed during the 2011 Remedial Action, which included excavation of two areas to 5 feet bgs, advancement of eight LDAs to bedrock, and excavation of on-site trenches to bedrock. According to the report, approximately 14,475 pounds of soil contamination remain in the subsurface on the former CCI property (Phase I 2025-2026 Five-Year Review Support Investigation Report, Haley & Aldrich 2026).

Groundwater

Groundwater contamination is being addressed through several remedial activities which include an on-property perimeter interceptor trench; off-property treatment via a chemical oxidant, specifically sodium permanganate; and MNA. The mitigation of vapor intrusion in homes above the contaminated groundwater plume is also part of the groundwater remedy. Each of the components of the groundwater remedy is discussed in turn below.

The first on-property and off-property chemical oxidant injections took place on August 10, 2011. The second injection took place 6 months after the first. The following criteria were used to evaluate the timing and duration of subsequent oxidant applications:

- Ability to inject a minimum quantity of oxidant to replenish the system;
- Water levels, to evaluate mounding and distribution levels over time;
- Permanganate monitoring to determine if the oxidant is persisting longer than anticipated; and
- VOC monitoring to determine permanganate impacts.

Nine injections occurred between August 2011 and March 2016 injecting over 23,490 gallons of permanganate with an additional injection occurring in November 2023. Groundwater monitoring for VOCs, permanganate levels, and MNA continue for the entirety of the site.

The on-property interceptor trenches, shown in Figure 2, intercept and treat groundwater as it exits the CCI property. These trenches are separate from the interceptor trench installed and operated during the 1990s, which has since been decommissioned. The oxidant used in the trenches also diffuses into the surrounding soil and transport zone to further reduce nearby VOC concentrations. Trenches were excavated to the Residium/South Bend Limestone contact. Following excavation, distribution piping and piezometers were installed; one piezometer was installed at the topographic low end of each trench.

Chemical oxidant was periodically placed into the trenches using 100,000 parts per million (ppm) or 10% solution. During the initial oxidant delivery, approximately 500 gallons were delivered to each trench, for a total of 2,000 gallons. One week after the initial oxidant placement, field tests indicated that oxidant was present in the trench and within the fractured bedrock. Subsequent oxidant placements were informed by a review of groundwater analytical data and MNA data.

Additional treatment of the central off-property groundwater plume was performed through injections of chemical oxidant through vertical wells in a trench on Ocheltree Street (Figure 2). Monitoring sells (MW) used for these injections include: MW-36B, MW-37B, MW-38B, MW-42B, and MW-43B. Like the on-property trenches, 100,000 ppm or 10% solution of chemical oxidant was injected into the off-property delivery system. The first injection consisted of approximately 400 gallons in each of the five wells, for a total of 2,000 gallons.

In 2023, a pilot test was completed to determine whether the zone at the South Bend Limestone–Rock Lake Shale contact could accept useful quantities of injected oxidant under low-pressure conditions comparable to prior injections. Oxidant delivery was implemented by injecting sodium permanganate oxidant into MW-36BR, MW-58B, and MW-59B on Ocheltree Street using a 100,000 ppm or 10% solution. The permanganate solution was pre-mixed to the required concentration and approximately

1,240 gallons were delivered to the site via a vacuum truck. Approximately 1,025 gallons total oxidant were delivered to the three injection locations. The remaining oxidant was placed in Trench 4 of the on-site oxidant system. Minor deviations from the standard operating procedures (SOPs) occurred during the pilot injections. Specifically, MW-58B and MW-59B were injected on two separate visits, and the cumulative volume at MW-59B exceeded 400 gallons. These adjustments were made to achieve the pilot test objectives. MW-58B required a second visit to resolve a wellhead assembly issue and complete the planned injection, and MW-59B was revisited to evaluate its ability to accept additional permanganate. The pilot test oxidant injections were completed on November 21, 2023.

MNA monitoring takes place at 10 selected monitoring wells annually; however, 18 monitoring wells were evaluated for the FYR. Refer to the Data Review section for more information.

The EPA has continued to install air purifiers and VIMs and to carry out O&M of the VIMS to protect building occupants from VI. An Action Memorandum and Removal Action were approved on January 10, 2025, in response to the EPA identifying several residences with VI levels of site-specific COCs within the site boundary. From November 2021 through July 2026, the EPA collected VI samples from 108 residences (consisting of 79 properties). Twenty-two homes exceeded the EPA VI action levels requiring critical VIMS repairs and new VIMS installations.

The EPA also conducted sewer headspace sampling along Keeler Street, Glendale Street, Parkway Drive, Lane Street, and Cedar Street identifying vapors above action levels, indicating a potential preferential pathway for VOC migration.

In 2025 and 2026, while completing the VI sampling, the EPA also intended to inspect the 47 existing VIMS associated with the site for the FYR. The EPA inspected 32 VIMS and found two VIMS had been removed by a previous owner. The EPA reinstalled the two removed VIMS due to VI exceedances confirmed in 2026. The EPA was unable to gain access from the homeowners for the remaining 13 VIMS. The EPA has completed 15 critical repairs and 9 VIMS installations required due to VI exceedances. The EPA has upgraded 25 VIMS to meet current system requirements (i.e., outside ventilation changed to above the roof line, separated duplex systems, and installed alarms). The upgrades included redesigning three duplexes with separate crawlspaces so that each unit now has its own VIMS. This change increases the total number of systems and ensures effective coverage of each crawlspace. Remaining repairs/upgrades are ongoing as of September 2026.

There are currently 59 total vapor intrusion mitigation systems related to the site. The current systems consist of 52 structures, 17 of which are duplexes. Nine of the 17 duplexes share a vapor intrusion mitigation system due to a shared crawlspace (Figure 4). From 2021 through 2026, numerous VI sampling events have been conducted to confirm VIMS performance.

The effectiveness of indoor air mitigation is closely tied to groundwater VOC concentrations beneath the buildings. The O&M of these systems is further discussed under Systems Operations/Operation & Maintenance.

IC Summary Table

Table 3: Summary of Planned and/or Implemented Institutional Controls

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
Groundwater	Yes	Yes	Restrictive covenant applies to parcels shown in Figure 3	Prevent ingestion of groundwater containing VOCs in excess of target cleanup levels. Mitigate risk from direct contact with groundwater containing VOCs in excess of target cleanup levels.	2006 Declaration of Restrictive Covenant
Groundwater	Yes	Yes	Ordinance applies to City of Olathe	Prevent ingestion of groundwater containing VOCs in excess of target cleanup levels. Mitigate risk from direct contact with groundwater containing VOCs in excess of target cleanup levels.	City of Olathe Ordinance No. 03-07
Indoor Air	Yes	No	Parcels within contaminant plumes	Ensure that residents of homes within plumes are aware of contamination and possible need for indoor air ventilation systems in order to prevent exposure to contaminants in indoor air. Alert current and future owners of buildings of vapor intrusion concerns.	None

Soil	Yes	Yes	Parcels shown in Figure 3	Mitigate risk from ingestion, inhalation and dermal contact with on-site soils to acceptable levels. Implement land use restrictions. Restrict the area to recreational green space.	2006 Declaration of Restrictive Covenant and city of Olathe Ordinance 06-101
Soil	Yes	Yes	Parcels shown in Figure 3	Mitigate risk from ingestion, inhalation. and dermal contact with on-site soils to acceptable levels. Implement land use restrictions. Restrict the area to recreational green space.	2006 Declaration of Restrictive Covenant and city of Olathe Ordinance 06-101
Soil	Yes	Yes	BNSF area of interest Figure 1	Mitigate risk from ingestion, inhalation and dermal contact with on-site soils to acceptable levels. Implement land use restrictions.	Implement by 9/24/2030

Access to the CCI property and the adjacent BNSF area of interest for remedial activities is provided via the 2009 Consent Decree. The CCI property was rezoned in 2006 by the city of Olathe. The zoning designation restricts the area to recreational green space and prohibits the construction of residences. A restrictive covenant restricts land use for the site property and parcels in the surrounding area and provides the EPA with access to the property for future remedial activities (Figure 3, Appendix F). Property restrictions include no commercial, residential, or industrial land use, no disturbance of the surface or subsurface of the property, no livestock grazing or food production, and no water wells installed, used or maintained, unless approved by the EPA.

Due to remaining soil contamination, the BNSF area of interest requires institutional control. The parcel associated with the BNSF area of interest has been identified as Parcel No. DF231336-3010 and includes the full length of track from Wabash Street to north of Park Street. The presence of the raised rail is not a substitute for recorded institutional controls for the BNSF area of interest (Figure 1).

Groundwater is not currently used as a potable source of water for the area. Residences in the vicinity are connected to the city's water supply system. The city of Olathe has restricted future use of groundwater extraction for domestic use (Appendix G). The city ordinance states that no wells should be constructed and personally used if the health officer determines that the well is in a contaminated area, or within 500 feet of a contaminated area. The ordinance also states that existing wells should cease being used if they are within 500 feet of a contaminated area, public water is available to the well user, and the cessation of use of the water well for personal use is in the best interest of the public health, safety, and welfare.

Although existing institutional controls prevent direct contact with contaminated groundwater, continued use of the homes above the contaminated groundwater plume means that contact with vapors could occur if the VIMS are not operated or maintained correctly. There is an ongoing need to ensure that residents of homes within plume limits are aware of contamination and the possible need for indoor air ventilation systems, in order to prevent exposure to contaminants in indoor air. The EPA will continue to alert current and future owners of vapor intrusion concerns.

Systems Operations/Operation and Maintenance

The December 2012 Final Operation, Maintenance, and Monitoring (OM&M) Plan details the current, ongoing activities at the site. This includes soil cover maintenance, groundwater monitoring, MNA and performance monitoring, operation of the groundwater treatment system, and maintenance of equipment and general site conditions. The PRPs' contractor inspects the site in accordance with the OM&M Plan and addresses issues as needed.

In 2008, the EPA took over implementation of the residential indoor air program from the PRPs. The EPA's Quality Assurance Project Plan (QAPP) for sampling and analysis of residential indoor air details the indoor air sampling procedures, and this plan continues to be implemented by the EPA. The QAPP has three major components:

- Assessment sampling to determine whether additional VIMS are necessary in residences without systems, such as homes where access was previously denied, where ownership has changed, or due to the migration of groundwater outside of the previously defined area.
- Confirmation sampling to verify that newly installed systems are operating as designed, with two sampling events completed for each home within the first year of indoor air ventilation system installation.
- Performance monitoring to evaluate the effectiveness of existing VIMS, conducted annually in 10% of residences with operating systems.

While the QAPP specifies performance monitoring annually in 10% of residences with VIMS, the EPA regularly monitors a minimum of 10 homes per event with two events per year, totaling about 40% of homes annually. When the EPA does not receive a response from a residence, that home is prioritized for the next sampling event. The EPA reviews the efficiency of the assessment, confirmation, and performance monitoring requirements in the QAPP and modifies the QAPP when needed if any changes to monitoring, inspections, or community outreach are necessary.

The indoor air program's effectiveness depends on the effectiveness of the soil and groundwater remedies. The soil remedy must prevent additional leaching to groundwater, and groundwater concentrations must decline over time to reduce long-term reliance on indoor air mitigation. The selected groundwater remedy in the 2005 ROD presumes that as plume concentrations decrease over time, the need for these ventilation systems will be reduced; however, as discussed in greater detail below, plume concentrations have not decreased for all COCs, and the contaminated plume has migrated further west of the site. This has led to a greater number of VIMs being installed and an increase in the need for sampling and O&M of the VIMS.

III. PROGRESS SINCE THE LAST REVIEW

This section includes the protectiveness determinations and statements from the most recent FYR as well as the recommendations from the most recent FYR and the current status of those recommendations.

Table 4: Protectiveness Determinations/Statements from the 2021 FYR

OU #	Protectiveness Determination	Protectiveness Statement
1	Short-term Protective	A protectiveness determination of the remedy at the site is short-term protective.

Table 5: Status of Recommendations from the 2021 FYR

OU #	Issue	Recommendations	Current Status	Current Implementation Status Description	Completion Date (if applicable)
01	Several residences are located outside of 5 µg/L TCE plume and exhibit exceedances in indoor air for chloroform, methylene chloride and 1,2-DCA.	Determine if chloroform, methylene chloride and 1,2-DCA require further response action.	Completed	All identified site COCs are screened according to the EPA Region 7 Vapor Intrusion Screening Levels for Vapor Sources, Vapor Intrusion Removal Management Levels for Buildings, and Vapor Intrusion Risk Management Decision Matrix for Occupied Buildings. This reflects the November 2024 updates to the EPA Regional Screening Level and Vapor Intrusion Screening Level calculators. 2025-2026 sampling results did not have exceedances for	7/31/2026

				chloroform, Methylene chloride or 1,2 DCA outside of the 5 ug/L TCE plume.	

01	Groundwater COCs have not met MCLs but the OM&M Plan only requires 5 years of in situ chemical oxidation treatment, ending in August 2016. The overall remedy needs to be reevaluated.	Update the OM&M Plan to reflect future sampling, treatment, and monitoring needs.	Ongoing	A Revised Offsite Pilot Test Work Plan was prepared and submitted by the PRP to the EPA March 28, 2023. The Work Plan was approved by the EPA. An update to the OM&M Plan regarding injections is currently not needed. Sampling, treatment and monitoring needs will be reevaluated following the FYR.	Click here to enter a date
01	There is no soil institutional control on the BNSF area of interest.	Evaluate the need for a soil institutional control on the BNSF area of interest.	Ongoing	Work is ongoing to establish institutional control for the BNSF area of interest. The parcel has been identified as Parcel No. DF231336-3010 and includes the full length of track from Wabash Street to north of Park Street, which extends beyond the area of interest. Soil contamination remains present; therefore, institutional controls are still required for the BNSF area of interest.	Click here to enter a date

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Involvement, and Site Interviews

The EPA made a public notice available by newspaper posting in the *Kansas City Star* on June 19, 2025, stating that there was a Five-Year Review and inviting the public to submit any comments to the EPA. The results of the review and the report will be made available on the Chemical Commodities, Inc. Superfund Site Profile Page at: https://www.epa.gov/superfund/chemicalcommoditiesinc.

During the FYR process, interviews were conducted to document any perceived problems or successes with the remedy that has been implemented to date. The results of these interviews are summarized below.

The EPA interviewed two residents living in privately owned homes with existing VIMS within the site boundary that has VI detections above action levels. Both residents expressed satisfaction with site communications, while noting a desire for faster cleanup and less disruption from continued VI sampling. One resident reported that the real estate companies did not disclose the site or potential VI issues during property transactions. One resident is concerned for her children's health with ongoing VI issues over the last 5 years. Both residents indicated they feel well-informed about site activities over the last few years.

The EPA interviewed two tenants in the area. One tenant had recently moved in and was not aware of the site prior to the interview. The other tenant had lived in the rental for a few years. Each tenant expressed satisfaction with the EPA's outreach and the testing conducted at their residences, and neither had additional comments regarding cleanup progress.

The owner company of multiple rental properties in the area expressed dissatisfaction with the site remedy and cleanup goals. It reported frequent disruptions to tenants from ongoing VI sampling and VIMS inspections/maintenance, leading to tenant concerns about inconvenience, potential health impacts, and uncertainty. The company stated that these activities have significantly reduced rental income and could negatively affect the properties' values if sold. While the company felt well informed about ongoing VI work, it is not aware of any plans for permanent cleanup to address the underlying contamination. The company also expressed concern that continued plume movement will cause further tenant disruption and increase economic impacts as additional VIMS are installed. The company expressed dissatisfaction with the frequency of VI testing and the resulting inconvenience to tenants and on-site staff. Staff are required to accompany the EPA and contractors during access to rental units, diverting time from routine maintenance, and owners incur uncompensated labor costs for this support.

KDHE's current view is that the site remedy is likely performing consistent with the ROD's 100-year timeframe. Nonetheless, this timeline is not considered optimal for human health or environmental protection. In particular, permanganate in situ chemical oxidation (ISCO) has not produced mass-destruction rates adequate to reduce groundwater concentrations that are influencing vapor intrusion in adjacent residential properties.

The state and private homeowners expressed dissatisfaction with the pace of cleanup and progress toward site goals. Stakeholders are concerned that persistent VI will continue for the long term, resulting in ongoing disruptions, economic impacts, and potential health concerns for residents who remain in the area. They seek clearer plans for accelerating mass reduction and achieving more permanent solutions beyond continued VI mitigation.

Data Review

For this data review, the EPA considered multiple lines of evidence, including site geology, groundwater monitoring data, and vapor intrusion sampling data.

Groundwater monitoring well data has been collected semi-annually or annually since 2011. The groundwater monitoring network at the site consists of 60 monitoring wells or piezometers (Figure 6), however not all 60 monitoring wells are sampled each year. During the 2018-2019 Two-Year

Investigation, 15 permanent monitoring wells were installed (Haley & Aldrich, 2019). In 2023 as part of an off-site pilot test, four new permanent wells were installed (Haley & Aldrich, 2025b). Additionally, MW-26B was abandoned due to concerns it may act as a conduit for contaminated groundwater to lower aquifer zones due to its open hole construction across multiple geologic contacts. During 2025, depth to water in the site wells was measured at depths ranging from 0.11 to 11.81 feet bgs (Haley & Aldrich, 2025). This appears to be consistent with historic water measurements. Groundwater flow direction at the site is somewhat circular. South of the capped area, groundwater flows towards the south to southwest from MW-40B towards MW-21 and MW-22. To the west of the capped area, groundwater generally flows westerly from MW-46B towards Lane Street (Figure 6).

The groundwater and soil remedies for the site were documented in the ROD. The first FYR, completed in 2015, deferred a protectiveness determination pending investigation into whether further response actions were required and additional sampling to define the nature and extent of the groundwater plume. The second FYR, completed in 2021, determined the remedy was protective in the short term but identified several issues that could affect long-term protectiveness. The second FYR concluded that groundwater restoration did not appear likely to be achieved within a reasonable timeframe without amending or replacing the current remedy and recommended reevaluation of the groundwater remedy.

In 2025, due to ongoing VI impacts in the community, the EPA identified the studies and investigations needed to support the third FYR. The requested investigations assess whether the ROD's 100-year groundwater restoration objective is achievable and confirm the remedy's protectiveness for human health and the environment. The PRPs submitted and the EPA approved a workplan proposing several phases for completion of the work. The PRPs have completed Phase 1, which included the installation of new monitoring wells targeting specific geologic contact zones beneath the site, a contaminant mass flux evaluation, and transport modeling. The EPA has received the Phase 1 2025–2026 Five-Year Review Support Investigation Report (Haley & Aldrich 2026). Data from Phase 1 has been included in this FYR. Phase 2, which consists of collecting additional soil gas samples, will be completed in the fall of 2026 (Haley & Aldrich, 2025c).

In 2025 Haley & Aldrich conducted a monitored natural attenuation evaluation and completed a Mann-Kendall Trend analysis on several monitoring wells at the site (Haley & Aldrich, 2025a). The Mann-Kendall Trend analysis evaluates the data and indicates whether groundwater contamination in individual wells is increasing, decreasing, stable, showing no trend, or possibly increasing or decreasing. The Mann-Kendall analysis was conducted on wells that generally met the following criteria: minimum of 10 years or more of monitoring data between the first and most recent samples, at least five measurable concentrations of COCs, and most recent sample was within the last 10 years. Data from 2011-2018 in MW-44B and MW-45B were not utilized due to elevated concentrations of permanganate. Additionally, Mann-Kendall analysis was conducted on some monitoring wells installed during the Two-Year Investigation, but these wells do not have 10 data points at this time.

Further, additional Mann-Kendall Analysis was conducted by the EPA utilizing the EPA's ProUCL version 5.2 for COC concentrations at select wells not included in the 2025 Annual Groundwater

Monitoring and Five-Year Review Evaluation Report.

Evidence of Groundwater Migration Offsite

The 2005 ROD identified ISCO to address areas of high VOC concentrations on the CCI property and to prevent further offsite downgradient groundwater contamination (EPA, 2005). Chemical oxidant deliveries began in 2011, and nine delivery events have been conducted between 2011 and 2023. Approximately 23,490 gallons of oxidant have been injected since the remedy began (Haley & Aldrich 2024). A summary of the oxidant delivery events can be found in the 2024 Annual Groundwater Monitoring Report, dated August 12, 2024 (Haley & Aldrich 2024).

From 2017-2020, the injections were suspended to determine if further injections would be beneficial for mass reduction (Haley & Aldrich 2024). It was noted that the permanganate injections had persisted in the groundwater for 39 months which indicates a longer-than-expected persistence within the aquifer system (Haley & Aldrich 2024).

Additionally, it was noted in the Two-Year Performance Monitoring Report that "lateral migration of impacted groundwater downgradient of the site primarily occurs within the higher permeability weathered and fractured intervals in the uppermost portion of the underlying bedrock, predominately relatively thin zones within the South Bend Limestone and the Rock Lake Shale" (Haley & Aldrich, 2019).

Table 6: Generalized Stratigraphic Column at the Chemical Commodities Inc. Site

Geologic Formation Name	Geologic Member Name
Quaternary Deposits	Residuum Transition Zone
Stanton Formation	Transition Zone South Bend Limestone
	Rock Lake Shale
	Stoner Limestone
	Eudora Shale
	Captain Creek Limestone*
Notes: *Not present in monitoring wells currently installed at the site. Stratigraphic column is not to scale as the bedrock varies in thickness across the site. Refer to Figures 13 and 14 for a detailed cross section.	

During the Remedial Investigation, it was noted that concentrations generally decline with depth in the bedrock and "with most of the VOC mass occurring in the transition zone" (MWH, 2001a). In the Final Remedial Design, it is noted "the extensive bedrock investigations conducted at the site indicate that lateral migration of groundwater from the site primarily occurs through the transition zone and uppermost portion of the underlying bedrock." It continues and states "vertical migration of groundwater is negligible as it is limited by the low vertical hydraulic conductivities in the bedrock" (MWH, 2010). The primary purpose of the on-site perimeter trench is to "intercept and treat groundwater as it exits the site" (MWH, 2010). A secondary benefit was stated as diffusing the oxidant into the surrounding soil and transport zone for volatile organic compound treatment (MWH, 2010). Prior to the additional investigations conducted in 2023 and 2025, six existing monitoring wells immediately downgradient of the perimeter trench along Keeler Street were sampled during this FYR period: MW-39B, MW-40B, MW-46B, MW-52B, MW-55B, and TMW-008 (Figure 1). Of these monitoring wells, MW-39B, MW-40B, and TMW-008 are screened across the contact of the residuum and South Bend Limestone which contains the transition zone. MW-46B is screened across multiple contacts consisting of the residuum, South Bend Limestone, and the Rock Lake Shale. MW-52B and MW-55B are screened across the South Bend Limestone and Rock Lake Shale contact. Additional geology and hydrology information is provided in Appendix H.

Due to ongoing VI impacts in the community, the EPA identified investigations to evaluate whether the RAO for reducing groundwater VOC concentrations is sufficiently protective of indoor air quality and human health via the VI pathway. As part of the 2025 investigations, the PRP installed eight new monitoring wells: MW-46, MW-46BR, MW-46C, MW-52CR, MW-55, MW-55C,

MW-61, and MW-61B. The wells were installed to monitor groundwater contaminant concentrations at targeted geologic contacts downgradient of the perimeter trench and to evaluate potential impacts on VI (Figure 1, Haley & Aldrich, 2025c). A review of the preliminary groundwater data and the preliminary bore logs and construction logs indicate there are significant concentrations of COCs in wells screened along the South Bend Limestone and Rock Lake Shale contact, MW-46BR and MW-61B, compared to collocated monitoring wells screened across the residuum and South Bend Limestone Contact, MW-46 and MW-61. Additionally, the newly installed wells monitoring screened at the Rock Lake Shale and Stoner Limestone contact, MW-52CR, MW-55C, and MW-46C, indicate much lower concentrations of COCs compared to the wells at the geologic contact above. The preliminary results for these monitoring wells are presented in Table 7.

Table 7: 2025 Preliminary Data from New Wells Downgradient of Perimeter Trench

Well	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Carbon Tetrachloride (µg/L)
MW-46	175	5700	7090	50 U
MW-46BR	24500	107000	10500	11900
MW-46C	8.9	47.6	1U	1U
MW-52CR	1U	1U	1U	1U
MW-55	18.5	197	94.7	1.3
MW-55C	1U	2.2	1U	1U
MW-61	7.9	117	78.4	64.3
MW-61B	1980	50100	286	48200

Notes:
µg/L - micrograms per liter
U: The analyte was analyzed but was not detected above the reported sample quantitation limit.

Several monitoring wells are installed downgradient of the perimeter trench and can be utilized to assess its performance. MW-39B, MW-40B, and TMW-008 are screened across the contact between the residuum and the South Bend Limestone. MW-46B and MW-50B are screened across multiple contacts of the residuum, South Bend Limestone, and the Rock Lake Shale. MW-52B and MW-53B are screened across the contact between the South Bend Limestone and the Rock Lake Shale. A Mann Kendall trend analysis results from these wells is presented in Table 8. A review of the trend analysis indicates concentrations are generally decreasing. However, there are increasing trends to no reductions in TCE concentrations near MW-39B, MW-50B, and MW-55B (Figure 10).

Table 8: Trends of Wells Downgradient of Perimeter Trench

Monitoring Well	PCE Trend	TCE Trend	cis-1,2-DCE Trend	Carbon Tetrachloride trend	Chloroform Trend
MW-39B	Decreasing	Stable	Decreasing	Decreasing	Stable
MW-46B	Decreasing	Decreasing	Decreasing	Decreasing	Stable
MW-50B	No Trend	No Trend	No Trend	Decreasing	NA
MW-52B	Decreasing	Decreasing	No Trend	Decreasing	NA
MW-55B	Increasing	Increasing	Increasing	Increasing	Increasing
TMW-008	Increasing	Probably Increasing	Increasing	NA	NA
MW-40B	Decreasing	Decreasing	Increasing	Probably Increasing	Probably decreasing

Notes:

NA= Not analyzed
Stable Trends - According to the 2025 Mann-Kendall analysis performed by Haley and Aldrich stable trends were reported when the S statistic was less than or equal to 0, the confidence factor was below 90%, and the coefficient of variation was less than 1 (Haley & Aldrich, 2025a).

Based on this information, significant concentrations of COCs are migrating off-site from beneath the perimeter trench along the contact of the South Bend Limestone and the Rock Lake Shale. Additionally, the Rock Lake Shale, where present, is somewhat effective at preventing downward migration of contamination, but the pathway still exists as evident by the COC detections in MW-46C and MW-55C. Further, the increasing concentration trends or little to no reduction of TCE concentrations in MW-39B, MW-50B, and MW-55B may indicate limited effectiveness of the remedy in these areas. Lastly, these well locations are directly upgradient of the areas of highest contamination along Ocheltree Street. The limited remedy effectiveness in downgradient areas is expected to extend the timeframe to achieve cleanup levels beyond the 100-year period established in the ROD for meeting the RAOs.

In 2023, two new injection wells (MW-58B and MW-59B) were installed, one injection well was over drilled and replaced (MW-36B to MW-36BR) and one new monitoring was installed, MW-60B, near the off-site treatment area along Ocheltree Street (Haley & Aldrich, 2025b). There are four existing performance monitoring wells installed slightly downgradient of the off-site injection system (MW-44B, MW-45B, MW-55B, and PP-5D) and the newly installed MW-60B. MW-44B and MW-45B were installed in 2011 and are screened across multiple contacts of the residuum, South Bend Limestone, and the Rock Lake Shale. PP-5D was installed in 2001 and is screened to monitor the residuum and the South Bend Limestone contact. Wells MW-51B and MW-60B are screened to monitor the contact of the South Bend Limestone and the Rock Lake shale and were installed in 2018 and 2023, respectively. (Figure 1)

A Mann-Kendall trend analysis was conducted by Haley and Aldrich for MW-44B, MW-45B, and PP-5D. Data from 2011 through 2018 was removed from the analysis of MW-44B and MW-45B due to

the presence of oxidant, permanganate. Additionally, the EPA conducted Mann-Kendall analysis was conducted for MW-51B and MW-60B. It should be noted that MW-60B is newly installed and only four data points were available at the time of this review. The trend results from MW-60B are considered preliminary at this time and further sample collection will be required to monitor future trends. A summary of these analyses is presented in Table 9.

Table 9: Trends in Performance Monitoring Wells Near Off-Site Injection Wells Along Ocheltree Street

Well	PCE Trend	TCE Trend	Cis-1,2-DCE Trend	Carbon Tetrachloride Trend	Chloroform Trend
MW-44B*	Probably decreasing	Decreasing	Increasing	Decreasing	Stable
MW-45B*	No trend	Stable	No Trend	No Trend	Stable
PP-5D	Decreasing	Decreasing	No Trend	Decreasing	Decreasing
MW-51B	Increasing	Probably increasing	Increasing	Increasing	No Trend
MW-60B**	No Trend	No Trend	No Trend	Probably increasing	No Trend

Notes:
* Values from 2011-2018 were removed due to elevated permanganate concentrations.
** Only 4 data points since installation in 2023.

Concentrations of COCs in MW-44B and MW-45B are stable or decreasing. However, it is important to note that these wells are screened across multiple contacts and may be biased due to mixing of groundwater within the wells. A review of the historic data from MW-45B suggests that even with the presence of permanganate between 2011 and 2018, there has been minimal reduction in TCE and carbon tetrachloride. The installation and monitoring of MW-60B, which is screened across the South Bend Limestone and Rock Lake Shale contact, has detected the highest concentrations of TCE in the site monitoring wells.

Based on a review of these trends, there appears to be some decreases in COCs near MW-44B and PP-5D, but concentrations remain several orders of magnitude above the cleanup levels. Additionally, the oxidant injections are having or have had minimal to no impacts on COC reductions near MW-45B. Continued monitoring of MW-60B will be informative to determine potential concentration trends and if oxidant materials are impacting concentrations at this geologic contact.

Monitoring wells are installed along Parkway Drive, downgradient of the off-site injection system. These wells can be used to assess potential plume migration along Ocheltree Street towards the perimeter monitoring wells. Again, Mann-Kendall trend analysis was conducted on these wells, and the results of that analysis are summarized in Table 10.

Table 10: Downgradient Wells Along Parkway Drive

Well	PCE Trend	TCE Trend	Cis-1,2-DCE Trend	Carbon Tetrachloride Trend	Chloroform Trend
MW-47B	Probably increasing	Probably increasing	Increasing	Increasing	No Trend
MW-53B1	No trend	No Trend	No Trend	NA	NA
MW-53B2	No Trend	Probably increasing	Increasing	Increasing	NA
MW-48B	Decreasing	Decreasing	Decreasing	Decreasing	Decreasing
MW-48C	Decreasing	Decreasing	No Trend	NA	Probably Decreasing
MW-28B	Decreasing	Decreasing	Decreasing	NA	NA
Notes: NA= Not Analyzed					

Based on a review of these trends, concentrations of COCs are generally decreasing in these wells. An increasing trend of cis-1,2-DCE in MW-47B and MW-53B2 may be indicative that reductive dichlorination is occurring. However, PCE and TCE have increasing trends in MW-47B. Additionally, carbon tetrachloride trends are increasing in MW-47B and MW-52B. These increases suggest potential downgradient plume migration from the MW-47B area toward MW-24 and MW-27B COCs were not detected above laboratory detection limits in MW-24 or MW-27B above their respective cleanup standards except for cis-1,2-DCE. Cis-1,2-DCE was detected at 1.7 µg/L in MW-27B, consistent with potential downgradient migration from the MW-47B vicinity.

Perimeter monitoring wells are spread out across the site to monitor potential plume migration beyond the current monitoring network. These wells are generally located along Wabash Street to the south: MW-21, MW-22, MW-22B, and MW-30B, Lane Street to the west: MW-41B, MW-23, MW-23B, MW-54C, MW-27B, MW-24, and Cedar Street to the North: MW-34B, MW-56B, and MW-18B. MW-19 and MW-29B are located south of the site near the railroad tracks. MW-25 and MW-57B monitor to the north of the site along Ocheltree Street. MW-31, MW-31B, MW-32B, and MW-33B are installed west of the site and west of Lane Street near Mill Creek. COCs have not been detected in these monitoring wells above their respective cleanup levels except for MW-23B, MW-54C, and MW-56B.

Since it was installed in 2003, concentrations of TCE in MW-23B have periodically been detected below its MCL value of 5 µg/L. However, during the last two sampling events the concentrations have exceeded the MCL. The Mann-Kendall analysis indicated that the TCE concentrations are increasing. In 2018 MW-54C and MW-56B were installed and TCE has been detected above its MCL during each sampling event (Figure 7). Additionally, PCE, carbon tetrachloride, and chloroform have been detected above their respective MCL values in MW-56B during each sampling event.

Based on this information and historical groundwater flow direction, the groundwater plume is migrating westerly towards the monitoring wells along Lane Street and beyond.

Monitored Natural Attenuation Evaluation

A MNA evaluation was prepared as part of the 2025 Groundwater Monitoring and FYR evaluation (Haley & Aldrich, 2025a). In this evaluation, multiple lines of evidence for assessing MNA are discussed including the Mann-Kendall trend analysis, evaluation of TCE degradation, and groundwater characterization and redox conditions.

Thirty-one monitoring wells were evaluated for the trend analysis. The evaluation noted two wells with increasing TCE trends (MW-55B & MW-23B) and four wells with probably increasing trends (MW-47B, MW-51B, MW-53B2, and TMW-008) (Figure 7). It was reported that concentrations in TMW-008 are to be increasing, but concentrations are decreasing since 2017. Increasing concentrations in MW-23B were suspected to be the result of water line repairs in the area or localized plume movements. Continued monitoring of these locations will be necessary to determine if MNA is functioning effectively in these areas. For wells MW-47B, MW-51B, and MW-53B2, the evaluation noted these wells are located within area of high TCE concentrations and consistent with downgradient transport of TCE-impacted groundwater. Additionally, the report stated that these areas "suggest that natural biodegradation is limited in these areas, and that the injected oxidant is not effectively reaching these locations, potentially due to local redox conditions and groundwater flow direction" (Haley & Aldrich, 2025a).

The evaluation examined the presence of TCE and its degradation products, such as cis-1,2-DCE and vinyl chloride. It states: "the majority of wells located downgradient from the plume center also exhibit measurable proportions of cis-1,2-DCE, suggesting that natural biodegradation is occurring at the periphery of the TCE plume" (Haley & Aldrich, 2025a). Analysis conducted by the EPA indicates that concentrations of cis-1,2-DCE are increasing in wells MW-44B, MW-51B, and MW-53B2. The increasing concentrations of cis-1,2-DCE in these areas may also indicate biodegradation is occurring in some areas throughout the plume. Additionally, it is stated in the MNA evaluation that "reductive dechlorination daughter products at MW-39B and MW-46B, located within the center of the TCE plume, indicate relative contribution of daughter products of 70 to 100% during the most recent sampling event" (Haley & Aldrich, 2025a). However, these wells are located immediately downgradient of the perimeter trench and may be biased by the oxidant deliveries to the trench.

Finally, a review of the groundwater characteristics and redox conditions was performed. The report indicated that groundwater conditions are moderately reducing and characterized primarily by iron and manganese reduction, consistent with previous sampling events (Haley & Aldrich, 2025a).

However, dissolved oxygen and oxidation reduction potential were not discussed in this evaluation. A review of dissolved oxygen data from the 2024 and 2025 Annual Groundwater Monitoring Reports suggests that many areas are not favorable for reductive dechlorination due to dissolved oxygen concentrations exceeding 0.5 milligrams per liter and positive oxidation reduction potential readings.

Overall, the MNA evaluation found that TCE trends are declining or stable in some portions of the plume and that groundwater is moderately reducing, with cis 1,2 DCE present downgradient of the plume center. However, at downgradient locations MW-23B, MW-53B2, and MW-47B, TCE exhibits statistically increasing trends, indicating active plume migration beyond the influence of oxidant injections. These increases demonstrate that MNA is not effectively controlling migration in these areas and is not protective for downgradient receptors. Plume stability, a condition for successful MNA, is not met based on the statistical evaluation; therefore, continued reliance on MNA does not meet the RAOs within the ROD timeframe.

Evidence of Increased Potential for VI Exposure and Expanded VI Footprint

Groundwater concentrations of chlorinated VOCs (e.g., TCE) remain elevated beneath the neighborhood and are sustaining and expanding the vapor intrusion footprint. Confirmed indoor air exceedances show the groundwater plume is not adequately controlled. Because TCE poses short-term health risks, immediate mitigation and stronger plume control are needed. Until groundwater concentrations are significantly reduced, residents will continue to face the potential for vapor intrusion into their homes.

Due to an increase in VI exposure in the community, at the outset of this FYR, the EPA conducted multiple community awareness and access efforts, including two public meetings, door-to-door outreach with informational flyers, and mailed notices to obtain access for VI sampling and VIMS inspections. From 2025 through 2026, the EPA contacted 156 homes near the site and gained access to 107 homes. The EPA was denied access to 15 homes potentially impacted by VI associated with elevated groundwater contamination beneath those properties. Lack of access prevents indoor air sampling and VIMS inspection/verification, creating potential unaddressed exposure and affecting protectiveness determinations. The EPA continues outreach as additional homes are identified with potential VI issues. This FYR includes VI data collected over the last 5 years.

VI sampling from 2021 to 2026 indicates an increased potential for VI exposure attributable to contaminated groundwater underlying residential properties. Several homes have experienced recurring VI issues over the past 5 years. The EPA continues routine VI sampling and completed additional VIMS repairs and upgrades in 2025 and 2026 to protect residents. The upgraded systems now include local audible alarms to notify residents of malfunctions. Clear instructions and whom to contact are posted near the indoor alarm. However, when VIMS are not operating effectively, residents may be exposed to contaminated indoor air. Ongoing VIMS O&M, rapid response to system issues, confirmatory indoor air sampling, and continued plume/source control actions are necessary to ensure continued protection of residents living above the contaminated groundwater plume.

Sewer headspace sampling along Keeler Street, Glendale Street, Parkway Drive, Lane Street, and Cedar Street identified vapors above action levels, indicating a potential preferential pathway for VOC migration. Because sewer lines can convey vapors beyond groundwater plume boundaries and into buildings via drains and plumbing penetrations (especially where traps are dry or poorly sealed), homes outside the current site boundary may be at risk. These finding warrants expanded evaluation and pathway management in coordination with the utility.

The engineered cover is atypical and, from bottom to top, consists of a 1-foot gravel vent layer, a 10-oz/yd² geotextile, 1 foot of compacted clay, and 1 foot of topsoil. The gravel layer functions as a passive soil-vapor collection and venting zone beneath the cover (Haley & Aldrich, Inc., 2012). Because the cap area is maintained as a pollinator garden and rooting depths of some plantings are unknown, there is concern that deep-rooted species could penetrate to and compromise the compacted clay barrier and/or geotextile, increasing infiltration and reducing the cover's effectiveness at limiting vertical contaminant migration from soil to groundwater. If vertical migration is occuring, off-site groundwater impacts could expand and the risk of VI to adjacent buildings could increase.

In response to increased VI exceedances, the EPA sought technical assistance from EPA's Office of Research and Development (ORD) to reassess current site conditions, evaluate groundwater plume impacts, and develop recommendations for near-term exposure controls and longer-term site control. The following summaries of ORD's conclusions are based on an independent assessment of the available site-specific data, scientific literature, and technical references, and reflect ORD's specialized expertise in environmental fate and transport, remedy performance, and risk evaluation. ORD's conclusions were based on data available at time of the review. The recommendations from the ORD prompted EPA's request for additional studies and investigations to address data gaps for this FYR and support the protectiveness determination.

Cap and Trench System Review

EPA Region 7 submitted a request to the Groundwater Technical Support Center in EPA's ORD for technical assistance to evaluate the cap and trench system and its effectiveness in limiting off-site migration of contaminated groundwater. In response, the ORD completed an independent, third-party evaluation. ORD's *Technical Review Comments for Chemical Commodities, Inc. Site, Olathe, KS (25-R07-02)* was received December 2, 2024 (Appendix I).

The review raises several technical concerns about the long-term effectiveness of the site cap and trench system. While the cap helps limit vertical infiltration, it deviates from standard *RCRA* Subtitle C design requirements, and it is unclear whether supporting testing was conducted to justify those deviations. There are also concerns that the geotextile layer may be vulnerable to root damage as the cap is used as a pollinator garden, which could reduce the cap's ability to function properly.

The report further indicates that the cap alone does not adequately prevent offsite groundwater migration, since residual contaminated soil remains in place beneath the site and the shallow water table remains in contact with contamination. The interceptor trenches are identified as the primary mechanism for controlling groundwater migration, but their effectiveness depends on active management, including control of trench water levels and prevention of stormwater intrusion. Without these controls, water could accumulate beneath the cap or in the trenches and potentially increase downgradient flow.

Additional concerns include the possibility of groundwater pooling in the trench system and moving through fractured residuum or bedrock, as well as the lack of confirmed evaluation of preferential pathways associated with utility corridors, including sewer and gas lines along the

southern boundary. If present, these lines could serve as migration pathways for contaminated shallow groundwater. Overall, the technical review comments suggest that the cap and trench system may not be technically adequate without further verification, monitoring, and active management.

The following questions and responses are excerpted from ORD's technical review comments that support the above concerns regarding the cap and trench system. ORD's responses were based on data available at time of the review. The more technical portions of the responses, including tables and maps, are not included below; refer to Attachment I for the full responses.

1. **Does this cap appear technically sound in its use as a cap and vent for the underlying contamination?**
   "In summary, the cap at the Site deviates from the RCRA Subtitle C Cap Requirements. It is noted that the design of covers is site-specific and depends on the intended functions of the system. Therefore, deviations from the recommended C cap design are possible but need to be supported by tests (EPA 1993). It is unknown if such tests were performed at the Site and if they were, it is unknown whether tests supported the deviations from the typical cap design."

2. **Considering the reuse of this site as a pollinator garden, does [the geotextile] provide adequate protection to prevent infiltration if damaged by root systems?**
   "The 10-oz geotextile liner is covered by 1 foot of compactable clay and one foot of topsoil. Thus, damage of the geotextile liner due to root systems must be anticipated when the cap is vegetated with plants/scrubs whose roots penetrate at least 2 feet deep. Once the protective geotextile layer is damaged, infiltrating fines from the layers above will decrease the pneumatic conductivity of the gas collection layer. The potential for damage to the geotextile liner by root systems could be avoided by planting the cap with shallow rooted plants. It is unclear if the cap maintenance protocol and the pollinator garden design include such a provision. More importantly, potential damages could *have been reduced if thicker barrier and topsoil layers had been installed, as recommended in the RCRA Subtitle C Cap Requirements. Additional protection from damages would have resulted from installing a recommended drainage layer."*

3. **Minimal excavation was completed in "hot spots" before the cap was constructed on the site's prior elevation. This left contaminated soil in place a total of approximately 20 feet below current site elevation for near the entirety of the site. Due to the site's location on a structural high from downgradient areas west and south, does the cap and trench system provide technically adequate protection to minimize further offsite migration of groundwater containing VOCs in excess of target cleanup levels?**
   "Properly designed and maintained caps can isolate the wastes from human and environmental exposure for very long periods of time. However, capping does not lessen the toxicity, mobility, or volume of hazardous wastes. That is, a cap by itself cannot prevent the horizontal flow of groundwater through the waste, only the vertical entry of water into the waste (EPA 1993). The

water table at the Site is approximately 6 to 7 feet bgs (TMW-015), shallower in the trenches. Contaminated soil is present from the surface to approximately 20 feet bgs (see MWH (2010) Figure 8-23). Therefore, groundwater is in contact with contaminated soil, implying that the cap alone does not provide technically adequate protections to minimize further offsite migration of groundwater containing VOCs potentially in excess of target cleanup levels. However, the cap is bordered by four trenches: two the west and two to the south (see MWH (2010) Figures 6-23 and 9-23 to 11-23). These trenches serve two purposes: (1) to intercept the shallow groundwater and minimize migration of on-site contaminated groundwater, while (2) providing treatment of the contaminated groundwater via ISCO injections."

"…[T]he cap and trench system does not provide technically adequate protections to minimize further offsite migration of groundwater containing VOCs unless the interceptor trenches are actively managed beyond the occasional injection of ISCO solution and stormwater runoff is prevented from entering the trenches."

4. **The trenches were constructed to hold a minimum of nearly 4,500 gallons using on-site data and trench design specs. Per the Final Remedial Design, the trench gravel would be interconnected to the "vent" gravel layer to provide "overfill protection" of the permanganate. Fluids in the trench flowed out into the gravel layer under the cap and also allow infiltrated stormwater to flow to the perimeter trenches.**

   (a) **Does this allow groundwater to be cycled onto the cap during injection or periods of high rainfall due to the construction of this "vent" layer under the geotextile?**

   "The connection between the trench and the cap's vent layer potentially links the two remedial systems. Each of these systems was designed for very different purposes, however. The primary function of the vent layer is to capture volatile compounds emanating from the contaminated soil residing under the cap and preventing the gases from escaping into the environment. The trench's function is to intercept and capture contaminated groundwater and prevent or minimize its off-site migration, besides serving as an occasional ISCO delivery system."

   "Partial or complete flooding of the vent layer would temporarily decrease or fully disable the layer's primary function. In addition, the trench overflow would then infiltrate into the contaminated soil beneath the cap because the vent layer's gravel pack is in direct contact with the contaminated soil. In addition, stormwater can be expected to increase the spreading of contaminants away from the capped area, which is the opposite of what the cap was designed for."

   "…[T]he cap does not have a drainage layer that would capture infiltrating rainwater. It is plausible that this seepage water could pool on top of the geotextile layer, assuming it is impermeable and undamaged. Regardless, seepage water would eventually move out of the

flanks of the cap or reach deeper layers, especially if roots damage the geotextile layer. Water seeping out of the cap flank should not be contaminated unless it has come in contact with contaminated soil. This may not be the case for seepage penetrating the geotextile layer and the underlying vent layer. That water will eventually enter the contaminated soil, thereby increasing the amount of water that need to be decontaminated."

(b) Due to the tightly compacted residuum, will this design allow storm / groundwater to pool in the trenches or under the cap in the gravel layer? If so, will this facilitate groundwater movement within the contaminated residuum, allowing additional diffusion to occur and reach the fractured limestone layer below?

"The horizontal groundwater migration in the residuum is limited due to its low permeability (measured as hydraulic conductivity with values as low as 10-8 centimeters per second [cm/s]); however, there can be relatively rapid vertical migration through localized cracks and fractures (Haley Aldrich 2018). In comparison, the typical hydraulic conductivity of gravel inside the trench ranges between 10−4 and 10−1 cm/s. The large difference in hydraulic conductivity suggests that water quickly saturates the gravel-filled trench but that it will take additional time for the water to infiltrate into the less permeable residuum. Because of this delay, including the potential mounding of water inside the trenches, the water is likely to infiltrate into the fractured limestone layer that is in contact with the trench bottom. While the water captured in the trenches may not be contaminated (see above), the added volume and the hydraulic pressure exerted by the water column in the trench can plausibly accelerate the flow of already contaminated fluid in the limestone layer off site."

"…[I]t is unlikely that the residence time in the trench will be sufficiently long enough for back diffusion to have a significant impact on the water quality. However, field tests are recommended to test if this assessment reflects the site conditions. Such test could include a tracer dilution test inside the trench well or piezometer."

5. Does the cap and trench system in place adequately consider preferential pathways from the active natural gas and sanitary sewer lines that run through the south boundary of the site?

"It is unclear if some or all of these lines have been preserved, removed, or relocated. If still present, even if inactive, these pieces of infrastructure could become preferential pathways if the plume of contaminated shallow groundwater intercepts them. Trenches 3 and 4 are located to the south of the sewage and gas pipes on the southern side of the property (see MWH (2010) Figure 4-23). Therefore, contaminated shallow groundwater flowing in a southerly direction can intercept those sewage lines if the groundwater table is sufficiently shallow. Details about how these trenches are constructed were not examined. But assuming that trenches are about 5 feet deep (which is within the groundwater level measured within the trench piezometers, see above), and lines and pipes are embedded in a sandy matrix, these horizontal features could

serve as lateral preferential pathways. In addition, should the sewer lines be damaged, it is plausible that contaminated groundwater might enter the sewage system."

Evaluation of RAOs

Additionally, EPA Region 7 requested ORD's technical review of the 2024 Annual Groundwater Monitoring Report. In response, the ORD completed an independent, third-party evaluation to provide assessment of the site remedy and to determine if it is meeting RAOs and timeline to meet RAOs, or if there is not enough information to make an accurate determination. ORD's conclusions were based on data available at time of the review. The recommendations from the ORD prompted the EPA's request for additional studies and investigations to address data gaps for this FYR and support the protectiveness determination. ORD's response was included in the *Technical Review Comments for Chemical Commodities, Inc. Site, Olathe, KS (25-R07-02)*, dated December 2, 2024.

The ORD concluded that the remedy's ability to achieve cleanup goals within the ROD's 100-year timeframe cannot be confirmed. Permanganate appears to have limited effectiveness for some VOCs, the source zone remains highly contaminated, and MNA has not been shown to be effective, suggesting ISCO may need to continue indefinitely unless the source is removed or degraded.

The ORD further concluded that overall groundwater conditions have not clearly improved. TCE concentrations have generally remained stable, with some areas declining and others rebounding after periods of non-detection. ISCO has been effective in treated areas, but the data suggests portions of the plume were not reached. The ORD recommended the collection of additional data to better evaluate remedy performance.

The ORD noted that the plume boundaries are not fully supported by defensible data. Delineation to the east and south depends on a small number of infrequently monitored wells, some with missing data, so the current boundary interpretation may be incomplete or inaccurate. The ORD recommended regular sampling of southern and eastern wells.

The ORD also questioned whether contaminants are truly isolated above the Rock Lake Shale, or whether hydraulic connections exist between geologic units. Because the geology is complex and not fully characterized, it is likely that other wells may also provide hydraulic connections, and further delineation was recommended.

The following questions and responses are excerpted from the ORD's technical review comments that support the above concerns with meeting the RAOs in the 2005 ROD. The more technical portions of the responses, including tables and figures, are not included below; refer to Attachment I for the full responses.

1. **Does the data support that the remedy is operating as intended and will reach remediation goals within the 100-year time frame as stated in the ROD?**
   "Based on the limited effectiveness of permanganate chemical oxidant for treating non-chloroethene cVOCs, it appears that the current ISCO remedy likely will not reach the remediation goals for all cVOCs. It is recommended to consider replacing permanganate with other, stronger chemical oxidants (capable of degrading a broader range of VOCs), such as

advanced oxidation processes (AOP), or to consider altogether different remedies. Also, it is concerning that the source zone strength remains comparatively high which implies that ISCO treatment must continue for the foreseeable future, unless the source zone is removed or degraded first. Further, the effectiveness of the second site remedy (MNA) has not been sufficiently demonstrated. Therefore, no conclusion about its current and long-term effectiveness can be reached at the current time. In summary, based on the available data, it is not possible to determine if the remediation goals can be reached with the current set of remedies within the 100-year time frame, as stated in the ROD."

2. **Are site conditions continuing to be the same or improved from the time frame when the remedy was developed as stated in the document? If the data from prior to the remedy being implemented is included into the timeframe, do conditions remain the same or improved (specifically off-site)?**
   "In summary, the data suggests that the ISCO treatment remained effective for several years in some locations but, more recently, its effectiveness has largely declined. This conclusion largely confirms H&A (2024), which sees evidence that permanganate remained effective for up to 39 months. Further, the groundwater VOC data suggest that parts of the plume were apparently not reached by the ISCO solution, as indicated by the continued presence of dehalogenation daughter products, such as DCEs and VC. It is also plausible that parts of the plume where ISCO might have been active in the past are now undergoing natural degradation processes. The currently available data in H&A (2024) is insufficient and does not provide clarity regarding the possibility of ongoing MNA processes. Additional data, such as detailed microbial community assays, would be required to determine if and where biological processes may be taking place."

3. **Are the boundaries in the report supported by defensible data or are data gaps needing to be addressed? Specifically in the areas of plume stability and whether further evaluation is warranted east of the site.**
   "To the east of the Site, the delineation of the plume largely rests on a single well (MW-20), which has been monitored since 2001 but rather infrequently (i.e., about every 2-8 years). During the entire monitoring period, VOC concentrations were at or near their respective detection limits. Three wells (MW-19, MW-29B, and NFL-001A) demarcate the plume to the south. Of those three wells, NFL-001A appears to be missing from the VOC analytical data set included in H&A (2024). While MW-29B was monitored as recent as mid-2024, MW-19 was monitored during three campaigns only, dating back to 2001, 2003, and 2009."

   "Regarding MW-19, it is plausible that VOCs could have reached this monitoring location since the last monitoring campaign in 2009. Therefore, drawing the plume boundaries as shown in H&A 2024 (Fig. 7) may be a misinterpretation of existing site conditions. It is strongly recommended that this and other less frequently monitored wells on the southern and eastern periphery be included in future well sampling campaigns."

4. ***Is there supporting evidence of contaminants isolated above the Rock Lake Shale as stated or is there evidence of hydrological interaction from the South Bend Limestone, through the Rock Lake Shale, to the Stoner Limestone as was stated in the Feasibility Study?***
   "Well MW-26B is not the only location where a direct connection to the bedrock might exist (see H&A 2024; Table 1). Therefore, it is unclear why this well was singled out and then abandoned. Given the complex and not fully described on- and off-site geology, it is likely that other wells can provide a hydraulic connection between the residuum and the bedrock below."

   "Even though H&A (2024) holds that the 'vertical flow of groundwater below the Rock Lake Shale appears negligible, as it is limited by the low vertical hydraulic conductivities of the competent bedrock intervals,' it is recommended to further delineate the horizonal and vertical extent of the Rock Lake Shale and clearly map the areas where the Stoner Limestone is in direct contact with the residuum above. This may require drilling new wells in areas where geologic coverage is sparse."

<u>Effectiveness of the ISCO Remedy</u>
EPA Region 7 also requested technical support from the Groundwater Technical Support Center in the ORD on the effectiveness of the ISCO remedy. In response, the ORD completed an independent, third-party evaluation. The ORD provided a second report, entitled *Revised Technical Review Comments Related to ISCO at the Chemical Commodities, Inc. Site, Olathe, KS (25-R07-02),* dated April 11, 2025.

ORD's technical review raises significant concerns about whether the remedy is functioning as intended and whether remediation goals can be achieved within the 100-year timeframe identified in the ROD. Available data does not demonstrate that the current remedies, including ISCO and MNA, will reach cleanup objectives, particularly given the limited effectiveness of permanganate on non-chloroethene VOCs and the persistence of a high-concentration source zone that may require ongoing treatment indefinitely.

The report also indicates that site conditions have not clearly improved overall. While some areas show declining concentrations, other areas have remained stable or rebounded after periods of non-detection, suggesting continued plume persistence and incomplete treatment coverage. ISCO appears to have been effective in treated locations, but evidence suggests portions of the plume were not reached. Additional data, including microbial and geochemical information, are needed to better assess treatment processes and remedy performance.

Several data gaps and boundary uncertainties remain. Plume delineation to the east and south relies on infrequently monitored wells and incomplete datasets, raising concern that plume boundaries may be inaccurately defined. The report recommends more regular sampling to better define current site conditions. In addition, the hydrogeologic setting remains incompletely characterized, and there is uncertainty about whether contaminants are isolated above the Rock Lake Shale or whether hydraulic connections exist between units as described in the Feasibility Study.

The report also identifies concerns that ISCO injections may create formation pressure and contribute to plume migration, especially in low-permeability zones. Potential preferential pathways such as utilities, boreholes, and wells may facilitate movement of injected or contaminated groundwater. The data also suggests possible abiotic reductive dechlorination in areas not directly impacted by ISCO, but the current documentation is insufficient to determine the extent of these processes. Overall, the ORD concludes that a significant residual source likely remains onsite and continues to contribute to the off-site groundwater plume.

The following questions and responses are excerpted from ORD's technical review comments and support the concerns noted above regarding ISCO. The more technical portions of the responses, including tables and figures, are not included below; refer to Attachment J for the full responses.

1. **Should consideration be given to ISCO injection causing formation pressure and thereby plume migration?**
   "Plume migration is an unavoidable and common side-effect of ISCO. The injectate is comprised of an oxidant dissolved in water, an incompressible fluid. When this fluid is injected into the groundwater (i.e., saturated and unconsolidated porous media), displacement of the native (i.e., contaminated) groundwater will occur."

   "The rate at which an aquifer can accept fluids and the lateral migration of these fluids before reaching structural failure is significantly influenced by the vertical acceptance rate (Huling et al., 2017)…. It was reported that the root cause of MnO4- daylighting was due to the limited storability of the flow network along Ocheltree Street. The term 'limited storability' is vague, and other more specific and plausible explanations are provided here. Because this is an urbanized area and various utilities and geotechnical investigations were conducted, vertical and lateral preferential pathways likely played a dominant role in the daylighting. Assuming the injected oxidant was under pressure and encountered a preferential pathway, a disproportionate volume of oxidant would naturally migrate along a low-pressure preferential pathway. Potential pathways include subsurface utilities (i.e., sanitary sewer, gas, water, and communication lines). Additionally, improperly sealed abandoned exploratory boreholes, or poorly sealed injection/monitoring wells represent high probability preferential pathways."

   "The oxidant used at the Site is sodium permanganate (NaMnO4) (100 g/L; 10% solution, well below the solubility (40%)). Some studies involving potassium permanganate (KMnO4(s)) report temporary reductions of permeability in injection wells. This is often attributed to the injection of an oxidant solution containing solid phase KMnO4(s), and over time, the permeability is restored as the KMnO4(s) dissolves in the groundwater. Because NaMnO4 is highly soluble and does not involve a solid phase, permeability reductions do not occur as a result of oxidant clogging, suggesting that other causes may be responsible for longer-lasting changes in the formation's permeability."

2. **Does the data support significant reductive dechlorination or if the remedy is functioning as intended?**

   "*In summary, while biological processes have not been actively stimulated at the site and enhanced reductive dichlorination remedies have not been applied, it appears that abiotic reductive dechlorination processes are occurring in areas not directly impacted by the ISCO treatment, including areas where the ISCO agent activity might have diminished over time. However, the discussion of the site data in the H&A (Sept. 2024) report is insufficient and does not identify if and where and to what extent processes other than ISCO contribute to the treatment of the plume downgradient from the site. While ISCO performance data is tabulated and mapped, no iso-contour maps of ISCO or MNA parameters have been drawn. Such maps would provide insights into areas where ISCO or anaerobic conditions exist, where permanganate is still detectable, and where conditions support MNA processes, including identifying areas where data gaps exist. It is recommended to produce iso-contour maps from existing dissolved oxygen, ORP, permanganate, and methane data, besides MNA indicator data (see Tables IV, VII and VIII in H&A, 2024) and use these maps to better assess treatment processes. In addition, areas with data gaps should be identified and marked for additional sampling in the future."*

3. **Are other compounds outside of TCE reacting with the ISCO remedy due to a higher oxidation potential? Should we evaluate other compound degradation pathways for potential VI exposure?**

   The report noted that Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) were identified as potential contaminants that would readily react with ISCO as acetone was identified in some monitoring wells.

   "The groundwater characterized by TMW-15 is contaminated with a range of chlorinated and non-chlorinated compounds, including carbon tetrachloride and other chloromethanes, 1,1,1-TCA and other chloroethanes, and potential chloroethene precursors, like 1,1,2,2-tetrachloroethane (1,1,2,2-PCA) as well as PCE/TCE and other chloroethenes. Benzene, toluene, ethylbenzene, and xylenes (BTEX) were detected in a few samples…. Of these contaminant classes, chloroethenes, BTEX, and chlorobenzenes are most amenable to ISCO, whereas chloroethanes and chloromethanes are less amenable (Siegrist et al. 2011)."

   "An increasing trend in acetone concentration is noted in well MW-53B1 and MW-54C (Figures 6a and 6b)."

"The observed production of acetone (i.e., ketones) is likely caused by the reaction between permanganate and petroleum hydrocarbons, including BTEX. Acetone exhibits less toxicity than its parent compounds. It is a highly mobile, poorly volatile compound, and it is biodegradable. Because acetone has a high vapor pressure but a low Henry's constant and is biodegradable, it does not pose a vapor intrusion concern."

4. **Overall Conceptual Remediation Strategy of an Upgradient Source.**
   "The overall conceptual remediation strategy appears to assume that the source area has been sufficiently diminished (i.e., as a result of previously implemented emergency soil Removal Actions) or isolated (i.e., by installation of a cap) and that the ongoing ISCO remediation (i.e., injection wells and trenches) will address the lingering residuals undergoing downgradient groundwater transport beyond the property boundary. There are multiple lines of evidence that suggest a strong cVOC source currently remains on the property and is supporting strong off-site mass flux of cVOC in groundwater."

   "Specifically, the TCE concentrations in groundwater (Figure 4 in H&A 2024) clearly indicate that TCE residuals remain on-site and that a continuous downgradient groundwater contamination plume originates from these residuals. The groundwater plume serves as a potential TCE source for indoor air contamination in the downgradient neighborhood (Figure 5 in H&A 2024)."

   "In the Phase II Bedrock Groundwater Investigations report (2004), it was reported that DNAPL has persisted on-site, was physically observed in wells TMW-005, -007, and -015, and may have migrated to bedrock. Consequently, these observations help explain the very high groundwater cVOC concentrations currently measured today."

   "It is unclear whether detailed site characterization was carried out to delineate post-removal cVOC residuals, i.e., after the emergency soil Removal Action. It is reasonable to assume that while a significant amount of contaminant mass was removed, a significant mass of residual remains and is capable of supporting the existing groundwater plume."

5. **Source Area versus Diffuse Plume Treatment.**
   "Despite the significant soil Removal Actions and source area remediation that has occurred over the years, cVOCs have continued to persist for a long period of time. Based on the very high concentration of TCE extending well off-site, it can be concluded that a strong and sustained TCE source exists at the site. For example, upgradient sources of cVOCs, and specifically TCE, includes the slow desorption from aquifer materials, slow back diffusion from low permeable media, dissolution from dense non-aqueous phase liquid (DNAPL), and low hydraulic conductivity. The effects of the cVOC residuals and the mass transport/transfer mechanisms and parameters, collectively contribute to cVOC elution from the source area which is generally projected to continue for a very long time (> 100 years)."

"The ISCO treatment zone, located upgradient from the neighborhood, but downgradient from a cVOC source areas is problematic. Based on the location of the downgradient ISCO remediation trenches and wells, ISCO can only treat contaminated groundwater as fast as it elutes from the upgradient source areas. Under this condition, a temporary clean-water wedge may result from ISCO deployment. However, under post-oxidation conditions (i.e., if ISCO is discontinued), untreated groundwater from upgradient will be continually sustained, and will move down into the treated area. Therefore, at best, a clean-water wedge will exist temporarily as long as ISCO is deployed. This is an undesirable result because if ISCO ceases or is deployed intermittently, the upgradient contaminated groundwater will move down into the treated zones and re-contaminate aquifer solids and groundwater. Assuming the current conditions, where remedial treatment is deployed downgradient from the source area, ISCO operations will need to be continuously deployed to avoid recontamination, and to limit cVOC transport towards the neighborhood. The continuous deployment of ISCO underscores the concept that oxidant applications will be required in perpetuity to meet the treatment objectives."

Site Inspection

The inspection of the site was conducted by Stephanie Pfannenstiel on November 17, 2025. On December 10, 2026, an additional site inspection was conducted. In attendance were Stephanie Pfannenstiel and Clint Sperry with the EPA and Sean Hammersburg and Peter Smith with the KDHE. The purpose of the inspection was to assess the protectiveness of the remedy. Stephanie Pfannenstiel conducted a follow-up inspection on April 24, 2026.

The site cap is properly maintained overall. Minor erosional holes and small, shallow animal disturbances were observed. The cap had been recently aerated and seeded. Several areas of brown turf noted during the November inspection were assumed dormant. Upon returning in April 2026, these areas were reevaluated and exhibited green grass. The pollination garden continues to be well maintained. New trees were found on the capped area during the April 2026 inspection. Signs at the site say the new trees are Serviceberry (Amelanchier alnifolia), which isn't on the Pollinator Prairie plant list. The EPA doesn't know when they were planted or what variety they are. Some serviceberries can send roots down to around 24 inches, which is the depth of the cap's geotextile layer, so there's a risk the roots could damage the cap if the plants are left in place.

Two monitoring well pads were identified as needing repair in November 2025. The EPA notified the PRP, and those pads have since been repaired. All remaining monitoring wells were located and observed to be in good condition.

V. TECHNICAL ASSESSMENT

QUESTION A: Is the remedy functioning as intended by the decision documents?

Question A Summary:

The groundwater remedy is not achieving the RAOs and is not controlling plume migration as required by the ROD, resulting in continued VI risk. Direct exposure to potentially contaminated soils and groundwater has been prevented by the excavation, construction of the cap, and local ordinances to prevent private well usage in the area. However, migration of contaminated groundwater from the site to downgradient areas is not shown to be minimized based upon the data detailed above. Additionally, VOC concentrations are not reducing in several areas, especially along Glendale Street. Finally, the current groundwater concentrations are not adequately protective of indoor air quality and with areas of increasing trends or little to no reduction, near MW-45B. Based on modeling results in the Phase 1 2025-2026 Five-Year Review Support Investigation Report (Haley & Aldrich 2026), cleanup to target groundwater levels remains on the order of hundreds of years, making attainment of RAOs within the ROD's 100-year timeframe unlikely. Without accelerated mass-reduction and plume-control measures, the remedy will not achieve indoor air protective concentrations in the 100-year timeframe.

VIMS at several residences were not operating effectively to reduce VI concentrations to below action levels, demonstrating a loss of protectiveness and requiring immediate inspection, repair, and recommissioning with follow-up indoor air confirmation. Fifteen VIMS were identified as needing critical repairs to protect residents from VI detected above EPA action levels. Eight properties without VIMS had exceedances of indoor air action levels. These issues are currently being addressed with additional sampling, repairs and maintenance, and additional vapor intrusion mitigation system installations.

Remedial Action Performance

The Remedial Action performance is evaluated against the RAOs presented in the 2005 ROD (EPA, 2005).

1. Mitigate risk from ingestion, inhalation, and dermal contact with on-site soils to acceptable levels:
    - Soil remediation was completed in 2012 through the removal of the top 5 feet of soil and the large diameter auger excavations. Potentially contaminated soils below 5 feet and not within the footprint of the auger excavations remain in place. The CCI property was covered with a constructed cap to prevent exposure to potentially impacted soils, reduce surface water infiltration, and maximize future beneficial reuse.
    - The cap remains in place and is in good condition, successfully mitigating risk of ingestion, inhalation, and dermal contact with on-site soils.

2. Minimize further off-site migration of groundwater containing VOCs in excess of target cleanup levels:

- Newly installed downgradient monitoring wells beyond the trench show significant VOC concentrations above target cleanup levels (and increasing in some wells), confirming that contaminated groundwater is migrating offsite. This demonstrates that the current remedy is not containing the plume as required. Ongoing off-site groundwater migration expands the vapor intrusion risk footprint and threatens downgradient receptors. Reliance on MNA and periodic injections, as currently implemented, is insufficient to control mass flux and meet RAOs.

3. Reduce VOC concentrations in on-site and off-site groundwater to levels that are adequately protective of indoor air quality.
   - Currently, groundwater VOC concentrations onsite and offsite are several orders of magnitude above levels which would be adequately protective of indoor air quality. Monitoring well data along Glendale Street indicates potential increasing trends in groundwater concentrations. Additionally, reductions in groundwater concentrations near MW-45B are not significantly impacted by MNA or off-site oxidant injections. Decreasing trends of COC concentrations in monitoring wells downgradient of the perimeter trench have been noted, but newly installed wells in this area indicate there may be significant contamination being transported offsite beneath the influence of trench. Continued monitoring of these new wells and the mass flux evaluations will provide greater detail regarding the reduction in contamination beneath the cap and groundwater traveling from this vicinity.
   - Based on this information, the EPA concludes that concentrations of VOCs are not being reduced across the site to be protective of indoor air quality.

4. Prevent ingestion of groundwater containing VOCs in excess of target cleanup levels.
   - There are no known domestic wells near the site and the city of Olathe, KS has an ordinance in place prohibiting the installation of new water wells within 500 feet of a contaminated area (Olathe, 2025). All residences within the site boundary are connected to a public water supply. Based on this information, ingestion of contaminated groundwater is being prevented.

5. Mitigate risk from direct contact with groundwater containing VOCs in excess of target cleanup levels.
   - Refer to item 4 above.

6. Mitigate risk associated with inhalation of residential indoor air containing vapors emanating from groundwater.
   - During this FYR period, it was noted that several VIMS needed repair. Additionally, 15 VIMS were found to have exceedances of indoor air action levels for site COCs and exposures may be occurring. VI sampling and mitigation system operation, installation, and repair efforts are ongoing to ensure current and future risks from inhalation are mitigated.
   - Eighteen additional VIMS were inspected with no VI exceedances; however, they require repairs or upgrades to meet current system standards.
   - Eleven residents (seven buildings) without VIMS had VI detections above EPA action levels, requiring the installation of a VIMS.

- Based on this information, the risks of inhalation are not completely mitigated at several properties, while other properties are effectively mitigated. These long-term risks will persist so long as groundwater contamination beneath these residences exceeds VI action levels.

System Operations/O&M

Groundwater

For groundwater, performance monitoring is conducted including measuring residual permanganate and monitored natural attenuation parameters, as well as chemical analyses to assess groundwater plume conditions. ICs are in place and are effective at preventing exposure to contaminated water.

Vapor Intrusion

Vapor intrusion mitigation systems are inspected regularly on a rotating basis to determine whether systems are functioning properly. During the last annual vapor intrusion report, no new vapor intrusion mitigation systems were installed, 30 vapor intrusion mitigation systems were inspected and 24 of those will need repairs or a follow-up visit. Five of these noted repairs were addressed in March 2025 (HGL, 2025).

During the previous FYR period, 24 residences with vapor intrusion mitigation systems installed did not detect volatile organic compounds at concentrations exceeding their respective EPA action levels. Two residents denied the EPA access to sample and five additional residents did not respond to the EPA's sampling request. During this FYR period, the EPA contacted all the properties within the site boundary requesting vapor intrusion sampling. Within the site boundary, VI sampling was conducted at 68 properties, including 25 duplexes (Figure 5). Because each duplex may present distinct VI conditions in each unit, the EPA counted duplexes as two residences where both units were sampled, resulting in a total of 92 residences sampled. In addition, the EPA sampled 16 residences outside of the site boundary, including four duplexes to assess plume movement. Overall, the EPA sampled 78 properties consisting of 108 residences.

Fifteen residences with existing VIMS exhibited indoor air concentrations above EPA action levels. Eleven residences were identified with VI exceedances and did not have VIMS in place; VIMS installation is therefore required at these homes. One of the affected residences is located on Lane Street near MW-54C, at the western edge of the groundwater plume. Sixteen residents denied the EPA access to sample, and 36 additional residents did not respond to the EPA's sampling request. Continued monitoring and mitigation efforts are ongoing to ensure the risks are mitigated. The number of residences sampled by year that was included in the FYR is included in Table 11.

Institutional controls are in place for homes with vapor intrusion mitigation systems (VIMS); however, no institutional controls are currently in place for homes without VIMS. These controls are effective only when the systems are operating properly. The systems are not protective during power outages, when system components require replacement, or when occupants do not notify the EPA of system issues in a timely manner. Additional action is needed to address contaminated groundwater and reduce reliance on VIMS to protect occupants from vapor intrusion exposure.

Table 11: Residences Sampled for Vapor Intrusion

Year	Number of Residences Sampled
2021	10
2022	25
2023	26
2024	18
2025	69
2026	29

Notes:
Duplexes are counted as two residences as two different exposures can occur.
Several residences are sampled on an annual basis.
2021 - VI Samples collected from November.
2026 - VI samples collected from January through August.

To assess whether sewer contamination is related to indoor VI impacts, the EPA collected sewer headspace samples at six manholes along South Keeler Steet, South Ocheltree Street, South Parkway Drive, South Lane Street, and East Cedar Street (Figure 5). Summa canisters were placed at the manholes and operated for approximately 24 hours. TCE concentrations exceeded EPA indoor-air action levels at all but one location (Table 1). Because indoor-air action levels are not designed for sewer atmospheres and 24-hour samples may not capture temporal variability in the sewer system, these results should be considered screening-level indicators of TCE presence rather than definitive exposure metrics. The EPA is acquiring passive samplers to conduct 30-day integrated sampling to better characterize typical sewer concentrations and their potential influence on VI in homes.

Implementation of Institutional Controls and Other Measures

The city of Olathe, Kansas has implemented Ordinance 13.32.105 which prohibits new construction of domestic water wells within a contaminated area or within 500 feet of a contaminated area (Olathe, 2025). This ordinance also allows contaminated wells to be taken out of service if a health official determines the domestic well to be contaminated or in proximity to a contamination source. This ordinance remains in effect and is being enforced within the site area and continues to be effective at preventing exposure through the consumption of contaminated groundwater.

A restrictive covenant was placed on the property in 2006 and remains in effect (Olathe, 2006). The covenant prohibits usage of the site property for residential, commercial, or industrial purposes, prevents subsurface disturbance, prohibits livestock grazing for human consumption, and prevents new water well installation. Additionally, according to the city of Olathe's Planning Department, the site is partially zoned as heavy industrial and planned single family (Olathe, 2021). A majority of the parcels are listed as a passive leisure activity and a botanical garden and arboretum function (Olathe, 2021).

Work is ongoing to establish institutional controls for the BNSF area of interest (Figure 1). The parcel has been identified as Parcel No. DF231336-3010 and includes the full length of track from Wabash Street to north of Park Street. Soil excavations were conducted within the BNSF area of interest;

however, the entire area was not removed, nor is the area covered by the site cap. In addition, the presence of the raised rail is not a substitute for recorded institutional controls for the BNSF area of interest. Institutional controls are still required for the BNSF area of interest due to the remaining soil contamination.

QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels, and Remedial Action Objectives used at the time of the remedy selection still valid?

Question B Summary:

There have been changes in toxicity levels of several contaminants since the ROD and since the last FYR. In soil and groundwater, these changes in toxicity levels do not affect the protectiveness of the remedy for direct exposure to these media due to the institutional controls which prevent contact with the soil and consumption and contact with the groundwater. However, if there is construction activity in which people may have direct contact with the soil, the cleanup level for TCE may no longer be protective due to updates in toxicity values. Cleanup levels for groundwater were based on MCLs, which have not changed since the ROD or last FYR.

Indoor air action levels presented in the 2005 ROD and used for evaluating indoor air and crawlspace air were evaluated during this FYR. As concluded in the second FYR, all individual indoor air action levels fall within the EPA's cancer risk range of 1E-06 to 1E-04 and below a non-cancer HQ of 1, with the exception of 1,1-dichloroethylene, which has a non-cancer HQ of 51 at the cleanup level presented in the ROD. This value may affect protectiveness of the remedy, since RAOs address mitigating risk from inhalation of vapors from contaminated soil and groundwater. Current indoor air Removal Management Levels were also included in Table 12.

Table 12: Changes to Cleanup Levels for COCs

Soil COC	Cleanup Level	Basis for Cleanup Level	Current Level*	Change?	Could Affect Protectiveness of the Remedy?
Milligrams per kilogram (mg/kg)					
Arsenic	16	Risk Assessment	7.2	Yes	No
Chromium, Total	23	Risk Assessment	12	Yes	No
TCE	110	Risk Assessment	4.2 / 0.036**	Yes	No***
Groundwater COC	**Cleanup Level**	**Basis for Cleanup Level**	**Current Level***	**Change?**	**Could Affect Protectiveness of the Remedy?**
micrograms per kilogram (ug/L)					
TCE	5	MCL	5	No	No
PCE	5	MCL	5	No	No
cis-1,2-DCE	70	MCL	70	No	No

Chloroform	80	MCL	80	No	No
Carbon Tetrachloride	5	MCL	5	No	No

Notes:
MCL= Maximum Contaminant Level
Source: 2005 Record of Decision
*Current levels for soil assume default construction worker direct exposure parameters and site-specific factors detailed in the feasibility study, and risk ranges of 1E-06 excess lifetime cancer risk and a hazard quotient of 1 since contaminants do not have overlapping noncancer target organs.
**The MCL-based soil to groundwater number was also included for comparison since this is a potential pathway.
***Based on cleanup levels alone, the change in toxicity could alter long-term protectiveness of the remedy

Table 13: Comparison of Indoor Air Action Levels from Record of Decision with November 2024 Indoor Air Removal Management Levels

Contaminant	Indoor Air Action Levels from 2005 ROD (µg/m3)	Cancer Risk of 2005 Action Levels	Non-cancer risk 2005 Action Levels	Residential Indoor Air Action Level (µg/m3)
Carbon tetrachloride	1.3	2.78E-06	0.0125	47
Chloroform	0.8	6.55E-06	0.393	2
Chloromethane	10.5	6.73E-06	0.112	94
1,2-dichloroethane	0.7	6.48E-06	0.0959	7.3
1, 1-dichloroethene	209	-	50.6	4.1
cis-1,2-DCE	37	-	0.887	42
Methylene chloride	40.7	4.01E-07	0.065	630
PCE	6.6	6.11E-07	0.158	42
1,1,1-trichloroethane	2300	-	0.441	5200
TCE	2	4.18E-06	1	2

Note: µg/m3 = micrograms per meter cubed

Ecological Risk

In previous FYRs, groundwater results from MW-21 and MW-22 were compared to surface water standards to evaluate any potential groundwater discharge to surface water in Drainage B. Historically, information related to potential impacts to sediment and aquatic biota in Drainage B were used to infer potential impacts in the connected Mill Creek. However, MW-21 and MW-22 have not been sampled in the last 5 years. MW-31 is a shallow well near Mill Creek which would be appropriate to evaluate for potential direct discharge of groundwater into surface water in the creek. In the last 5 years, only cis-1,2-DCE has been detected in groundwater at this well, ranging from ND-3.31 µg/L.

These values are well below the Region 4 chronic surface freshwater screening value for cis-1,2-DCE of 620 µg/L (EPA, 2018). Therefore, it is unlikely that groundwater is impacting surface water in this area. Because Mill Creek is an engineered waterway lined with concrete and riprap, sediment and benthic organisms are not ecologically relevant.

The second FYR recommended additional surface water and sediment sampling in Drainage B. An evaluation using prior data from Drainage B was completed in 2023 (Haley and Aldrich, 2023) for the prairie vole and the red-tailed hawk receptors and the HQ for both receptors were below 1 for all analytes evaluated. While some metals in the sediment exceeded MacDonald, et al.'s 2000 TEC concentrations for the protection of benthic life, none exceeded the PEC concentrations, and the 2003 baseline risk assessment concluded that due to this and habitat quality, potential impacts from these metals are unlikely to be of ecological significance. Additionally, the historical lack of detections of COCs in MW-21 and MW-22 and the low-level detection of cis-1,2-DCE in MW-31, make it unlikely that groundwater is impacting surface water or sediment at this site; no further sampling is recommended.

Regarding species with special species status, during this FYR period, the species status of the Tri-Colored Bat has been changed to proposed endangered and the Monarch Butterfly and the Western Regal Fritillary have been added as a proposed threatened species. However, no critical habitats for any threatened or endangered species have been identified near the site.

Changes in Standards and TBCs

MCLs were identified as groundwater cleanup levels for TCE, PCE, cis-1,2-DCE, chloroform, and carbon tetrachloride. The federal MCL listed in the 2005 ROD were compared to the current National Primary Drinking Water Regulations (40 CFR Parts 141-143). As shown in Table 7, there have been no changes in maximum contaminant levels.

Ecological Risk

Since the baseline risk assessment, Eco-SSLs have been developed for several of the metals detected in sediment and soil in Drainage A that were not available in 2003. However, Drainage A no longer exists due to construction which elevated the rail line and was completed in 2008. There have not been any changes to the toxicity factors or other contaminant characteristics that affect the protectiveness of the remedy for ecological receptors at the site.

Changes in Toxicity and Other Contaminant Characteristics

Since the last FYR, there have been changes in toxicity values for several contaminants in soil, groundwater and indoor air. These include arsenic, chromium, 1,1-dichloroethylene, cis-1,2-DCE, and chloroform.

Risk-based cleanup levels were determined for total chromium, arsenic, and TCE in soil. The soil cleanup level for total chromium was based on background, and the soil cleanup levels for arsenic and TCE were based on the protection of a construction worker. As noted in the second FYR and based on a risk-based evaluation of arsenic and TCE using the EPA updated standardized risk assumptions for a construction worker, the protectiveness of the cleanup numbers for arsenic and TCE were evaluated. A new Integrated Risk Information System (IRIS) assessment for arsenic was completed and published in January 2025, changing some toxicity values (EPA, 2025).

Despite these changes, the cleanup level for arsenic remains protective of a construction worker and is within the EPA acceptable cancer risk range of 1-04 to 1E-06 and under a HQ of 1 for noncancer endpoints. Also, since the ROD was completed in 2005, TCE underwent an IRIS toxicological review, and updated toxicity values became available in 2011 (EPA, 2011b). Based on the updated toxicity levels, the 2005 cleanup level exceeds a non-cancer HQ of 1. Because an institutional control is in place that restricts the use of the site to recreational and open space, and site soils have been capped, the remedy remains protective. However, if there is an excavation construction activity or the cap is disrupted in some way in the future, there could be potential exposure to soil at levels that would not be protective of human health, and a reevaluation of the cleanup levels may be warranted.

Since groundwater cleanup goals are based on MCLs, which have had no changes, the groundwater cleanup goals remain protective for direct exposure. With respect to indoor air, the change in toxicity value of 1,1-dichloroethylene does impact the protectiveness of the action level presented in the 2005 ROD, resulting in a non-cancer HQ of 51. This level may no longer be protective of human health, and a new cleanup goal that is protective of human health will need to be created and used to rescreen any recent vapor intrusion data that was screened using the 2005 ROD Action Level.

Additionally, as noted in the second FYR the EPA finalized new non-cancer toxicity values for TCE that are in part based on fetal heart defects that may occur after acute exposure to TCE at any time during the critical three-week period in early pregnancy that occurs approximately four to seven weeks after conception in humans. Exposure to TCE is estimated to remain in the system for one week. Thus, single instance, short term exposure could result in fetal cardiac malformations.

Ecological Risk

There have not been any changes to the toxicity factors or other contaminant characteristics that affect the protectiveness of the remedy for ecological receptors at the site.

Changes in Risk Assessment Methods

As noted in the second FYR, there have been several changes in the EPA's standardized risk assessment methodologies since the completion of the human health risk assessments. These changes in risk assessment methodologies do not have a significant impact on the conclusions of the risk assessments.

Ecological Risk

Though the Ecological Risk Assessment Guidance for Superfund (ERAGs) was finalized in 1997, after the EPA wrote the on-site ecological risk assessment in the 1995 baseline risk assessment, it remains sufficient. Further off-site risk was evaluated in the 2003 supplemental baseline risk assessment for the site.

Changes in Exposure Pathways

To the EPA's knowledge, there have not been any changes in exposure pathways since the last FYR. As mentioned in the second FYR, a detailed evaluation of past site activities is recommended to determine whether per- and polyfluoroalkyl substances (PFAS) may have been present at the site. This evaluation should determine whether historical site operations may have resulted in the release of PFAS to the environment and whether a sampling investigation is warranted.

Ecological Risk
Drainage A no longer exists due to construction which elevated the rail line and was completed in 2008.

Expected Progress Towards Meeting RAOs
The remedy is protective with respect to ingestion, inhalation, and dermal contact with on-site soils, and it protects against direct contact with and ingestion of groundwater. However, progress in reducing further off-site migration of groundwater remains an issue. Residual on-site soil contamination continues to leach to groundwater, which then migrates offsite beneath the adjacent residential neighborhood. Significant contamination is found to be migrating beneath the influence of the perimeter trench, and several areas within the plume exhibit increasing contaminant trends or is minimally affected by oxidant injections and MNA. Indoor air conditions will not be adequately protective without further reductions in soil and groundwater concentrations. Long-term reductions in groundwater concentrations are necessary to reduce reliance on VIMS, rather than requiring continued VIMS operation for the next 100 years or longer.

Ecological Risk
The RAOs remain valid for ecological receptors.

QUESTION C: Has any other information come to light that could call into question the protectiveness of the remedy?

The EPA is not aware of any additional information that could impact the protectiveness of the remedy beyond the data and analysis discussed above.

VI. ISSUES/RECOMMENDATIONS

Issues/Recommendations
OU(s) without Issues/Recommendations Identified in the Five-Year Review:
None

OU(s): 1	**Issue Category: Remedy Performance**
	Issue: Groundwater concentrations beneath the neighborhood have not decreased over time, and new VI exceedances have been identified to the west of the site. These results suggest continued plume persistence with possible westward expansion and/or transport along preferential pathways. Additionally, according to the Phase 1 2025-2026 Five-Year Review Support Investigation Report, after several decades of migration and diffusion following the initial release, the dissolved TCE plume is broadly dispersed within a large volume of the rock matrix. Modeling indicates that plume attenuation is strongly

	controlled by back diffusion from the rock matrix into mobile groundwater within fractures and highly weathered bedrock, across all remediation and degradation scenarios evaluated. The updated modeling projects clean-up time frames on the order of hundreds of years to meet target levels. The 2005 ROD noted that the time to meet RAOs is highly unpredictable but expected to be on the order of 100 years; the updated modeling therefore projects a significantly longer timeline than stated in the ROD.			
	Recommendation: Complete a supplemental Focused Feasibility Study to evaluate alternative soil and groundwater Remedial Actions to achieve remediation timelines outlined in the ROD.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
Yes	Yes	PRP	EPA	10/1/2028

OU(s): 1	**Issue Category: Changed Site Conditions**			
	Issue: The monitoring wells installed in 2025 show contamination between all bedrock contacts. Several new exceedances of VI action levels, coupled with the ongoing installation of seven additional VIMS, may indicate plume migration and/or preferential-pathway transport.			
	Recommendation: Install additional monitoring wells to evaluate plume movement through bedrock contact points and to define the groundwater plume in all directions.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
Yes	Yes	PRP	EPA	10/1/2027

OU(s): 1	**Issue Category: Changed Site Conditions**
	Issue: Air samples collected from multiple sewer manholes contained TCE, indicating the presence of chlorinated solvent vapors within the sewer system. Sewers can act as preferential pathways for vapor migration and may allow VOCs to enter buildings through plumbing if traps are dry or poorly sealed.
	Recommendation: Continue evaluation of the sewer system for VI. Recommend sampling using passive samplers with a 30-day collection timeframe.

Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party	Milestone Date
Yes	Yes	PRP	EPA	12/31/2026

Other Findings

In addition, the following are recommendations that were identified during the FYR and may improve performance of the remedy, reduce costs, improve management of O&M, accelerate site close out, conserve energy, promote sustainability, etc., but do not affect current and/or future protectiveness:

- During the EPA's review of the 2024 Annual Groundwater Report, the EPA identified measurements for total depth (TD) were not consistently collected or recorded during sampling events. The lack of TD verification led to misattribution of certain samples to the wrong monitoring wells, particularly among co-located/nested wells. The TD for co-located/nested wells must be measured and recorded during each sampling event.
- Planting of woody vegetation on the engineered cap is discouraged. Woody species can develop roots that extend beyond 24 inches bgs and may exploit desiccation cracks, utility trenches, or other defects. Although the compacted clay layer discourages root penetration, the risk of deeper rooting increases over time if irrigation system leaks occur. It is recommended that the O&M Plan be updated to require: (1) an annual growing-season inspection to identify and remove new woody plants and other deep-rooted vegetation; and (2) an annual inspection and testing of the irrigation system for leaks, with prompt repair and documentation of findings and corrective actions.
- Records confirming proper abandonment of former residential utility services of the demolished homes north of the site were not available at the time of the FYR. As the PRP conducted the demolition, the city of Olathe did not have documentation for these utilities. The EPA will request that the PRP submit documentation demonstrating that former service laterals/conduits were properly capped or removed; any improperly abandoned utilities will be addressed and the closure documentation added to the site record to ensure long-term protectiveness.
- The groundwater sampling procedure does not specify neutralization of 'binary' samples that contain residual permanganate (MnO_4^-). In such cases, failure to neutralize can lead to oxidation of CVOCs in the sample bottle and false negatives (Johnson et al, 2012). CVOC results from groundwater affected by residual permanganate and collected without neutralization should be qualified as potentially biased low. The SOP must be updated to require screening for oxidant and use of laboratory supplied, preneutralized VOA vials (with ascorbic acid or sodium thiosulfate) for CVOC sampling when permanganate is present or suspected. Where decisions depend on this data, consider targeted resampling using the updated protocol.
- While ISCO performance data is tabulated and mapped, no iso-contour maps of ISCO or MNA parameters have been drawn. Such maps would provide insights into areas where ISCO or anaerobic conditions exist, where permanganate is still detectable, and where conditions support MNA processes, including identifying areas where data gaps exist. It is recommended to produce iso-contour maps from existing dissolved oxygen, ORP, permanganate, and methane data, besides MNA indicator data (see Tables IV, VII and VIII in H&A, 2025) and use these maps to better assess treatment processes. In addition, areas with data gaps should be identified and marked for additional sampling in the future.

The following are recommendations that were identified during the FYR and may improve performance of the remedy, reduce costs, improve management of O&M, accelerate site close out, conserve energy, promote sustainability, etc., but do not affect current and/or future protectiveness:

- Volunteer activities occur within the Pollinator Prairie established over the engineered cover. A sign is posted instructing volunteers to call Haley & Aldrich prior to planting any new items. To ensure cap integrity and consistent stewardship, the PRP should implement a formal volunteer training and oversight program with posted depth limits, an updated approved plant list (shallow-root species), and clear stop-work procedures if geotextile or liner is encountered. Compliance should be documented and provided to the EPA. The current Pollinator Prairie planting list is outdated and should be revised to include root depths for all species to ensure no plantings risk penetrating the geotextile located 24 inches bgs.
- Conduct a detailed PFAS evaluation to determine whether the site may have been a source of PFAS. Historic documents reference several fires occurred at the site and must be evaluated to determine if PFAS material was used.
- The indoor air action level named in the 2005 ROD for 1,1-dichloroethylene is no longer protective of human health and should be amended to an action level that is protective of human health.

VII. PROTECTIVENESS STATEMENT

Protectiveness Statement(s)		
Operable Unit: OU1	*Protectiveness Determination:* Not Protective	*Planned Addendum Completion Date:* 9/8/2030
Protectiveness Statement: The remedy is not currently protective of human health and the environment. Residual soil contamination beneath the site cap continues to impact groundwater, which is demonstrated to have migrated underneath the adjacent residential neighborhood, where concentrations have not decreased over time and are no longer expected to meet the RAOs. Recent modeling indicates that attainment of the RAOs may require hundreds of years, which is significantly longer than the 100-year cleanup timeline set forth in the 2005 ROD. New VI exceedances have been identified to the west of the site. These conditions indicate continued plume persistence and suggest potential westward expansion and/or transport along preferential pathways. Indoor air mitigation systems (VIMS) are currently necessary to protect building occupants from VI; however, their long-term effectiveness is closely tied to groundwater VOC concentrations beneath the buildings. Sustained reductions in groundwater concentrations are needed to meet RAOs and lessen reliance on VIMS.		

Sitewide Protectiveness Statement	
Protectiveness Determination: Not Protective	*Planned Addendum Completion Date:* 9/8/2030
Protectiveness Statement: The remedy is not currently protective of human health and the environment. Residual soil contamination beneath the site cap continues to impact groundwater, which is demonstrated to have migrated underneath the adjacent residential neighborhood, where concentrations have not decreased over time and are no longer expected to meet the RAOs. Recent modeling indicates that attainment of the RAOs may require hundreds of years, which is significantly longer than the 100-year cleanup timeline set forth in the 2005 ROD. New VI exceedances have been identified to the west of the site. These conditions indicate continued plume persistence and suggest potential westward expansion and/or transport along preferential pathways. Indoor air mitigation systems (VIMS) are currently necessary to protect building occupants from VI; however, their long-term effectiveness is closely tied to groundwater VOC concentrations beneath the buildings. Sustained reductions in groundwater concentrations are needed to meet RAOs and lessen reliance on VIMS.	

VIII. NEXT REVIEW

The next FYR report for the Chemical Commodities, Inc. Superfund Site is required five years from the completion date of this review.

APPENDIX A – REFERENCE LIST

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APPENDIX B – LIST OF FIGURES

Figure 1: Site Map

Figure 2: 2012 Remediation Map

Figure 3: Restrictive Covenant Area

Figure 4: Vapor Intrusion Mitigation Systems Locations

Figure 5: Vapor Intrusion Sampling Locations

Figure 6: 2025 Groundwater Flow Map

Figure 7: TCE Concentration Plume Map

Figure 8: PCE Concentration Plume Map

Figure 9: Carbon Tetrachloride Concentration Plume Map

Figure 10: Mann-Kendall Trends for TCE

Figure 11: Mann-Kendall Trends for PCE

Figure 12: Mann-Kendall Trends for Carbon Tetrachloride

Figure 1 – Site Map

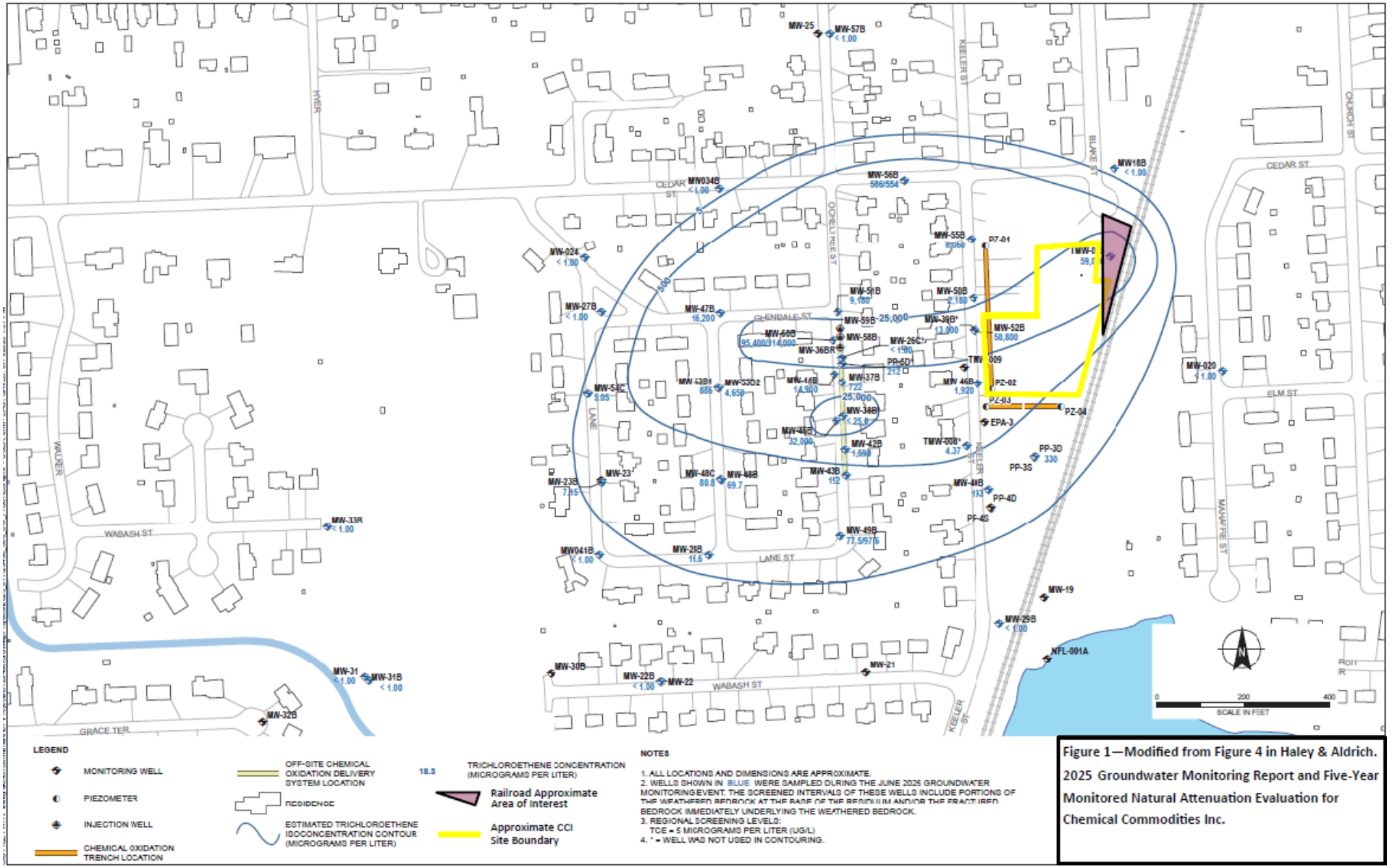


Figure 1—Modified from Figure 4 in Haley & Aldrich. 2025 Groundwater Monitoring Report and Five-Year Monitored Natural Attenuation Evaluation for Chemical Commodities Inc.

Figure 2 – 2012 Remediation Map

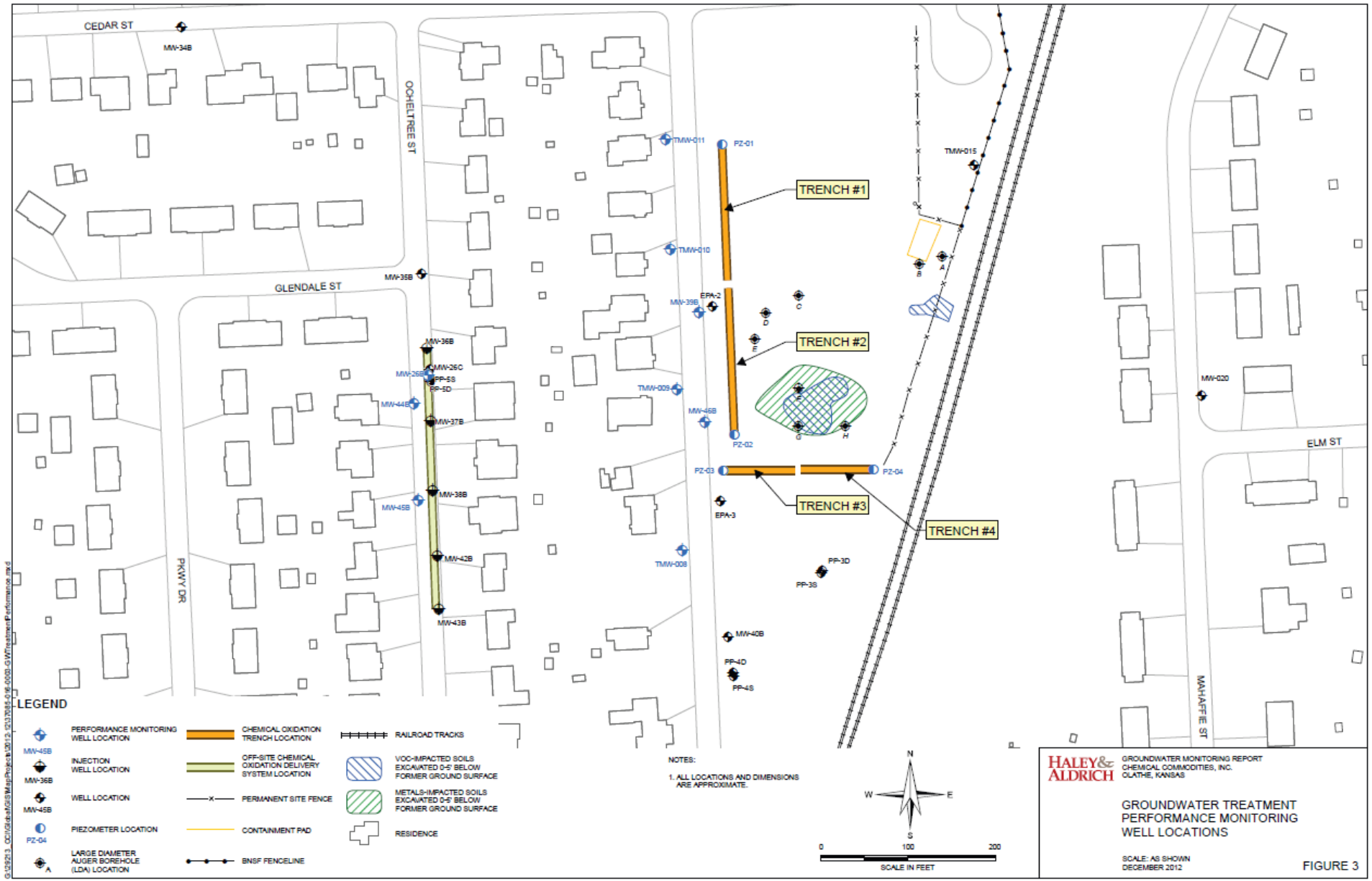
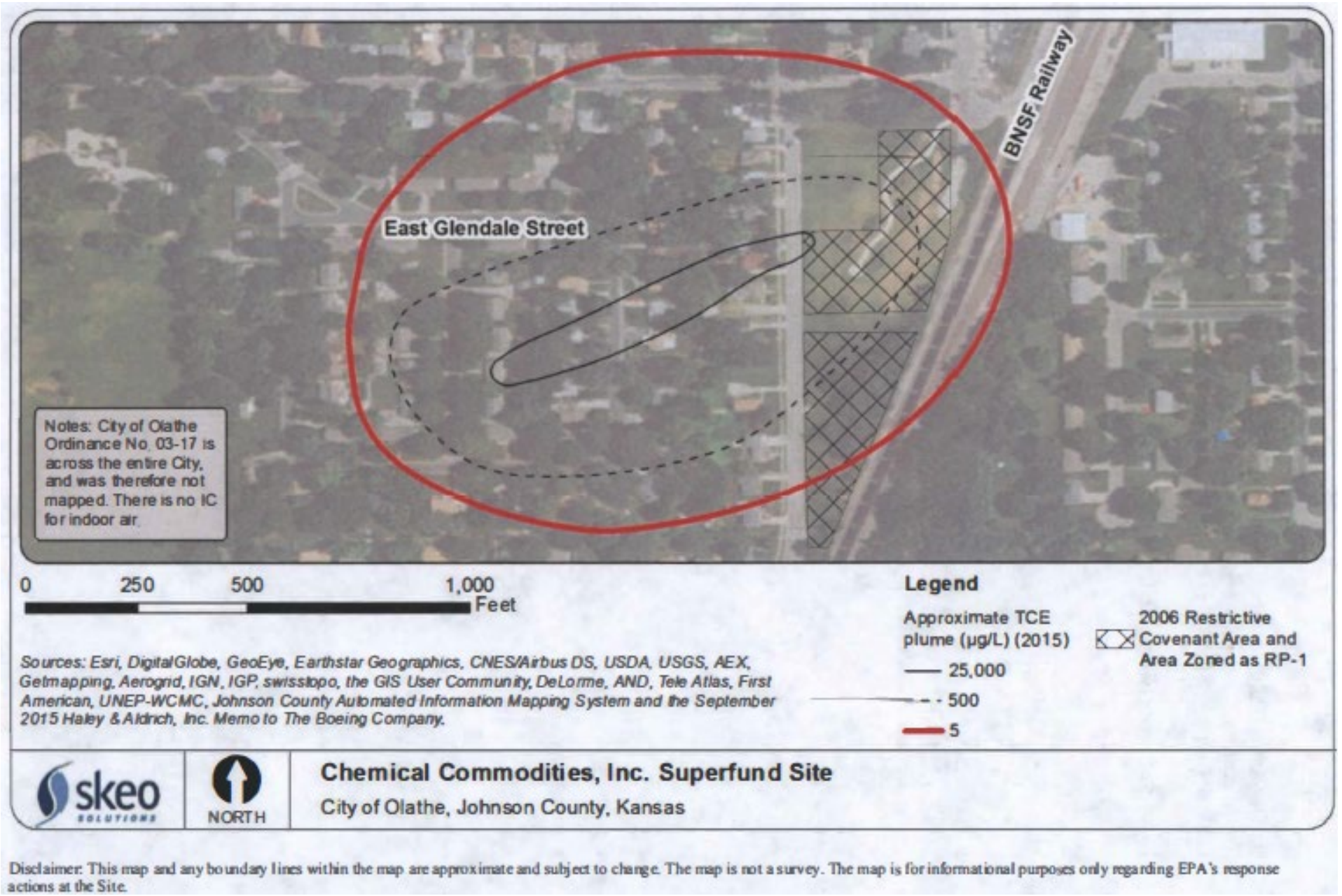


Figure 3 – Restrictive Covenant Area



Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site.

Figure 4 – Location of Vapor Intrusion Mitigation Systems

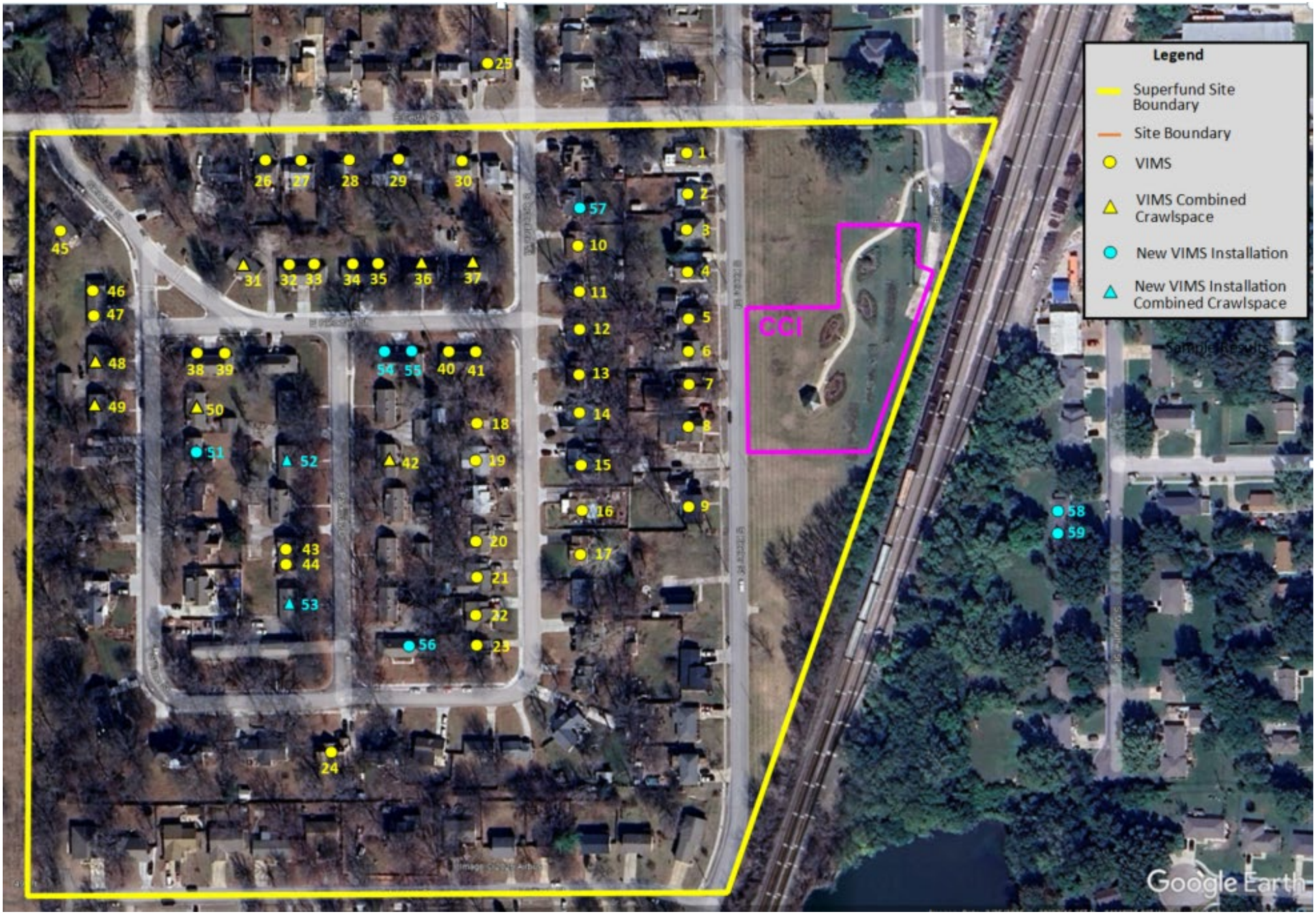


Figure 5 – Location of Vapor Intrusion Sampling

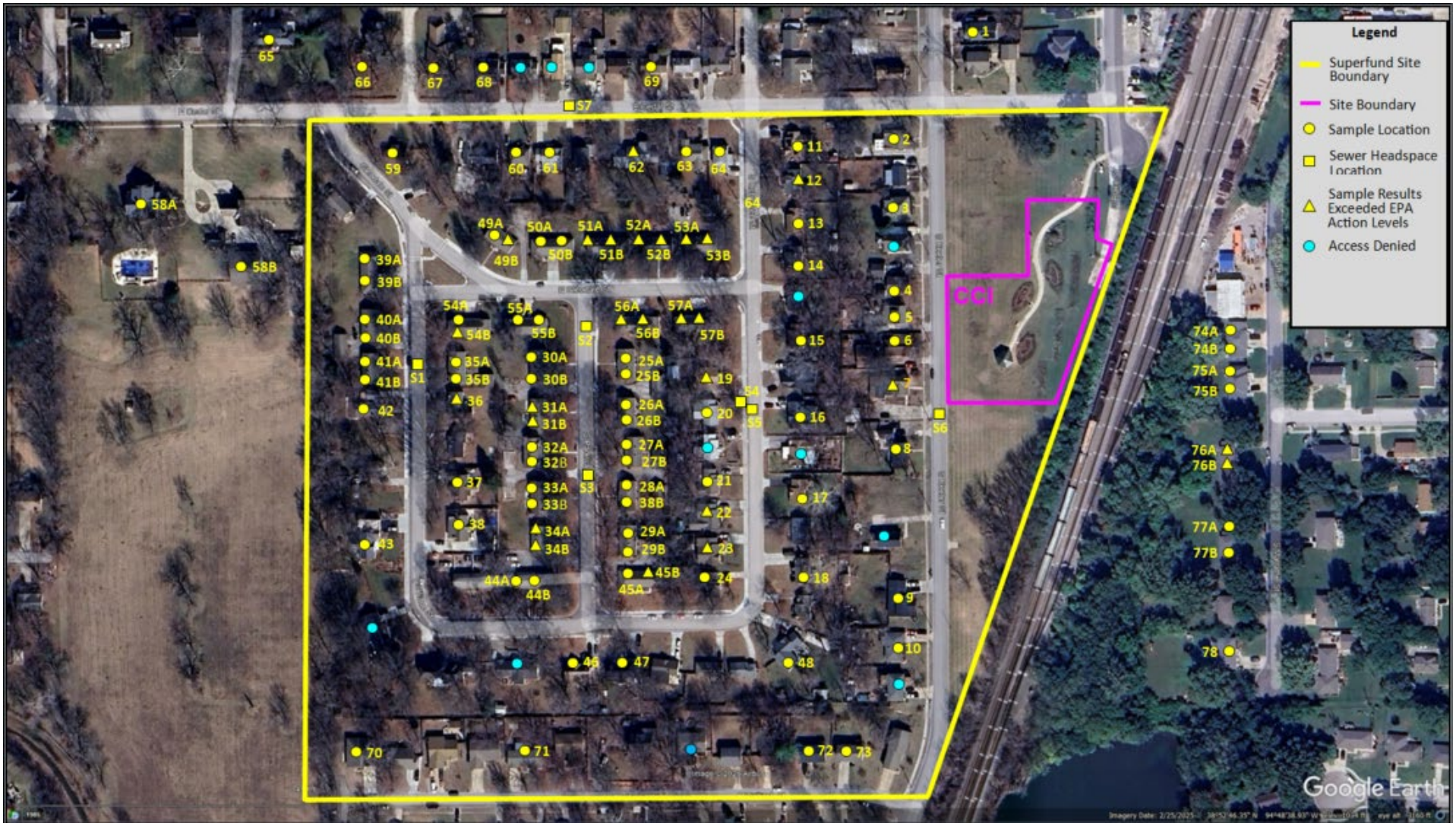


Figure 6 – 2025 Groundwater Flow Map

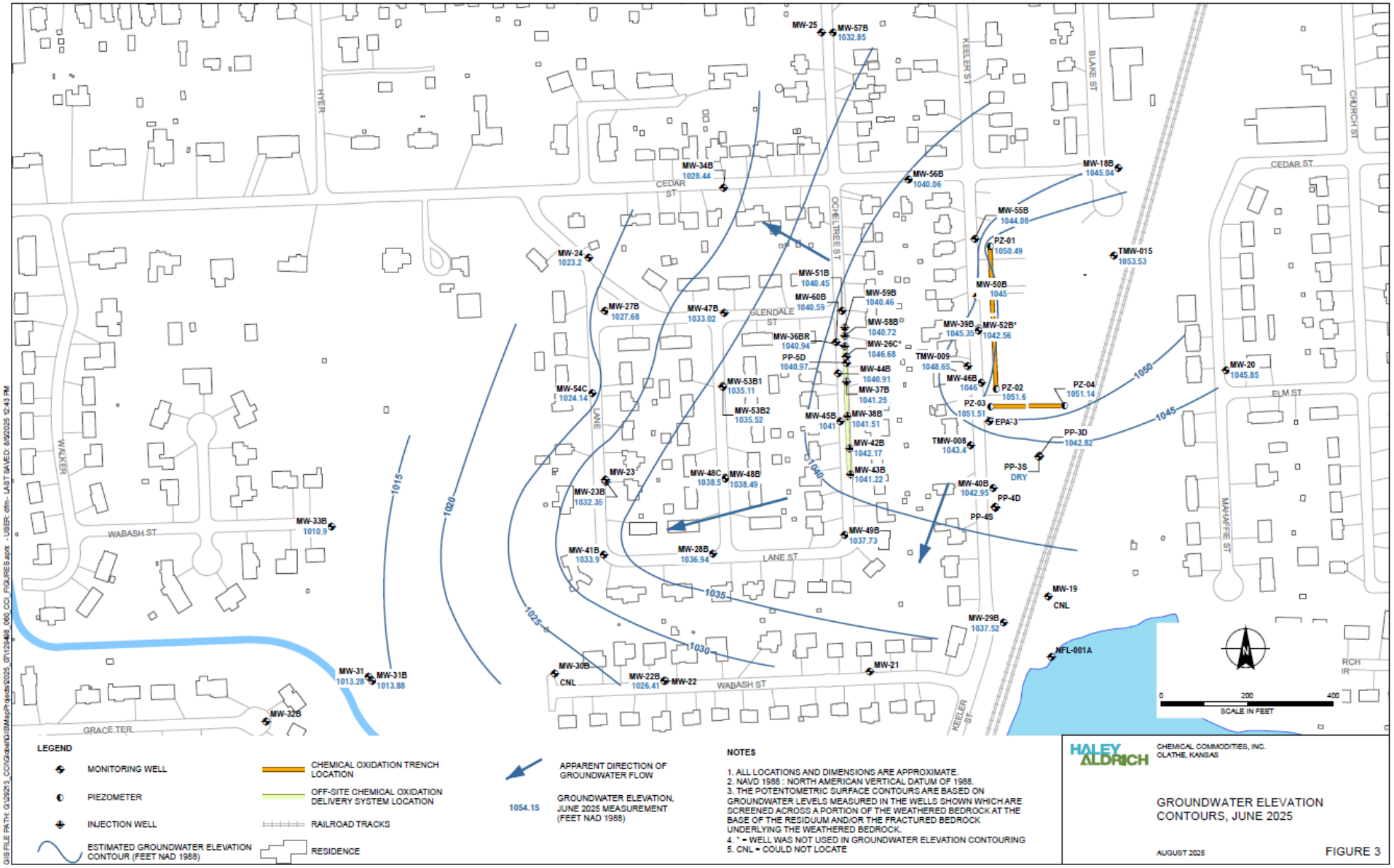


Figure 7 – TCE Concentration Plume Map

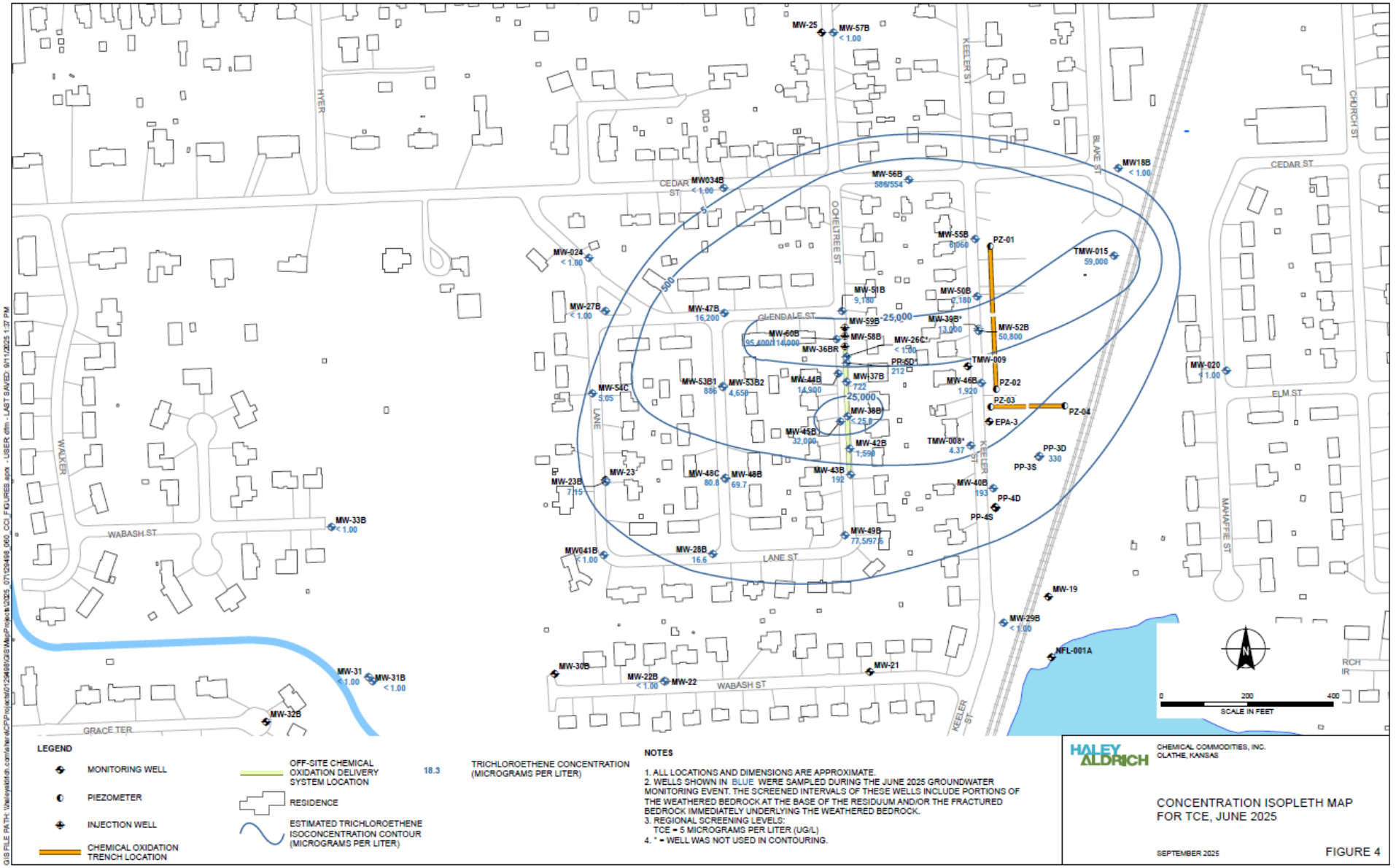


Figure 8 – PCE Concentration Plume Map

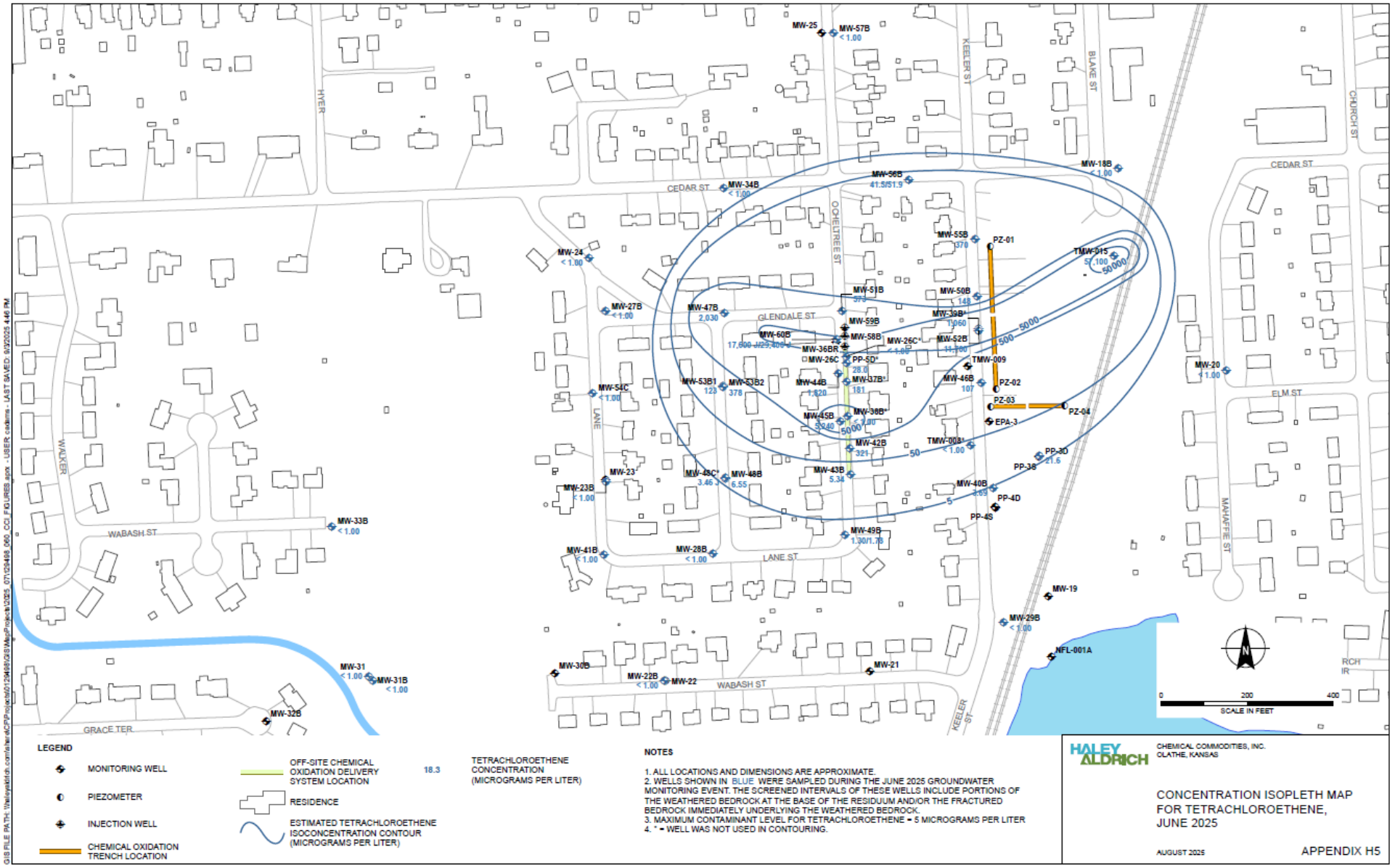


Figure 9 – Carbon Tetrachloride Concentration Plume Map

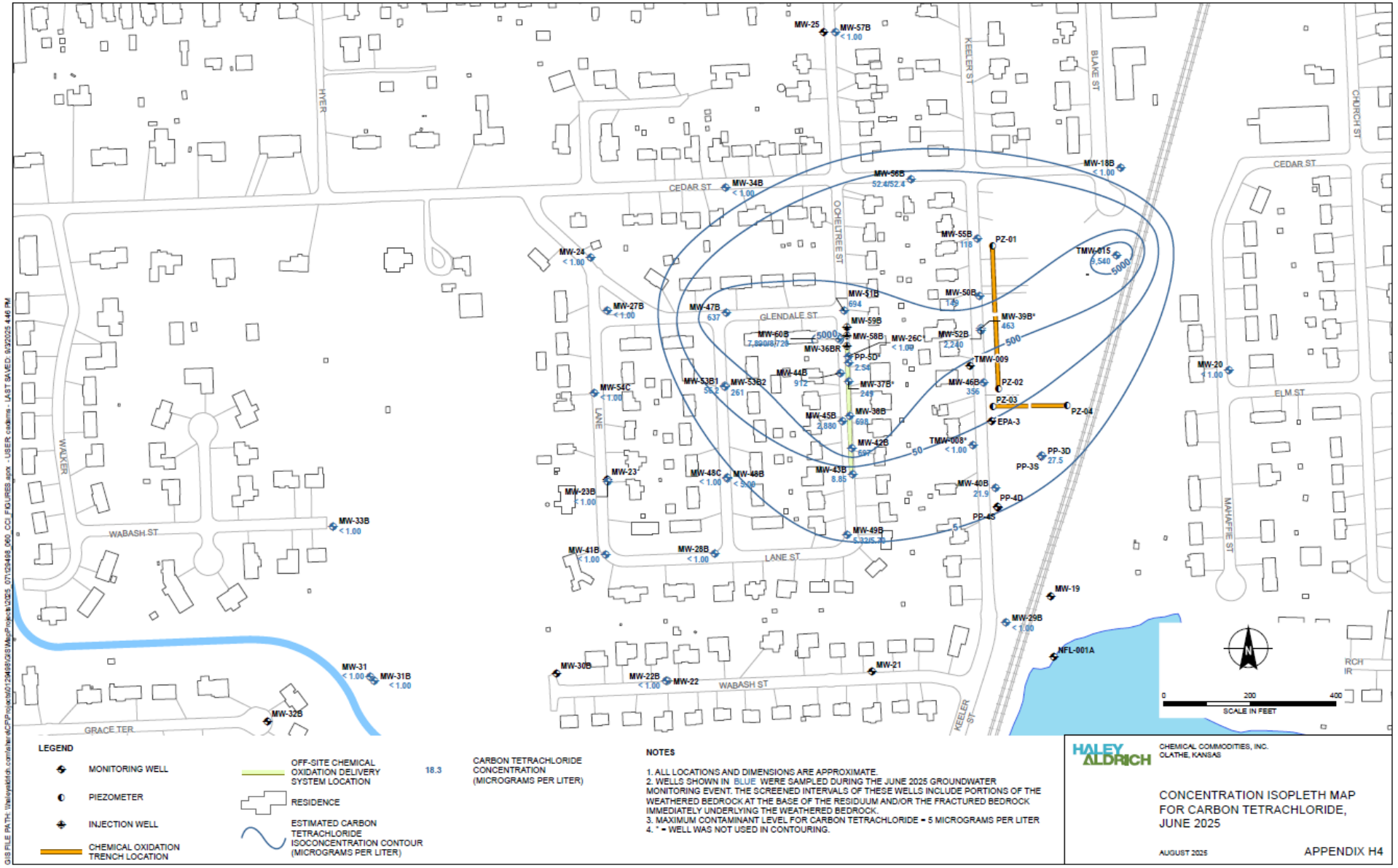


Figure 10 – Mann-Kendall Trends for TCE

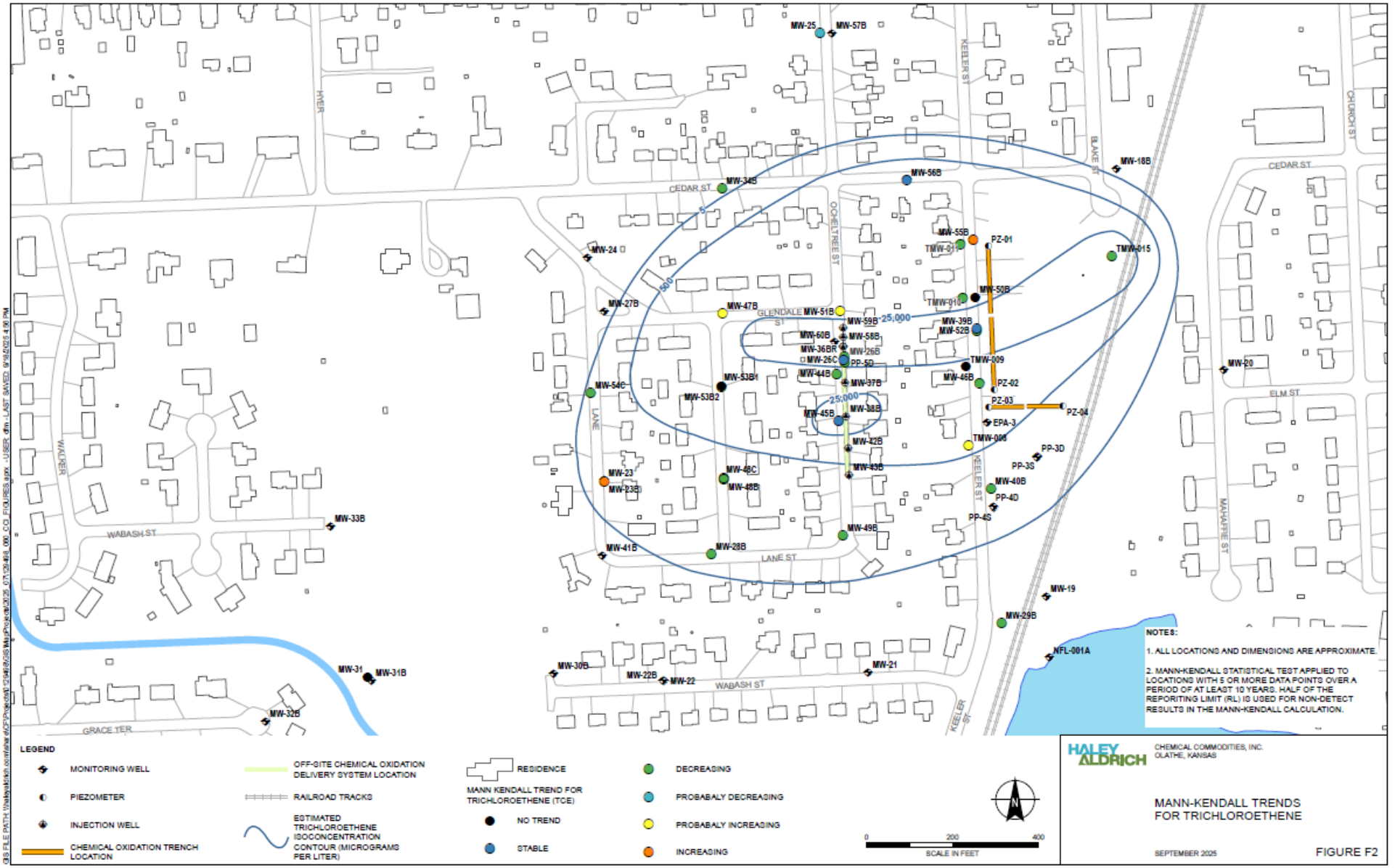


Figure 11 – Mann-Kendall Trends for PCE

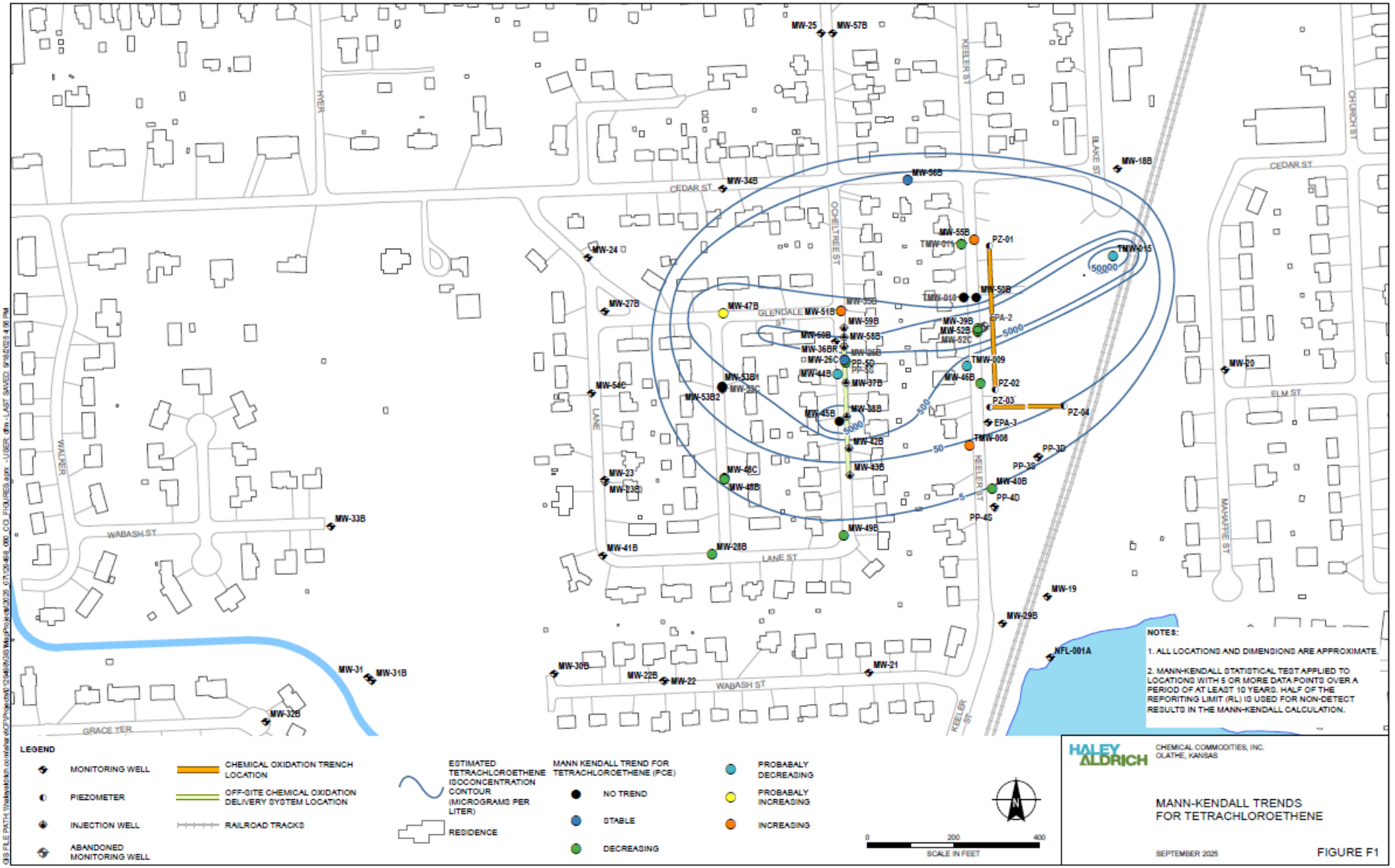


Figure 12 – Mann-Kendall Trends for Carbon Tetrachloride

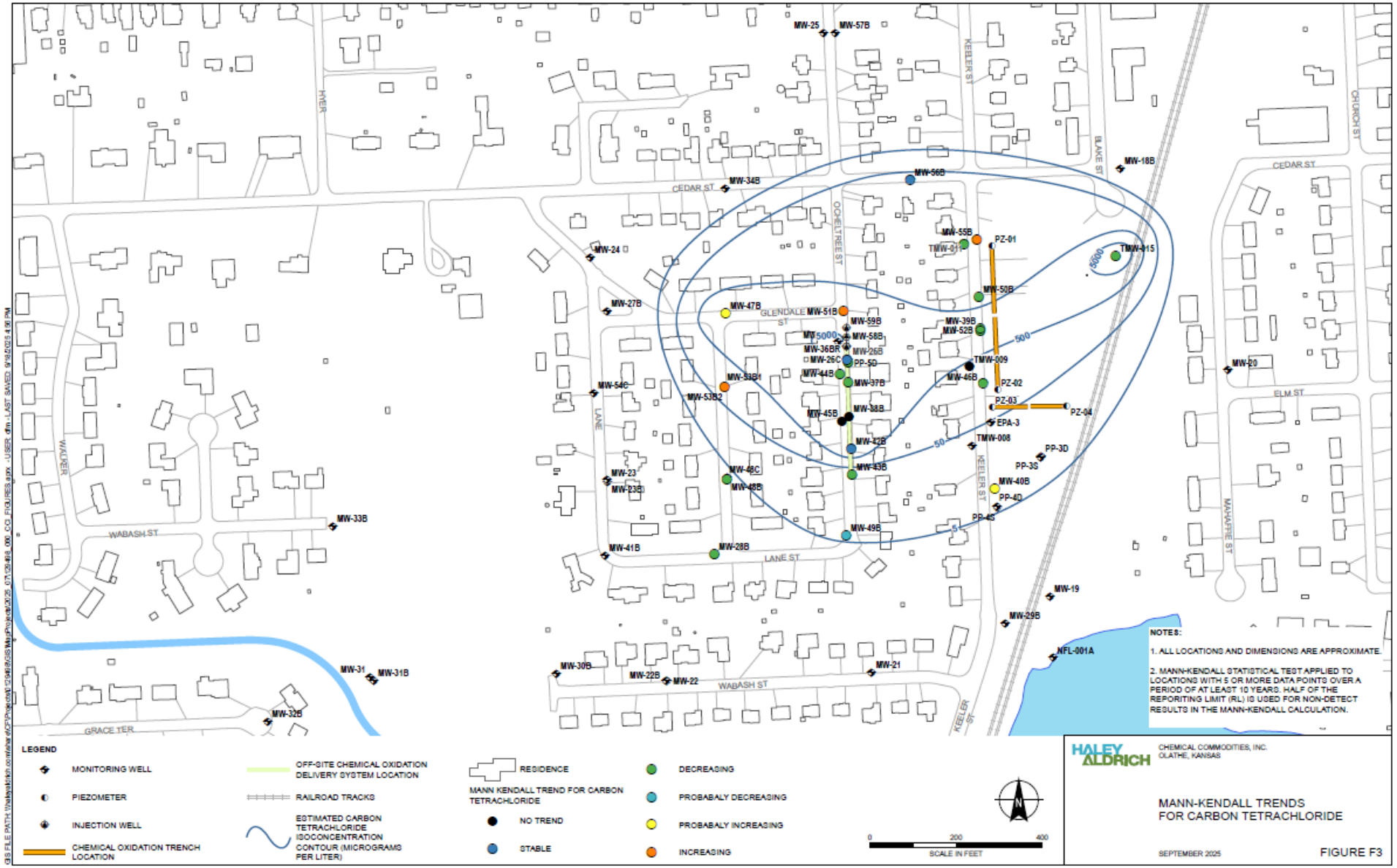


Figure 13 – Geologic Cross-Section of the Site

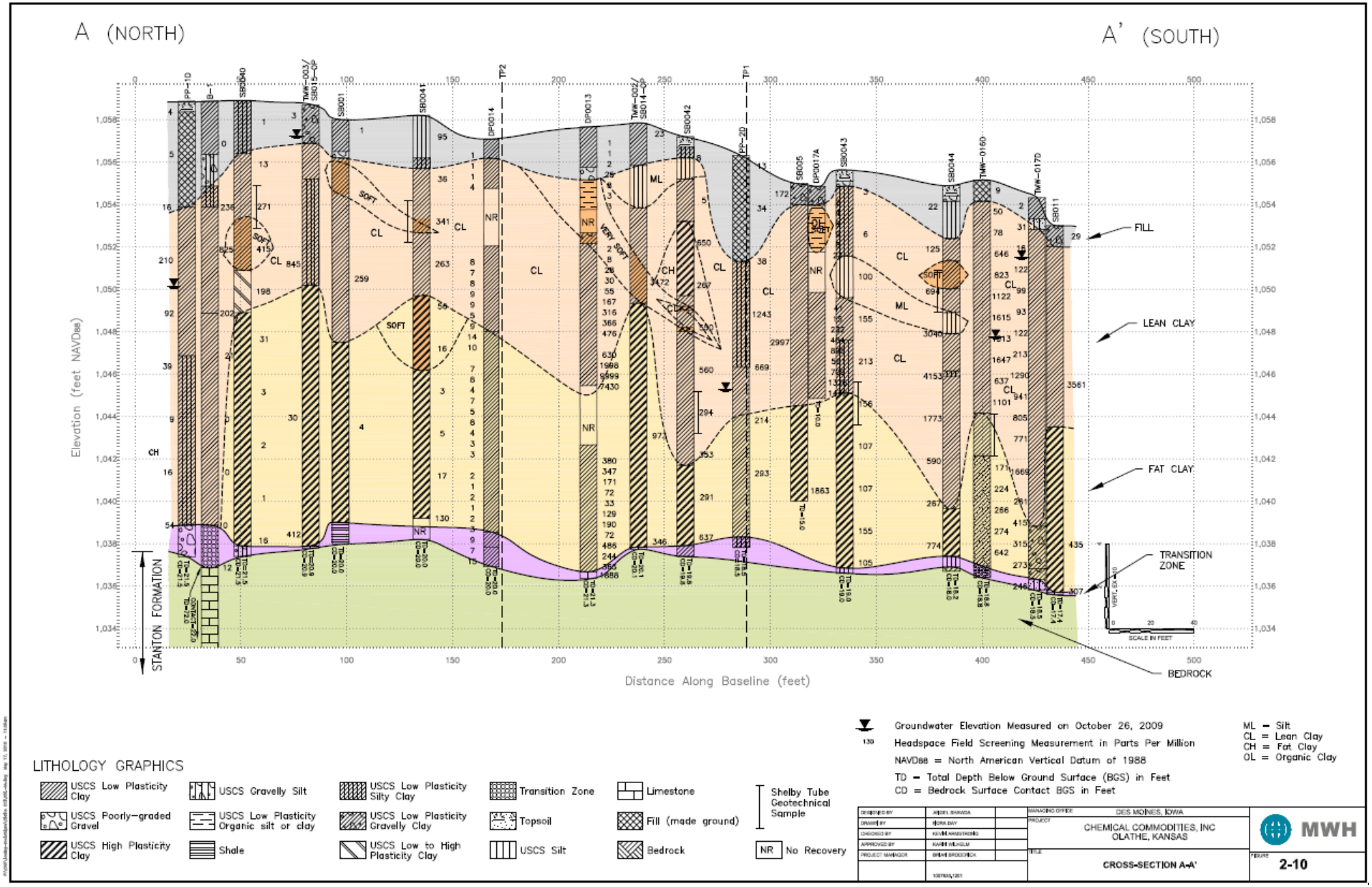
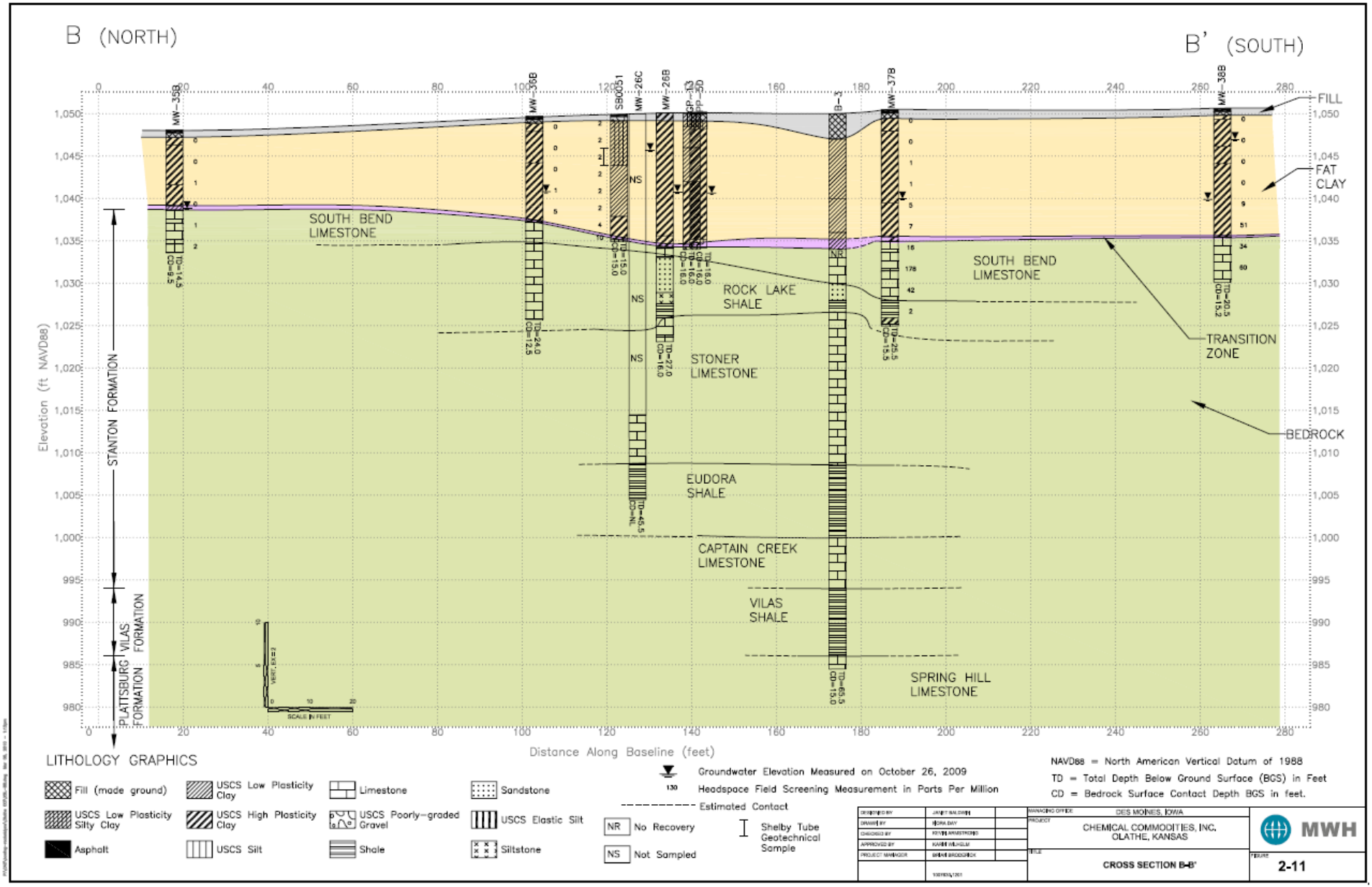


Figure 14 – Geologic Cross-Section Along Ocheltree Street



APPENDIX C – LIST OF TABLES

Table 1: Vapor Intrusion Concentrations

Table 2: Monitoring Well Completion Information

Table 3: Historical Groundwater Monitoring Well Elevations

Table 4: Historical Groundwater Monitoring Well Analytical Data

Table 5: Mann-Kendal and MNA Evaluation

Table 6: Oxidant Delivery

Table 1 - Vapor Intrusion Sampling Results

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 1									
2/4/2026									
Crawlspace	ND	0.11	0.44	ND	1	ND	ND	0.43	ND
Crawlspace - Field Duplicate	ND	0.11	0.44	ND	1.1	ND	ND	0.35	ND
Living Room	ND	0.34	0.49	0.27	1.2	ND	1.2	2	ND
Bedroom	ND	0.26	0.46	0.23	1.2	ND	0.92	3.1	ND
Property 2									
1/17/2025									
Crawlspace	ND	0.21	0.42	0.56	1.1	ND	ND	ND	ND
Bathroom	ND	0.34	0.42	0.96	1.2	ND	ND	ND	ND
Living Room	ND	0.33	0.43	0.85	1.2	ND	ND	ND	ND
Outdoor Ambient	ND	ND	0.42	ND	1.1	ND	ND	ND	ND
Property 3									
1/16/2025									
Crawlspace	ND	0.1	0.43	0.13	1	ND	ND	ND	ND
Crawlspace	ND	ND	0.43	0.13	1	ND	ND	ND	ND
Bathroom	ND	0.36	0.44	0.38	1.1	ND	ND	ND	ND
Living Room	ND	0.17	0.44	0.25	1.1	ND	ND	ND	ND
Property 4									
11/13/2025									
Outdoor Ambient	ND	ND	0.39	ND	1.2	ND	ND	0.37	0.58
Crawlspace	ND	0.11	0.4	0.14	1.2	ND	ND	0.79	0.6
Crawlspace	ND	0.1	0.41	0.14	1.2	ND	ND	0.9	1
Utility Room	ND	0.65	0.59	0.69	4.8	ND	ND	6.4	0.83
5/12/2026									
Bedroom	ND	1.1	0.63	0.69	4.3	ND	ND	6.5	ND
Addition (Utility Room)	ND	0.49	0.57	0.51	3.8	ND	ND	8.8	ND
Crawlspace	ND	0.16	0.5	0.15	1.7	ND	ND	0.86	ND
Outdoor Ambient	ND	ND	0.45	ND	1.5	ND	ND	ND	ND

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 5									
3/4/2026									
Living Room	ND	0.11	0.47	0.18	1.1	ND	ND	ND	ND
Office	ND	ND	0.43	ND	1.1	ND	ND	0.59	ND
Storage Room	ND	0.1	0.48	0.18	0.96	ND	ND	ND	ND
Crawlspace	ND	ND	0.46	ND	1	ND	ND	ND	ND
Outdoor Ambient	ND	ND	0.47	ND	1	ND	ND	ND	ND
Property 6									
11/29/2023									
Crawlspace	ND	ND	0.44	ND	0.85	ND	ND	ND	0.91
Kitchen	ND	0.69	0.47	0.4	1.1	0.4	ND	0.65	0.66
Living Room	ND	0.44	0.43	0.34	1	0.23	ND	0.64	0.48
Living Room	ND	0.57	0.41	0.35	1.7	ND	ND	0.68	0.42
2/27/2025									
Crawlspace	ND	0.17	0.58	0.15	1.3	0.28	ND	ND	0.87
Bedroom	ND	0.83	0.48	0.54	1.7	ND	ND	ND	0.55
Living Room	ND	1.3	0.54	0.54	1.6	ND	ND	ND	0.59
Living Room	ND	1.2	0.48	0.66	1.6	ND	ND	ND	0.41
2/19/2026									
Addition	ND	0.81	0.45	0.64	1.4	ND	ND	ND	0.16
Living Room	ND	ND	0.43	ND	1.2	ND	ND	ND	ND
Outdoor Ambient	ND	0.78	0.45	0.48	2.2	ND	ND	ND	0.19
Property 7									
8/14/2025									
Living Room	ND	0.17	0.46	1.1	1.5	0.54	ND	ND	0.65
Bedroom	ND	0.18	0.49	1.1	1.5	0.7	ND	ND	0.88
Addition	ND	0.23	0.49	0.98	1.5	0.68	ND	ND	0.85
Crawlspace	ND	ND	0.53	0.39	1.4	1	ND	ND	1.2

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 8									
9/15/2025									
Crawlspace	0.29	0.24	8.4	1.8	4.7	5.7	ND	1.8	17
Crawlspace - Field Duplicate	0.26	0.23	7.5	1.6	4.4	5.3	ND	1.6	16
Dining Room	ND	0.48	2	1	28	1.6	ND	0.37	3.6
Spare Bedroom	ND	0.42	1.7	0.85	22	1.4	ND	0.34	3
4/10/2026									
Bedroom	ND	0.17	0.45	0.89	6.5	ND	ND	ND	ND
Living Room	ND	0.16	0.43	0.91	6.8	ND	ND	ND	ND
Laundry Room	ND	ND	0.46	ND	1.4	ND	ND	ND	ND
Outdoor Ambient	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property 9									
9/15/2025									
Crawlspace	ND	0.42	0.49	0.89	1.6	ND	ND	ND	ND
Child Bedroom	ND	0.68	0.41	1.1	2	ND	ND	ND	ND
Living Room	ND	0.87	0.41	1.1	2	ND	ND	ND	ND
Property 10									
8/11/2025									
Outdoor Ambient	ND	ND	0.43	ND	1.3	ND	ND	ND	ND
Living Room	ND	0.46	0.42	3	1.7	ND	ND	2.6	0.14
Garage	ND	0.51	0.41	4.5	1.8	ND	ND	2.4	0.14
Bedroom	ND	0.47	0.39	4.4	2	ND	ND	2.5	ND
Property 11									
8/7/2025									
Outdoor Ambient - Backyard	ND	ND	0.42	ND	1.3	ND	ND	ND	ND
Crawlspace	ND	0.24	0.48	0.98	1.2	ND	6.2	0.45	ND
Garage	ND	0.13	0.4	0.56	1.1	ND	2.1	1.7	ND
Kitchen/Dining	ND	0.38	0.44	1.2	1.2	ND	5.1	0.43	ND
Living Room	ND	0.37	0.44	1.1	1.1	ND	5.8	0.48	ND

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 12									
12/12/2024									
Crawlspace	ND	0.37	1.2	0.63	1	3.7	ND	7	29
Crawlspace	ND	0.27	0.97	0.45	1.5	2.3	ND	4.3	18
Family Room	ND	1.4	1.8	1.2	1.2	5.5	0.99	10	43
Living Room	ND	1.6	1.7	1.1	1.1	5.1	ND	10	41
8/27/2025									
Bedroom	ND	3.2	0.61	2.6	1.5	0.74	2.7	ND	1.6
Crawlspace	ND	0.21	0.36	0.31	0.91	ND	ND	ND	0.24
Living Room	ND	2.7	0.53	0.24	1.5	0.74	2.1	ND	1.5
12/16/2025									
Crawlspace	ND	0.16	0.43	0.12	1.1	0.23	ND	ND	0.3
Bedroom	ND	0.82	0.4	0.42	1.2	ND	ND	ND	0.14
Living Room	ND	1.8	0.44	0.45	1.3	ND	ND	ND	0.16
Property 13									
11/30/2023									
Crawlspace	ND	ND	0.49	ND	1	ND	ND	ND	0.19
Bedroom	ND	0.14	0.47	0.56	1.2	ND	ND	ND	0.23
Living Room	ND	0.13	0.43	0.68	1.2	ND	ND	ND	0.24
12/16/2025									
Outdoor Ambient	ND	ND	0.4	ND	1.1	ND	ND	ND	ND
Crawlspace	ND	ND	0.45	ND	1.2	ND	ND	ND	ND
Crawlspace	ND	ND	0.42	ND	1.1	ND	ND	ND	ND
Bedroom	ND	0.1	0.43	0.26	1.2	ND	ND	ND	ND
Living Room	ND	0.1	0.4	0.22	1.2	ND	ND	ND	ND
Property 14									
11/29/2023									
Crawlspace	ND	0.1	0.46	0.18	1.1	ND	ND	ND	0.63
Bedroom	ND	0.67	0.44	1	1.1	ND	ND	ND	0.78
Living Room	ND	0.77	0.43	1	1.1	ND	ND	ND	0.75

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 14									
12/16/2025									
Crawlspace	ND	ND	0.41	ND	1	ND	ND	ND	ND
Crawlspace	ND	ND	0.4	ND	0.99	ND	ND	ND	ND
Kitchen	ND	0.48	0.4	0.43	1.1	ND	ND	ND	ND
Living Room	ND	0.56	0.42	0.39	1.2	ND	ND	ND	ND
Property 15									
11/30/2023									
Crawlspace	ND	ND	0.43	ND	1	ND	ND	ND	ND
Bedroom	ND	0.24	0.44	0.13	1	ND	ND	0.76	0.16
Living Room	ND	0.17	0.5	0.15	1.1	ND	ND	0.68	0.17
2/27/2026									
Crawlspace	ND	0.11	0.54	0.12	1.1	ND	ND	ND	0.33
Living Room	ND	0.11	0.55	0.27	1.3	ND	ND	ND	0.53
Garage	ND	0.1	0.49	0.14	1.1	ND	ND	ND	0.51
Outdoor Ambient	**ND**	ND	0.49	ND	1.2	ND	ND	ND	0.46
Property 16									
11/29/2023									
Crawlspace	ND	ND	0.41	ND	0.95	ND	ND	ND	ND
Bedroom	ND	0.11	0.44	0.18	1.1	ND	ND	ND	ND
Living Room	ND	0.11	0.46	0.25	1.1	ND	ND	ND	ND
2/27/2025									
Outdoor Ambient	ND	ND	0.46	ND	1.2	ND	ND	ND	ND
Crawlspace	ND	ND	0.46	0.13	1.3	ND	ND	ND	ND
Bedroom	ND	0.14	0.49	0.18	1.6	ND	ND	ND	ND
Living Room	ND	0.13	0.48	0.17	1.4	ND	ND	ND	ND
5/12/2026									
Bedroom	ND	0.27	0.48	0.26	2.1	ND	ND	ND	ND
Crawlspace	ND	ND	0.47	ND	1.2	ND	ND	ND	ND
Crawlspace - Field Duplicate	ND	ND	0.5	ND	1.4	ND	ND	ND	ND
Living Room	ND	0.24	0.48	0.26	2	ND	ND	ND	ND

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 17									
7/30/2025									
Crawlspace	ND	0.17	0.44	0.19	1.2	ND	ND	ND	ND
Garage	ND	0.2	0.39	0.22	1.3	ND	ND	ND	ND
Living Room	ND	0.31	0.4	0.29	1.2	ND	ND	ND	ND
Office	ND	0.27	0.4	0.32	1.3	ND	ND	ND	ND
Property 18									
5/22/2024									
Crawlspace	ND	ND	0.41	ND	2.3	ND	ND	ND	ND
Crawlspace	ND	ND	0.41	ND	0.9	ND	ND	ND	ND
Bedroom	ND	0.53	0.4	0.27	1	ND	ND	ND	ND
Living Room	ND	0.57	0.42	0.28	1	ND	ND	ND	ND
Property 19									
8/7/2025									
Basement	ND	0.29	0.48	22	1.5	0.4	1.3	1.4	4.4
Basement - Field Duplicate	ND	0.26	0.45	22	1.4	0.39	1.3	1.3	4.1
Laundry Room	ND	0.2	0.44	25	1.5	0.29	1.5	1	3.1
Living Room	ND	0.19	0.43	21	1.4	0.26	1.3	1.1	3.1
Spare Bedroom	ND	0.2	0.45	20	1.5	0.29	1.3	1.1	3.2
11/14/2025									
Bedroom	ND	0.29	0.51	1	1.8	ND	ND	0.66	3.3
Basement - NE Corner	ND	0.12	0.41	0.39	1.3	ND	ND	0.72	2.5
Basement - SW Corner	ND	0.12	0.41	0.36	1.3	ND	ND	0.67	2.3
Living Room	ND	0.25	0.45	0.75	1.6	ND	ND	0.5	2.4
1/22/2026									
Basement - NE Corner	ND	0.12	0.45	0.14	1.3	ND	ND	ND	0.5
Basement - SW Corner	ND	0.11	0.46	0.15	1.3	ND	ND	ND	0.5
Living Room	ND	0.11	0.47	0.21	1.3	ND	ND	ND	0.47

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 20									
11/29/2023									
Crawlspace	ND	ND	0.43	0.13	1.1	ND	ND	ND	ND
Bedroom	ND	0.12	0.45	0.25	1	ND	ND	ND	ND
Living Room	ND	ND	0.43	0.3	1.1	ND	ND	ND	ND
11/5/2025									
Living Room	ND	0.31	0.4	0.14	1.3	ND	ND	ND	0.25
Crawlspace	ND	0.12	0.39	ND	1.2	ND	ND	ND	0.34
Crawlspace - FB	ND	0.12	0.39	ND	1.2	ND	ND	ND	0.33
Bedroom	ND	0.29	0.41	0.15	1.4	ND	ND	ND	0.25
Property 21									
5/30/2025									
Crawlspace - Bedroom Closet	ND	ND	0.36	0.27	0.95	ND	ND	ND	ND
Crawlspace - Exterior Access	ND	ND	0.32	0.12	1.1	ND	ND	ND	ND
Back Bedroom/Office	ND	ND	0.38	0.55	1.4	ND	ND	0.63	ND
Living Room	ND	ND	0.37	0.51	1.5	ND	ND	1	ND
Living Room	ND	ND	0.36	0.48	1.3	ND	ND	1	0.14
4/10/2026									
Crawlspace	ND	ND	0.48	0.12	1.3	ND	ND	ND	0.24
West Bedroom	ND	ND	0.48	0.21	1.6	ND	ND	0.75	0.27
Living Room	ND	0.41	0.46	0.23	1.6	ND	ND	0.59	0.25
Outdoor Ambient	ND	0.11	0.49	ND	1.5	ND	ND	ND	0.21
Property 22									
11/29/2023									
Crawlspace	0.65	ND	4.3	0.36	1	0.86	ND	2.9	20
Bedroom	1.1	ND	6.7	0.56	1.3	1.1	ND	4.7	29
Living Room	1.4	0.11	9	0.72	2	2.1	ND	7.2	42
5/1/2024									
Crawlspace	U 0.2	U 0.1	0.49	0.21	1.1	U 0.2	U 0.7	1.1	4.1
Bedroom	U 0.2	U 0.1	0.44	0.24	1.3	U 0.2	U 0.7	0.92	3.2
Living Room	U 0.2	0.11	0.52	0.27	1.3	U 0.2	U 0.7	0.98	3.6

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 22									
8/22/2024									
Crawlspace	ND	ND	0.92	0.56	1.1	0.31	ND	3.4	14
Crawlspace	ND	ND	0.9	0.56	1.1	0.3	ND	3.3	13
Bedroom	ND	ND	1.1	0.83	1.3	0.4	ND	4.2	17
Living Room	ND	0.12	0.95	0.76	1	0.35	ND	4	15
10/11/2024									
Bedroom	ND	ND	0.36	0.2	1.3	ND	ND	0.64	1.7
Closet	ND	0.11	0.35	0.22	1.3	ND	ND	0.6	1.9
Garage	0.92	0.13	7.1	1.1	1.2	0.79	ND	8.1	41
11/5/2024									
Crawlspace	ND	ND	1.2	0.39	1	0.29	ND	2	10
Bedroom	ND	ND	0.57	0.53	1.6	ND	ND	0.62	2.5
Garage	0.82	ND	5.5	1.1	1.6	1.4	ND	7.1	38
HVAC Closet	1.6	ND	11	1.5	1.7	2.5	ND	12	68
SW Bedroom	ND	ND	0.48	0.59	1.2	ND	ND	0.38	1.8
12/12/2024									
Outdoor Ambient	ND	ND	0.48	ND	1.1	U 0.2	ND	ND	ND
Bedroom	ND	ND	0.49	ND	0.57	U 0.2	ND	ND	0.6
Crawlspace	0.29	ND	3.1	0.46	U 0.42	0.26	ND	0.73	11
Garage	7	ND	41	2.6	U 0.42	15	ND	2.2	97
2/27/2026									
Living Room	ND	0.1	0.66	0.6	1.6	ND	ND	0.61	2.6
Bedroom	ND	0.11	0.7	0.37	1.5	ND	ND	0.75	2.9
Garage	ND	ND	0.55	0.28	1.4	ND	ND	0.4	1.3
Crawlspace	ND	ND	0.64	0.27	1.2	ND	ND	0.57	2.4
4/10/2026									
Crawlspace	ND	0.1	0.51	0.16	1.2	ND	ND	ND	0.48
Crawlspace FB	ND	ND	0.51	0.16	1.4	ND	ND	ND	0.49
Living Room	ND	0.11	0.5	0.34	1.8	ND	ND	0.4	0.45
Bedroom	ND	0.1	0.52	0.16	1.5	ND	ND	0.34	0.78

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 23									
11/29/2023									
Outdoor Ambient	ND	ND	0.41	ND	0.99	ND	ND	ND	ND
Crawlspace	ND	ND	0.78	0.21	0.89	ND	ND	0.63	2.5
Bedroom	ND	0.64	0.79	0.55	1.1	ND	2.6	0.77	2.7
Living Rom	ND	0.42	0.74	0.5	1.1	ND	2.5	0.71	2.4
5/1/2024									
Outdoor Ambient	ND	ND	0.5	ND	1.1	U 0.2	ND	ND	ND
Crawlspace	ND	0.5	0.57	0.31	1.3	U 0.2	28	1.7	0.27
Bedroom	ND	1.4	0.5	1.9	1.7	U 0.2	ND	6.8	ND
Living Room	ND	2.1	0.64	0.75	1.4	U 0.2	69	6.3	0.24
7/30/2025									
Crawlspace	ND	4.6	0.5	0.84	1.3	ND	4.6	1.5	8.5
Bedroom	ND	5.5	0.48	1.1	1.7	ND	6	1.8	11
Laundry Room	ND	4.7	0.39	0.83	1.5	ND	12	1.6	9.2
Living Room	ND	4.3	0.42	0.78	1.4	ND	5.5	1.5	8.2
3/4/2026									
Crawlspace	ND	0.13	0.48	0.15	1.1	ND	1.2	ND	0.35
Crawlspace - Field Duplicate	ND	0.13	0.49	0.14	1	ND	1.1	ND	0.36
Living Room	ND	0.4	0.45	0.32	1.2	ND	5.3	ND	0.39
Bedroom	ND	0.35	0.45	0.4	1.2	ND	4	ND	0.38
Property 24									
11/29/2023									
Crawlspace	ND	ND	0.39	ND	0.99	ND	ND	ND	ND
Bedroom	ND	ND	0.41	ND	1	ND	ND	ND	ND
Living Rom	ND	0.12	0.39	0.27	1	ND	ND	ND	ND
9/15/2025									
Crawlspace	ND	0.23	0.4	0.14	1.6	ND	ND	ND	ND
Child Bedroom	ND	0.61	0.47	0.15	1.4	ND	ND	ND	ND
Garage	ND	0.36	0.43	0.16	1.3	ND	ND	ND	ND
Living Room	ND	0.71	0.46	0.16	1.3	ND	ND	ND	ND

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 25A									
2/27/2025									
Crawlspace	ND	0.1	0.5	0.14	0.63	ND	ND	ND	0.24
Bedroom	ND	0.17	0.55	0.91	1	ND	ND	ND	0.34
Living Room	ND	0.18	0.56	0.9	1.2	ND	ND	ND	0.37
2/27/2026									
Crawlspace	ND	0.11	0.54	0.12	1.1	ND	ND	ND	0.33
Living Room	ND	0.11	0.55	0.27	1.3	ND	ND	ND	0.53
Garage	ND	0.1	0.49	0.14	1.1	ND	ND	ND	0.51
Outdoor Ambient	ND	ND	0.49	ND	1.2	ND	ND	ND	0.46
Property 25B									
5/25/2022									
Crawlspace	ND	ND	0.54	0.22	0.77	ND	ND	ND	0.79
Bedroom	ND	ND	0.46	1.5	1.5	ND	ND	ND	ND
Living Room	ND	0.11	0.55	0.84	2.2	ND	ND	ND	0.94
5/24/2023									
Living Room	NA	NA	NA	NA	NA	NA	NA	NA	0.51
Bedroom	NA	NA	NA	NA	NA	NA	NA	NA	ND
Crawlspace	NA	NA	NA	NA	NA	NA	NA	NA	0.41
5/22/2024									
Crawlspace	ND	0.17	0.42	0.36	0.43	ND	ND	0.34	0.22
Crawlspace	ND	0.16	0.43	0.37	0.61	ND	ND	ND	0.22
Bedroom	ND	2.2	0.42	0.31	1.1	ND	ND	ND	0.15
Living Room	ND	4.3	0.43	0.38	1.2	ND	ND	ND	0.17
2/27/2025									
Crawlspace	ND	0.13	0.51	0.14	0.59	ND	ND	ND	0.25
Bedroom	ND	0.47	0.51	0.29	1.6	ND	ND	ND	0.26
Living Room	ND	0.58	0.52	0.32	1.5	ND	ND	ND	0.28
Property 26A									
1/16/2025									
Kitchen	ND	0.78	0.43	0.27	1	ND	ND	ND	ND
Living Room	ND	0.82	0.45	0.29	1	ND	ND	ND	ND
Living Room	ND	0.84	0.45	0.29	1	ND	ND	ND	ND
OB	ND	ND	0.41	ND	1.1	ND	ND	ND	ND

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 26A									
11/5/2025									
Outdoor Ambient	ND	ND	0.39	ND	1.3	ND	ND	ND	0.32
Kitchen	ND	1.8	0.44	0.49	1.6	ND	ND	ND	0.22
Property 26B									
11/16/2022									
Living Room	ND	ND	0.73	0.30	1.2	0.21	ND	2.2	8.2
Bedroom	ND	ND	0.49	0.41	1.3	ND	ND	0.72	2.3
Crawlspace	ND	0.10	0.55	0.46	1.5	ND	ND	1.0	3.7
11/5/2025									
Living Room	ND	0.15	0.44	0.93	1.5	ND	ND	ND	0.34
Crawlspace	ND	0.2	0.4	0.28	1.1	ND	ND	ND	0.46
Utility Room	ND	0.15	0.59	0.42	1.3	ND	ND	0.37	0.57
1/16/2026									
Crawlspace	ND	0.14	0.44	0.14	0.94	ND	ND	ND	ND
Bathroom	ND	0.15	0.45	0.22	1	ND	ND	ND	ND
Living Room	ND	0.16	0.44	0.21	1	ND	ND	ND	ND
Property 27A									
7/31/2025									
Laundry Room	ND	ND	0.42	0.37	0.86	ND	ND	ND	0.19
Living Room	ND	ND	0.44	0.43	0.84	ND	ND	ND	0.2
Property 27B									
11/17/2021									
Crawlspace	ND	ND	0.49	ND	0.47	ND	ND	ND	ND
Bedroom	ND	ND	0.49	0.33	0.60	ND	ND	ND	ND
5/25/2022									
Crawlspace	ND	ND	0.45	ND	0.60	ND	ND	ND	ND
Bedroom	ND	ND	0.58	0.23	0.92	ND	ND	ND	ND
Living Room	ND	ND	0.56	0.24	0.87	ND	ND	ND	ND
5/22/2024									
Crawlspace	ND	ND	0.42	0.13	0.76	ND	ND	ND	ND
Bedroom	ND	ND	0.42	1.1	0.96	ND	ND	ND	ND
Living Room	ND	ND	0.43	1.1	0.94	ND	ND	ND	ND
Living Room	ND	ND	0.42	1.4	0.98	ND	ND	ND	ND

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 27B									
7/31/2025									
Crawlspace	ND	ND	0.43	0.16	0.6	ND	ND	ND	0.22
Laundry Room	ND	ND	0.47	0.22	0.75	ND	ND	ND	0.21
Living Room	ND	ND	0.45	0.18	0.74	ND	ND	0.55	0.21
Property 28A									
5/25/2022									
Crawlspace	ND	ND	0.41	0.16	1.3	ND	ND	ND	ND
Living Room	ND	ND	0.42	0.14	1.3	ND	ND	ND	ND
7/31/2025									
Laundry Room	ND	ND	ND	0.22	ND	ND	ND	ND	ND
Living Room	ND	ND	ND	0.28	ND	ND	ND	ND	ND
Property 28B									
5/25/2022									
Crawlspace	ND	ND	0.41	0.16	0.53	ND	ND	ND	ND
Bedroom	ND	0.49	0.41	0.21	1.5	ND	ND	ND	ND
Living Room	ND	0.73	0.42	0.39	1.8	ND	ND	ND	ND
7/31/2025									
Outdoor Ambient	ND	ND	ND	ND	ND	ND	ND	ND	ND
Crawlspace	ND	ND	0.39	0.22	1.2	ND	ND	ND	ND
Laundry Room	ND	ND	0.4	0.18	1.1	ND	ND	ND	ND
Living Room	ND	ND	0.39	0.21	1.3	ND	ND	ND	ND
Living Room - Field Duplicate	ND	ND	0.4	0.21	1.3	ND	ND	ND	ND
Property 29A									
5/25/2022									
Living Room	ND	ND	0.52	0.29	10	ND	ND	ND	ND
Living Room	ND	ND	0.63	0.50	2.7	ND	ND	ND	ND
Bedroom	ND	ND	0.60	0.42	2.4	ND	ND	ND	ND

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 29B									
11/17/2021									
Living Room	ND	ND	0.57	0.32	0.92	ND	ND	ND	ND
Bedroom	ND	ND	0.56	0.32	0.90	ND	ND	ND	ND
Outside	ND	ND	0.49	ND	1.1	ND	ND	ND	ND
Crawlspace	ND	ND	0.47	ND	0.59	ND	ND	ND	ND
5/25/2022									
Crawlspace	ND	ND	0.55	0.17	1.1	ND	ND	ND	ND
Bedroom	ND	ND	0.49	0.18	1.0	ND	ND	ND	0.23
Living Room	ND	ND	0.41	0.16	1.0	ND	ND	ND	0.33
5/24/2023									
Living Room	NA	NA	NA	NA	NA	NA	NA	NA	0.17
Bedroom	NA	NA	NA	NA	NA	NA	NA	NA	0.16
Crawlspace	NA	NA	NA	NA	NA	NA	NA	NA	0.17
7/31/2025									
Crawlspace	ND	0.23	ND	0.44	ND	ND	ND	ND	ND
Laundry Room	ND	0.35	ND	0.44	ND	ND	ND	ND	ND
Living Room	ND	0.26	ND	0.47	ND	ND	ND	ND	ND
Property 30A									
1/28/2026									
Living Room	ND	0.35	0.42	1.2	1.1	ND	ND	0.62	ND
Property 30B									
11/17/2021									
Crawlspace	ND	ND	0.48	ND	0.53	0.30	ND	ND	0.45
Bedroom - Field Duplicate	ND	ND	0.48	0.15	0.98	ND	ND	ND	0.30
Bedroom	ND	ND	0.49	0.15	0.95	ND	ND	ND	0.32
Living Room	ND	ND	0.42	0.13	0.83	ND	ND	ND	0.30
5/25/2022									
Crawlspace	ND	ND	0.52	0.21	ND	1.7	ND	0.34	1.7
Bedroom	ND	ND	0.48	0.42	0.93	0.85	ND	ND	0.83
Living Room	ND	0.10	0.51	0.37	1.3	0.75	ND	ND	0.74

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 30B									
5/24/2023									
Living Room	NA	NA	NA	NA	NA	NA	NA	NA	ND
Bedroom	NA	NA	NA	NA	NA	NA	NA	NA	0.26
Crawlspace	NA	NA	NA	NA	NA	NA	NA	NA	0.58
5/22/2024									
Crawlspace	ND	ND	0.45	0.13	0.48	ND	ND	ND	ND
Bedroom	ND	ND	0.48	0.44	1.1	ND	ND	ND	ND
Living Room	ND	0.11	0.52	0.4	1.7	ND	ND	ND	ND
1/21/2026									
Living Room	ND	ND	0.46	0.13	1	ND	ND	ND	ND
Crawlspace	ND	ND	0.42	0.13	0.71	ND	ND	ND	ND
Property 31A									
1/21/2026									
Living Room	ND	0.1	0.43	0.35	1	0.49	ND	0.86	2
8/5/2026									
Living Room	ND	0.33	0.4	1.8	1.1	ND	ND	ND	ND
Property 31B									
5/25/2022									
Crawlspace	ND	0.24	0.47	0.77	0.92	ND	ND	ND	ND
Bedroom	0.21	0.80	0.52	1.7	1.3	ND	ND	ND	0.65
Living Room	ND	0.53	0.50	1.5	1.3	ND	ND	ND	0.83
5/22/2024									
Crawlspace	ND	ND	0.43	0.22	0.87	ND	ND	ND	0.5
Bedroom	ND	0.81	0.42	0.76	1	ND	0.99	ND	0.41
Living Room	ND	0.57	0.44	0.87	2	ND	1.1	ND	0.45
1/21/2026									
Living Room	ND	ND	0.45	0.13	0.96	0.47	ND	0.62	1.7
Crawlspace	ND	ND	0.46	0.12	0.93	0.61	ND	0.75	2.2
Crawlspace - Field Duplicate	ND	ND	0.45	0.12	0.83	0.6	ND	0.78	2.2
Outdoor Ambient	ND	ND	0.45	ND	1.2	ND	ND	ND	ND

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 31B									
2/20/2026									
Bedroom Closet	ND	ND	0.44	0.18	0.94	ND	ND	0.36	0.76
Bedroom Closet - Field Duplicate	ND	ND	0.45	0.19	0.96	ND	ND	0.36	0.82
Living Room	ND	ND	0.45	0.18	1.1	ND	ND	0.34	0.78
Bathroom	ND	ND	0.43	0.18	0.92	ND	ND	0.34	0.76
Garage	ND	ND	0.43	0.18	1.1	ND	ND	ND	0.44
Outdoor Ambient	ND	ND	0.41	ND	1.2	ND	ND	ND	ND
8/5/2026									
Crawlspace	ND	0.69	0.42	0.64	0.92	ND	ND	ND	ND
Living Room	ND	2.9	0.45	1.2	1.3	ND	ND	ND	ND
Property 32A									
3/23/2026									
Living Room	ND	0.12	0.46	0.73	1.4	ND	0.85	ND	ND
Laundry Room	ND	ND	0.45	0.18	1.2	ND	ND	ND	ND
Outdoor Ambient	ND	0.1	0.46	ND	1.3	ND	ND	ND	ND
Property 32B									
11/17/2021									
Crawlspace	ND	ND	0.48	0.13	0.59	ND	ND	ND	ND
Bedroom - Field Duplicate	ND	ND	0.49	0.30	0.89	ND	ND	ND	ND
Bedroom	ND	ND	0.50	0.32	1.2	ND	ND	ND	ND
Living Room	ND	ND	0.43	0.29	0.68	ND	ND	ND	ND
5/25/2022									
Crawlspace	ND	ND	0.45	ND	0.52	ND	ND	ND	ND
Bedroom	ND	0.11	0.44	0.31	0.87	ND	ND	ND	ND
Living Room	ND	0.10	0.43	0.22	0.84	ND	ND	ND	ND
5/24/2023									
Living Room	NA	NA	NA	NA	NA	NA	NA	NA	0.18
Bedroom	NA	NA	NA	NA	NA	NA	NA	NA	0.18
Crawlspace	NA	NA	NA	NA	NA	NA	NA	NA	0.18

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 32B									
5/22/2024									
Crawlspace	ND	ND	0.43	0.59	0.61	ND	ND	ND	ND
Bedroom	ND	0.14	0.41	0.13	1.4	ND	ND	ND	ND
Living Room	ND	0.2	0.42	ND	4	ND	ND	ND	ND
3/23/2026									
Living Room	ND	0.54	0.45	0.16	1.4	ND	ND	ND	ND
Crawlspace	ND	ND	ND	ND	ND	ND	ND	ND	ND
Property 33A									
11/16/2022									
Living Room	ND	0.51	0.46	0.80	3.0	ND	ND	ND	ND
Bedroom	ND	0.51	0.44	0.77	2.7	ND	ND	ND	ND
Crawlspace	ND	0.13	0.41	0.21	1.2	ND	ND	ND	ND
Crawlspace	ND	0.11	0.40	0.19	1.1	ND	ND	ND	ND
1/16/2025									
Crawlspace	ND	0.11	0.44	0.12	1.1	ND	ND	ND	ND
Bathroom	ND	0.52	0.45	0.58	1.3	ND	ND	ND	ND
Living Room	ND	0.72	0.43	0.56	1.2	ND	ND	ND	ND
11/7/2025									
Living Room	ND	0.44	0.36	0.24	2.6	ND	ND	ND	ND
Crawlspace	ND	0.17	0.35	0.12	1.6	ND	ND	ND	ND
Utility Room	ND	0.4	0.35	0.24	2.3	ND	ND	ND	ND
2/27/2026									
Living Room	ND	0.1	0.66	0.6	1.6	ND	ND	0.61	2.6
Bedroom	ND	0.11	0.7	0.37	1.5	ND	ND	0.75	2.9
Garage	ND	ND	0.55	0.28	1.4	ND	ND	0.4	1.3
Crawlspace	ND	ND	0.64	0.27	1.2	ND	ND	0.57	2.4
Property 33B									
1/16/2025									
Crawlspace	ND	ND	0.43	0.85	1.1	ND	ND	ND	ND
Bathroom	ND	0.1	0.45	3.5	2.6	ND	ND	ND	ND
Bathroom	ND	ND	0.43	3.3	1.1	ND	ND	ND	ND
Living Room	ND	0.1	0.44	3	1.1	ND	ND	ND	ND

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 33B									
11/7/2025									
Living Room	ND	0.18	0.37	0.53	1.6	ND	ND	ND	ND
Crawlspace	ND	0.12	0.37	0.28	1.4	ND	ND	ND	ND
Bedroom	ND	0.17	0.38	0.59	1.8	ND	ND	ND	ND
Property 34A									
3/23/2026									
Living Room	ND	ND	0.53	0.23	1.2	ND	ND	ND	1.5
Property 34B									
11/17/2021									
Crawlspace	ND	ND	0.50	ND	0.52	ND	ND	ND	ND
Bedroom	ND	ND	0.47	ND	0.85	ND	ND	ND	ND
Living Room - Field Duplicate	ND	ND	0.47	ND	0.92	ND	ND	ND	ND
Living Room	ND	ND	0.48	ND	0.93	ND	ND	ND	ND
5/25/2022									
Crawlspace	ND	ND	0.45	ND	0.60	ND	ND	ND	ND
Bedroom	ND	ND	0.58	0.23	0.92	ND	ND	ND	ND
Living Room	ND	ND	0.56	0.24	0.87	ND	ND	ND	ND
5/24/2023									
Living Room	NA	NA	NA	NA	NA	NA	NA	NA	0.17
Bedroom	NA	NA	NA	NA	NA	NA	NA	NA	0.18
Crawlspace	NA	NA	NA	NA	NA	NA	NA	NA	0.21
3/19/2026									
Living Room	ND	ND	0.49	0.13	1.3	ND	ND	ND	0.37
Crawlspace	ND	ND	0.62	0.2	0.57	ND	ND	0.7	3.9
Property 35A									
12/3/2025									
Crawlspace	ND	6.4	0.41	0.3	1.2	ND	ND	ND	ND
Living Room	ND	6.3	0.44	0.3	1.3	ND	ND	ND	ND

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 35B									
11/17/2021									
Bedroom	ND	0.11	0.49	0.30	4.3	ND	ND	0.70	0.20
Living Room - Field Duplicate	ND	0.13	0.48	0.31	3.0	ND	ND	0.75	0.23
Living Room	ND	0.12	0.45	0.29	2.6	ND	ND	0.75	0.21
5/25/2022									
Crawlspace	ND	0.14	0.64	0.22	0.42 U	0.64	ND	1.3	6.3
Bedroom	ND	0.16	0.58	0.39	1.2	0.48	ND	0.96	4.4
Living Room	ND	0.13	0.59	0.34	0.73	0.43	ND	0.96	4.2
11/16/2022									
Crawlspace	ND	ND	0.42	0.45	1.1	ND	ND	ND	ND
Bedroom	ND	ND	0.40	0.57	1.3	ND	ND	ND	ND
Living Room	ND	ND	0.39	0.53	1.5	ND	ND	0.50	ND
Living Room	ND	ND	0.39	0.53	1.7	ND	ND	0.68	0.20
12/3/2025									
Crawlspace	ND	9.3	0.42	0.31	1.2	ND	ND	ND	0.28
Living Room	ND	0.15	0.43	0.15	1.4	ND	ND	ND	ND
Property 36									
2/23/2026									
Living Room	ND	ND	0.56	0.28	1.1	ND	ND	1.6	4.4
Garage	ND	ND	0.59	0.27	1.2	ND	ND	1.5	4.1
East Bedroom	ND	0.11	0.66	0.32	1.2	ND	ND	1.6	5
Basement - SE Corner	ND	0.1	0.67	0.36	1.2	0.22	ND	2	6.2
Basement - NW Corner	ND	ND	0.69	0.37	1.3	0.21	ND	2	6.2
Property 37									
5/22/2024									
Outdoor Ambient	ND	ND	0.4	ND	1.3	ND	ND	ND	ND
Crawlspace	ND	ND	0.42	0.29	0.86	ND	ND	ND	ND
Bedroom	ND	ND	0.4	0.49	1	ND	ND	ND	ND
Living Room	ND	ND	0.4	0.75	1.1	ND	ND	ND	ND

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 38									
7/24/2025									
Outdoor Ambient - Backyard	ND	ND	0.39	ND	1.3	ND	ND	ND	ND
Addition Office Room	ND	1.4	0.5	1.4	1.5	ND	0.74	ND	ND
Basement NE Corner	ND	1.5	0.59	1.5	1.6	ND	0.92	ND	ND
Basement SW Corner	ND	1.4	0.54	1.5	1.9	ND	0.84	ND	ND
Living Room	ND	2.2	0.53	1.4	1.5	ND	0.77	ND	ND
Property 39A									
11/16/2022									
Crawlspace	ND	ND	0.40	0.16	1.7	ND	ND	0.44	ND
Bedroom	ND	0.11	0.41	0.26	1.5	ND	ND	0.37	ND
Living Room	ND	0.11	0.40	0.23	1.2	ND	ND	ND	ND
12/3/2025									
Outdoor Ambient	ND	ND	0.38	ND	1.2	ND	ND	ND	ND
Crawlspace	ND	0.12	0.4	0.12	1.2	ND	ND	ND	ND
Living Room	ND	0.14	0.41	0.15	1.4	ND	ND	ND	ND
5/12/2026									
Crawlspace	ND	0.16	0.48	0.21	1.7	ND	ND	ND	ND
Bedroom	ND	0.54	0.50	0.33	3.4	ND	ND	ND	ND
Living Room	ND	0.44	0.52	0.66	3.4	ND	ND	ND	ND
Property 39B									
12/3/2025									
Crawlspace	ND	0.13	0.6	ND	1.8	ND	ND	ND	ND
Living Room	ND	0.13	0.41	ND	1.3	ND	ND	ND	0.19
5/12/2026									
Crawlspace	ND	ND	0.46	ND	1.2	ND	ND	ND	ND
Bedroom	ND	0.16	0.47	0.35	1.6	ND	ND	ND	ND
Living Room	ND	0.14	0.45	0.16	1.3	ND	ND	ND	0.15
Property 40A									
12/3/2025									
Crawlspace	ND	0.1	0.42	0.12	1.1	ND	ND	ND	ND
Living Room	ND	ND	0.41	0.14	1.2	ND	ND	ND	ND

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 40B									
12/3/2025									
Crawlspace	ND	ND	0.41	ND	1.1	ND	ND	ND	ND
Living Room	ND	ND	0.4	0.22	1.2	ND	ND	ND	ND
Property 41A									
12/3/2025									
Crawlspace	ND	ND	0.39	ND	1.3	ND	ND	ND	ND
Living Room	ND	0.11	0.43	0.21	1.3	ND	ND	ND	ND
Property 41B									
5/25/2022									
Crawlspace	ND	0.11	0.45	0.17	1.2	ND	ND	ND	0.51
Bedroom	ND	0.31	0.50	0.27	2.0	0.21	ND	0.38	1.7
Living Room	ND	0.31	0.49	0.23	1.9	ND	ND	ND	1.5
5/24/2023									
Living Room	NA	NA	NA	NA	NA	NA	NA	NA	0.34
Bedroom	NA	NA	NA	NA	NA	NA	NA	NA	0.29
Crawlspace	NA	NA	NA	NA	NA	NA	NA	NA	0.31
Crawlspace	NA	NA	NA	NA	NA	NA	NA	NA	0.31
12/3/2025									
Crawlspace	ND	0.1	0.42	ND	1.2	ND	ND	ND	ND
Crawlspace	ND	0.11	0.43	ND	1.2	ND	ND	ND	ND
Living Room	ND	0.17	0.43	0.16	1.3	ND	ND	ND	ND
Property 42									
11/17/2021									
Bedroom	ND	ND	0.43	0.29	1.1	ND	ND	ND	0.43
Basement	ND	ND	0.44	0.16	0.87	ND	ND	ND	0.75
Living Room	ND	ND	0.43	0.26	1.6	ND	ND	ND	0.44
Property 43									
8/8/2025									
Crawlspace	ND	ND	0.41	0.14	1.3	ND	ND	ND	ND
Basement	ND	0.51	0.52	0.55	1.6	ND	ND	ND	ND
Dining Room	ND	0.59	0.56	0.68	1.7	ND	ND	ND	ND

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 44A									
5/25/2022									
Crawlspace	ND	ND	0.42	0.20	0.46	ND	ND	ND	ND
Bedroom	ND	0.59	0.46	2.8	3.9	ND	ND	0.55	ND
5/24/2023									
Living Room	NA	NA	NA	NA	NA	NA	NA	NA	0.15
Bedroom	NA	NA	NA	NA	NA	NA	NA	NA	0.15
Bedroom	NA	NA	NA	NA	NA	NA	NA	NA	ND
Crawlspace	NA	NA	NA	NA	NA	NA	NA	NA	0.18
10/1/2025									
Crawlspace	ND	0.41	0.52	1.3	0.97	ND	ND	ND	0.3
Bedroom	ND	0.73	0.6	1.4	1.5	ND	ND	ND	0.3
Living Room	ND	0.78	0.63	0.79	1.2	ND	ND	ND	0.28
Property 44B									
11/17/2021									
Bedroom	ND	0.21	0.54	0.98	1.1	ND	ND	ND	ND
Crawlspace	ND	ND	0.48	0.30	0.48	ND	ND	ND	ND
Living Room	ND	0.24	0.47	0.35	1.1	ND	ND	ND	ND
5/24/2023									
Living Room	NA	NA	NA	NA	NA	NA	NA	NA	0.14
Bedroom	NA	NA	NA	NA	NA	NA	NA	NA	0.17
Crawlspace	NA	NA	NA	NA	NA	NA	NA	NA	ND
10/1/2025									
Crawlspace	ND	0.24	0.48	0.24	0.61	ND	ND	0.41	0.31
Garage	ND	0.99	0.46	0.33	0.98	ND	ND	ND	0.26
Living Room	ND	3.9	0.44	0.47	1.2	ND	ND	ND	0.32
Property 45A									
10/1/2025									
Outdoor Ambient - Backyard	ND	ND	0.47	0.16	1.3	ND	ND	ND	0.55
Crawlspace	ND	0.22	0.38	0.39	1.2	ND	ND	ND	0.35
Crawlspace - Field Duplicate	ND	0.16	0.37	0.27	1	ND	ND	0.41	0.15
Garage	ND	0.19	0.39	0.62	ND	ND	ND	0.4	0.47
Living Room	ND	0.26	0.39	0.69	1.4	ND	ND	0.37	0.42

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 45A									
2/4/2026									
Crawlspace	ND	0.1	0.47	0.12	1.1	ND	ND	ND	ND
Living Room	ND	0.15	0.49	0.2	1.6	ND	ND	ND	0.15
Bedroom	ND	0.16	0.45	0.15	1.4	ND	ND	ND	ND
Property 45B									
1/29/2026									
Living Room	ND	ND	0.93	0.27	1.1	0.42	ND	1.6	8.8
Garage	ND	0.1	0.92	0.25	1.2	0.37	ND	1.4	7.4
2/4/2026									
Crawlspace	ND	ND	1.1	0.42	1.1	0.94	ND	2.5	14
Living Room	ND	ND	0.85	0.29	1.1	0.51	ND	1.6	8.2
Bedroom	ND	ND	0.86	0.3	1.2	0.51	ND	1.6	8.2
Garage	ND	ND	0.67	0.23	1.2	ND	ND	0.86	3.9
Outdoor Ambient	ND	ND	0.46	ND	1.2	ND	ND	ND	ND
8/10/2026									
Crawlspace	ND	ND	0.42	0.23	1	ND	ND	ND	ND
Crawlspace - Field Duplicate	ND	ND	0.43	0.23	1	ND	ND	ND	ND
Living Room	ND	ND	0.43	0.23	1	ND	ND	ND	ND
Property 46									
11/16/2022									
Attic	ND	ND	0.37	0.14	1.1	ND	ND	ND	ND
Basement	ND	ND	0.38	ND	0.99	ND	ND	ND	ND
Living Room	ND	ND	0.38	0.14	1.2	ND	ND	ND	ND
Property 47									
8/8/2025									
Attached Garage	ND	0.23	0.41	0.4	1.4	ND	ND	1.2	0.36
Basement	ND	0.15	0.4	0.43	1.3	ND	ND	0.74	0.62
Dining Room	ND	0.25	0.41	0.58	1.3	ND	ND	1.4	1.1

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 47									
1/29/2026									
Basement	ND	0.12	0.45	0.33	1.4	ND	ND	ND	0.65
Living Room	ND	0.11	0.41	0.3	1.2	ND	ND	ND	0.43
Bedroom	ND	0.16	0.44	0.31	1.6	ND	ND	ND	0.46
Outdoor Ambient	ND	0.1	0.47	ND	1.4	ND	ND	ND	ND
Property 48									
12/16/2025									
Crawlspace	ND	ND	0.4	0.35	1	ND	ND	ND	ND
Bedroom	ND	ND	0.4	5.9	1.1	ND	ND	ND	ND
Living Room	ND	ND	0.4	3	1	ND	ND	ND	ND
Property 49A									
11/16/2022									
Crawlspace	ND	ND	0.53	0.13	1.1	0.72	ND	1.2	4.2
Bedroom	ND	0.11	0.49	0.14	1.4	0.49	ND	0.81	2.8
Living Room	ND	0.10	0.47	0.12	1.2	0.42	ND	0.70	2.4
1/17/2025									
Crawlspace	ND	ND	0.47	0.12	1.1	ND	ND	ND	0.66
Bathroom	ND	ND	0.51	0.42	1.2	ND	ND	ND	0.54
Bathroom	ND	ND	0.52	0.43	1.2	ND	ND	ND	0.53
Living Room	ND	ND	0.52	0.34	1.2	ND	ND	ND	0.44
12/10/2025									
Outdoor Ambient	ND	0.1	0.4	ND	1.4	ND	ND	ND	ND
Crawlspace	ND	0.1	0.48	0.17	1.5	ND	ND	0.37	1.1
Living Room	ND	0.12	0.51	0.5	5.2	ND	ND	ND	0.52
4/23/2026									
Crawlspace	ND	0.1	0.54	0.17	1.5	ND	ND	0.79	2.2
Crawlspace - FD	ND	0.1	0.56	0.18	1.6	ND	ND	0.85	2.3
Bedroom	ND	0.11	0.43	0.25	4.3	ND	ND	ND	ND
Living Room	ND	0.1	0.44	0.29	2.3	ND	ND	ND	ND
Outdoor Ambient	ND	0.1	0.51	0.2	1.6	ND	ND	0.38	0.88

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 49B									
1/17/2025									
Crawlspace	ND	ND	0.48	ND	1.1	ND	ND	ND	0.85
Bathroom	ND	0.1	0.53	0.24	1.3	0.21	ND	0.83	3
Living Room	ND	0.1	0.52	0.21	1.2	ND	ND	0.78	2.8
Living Room	ND	0.1	0.51	0.21	1.3	ND	ND	0.73	2.6
12/10/2025									
Crawlspace	ND	0.1	0.47	0.15	1.4	ND	ND	0.5	1.4
Living Room	ND	0.1	0.52	0.4	2.1	ND	ND	0.9	3.1
4/23/2026									
Living Room	ND	0.1	0.51	0.22	1.7	ND	ND	0.39	0.88
Bedroom	ND	0.12	0.47	ND	1.4	ND	ND	ND	ND
Property 50A									
1/15/2025									
Crawlspace	ND	0.22	0.45	0.19	0.97	ND	ND	0.38	0.39
Bathroom	ND	0.45	0.51	0.33	1.1	ND	ND	0.38	0.46
Living Room	ND	0.46	0.45	0.34	1	ND	ND	0.37	0.43
12/10/2025									
Crawlspace	ND	0.41	0.5	0.22	1.2	ND	ND	0.47	0.24
Living Room	ND	1.5	0.47	0.68	1.4	ND	ND	ND	ND
3/19/2026									
Living Room	ND	2.1	0.46	0.19	1.2	ND	ND	ND	ND
Crawlspace	ND	0.68	0.49	0.2	1.3	ND	ND	ND	ND
Property 50B									
1/15/2025									
Crawlspace	ND	ND	0.45	ND	1.1	ND	ND	ND	0.34
Bathroom	ND	ND	0.47	0.14	1.1	ND	ND	ND	0.49
Living Room	ND	ND	0.47	0.14	1.1	ND	ND	ND	0.48
12/10/2025									
Crawlspace	ND	0.12	0.41	0.16	1.3	ND	ND	ND	ND
Living Room	ND	0.18	0.41	0.15	1.6	ND	ND	ND	0.18

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 50B									
3/19/2026									
Living Room	ND	0.11	0.47	0.37	1.4	ND	ND	ND	0.15
Crawlspace	ND	ND	0.46	0.16	1.2	ND	ND	ND	0.2
Crawlspace - Field Duplicate	ND	0.11	0.45	0.12	1.2	ND	ND	ND	0.2
Property 51A									
5/25/2022									
Outside Ambient	ND	ND	0.45	ND	1.2	ND	ND	ND	0.33
Bedroom	ND	1.3	0.44	1.3	1.9	ND	ND	ND	0.72
Crawlspace	ND	0.28	0.62	0.38	1.3	ND	ND	0.90	3.3
Living Room	ND	1.3	0.46	1.3	1.8	ND	ND	ND	0.67
6/28/2022									
Crawlspace	NA	NA	NA	NA	NA	NA	NA	NA	16
Bedroom	NA	NA	NA	NA	NA	NA	NA	NA	18
Living Room	NA	NA	NA	NA	NA	NA	NA	NA	17
Outside Ambient	NA	NA	NA	NA	NA	NA	NA	NA	0.70
7/20/2022									
Living Room	NA	NA	NA	NA	NA	NA	NA	NA	49
Bedroom	NA	NA	NA	NA	NA	NA	NA	NA	86
Crawlspace	NA	NA	NA	NA	NA	NA	NA	NA	60
8/18/2022									
Living Room	NA	NA	NA	NA	NA	NA	NA	NA	41
Bedroom	NA	NA	NA	NA	NA	NA	NA	NA	41
Crawlspace	NA	NA	NA	NA	NA	NA	NA	NA	36
11/16/2022									
Crawlspace	0.22	ND	1.5	0.36	1.1	2.0	ND	7.4	25
Bedroom	0.58	0.22	3.4	0.88	1.3	5.6	ND	19	62
Living Room	0.62	0.21	3.7	0.94	1.3	6.0	ND	20	67
Outside	ND	ND	0.40	ND	1.2	ND	ND	ND	0.23
4/26/2023									
Crawlspace	NA	NA	NA	NA	NA	NA	NA	NA	4.5
Living Room	NA	NA	NA	NA	NA	NA	NA	NA	12
Bedroom	NA	NA	NA	NA	NA	NA	NA	NA	9.9

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 51A									
1/15/2025									
Crawlspace	ND	ND	0.62	0.25	1	0.25	0.71	1.1	3.3
Bathroom	ND	ND	1.4	1.3	1.2	1.2	1.6	4.2	14
Living Room	ND	ND	1.4	0.97	1.1	1.2	1.9	4.9	16
OB	ND	ND	0.45	ND	1.1	ND	ND	ND	0.26
3/26/2025									
Outdoor Ambient	ND	ND	0.46	ND	1.3	ND	ND	ND	0.42
Crawlspace	ND	ND	0.72	0.3	1.4	0.2	2.1	1.1	3.3
Bedroom	ND	ND	0.42	0.84	2.3	0.21	5.1	0.44	1.2
Living Room	ND	ND	ND	0.55	3.7	ND	4.1	ND	0.63
5/2/2025									
Bathroom	ND	ND	1.2	2.3	1.3	0.27	11	1.2	3.1
Closet	ND	ND	1.1	2.1	1.3	0.24	9.6	1.1	2.7
Living Room	ND	0.11	1.4	3	1.3	0.36	J 4.4	0.48	1.6
9/16/2025									
Crawlspace	ND	ND	0.92	6.9	1.5	ND	ND	0.46	1.1
Living Room	ND	0.12	1.5	13	1.8	ND	ND	0.43	1.2
12/10/2025									
Crawlspace	ND	0.11	0.53	0.61	3.4	ND	ND	ND	0.63
Living Room	ND	0.1	0.44	0.27	1.6	ND	ND	ND	0.22
Property 51B									
5/25/2022									
Bedroom	ND	1.7	0.49	1.0	1.3	ND	ND	0.49	1.6
Crawlspace	ND	0.75	0.46	0.37	1.3	ND	ND	ND	0.71
Living Room	ND	2.5	0.51	1.1	1.5	ND	ND	0.52	1.7
6/28/2022									
Crawlspace	NA	NA	NA	NA	NA	NA	NA	NA	23
Bedroom	NA	NA	NA	NA	NA	NA	NA	NA	28
Living Room	NA	NA	NA	NA	NA	NA	NA	NA	27

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 51B									
7/20/2022									
Outdoor Ambient	NA	NA	NA	NA	NA	NA	NA	NA	2.9
Living Room	NA	NA	NA	NA	NA	NA	NA	NA	18
Bedroom	NA	NA	NA	NA	NA	NA	NA	NA	17
Crawlspace	NA	NA	NA	NA	NA	NA	NA	NA	22
Property 51B									
8/18/2022									
Outdoor Ambient	NA	NA	NA	NA	NA	NA	NA	NA	3.5
Living Room	NA	NA	NA	NA	NA	NA	NA	NA	20
Bedroom	NA	NA	NA	NA	NA	NA	NA	NA	18
Crawlspace	NA	NA	NA	NA	NA	NA	NA	NA	17
11/16/2022									
Crawlspace	0.58	0.11	3.4	0.86	1.1	6.8	ND	17	64
Bedroom	0.37	ND	2.2	0.57	1.1	4.1	ND	11	41
Living Room	0.36	0.12	2.2	0.59	1.2	4.2	ND	11	43
4/26/2023									
Crawlspace	NA	NA	NA	NA	NA	NA	NA	NA	1.1
Living Room	NA	NA	NA	NA	NA	NA	NA	NA	0.66
Bedroom	NA	NA	NA	NA	NA	NA	NA	NA	0.72
6/21/2023									
Crawlspace	NA	NA	NA	NA	NA	NA	NA	NA	3.4
Living Room	NA	NA	NA	NA	NA	NA	NA	NA	4.8
Bedroom	NA	NA	NA	NA	NA	NA	NA	NA	4.6
1/15/2025									
Crawlspace	ND	ND	0.66	0.18	1.1	0.38	5.8	1.9	5.8
Crawlspace	ND	ND	0.66	0.18	1.1	0.38	5.7	1.9	5.8
Bathroom	ND	ND	0.95	0.36	1.1	0.79	21	4.3	13
Living Room	ND	ND	0.95	0.34	1.1	0.79	20	4.4	13
3/26/2025									
Crawlspace	ND	ND	0.6	0.17	1.3	0.21	21	1.7	3.9
Bedroom	ND	ND	0.66	0.26	1.3	ND	60	2	3.2
Living Room	ND	ND	0.66	0.24	1.3	ND	57	2.2	3.4

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 51B									
5/2/2025									
Bathroom	ND	ND	ND	0.25	1.3	ND	99	0.48	0.79
Closet	ND	ND	ND	0.44	1.8	ND	90	1.2	2.1
Living Room	ND	ND	ND	0.18	1.3	ND	150	ND	0.33
9/16/2025									
Crawlspace	ND	ND	0.59	0.69	1.5	ND	ND	0.68	1.9
Living Room	ND	ND	0.58	0.89	1.4	ND	ND	0.71	1.9
12/10/2025									
Crawlspace	ND	0.11	0.52	0.2	1.4	ND	ND	0.5	1.8
Crawlspace	ND	0.11	0.49	0.2	1.4	ND	ND	0.48	1.8
Living Room	ND	0.12	0.69	0.53	1.4	ND	ND	1.2	4.8
Property 51B									
1/21/2026									
Crawlspace	ND	ND	0.48	0.13	1.2	ND	ND	ND	0.7
Bedroom	ND	0.11	0.69	0.4	1.3	ND	ND	0.87	3.5
Living Room	ND	0.1	0.65	0.36	1.2	ND	ND	0.79	3.3
4/23/2026									
Crawlspace	ND	0.15	0.5	0.2	1.3	ND	ND	ND	0.17
Bedroom	ND	0.36	0.59	1.4	1.7	ND	ND	ND	0.18
Living Room	ND	ND	0.58	1.4	1.6	ND	ND	ND	0.18
Property 52A									
11/16/2022									
Crawlspace	0.35	0.19	1.7	0.78	1.1	5.4	ND	11	37
Bedroom	0.29	0.18	1.7	0.98	1.2	4.1	ND	8.7	31
Living Room	0.24	0.15	1.4	0.88	1.4	3.5	ND	7.4	26
4/26/2023									
Crawlspace	NA	NA	NA	NA	NA	NA	NA	NA	0.57
Bedroom	NA	NA	NA	NA	NA	NA	NA	NA	0.58
Living Room	NA	NA	NA	NA	NA	NA	NA	NA	ND
8/27/2025									
Living Room	ND	ND	0.54	0.46	0.92	0.59	ND	2.9	8.6
Crawlspace	ND	ND	0.53	0.4	0.87	0.51	ND	2.6	7.6

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 52A									
1/15/2025									
Crawlspace	0.21	0.12	1.5	0.54	1	2.7	ND	7.1	25
Bathroom	ND	0.33	1.4	1.5	1.1	2.3	ND	6.4	22
Living Room	0.21	0.44	1.6	1.6	1.2	2.6	ND	6.6	25
3/26/2025									
Crawlspace	ND	0.14	1.2	0.68	1.1	5	ND	12	40
Bedroom	ND	0.28	ND	0.76	1.5	2	ND	1.9	6.7
Living Room	ND	0.19	ND	0.59	1.4	2	ND	1	3.7
5/15/2025									
Bedroom	ND	0.6	0.73	1.1	1.6	2.1	ND	ND	3.2
Living Room	ND	0.49	0.61	0.95	1.4	1.6	ND	ND	2.7
Crawlspace	ND	0.15	0.39	0.4	1.3	0.43	ND	0.57	1.7
8/27/2025									
Living Room	ND	ND	0.54	0.46	0.92	0.59	ND	2.9	8.6
Crawlspace	ND	ND	0.53	0.4	0.87	0.51	ND	2.6	7.6
10/1/2025									
Crawlspace	ND	0.14	0.66	0.27	1.3	0.32	ND	1.4	5
Living Room	ND	0.11	0.62	0.26	1.4	0.2	ND	1	3.4
11/25/2025									
Crawlspace	ND	ND	0.47	ND	1.3	ND	ND	ND	0.89
Bathroom	ND	ND	0.46	ND	1.2	ND	ND	ND	0.96
Living Room	ND	ND	0.49	ND	1.4	ND	ND	ND	0.99
Utility Room	ND	ND	0.48	ND	1.4	ND	ND	ND	0.87
Property 52B									
1/15/2025									
Crawlspace	0.36	0.14	2.4	0.77	1	4.7	ND	14	45
Bathroom	0.31	0.26	2.1	0.84	1.1	3.5	ND	10	36
Living Room	0.31	0.22	2	0.85	1.1	3.6	ND	9.8	35
3/26/2025									
Bedroom	ND	0.19	0.39	0.46	1.6	1.1	ND	2.5	8.5
Living Room	ND	0.19	0.38	0.45	1.5	1.1	ND	2.4	8.6

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 52B									
5/15/2025									
Garage	ND	0.22	0.45	0.51	1.2	0.63	ND	ND	1.4
Bedroom	ND	0.19	0.33	0.86	1.1	0.54	ND	ND	1
Living Room	ND	0.2	0.32	0.91	1.2	0.56	ND	ND	0.94
8/27/2025									
Bedroom	ND	0.38	0.51	1.2	0.91	0.49	ND	2.2	7.2
10/1/2025									
Bedroom	ND	0.39	0.92	0.67	1.4	0.68	ND	1.7	8.1
11/25/2025									
Bathroom	ND	ND	0.44	0.21	1.4	ND	ND	0.4	1.1
Living Room	ND	ND	0.45	ND	1.3	ND	ND	0.38	1
Utility Room	ND	0.11	0.46	0.12	1.3	ND	ND	0.35	0.91
Property 53A									
11/16/2022									
Crawlspace	ND	ND	0.51	0.20	1.4	0.25	ND	0.75	3.0
Bedroom	ND	0.27	0.53	0.48	1.3	0.25	ND	0.63	3.0
Living Room	ND	0.21	0.55	0.23	1.2	0.36	ND	0.93	3.9
2/27/2025									
Crawlspace	ND	0.13	0.51	0.23	1.1	ND	ND	14	0.91
Bedroom	ND	0.28	0.52	0.42	1.3	ND	ND	ND	0.62
Living Room	ND	0.27	0.53	0.43	1.4	ND	ND	0.37	0.63
11/5/2025									
Bedroom	ND	1.2	0.62	1.8	1.2	0.44	ND	1.8	6.6
Living Room	ND	1.2	0.65	1.7	1.3	0.39	ND	1.7	6
Crawlspace	ND	0.22	1.1	0.63	1.2	1.7	ND	4.9	21
3/19/2026									
Living Room	ND	0.33	0.49	0.37	1.1	ND	ND	ND	0.62
Living Room	ND	0.15	0.47	0.36	1.1	ND	ND	ND	1.1

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 53B									
2/27/2025									
Crawlspace	ND	0.13	0.51	0.32	1.2	ND	ND	0.36	0.91
Bedroom	ND	0.29	0.54	0.99	1.9	ND	ND	ND	0.67
Living Room	ND	0.31	0.5	1	1.3	ND	ND	0.37	0.61
11/5/2025									
Bedroom	ND	0.51	0.77	0.83	1.4	1	ND	2.8	12
Living Room	ND	0.77	0.7	0.84	1.4	0.83	ND	2.4	9.8
3/19/2026									
Living Room	ND	0.16	ND	0.69	1.6	0.89	ND	ND	ND
4/23/2026									
Living Room	ND	0.52	0.58	0.48	1.4	0.35	ND	0.35	1.2
Bedroom	ND	0.61	0.7	51	1.6	0.35	ND	ND	1.3
Property 54A									
10/1/2025									
Crawlspace	ND	0.17	0.45	0.28	1.4	ND	ND	0.41	0.91
Garage	ND	0.15	0.48	0.25	1.5	ND	ND	0.45	1.1
Living Room	ND	0.21	0.47	0.39	1.4	ND	ND	0.44	1.1
5/12/2026									
Crawlspace	ND	0.12	0.53	0.19	1.2	ND	ND	0.66	ND
Bedroom	ND	0.12	0.49	0.23	1.4	ND	ND	8.4	ND
Living Room	ND	0.63	0.93	0.41	2.1	ND	ND	2.3	ND
Property 54B									
10/1/2025									
Crawlspace	ND	0.81	0.46	1.6	1.5	ND	ND	0.61	1.8
Dining Room	ND	1.4	0.54	2.8	1.7	ND	ND	0.79	2.2
Living Room	ND	1.3	0.5	2.2	1.8	0.2	ND	0.73	2.4
5/12/2026									
Crawlspace	ND	0.1	0.5	0.38	1.4	ND	ND	ND	ND
Bedroom	ND	0.21	0.48	2.5	1.8	ND	ND	ND	ND
Living Room	ND	0.27	0.47	2.7	2	ND	ND	ND	ND

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 55A									
11/17/2021									
Crawlspace	ND	ND	0.49	ND	0.65	ND	ND	ND	ND
Bedroom	0.37	0.10	0.55	0.23	1.8	ND	ND	ND	ND
Living Room	0.62	ND	0.55	0.21	1.0	ND	ND	ND	ND
5/25/2022									
Crawlspace	ND	ND	0.43	ND	0.42 U	ND	ND	ND	ND
Bedroom	ND	0.17	0.59	0.42	1.5	ND	ND	ND	ND
Living Room	ND	0.15	0.61	0.47	1.4	ND	ND	ND	ND
5/24/2023									
Living Room	NA	NA	NA	NA	NA	NA	NA	NA	0.33
Bedroom	NA	NA	NA	NA	NA	NA	NA	NA	0.33
Crawlspace	NA	NA	NA	NA	NA	NA	NA	NA	0.29
12/11/2024									
Crawlspace	ND	ND	0.47	ND	0.48	ND	ND	ND	0.43
Bedroom	ND	ND	0.52	0.38	0.9	ND	ND	ND	ND
Living Room	ND	ND	0.51	0.38	0.83	ND	ND	ND	ND
12/10/2025									
Crawlspace	ND	ND	0.42	0.13	0.78	ND	ND	ND	ND
Living Room	ND	0.18	0.44	0.52	1.1	ND	ND	ND	ND
Property 55B									
12/11/2024									
Crawlspace	ND	ND	0.46	0.12	0.65	ND	ND	ND	ND
Bedroom	ND	ND	0.46	0.47	0.98	ND	ND	ND	ND
Living Room	ND	ND	0.44	0.45	0.88	ND	ND	ND	ND
12/10/2025									
Crawlspace	ND	ND	0.43	ND	0.73	ND	ND	ND	ND
Living Room	ND	0.11	0.4	0.31	1.2	ND	ND	ND	ND

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 56A									
11/17/2021									
Crawlspace	ND	ND	0.49	0.14	0.62	ND	ND	ND	ND
Bedroom - Field Duplicate	ND	ND	0.48	0.69	2.0	ND	ND	1.1	ND
Bedroom	ND	ND	0.49	0.71	2.0	ND	ND	1.1	ND
Living Room	ND	ND	0.47	0.96	2.3	ND	ND	1.2	ND
Outside	ND	ND	0.47	ND	1.0	ND	ND	ND	ND
5/25/2022									
Crawlspace	ND	ND	ND	ND	ND	ND	ND	ND	ND
Living Room	ND	ND	0.41	0.36	1.4	ND	ND	ND	ND
5/24/2023									
Living Room	NA	NA	NA	NA	NA	NA	NA	NA	0.77
Bedroom	NA	NA	NA	NA	NA	NA	NA	NA	0.69
Crawlspace	NA	NA	NA	NA	NA	NA	NA	NA	0.54
Outdoor Ambient	NA	NA	NA	NA	NA	NA	NA	NA	0.46
12/11/2024									
Outdoor Ambient	ND	ND	0.47	U 0.12	1	ND	ND	ND	0.56
Crawlspace	ND	ND	1.3	0.33	0.66	0.51	ND	7.9	27
Bedroom	0.53	ND	4.6	1.6	1.9	3.1	ND	44	140
Living Room	0.45	ND	3.9	1.6	1.8	2.6	ND	39	130
5/2/2025									
Bathroom	ND	0.23	2	3.4	5.4	3.2	ND	1.3	23
Closet	ND	0.14	1.2	2	3.2	1.9	ND	1.5	14
Living Room	ND	0.3	2.9	4.8	6	4.8	ND	0.51	31
9/16/2025									
Outdoor Ambient	ND	ND	0.46	0.14	1.4	ND	ND	ND	0.58
Crawlspace	ND	0.11	0.51	1.4	2.9	ND	ND	0.79	1.1
Living Room	ND	0.2	0.67	5.6	9	ND	ND	2.1	2.6
11/24/2025									
Crawlspace	ND	0.11	0.49	0.38	2	ND	ND	ND	0.39
Living Room	ND	0.11	0.49	2.3	6.5	ND	ND	1.3	1.2

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 56B									
5/24/2023									
Living Room	NA	NA	NA	NA	NA	NA	NA	NA	0.95
Bedroom	NA	NA	NA	NA	NA	NA	NA	NA	0.98
Crawlspace	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/11/2024									
Crawlspace	ND	ND	1.2	0.25	0.59	0.41	ND	6.1	22
Bedroom	0.37	ND	3.9	1.1	2.6	2.5	ND	33	120
Living Room	0.38	0.11	3.9	1.1	2.7	2.5	ND	34	120
5/2/2025									
Bathroom	ND	0.21	0.66	1.5	4.6	1.4	ND	1.4	4.6
Closet	ND	0.17	0.58	1.1	3.9	1	ND	1.4	4.2
Living Room	ND	0.24	0.72	1.7	5.2	1.8	ND	0.99	4.4
9/16/2025									
Crawlspace	ND	0.13	0.57	0.24	2.4	ND	ND	ND	1.9
Living Room	ND	0.64	1	0.79	6	ND	ND	0.52	14
11/24/2025									
Crawlspace	ND	0.1	0.44	ND	1.7	ND	ND	ND	0.31
Living Room	ND	0.19	0.47	0.41	4.8	ND	ND	0.4	0.6
Property 57A									
11/16/2022									
Crawlspace	ND	ND	0.85	0.15	1.2	0.52	ND	2.4	11
Bedroom	0.47	0.20	2.5	0.47	1.2	2.1	ND	9.8	42
Living Room	0.51	0.21	2.7	0.49	1.2	2.3	ND	10	46
4/26/2023									
Crawlspace	NA	NA	NA	NA	NA	NA	NA	NA	5.6
Bedroom	NA	NA	NA	NA	NA	NA	NA	NA	2.1
Living Room	NA	NA	NA	NA	NA	NA	NA	NA	2.6
6/21/2023									
Crawlspace	NA	NA	NA	NA	NA	NA	NA	NA	2.6
Outdoor Ambient	NA	NA	NA	NA	NA	NA	NA	NA	2.2
Bedroom	NA	NA	NA	NA	NA	NA	NA	NA	4.6
Living Room	NA	NA	NA	NA	NA	NA	NA	NA	4.7

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 57A									
11/29/2023									
Crawlspace	0.31	0.17	1.8	0.28	0.93	1.7	ND	7.4	29
Bedroom	1.1	0.4	5.2	0.71	0.97	5.4	ND	24	92
Living Rom	0.91	0.39	4.5	0.71	0.94	5.1	ND	22	83
5/1/2024									
Crawlspace	J 0.35	0.21	1.9	J 0.22	J 0.97	J 0.67	U 0.7	3.7	14
Bedroom	0.53	0.28	2.3	0.91	2	1.1	U 0.7	3.7	21
Living Room	0.45	0.34	2.5	0.67	1.6	0.87	U 0.7	4	18
8/21/2024									
Outdoor Ambient	ND	ND	0.44	0.12	1	ND	ND	ND	0.42
Crawlspace	ND	ND	0.75	0.32	0.86	0.2	ND	2.6	7.7
Bedroom	ND	ND	0.69	0.53	0.93	ND	ND	2.2	6.6
Kitchen	ND	ND	0.69	0.46	0.94	ND	ND	2.1	6.4
11/5/2024									
Crawlspace	0.64	ND	4.2	0.34	1.1	0.99	ND	9.1	36
Bedroom	3.4	0.23	20	1.4	1.2	5.9	ND	47	220
Garage	14	0.76	80	5.7	0.96	25	ND	230	860
Kitchen	3.4	0.23	19	1.4	1.1	6	ND	48	210
12/12/2024									
Crawlspace	0.2	0.13	1.5	0.18	1.1	0.95	U 0.7	4.5	20
Bedroom	0.29	0.12	1.8	0.2	1	1.4	U 0.7	6.4	30
Garage	4	1.4	24	2.6	1.1	20	U 0.7	110	400
Kitchen	0.66	0.26	4	0.44	1.1	3.1	U 0.7	15	68
2/5/2025									
Crawlspace	0.2	0.3	1.2	0.26	1	1.2	ND	4.5	18
Garage	ND	0.33	1.1	0.22	1.1	1.2	ND	3.7	15
Living Room	ND	0.3	1.1	0.23	1	1.1	ND	4.1	16
2/27/2025									
Crawlspace	ND	0.23	0.98	0.23	1.2	0.92	ND	2.9	12
Bedroom	ND	0.15	0.62	0.2	1.4	0.32	ND	0.85	3.2
Living Room	ND	0.19	0.83	0.32	1.2	0.69	ND	1.9	7.8

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 57A									
5/14/2025									
Crawlspace	0.11	0.11	0.54	0.14	1.5	0.26	ND	0.5	2.4
Living Room	1.5	ND	ND	0.28	1.4	2.4	1.4	ND	2.7
Bedroom	1.4	ND	ND	0.23	1.6	2.1	1.6	ND	1.7
8/27/2025									
Crawlspace	ND	ND	0.42	0.14	0.94	ND	ND	0.43	0.86
Living Room	ND	ND	0.42	0.23	1.1	ND	ND	0.46	0.97
12/10/2025									
Crawlspace	ND	0.1	0.44	0.18	1.4	ND	ND	ND	0.43
Living Room	ND	0.1	0.44	0.82	1.4	ND	ND	ND	0.51
Property 57B									
11/29/2023									
Crawlspace	ND	0.14	1.1	0.25	0.97	1.3	ND	5.4	19
Crawlspace	ND	0.14	1.2	0.26	0.99	1.4	ND	6	21
Bedroom	0.57	0.35	3.2	0.68	0.98	4.4	ND	18	60
Living Rom	0.57	0.34	3.1	0.69	1	4.4	ND	17	59
5/1/2024									
Crawlspace	ND	ND	0.56	ND	1.4	ND	ND	ND	0.78
Bedroom	ND	0.18	1.4	0.84	2.5	0.21	ND	1.1	4.7
Living Room	0.2	0.22	1.5	0.89	2.5	0.24	ND	1.3	6.2
12/17/2024									
Garage	2.7	2.7	18	3	1	25	ND	95	440
Bedroom	2.1	1.6	13	2.6	0.95	19	ND	72	260
Living Room	1.8	1.5	11	2.5	0.95	17	ND	68	240
Kitchen	1.9	1.6	12	2.5	1	18	ND	63	270
2/5/2025									
Garage	0.88	2.6	4.7	1.2	1.1	11	ND	27	100
Living Room	0.52	1.6	3	0.96	1	6.9	ND	15	65
Living Room	0.53	1.5	3	0.94	1	6.8	ND	16	63

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 57B									
2/27/2025									
Bedroom	0.72	0.55	1	1.1	1.2	6.4	ND	1.2	7
Garage	0.58	1.2	2.2	1	1.1	9.1	ND	5.4	25
Living Room	0.78	0.48	0.83	0.86	1.3	5.9	ND	1.2	6.2
5/15/2025									
Garage	ND	0.88	4	0.44	1.1	2.9	ND	1.7	120
Bedroom	ND	0.82	2.4	0.85	1.5	4.6	ND	0.56	39
Living Room	ND	0.78	1.8	0.78	1.2	5.4	ND	ND	10
8/27/2025									
Crawlspace	ND	ND	0.41	0.34	0.9	ND	ND	0.41	0.85
Living Room	ND	0.1	0.45	1.1	0.92	ND	ND	0.62	1.7
12/10/2025									
Crawlspace	ND	0.11	0.44	ND	1.3	ND	ND	ND	0.48
Living Room	ND	0.14	0.45	0.43	1.4	ND	ND	ND	0.69
Property 58A									
6/11/2025									
2nd Floor Back Bedroom	ND	0.34	0.33	0.81	1.7	ND	ND	2.5	ND
2nd Floor Playroom	ND	0.29	ND	0.75	1.6	ND	ND	2.1	ND
Basement Living Room	ND	0.51	ND	1.2	1.8	ND	ND	2.7	ND
Basement Storage Room	ND	0.57	ND	1.2	1.8	ND	ND	2.9	ND
First Floor Living Room	ND	0.52	0.33	1	1.8	ND	ND	3.2	ND
First Floor Living Room	ND	0.43	ND	1	1.9	ND	0.71	3	ND
Property 58B									
6/11/2025									
Guest House/Storage	ND	ND	ND	0.21	1.3	ND	ND	ND	ND
Kitchen	ND	0.41	ND	1.2	1.6	ND	ND	4.1	ND

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 59									
5/29/2025									
E Side of Basement	ND	0.12	0.41	1	0.99	ND	ND	ND	ND
Kitchen	ND	0.6	0.41	6	1.2	ND	ND	ND	ND
Living Room	ND	0.71	0.42	5.2	1.3	ND	ND	ND	ND
W Side of Basement	ND	0.14	0.41	1	1.1	ND	ND	ND	ND
Property 60									
7/24/2025									
Baby Room	ND	0.9	0.4	0.69	1.6	ND	ND	ND	0.16
Basement by Sump Pump	ND	0.77	0.42	0.69	1.5	ND	ND	ND	0.18
Basement SE Corner	ND	0.96	0.44	0.6	1.6	ND	ND	ND	0.16
Basement SE Corner	ND	0.75	0.4	0.87	1.6	ND	ND	ND	0.18
Dining Room	ND	0.97	0.4	0.71	1.6	ND	ND	ND	0.16
Property 61									
5/30/2025									
Outdoor Ambient - Backyard	ND	ND	0.33	ND	1.1	ND	ND	ND	0.4
Crawlspace	ND	ND	0.34	ND	0.91	ND	ND	ND	0.4
Center of Basement	ND	ND	0.35	0.51	1.5	ND	ND	ND	0.67
Kitchen	ND	ND	0.38	1.2	1.6	ND	ND	ND	0.29
Office	ND	ND	0.39	1.3	1.4	ND	ND	ND	0.27
Property 62									
6/5/2025									
Outdoor Ambient - Backyard	ND	ND	0.41	0.14	1.4	ND	ND	ND	0.41
Crawlspace	ND	ND	0.49	0.12	1.2	ND	ND	0.38	1.2
Center of Basement	ND	0.12	0.55	0.34	2.3	0.25	ND	0.56	3.3
Garage/Living Space	ND	ND	0.48	0.13	1.3	ND	ND	ND	0.56
Garage/Living Space	ND	0.11	0.46	0.2	1.5	ND	ND	1.1	0.56
Living Room	ND	0.1	0.42	0.14	2.3	ND	ND	ND	0.62
11/13/2025									
Basement - NW Corner	ND	0.43	0.5	0.59	1.2	ND	3.4	1	2.3
Basement - SE Corner	ND	0.45	0.54	0.66	1.2	ND	3.3	1	2.4
Living Room	ND	1.1	0.47	1.3	1.6	ND	6.8	0.81	2

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 62									
1/21/2026									
Basement - SE Corner	ND	0.27	0.49	0.28	1.3	ND	1.1	ND	0.23
Basement - NW Corner	ND	0.25	0.44	0.27	1.2	ND	1	ND	0.2
Living Room	ND	0.43	0.41	0.53	1.3	ND	1.9	ND	0.16
Bedroom	ND	0.46	0.43	0.48	1.4	ND	2	ND	0.16
Property 63									
6/11/2025									
Outdoor Ambient - Backyard	ND	ND	ND	0.12	2.2	ND	ND	ND	0.15
CS - Back Room	ND	ND	ND	ND	1.2	ND	ND	ND	0.16
Basement - Laundry Room	ND	0.57	0.33	0.45	1.5	ND	3.7	ND	0.23
Basement Storage Room	ND	0.63	0.33	0.47	1.6	ND	4.1	ND	0.22
Living Room	ND	0.73	0.32	0.49	1.7	ND	2.7	ND	0.22
Property 64									
6/23/2026									
Basement - NW Corner	ND	ND	0.46	0.17	1	ND	ND	0.35	0.58
Basement - NW Corner - DUP	0.3	ND	0.45	0.16	0.96	ND	ND	0.35	0.6
Basement SW Corner	ND	ND	0.46	0.16	0.97	ND	ND	0.4	0.68
Kitchen	ND	ND	0.44	0.17	1.1	ND	ND	ND	0.46
North Bedroom Closet	ND	ND	0.42	0.13	1.1	ND	ND	ND	0.18
Outdoor Ambient	ND	ND	0.46	0.19	1.2	ND	ND	ND	0.18
Property 65									
7/21/2026									
Basement	ND	0.44	0.46	0.64	1.4	ND	ND	ND	ND
Basement - Field Duplicate	ND	0.43	0.42	0.61	1.4	ND	ND	ND	ND
Dining Room	ND	0.25	0.41	0.59	1.4	ND	ND	ND	ND
Office	ND	0.33	0.41	0.63	1.4	ND	ND	ND	ND
Outdoor Ambient	ND	ND	0.39	ND	1.2	ND	ND	ND	ND

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 66									
11/13/2025									
Basement - NE Corner	ND	0.55	0.43	0.15	1.2	ND	ND	0.48	0.34
Basement - SW Corner	ND	0.48	0.39	0.13	1.2	ND	ND	0.44	0.3
Living Room	ND	0.94	0.38	0.18	1.3	ND	ND	0.91	0.26
Property 67									
11/26/2025									
Outdoor Ambient - Front yard	ND	0.1	0.38	ND	1.3	ND	ND	ND	ND
Bedroom - North Side	ND	3.1	0.44	0.67	1.5	ND	ND	4.2	ND
Basement - Living Room	ND	2.7	0.41	0.78	1.9	ND	ND	3.4	ND
Basement - Near HVAC	ND	3.1	0.41	1.1	1.4	ND	ND	3.2	ND
Living Room	ND	4.2	0.47	0.97	1.6	ND	ND	6.7	ND
Property 68									
2/4/2026									
Living Room	ND	ND	0.44	0.23	1.3	ND	ND	0.55	ND
Bedroom	ND	ND	0.43	0.19	1.25	ND	ND	0.37	ND
Kitchen	ND	ND	0.44	0.19	1.4	ND	ND	0.37	ND
Basement	ND	ND	0.43	0.14	1.3	ND	ND	ND	ND
Basement - Field Duplicate	ND	ND	0.38	0.12	1.1	ND	ND	ND	ND
Property 69									
8/7/2025									
Crawlspace	ND	ND	0.5	0.41	1.3	ND	ND	0.55	ND
Basement	ND	0.17	0.61	0.73	1.7	ND	ND	1.1	ND
Dining Room	ND	0.21	0.72	0.88	2.2	ND	ND	1.6	ND
Master Bedroom	ND	0.21	0.72	0.92	2.3	ND	ND	1.6	ND
Property 70									
2/19/2026									
Living Room	ND	0.13	0.48	0.36	1.7	ND	ND	2.7	ND
Living Room - Field Duplicate	ND	0.12	0.43	0.34	1.7	ND	ND	2.6	ND
West Bedroom	ND	0.13	0.47	0.36	1.8	ND	ND	2.7	ND
East Bedroom	ND	0.12	0.46	0.38	1.8	ND	ND	2.4	ND

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 71									
1/29/2026									
Crawlspace	ND	0.11	0.44	ND	1.1	ND	1.7	ND	ND
Living Room	ND	0.24	0.44	0.22	1.3	ND	5.6	ND	ND
Living Room - Field Duplicate	ND	0.17	0.44	0.18	1.2	ND	6.8	ND	ND
Bedroom	ND	0.16	0.44	0.18	1.3	ND	6.8	ND	ND
Property 72									
Bedroom	ND	2.6	0.48	3.4	1.6	ND	ND	ND	ND
Basement	ND	2.5	0.48	4.6	1.8	ND	ND	ND	ND
Kitchen	ND	2.9	0.49	3.7	1.6	ND	ND	ND	ND
Property 73									
2/4/2026									
Living Room	ND	0.34	0.56	0.39	1.6	ND	ND	ND	ND
Bedroom	ND	0.29	0.5	0.43	1.5	ND	ND	ND	ND
Basement	ND	0.25	0.54	0.22	1.4	ND	ND	ND	ND
Property 74A									
Living Room	ND	ND	0.46	2.1	1.3	ND	ND	3.1	0.17
Bedroom	ND	ND	0.46	2.3	1.2	ND	ND	3.2	0.18
Basement - SW Side	ND	ND	0.45	2.1	1.2	ND	ND	3.3	0.16
Property 74B									
Basement - NW Side	ND	ND	0.45	1.2	1.3	ND	ND	0.36	ND
Living Room	ND	ND	0.43	1.3	1.3	ND	ND	0.39	ND
Bedroom	ND	ND	0.4	1.2	1.2	ND	ND	0.38	ND
Property 75A									
Bedroom	ND	0.14	0.4	1.7	1.4	ND	1.8	0.7	ND
Living Room	ND	0.17	0.41	1.8	1.3	ND	1.7	0.64	ND
Basement - NW Side	ND	0.14	0.4	1.6	1.3	ND	1.5	0.55	ND

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 75B									
7/10/2026									
Living Room	ND	0.32	0.44	3.4	2.4	ND	0.79	ND	ND
Bedroom	ND	0.31	0.45	3.3	2.3	ND	0.79	ND	ND
Basement - SW Side	ND	0.35	0.44	3.6	2.5	ND	0.77	ND	ND
Property 76A									
7/7/2026									
Bedroom	ND	0.36	0.69	8.6	1.4	ND	ND	14	60
Living Room	ND	ND	0.75	11	1.3	ND	ND	15	61
Basement	ND	ND	0.68	8.3	1.2	ND	ND	15	61
Basement - Field Duplicate	ND	ND	0.69	8.3	1.3	ND	ND	15	61
8/10/2026									
Bedroom	ND	0.13	ND	3.5	1.5	ND	ND	3.4	15
Basement	ND	ND	ND	4.4	1.3	ND	ND	2.4	11
Living Room	ND	ND	ND	3.3	1.6	ND	ND	0.9	3.9
Sub slab - Utility Room	1	ND	2.3	2.2	ND	ND	ND	120	740
Property 76B									
7/7/2026									
Bedroom	ND	0.24	0.56	3.4	1.3	ND	ND	6.5	30
Living Room	ND	0.22	0.57	3.1	1.3	ND	ND	5.8	27
Basement	ND	0.22	0.57	3.2	1.2	ND	ND	5.8	27
Outdoor Ambient	ND	ND	0.42	1.9	1.2	ND	ND	ND	0.86
8/10/2026									
Sub slab - Garage	3.6	0.24	0.94	2.5	0.43	ND	ND	12	99
Property 77A									
7/7/2026									
Bedroom	ND	1.1	0.56	6.4	4.6	ND	ND	0.8	1.5
Living Room	ND	1.2	0.56	7.0	5.0	ND	ND	0.77	1.5
Basement	ND	1.0	0.59	6.4	4.0	ND	ND	0.74	1.4

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Property 77B									
7/7/2026									
Living Room	ND	0.48	0.95	7.0	1.8	ND	ND	ND	0.22
Bedroom	ND	0.43	0.84	7.2	1.9	ND	ND	ND	0.24
Basement	ND	0.45	0.86	6.8	1.8	ND	ND	ND	0.23
Property 78									
12/11/2024									
Outdoor Ambient	ND	ND	0.49	ND	1.1	ND	ND	ND	ND
Basement	ND	0.14	0.49	0.25	1.2	ND	3.3	ND	ND
Garage	ND	0.11	0.46	ND	0.99	ND	ND	ND	ND
Kitchen	ND	0.28	0.56	0.52	2.2	ND	1.6	ND	ND
Living Room	ND	0.25	0.5	0.51	1.3	ND	1.6	ND	ND
Sewer Headspace (S1)									
11/13/2025									
Lane Street	ND	ND	0.6	23	0.9	ND	2	2.8	4.1
Sewer Headspace (S2)									
11/13/2025									
Parkway Dr./Glendale St.	2.6	0.22	19	160	0.63	13	6.4	110	370
12/12/2025									
Parkway Dr./Glendale St.	ND	0.11	1.2	13	0.99	1.2	0.79	4.2	16
Parkway Dr./Glendale St. - FB	2	0.32	13	240	0.73	10	4.3	59	310
Sewer Headspace (S3)									
12/12/2025									
Parkway Drive	0.85	0.15	6.1	77	0.68	3.5	1.9	32	100
Sewer Headspace (S4)									
11/13/2025									
Ocheltree Street (Sidewalk)	ND	ND	0.5	8.9	ND	ND	0.9	2.9	3.3
Sewer Headspace (S5)									
11/13/2025									
Ocheltree Street	ND	ND	0.52	3.2	1.2	ND	1.6	0.45	1.5

Sample Location	1,1-DCE	1,2-DCA	Carbon Tetrachloride	Chloroform	Chloro-methane	cis-1,2-DCE	Methylene Chloride	PCE	TCE
Residential Indoor Air Action Level	**4.1 ug/m3**	**7.3 ug/m3**	**47 ug/m3**	**2 ug/m3**	**94 ug/m3**	**42 ug/m3**	**630 ug/m3**	**42 ug/m3**	**2 ug/m3**
Sewer Headspace (S6)									
12/12/2025									
Keeler Street	46	52	220	52	1.6	1200	4.6	120	1100
Sewer Headspace (S7)									
12/12/2025									
Cedar Street	1.2	0.43	7.4	97	0.61	23	3.4	52	200

Footnotes:

ND = Not Detect

NA = Not Analysed

Shaded values exceeded EPA Action Levels

Table 2 - Monitoring Well Completion Information

Adapted from Table 1 of Haley & Aldrich, Inc. 2025 Groundwater Report
GROUNDWATER MONITORING WELL COMPLETION DETAILS
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Identifier	Installed	Abandoned	Total Well Depth (feet)	Casing Diameter (inches, ID)	Casing Material	Screened Geology	Screened Interval (feet bgs)	TOC (feet NAVD88)	Ground Surface (feet NAVD88)
CCI-101	12/21/1988	10/05/2009	15.5	4	PVC	R	13.5 to 15.5	1053.87	1053.01
EPA-2	02/17/1989	05/09/2011	16.7	2	PVC	R/SB	11.7 to 16.7	1056.47	1054.87
EPA-3	09/23/1991	NA	36.5	2	PVC	SL	31.5 to 36.5	1053.89	1050.89
KDHE-2	01/17/1989	05/09/2011	18.5	2	PVC	Unknown	13.5 to 18.5	1058.00	1056.76
MW-18	02/13/2001	10/29/2009	16.8	2	PVC	R/SB	14.8 to 16.8	1059.91	1060.12
MW-18B	10/05/2009	NA	24.0	4	PVC	SB/RL	19.0 to 24.0	1056.01[c]	1056.765[c]
MW-19	02/13/2001	NA	17.0	2	PVC	R	15.0 to 17.0	1051.09	1051.37
MW-20	02/14/2001	NA	13.9	2	PVC	R/SB	11.9 to 13.9	1051.45	1051.74
MW-21	02/14/2001	NA	10.6	2	PVC	R/SL	8.6 to 10.6	1033.26	1033.64
MW-22	02/14/2001	NA	7.8	2	PVC	R/RL	5.8 to 7.8	1033.44[c]	1033.675[c]
MW-22B	09/09/2003	NA	23.0	2	PVC	RL/SL	8.0 to 23.0	1033.44[c]	1033.688[c]
MW-23	02/15/2001	NA	7.5	2	PVC	R/RL	5.5 to 7.5	1036.48[c]	1037.145[c]
MW-23B	09/09/2003	NA	19.0	2	PVC	R/RL/SL	9.0 to 19.0	1036.76[c]	1037.351[c]
MW-24	02/15/2001	NA	11.5	2	PVC	R/SL	9.5 to 11.5	1027.49	1027.89
MW-25	02/15/2001	NA	14.0	2	PVC	R	12.0 to 14.0	1037.14	1037.44
MW-26B	11/01/2002	11/09/2023	27.0	4	Steel	SB/RL/SL	Open Hole from 16.5 to 27.0	1049.22[c]	1049.533[c]
MW-26C	09/17/2003	NA	45.5	4	Steel	SL/ES	Open Hole from 35.5 to 45.5	1049.18[c]	1049.460[c]
MW-27B	11/04/2002	NA	22.7	4	Steel	R/SL	Open Hole from 12.6 to 22.7	1027.79	1028.09
MW-28B	11/01/2002	NA	23.7	4	Steel	SB/RL/SL	Open Hole from 13.3 to 23.7	1042.56[c]	1042.990[c]
MW-29B	11/04/2002	NA	21.0	4	Steel	RL/SL	Open Hole from 11.2 to 21.0	1040.07[c]	1040.640[c]
MW-30B	09/10/2003	NA	19.0	2	PVC	RL/SL	9.0 to 19.0	1030.82	1031.13
MW-31	10/22/2003	NA	8.5	2	PVC	R/SL	3.5 to 8.5	1014.67	1017.29
MW-31B	09/08/2003	NA	19.0	2	PVC	SL/ES	14.0 to 19.0	1015.23	1017.59
MW-32B	09/12/2003	NA	23.0	2	PVC	R/SL/ES	13.0 to 23.0	1016.42	1016.78
MW-33B	09/12/2003	NA	22.0	2	PVC	R/SL/ES	12.0 to 22.0	1016.85	1017.22

TABLE I
GROUNDWATER MONITORING WELL COMPLETION DETAILS
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Identifier	Installed	Abandoned	Total Well Depth (feet)	Casing Diameter (inches, ID)	Casing Material	Screened Geology	Screened Interval (feet bgs)	TOC (feet NAVD88)	Ground Surface (feet NAVD88)
MW-34B	10/07/2009	NA	15.0	4	PVC	R/SL	10.0 to 15.0	1030.62[c]	1031.338[c]
MW-35B	10/13/2009	10/01/2018	14.5	4	PVC	R/SB	9.5 to 14.5	1047.43[a]	1048.11
MW-36B	10/14/2009	Overdrilled - See MW-36BR	22.0	4	PVC	R/SB/RL		1048.76[c]	1049.340[c]
MW-36BR	11/07/2023	NA	22.5	4	PVC	SB/RL	17.5 to 22.5	1048.92[e]	1048.92[e]
MW-37B	10/09/2009	NA	25.0	4	PVC	R/SB/RL	15.0 to 25.0	1049.77[c]	1050.105[c]
MW-38B	10/13/2009	NA	20.0	4	PVC	R/SB	15.0 to 20.0	1049.69[c]	1050.114[c]
MW-39B	10/12/2009	NA	20.0	4	PVC	R/SB	15.0 to 20.0	1052.43[c]	1052.781[c]
MW-40B	10/06/2009	NA	15.0	4	PVC	R/SB	10.0 to 15.0	1047.91	1048.26
MW-41B	10/06/2009	NA	14.5	4	PVC	R/SB/RL	9.5 to 14.5	1040.11[c]	1040.494[c]
MW-42B	05/04/2011	NA	24.62	4	PVC	R/SB/RL	14.62 to 24.62	1048.87[c]	1049.468[c]
MW-43B	05/05/2011	NA	21.05	4	PVC	R/SB/RL	11.05 to 21.05	1047.83[c]	1048.507[c]
MW-44B	05/10/2011	NA	24.35	4	PVC	R/SB/RL	14.35 to 24.35	1049.41[c]	1049.876[c]
MW-45B	05/09/2011	NA	24.76	4	PVC	R/SB/RL	14.76 to 24.76	1049.62[c]	1050.015[c]
MW-46B	05/03/2011	NA	23.55	4	PVC	R/SB/RL	13.55 to 23.55	1050.95[c]	1051.360[c]
MW-47B	05/17/2017	NA	17.0	4	PVC	R/RL/SL	7 to 17	1037.95[c]	1038.363[c]
MW-48B	05/19/2017	NA	18.0	4	PVC	R/RL	8 to 18	1044.58[c]	1045.080[c]
MW-48C	05/18/2017	NA	25.0	4	PVC	RL/SL	20 to 25	1044.50[c]	1045.102[c]
MW-49B	05/18/2017	NA	20.0	4	PVC	R/SB/RL	10 to 20	1045.35[c]	1045.684[c]
MW-50B	06/05/2018	NA	25.0	2	PVC	R/SB/RL	15 to 25	1052.81	1053.18
MW-51B	06/05/2018	NA	24.0	2	PVC	SB/RL	14 to 24	1047.18[c]	1047.658[c]
MW-52B	06/06/2018	NA	25.0	2	PVC	SB/RL	20 to 25	1052.27	1052.69
MW-52C	06/06/2018	10/01/2018	30.0	2	PVC	RL/SL	25 to 30	1052.32	1052.67
MW-53B1	06/07/2018	NA	11.0	2	PVC	R/SB	6 to 11	1040.08[C]	1040.786[c]
MW-53B2	06/07/2018	NA	16.0	2	PVC	SB/RL	11 to 16	1040.21[c]	1040.886[c]
MW-53C	06/07/2018	10/01/2018	20.0	2	PVC	RL/SL	18 to 20	1040.71	1041.33
MW-54C	06/07/2018	NA	13.5	2	PVC	RL/SL	8.5 to 13.5	1029.16[c]	1029.747[c]
MW-55B	06/07/2018	NA	25.0	2	PVC	SB/RL	15 to 25	1051.55	1051.85
MW-56B	06/08/2018	NA	20.0	2	PVC	SB/RL/SL	10 to 20	1043.12	1043.54

TABLE I
GROUNDWATER MONITORING WELL COMPLETION DETAILS
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Identifier	Installed	Abandoned	Total Well Depth (feet)	Casing Diameter (inches, ID)	Casing Material	Screened Geology	Screened Interval (feet bgs)	TOC (feet NAVD88)	Ground Surface (feet NAVD88)
MW-57B	10/08/2018	NA	16.5	2	PVC	R/SL	11.5 to 16.5	1037.12[c]	1037.643[c]
MW-58B	11/08/2023	NA	22.0	4	PVC	SB/RL	17.0 to 22.0	1048.46[e]	1048.91[e]
MW-59B	11/09/2023	NA	20.5	4	PVC	SB/RL	15.5 to 20.5	1047.66[e]	1048.58[e]
MW-60B	11/10/2023	NA	19.7	2	PVC	SB/RL	16.7 to 19.7	1048.47[e]	1048.92[e]
PP-1D	01/08/2001	05/09/2011	21.0	1	PVC	R/SB	20.0 to 21.0	1058.44	1058.87
PP-1M	01/08/2001	05/09/2011	18.5	1	PVC	R	17.5 to 18.5	1058.74	1059.14
PP-1S	01/08/2001	05/09/2011	16.0	1	PVC	R	11.0 to 16.0	1058.94	1059.44
PP-2D	01/08/2001	05/09/2011	18.5	1	PVC	R/SB	17.5 to 18.5	1055.90	1056.32
PP-2S	01/08/2001	05/09/2011	16.0	1	PVC	R	11.0 to 16.0	1055.91	1056.33
PP-3D	01/09/2001	NA	15.0	1	PVC	R/SB	14.0 to 15.0	1051.42	1052.42
PP-3S	01/09/2001	NA	12.5	1	PVC	R	7.5 to 12.5	1051.81	1052.28
PP-4D	01/09/2001	NA	12.8	1	PVC	R/SB	11.8 to 12.8	1048.04	1048.23
PP-4S	01/09/2001	NA	10.0	1	PVC	R	5.0 to 10.0	1047.83	1048.22
PP-5D	01/10/2001	NA	16.0	1	PVC	R/SB	15.0 to 16.0	1049.17[c]	1049.602[c]
PP-5S[d]	01/10/2001	March 2023	12.0	1	PVC	R	7.0 to 12.0	1049.62[b]	1050.12[b]
PZ-01	05/31/2011	NA	18.0	6	PVC	R/SB	8 to 18	1053.88	1054.2
PZ-02	05/31/2011	NA	19.0	6	PVC	R/SB	8 to 19	1052.88	1053.75
PZ-03	05/31/2011	NA	16.0	6	PVC	R/SB	6 to 16	1051.21	1051.77
PZ-04	05/31/2011	NA	18.0	6	PVC	R/SB	5 to 18	1055.85	1056.17
TMW-001	11/02/1995	05/09/2011	18.0	2	SS	R/SB	8.0 to 18.0	1058.40	1054.82
TMW-002	11/02/1995	05/09/2011	20.0	2	SS	R/SB	10.0 to 20.0	1060.87	1057.84
TMW-003	11/02/1995	05/09/2011	21.0	2	PVC/SS	R/SB	11.0 to 21.0	1061.81	1058.69
TMW-004	11/02/1995	05/09/2011	21.4	2	PVC/SS	R/SB	11.4 to 21.4	1062.12	1059.05
TMW-005	11/03/1995	05/09/2011	21.0	2	PVC/SS	R/SB	11.0 to 21.0	1061.39	1058.36
TMW-007	11/06/1995	05/09/2011	19.1	2	PVC/SS	R/SB	9.1 to 19.1	1059.71	1056.56
TMW-008	11/07/1995	NA	13.3	2	PVC	R/SB	3.3 to 13.3	1049.09[c]	1049.558[c]
TMW-009	11/07/1995	NA	15.5.	2	PVC	R/SB	5.5 to 15.5	1051.83[c]	1052.489[c]
TMW-010	11/07/1995	10/01/2018	15.4	2	PVC	R/SB	5.4 to 15.4	1051.85[b]	1052.39[b]
TMW-011	11/07/1995	10/01/2018	15.0	2	PVC	R/SB	5.0 to 15.0	1051.84	1052.21
TMW-015	11/09/1995	NA	21.5	2	PVC	R/SB	11.5 to 21.5	1061.47	1059.20

TABLE I
GROUNDWATER MONITORING WELL COMPLETION DETAILS
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Identifier	Installed	Abandoned	Total Well Depth (feet)	Casing Diameter (inches, ID)	Casing Material	Screened Geology	Screened Interval (feet bgs)	TOC (feet NAVD88)	Ground Surface (feet NAVD88)
TMW-016D	11/07/2000	05/09/2011	18.5	2	PVC	R/SB	15.5 to 18.5	1057.36	1055.15
TMW-017D	11/07/2000	05/09/2011	18.0	2	PVC	R	15.0 to 18.0	1056.66	1054.32

Notes:

[a] *Well heads were modified on 10 November 2009 for injection tests and surveyed on 11 November 2009.*

[b] *Well heads were modified or repaired during Remedial Action implementation and surveyed in July/August 2011.*

[c] *Wellheads were modified during construction activities associated with city sewer improvements and surveyed in April/May 2023.*

[d] *Wellhead destroyed; unable to locate for abandonment.*

Abbreviations:

ags = Above ground surface
bgs = Below ground surface
ES = Eudora Sandstone
ID = Inner diameter
NA = Not applicable
NAVD88 = North American Vertical Datum of 1988
R = Residuum
PVC = Polyvinyl chloride
RL = Rock Lake Shale
SB = South Bend Limestone
SL = Stoner Limestone
SS = Stainless-steel
TOC = Top of casing

Table 3 - Historical Groundwater Monitoring Well Elevations

Adapted from Appendix C of Haley & Aldrich, Inc. 2025 Groundwater Report
APPENDIX C
COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC. OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
EPA-2	5/24/2000	1055.84	13.28	1042.56
EPA-2	12/3/2000	1055.84	15.25	1040.59
EPA-2	2/26/2001	1055.84	12.6	1043.24
EPA-2	3/23/2001	1055.84	11.73	1044.11
EPA-2	5/3/2001	1055.84	11.82	1044.02
EPA-2	5/8/2001	1055.84	11.56	1044.28
EPA-2	6/12/2001	1055.84	10.49	1045.35
EPA-2	11/1/2002	1055.84	16.29	1039.55
EPA-2	2/3/2003	1055.84	18.32	1037.52
EPA-2	10/20/2003	1055.84	15.64	1040.2
EPA-2	3/2/2009	1056.47	12.11	1044.36
EPA-2	10/26/2009	1056.47	13.21	1043.26
EPA-3	12/1/1995	1053.26	17.2	1036.06
EPA-3	5/24/2000	1053.26	13.14	1040.12
EPA-3	12/3/2000	1053.26	13.37	1039.89
EPA-3	2/26/2001	1053.26	12.4	1040.86
EPA-3	3/23/2001	1053.26	12.26	1041
EPA-3	5/3/2001	1053.26	12.42	1040.84
EPA-3	5/8/2001	1053.26	12.41	1040.85
EPA-3	6/12/2001	1053.26	12.37	1040.89
EPA-3	11/1/2002	1053.26	15.34	1037.92
EPA-3	11/27/2002	1053.26	14.85	1038.41
EPA-3	12/7/2002	1053.26	15.08	1038.18
EPA-3	2/3/2003	1053.26	17.16	1036.1
EPA-3	10/20/2003	1053.26	14.71	1038.55
EPA-3	3/2/2009	1053.89	11.28	1042.61
EPA-3	10/26/2009	1053.89	11.51	1042.38
KDHE-2	10/26/2009	1058.00	12.65	1045.35
MW-18B	10/26/2009	1055.82	11.34	1044.48
MW-18B	6/15/2011	1055.82	12.22	1043.6
MW-18B	6/25/2012	1055.82	13.58	1042.24
MW-18B	11/5/2012	1055.82	16.61	1039.21
MW-18B	5/20/2013	1055.82	10.96	1044.86
MW-18B	5/19/2014	1055.82	11.95	1043.87
MW-18B	5/18/2015	1055.82	10.04	1045.78
MW-18B	10/22/2015	1055.82	14.83	1040.99
MW-18B	5/31/2016	1055.82	9.19	1046.63
MW-18B	6/19/2017	1055.82	11.3	1044.52
MW-18B	11/6/2017	1055.82	11.29	1044.53
MW-18B	5/14/2018	1055.82	11.51	1044.31
MW-18B	11/9/2018	1055.82	11.89	1043.93
MW-18B	5/13/2019	1055.82	9.49	1046.33
MW-18B	4/27/2020	1055.82	9.41	1046.41
MW-18B	6/1/2020	1055.82	9.56	1046.26
MW-18B	5/17/2021	1055.82	10.07	1045.75
MW-18B	2/15/2022	1055.82	12.99	1042.83
MW-18B	4/4/2022	1055.82	10.01	1045.81
MW-18B	4/28/2023	1055.94	11.34	1044.6
MW-18B	5/14/2024	1055.94	10.63	1045.31
MW-18B	4/28/2025	1055.94	10.97	1044.97
MW-18B	6/2/2025	1055.94	10.9	1045.04

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
MW-19	2/26/2001	1050.57	7.9	1042.67
MW-19	3/23/2001	1050.57	9.01	1041.56
MW-19	5/3/2001	1050.57	11.11	1039.46
MW-19	5/8/2001	1050.57	10.2	1040.37
MW-19	6/12/2001	1050.57	10.25	1040.32
MW-19	11/1/2002	1050.57	11.15	1039.42
MW-19	2/3/2003	1050.57	13.29	1037.28
MW-19	10/20/2003	1050.57	12.8	1037.77
MW-19	3/5/2009	1051.09	11.22	1039.87
MW-19	10/29/2009	1051.09	8.88	1042.21
MW-19	4/28/2025	1051.09		
MW-19	6/2/2025	1051.09		
MW-20	2/26/2001	1050.78	5.95	1044.83
MW-20	3/23/2001	1050.78	11.89	1038.89
MW-20	5/3/2001	1050.78	7.87	1042.91
MW-20	5/8/2001	1050.78	12.98	1037.8
MW-20	6/12/2001	1050.78	10.49	1040.29
MW-20	11/1/2002	1050.78	3.67	1047.11
MW-20	2/3/2003	1050.78	5.71	1045.07
MW-20	10/20/2003	1050.78	4.73	1046.05
MW-20	3/2/2009	1051.45	4.36	1047.09
MW-20	10/26/2009	1051.45	3.99	1047.46
MW-20	11/6/2017	1051.45	5.47	1045.98
MW-20	5/14/2018	1051.45	6.04	1045.41
MW-20	5/13/2019	1051.45	7.04	1044.41
MW-20	4/27/2020	1051.45	5.86	1045.59
MW-20	6/1/2020	1051.45	5.39	1046.06
MW-20	5/17/2021	1051.45	5.89	1045.56
MW-20	2/15/2022	1051.45	5.39	1046.06
MW-20	4/4/2022	1051.45	5.99	1045.46
MW-20	4/28/2023	1051.45	5.97	1045.48
MW-20	5/13/2024	1051.45	3.34	1048.11
MW-20	4/28/2025	1051.45	7.9	1043.55
MW-20	6/2/2025	1051.45	5.6	1045.85
MW-21	2/26/2001	1032.75	6.29	1026.46
MW-21	3/23/2001	1032.75	6.9	1025.85
MW-21	5/3/2001	1032.75	8.29	1024.46
MW-21	5/8/2001	1032.75	8.68	1024.07
MW-21	6/12/2001	1032.75	6.64	1026.11
MW-21	11/1/2002	1032.75	7.78	1024.97
MW-21	2/3/2003	1032.75	5.52	1027.23
MW-21	10/20/2003	1032.75	8.42	1024.33
MW-21	3/2/2009	1033.26	7.6	1025.66
MW-21	10/26/2009	1033.26	7.14	1026.12
MW-21	6/15/2011	1033.26	8.54	1024.72
MW-21	6/25/2012	1033.26	8.79	1024.47
MW-21	11/5/2012	1033.26	9.97	1023.29
MW-21	5/20/2013	1033.26	7.63	1025.63
MW-21	5/19/2014	1033.26	8.36	1024.9
MW-21	5/18/2015	1033.26	5.04	1028.22
MW-21	10/22/2015	1033.26	9.48	1023.78
MW-21	5/31/2016	1033.26	4.14	1029.12
MW-21	6/19/2017	1033.26	8.05	1025.21
MW-21	10/2/2017	1033.26	8.37	1024.89

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
MW-21	5/14/2018	1033.26	8.37	1024.89
MW-21	11/9/2018	1033.26	8.14	1025.12
MW-21	5/13/2019	1033.26	3.58	1029.68
MW-21	4/27/2020	1033.26	4.33	1028.93
MW-21	6/1/2020	1033.26	3.76	1029.5
MW-21	5/17/2021	1033.26	3.7	1029.56
MW-21	2/15/2022	1033.26	8.45	1024.81
MW-21	4/4/2022	1033.26	4.52	1028.74
MW-21	4/28/2023	1033.26	7.86	1025.4
MW-21	5/15/2024	1033.26	6.49	1026.77
MW-22	2/26/2001	1032.83	5.91	1026.92
MW-22	3/23/2001	1032.83	6.78	1026.05
MW-22	5/3/2001	1032.83	Dry	Dry
MW-22	5/8/2001	1032.83	6.89	1025.94
MW-22	6/12/2001	1032.83	6.59	1026.24
MW-22	11/1/2002	1032.83	Dry	Dry
MW-22	2/3/2003	1032.83	7.39	1025.44
MW-22	10/20/2003	1032.83	7.4	1025.43
MW-22	3/2/2009	1033.36	Dry	Dry
MW-22	10/26/2009	1033.36	6.76	1026.6
MW-22	6/15/2011	1033.36	Dry	Dry
MW-22	11/5/2012	1033.36	Dry	Dry
MW-22	5/20/2013	1033.36	6.83	1026.53
MW-22	6/25/2013	1033.36	Dry	Dry
MW-22	5/19/2014	1033.36	Dry	Dry
MW-22	5/18/2015	1033.36	4.88	1028.48
MW-22	10/22/2015	1033.36	Dry	Dry
MW-22	5/31/2016	1033.36	5.92	1027.44
MW-22	6/19/2017	1033.36	7.39	1025.97
MW-22	11/6/2017	1033.36	Dry	Dry
MW-22	5/14/2018	1033.36	Dry	Dry
MW-22	11/9/2018	1033.36	Dry	Dry
MW-22	5/13/2019	1033.36	5.9	1027.46
MW-22	4/27/2020	1033.36	5.23	1028.13
MW-22	6/1/2020	1033.36	6.1	1027.26
MW-22	5/17/2021	1033.36	2.91	1030.45
MW-22	2/15/2022	1033.36	Dry	Dry
MW-22	4/4/2022	1033.36	6.69	1026.67
MW-22	4/28/2023	1033.48	7.23	1026.25
MW-22	5/13/2024	1033.48	6.99	1026.49
MW-22B	10/20/2003	1032.51	8.95	1023.56
MW-22B	3/2/2009	1033.31	7.55	1025.76
MW-22B	10/26/2009	1033.31	7.09	1026.22
MW-22B	6/15/2011	1033.31	8.83	1024.48
MW-22B	6/25/2012	1033.31	11.45	1021.86
MW-22B	11/5/2012	1033.31	14.25	1019.06
MW-22B	5/20/2013	1033.31	6.91	1026.4
MW-22B	5/19/2014	1033.31	7.63	1025.68
MW-22B	5/18/2015	1033.31	4.79	1028.52
MW-22B	10/22/2015	1033.31	10.3	1023.01
MW-22B	5/31/2016	1033.31	5.72	1027.59
MW-22B	6/19/2017	1033.31	7.43	1025.88
MW-22B	11/6/2017	1033.31	7.57	1025.74
MW-22B	5/14/2018	1033.31	7.94	1025.37

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
MW-22B	11/9/2018	1033.31	9.19	1024.12
MW-22B	5/13/2019	1033.31	5.82	1027.49
MW-22B	4/27/2020	1033.31	5.18	1028.13
MW-22B	6/1/2020	1033.31	5.95	1027.36
MW-22B	5/17/2021	1033.31	2.29	1031.02
MW-22B	2/15/2022	1033.31	8.23	1025.08
MW-22B	4/4/2022	1033.31	6.42	1026.89
MW-22B	4/28/2023	1033.44	7.21	1026.23
MW-22B	5/13/2024	1033.44	6.97	1026.47
MW-22B	4/28/2025	1033.44	6.98	1026.46
MW-22B	6/2/2025	1033.44	7.03	1026.41
MW-23	2/26/2001	1035.85	4.16	1031.69
MW-23	3/23/2001	1035.85	3.73	1032.12
MW-23	5/3/2001	1035.85	4.6	1031.25
MW-23	5/8/2001	1035.85	5.6	1030.25
MW-23	6/12/2001	1035.85	4.31	1031.54
MW-23	11/1/2002	1035.85	Dry	Dry
MW-23	2/3/2003	1035.85	6.99	1028.86
MW-23	10/20/2003	1035.85	Dry	Dry
MW-23	3/2/2009	1036.41	4.62	1031.79
MW-23	10/26/2009	1036.41	6.03	1030.38
MW-23	6/15/2011	1036.94	6.84	1030.1
MW-23	6/25/2012	1036.94	Dry	Dry
MW-23	11/5/2012	1036.94	Dry	Dry
MW-23	5/20/2013	1036.94	3.61	1033.33
MW-23	5/19/2014	1036.94	4.84	1032.1
MW-23	5/18/2015	1036.94	1.36	1035.58
MW-23	10/22/2015	1036.94	Dry	Dry
MW-23	5/31/2016	1036.94	2.47	1034.47
MW-23	6/19/2017	1036.94	6.46	1030.48
MW-23	10/2/2017	1036.94	5.25	1031.69
MW-23	5/14/2018	1036.94	4.55	1032.39
MW-23	11/9/2018	1036.94	Dry	Dry
MW-23	5/13/2019	1036.94	2.33	1034.61
MW-23	4/27/2020	1036.94	0.98	1035.96
MW-23	6/1/2020	1036.94	2.85	1034.09
MW-23	5/17/2021	1036.94		
MW-23	2/15/2022	1036.94	5.95	1030.99
MW-23	4/4/2022	1036.94	2.94	1034
MW-23	4/28/2023	1036.48	3.23	1033.25
MW-23	5/13/2024	1036.48	6.97	1029.51
MW-23B	10/20/2003	1036.06	9.03	1027.03
MW-23B	3/2/2009	1036.94	4.57	1032.37
MW-23B	10/26/2009	1036.94	5.33	1031.61
MW-23B	6/15/2011	1036.06	6.65	1029.41
MW-23B	6/25/2012	1036.06	8.42	1027.64
MW-23B	11/5/2012	1036.06	11.27	1024.79
MW-23B	5/20/2013	1036.06	3.94	1032.12
MW-23B	5/19/2014	1036.06	4.81	1031.25
MW-23B	5/18/2015	1036.06	3.03	1033.03
MW-23B	10/22/2015	1033.36	9.08	1024.28
MW-23B	5/31/2016	1033.36	3.22	1030.14
MW-23B	6/19/2017	1033.36	5.77	1027.59
MW-23B	11/6/2017	1033.36	5.17	1028.19

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
MW-23B	5/14/2018	1033.36	5.16	1028.2
MW-23B	11/9/2018	1033.36	6.07	1027.29
MW-23B	5/13/2019	1036.06	3.38	1032.68
MW-23B	4/27/2020	1036.06	3.04	1033.02
MW-23B	6/1/2020	1036.06	3.73	1032.33
MW-23B	5/17/2021	1036.06	2.7	1033.36
MW-23B	2/15/2022	1036.06	6.19	1029.87
MW-23B	4/4/2022	1036.06	3.99	1032.07
MW-23B	4/28/2023	1036.76	4.42	1032.34
MW-23B	5/13/2024	1036.76	4.13	1032.63
MW-23B	4/28/2025	1036.76	4.1	1032.66
MW-23B	6/2/2025	1036.76	4.41	1032.35
MW-24	2/26/2001	1026.84	3.78	1023.06
MW-24	3/23/2001	1026.84	5.07	1021.77
MW-24	5/3/2001	1026.84	4.81	1022.03
MW-24	5/8/2001	1026.84	4.83	1022.01
MW-24	6/12/2001	1026.84	4	1022.84
MW-24	11/1/2002	1026.84	5.73	1021.11
MW-24	2/3/2003	1026.84	5.93	1020.91
MW-24	10/20/2003	1026.84	9.28	1017.56
MW-24	3/2/2009	1027.49	4.53	1022.96
MW-24	10/26/2009	1027.49	4.47	1023.02
MW-24	6/15/2011	1027.49	6.63	1020.86
MW-24	6/25/2012	1027.49	5.49	1022
MW-24	11/5/2012	1027.49	7.18	1020.31
MW-24	5/20/2013	1027.49	4.31	1023.18
MW-24	5/19/2014	1027.49	4.71	1022.78
MW-24	5/18/2015	1027.49	3.29	1024.2
MW-24	10/22/2015	1027.49	4.36	1023.13
MW-24	5/31/2016	1027.49	4.29	1023.2
MW-24	6/19/2017	1027.49	4.92	1022.57
MW-24	11/6/2017	1027.49	5.14	1022.35
MW-24	5/14/2018	1027.49	5.08	1022.41
MW-24	11/9/2018	1027.49	4.56	1022.93
MW-24	5/13/2019	1027.49	4.1	1023.39
MW-24	4/27/2020	1027.49	3.78	1023.71
MW-24	6/1/2020	1027.49	3.88	1023.61
MW-24	5/17/2021	1027.49	3.39	1024.1
MW-24	2/15/2022	1027.49	4.14	1023.35
MW-24	4/4/2022	1027.49	4.16	1023.33
MW-24	4/28/2023	1027.49	4.11	1023.38
MW-24	5/13/2024	1027.49	4.18	1023.31
MW-24	4/28/2025	1027.49	4.17	1023.32
MW-24	6/2/2025	1027.49	4.29	1023.2
MW-25	2/26/2001	1036.47	4.08	1032.39
MW-25	3/23/2001	1036.47	4.42	1032.05
MW-25	5/3/2001	1036.47	4.41	1032.06
MW-25	5/8/2001	1036.47	11.88	1024.59
MW-25	6/12/2001	1036.47	8.39	1028.08
MW-25	11/1/2002	1036.47	5.63	1030.84
MW-25	2/3/2003	1036.47	5.6	1030.87
MW-25	10/20/2003	1036.47	4.66	1031.81
MW-25	3/2/2009	1037.14	4.18	1032.96
MW-25	10/26/2009	1037.14	3.45	1033.69

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
MW-25	6/15/2011	1037.14	4.5	1032.64
MW-25	6/25/2012	1037.14	4.69	1032.45
MW-25	11/5/2012	1037.14	5.97	1031.17
MW-25	5/20/2013	1037.14	4.72	1032.42
MW-25	5/19/2014	1037.14	5.18	1031.96
MW-25	5/18/2015	1037.14	4.64	1032.5
MW-25	10/22/2015	1037.14	4.78	1032.36
MW-25	5/31/2016	1037.14	4.33	1032.81
MW-25	6/19/2017	1037.14	4.57	1032.57
MW-25	11/6/2017	1037.14	4.05	1033.09
MW-25	5/14/2018	1037.14	5.17	1031.97
MW-25	11/9/2018	1037.14	4.04	1033.1
MW-25	5/13/2019	1037.14	4.7	1032.44
MW-25	4/27/2020	1037.14	4.56	1032.58
MW-25	6/1/2020	1037.14	4.52	1032.62
MW-25	5/17/2021	1037.14	4.39	1032.75
MW-25	2/15/2022	1037.14	4.6	1032.54
MW-25	4/4/2022	1037.14	4.72	1032.42
MW-25	4/28/2023	1037.14	4.98	1032.16
MW-25	5/13/2024	1037.14	4.51	1032.63
MW-26B	11/4/2002	1049.28	12.71	1036.57
MW-26B	11/13/2002	1049.28	13.35	1035.93
MW-26B	11/20/2002	1049.28	13.55	1035.73
MW-26B	11/27/2002	1049.28	13.97	1035.31
MW-26B	12/7/2002	1049.28	14.3	1034.98
MW-26B	2/3/2003	1049.28	14.94	1034.34
MW-26B	10/20/2003	1049.28	12.44	1036.84
MW-26B	3/2/2009	1049.76	8.67	1041.09
MW-26B	10/26/2009	1049.76	8.96	1040.8
MW-26B	6/15/2011	1049.42	9.53	1039.89
MW-26B	2/22/2012	1049.42	9.01	1040.41
MW-26B	6/25/2012	1049.42	11.39	1038.03
MW-26B	11/5/2012	1049.42	14.36	1035.06
MW-26B	3/13/2013	1049.42	9.69	1039.73
MW-26B	5/20/2013	1049.42	7.81	1041.61
MW-26B	5/19/2014	1049.42	9.18	1040.24
MW-26B	5/18/2015	1049.42	7.07	1042.35
MW-26B	10/22/2015	1049.42	13.32	1036.1
MW-26B	5/31/2016	1049.42	6.03	1043.39
MW-26B	6/19/2017	1049.42	8.59	1040.83
MW-26B	11/6/2017	1049.42	8.63	1040.79
MW-26B	5/14/2018	1049.42	8.74	1040.68
MW-26B	11/9/2018	1049.42	9.56	1039.86
MW-26B	5/13/2019	1049.42	6.29	1043.13
MW-26B	4/27/2020	1049.42	6.3	1043.12
MW-26B	6/1/2020	1049.42	6.35	1043.07
MW-26B	5/17/2021	1049.42	6.59	1042.83
MW-26B	2/15/2022	1049.42	10.52	1038.9
MW-26B	4/4/2022	1049.42	7.13	1042.29
MW-26B	4/28/2023	1049.22	8.26	1040.96
MW-26C	10/20/2003	1048.74	42.54	1006.2
MW-26C	12/17/2003	1048.74	35.3	1013.44
MW-26C	3/2/2009	1049.61	4.15	1045.46
MW-26C	10/26/2009	1049.61	3.9	1045.71

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
MW-26C	6/19/2017	1049.23	29.56	1019.67
MW-26C	11/6/2017	1049.23	28.06	1021.17
MW-26C	5/14/2018	1049.23	20.2	1029.03
MW-26C	11/9/2018	1049.23	13.84	1035.39
MW-26C	5/13/2019	1049.23	7.58	1041.65
MW-26C	4/27/2020	1049.23	3.19	1046.04
MW-26C	6/1/2020	1049.23	3.17	1046.06
MW-26C	5/17/2021	1049.23	4.12	1045.11
MW-26C	2/15/2022	1049.23	4.33	1044.9
MW-26C	4/4/2022	1049.23	4.29	1044.94
MW-26C	4/28/2023	1049.18	2.56	1046.62
MW-26C	5/13/2024	1049.18	2.17	1047.01
MW-26C	4/28/2025	1049.18	2.5	1046.68
MW-26C	6/2/2025	1049.18	2.5	1046.68
MW-27B	11/13/2002	1027.24	19.84	1007.4
MW-27B	11/20/2002	1027.24	18.93	1008.31
MW-27B	11/27/2002	1027.24	18.25	1008.99
MW-27B	12/7/2002	1027.24	21.39	1005.85
MW-27B	2/3/2003	1027.24	17.52	1009.72
MW-27B	10/20/2003	1027.24	7.01	1020.23
MW-27B	3/2/2009	1027.70	3.4	1024.3
MW-27B	10/26/2009	1027.70	3.74	1023.96
MW-27B	6/15/2011	1027.70	3.5	1024.2
MW-27B	6/25/2012	1027.70	4.01	1023.69
MW-27B	11/5/2012	1027.70	4.82	1022.88
MW-27B	5/20/2013	1027.70	4.59	1023.11
MW-27B	5/19/2014	1027.70	3.97	1023.73
MW-27B	5/18/2015	1027.70	3.93	1023.77
MW-27B	10/22/2015	1027.70	2.53	1025.17
MW-27B	5/31/2016	1027.70	3.48	1024.22
MW-27B	6/19/2017	1027.70	3.34	1024.36
MW-27B	11/6/2017	1027.70	1.2	1026.5
MW-27B	5/14/2018	1027.70	3.53	1024.17
MW-27B	11/9/2018	1027.70	3.97	1023.73
MW-27B	5/13/2019	1027.70	3.74	1023.96
MW-27B	4/27/2020	1027.70	3.38	1024.32
MW-27B	6/1/2020	1027.70	2.58	1025.12
MW-27B	5/17/2021	1027.70	3.89	1023.81
MW-27B	2/15/2022	1027.70	3.13	1024.57
MW-27B	4/4/2022	1027.70	3.3	1024.4
MW-27B	4/28/2023			
MW-27B	5/13/2024	1027.79	0.07	1027.72
MW-27B	4/28/2025	1027.79	1.79	1026
MW-27B	6/2/2025	1027.79	0.11	1027.68
MW-28B	11/4/2002	1042.62	9	1033.62
MW-28B	11/13/2002	1042.62	9.58	1033.04
MW-28B	11/20/2002	1042.62	9.9	1032.72
MW-28B	11/27/2002	1042.62	10.36	1032.26
MW-28B	12/7/2002	1042.62	10.84	1031.78
MW-28B	2/3/2003	1042.62	11.1	1031.52
MW-28B	10/20/2003	1042.62	9.14	1033.48
MW-28B	3/2/2009	1043.03	4.41	1038.62
MW-28B	10/26/2009	1043.03	5.9	1037.13
MW-28B	6/15/2011	1044.09	1.95	1042.14

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
MW-28B	6/25/2012	1044.09	5.7	1038.39
MW-28B	11/5/2012	1044.09	10.09	1034
MW-28B	5/20/2013	1044.09	4.89	1039.2
MW-28B	5/19/2014	1044.09	6.61	1037.48
MW-28B	5/18/2015	1044.09	5.59	1038.5
MW-28B	10/22/2015	1044.09	7.71	1036.38
MW-28B	5/31/2016	1044.09	3.47	1040.62
MW-28B	6/19/2017	1044.09	3.91	1040.18
MW-28B	11/6/2017	1044.09	4.36	1039.73
MW-28B	5/14/2018	1044.09	4.54	1039.55
MW-28B	11/9/2018	1044.09	5.48	1038.61
MW-28B	5/13/2019	1044.09	1.63	1042.46
MW-28B	4/27/2020	1044.09	3.03	1041.06
MW-28B	6/1/2020	1044.09	2.83	1041.26
MW-28B	5/17/2021	1044.09	3.69	1040.4
MW-28B	2/15/2022	1044.09	4.51	1039.58
MW-28B	4/4/2022	1044.09	3.79	1040.3
MW-28B	4/28/2023	1042.63	2.45	1040.18
MW-28B	5/13/2024	1042.63	5.44	1037.19
MW-28B	4/28/2025	1042.63	6.36	1036.27
MW-28B	6/2/2025	1042.63	5.69	1036.94
MW-29B	11/5/2002	1039.61	12.73	1026.88
MW-29B	11/13/2002	1039.61	6.75	1032.86
MW-29B	11/20/2002	1039.61	4.79	1034.82
MW-29B	11/27/2002	1039.61	4.5	1035.11
MW-29B	12/7/2002	1039.61	4.59	1035.02
MW-29B	2/3/2003	1039.61	5.42	1034.19
MW-29B	10/20/2003	1039.61	3.79	1035.82
MW-29B	3/2/2009	1040.07	4.25	1035.82
MW-29B	10/26/2009	1040.07	3.32	1036.75
MW-29B	11/11/2009	1040.07	6.22	1033.85
MW-29B	6/15/2011	1040.07	3.26	1036.81
MW-29B	6/25/2012	1040.07	4.32	1035.75
MW-29B	11/5/2012	1040.07	4.55	1035.52
MW-29B	5/20/2013	1040.07	3.89	1036.18
MW-29B	5/19/2014	1040.07	4.17	1035.9
MW-29B	5/18/2015	1040.07	0.39	1039.68
MW-29B	10/22/2015	1040.07	3.86	1036.21
MW-29B	5/31/2016	1040.07	3.17	1036.9
MW-29B	6/19/2017	1040.07	3.76	1036.31
MW-29B	11/6/2017	1040.07	3.03	1037.04
MW-29B	5/14/2018	1040.07	4.48	1035.59
MW-29B	11/9/2018	1040.07	3.47	1036.6
MW-29B	5/13/2019	1040.07	3.42	1036.65
MW-29B	4/27/2020	1040.07	3.92	1036.15
MW-29B	6/1/2020	1040.07	3.68	1036.39
MW-29B	5/17/2021	1040.07	3.86	1036.21
MW-29B	2/15/2022	1040.07	4.95	1035.12
MW-29B	4/4/2022	1040.07	3.82	1036.25
MW-29B	4/28/2023	1040.07	4.28	1035.79
MW-29B	5/15/2024	1040.07	3.76	1036.31
MW-29B	4/28/2025	1040.07	4.12	1035.95
MW-29B	6/2/2025	1040.07	2.55	1037.52

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
MW-30B	10/20/2003	1030.04	16.06	1013.98
MW-30B	3/2/2009	1030.82	16.64	1014.18
MW-30B	10/26/2009	1030.82	13.87	1016.95
MW-30B	4/28/2025	1030.82		
MW-30B	6/2/2025	1030.82		
MW-31	10/27/2009	1017.29	3.61	1013.68
MW-31	6/15/2011	1017.29	5.33	1011.96
MW-31	6/25/2012	1017.29	6.52	1010.77
MW-31	11/5/2012	1017.29	6.98	1010.31
MW-31	5/20/2013	1017.29	3.95	1013.34
MW-31	5/19/2014	1017.29	5.01	1012.28
MW-31	5/18/2015	1017.29	2.79	1014.5
MW-31	10/22/2015	1017.29	6.36	1010.93
MW-31	5/31/2016	1017.29	2.95	1014.34
MW-31	6/19/2017	1017.29	4.81	1012.48
MW-31	11/6/2017	1017.29	4.64	1012.65
MW-31	5/14/2018	1017.29	5.35	1011.94
MW-31	11/9/2018	1017.29	4.35	1012.94
MW-31	5/13/2019	1017.29	2.64	1014.65
MW-31	4/27/2020	1017.29	2.69	1014.6
MW-31	6/1/2020	1017.29	2.89	1014.4
MW-31	5/17/2021	1017.29	2.49	1014.8
MW-31	2/15/2022	1017.29	5.38	1011.91
MW-31	4/4/2022	1017.29	2.59	1014.7
MW-31	4/28/2023	1017.29	4.14	1013.15
MW-31	5/13/2024	1017.29	3.09	1014.2
MW-31	4/28/2025	1017.29	3.68	1013.61
MW-31	6/2/2025	1017.29	4.01	1013.28
MW-31B	10/20/2003	1016.79	2.95	1013.84
MW-31B	10/27/2009	1017.59	3.88	1013.71
MW-31B	6/15/2011	1017.59	3.84	1013.75
MW-31B	6/25/2012	1017.59	4.45	1013.14
MW-31B	11/5/2012	1017.59	4.64	1012.95
MW-31B	5/20/2013	1017.59	3.69	1013.9
MW-31B	5/19/2014	1017.59	4.34	1013.25
MW-31B	5/18/2015	1017.59	3.65	1013.94
MW-31B	10/22/2015	1017.59	3.69	1013.9
MW-31B	5/31/2016	1017.59	2.72	1014.87
MW-31B	6/19/2017	1017.59	3.85	1013.74
MW-31B	11/6/2017	1017.59	2.68	1014.91
MW-31B	5/14/2018	1017.59	4.62	1012.97
MW-31B	11/9/2018	1017.59	2.45	1015.14
MW-31B	5/13/2019	1017.59	2.84	1014.75
MW-31B	4/27/2020	1017.59	3.41	1014.18
MW-31B	6/1/2020	1017.59	3.06	1014.53
MW-31B	5/17/2021	1017.59	3.78	1013.81
MW-31B	2/15/2022	1017.59	4.63	1012.96
MW-31B	4/4/2022	1017.59	3.41	1014.18
MW-31B	4/28/2023	1017.59	4.12	1013.47
MW-31B	5/13/2024	1017.59	3.38	1014.21
MW-31B	4/28/2025	1017.59	4.26	1013.33
MW-31B	6/2/2025	1017.59	3.71	1013.88

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
MW-32B	10/20/2003	1015.56	5.2	1010.36
MW-32B	3/2/2009	1016.42	4.73	1011.69
MW-32B	10/26/2009	1016.42	4.46	1011.96
MW-33B	10/20/2003	1016.09	5.56	1010.53
MW-33B	3/2/2009	1016.85	6.56	1010.29
MW-33B	10/26/2009	1016.85	5.27	1011.58
MW-33B	6/15/2011	1016.85	6.44	1010.41
MW-33B	6/25/2012	1016.85	6.77	1010.08
MW-33B	11/5/2012	1016.85	6.57	1010.28
MW-33B	5/20/2013	1016.85	6.13	1010.72
MW-33B	5/19/2014	1016.85	6.8	1010.05
MW-33B	5/18/2015	1016.85	5.8	1011.05
MW-33B	10/22/2015	1016.85	6.08	1010.77
MW-33B	5/31/2016	1016.85	4.77	1012.08
MW-33B	6/19/2017	1016.85	5.95	1010.9
MW-33B	11/6/2017	1016.85	5.14	1011.71
MW-33B	5/14/2018	1016.85	6.86	1009.99
MW-33B	11/9/2018	1016.85	4.87	1011.98
MW-33B	5/13/2019	1016.85	5.05	1011.8
MW-33B	4/27/2020	1016.85	5.53	1011.32
MW-33B	6/1/2020	1016.85	5.03	1011.82
MW-33B	5/17/2021	1016.85	5.4	1011.45
MW-33B	2/15/2022	1016.85	6.26	1010.59
MW-33B	4/4/2022	1016.85	5.38	1011.47
MW-33B	4/28/2023	1016.85	6.21	1010.64
MW-33B	5/13/2024	1016.85	5.52	1011.33
MW-33B	4/28/2025	1016.85	6.35	1010.5
MW-33B	6/2/2025	1016.85	5.95	1010.9
MW-34B	10/26/2009	1031.14	13.69	1017.45
MW-34B	6/15/2011	1031.14	3.69	1027.45
MW-34B	6/25/2012	1031.14	4.56	1026.58
MW-34B	11/5/2012	1031.14	7.59	1023.55
MW-34B	5/20/2013	1031.14	2.4	1028.74
MW-34B	5/19/2014	1031.14	3.55	1027.59
MW-34B	5/18/2015	1031.14	2.62	1028.52
MW-34B	10/22/2015	1031.14	3.78	1027.36
MW-34B	5/31/2016	1031.14	3.37	1027.77
MW-34B	6/19/2017	1031.14	2.47	1028.67
MW-34B	11/6/2017	1031.14	2.76	1028.38
MW-34B	5/14/2018	1031.14	2.72	1028.42
MW-34B	11/9/2018	1031.14	0.42	1030.72
MW-34B	5/13/2019	1031.14	0.33	1030.81
MW-34B	4/27/2020	1031.14	0.22	1030.92
MW-34B	6/1/2020	1031.14	0.29	1030.85
MW-34B	5/17/2021	1031.14	0	1031.14
MW-34B	2/15/2022	1031.14	3.27	1027.87
MW-34B	4/4/2022	1031.14	0.48	1030.66
MW-34B	4/28/2023	1030.62	2.51	1028.11
MW-34B	5/13/2024	1030.62	2.65	1027.97
MW-34B	4/28/2025	1030.62	2.61	1028.01
MW-34B	6/2/2025	1030.62	2.18	1028.44
MW-35B	10/26/2009	1047.54	10.33	1037.21
MW-35B	5/18/2015	1047.54	3.94	1043.6
MW-35B	10/22/2015	1047.54	11.2	1036.34

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
MW-35B	5/31/2016	1047.54	1.73	1045.81
MW-35B	6/19/2017	1047.54	6.65	1040.89
MW-35B	11/6/2017	1047.54	6.79	1040.75
MW-35B	5/14/2018	1047.54	6.75	1040.79
MW-36B	10/26/2009	1049.36	8.59	1040.77
MW-36B	5/14/2018	1049.26	8.48	1040.78
MW-36B	11/9/2018	1049.26	4.29	1044.97
MW-36B	5/13/2019	1049.26	5.98	1043.28
MW-36B	4/27/2020	1049.26	6.03	1043.23
MW-36B	6/1/2020	1049.26	6.1	1043.16
MW-36B	5/17/2021	1049.26	6.29	1042.97
MW-36B	2/15/2022	1049.26	10.22	1039.04
MW-36B	4/4/2022	1049.26	6.82	1042.44
MW-36B	4/28/2023	1048.76	7.82	1040.94
MW-36B	5/13/2024	1048.92	7.35	1041.57
MW-36BR	4/28/2025	1048.92	8.23	1040.69
MW-36BR	6/2/2025	1048.92	7.98	1040.94
MW-37B	10/26/2009	1049.89	9.22	1040.67
MW-37B	5/14/2018	1049.98	9.12	1040.86
MW-37B	11/9/2018	1049.98	10.09	1039.89
MW-37B	5/13/2019	1049.98	6.72	1043.26
MW-37B	4/27/2020	1049.98	6.74	1043.24
MW-37B	6/1/2020	1049.98	6.76	1043.22
MW-37B	5/17/2021	1049.98	7.04	1042.94
MW-37B	2/15/2022	1049.98	10.87	1039.11
MW-37B	4/4/2022	1049.98	7.53	1042.45
MW-37B	4/28/2023	1049.77	8.75	1041.02
MW-37B	5/13/2024	1049.77	7.89	1041.88
MW-37B	4/28/2025	1049.77	8.62	1041.15
MW-37B	6/2/2025	1049.77	8.52	1041.25
MW-38B	10/26/2009	1050.22	10.38	1039.84
MW-38B	5/14/2018	1050.09	9.11	1040.98
MW-38B	11/9/2018	1050.09	10.47	1039.62
MW-38B	5/13/2019	1050.09	6.84	1043.25
MW-38B	4/27/2020	1050.09	7.09	1043
MW-38B	6/1/2020	1050.09	6.96	1043.13
MW-38B	5/17/2021	1050.09	7.63	1042.46
MW-38B	2/15/2022	1050.09	10.73	1039.36
MW-38B	4/4/2022	1050.09	7.57	1042.52
MW-38B	4/28/2023	1049.69	8.57	1041.12
MW-38B	5/13/2024	1049.69	7.73	1041.96
MW-38B	4/28/2025	1049.69	8.49	1041.2
MW-38B	6/2/2025	1049.69	8.18	1041.51
MW-39B	10/26/2009	1052.35	9.38	1042.97
MW-39B	6/15/2011	1052.35	9.67	1042.68
MW-39B	2/22/2012	1052.35	8.69	1043.66
MW-39B	6/25/2012	1052.35	10.41	1041.94
MW-39B	9/20/2012	1052.35	11.18	1041.17
MW-39B	11/5/2012	1052.35	13.89	1038.46
MW-39B	3/13/2013	1052.35	9.63	1042.72
MW-39B	5/20/2013	1052.35	8.14	1044.21
MW-39B	5/19/2014	1052.35	9.31	1043.04
MW-39B	5/18/2015	1052.35	7.71	1044.64
MW-39B	10/22/2015	1052.35	12.53	1039.82

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
MW-39B	5/31/2016	1052.35	5.65	1046.7
MW-39B	6/19/2017	1052.35	8.93	1043.42
MW-39B	11/6/2017	1052.35	7.7	1044.65
MW-39B	5/14/2018	1052.35	3.88	1048.47
MW-39B	11/9/2018	1052.35	9.38	1042.97
MW-39B	5/13/2019	1052.35	6.1	1046.25
MW-39B	4/27/2020	1052.35	6.16	1046.19
MW-39B	6/1/2020	1052.35	6.22	1046.13
MW-39B	5/17/2021	1052.35	6.54	1045.81
MW-39B	2/15/2022	1052.35	10.15	1042.2
MW-39B	4/4/2022	1052.35	6.88	1045.47
MW-39B	4/28/2023	1052.51	7.41	1045.1
MW-39B	5/13/2024	1052.51	8.84	1043.67
MW-39B	4/28/2025	1052.51	7.42	1045.09
MW-39B	6/2/2025	1052.51	7.16	1045.35
MW-40B	10/26/2009	1047.91	5.23	1042.68
MW-40B	6/15/2011	1047.91	6.27	1041.64
MW-40B	6/25/2012	1047.91	8.25	1039.66
MW-40B	11/5/2012	1047.91	11.02	1036.89
MW-40B	5/20/2013	1047.91	5.4	1042.51
MW-40B	5/19/2014	1047.91	6.48	1041.43
MW-40B	5/18/2015	1047.91	3.83	1044.08
MW-40B	10/22/2015	1047.91	8.12	1039.79
MW-40B	5/31/2016	1047.91	3.4	1044.51
MW-40B	6/19/2017	1047.91	5.49	1042.42
MW-40B	11/6/2017	1047.91	5.74	1042.17
MW-40B	5/14/2018	1047.91	5.01	1042.9
MW-40B	11/9/2018	1047.91	6.49	1041.42
MW-40B	5/13/2019	1047.91	3.68	1044.23
MW-40B	4/27/2020	1047.91	4.33	1043.58
MW-40B	6/1/2020	1047.91	3.79	1044.12
MW-40B	5/17/2021	1047.91	3.88	1044.03
MW-40B	2/15/2022	1047.91	5.5	1042.41
MW-40B	4/4/2022	1047.91	4.09	1043.82
MW-40B	4/28/2023	1047.91	5.8	1042.11
MW-40B	5/15/2024	1047.91	4.95	1042.96
MW-40B	4/28/2025	1047.91	5.14	1042.77
MW-40B	6/2/2025	1047.91	4.96	1042.95
MW-41B	10/26/2009	1040.07	7.63	1032.44
MW-41B	6/15/2011	1040.07	14.22	1025.85
MW-41B	6/25/2012	1040.07	9.82	1030.25
MW-41B	11/5/2012	1040.07	13.48	1026.59
MW-41B	5/20/2013	1040.07	6.61	1033.46
MW-41B	5/19/2014	1040.07	7.35	1032.72
MW-41B	5/18/2015	1040.07	5.83	1034.24
MW-41B	10/22/2015	1040.07	5.99	1034.08
MW-41B	5/31/2016	1040.07	4.74	1035.33
MW-41B	6/19/2017	1040.07	7.03	1033.04
MW-41B	11/6/2017	1040.07	7.03	1033.04
MW-41B	5/14/2018	1040.07	6.65	1033.42
MW-41B	11/9/2018	1040.07	8.24	1031.83
MW-41B	5/13/2019	1040.07	4.28	1035.79
MW-41B	4/27/2020	1040.07	4.42	1035.65
MW-41B	6/1/2020	1040.07	4.31	1035.76

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
MW-41B	5/17/2021	1040.07	5.04	1035.03
MW-41B	2/15/2022	1040.07	6.38	1033.69
MW-41B	4/4/2022	1040.07	4.8	1035.27
MW-41B	4/28/2023	1040.09	5.65	1034.44
MW-41B	5/13/2024	1040.09	5.72	1034.37
MW-41B	4/28/2025	1040.09	7.81	1032.28
MW-41B	6/2/2025	1040.09	6.19	1033.9
MW-42B	5/14/2018	1049.45	8.23	1041.22
MW-42B	11/9/2018	1049.45	9.79	1039.66
MW-42B	5/13/2019	1049.45	5.94	1043.51
MW-42B	4/27/2020	1049.45	6.07	1043.38
MW-42B	6/1/2020	1049.45	6.02	1043.43
MW-42B	5/17/2021	1049.45	6.63	1042.82
MW-42B	2/15/2022	1049.45	9.75	1039.7
MW-42B	4/4/2022	1049.45	6.79	1042.66
MW-42B	4/28/2023	1048.87	7.98	1040.89
MW-42B	5/13/2024	1048.87	7.14	1041.73
MW-42B	4/28/2025	1048.87	7.83	1041.04
MW-42B	6/2/2025	1048.87	6.7	1042.17
MW-43B	5/14/2018	1048.41	7.03	1041.38
MW-43B	11/9/2018	1048.41	8.9	1039.51
MW-43B	5/13/2019	1048.41	4.85	1043.56
MW-43B	4/27/2020	1048.41	4.98	1043.43
MW-43B	6/1/2020	1048.41	4.91	1043.5
MW-43B	5/17/2021	1048.41	5.23	1043.18
MW-43B	2/15/2022	1048.41	8.38	1040.03
MW-43B	4/4/2022	1048.41	5.64	1042.77
MW-43B	4/28/2023	1047.83	6.84	1040.99
MW-43B	5/13/2024	1047.83	6.13	1041.7
MW-43B	4/28/2025	1047.83	6.84	1040.99
MW-43B	6/2/2025	1047.83	6.61	1041.22
MW-44B	6/15/2011	1049.59	9.29	1040.3
MW-44B	2/22/2012	1049.59	9.2	1040.39
MW-44B	6/25/2012	1049.59	10.22	1039.37
MW-44B	9/20/2012	1049.59	14.02	1035.57
MW-44B	11/5/2012	1049.59	14.49	1035.1
MW-44B	3/13/2013	1049.59	9.62	1039.97
MW-44B	5/20/2013	1049.59	7.63	1041.96
MW-44B	5/19/2014	1049.59	9.03	1040.56
MW-44B	5/18/2015	1049.59	7.35	1042.24
MW-44B	10/22/2015	1049.59	12.23	1037.36
MW-44B	5/31/2016	1049.59	6.01	1043.58
MW-44B	6/19/2017	1049.59	8.96	1040.63
MW-44B	11/6/2017	1049.59	8.54	1041.05
MW-44B	5/14/2018	1049.59	8.44	1041.15
MW-44B	11/9/2018	1049.59	9.42	1040.17
MW-44B	5/13/2019	1049.59	6.24	1043.35
MW-44B	4/27/2020	1049.59	7.04	1042.55
MW-44B	6/1/2020	1049.59	6.34	1043.25
MW-44B	5/17/2021	1049.59	6.81	1042.78
MW-44B	2/15/2022	1049.59	10.19	1039.4
MW-44B	4/4/2022	1049.59	7.11	1042.48
MW-44B	4/28/2023	1049.41	8.55	1040.86
MW-44B	5/13/2024	1049.41	7.93	1041.48

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
MW-44B	4/28/2025	1049.41	8.85	1040.56
MW-44B	6/2/2025	1049.41	8.5	1040.91
MW-45B	6/15/2011	1050.22	9.72	1040.5
MW-45B	2/22/2012	1050.22	9.85	1040.37
MW-45B	6/25/2012	1050.22	12.23	1037.99
MW-45B	9/20/2012	1050.22	13.46	1036.76
MW-45B	11/5/2012	1050.22	15.14	1035.08
MW-45B	3/13/2013	1050.22	10.82	1039.4
MW-45B	5/20/2013	1050.22	8.67	1041.55
MW-45B	5/19/2014	1050.22	9.92	1040.3
MW-45B	5/18/2015	1050.22	8.33	1041.89
MW-45B	10/22/2015	1050.22	15.22	1035
MW-45B	5/31/2016	1050.22	6.54	1043.68
MW-45B	6/19/2017	1050.22	8.47	1041.75
MW-45B	11/6/2017	1050.22	9.09	1041.13
MW-45B	5/14/2018	1050.22	9.03	1041.19
MW-45B	11/9/2018	1050.22	10.29	1039.93
MW-45B	5/13/2019	1050.22	6.68	1043.54
MW-45B	4/27/2020	1050.22	6.84	1043.38
MW-45B	6/1/2020	1050.22	6.81	1043.41
MW-45B	5/17/2021	1050.22	7.15	1043.07
MW-45B	2/15/2022	1050.22	10.69	1039.53
MW-45B	4/4/2022	1050.22	7.57	1042.65
MW-45B	4/28/2023	1049.62	8.91	1040.71
MW-45B	5/13/2024	1049.62	8.03	1041.59
MW-45B	4/28/2025	1049.62	11.81	1037.81
MW-45B	6/2/2025	1049.62	8.62	1041
MW-46B	6/15/2011	1050.70	5.92	1044.78
MW-46B	2/22/2012	1050.70	6	1044.7
MW-46B	6/25/2012	1050.70	9.62	1041.08
MW-46B	9/20/2012	1050.70	11.1	1039.6
MW-46B	11/5/2012	1050.70	13.07	1037.63
MW-46B	3/13/2013	1050.70	7.7	1043
MW-46B	5/20/2013	1050.70	6.28	1044.42
MW-46B	5/19/2014	1050.70	7.39	1043.31
MW-46B	5/18/2015	1050.70	5.81	1044.89
MW-46B	10/22/2015	1050.70	10.91	1039.79
MW-46B	5/31/2016	1050.70	4.16	1046.54
MW-46B	6/19/2017	1050.70	7.03	1043.67
MW-46B	11/6/2017	1050.70	7.32	1043.38
MW-46B	5/14/2018	1050.70	6.79	1043.91
MW-46B	11/9/2018	1050.70	6.68	1044.02
MW-46B	5/13/2019	1050.70	4.76	1045.94
MW-46B	4/27/2020	1050.70	4.25	1046.45
MW-46B	6/1/2020	1050.70	4.49	1046.21
MW-46B	5/17/2021	1050.70	4.58	1046.12
MW-46B	2/15/2022	1050.70	8.55	1042.15
MW-46B	4/4/2022	1050.70	5.13	1045.57
MW-46B	4/28/2023	1050.87	6.74	1044.13
MW-46B	5/13/2024	1050.87	6.31	1044.56
MW-46B	4/28/2025	1050.87	6.75	1044.12
MW-46B	6/2/2025	1050.87	4.87	1046

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
MW-47B	6/19/2017	1038.33	4.98	1033.35
MW-47B	11/6/2017	1038.33	5.05	1033.28
MW-47B	5/14/2018	1038.33	5.52	1032.81
MW-47B	11/9/2018	1038.33	5.12	1033.21
MW-47B	5/13/2019	1038.33	3.81	1034.52
MW-47B	4/27/2020	1038.33	3.4	1034.93
MW-47B	6/1/2020	1038.33	3.71	1034.62
MW-47B	5/17/2021	1038.33	1.99	1036.34
MW-47B	2/15/2022	1038.33	6.79	1031.54
MW-47B	4/4/2022	1038.33	3.88	1034.45
MW-47B	4/28/2023	1037.95	4.37	1033.58
MW-47B	5/13/2024	1037.95	4.19	1033.76
MW-47B	4/28/2025	1037.95	4.45	1033.5
MW-47B	6/2/2025	1037.95	4.93	1033.02
MW-48B	6/19/2017	1044.70	5.69	1039.01
MW-48B	11/6/2017	1044.70	5.85	1038.85
MW-48B	5/14/2018	1044.70	5.81	1038.89
MW-48B	11/9/2018	1044.70	5.74	1038.96
MW-48B	5/13/2019	1044.70	3.18	1041.52
MW-48B	4/27/2020	1044.70	3.87	1040.83
MW-48B	6/1/2020	1044.70	3.52	1041.18
MW-48B	5/17/2021	1044.70	4.14	1040.56
MW-48B	2/15/2022	1044.70	6.67	1038.03
MW-48B	4/4/2022	1044.70	3.98	1040.72
MW-48B	4/28/2023	1044.58	6.04	1038.54
MW-48B	5/13/2024	1044.58	5.51	1039.07
MW-48B	4/28/2025	1044.58	5.8	1038.78
MW-48B	6/2/2025	1044.58	6.09	1038.49
MW-48C	6/19/2017	1044.77	7.62	1037.15
MW-48C	11/6/2017	1044.77	5.27	1039.5
MW-48C	5/14/2018	1044.77	5.58	1039.19
MW-48C	11/9/2018	1044.77	5.59	1039.18
MW-48C	5/13/2019	1044.77	3.06	1041.71
MW-48C	4/27/2020	1044.77	3.9	1040.87
MW-48C	6/1/2020	1044.77	3.54	1041.23
MW-48C	5/17/2021	1044.77	3.38	1041.39
MW-48C	2/15/2022	1044.77	6.8	1037.97
MW-48C	4/4/2022	1044.77	3.86	1040.91
MW-48C	4/28/2023	1044.50	5.84	1038.66
MW-48C	5/13/2024	1044.50	5.26	1039.24
MW-48C	4/28/2025	1044.50	7.53	1036.97
MW-48C	6/2/2025	1044.50	6	1038.5
MW-49B	6/19/2017	1045.42	5.07	1040.35
MW-49B	11/6/2017	1045.42	5.39	1040.03
MW-49B	5/14/2018	1045.42	4.9	1040.52
MW-49B	11/9/2018	1045.42	6.81	1038.61
MW-49B	5/13/2019	1045.42	2.82	1042.6
MW-49B	4/27/2020	1045.42	2.83	1042.59
MW-49B	6/1/2020	1045.42	3.08	1042.34
MW-49B	5/17/2021	1045.42	2.76	1042.66
MW-49B	2/15/2022	1045.42	5.5	1039.92
MW-49B	4/4/2022	1045.42	3.47	1041.95
MW-49B	4/28/2023	1045.35	4.89	1040.46
MW-49B	5/13/2024	1045.35	4.28	1041.07

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
MW-49B	4/28/2025	1045.35	4.69	1040.66
MW-49B	6/2/2025	1045.35	7.62	1037.73
MW-50B	11/9/2018	1052.81	8.89	1043.92
MW-50B	5/13/2019	1052.81	6.58	1046.23
MW-50B	4/27/2020	1052.81	6.28	1046.53
MW-50B	6/1/2020	1052.81	6.29	1046.52
MW-50B	5/17/2021	1052.81	6.1	1046.71
MW-50B	2/15/2022	1052.81	10.18	1042.63
MW-50B	4/4/2022	1052.81	6.86	1045.95
MW-50B	4/28/2023	1052.81	8.06	1044.75
MW-50B	5/13/2024	1052.81	7.46	1045.35
MW-50B	4/28/2025	1052.81	7.88	1044.93
MW-50B	6/2/2025	1052.81	7.81	1045.00
MW-51B	11/9/2018	1047.63	8.09	1039.54
MW-51B	5/13/2019	1047.63	4.77	1042.86
MW-51B	4/27/2020	1047.63	4.79	1042.84
MW-51B	6/1/2020	1047.63	4.89	1042.74
MW-51B	5/17/2021	1047.63	5.3	1042.33
MW-51B	2/15/2022	1047.63	8.86	1038.77
MW-51B	4/4/2022	1047.63	5.65	1041.98
MW-51B	4/28/2023	1047.18	6.44	1040.74
MW-51B	5/13/2024	1047.18	5.92	1041.26
MW-51B	4/28/2025	1047.18	6.7	1040.48
MW-51B	6/2/2025	1047.18	6.73	1040.45
MW-52B	11/9/2018	1052.27	10.76	1041.51
MW-52B	5/13/2019	1052.27	7.58	1044.69
MW-52B	4/27/2020	1052.27	7.44	1044.83
MW-52B	6/1/2020	1052.27	7.45	1044.82
MW-52B	5/17/2021	1052.27	7.62	1044.65
MW-52B	2/15/2022	1052.27	11.34	1040.93
MW-52B	4/4/2022	1052.27	8.13	1044.14
MW-52B	4/28/2023	1052.27	9.62	1042.65
MW-52B	5/13/2024	1052.27	6.87	1045.40
MW-52B	4/28/2025	1052.27	9.45	1042.82
MW-52B	6/2/2025	1052.27	9.71	1042.56
MW-52C	6/8/2018	1052.32	3.14	1049.18
MW-52C	7/2/2018	1052.32	12.02	1040.30
MW-53B1	11/9/2018	1040.80	3.57	1037.23
MW-53B1	5/13/2019	1040.80	2.73	1038.07
MW-53B1	4/27/2020	1040.80	2.75	1038.05
MW-53B1	6/1/2020	1040.80	3.08	1037.72
MW-53B1	5/17/2021	1040.80	2.14	1038.66
MW-53B1	2/15/2022	1040.80	5.27	1035.53
MW-53B1	4/4/2022	1040.80	2.95	1037.85
MW-53B1	4/28/2023	1040.08	4.72	1035.36
MW-53B1	5/13/2024	1040.08	4.46	1035.62
MW-53B1	4/28/2025	1040.08	4.71	1035.37
MW-53B1	6/2/2025	1040.08	4.97	1035.11
MW-53B2	11/9/2018	1040.75	3.8	1036.95
MW-53B2	5/13/2019	1040.75	2.72	1038.03
MW-53B2	4/27/2020	1040.75	2.77	1037.98
MW-53B2	6/1/2020	1040.75	3.07	1037.68
MW-53B2	5/17/2021	1040.75	2.24	1038.51
MW-53B2	2/15/2022	1040.75	5.59	1035.16

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
MW-53B2	4/4/2022	1040.75	3.04	1037.71
MW-53B2	4/28/2023	1040.21	4.64	1035.57
MW-53B2	5/13/2024	1040.21	4.02	1036.19
MW-53B2	4/28/2025	1040.21	4.34	1035.87
MW-53B2	6/2/2025	1040.21	4.69	1035.52
MW-53C	6/8/2018	1040.71	9.44	1031.27
MW-53C	7/2/2018	1040.71	18.48	1022.23
MW-54C	11/9/2018	1029.40	6.29	1023.11
MW-54C	5/13/2019	1029.40	3.88	1025.52
MW-54C	4/27/2020	1029.40	6.28	1023.12
MW-54C	6/1/2020	1029.40	4.68	1024.72
MW-54C	5/17/2021	1029.40	5.11	1024.29
MW-54C	2/15/2022	1029.40	7.98	1021.42
MW-54C	4/4/2022	1029.40	4.4	1025.00
MW-54C	4/28/2023	1029.16	5.09	1024.07
MW-54C	5/13/2024	1029.16	4.51	1024.65
MW-54C	4/28/2025	1029.16	6.2	1022.96
MW-54C	6/2/2025	1029.16	5.02	1024.14
MW-55B	11/9/2018	1051.56	8.56	1043.00
MW-55B	5/13/2019	1051.56	5.84	1045.72
MW-55B	4/27/2020	1051.56	5.76	1045.80
MW-55B	6/1/2020	1051.56	5.81	1045.75
MW-55B	5/17/2021	1051.56	6.28	1045.28
MW-55B	2/15/2022	1051.56	9.39	1042.17
MW-55B	4/4/2022	1051.56	6.39	1045.17
MW-55B	4/28/2023	1051.56	7.71	1043.85
MW-55B	5/13/2024	1051.56	7.02	1044.54
MW-55B	4/28/2025	1051.56	7.51	1044.05
MW-55B	6/2/2025	1051.56	7.48	1044.08
MW-56B	11/9/2018	1043.12	4	1039.12
MW-56B	5/13/2019	1043.12	2.47	1040.65
MW-56B	4/27/2020	1043.12	2.21	1040.91
MW-56B	6/1/2020	1043.12	2.05	1041.07
MW-56B	5/17/2021	1043.12	2.22	1040.90
MW-56B	2/15/2022	1043.12	4.32	1038.80
MW-56B	4/4/2022	1043.12	2.87	1040.25
MW-56B	4/28/2023	1043.12	3.36	1039.76
MW-56B	5/13/2024	1043.12	2.88	1040.24
MW-56B	4/28/2025	1043.12	3.25	1039.87
MW-56B	6/2/2025	1043.12	3.06	1040.06
MW-57B	11/9/2018	1037.08	3.84	1033.24
MW-57B	5/13/2019	1037.08	4.17	1032.91
MW-57B	4/27/2020	1037.08	4.11	1032.97
MW-57B	6/1/2020	1037.08	3.98	1033.1
MW-57B	5/17/2021	1037.08	3.43	1033.65
MW-57B	2/15/2022	1037.08	5.06	1032.02
MW-57B	4/4/2022	1037.08	4.3	1032.78
MW-57B	4/28/2023	1037.08	4.65	1032.43
MW-57B	5/13/2024	1037.08	4.19	1032.89
MW-57B	4/28/2025	1037.08	4.4	1032.68
MW-57B	6/2/2025	1037.08	4.23	1032.85
MW-58B	5/13/2024	1048.46	7.22	1041.24
MW-58B	4/28/2025	1048.46	7.93	1040.53
MW-58B	6/2/2025	1048.46	7.74	1040.72

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
MW-59B	5/13/2024	1047.66	6.67	1040.99
MW-59B	4/28/2025	1047.66	7.28	1040.38
MW-59B	6/2/2025	1047.66	7.2	1040.46
MW-60B	5/13/2024	1048.47	7.13	1041.34
MW-60B	4/28/2025	1048.47	7.88	1040.59
MW-60B	6/2/2025	1048.47	7.88	1040.59
PP-1D	1/29/2001	1058.19	15.11	1043.08
PP-1D	2/26/2001	1058.19	11.34	1046.85
PP-1D	3/23/2001	1058.19	14.91	1043.28
PP-1D	5/8/2001	1058.19	13.85	1044.34
PP-1D	5/17/2001	1058.19	13.67	1044.52
PP-1D	6/12/2001	1058.19	14.84	1043.35
PP-1D	7/16/2001	1058.19	10.22	1047.97
PP-1D	7/24/2001	1058.19	11.12	1047.07
PP-1D	11/1/2002	1058.19	11.66	1046.53
PP-1D	3/2/2009	1058.44	6.46	1051.98
PP-1D	10/26/2009	1058.44	8.28	1050.16
PP-1M	1/29/2001	1058.47	Dry	Dry
PP-1M	2/26/2001	1058.47	Dry	Dry
PP-1M	3/23/2001	1058.47	18.45	1040.02
PP-1M	5/8/2001	1058.47	18.23	1040.24
PP-1M	5/17/2001	1058.47	17.99	1040.48
PP-1M	6/12/2001	1058.47	17.61	1040.86
PP-1M	7/16/2001	1058.47	16.63	1041.84
PP-1M	7/24/2001	1058.47	16.38	1042.09
PP-1M	11/1/2002	1058.47	12.73	1045.74
PP-1M	3/2/2009	1058.74	5.89	1052.85
PP-1M	10/26/2009	1058.74	6.48	1052.26
PP-1S	1/29/2001	1058.81	Dry	Dry
PP-1S	2/26/2001	1058.81	Dry	Dry
PP-1S	3/23/2001	1058.81	Dry	Dry
PP-1S	5/8/2001	1058.81	15.46	1043.35
PP-1S	5/17/2001	1058.81	15.23	1043.58
PP-1S	6/12/2001	1058.81	13.15	1045.66
PP-1S	7/16/2001	1058.81	14.37	1044.44
PP-1S	7/24/2001	1058.81	14.27	1044.54
PP-1S	11/1/2002	1058.81	11.4	1047.41
PP-1S	3/2/2009	1058.94	6.21	1052.73
PP-1S	10/26/2009	1058.94	6.11	1052.83
PP-2D	1/29/2001	1055.63	Dry	Dry
PP-2D	2/26/2001	1055.63	18.46	1037.17
PP-2D	3/23/2001	1055.63	18.24	1037.39
PP-2D	5/8/2001	1055.63	17.62	1038.01
PP-2D	5/17/2001	1055.63	17.27	1038.36
PP-2D	6/12/2001	1055.63	16.28	1039.35
PP-2D	7/16/2001	1055.63	15.2	1040.43
PP-2D	7/24/2001	1055.63	15.03	1040.6
PP-2D	11/1/2002	1055.63	13.14	1042.49
PP-2D	3/2/2009	1055.90	8.78	1047.12
PP-2D	10/26/2009	1055.90	10.62	1045.28
PP-2S	1/29/2001	1055.62	Dry	Dry
PP-2S	2/26/2001	1055.62	Dry	Dry
PP-2S	3/23/2001	1055.62	Dry	Dry
PP-2S	5/8/2001	1055.62	15.39	1040.23

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
PP-2S	5/17/2001	1055.62	15.11	1040.51
PP-2S	6/12/2001	1055.62	14.49	1041.13
PP-2S	7/16/2001	1055.62	13.84	1041.78
PP-2S	7/24/2001	1055.62	13.71	1041.91
PP-2S	11/1/2002	1055.62	11.62	1044
PP-2S	3/2/2009	1055.91	1	1054.91
PP-2S	10/26/2009	1055.91	0.71	1055.2
PP-3D	1/29/2001	1051.68	14.65	1037.03
PP-3D	2/26/2001	1051.68	11.44	1040.24
PP-3D	3/23/2001	1051.68	11.6	1040.08
PP-3D	5/8/2001	1051.68	9.05	1042.63
PP-3D	5/17/2001	1051.68	8.98	1042.7
PP-3D	6/12/2001	1051.68	8.49	1043.19
PP-3D	7/16/2001	1051.68	8.24	1043.44
PP-3D	7/24/2001	1051.68	8.41	1043.27
PP-3D	11/1/2002	1051.68	10.22	1041.46
PP-3D	3/2/2009	1051.42	7.69	1043.73
PP-3D	10/26/2009	1051.42	8.66	1042.76
PP-3D	6/15/2011	1051.42	8.4	1043.02
PP-3D	6/25/2012	1051.42	9.17	1042.25
PP-3D	11/5/2012	1051.42	11.45	1039.97
PP-3D	5/20/2013	1051.42	6.49	1044.93
PP-3D	5/19/2014	1051.42	7.82	1043.6
PP-3D	5/18/2015	1051.42	0.33	1051.09
PP-3D	10/22/2015	1051.42		
PP-3D	5/31/2016	1051.42	7.65	1043.77
PP-3D	6/19/2017	1051.42	11.47	1039.95
PP-3D	11/6/2017	1051.42	6.33	1045.09
PP-3D	5/14/2018	1051.42	7.29	1044.13
PP-3D	11/9/2018	1051.42	10.39	1041.03
PP-3D	5/13/2019	1051.42	5.46	1045.96
PP-3D	4/27/2020	1051.42	6.43	1044.99
PP-3D	6/1/2020	1051.42	4.37	1047.05
PP-3D	5/17/2021	1051.42	7.61	1043.81
PP-3D	2/15/2022	1051.42	10.16	1041.26
PP-3D	4/4/2022	1051.42	7.15	1044.27
PP-3D	4/28/2023	1051.42	8.87	1042.55
PP-3D	5/15/2024	1051.42	8.31	1043.11
PP-3D	4/28/2025	1051.42	9.15	1042.27
PP-3D	6/2/2025	1051.42	8.6	1042.82
PP-3S	1/29/2001	1051.59	Dry	Dry
PP-3S	2/26/2001	1051.59	12.43	1039.16
PP-3S	3/23/2001	1051.59	Dry	Dry
PP-3S	5/8/2001	1051.59	12.66	1038.93
PP-3S	5/17/2001	1051.59	Dry	Dry
PP-3S	6/12/2001	1051.59	Dry	Dry
PP-3S	6/24/2001	1051.59	Dry	Dry
PP-3S	7/16/2001	1051.59	12.75	1038.84
PP-3S	11/1/2002	1051.59	Dry	Dry
PP-3S	3/2/2009	1051.81	Dry	Dry
PP-3S	10/26/2009	1051.81	12.33	1039.48
PP-3S	6/15/2011	1051.81	12.35	1039.46
PP-3S	11/5/2012	1051.81	12.28	1039.53
PP-3S	5/20/2013	1051.81	12.24	1039.57

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
PP-3S	6/25/2013	1051.81	12.26	1039.55
PP-3S	5/19/2014	1051.81	12.27	1039.54
PP-3S	5/18/2015	1051.81	8.12	1043.69
PP-3S	10/22/2015	1051.81	9.83	1041.98
PP-3S	5/31/2016	1051.81	12.29	1039.52
PP-3S	6/19/2017	1051.81	-0.09	1051.9
PP-3S	11/6/2017	1051.81	12.37	1039.44
PP-3S	5/14/2018	1051.81	12.41	1039.4
PP-3S	11/9/2018	1051.81	12.35	1039.46
PP-3S	5/13/2019	1051.81	4.99	1046.82
PP-3S	4/27/2020	1051.81	12.46	1039.35
PP-3S	6/1/2020	1051.81	12.08	1039.73
PP-3S	5/17/2021	1051.81	12.25	1039.56
PP-3S	2/15/2022	1051.81	12.33	1039.48
PP-3S	4/4/2022	1051.81	12.34	1039.47
PP-3S	4/28/2023	1051.81	12.24	1039.57
PP-3S	5/15/2024	1051.81	12.34	1039.47
PP-3S	4/28/2025	1051.81	Dry	Dry
PP-3S	6/2/2025	1051.81	Dry	Dry
PP-4D	1/29/2001	1047.65	11.25	1036.4
PP-4D	2/26/2001	1047.65	10.02	1037.63
PP-4D	3/23/2001	1047.65	10.53	1037.12
PP-4D	5/8/2001	1047.65	8.74	1038.91
PP-4D	5/17/2001	1047.65	8.31	1039.34
PP-4D	6/12/2001	1047.65	6.93	1040.72
PP-4D	7/16/2001	1047.65	6.23	1041.42
PP-4D	7/24/2001	1047.65	6.21	1041.44
PP-4D	11/1/2002	1047.65	8.64	1039.01
PP-4D	2/3/2003	1047.65	10.08	1037.57
PP-4D	10/20/2003	1047.65	9.77	1037.88
PP-4D	3/2/2009	1048.04	5.04	1043
PP-4D	10/26/2009	1048.04	10.83	1037.21
PP-4S	1/29/2001	1047.61	Dry	Dry
PP-4S	2/26/2001	1047.61	Dry	Dry
PP-4S	3/23/2001	1047.61	Dry	Dry
PP-4S	5/8/2001	1047.61	9.61	1038
PP-4S	5/17/2001	1047.61	9.41	1038.2
PP-4S	6/12/2001	1047.61	8.95	1038.66
PP-4S	7/16/2001	1047.61	8.5	1039.11
PP-4S	7/24/2001	1047.61	8.4	1039.21
PP-4S	11/1/2002	1047.61	6.84	1040.77
PP-4S	2/3/2003	1047.61	7.77	1039.84
PP-4S	10/20/2003	1047.61	9.53	1038.08
PP-4S	3/2/2009	1047.83	3.22	1044.61
PP-4S	10/26/2009	1047.83	2.47	1045.36
PP-5D	1/29/2001	1049.67	11.76	1037.91
PP-5D	2/26/2001	1049.67	8.75	1040.92
PP-5D	3/23/2001	1049.67	8.28	1041.39
PP-5D	5/8/2001	1049.67	9.41	1040.26
PP-5D	6/12/2001	1049.67	9.05	1040.62
PP-5D	7/16/2001	1049.67	9.2	1040.47
PP-5D	7/24/2001	1049.67	9.72	1039.95
PP-5D	11/1/2002	1049.67	11.91	1037.76
PP-5D	2/3/2003	1049.67	15.28	1034.39

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
PP-5D	10/20/2003	1049.67	12.74	1036.93
PP-5D	3/2/2009	1050.03	8.75	1041.28
PP-5D	10/26/2009	1050.03	9.41	1040.62
PP-5D	5/14/2018	1050.02	8.97	1041.05
PP-5D	11/9/2018	1050.02	9.82	1040.2
PP-5D	5/13/2019	1050.02	6.55	1043.47
PP-5D	4/27/2020	1050.02	6.55	1043.47
PP-5D	6/1/2020	1050.02	6.63	1043.39
PP-5D	5/17/2021	1050.02	6.84	1043.18
PP-5D	2/15/2022	1050.02	10.79	1039.23
PP-5D	4/4/2022	1050.02	7.38	1042.64
PP-5D	4/28/2023	1049.17	8.13	1041.04
PP-5D	5/13/2024	1049.17	7.39	1041.78
PP-5D	4/28/2025	1049.17	8.13	1041.04
PP-5D	6/2/2025	1049.17	8.2	1040.97
PP-5S	1/29/2001	1049.61	Dry	Dry
PP-5S	2/26/2001	1049.61	Dry	Dry
PP-5S	3/23/2001	1049.61	Dry	Dry
PP-5S	5/8/2001	1049.61	Dry	Dry
PP-5S	6/12/2001	1049.61	Dry	Dry
PP-5S	7/16/2001	1049.61	11.71	1037.9
PP-5S	7/24/2001	1049.61	11.66	1037.95
PP-5S	11/1/2002	1049.61	6.69	1042.92
PP-5S	2/3/2003	1049.61	11.3	1038.31
PP-5S	2/4/2003	1049.61	11.78	1037.83
PP-5S	2/6/2003	1049.61	11.64	1037.97
PP-5S	10/20/2003	1049.61	10.45	1039.16
PP-5S	3/2/2009	1049.81	4.7	1045.11
PP-5S	10/26/2009	1049.81	4.59	1045.22
PP-5S	5/14/2018	1049.62	6.03	1043.59
PP-5S	11/9/2018	1049.62	5.62	1044
PP-5S	5/13/2019	1049.62	6.13	1043.49
PP-5S	4/27/2020	1049.62	5.45	1044.17
PP-5S	6/1/2020	1049.62	5.17	1044.45
PP-5S	5/17/2021	1049.62	8.96	1040.66
PP-5S	2/15/2022	1049.62	7.96	1041.66
PP-5S	4/4/2022	1049.62	7.83	1041.79
PP-5S	4/28/2023			
PZ-01	6/15/2011	1053.88	6.47	1047.41
PZ-01	2/22/2012	1053.88	8.72	1045.16
PZ-01	6/25/2012	1053.88	6.47	1047.41
PZ-01	9/20/2012	1053.88	9.52	1044.36
PZ-01	11/5/2012	1053.88	10.51	1043.37
PZ-01	3/13/2013	1053.88	3.33	1050.55
PZ-01	5/20/2013	1053.88	3.59	1050.29
PZ-01	5/19/2014	1053.88	4.22	1049.66
PZ-01	5/18/2015	1053.88	2.91	1050.97
PZ-01	10/22/2015	1053.88	4.98	1048.9
PZ-01	5/31/2016	1053.88	3.27	1050.61
PZ-01	6/19/2017	1053.88	3.89	1049.99
PZ-01	11/6/2017	1053.88	3.66	1050.22
PZ-01	5/14/2018	1053.88	4.93	1048.95
PZ-01	11/9/2018	1053.88	4.72	1049.16
PZ-01	5/13/2019	1053.88	3.35	1050.53

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
PZ-01	4/27/2020	1053.88	3.25	1050.63
PZ-01	6/1/2020	1053.88	3.35	1050.53
PZ-01	5/17/2021	1053.88	0.62	1053.26
PZ-01	2/15/2022	1053.88	8.34	1045.54
PZ-01	4/4/2022	1053.88	3.34	1050.54
PZ-01	4/28/2023	1053.88	4.12	1049.76
PZ-01	5/15/2024	1053.88	3.41	1050.47
PZ-01	4/29/2025	1053.88	3.22	1050.66
PZ-01	6/2/2025	1053.88	3.39	1050.49
PZ-02	6/15/2011	1052.88	3.21	1049.67
PZ-02	2/22/2012	1052.88	4.4	1048.48
PZ-02	6/25/2012	1052.88	3.21	1049.67
PZ-02	9/20/2012	1052.88	2.49	1050.39
PZ-02	11/5/2012	1052.88	3.71	1049.17
PZ-02	3/13/2013	1052.88	1.13	1051.75
PZ-02	5/20/2013	1052.88	1.12	1051.76
PZ-02	5/19/2014	1052.88	1.54	1051.34
PZ-02	5/18/2015	1052.88	0.99	1051.89
PZ-02	10/22/2015	1052.88	1.57	1051.31
PZ-02	5/31/2016	1052.88	0.85	1052.03
PZ-02	6/19/2017	1052.88	1.3	1051.58
PZ-02	11/6/2017	1052.88	1.37	1051.51
PZ-02	5/14/2018	1052.88	1.69	1051.19
PZ-02	11/9/2018	1052.88	1.44	1051.44
PZ-02	5/13/2019	1052.88	1	1051.88
PZ-02	4/27/2020	1052.88	0.76	1052.12
PZ-02	6/1/2020	1052.88	1.06	1051.82
PZ-02	5/17/2021	1052.88	-0.47	1053.35
PZ-02	2/15/2022	1052.88	3.56	1049.32
PZ-02	4/4/2022	1052.88	1.12	1051.76
PZ-02	4/28/2023	1052.88	1.38	1051.5
PZ-02	5/15/2024	1052.88	1.3	1051.58
PZ-02	4/29/2025	1052.88	1.07	1051.81
PZ-02	6/2/2025	1052.88	1.28	1051.6
PZ-03	6/15/2011	1051.21	1.65	1049.56
PZ-03	2/22/2012	1051.21	2.23	1048.98
PZ-03	6/25/2012	1051.21	1.65	1049.56
PZ-03	9/20/2012	1051.21	1.61	1049.6
PZ-03	11/5/2012	1051.21	2.38	1048.83
PZ-03	3/13/2013	1051.21		>1051.21
PZ-03	5/20/2013	1051.21	0.38	1050.83
PZ-03	5/19/2014	1051.21	0.86	1050.35
PZ-03	5/18/2015	1051.21	0.45	1050.76
PZ-03	10/22/2015	1051.21	1.51	1049.7
PZ-03	5/31/2016	1051.21	0.3	1050.91
PZ-03	6/19/2017	1051.21	1.36	1049.85
PZ-03	11/6/2017	1051.21	0.92	1050.29
PZ-03	5/14/2018	1051.21	1.76	1049.45
PZ-03	11/9/2018	1051.21	0.81	1050.4
PZ-03	5/13/2019	1051.21	-0.09	1051.3
PZ-03	4/27/2020	1051.21	0.24	1050.97
PZ-03	6/1/2020	1051.21	0.21	1051
PZ-03	5/17/2021	1051.21		>1051.21
PZ-03	2/15/2022	1051.21	3.09	1048.12

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
PZ-03	4/4/2022	1051.21	-0.01	1051.22
PZ-03	4/28/2023	1051.21	1.06	1050.15
PZ-03	5/15/2024	1051.21	0.01	1051.2
PZ-03	4/29/2025	1051.21	-0.5	1051.71
PZ-03	6/2/2025	1051.21	-0.3	1051.51
PZ-04	6/15/2011	1055.85	4.75	1051.1
PZ-04	2/22/2012	1055.85	5.36	1050.49
PZ-04	6/25/2012	1055.85	4.75	1051.1
PZ-04	9/20/2012	1055.85	5.7	1050.15
PZ-04	11/5/2012	1055.85	6.16	1049.69
PZ-04	3/13/2013	1055.85	4.55	1051.3
PZ-04	5/20/2013	1055.85	5.13	1050.72
PZ-04	5/18/2015	1055.85	4.35	1051.5
PZ-04	10/22/2015	1055.85	5.89	1049.96
PZ-04	5/31/2016	1055.85	4.48	1051.37
PZ-04	6/19/2017	1055.85	5.86	1049.99
PZ-04	11/6/2017	1055.85	5.49	1050.36
PZ-04	5/14/2018	1055.85	5.66	1050.19
PZ-04	11/9/2018	1055.85	5.51	1050.34
PZ-04	5/13/2019	1055.85	4.69	1051.16
PZ-04	4/27/2020	1055.85	4.56	1051.29
PZ-04	6/1/2020	1055.85	4.55	1051.3
PZ-04	5/17/2021	1055.85	4.09	1051.76
PZ-04	2/15/2022	1055.85	6.57	1049.28
PZ-04	4/4/2022	1055.85	4.13	1051.72
PZ-04	4/28/2023	1055.85	5.52	1050.33
PZ-04	5/15/2024	1055.85	4.76	1051.09
PZ-04	4/29/2025	1055.85	4.53	1051.32
PZ-04	6/2/2025	1055.85	4.71	1051.14
TMW-001	5/24/2000	1057.80	13.36	1044.44
TMW-001	12/3/2000	1057.80	18.04	1039.76
TMW-001	1/29/2001	1057.80	8.27	1049.53
TMW-001	2/26/2001	1057.80	10.63	1047.17
TMW-001	3/23/2001	1057.80	11.24	1046.56
TMW-001	5/3/2001	1057.80	11.65	1046.15
TMW-001	5/8/2001	1057.80	10.67	1047.13
TMW-001	6/12/2001	1057.80	9.64	1048.16
TMW-001	11/1/2002	1057.80	11.49	1046.31
TMW-001	11/5/2002	1057.80	11.99	1045.81
TMW-001	11/6/2002	1057.80	12	1045.8
TMW-001	2/3/2003	1057.80	18.53	1039.27
TMW-001	10/20/2003	1057.80	14.09	1043.71
TMW-001	3/2/2009	1058.40	7.77	1050.63
TMW-001	10/26/2009	1058.40	4.64	1053.76
TMW-002	11/1/2002	1060.11	13.06	1047.05
TMW-002	11/5/2002	1060.11	13.05	1047.06
TMW-002	11/6/2002	1060.11	13.14	1046.97
TMW-002	2/3/2003	1060.11	14.95	1045.16
TMW-002	10/20/2003	1060.11	12.98	1047.13
TMW-002	3/2/2009	1060.87	7.96	1052.91
TMW-002	10/26/2009	1060.87	4.59	1056.28
TMW-003	5/24/2000	1061.18	11.38	1049.8
TMW-003	12/3/2000	1061.18	11.19	1049.99
TMW-003	12/7/2000	1061.18	11.15	1050.03

APPENDIX C

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA

CHEMICAL COMMODITIES, INC.

OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
TMW-003	1/29/2001	1061.18	15.74	1045.44
TMW-003	2/26/2001	1061.18	13.04	1048.14
TMW-003	3/23/2001	1061.18	15.77	1045.41
TMW-003	5/8/2001	1061.18	11.85	1049.33
TMW-003	6/12/2001	1061.18	10.76	1050.42
TMW-003	11/1/2002	1061.18	12.5	1048.68
TMW-003	11/5/2002	1061.18	12.42	1048.76
TMW-003	11/6/2002	1061.18	12.54	1048.64
TMW-003	2/3/2003	1061.18	14.83	1046.35
TMW-003	10/20/2003	1061.18	11.92	1049.26
TMW-003	3/2/2009	1061.81	9.21	1052.6
TMW-003	10/26/2009	1061.81	4.59	1057.22
TMW-004	5/24/2000	1061.53	10.8	1050.73
TMW-004	12/3/2000	1061.53	10.95	1050.58
TMW-004	12/7/2000	1061.53	10.93	1050.6
TMW-004	1/29/2001	1061.53	15.9	1045.63
TMW-004	2/26/2001	1061.53	13.16	1048.37
TMW-004	3/23/2001	1061.53	14.06	1047.47
TMW-004	5/8/2001	1061.53	9.25	1052.28
TMW-004	6/12/2001	1061.53	6.28	1055.25
TMW-004	11/5/2002	1061.53	10.94	1050.59
TMW-004	11/6/2002	1061.53	11.04	1050.49
TMW-004	2/3/2003	1061.53	12.87	1048.66
TMW-004	10/20/2003	1061.53	14.54	1046.99
TMW-004	3/2/2009	1062.12	5.22	1056.9
TMW-004	10/26/2009	1062.12	9.68	1052.44
TMW-005	5/24/2000	1060.63	12.1	1048.53
TMW-005	12/3/2000	1060.63	12.42	1048.21
TMW-005	12/7/2000	1060.63	12.32	1048.31
TMW-005	1/29/2001	1060.63	9.57	1051.06
TMW-005	2/26/2001	1060.63	6.45	1054.18
TMW-005	3/23/2001	1060.63	6.56	1054.07
TMW-005	5/8/2001	1060.63	7.85	1052.78
TMW-005	6/12/2001	1060.63	6.84	1053.79
TMW-005	11/4/2002	1060.63	6.88	1053.75
TMW-005	11/6/2002	1060.63	12.67	1047.96
TMW-005	2/3/2003	1060.63	13.56	1047.07
TMW-005	10/20/2003	1060.63	7.41	1053.22
TMW-005	3/2/2009	1061.39	6.27	1055.12
TMW-005	10/26/2009	1061.39	5.62	1055.77
TMW-007	12/3/2000	1059.10	8.46	1050.64
TMW-007	12/7/2000	1059.10	8.48	1050.62
TMW-007	1/29/2001	1059.10	9.4	1049.7
TMW-007	2/26/2001	1059.10	9.02	1050.08
TMW-007	3/23/2001	1059.10	10.55	1048.55
TMW-007	5/8/2001	1059.10	9.14	1049.96
TMW-007	6/12/2001	1059.10	8.03	1051.07
TMW-007	11/1/2002	1059.10	9.46	1049.64
TMW-007	11/5/2002	1059.10	9.34	1049.76
TMW-007	11/6/2002	1059.10	9.45	1049.65
TMW-007	3/2/2009	1059.71	8.46	1051.25
TMW-007	10/26/2009	1059.71	7.55	1052.16

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
TMW-008	5/24/2000	1048.73	5.86	1042.87
TMW-008	12/3/2000	1048.73	11.89	1036.84
TMW-008	12/7/2000	1048.73	11.4	1037.33
TMW-008	1/29/2001	1048.73	3.57	1045.16
TMW-008	2/26/2001	1048.73	3.54	1045.19
TMW-008	3/23/2001	1048.73	3.56	1045.17
TMW-008	5/8/2001	1048.73	3.67	1045.06
TMW-008	6/12/2001	1048.73	3.86	1044.87
TMW-008	11/1/2002	1048.73	Dry	Dry
TMW-008	2/3/2003	1048.73	12.42	1036.31
TMW-008	2/4/2003	1048.73	13.03	1035.7
TMW-008	2/5/2003	1048.73	12.91	1035.82
TMW-008	10/20/2003	1048.73	10.2	1038.53
TMW-008	3/2/2009	1049.49	6.28	1043.21
TMW-008	10/26/2009	1049.49	3.81	1045.68
TMW-008	6/15/2011	1049.49	6.53	1042.96
TMW-008	2/22/2012	1049.42	5.94	1043.48
TMW-008	6/25/2012	1049.42	7.67	1041.75
TMW-008	11/5/2012	1049.42	10.86	1038.56
TMW-008	3/13/2013	1049.42	3.31	1046.11
TMW-008	5/20/2013	1049.42	3.57	1045.85
TMW-008	5/19/2014	1049.42	6.44	1042.98
TMW-008	5/18/2015	1049.42	3.24	1046.18
TMW-008	10/22/2015	1049.42	8.4	1041.02
TMW-008	5/31/2016	1049.42	3.17	1046.25
TMW-008	6/19/2017	1049.42	5.89	1043.53
TMW-008	11/6/2017	1049.42	5.96	1043.46
TMW-008	5/14/2018	1049.42	5.75	1043.67
TMW-008	11/9/2018	1049.42	6.12	1043.3
TMW-008	5/13/2019	1049.49	3.05	1046.44
TMW-008	4/27/2020	1049.49	2.91	1046.58
TMW-008	6/1/2020	1049.49	3.16	1046.33
TMW-008	5/17/2021	1049.49	2.88	1046.61
TMW-008	2/15/2022	1049.49	7.47	1042.02
TMW-008	4/4/2022	1049.49	3.17	1046.32
TMW-008	4/28/2023	1049.09	3.62	1045.47
TMW-008	5/13/2024	1049.09	3.25	1045.84
TMW-008	4/28/2025	1049.09	3.05	1046.04
TMW-008	6/2/2025	1049.09	5.69	1043.4
TMW-009	5/24/2000	1051.41	8.1	1043.31
TMW-009	12/3/2000	1051.41	12.37	1039.04
TMW-009	12/7/2000	1051.41	11.41	1040
TMW-009	1/29/2001	1051.41	9.51	1041.9
TMW-009	2/26/2001	1051.41	6.68	1044.73
TMW-009	3/23/2001	1051.41	6.26	1045.15
TMW-009	5/8/2001	1051.41	6.47	1044.94
TMW-009	6/12/2001	1051.41	5.43	1045.98
TMW-009	11/1/2002	1051.41	10.53	1040.88
TMW-009	2/3/2003	1051.41	13.76	1037.65
TMW-009	10/20/2003	1051.41	10.31	1041.1
TMW-009	3/2/2009	1052.02	6.49	1045.53
TMW-009	10/26/2009	1052.02	4.43	1047.59
TMW-009	6/15/2011	1052.02	7.36	1044.66
TMW-009	2/22/2012	1048.89	6.68	1042.21

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
TMW-009	6/25/2012	1048.89	8.03	1040.86
TMW-009	11/5/2012	1048.89	11.53	1037.36
TMW-009	3/13/2013	1048.89	5.55	1043.34
TMW-009	5/20/2013	1048.89	5.69	1043.2
TMW-009	5/19/2014	1048.89	7.06	1041.83
TMW-009	5/18/2015	1048.89	4.39	1044.5
TMW-009	10/22/2015	1048.89	9.89	1039
TMW-009	5/31/2016	1048.89	3.14	1045.75
TMW-009	6/19/2017	1048.89	6.17	1042.72
TMW-009	11/6/2017	1048.89	5.94	1042.95
TMW-009	5/14/2018	1048.89	6.54	1042.35
TMW-009	11/9/2018	1048.89	7.69	1041.2
TMW-009	5/13/2019	1052.02	4.02	1048
TMW-009	4/27/2020	1048.89	4.43	1044.46
TMW-009	6/1/2020	1048.89	4.25	1044.64
TMW-009	5/17/2021	1048.89	3.36	1045.53
TMW-009	2/15/2022	1048.89	8.85	1040.04
TMW-009	4/4/2022	1048.89	4.71	1044.18
TMW-009	4/28/2023	1051.83	6.18	1045.65
TMW-009	5/15/2024	1051.83	5.14	1046.69
TMW-009	4/28/2025	1051.83	5.87	1045.96
TMW-009	6/2/2025	1051.83	3.18	1048.65
TMW-010	5/24/2000	1052.47	10.14	1042.33
TMW-010	12/3/2000	1052.47	13.82	1038.65
TMW-010	12/7/2000	1052.47	13.54	1038.93
TMW-010	1/29/2001	1052.47	Dry	Dry
TMW-010	2/26/2001	1052.47	9.31	1043.16
TMW-010	3/23/2001	1052.47	8.1	1044.37
TMW-010	5/8/2001	1052.47	5.38	1047.09
TMW-010	6/12/2001	1052.47	4.39	1048.08
TMW-010	11/1/2002	1052.47	13.91	1038.56
TMW-010	2/3/2003	1052.47	14.99	1037.48
TMW-010	10/20/2003	1052.47	13.01	1039.46
TMW-010	3/2/2009	1053.09	5.09	1048
TMW-010	10/26/2009	1053.09	9.77	1043.32
TMW-010	6/15/2011	1053.09	6.75	1046.34
TMW-010	2/22/2012	1051.85	6.57	1045.28
TMW-010	6/25/2012	1051.85	9.71	1042.14
TMW-010	11/5/2012	1051.85	14.22	1037.63
TMW-010	3/13/2013	1051.85	6.35	1045.5
TMW-010	5/20/2013	1051.85	4.73	1047.12
TMW-010	5/19/2014	1051.85	5.85	1046
TMW-010	5/18/2015	1051.85	1.66	1050.19
TMW-010	10/22/2015	1051.85	10.37	1041.48
TMW-010	5/31/2016	1051.85	2.25	1049.6
TMW-010	6/19/2017	1051.85	6.23	1045.62
TMW-010	11/6/2017	1051.85	5.17	1046.68
TMW-010	5/14/2018	1051.85	5.49	1046.36
TMW-011	12/1/1995	1051.23	13.88	1037.35
TMW-011	5/24/2000	1051.23	9.64	1041.59
TMW-011	12/3/2000	1051.23	11.67	1039.56
TMW-011	12/7/2000	1051.23	11.26	1039.97
TMW-011	1/29/2001	1051.23	11.87	1039.36
TMW-011	2/26/2001	1051.23	9.78	1041.45

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
TMW-011	3/23/2001	1051.23	7.84	1043.39
TMW-011	5/8/2001	1051.23	7.68	1043.55
TMW-011	6/12/2001	1051.23	6.89	1044.34
TMW-011	11/1/2002	1051.23	12.98	1038.25
TMW-011	2/3/2003	1051.23	14.25	1036.98
TMW-011	10/20/2003	1051.23	12.24	1038.99
TMW-011	3/2/2009	1051.84	8.32	1043.52
TMW-011	10/26/2009	1051.84	8.97	1042.87
TMW-011	6/15/2011	1051.84	9.04	1042.8
TMW-011	2/22/2012	1051.85	8.58	1043.27
TMW-011	6/25/2012	1051.84	9.68	1042.16
TMW-011	11/5/2012	1051.84	13.51	1038.33
TMW-011	3/13/2013	1051.84	9.2	1042.64
TMW-011	5/20/2013	1051.84	7.43	1044.41
TMW-011	5/19/2014	1051.84	8.3	1043.54
TMW-011	5/18/2015	1051.84	6.76	1045.08
TMW-011	10/22/2015	1051.84	10.78	1041.06
TMW-011	5/31/2016	1051.84	5.66	1046.18
TMW-011	6/19/2017	1051.84	7.44	1044.4
TMW-011	11/6/2017	1051.84	7.26	1044.58
TMW-011	5/14/2018	1051.84	7.61	1044.23
TMW-015	12/3/2000	1060.85	9.13	1051.72
TMW-015	12/7/2000	1060.85	9.21	1051.64
TMW-015	1/29/2001	1060.85	10.22	1050.63
TMW-015	2/26/2001	1060.85	9.05	1051.8
TMW-015	3/23/2001	1060.85	8.27	1052.58
TMW-015	5/8/2001	1060.85	9.1	1051.75
TMW-015	6/12/2001	1060.85	6.64	1054.21
TMW-015	11/1/2002	1060.85	9.1	1051.75
TMW-015	11/5/2002	1060.85	8.55	1052.3
TMW-015	11/6/2002	1060.85	8.61	1052.24
TMW-015	2/3/2003	1060.85	12.02	1048.83
TMW-015	10/20/2003	1060.85	9.29	1051.56
TMW-015	3/2/2009	1061.47	7.59	1053.88
TMW-015	10/26/2009	1061.47	5.88	1055.59
TMW-015	6/19/2017	1061.47	6.39	1055.08
TMW-015	11/6/2017	1061.47	5.68	1055.79
TMW-015	5/14/2018	1061.47	7.07	1054.4
TMW-015	11/9/2018	1061.47	6.03	1055.44
TMW-015	5/13/2019	1061.47	5.74	1055.73
TMW-015	4/27/2020	1061.47	6.14	1055.33
TMW-015	6/1/2020	1061.47	5.93	1055.54
TMW-015	2/15/2022	1061.47	9.09	1052.38
TMW-015	4/4/2022	1061.47	8.14	1053.33
TMW-015	4/28/2023	1061.47	6.98	1054.49
TMW-015	5/13/2024	1061.47	7.32	1054.15
TMW-015	4/28/2025	1061.47	8.66	1052.81
TMW-015	6/2/2025	1061.47	7.94	1053.53

APPENDIX C

COMPREHENSIVE HISTORICAL GROUNDWATER AND SURFACE WATER ELEVATION DATA

CHEMICAL COMMODITIES, INC.

OLATHE, KANSAS

Well Identifier	Date of Measurement	Reference Point Elevation [a] (feet NAVD88)	Depth to Water (feet below reference point)	Static Water Level Elevation [b] (feet NAVD88)
TMW-016D	1/29/2001	1056.76	10.72	1046.04
TMW-016D	2/26/2001	1056.76	10.53	1046.23
TMW-016D	3/23/2001	1056.76	11.14	1045.62
TMW-016D	5/8/2001	1056.76	10.55	1046.21
TMW-016D	6/12/2001	1056.76	9.87	1046.89
TMW-016D	3/2/2009	1057.36	10.12	1047.24
TMW-016D	10/26/2009	1057.36	9.59	1047.77
TMW-017D	1/29/2001	1056.05	6.39	1049.66
TMW-017D	2/26/2001	1056.05	8.74	1047.31
TMW-017D	3/23/2001	1056.05	9.08	1046.97
TMW-017D	5/8/2001	1056.05	8.09	1047.96
TMW-017D	6/12/2001	1056.05	7.52	1048.53
TMW-017D	3/2/2009	1056.66	6.78	1049.88
TMW-017D	10/26/2009	1056.66	5.16	1051.5
MC-001	3/2/2009	1027.61	4.79	1022.82
MC-001	10/26/2009	1027.61	5.02	1022.59
NFL-001	3/5/2009	1040.14	2.26	1037.88
NFL-001	10/26/2009	1040.14	2.34	1037.8

Notes:

[a] = Reference point elevations are top-of-casing elevations, except for MC-001 and NFL-001.
Reference point elevations for MC-001 and NFL-001 are surface water measuring point elevations.
Locations existing prior to March 2009 were resurveyed during a site-wide survey in March 2009.
Locations installed in 2009 were surveyed in October 2009.
Locations installed in 2011 were surveyed in March 2011.
32 Locations were re-surveyed in April 2023.

[b] = Water elevations are groundwater elevations for each location, except for MC-001 and NFL-001.
Water elevations for MW-001 and NFL-001 are surface water elevations.

NAVD88 = North American Vertical Datum of 1988.

NA = Not applicable

AS = Groundwater was above the well head level and could not be pumped down.

APPENDIX E
Comprehensive Historical Groundwater Volatile Organic Compound Concentrations

Table 4 - Historical Groundwater Monitoring Well Analytical Data

Adapted from Appendix E of Haley & Aldrich, Inc. 2025 Groundwater Report
APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE ORGANIC COMPOUND CONCENTRATIONS
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethene	1,2-Dichloropropane	1,3,5-Trimethylbenzene
		CAS Number	79-34-5	79-00-5	75-34-3	75-35-4	563-58-6	87-61-6	96-18-4	120-82-1	95-63-6	96-12-8	106-93-4	95-50-1	107-06-2	540-59-0	78-87-5	108-67-8
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Location	**Sample Type**	**Sample Date**																
Bohl Well	Primary Result	10/31/2002	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	09/09/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	10/22/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
CCI-101	Primary Result	11/18/1988	1040	0 U	6	862	0 U	-	-	0 U	0 U	0 U	401	0 U	9090	166	651	0 U
	Primary Result	02/24/1989	2500 J	0 U	0 U	0 U	0 U	-	-	0 U	0 U	0 U	0 U	0 U	17000	0 U	0 U	0 U
	Primary Result	12/01/1995	360	46	6.7	830	5 U	5 U	5 U	5 U	5 U	5 U	320	240	35000	-	590	5 U
	Primary Result	11/28/2000	110	39	18	420	-	-	-	-	-	-	-	10 J	3300	-	310	-
	Primary Result	12/13/2000	81	50 U	150	5200 D	-	-	-	-	-	-	-	890	6500 D	-	330	-
	Field Duplicate	12/13/2000	50 U	50 U	140	3800	-	-	-	-	-	-	-	890	7100 D	-	50 U	-
	Primary Result	02/06/2003	5000 U	5000 U	1700 J	5500	5000 U	5000 U	5000 U	5000 U	5000 U	10000 U	5000 U	3100 J	9800	-	5000 U	5000 U
	Primary Result	10/24/2003	5000 U	5000 U	1100 J	4600 J	5000 U	5000 U	5000 U	5000 U	5000 U	10000 U	5000 U	2100 J	6500	-	5000 U	5000 U
EPA-1	Primary Result	02/24/1989	0 U	0 U	0 U	3600 J	0 U	-	-	0 U	0 U	0 U	0 U	0 U	30000	43000	0 U	0 U
	Field Duplicate	02/24/1989	0 U	0 U	0 U	0 U	0.14	-	-	27	8.5 J	12	0 U	0.046	31000 J	42000	0 U	8.5 J
EPA-2	Primary Result	12/01/1995	19	14	10	61	5 U	5 U	5 U	5 U	5 U	5 U	2.7 J	56	1400	-	5 U	5 U
	Primary Result	02/28/2001	50 U	50 U	50 U	200	-	-	-	-	-	-	-	150	2000	-	55	-
	Primary Result	02/06/2003	250 U	250 U	250 U	130 J	250 U	250 U	250 U	250 U	250 U	500 U	250 U	140 J	1600	-	250 U	250 U
	Primary Result	10/24/2003	1000 U	1000 U	1000 U	670 J	1000 U	1000 U	1000 U	1000 U	1000 U	2000 U	1000 U	1000 U	1600	-	1000 U	1000 U
EPA-3	Primary Result	12/01/1995	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 U	5 U	-	5 U	5 U
	Primary Result	02/28/2001	0.5 U	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	0.5 U	0.5 U	-	0.5 U	-
	Primary Result	02/05/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	10/23/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	03/04/2009	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	-	1 U	1 U
ERT-1	Primary Result	12/01/1995	6300	2500 U	2500 U	23000	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U	0.8 J	5000 U	49000	-	2500 U	2500 U
	Primary Result	03/01/2001	1000	50 U	50 U	4000	-	-	-	-	-	-	-	480	8400	-	50 U	-
	Primary Result	02/06/2003	1900 J	2500 U	2500 U	8400	2500 U	2500 U	2500 U	2500 U	2500 U	5000 U	2500 U	1100 J	20000	-	2500 U	2500 U
	Primary Result	10/24/2003	250 U	250 U	250 U	460	250 U	250 U	250 U	250 U	250 U	500 U	250 U	250 U	120	-	250 U	250 U
KDHE-1	Primary Result	12/20/1988	16500	0 U	50.6	2790	0 U	-	-	0 U	0 U	0 U	0 U	0 U	3620	450	23.4	0 U
	Primary Result	02/24/1989	11000	0 U	0 U	4200	0 U	-	-	0 U	0 U	0 U	0, U	0 U	2400 J	750 J	5.7 J	0 U
KDHE-2	Primary Result	01/06/1989	377	4	0 U	203	0 U	-	-	0 U	0 U	0 U	0 U	0 U	155	38.3	46.3	0 U
	Primary Result	02/24/1989	0 U	0 U	0 U	0 U	0 U	-	-	0 U	0 U	0 U	0 U,	0 U	0 U	0 U	0 U	0 U
	Primary Result	12/01/1995	2 J	9.8	32	13	5 U	5 U	5 U	5 U	5 U	5 U	5 U	25	1400	-	5 U	5 U
KDHE-3	Primary Result	01/06/1989	112	4.8	0.8	243	0 U	-	-	0 U	0 U	0 U	0 U	0 U	490	3	32.7	0 U
	Primary Result	02/24/1989	71 J	0 U	0 U	140 J	0 U	-	-	0 U	0 U	0 U	0 U	25	340	0 U	0 U	0 U
	Primary Result	12/01/1995	5 U	5 U	5 U	26	5 U	5 U	5 U	5 U	5 U	5 U	1 J	10 U	37	-	5 U	5 U
KDHE-4	Primary Result	12/22/1988	160	1.7	3.2	157	0 U	-	-	0 U	0 U	0 U	0 U	0 U	323	126	10.3	0 U
	Primary Result	02/24/1989	0 U	0 U	0 U	0 U	0 U	-	-	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U
	Primary Result	12/01/1995	15	5 U	5 U	21	5 U	5 U	5 U	5 U	5 U	5 U	3.5 J	10 U	73	-	5 U	5 U
MW-18	Primary Result	02/27/2001	0.5 U	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	0.5 U	0.5 U	-	0.5 U	-
	Primary Result	02/05/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	10/23/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
MW-18B	Primary Result	10/29/2009	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	07/19/2011	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/26/2012	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Field Duplicate	06/26/2012	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	11/05/2012	1 U	1 U	1 U	1 U	1 U	0.24 JB	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Field Duplicate	11/05/2012	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	05/21/2013	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Field Duplicate	05/21/2013	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	05/20/2014	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Field Duplicate	05/20/2014	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	05/19/2015	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Field Duplicate	05/19/2015	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/01/2016	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Field Duplicate	06/01/2016	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/15/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	1 U	1 U	1.7	2.5 U	1.1	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/16/2019	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/02/2020	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/18/2021	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	04/05/2022	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/06/2023	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/14/2024	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/04/2025	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE ORGANIC COMPOUND CONCENTRATIONS
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethene	1,2-Dichloropropane	1,3,5-Trimethylbenzene
		CAS Number	79-34-5	79-00-5	75-34-3	75-35-4	563-58-6	87-61-6	96-18-4	120-82-1	95-63-6	96-12-8	106-93-4	95-50-1	107-06-2	540-59-0	78-87-5	108-67-8
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-19	Primary Result	02/27/2001	0.5 U	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	0.5 U	0.5	-	0.5 U	-
	Primary Result	02/06/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	10/23/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	03/05/2009	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	10/29/2009	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Field Duplicate	10/29/2009	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
MW-20	Primary Result	02/27/2001	0.5 U	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	0.5 U	0.5 U	-	0.5 U	-
	Primary Result	02/05/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	10/23/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	03/04/2009	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	10/29/2009	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/15/2024	5 U	5 U	5 U	5 U	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Primary Result	06/05/2025	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
MW-21	Primary Result	02/27/2001	0.5 U	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	0.5 U	0.5 U	-	0.5 U	-
	Primary Result	02/05/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	10/22/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	03/03/2009	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	10/30/2009	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 UJ	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Field Duplicate	11/07/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/16/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
MW-22	Primary Result	02/27/2001	0.5 U	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	0.5 U	0.4 J	-	0.5 U	-
	Primary Result	10/30/2009	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	05/21/2013	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/01/2016	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/16/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
MW-22B	Primary Result	09/17/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	10/22/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	03/03/2009	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	10/28/2009	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	07/18/2011	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/26/2012	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	0.43 J	1 U	-	1 U	1 U
	Primary Result	11/05/2012	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	0.15 J	1 U	-	1 U	1 U
	Primary Result	05/21/2013	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	05/20/2014	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	05/20/2015	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/01/2016	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/16/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/17/2019	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/15/2024	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/05/2025	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
MW-23	Primary Result	02/27/2001	0.5 U	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	0.5 U	0.5 U	-	0.5 U	-
	Primary Result	03/03/2009	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	10/28/2009	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	05/21/2013	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	05/20/2014	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	05/19/2015	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/01/2016	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/15/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
MW-23B	Primary Result	09/17/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	10/23/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	03/03/2009	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	10/27/2009	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	07/19/2011	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/25/2012	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE ORGANIC COMPOUND CONCENTRATIONS
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethene	1,2-Dichloropropane	1,3,5-Trimethylbenzene
		CAS Number	79-34-5	79-00-5	75-34-3	75-35-4	563-58-6	87-61-6	96-18-4	120-82-1	95-63-6	96-12-8	106-93-4	95-50-1	107-06-2	540-59-0	78-87-5	108-67-8
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-23B	Primary Result	11/05/2012	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	05/21/2013	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	05/20/2014	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	05/19/2015	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/01/2016	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	11/08/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/15/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Field Duplicate	05/15/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Field Duplicate	11/12/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/17/2019	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/03/2020	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/18/2021	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	04/06/2022	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/08/2023	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/16/2024	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/05/2025	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
MW-24	Primary Result	02/27/2001	0.5 U	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	0.5 U	0.5 U	-	0.5 U	-
	Primary Result	02/05/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	10/23/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	03/03/2009	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	10/28/2009	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	05/20/2015	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/16/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/16/2024	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/05/2025	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
MW-25	Primary Result	02/27/2001	0.5 U	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	0.5 U	0.5 U	-	0.5 U	-
	Field Duplicate	02/27/2001	0.5 U	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	0.5 U	0.5 U	-	0.5 U	-
	Primary Result	02/05/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	10/23/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	03/04/2009	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	10/28/2009	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/15/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 UJ	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
MW-26B	Primary Result	11/04/2002	2500 U	2500 U	2500 U	750 J	2500 U	2500 U	2500 U	2500 U	2500 U	5000 U	2500 U	2500 U	1200 U	-	2500 U	2500 U
	Primary Result	02/06/2003	2500 U	2500 U	2500 U	870 J	2500 U	2500 U	2500 U	2500 U	2500 U	5000 U	2500 U	2500 U	1100 J	-	2500 U	2500 U
	Primary Result	10/24/2003	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	10000 U	5000 U	5000 U	2500 U	-	5000 U	5000 U
	Primary Result	03/05/2009	270 U	270 U	270 U	440	270 U	270 U	270 U	270 U	270 U	530 U	270 U	240 J	510	-	240 J	270 U
	Primary Result	10/30/2009	90 J	200 U	200 U	870	200 U	200 U	500 U	200 U	200 U	1000 UJ	200 U	470	940	-	360	200 U
	Primary Result	06/24/2017	430 J	500 UJ	130 J	1800 J	500 UJ	500 UJ	1300 UJ	500 UJ	500 UJ	2500 UJ	500 UJ	1400 J	2800 J	-	930 J	500 UJ
	Primary Result	11/08/2017	200 U	200 U	200 U	910	200 U	200 U	500 U	200 U	200 U	500 U	200 U	215	1660	13800	200 UJ	200 U
	Field Duplicate	11/08/2017	200 U	200 U	200 U	895	200 U	200 U	500 U	200 U	200 U	500 U	200 U	234	1640	14100	480 J	200 U
	Primary Result	05/16/2018	500 U	500 U	500 U	1300	500 U	500 U	1250 U	500 U	500 U	1250 U	500 U	897	2380	12400	836	500 U
	Primary Result	11/14/2018	1000 U	1000 U	1000 U	2800	1000 U	1000 U	2500 U	1000 U	1000 U	2500 U	1000 U	1480	3830	29200	1720	1000 U
	Primary Result	06/03/2020	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	5000 U	2000 U	2000 U	5000 U	2000 U	2000 U	2210	12800	2000 U	2000 U
	Primary Result	05/18/2021	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	5000 U	2000 U	2000 U	5000 U	2000 U	2000 U	2530	9870	2000 U	2000 U
	Primary Result	04/06/2022	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	5000 U	2000 U	2000 U	5000 U	2000 U	2000 U	2000 U	6780	2000 U	2000 U
	Primary Result	06/08/2023	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	5000 U	2000 U	2000 U	5000 U	2000 U	2000 U	2000 U	17100	2000 U	2000 U
MW-26C	Primary Result	10/21/2003	1 U	1 U	0.25 J	0.43 J	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	1.7	-	0.42 J	1 U
	Primary Result	10/23/2003	1 U	1 U	1 U	0.35 J	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	1.5	-	0.4 J	1 U
	Primary Result	12/17/2003	2.5 U	2.5 U	0.53 J	1.6 J	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5 U	2.5 U	2.5 U	6	-	1.9 J	2.5 U
	Primary Result	03/05/2009	1 U	1 U	0.084 J	0.37 J	1 U	1 U	1 U	1 U	0.082 J	2 U	1 U	1 U	1	-	0.51 J	1 U
	Primary Result	06/24/2017	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	2.5 UJ	1 UJ	1 UJ	5 UJ	1 UJ	1 UJ	0.57 J	-	1 UJ	1 UJ
	Primary Result	11/07/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/16/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1.7	1 U	1 U
	Primary Result	11/14/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/05/2025	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
MW-27B	Primary Result	02/04/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	10/21/2003	1 U	1 U	0.21 J	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	10/23/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	03/03/2009	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	10/28/2009	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	07/18/2011	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE ORGANIC COMPOUND CONCENTRATIONS
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethene	1,2-Dichloropropane	1,3,5-Trimethylbenzene
		CAS Number	79-34-5	79-00-5	75-34-3	75-35-4	563-58-6	87-61-6	96-18-4	120-82-1	95-63-6	96-12-8	106-93-4	95-50-1	107-06-2	540-59-0	78-87-5	108-67-8
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-27B	Primary Result	06/26/2012	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	11/05/2012	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	05/21/2013	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	05/20/2014	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	05/20/2015	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/02/2016	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/15/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 UJ	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/17/2019	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/16/2024	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1.7	1 U	1 U
	Field Duplicate	05/16/2024	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1.7	1 U	1 U
	Primary Result	06/05/2025	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
MW-28B	Primary Result	11/04/2002	10 U	10 U	10 U	3.6 J	10 U	10 U	10 U	10 U	10 U	20 U	10 U	10 U	5.9	-	10 U	10 U
	Primary Result	02/05/2003	2.5 U	2.5 U	2.5 U	2.7	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5 U	2.5 U	2.5 U	4.4	-	0.98 J	2.5 U
	Field Duplicate	02/05/2003	2.5 U	2.5 U	2.5 U	3.4	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5 U	2.5 U	2.5 U	5.6	-	1.4 J	2.5 U
	Primary Result	10/23/2003	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 U	5 U	5 U	4.3	-	5 U	5 U
	Field Duplicate	10/23/2003	10 U	10 U	10 U	4.6 J	10 U	10 U	10 U	10 U	10 U	20 U	10 U	10 U	4.4 J	-	10 U	10 U
	Primary Result	03/04/2009	1 U	1 U	1 U	0.14 J	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.44 J	-	1 U	1 U
	Field Duplicate	03/04/2009	1 U	1 U	1 U	0.16 J	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.45 J	-	0.094 J	1 U
	Primary Result	06/20/2017	1 U	1 U	1 U	1.1	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1.2	-	0.29 J	1 U
	Primary Result	11/08/2017	1 U	1 U	1 U	1.9	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1.8	2.2	1 U	1 U
	Primary Result	05/15/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 UJ	1 U	2.5 U	1 U	1 U	1.6	2.2	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	1.9	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1.9	2.8	1 U	1 U
	Primary Result	05/17/2019	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1.1	1.1	1 U	1 U
	Primary Result	06/03/2020	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1.1	1 U	1 U
	Primary Result	05/18/2021	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	04/06/2022	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/08/2023	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/16/2024	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/05/2025	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
MW-29B	Primary Result	11/06/2002	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.42 J	-	1 U	1 U
	Field Duplicate	11/06/2002	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.42 J	-	1 U	1 U
	Primary Result	02/05/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	10/22/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Field Duplicate	10/22/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	03/04/2009	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	11/11/2009	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	07/19/2011	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Field Duplicate	07/19/2011	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/26/2012	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	11/05/2012	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	05/21/2013	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	05/20/2014	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	05/19/2015	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/01/2016	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Field Duplicate	06/20/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/15/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 UJ	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 UJ	1 UJ	1 UJ	1 UJ	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 UJ	1 U	1 U	1 UJ	1 UJ
	Primary Result	05/17/2019	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/15/2024	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/05/2025	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
MW-30B	Primary Result	10/23/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	03/03/2009	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	10/28/2009	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Field Duplicate	10/28/2009	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
MW-31	Primary Result	11/04/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	10/27/2009	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	07/19/2011	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/26/2012	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	11/05/2012	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	05/21/2013	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	05/20/2014	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	05/19/2015	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE ORGANIC COMPOUND CONCENTRATIONS
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC		VOC		VOC		VOC		VOC		VOC		VOC		VOC		VOC		VOC		VOC		VOC		VOC	
		Chemical Name	1,1,2,2-Tetrachloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,1-Dichloroethene		1,1-Dichloropropene		1,2,3-Trichlorobenzene		1,2,3-Trichloropropane		1,2,4-Trichlorobenzene		1,2,4-Trimethylbenzene		1,2-Dibromo-3-chloropropane		1,2-Dibromoethane		1,2-Dichlorobenzene		1,2-Dichloroethane		1,2-Dichloroethene		1,2-Dichloropropane		1,3,5-Trimethylbenzene	
		CAS Number	79-34-5		79-00-5		75-34-3		75-35-4		563-58-6		87-61-6		96-18-4		120-82-1		95-63-6		96-12-8		106-93-4		95-50-1		107-06-2		540-59-0		78-87-5		108-67-8	
		Units	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
MW-31	Primary Result	06/01/2016	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	-		1	U	1	U
	Primary Result	06/20/2017	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	-		1	U	1	U
	Primary Result	11/07/2017	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	2.5	U	1	U	1	U	1	U	4.7		1	U	1	U
	Primary Result	05/15/2018	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	UJ	1	U	2.5	U	1	U	1	U	1	U	3.1		1	U	1	U
	Primary Result	11/12/2018	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	2.5	U	1	U	1	U	1	U	4.3		1	U	1	U
	Primary Result	05/17/2019	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	2.5	U	1	U	1	U	1	U	7.1		1	U	1	U
	Primary Result	06/03/2020	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	2.5	U	1	U	1	U	1	U	2.5		1	U	1	U
	Primary Result	05/18/2021	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	2.5	U	1	U	1	U	1	U	1.9		1	U	1	U
	Primary Result	04/06/2022	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	2.5	U	1	U	1	U	1	U	1	U	1	U	1	U
	Primary Result	06/08/2023	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	2.5	U	1	U	1	U	1	U	1.3		1	U	1	U
	Primary Result	05/15/2024	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	2.5	U	1	U	1	U	1	U	3		1	U	1	U
	Primary Result	06/04/2025	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	3.31		1	U	1	U
MW-31B	Primary Result	09/09/2003	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	2	U	1	U	1	U	0.5	U	-		1	U	1	U
	Primary Result	10/22/2003	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	2	U	1	U	1	U	0.5	U	-		1	U	1	U
	Primary Result	10/27/2009	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	-		1	U	1	U
	Primary Result	07/19/2011	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	-		1	U	1	U
	Primary Result	06/26/2012	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	-		1	U	1	U
	Primary Result	11/05/2012	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	-		1	U	1	U
	Primary Result	05/21/2013	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	-		1	U	1	U
	Primary Result	05/20/2014	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	-		1	U	1	U
	Primary Result	05/19/2015	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	-		1	U	1	U
	Primary Result	06/01/2016	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	-		1	U	1	U
	Primary Result	06/20/2017	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	-		1	U	1	U
	Primary Result	11/07/2017	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	2.5	U	1	U	1	U	1	U	1	U	1	U	1	U
	Primary Result	05/15/2018	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	UJ	1	U	2.5	U	1	U	1	U	1	U	1	U	1	U	1	U
	Primary Result	11/12/2018	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	2.5	U	1	U	1	U	1	U	1	U	1	U	1	U
	Primary Result	05/17/2019	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	2.5	U	1	U	1	U	1	U	1	U	1	U	1	U
	Primary Result	06/03/2020	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	2.5	U	1	U	1	U	1	U	1	U	1	U	1	U
	Primary Result	05/18/2021	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	2.5	U	1	U	1	U	1	U	1	U	1	U	1	U
	Primary Result	04/06/2022	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	2.5	U	1	U	1	U	1	U	1	U	1	U	1	U
	Primary Result	06/08/2023	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	2.5	U	1	U	1	U	1	U	1	U	1	U	1	U
	Primary Result	05/15/2024	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	2.5	U	1	U	1	U	1	U	1	U	1	U	1	U
	Primary Result	06/04/2025	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	1	U	1	U	1	U
MW-32B	Primary Result	09/12/2003	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	2	UJ	1	UJ	1	UJ	0.5	UJ	-		1	UJ	1	UJ
	Field Duplicate	09/12/2003	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	2	UJ	1	UJ	1	UJ	0.5	UJ	-		1	UJ	1	UJ
	Primary Result	10/22/2003	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	2	U	1	U	1	U	0.5	U	-		1	U	1	U
	Primary Result	03/03/2009	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	2	U	1	U	1	U	1	U	-		1	U	1	U
	Primary Result	10/27/2009	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	-		1	U	1	U
MW-33B	Primary Result	09/12/2003	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	2	UJ	1	UJ	1	UJ	0.5	UJ	-		1	UJ	1	UJ
	Primary Result	10/22/2003	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	2	U	1	U	1	U	0.5	U	-		1	U	1	U
	Primary Result	03/03/2009	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	2	U	1	U	1	U	1	U	-		1	U	1	U
	Primary Result	10/27/2009	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	-		1	U	1	U
	Primary Result	11/07/2017	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	2.5	U	1	U	1	U	1	U	1	U	1	U	1	U
	Primary Result	06/05/2025	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	1	U	1	U	1	U
MW-34B	Primary Result	10/28/2009	1	U	1	U	0.14	J	1	U	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	-		1	U	1	U
	Primary Result	07/19/2011	1	U	1	U	0.7	J	0.83	J	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	-		0.59	J	1	U
	Primary Result	06/26/2012	1	U	1	U	0.68	J	0.63	J	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	-		0.53	J	1	U
	Primary Result	11/05/2012	1	U	1	U	0.67	J	0.75	J	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	-		0.54	J	1	U
	Primary Result	05/21/2013	1	U	1	U	0.41	J	0.34	J	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	-		0.28	J	1	U
	Primary Result	05/20/2014	1	U	1	U	0.36	J	1	U	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	-		0.28	J	1	U
	Primary Result	05/19/2015	1	U	1	U	0.29	J	1	U	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	-		0.22	J	1	U
	Primary Result	06/01/2016	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	-		1	U	1	U
	Primary Result	06/20/2017	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	-		1	U	1	U
	Primary Result	11/07/2017	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	2.5	U	1	U	1	U	1	U	7.5		1	U	1	U
	Primary Result	05/15/2018	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	UJ	1	U	2.5	U	1	U	1	U	1	U	2.3		1	U	1	U
	Primary Result	11/12/2018	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	2.5	U	1	U	1	U	1	U	11.3		1	U	1	U
	Primary Result	05/17/2019	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	2.5	U	1	U	1	U	1	U	1.1		1	U	1	U
	Primary Result	05/15/2024	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	2.5	U	1	U	1	U	1	U	29		1	U	1	U
	Primary Result	06/05/2025	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	60		1	U	1	U
MW-35B	Primary Result	10/30/2009	5.2	J	20	U	4.3	J	28	J	20	U	20	U	50	U	20	U	20	U	100	U	20	U	22	J	160	J	-		35	J	20	U
	Primary Result	05/20/2015	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1.3		-		0.3	J	1	U
	Primary Result	06/02/2016	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	5	U	1	U	1	U	1	U	-		1	U	1	U
	Primary Result	06/24/2017	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	2.5	UJ	1	UJ	1	UJ	5	UJ	1	UJ	0.46	J	1	UJ	-		1	UJ	1	UJ
	Primary Result	11/08/2017	1	U	1	U	1	U	1.2		1	U	1	U	2.5	U	1	U	1	U	2.5	U	1	U	1	U	2		14.3		1	U	1	U
	Primary Result	05/16/2018	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	2.5	U	1	U	1	U	1	U	3.2		1	U	1	U
MW-36B	Primary Result	10/30/2009	200	U	200	U	200	U	750	J	200	U	200	U	500	U	200	U	200	U	1000	UJ	200	U	460	J	1200	J	-		200	U	200	U
	Primary Result	05/16/2018	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	1	U	1	U	2.5	U	1	U	1	U	1	U	7.2		1	U	1	U
	Primary Result	11/14/2018	1	U	1	U	1	U	1.2		1	U	1	U	2.5	U	1	U	1	U	2.5	U	1	U	9.7		1	U	19.6		1	U	1	U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE ORGANIC COMPOUND CONCENTRATIONS
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethene	1,2-Dichloropropane	1,3,5-Trimethylbenzene
		CAS Number	79-34-5	79-00-5	75-34-3	75-35-4	563-58-6	87-61-6	96-18-4	120-82-1	95-63-6	96-12-8	106-93-4	95-50-1	107-06-2	540-59-0	78-87-5	108-67-8
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-36BR	Primary Result	11/13/2023	200 U	200 U	200 U	514	200 U	200 U	500 U	200 U	200 U	500 U	200 U	493	899	4550	206	200 U
	Primary Result	11/20/2023	250 U	250 U	250 U	492	250 U	250 U	625 U	250 U	250 U	625 U	250 U	384	866	5100	250 U	250 U
MW-37B	Primary Result	10/30/2009	370	33 J	36 J	1100	200 U	200 U	500 U	200 U	200 U	1000 UJ	200 U	240	1100	-	600	200 U
	Primary Result	05/16/2018	21.5	16.1	17.7	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	5.1	33.6	562	1 U	172	1 U
	Primary Result	11/15/2018	50 U	50 U	50 U	50 U	50 U	50 U	125 U	50 U	50 U	125 U	50 U	50 U	273	50 U	72.1	50 U
	Field Duplicate	11/15/2018	50 U	50 U	50 U	50 U	50 U	50 U	125 U	50 U	50 U	125 U	50 U	50 U	294	50 U	81.8	50 U
	Primary Result	05/15/2024	5 U	5 U	5 U	5 U	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	8.8	10.4	5 U	5 U
	Primary Result	06/05/2025	1 U	1 U	1.24	2.52	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	7.68	19.1	7.27	10.7	1 U
MW-38B	Primary Result	10/30/2009	210 J	500 U	110 J	1200	500 U	500 U	1200 U	500 U	500 U	2500 U	500 U	290 J	1100	-	320 J	500 U
	Primary Result	05/16/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1.2	10.4	1 U	1.3	1 U
	Primary Result	11/15/2018	2.2	1 U	6.1	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	5	73.7	1 U	5.5	1 U
	Field Duplicate	11/15/2018	1.8	1	5.7	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	5.1	70.7	1 U	5.2	1 U
	Primary Result	05/15/2024	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1	1 U	1 U	1 U
	Primary Result	06/05/2025	5.44	3.16	18.1	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1.04	19	135	1 U	19.7	1 U
MW-39B	Primary Result	10/30/2009	730 J	1000 U	1500 J	5200 J	1000 U	1000 U	2500 U	1000 U	1000 U	5000 U	1000 U	3900 J	12000 J	-	980 J	1000 U
	Primary Result	07/18/2011	930	500 U	990	5700	500 U	500 U	1300 U	500 U	110 J	2500 U	500 U	6200	12000 B	-	610	500 U
	Primary Result	11/28/2011	730	400 U	570	3300	400 U	400 U	1000 U	400 U	95 J	2000 U	400 U	5500	8600	-	340 J	400 U
	Primary Result	02/22/2012	630	100 U	520	2600	100 U	100 U	250 U	100 U	82 J	500 U	100 U	5800	5500	-	300	30 J
	Field Duplicate	02/22/2012	640	400 U	520	2700	400 U	400 U	1000 U	400 U	85 J	2000 U	400 U	5500	5500	-	290 J	400 U
	Primary Result	06/26/2012	480	400 U	420	1700	400 U	400 U	1000 U	400 U	82 J	2000 U	400 U	4900	5100	-	300 J	400 U
	Primary Result	11/05/2012	500	100 U	360	1500	100 U	100 U	250 U	100 U	46 J	500 U	100 U	3400	4900	-	240	100 U
	Primary Result	03/13/2013	370	110	360	2100	100 U	100 U	250 U	23 J	45 J	500 U	100 U	2600	5900	-	250	100 U
	Field Duplicate	03/13/2013	360	70 J	390	1400	100 U	100 U	250 U	100 U	45 J	500 U	100 U	2900	6100	-	300	100 U
	Primary Result	05/21/2013	320	39 J	340	1400	100 U	100 U	250 U	100 U	28 J	500 U	100 U	2600	5100	-	230	100 U
	Primary Result	05/20/2014	390	200 U	290	1100	200 U	200 U	500 U	200 U	200 U	1000 U	200 U	3900	6400	-	210	200 U
	Primary Result	05/20/2015	310	44 J	240	1000	100 U	100 U	250 U	100 U	22 J	500 U	100 U	4600	6300	-	180	100 U
	Primary Result	06/02/2016	380	200 U	350	1200	200 U	200 U	500 U	200 U	200 U	1000 U	200 U	2100	6800	-	210	200 U
	Primary Result	06/22/2017	240	41 J	310	850	100 U	100 U	250 U	100 U	100 U	500 U	100 U	2100	7000	-	210	100 U
	Primary Result	11/08/2017	500 U	33.2	193	804	1 U	1 U	2.5 U	5.1	1.1	2.5 U	7	1440	5140	18800	1 U	1 U
	Primary Result	05/17/2018	500 U	500 U	500 U	500 U	500 U	500 U	1250 U	500 U	500 U	1250 U	500 U	500 U	3460	9480	500 U	500 U
	Primary Result	11/14/2018	500 U	500 U	500 U	722	500 U	500 U	1250 U	500 U	500 U	1250 U	500 U	1930	5310	18500	500 U	500 U
	Primary Result	06/05/2025	79.1	28.1	155	332	10 U	10 U	25 U	10 U	10 U	50 U	10 U	295	4840	19600	116	10 U
MW-40B	Primary Result	10/29/2009	10 U	10 U	7.7 J	46 J	10 U	10 U	25 U	10 U	10 U	50 U	10 U	9.3 J	120 J	-	8 J	10 U
	Primary Result	07/18/2011	2 U	2 U	2.9	7.1	2 U	2 U	5 U	2 U	2 U	10 U	2 U	0.53 J	33 B	-	2.4	2 U
	Field Duplicate	07/18/2011	2 U	2 U	2.9	7	2 U	2 U	5 U	2 U	2 U	10 U	2 U	0.5 J	33 B	-	2.4	2 U
	Primary Result	06/26/2012	1 U	1 U	2.1	4.5	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	0.32 J	31	-	2.3	1 U
	Field Duplicate	06/26/2012	2 U	2 U	2.2	4.4	2 U	2 U	5 U	2 U	2 U	10 U	2 U	0.35 J	28	-	2.3	2 U
	Primary Result	11/05/2012	1 U	1 U	2	4.8	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	0.73 J	4.7	-	2.1	1 U
	Field Duplicate	11/05/2012	1 U	1 U	2.1	4.5	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	0.59 J	4.9	-	2.1	1 U
	Primary Result	05/21/2013	2 U	2 U	2.4	4.9	2 U	2 U	5 U	2 U	2 U	10 U	2 U	2 U	8.3	-	2.5	2 U
	Field Duplicate	05/21/2013	2 U	2 U	2.3	4.9	2 U	2 U	5 U	2 U	2 U	10 U	2 U	2 U	8	-	2.4	2 U
	Primary Result	05/20/2014	2 U	2 U	2.4	5.2	2 U	2 U	5 U	2 U	2 U	10 U	2 U	0.51 J	7.2	-	2.4	2 U
	Field Duplicate	05/20/2014	2 U	2 U	2.4	5	2 U	2 U	5 U	2 U	2 U	10 U	2 U	0.5 J	7.2	-	2.4	2 U
	Primary Result	05/20/2015	4 U	4 U	1.7 J	3.7 J	4 U	4 U	10 U	4 U	4 U	20 U	4 U	4 U	3.2 J	-	1.5 J	4 U
	Field Duplicate	05/20/2015	2 U	2 U	1.8 J	4.1	2 U	2 U	5 U	2 U	2 U	10 U	2 U	2 U	3.2	-	1.6 J	2 U
	Primary Result	06/01/2016	2 U	2 U	1.6 J	2.7	2 U	2 U	5 U	2 U	2 U	10 U	2 U	2 U	2.6	-	1.6 J	2 U
	Primary Result	06/24/2017	1 UJ	1 UJ	1.5 J	2.5 J	1 UJ	1 UJ	2.5 UJ	1 UJ	1 UJ	5 UJ	1 UJ	0.22 J	1.9 J	-	1.4 J	1 UJ
	Primary Result	11/08/2017	5 U	5 U	5 U	5 U	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	5.6	88.9	5 U	5 U
	Primary Result	05/16/2018	5 U	5 U	5 U	5 U	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	5 U	50.4	5 U	5 U
	Primary Result	11/12/2018	1 U	1 U	1.7	6	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	9.3	90.2	1.7	1 U
	Primary Result	05/17/2019	5 U	5 U	5 U	5 U	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	5 U	65.7	5 U	5 U
	Primary Result	06/03/2020	5 U	5 U	5 U	5 U	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	5 U	74.3	5 U	5 U
	Primary Result	05/18/2021	5 U	5 U	5 U	5 U	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	5.2	82.6	5 U	5 U
	Primary Result	04/06/2022	5 U	5 U	5 U	5 U	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	5 U	90.1	5 U	5 U
	Primary Result	06/08/2023	5 U	5 U	5 U	5 U	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	5 U	65.1	5 U	5 U
	Primary Result	05/15/2024	5 U	5 U	5 U	8.7 J	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	5.1	94.5	5 U	5 U
	Primary Result	06/05/2025	1 U	1 U	1 U	2.35	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1.84	59.8	1 U	1 U
MW-41B	Primary Result	10/27/2009	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	05/20/2015	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/15/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 UJ	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/17/2019	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/16/2024	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/05/2025	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE ORGANIC COMPOUND CONCENTRATIONS
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethene	1,2-Dichloropropane	1,3,5-Trimethylbenzene
		CAS Number	79-34-5	79-00-5	75-34-3	75-35-4	563-58-6	87-61-6	96-18-4	120-82-1	95-63-6	96-12-8	106-93-4	95-50-1	107-06-2	540-59-0	78-87-5	108-67-8
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-42B	Primary Result	05/18/2011	36 J	100 U	40 J	460	100 U	100 U	250 U	100 U	100 U	500 U	100 U	160	710	-	70 J	100 U
	Field Duplicate	05/18/2011	36 J	100 U	33 J	320	100 U	100 U	250 U	100 U	100 U	500 U	100 U	180	710	-	68 J	100 U
	Primary Result	05/16/2018	4.3	3.8	14.4	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	2.1	33.3	200	1 U	15.7	1 U
	Primary Result	11/15/2018	20 U	20 U	20 U	20 U	20 U	20 U	50 U	20 U	20 U	50 U	20 U	25.7	276	20 U	23.1	20 U
	Primary Result	05/16/2024	10 U	10 U	14.9	10 U	10 U	10 U	25 U	10 U	10 U	25 U	10 U	37.3	218	10 U	18	10 U
	Primary Result	06/05/2025	1 U	4.06	21.9	18.1	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	42.6	250	315	25.2	1 U
MW-43B	Primary Result	05/18/2011	10 U	10 U	2.4 J	48	10 U	10 U	25 U	10 U	10 U	50 U	10 U	15	130	-	8.7 J	10 U
	Primary Result	05/16/2018	1 U	1 U	2.1	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	7.3	35.6	1 U	3.6	1 U
	Primary Result	11/15/2018	5 U	5 U	5 U	5 U	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	29.8	5 U	5 U	5 U
	Primary Result	05/16/2024	50 U	50 U	50 U	50 U	50 U	50 U	125 U	50 U	50 U	125 U	50 U	50 U	50 U	176	50 U	50 U
	Primary Result	06/05/2025	1 U	1 U	1.06	3.29	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	15.8	43.4	1.45	1 U
MW-44B	Primary Result	05/23/2011	400 U	400 U	400 U	520	400 U	400 U	1000 U	400 U	400 U	2000 U	400 U	340 J	930	-	450	400 U
	Primary Result	07/18/2011	86 J	200 U	200 U	810	200 U	200 U	500 U	200 U	200 U	1000 U	200 U	200 U	810 B	-	380	200 U
	Primary Result	11/28/2011	8.1	3.9	4.8	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1.1	19	130	-	45	1 U
	Primary Result	02/22/2012	13	5.1	4.3	2 U	2 U	2 U	5 U	2 U	2 U	10 U	1.9 J	30	150	-	56	2 U
	Primary Result	06/25/2012	17	4.3 J	3 J	5 U	5 U	5 U	13 U	5 U	5 U	25 U	1.4 J	36	170	-	44	5 U
	Primary Result	11/05/2012	7.6 J	3.6 J	3.7 J	2.9 J	10 U	10 U	25 U	10 U	10 U	50 U	10 U	25	120	-	33	10 U
	Primary Result	03/13/2013	5.2	4.1	3.4	0.25 J	1 U	1 U	2.5 U	1 U	1 U	5 U	1.9	31	160	-	47	1 U
	Primary Result	05/22/2013	19	6.6 J	5.1 J	10 U	10 U	10 U	25 U	10 U	10 U	50 U	3.8 J	56	230	-	100	10 U
	Primary Result	05/20/2014	11	4.8 J	4.9 J	5 U	5 U	5 U	13 U	5 U	5 U	25 U	2.1 J	42	200	-	51	5 U
	Primary Result	05/20/2015	8.3 J	5.5 J	5.3 J	10 U	10 U	10 U	25 U	10 U	10 U	50 U	10 U	53	190	-	49	10 U
	Primary Result	06/02/2016	13	5.1	7	0.39 J	1 U	1 U	2.5 U	1 U	1 U	5 U	1.8	56	230	-	53	1 U
	Primary Result	06/24/2017	26 J	20 J	17 J	4 UJ	4 UJ	4 UJ	10 UJ	4 UJ	4 UJ	20 UJ	9 J	190 J	650 J	-	250 J	4 UJ
	Primary Result	11/07/2017	11.1	10.4	10.9	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	4	33.7	336	1	126	1 U
	Primary Result	05/16/2018	18.4	16.2	15.3	10 U	10 U	10 U	25 U	10 U	10 U	25 U	10 U	135	538	10 U	222	10 U
	Primary Result	11/15/2018	20 U	20 U	20 U	20 U	20 U	20 U	50 U	20 U	20 U	50 U	20 U	25.9	427	20 U	156	20 U
	Primary Result	05/16/2019	20 U	20 U	20 U	47.3	20 U	20 U	50 U	20 U	20 U	50 U	20 U	97.8	456	136	214	20 U
	Primary Result	06/03/2020	42.2	20.8	25.6	248	20 U	20 U	50 U	20 U	20 U	50 U	20 U	20 U	798	1120	329	20 U
	Primary Result	05/18/2021	500 U	500 U	500 U	500 U	500 U	500 U	1250 U	500 U	500 U	1250 U	500 U	500 U	1010	1750	500 U	500 U
	Primary Result	04/05/2022	500 U	500 U	500 U	500 U	500 U	500 U	1250 U	500 U	500 U	1250 U	500 U	500 U	628	1840	500 U	500 U
	Primary Result	06/06/2023	50 U	50 U	50 U	50 U	50 U	50 U	125 U	50 U	50 U	125 U	50 U	50 U	96.3	879	50 U	50 U
	Primary Result	05/14/2024	50 U	50 U	50 U	166	50 U	50 U	125 U	50 U	50 U	125 U	50 U	50 U	50 U	2120	112	50 U
	Primary Result	06/04/2025	10.2	7.77	12.4	250 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1.2	7.84	272	2150	131	1 U
MW-45B	Primary Result	05/23/2011	400 U	400 U	400 U	290 J	400 U	400 U	1000 U	400 U	400 U	2000 U	400 U	130 J	460	-	180 J	400 U
	Primary Result	07/18/2011	200 U	200 U	200 U	440	200 U	200 U	500 U	200 U	200 U	1000 U	200 U	200 U	200 U	-	140 J	200 U
	Primary Result	11/28/2011	45 J	100 U	26 J	430	100 U	100 U	250 U	100 U	100 U	500 U	100 U	130	350	-	77 J	100 U
	Primary Result	02/22/2012	54 J	100 U	28 J	450	100 U	100 U	250 U	100 U	100 U	500 U	100 U	19 J	360	-	99 J	100 U
	Primary Result	06/25/2012	110 J	200 U	200 U	470	200 U	200 U	500 U	200 U	200 U	1000 U	200 U	77 J	610	-	150 J	200 U
	Primary Result	11/05/2012	49 J	100 U	25 J	240	100 U	100 U	250 U	100 U	100 U	500 U	100 U	85 J	340	-	56 J	100 U
	Primary Result	03/13/2013	69 J	100 U	31 J	650	100 U	100 U	250 U	100 U	100 U	500 U	100 U	15 J	450	-	120	100 U
	Primary Result	05/22/2013	110	9.7 J	33	33	10 U	10 U	25 U	10 U	10 U	50 U	6.2 J	140	470	-	120	10 U
	Primary Result	05/20/2014	150 J	200 U	62 J	630	200 U	200 U	500 U	200 U	200 U	1000 U	200 U	85 J	820	-	190 J	200 U
	Primary Result	05/19/2015	110	27 J	54 J	700	100 U	100 U	250 U	100 U	100 U	500 U	100 U	100 U	750	-	170	100 U
	Primary Result	06/02/2016	130 J	200 U	82 J	710	200 U	200 U	500 U	200 U	200 U	1000 U	200 U	200 U	1100	-	200	200 U
	Primary Result	06/24/2017	50 J	16 J	53 J	340 J	40 UJ	40 UJ	100 UJ	40 UJ	40 UJ	200 UJ	40 UJ	40 UJ	620 J	-	150 J	40 UJ
	Primary Result	11/08/2017	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	2500 U	1000 U	1000 U	2500 U	1000 U	1250	2210	21900	1000 U	1000 U
	Primary Result	05/16/2018	250 U	250 U	250 U	476	250 U	250 U	625 U	250 U	250 U	625 U	250 U	250 U	661	6820	250 U	250 U
	Primary Result	11/15/2018	500 U	500 U	500 U	659	500 U	500 U	1250 U	500 U	500 U	1250 U	500 U	500 U	817	10300	500 U	500 U
	Primary Result	05/16/2019	500 U	500 U	500 U	550	500 U	500 U	1250 U	500 U	500 U	1250 U	500 U	500 U	841	7200	500 U	500 U
	Primary Result	06/03/2020	500 U	500 U	500 U	500 U	500 U	500 U	1250 U	500 U	500 U	1250 U	500 U	500 U	645	7490	500 U	500 U
	Primary Result	05/18/2021	500 U	500 U	500 U	569	500 U	500 U	1250 U	500 U	500 U	1250 U	500 U	500 U	909	8560	500 U	500 U
	Primary Result	04/05/2022	500 U	500 U	500 U	500 U	500 U	500 U	1250 U	500 U	500 U	1250 U	500 U	500 U	577	6330	500 U	500 U
	Primary Result	06/06/2023	500 U	500 U	500 U	500 U	500 U	500 U	1250 U	500 U	500 U	1250 U	500 U	500 U	638	6070	500 U	500 U
	Primary Result	05/14/2024	500 U	500 U	500 U	585	500 U	500 U	1250 U	500 U	500 U	1250 U	500 U	500 U	724	8310	500 U	500 U
	Primary Result	06/04/2025	51.8	17.6	97.4	666	10 U	10 U	25 U	10 U	10 U	50 U	10 U	10 U	800	9060	125	10 U
MW-46B	Primary Result	05/23/2011	390 J	400 U	290 J	650	400 U	400 U	1000 U	400 U	400 U	2000 U	400 U	1700	2400	-	150 J	400 U
	Primary Result	07/18/2011	78 J	200 U	400	1600	200 U	200 U	500 U	200 U	200 U	1000 U	200 U	1900	2600 B	-	140 J	200 U
	Primary Result	11/28/2011	140 J	400 U	580	2200	400 U	400 U	1000 U	400 U	400 U	2000 U	400 U	2700	3300	-	190 J	400 U
	Field Duplicate	11/28/2011	130 J	400 U	570	2200	400 U	400 U	1000 U	400 U	400 U	2000 U	400 U	2700	3300	-	190 J	400 U
	Primary Result	02/22/2012	50 J	200 U	340	1300	200 U	200 U	500 U	200 U	200 U	1000 U	200 U	2200	1800	-	110 J	200 U
	Primary Result	06/26/2012	500 U	500 U	590	1700	500 U	500 U	1300 U	500 U	500 U	2500 U	500 U	2400	3200	-	240 J	500 U
	Primary Result	11/05/2012	200 U	200 U	660	2300	200 U	200 U	500 U	200 U	200 U	1000 U	200 U	2200	3200	-	260	200 U
	Primary Result	03/13/2013	200 U	200 U	320	1600	200 U	200 U	500 U	200 U	200 U	1000 U	200 U	1600	1800	-	140 J	200 U
	Primary Result	05/22/2013	37 J	100 U	290	1100	100 U	100 U	250 U	100 U	100 U	500 U	100 U	1800	1900	-	120	100 U
	Primary Result	05/20/2014	200 U	200 U	330	980	200 U	200 U	500 U	200 U	200 U	1000 U	200 U	1900	2400	-	130 J	200 U
	Primary Result	05/20/2015	100 U	100 U	230	780	100 U	100 U	250 U	100 U	100 U	500 U	100 U	1400	1700	-	94 J	100 U
	Primary Result	06/02/2016	200 U	200 U	270	880	200 U	200 U	500 U	200 U	200 U	1000 U	200 U	1300	2000	-	100 J	200 U
	Primary Result	06/22/2017	30 J	100 U	290	720	100 U	100 U	250 U	100 U	100 U	500 U	100 U	830	2500	-	130	100 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE ORGANIC COMPOUND CONCENTRATIONS
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethene	1,2-Dichloropropane	1,3,5-Trimethylbenzene
		CAS Number	79-34-5	79-00-5	75-34-3	75-35-4	563-58-6	87-61-6	96-18-4	120-82-1	95-63-6	96-12-8	106-93-4	95-50-1	107-06-2	540-59-0	78-87-5	108-67-8
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-46B	Primary Result	11/08/2017	200 U	200 U	234	739	200 U	200 U	500 U	200 U	200 U	500 U	200 U	418	2000	29500	200 U	200 U
	Primary Result	05/17/2018	250 U	250 U	250 U	717	250 U	250 U	625 U	250 U	250 U	625 U	250 U	940	1280	32500	250 U	250 U
	Primary Result	11/14/2018	250 U	250 U	250 U	490	250 U	250 U	625 U	250 U	250 U	625 U	250 U	705	1090	29600	250 U	250 U
	Primary Result	05/16/2024	50 U	50 U	178	587	50 U	50 U	125 U	50 U	50 U	125 U	50 U	50 U	1640	27700	65.3	50 U
	Primary Result	06/04/2025	4.24	3.45	54.7	182	1 U	1 U	2.5 U	1 U	1.25	5 U	1 U	402	353	7050	20.1	1 U
MW-47B	Primary Result	06/20/2017	40 U	40 U	40 U	69	40 U	40 U	100 U	40 U	40 U	200 U	40 U	27 J	74	-	30 J	40 U
	Primary Result	06/23/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Primary Result	11/08/2017	1 U	1 U	1.3	17.6	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	2.5	13	79.8	6	1 U
	Primary Result	05/15/2018	20 U	20 U	20 U	20 U	20 U	20 U	50 U	20 UJ	20 U	50 U	20 U	20 U	20 U	86.9	20 U	20 U
	Primary Result	11/15/2018	20 U	20 U	20 U	20 U	20 U	20 U	50 U	20 U	20 U	50 U	20 U	20 U	20 U	92.2	20 U	20 U
	Primary Result	05/16/2019	20 U	20 U	20 U	20.5	20 U	20 U	50 U	20 U	20 U	50 U	20 U	20 U	21	147	20 U	20 U
	Primary Result	06/03/2020	20 U	20 U	20 U	20.5	20 U	20 U	50 U	20 U	20 U	50 U	20 U	20 U	20 U	162	20 U	20 U
	Primary Result	05/19/2021	2 U	2 U	2 U	2.9	2 U	2 U	5 U	2 U	2 U	5 U	2 U	2 U	2.9	21	2 U	2 U
	Primary Result	04/06/2022	5 U	5 U	5 U	28.7	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	35.4	149	12.7	5 U
	Primary Result	06/08/2023	25 U	25 U	25 U	101	25 U	25 U	62.5 U	25 U	25 U	62.5 U	25 U	25 U	132	472	44.4	25 U
	Primary Result	05/16/2024	100 U	100 U	100 U	212	100 U	100 U	250 U	100 U	100 U	250 U	100 U	100 U	244	897	100 U	100 U
	Primary Result	06/04/2025	1 U	4.37	9.21	196	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	8.58	133	806	77.1	1 U
MW-48B	Primary Result	06/20/2017	40 U	40 U	40 U	72	40 U	40 U	100 U	40 U	40 U	200 U	40 U	22 J	91	-	21 J	40 U
	Primary Result	06/22/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Primary Result	11/08/2017	2	2.3	6.3	82	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	5	92.7	466	21.2	1 U
	Primary Result	05/15/2018	50 U	50 U	50 U	51.5	50 U	50 U	125 U	50 UJ	50 U	125 U	50 U	50 U	98.8	501	50 U	50 U
	Primary Result	11/15/2018	10 U	10 U	10 U	19.5	10 U	10 U	25 U	10 U	10 U	25 U	10 U	10 U	21.1	170	10 U	10 U
	Primary Result	05/16/2019	20 U	20 U	20 U	20 U	20 U	20 U	50 U	20 U	20 U	50 U	20 U	20 U	20 U	161	20 U	20 U
	Field Duplicate	05/16/2019	20 U	20 U	20 U	20 U	20 U	20 U	50 U	20 U	20 U	50 U	20 U	20 U	20 U	163	20 U	20 U
	Primary Result	06/03/2020	20 U	20 U	20 U	20 U	20 U	20 U	50 U	20 U	20 U	50 U	20 U	20 U	20 U	190	20 U	20 U
	Field Duplicate	06/03/2020	20 U	20 U	20 U	20 U	20 U	20 U	50 U	20 U	20 U	50 U	20 U	20 U	20 U	186	20 U	20 U
	Primary Result	05/19/2021	20 U	20 U	20 U	20 U	20 U	20 U	50 U	20 U	20 U	50 U	20 U	20 U	20 U	78.9	20 U	20 U
	Field Duplicate	05/19/2021	20 U	20 U	20 U	20 U	20 U	20 U	50 U	20 U	20 U	50 U	20 U	20 U	20 U	80.7	20 U	20 U
	Primary Result	04/06/2022	20 U	20 U	20 U	20 U	20 U	20 U	50 U	20 U	20 U	50 U	20 U	20 U	20 U	74.7	20 U	20 U
	Field Duplicate	04/06/2022	20 U	20 U	20 U	20 U	20 U	20 U	50 U	20 U	20 U	50 U	20 U	20 U	20 U	146	20 U	20 U
	Primary Result	06/08/2023	20 U	20 U	20 U	20 U	20 U	20 U	50 U	20 U	20 U	50 U	20 U	20 U	20 U	221	20 U	20 U
	Primary Result	05/16/2024	20 U	20 U	20 U	20 U	20 U	20 U	50 U	20 U	20 U	50 U	20 U	20 U	20 U	59.1	20 U	20 U
	Primary Result	06/04/2025	1 U	1 U	1 U	1.96	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	5 U	2.49	175	1 U	1 U
MW-48C	Primary Result	06/20/2017	10 U	10 U	10 U	35	10 U	10 U	25 U	10 U	10 U	50 U	10 U	10 U	40	-	11	10 U
	Primary Result	06/22/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Primary Result	11/08/2017	1 U	1 U	1.4	14.2	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	20.5	67.6	4.3	1 U
	Primary Result	05/15/2018	10 U	10 U	10 U	10 U	10 U	10 U	25 U	10 UJ	10 U	25 U	10 U	10 U	18.5	48.9	10 U	10 U
	Field Duplicate	05/15/2018	10 U	10 U	10 U	10 U	10 U	10 U	25 U	10 UJ	10 U	25 U	10 U	10 U	17.6	44.4	10 U	10 U
	Primary Result	11/15/2018	10 U	10 U	10 U	10 U	10 U	10 U	25 U	10 U	10 U	25 U	10 U	10 U	10 U	45.3	10 U	10 U
	Field Duplicate	11/15/2018	10 U	10 U	10 U	10 U	10 U	10 U	25 U	10 U	10 U	25 U	10 U	10 U	10 U	43.4	10 U	10 U
	Primary Result	05/16/2019	10 U	10 U	10 U	10 U	10 U	10 U	25 U	10 U	10 U	25 U	10 U	10 U	10 U	36.5	10 U	10 U
	Primary Result	06/03/2020	1 U	1 U	1 U	4.8	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	3.6	45.1	2	1 U
	Primary Result	05/19/2021	1 U	1 U	1 U	3.9	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	2.9	33.9	1.6	1 U
	Primary Result	04/06/2022	1 U	1 U	1 U	3.6	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	3.3	29.7	1.4	1 U
	Primary Result	06/08/2023	20 U	20 U	20 U	20 U	20 U	20 U	50 U	20 U	20 U	50 U	20 U	20 U	20 U	75.8	20 U	20 U
	Field Duplicate	06/08/2023	20 U	20 U	20 U	20 U	20 U	20 U	50 U	20 U	20 U	50 U	20 U	20 U	20 U	75	20 U	20 U
	Primary Result	05/16/2024	20 U	20 U	20 U	20 U	20 U	20 U	50 U	20 U	20 U	50 U	20 U	20 U	20 U	174	20 U	20 U
	Field Duplicate	05/16/2024	20 U	20 U	20 U	20 U	20 U	20 U	50 U	20 U	20 U	50 U	20 U	20 U	20 U	163	20 U	20 U
	Primary Result	06/04/2025	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	180	1.51	1 U
MW-49B	Primary Result	06/20/2017	1 U	1 U	1.2	5.1	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1	14	-	1.1	1 U
	Primary Result	06/22/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Primary Result	11/07/2017	1 U	1 U	1	4.7	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	12.8	58.5	1 U	1 U
	Primary Result	05/15/2018	1 U	1 U	1 U	2.1	1 U	1 U	2.5 U	1 UJ	1 U	2.5 U	1 U	1 U	10.4	40.9	1 U	1 U
	Primary Result	11/15/2018	1 U	1 U	1.1	5.1	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	13.2	66	1 U	1 U
	Primary Result	05/16/2019	10 U	10 U	10 U	10 U	10 U	10 U	25 U	10 U	10 U	25 U	10 U	10 U	10 U	31.2	10 U	10 U
	Primary Result	06/03/2020	1 U	1 U	1 U	1.3	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1.6	30.3	1 U	1 U
	Primary Result	05/18/2021	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1.3	9	1 U	1 U
	Primary Result	04/06/2022	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	5.7	1 U	1 U
	Primary Result	06/08/2023	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1.7	10.7	1 U	1 U
	Primary Result	05/16/2024	1 U	1 U	1 U	1.5	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	2.1	17.3	1 U	1 U
	Field Duplicate	06/04/2025	1 U	1 U	1 U	1.56	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1.38	20.2	1 U	1 U
	Primary Result	06/05/2025	1 U	1 U	1 U	1.41	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1.23	20.5	1 U	1 U
MW-50B	Primary Result	06/06/2018	1030	17.4 J	22.4	65.8	1 U	1 U	2.5 U	1 U	1 U	2.5 U	4.4 J	167	801 J	16.2	250 U	1 U
	Field Duplicate	06/06/2018	1360	200 UJ	200 U	200 U	200 U	200 U	500 U	200 U	200 U	500 U	200 UJ	200 U	758 J	200 U	233	200 U
	Primary Result	11/12/2018	10 U	10 U	16.1	10 U	10 U	10 U	25 U	10 U	10 U	25 U	10 U	82.5	705	10 U	17	10 U
	Field Duplicate	11/12/2018	25 U	25 U	25 U	25 U	25 U	25 U	62.5 U	25 U	25 U	62.5 U	25 U	81.3	724	25 U	25 U	25 U
	Primary Result	06/03/2020	14.9	11	39.8	88.9	10 U	10 U	25 U	10 U	10 U	25 U	10 U	104	2590	9770	37	10 U
	Primary Result	05/19/2021	100 U	100 U	100 U	100 U	100 U	100 U	250 U	100 U	100 U	250 U	100 U	103	1590	5790	100 U	100 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE ORGANIC COMPOUND CONCENTRATIONS
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethene	1,2-Dichloropropane	1,3,5-Trimethylbenzene
		CAS Number	79-34-5	79-00-5	75-34-3	75-35-4	563-58-6	87-61-6	96-18-4	120-82-1	95-63-6	96-12-8	106-93-4	95-50-1	107-06-2	540-59-0	78-87-5	108-67-8
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-50B	Primary Result	04/06/2022	100 U	100 U	100 U	100 U	100 U	100 U	250 U	100 U	100 U	250 U	100 U	100 U	1100	3040	100 U	100 U
	Primary Result	06/08/2023	100 U	100 U	100 U	100 U	100 U	100 U	250 U	100 U	100 U	250 U	100 U	100 U	1240	4160	100 U	100 U
	Primary Result	05/16/2024	100 U	100 U	100 U	100 U	100 U	100 U	250 U	100 U	100 U	250 U	100 U	100 U	100 U	1640	100 U	100 U
	Primary Result	06/05/2025	8.07	5.89	23.9	49.4	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	27.3	915	3290	21.1	1 U
MW-51B	Primary Result	06/06/2018	16	2.2 J	2	31.7	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1.4 J	30.3	123 J	186	48.2	1 U
	Primary Result	11/12/2018	50 U	50 U	50 U	50 U	50 U	50 U	125 U	50 U	50 U	125 U	50 U	50 U	84.4	187	50 U	50 U
	Field Duplicate	11/12/2018	100 U	100 U	100 U	100 U	100 U	100 U	250 U	100 U	100 U	250 U	100 U	100 U	100 U	216	100 U	100 U
	Primary Result	05/16/2019	50 U	50 U	50 U	67.1	50 U	50 U	125 U	50 U	50 U	125 U	50 U	50 U	172	602	50 U	50 U
	Primary Result	06/02/2020	50 U	50 U	50 U	50 U	50 U	50 U	125 U	50 U	50 U	125 U	50 U	50 U	122	342	50 U	50 U
	Primary Result	05/18/2021	50 U	50 U	50 U	67.1	50 U	50 U	125 U	50 U	50 U	125 U	50 U	50 U	169	360	50 U	50 U
	Primary Result	04/05/2022	50 U	50 U	50 U	58.9	50 U	50 U	125 U	50 U	50 U	125 U	50 U	50 U	141	318	50 U	50 U
	Primary Result	06/06/2023	50 U	50 U	50 U	52.3	50 U	50 U	125 U	50 U	50 U	125 U	50 U	50 U	127	514	50 U	50 U
	Primary Result	05/14/2024	50 U	50 U	50 U	81.1	50 U	50 U	125 U	50 U	50 U	125 U	50 U	50 U	227	687	50 U	50 U
	Primary Result	06/04/2025	20 U	20 U	20 U	111	20 U	20 U	50 U	20 U	20 U	100 U	20 U	20 U	262	789	74.6	20 U
MW-52B	Primary Result	06/08/2018	10700	500 U	500 U	1920	500 U	500 U	1250 U	500 U	500 U	1250 U	500 U	984	2340	6770	1400	500 U
	Primary Result	11/12/2018	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	12500 U	5000 U	5000 U	12500 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U
	Primary Result	05/16/2019	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U	6250 U	2500 U	2500 U	6250 U	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U
	Primary Result	06/02/2020	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	2500 U	1000 U	1000 U	2500 U	1000 U	1000 U	2160	5100	1000 U	1000 U
	Primary Result	05/18/2021	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	2500 U	1000 U	1000 U	2500 U	1000 U	1000 U	3120	6600	1000 U	1000 U
	Primary Result	04/05/2022	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	2500 U	1000 U	1000 U	2500 U	1000 U	1000 U	2760	7970	1000 U	1000 U
	Primary Result	06/06/2023	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	2500 U	1000 U	1000 U	2500 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U
	Primary Result	05/14/2024	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	2500 U	1000 U	1000 U	2500 U	1000 U	1000 U	1430	13800	1000 U	1000 U
	Primary Result	06/04/2025	20 U	20 U	20 U	377	20 U	20 U	50 U	20 U	20 U	100 U	20 U	34.9	95.6	829	111	20 U
MW-52C	Primary Result	06/08/2018	1.1	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1.1	3.5	2.1	1 U	1 U
	Primary Result	07/02/2018	4.8	1 U	7.2	26.5	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	9.6	32.3	71	7.4	1 U
	Primary Result	10/01/2018	20 U	20 U	20 U	47.9	20 U	20 U	50 U	20 U	20 U	50 U	20 U	20 U	20 U	2840	20 U	20 U
	Field Duplicate	10/01/2018	20 U	20 U	20 U	45.3	20 U	20 U	50 U	20 U	20 U	50 U	20 U	20 U	20 U	2670	20 U	20 U
MW-53B1	Primary Result	06/08/2018	6.4	1 U	1 U	3.1	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	10.4	1.4	1 U
	Primary Result	07/02/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1.2	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/16/2019	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1.9	1 U	1 U
	Primary Result	06/02/2020	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	3.9	1 U	1 U
	Primary Result	05/18/2021	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	04/05/2022	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/06/2023	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/14/2024	1 U	1 U	1 U	18.3	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	82.7	1 U	1 U
	Primary Result	06/04/2025	1 U	1 U	1 U	12.4	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	25 U	74.5	3.87	1 U
MW-53B2	Primary Result	06/08/2018	3	1 U	1 U	2.4	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	2.6	1.1	1 U
	Primary Result	07/02/2018	5 U	5 U	5 U	31.9	5 U	5 U	12.5 U	5 U	5.7	12.5 U	5 U	5 U	7.2	45.4	14.8	5 U
	Primary Result	11/12/2018	100 U	100 U	100 U	100 U	100 U	100 U	250 U	100 U	100 U	250 U	100 U	100 U	100 U	130	100 U	100 U
	Primary Result	05/16/2019	50 U	50 U	50 U	50 U	50 U	50 U	125 U	50 U	50 U	125 U	50 U	50 U	50 U	96	50 U	50 U
	Primary Result	06/02/2020	50 U	50 U	50 U	50 U	50 U	50 U	125 U	50 U	50 U	125 U	50 U	50 U	50 U	121	50 U	50 U
	Primary Result	05/18/2021	50 U	50 U	50 U	71.5	50 U	50 U	125 U	50 U	50 U	125 U	50 U	50 U	50 U	222	50 U	50 U
	Primary Result	04/05/2022	50 U	50 U	50 U	50 U	50 U	50 U	125 U	50 U	50 U	125 U	50 U	50 U	50 U	247	50 U	50 U
	Primary Result	06/06/2023	50 U	50 U	50 U	52.7	50 U	50 U	125 U	50 U	50 U	125 U	50 U	50 U	50 U	187	50 U	50 U
	Primary Result	05/14/2024	20 U	20 U	20 U	24.1	20 U	20 U	50 U	20 U	20 U	50 U	20 U	20 U	20 U	70.1	20 U	20 U
	Primary Result	06/04/2025	1 U	1.41	2.51	66.5	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	14	196	21.8	1 U
MW-53C	Primary Result	06/08/2018	13.9	1 U	1 U	7	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	4.6	3.6	38.2	6.4	1 U
	Primary Result	07/02/2018	5 U	5 U	5 U	5 U	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	5 U	22.6	5 U	5 U
	Primary Result	10/01/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	6.8	1	1 U
MW-54C	Primary Result	07/02/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1.4	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1.8	1 U	1 U
	Primary Result	05/16/2019	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1.6	1 U	1 U
	Primary Result	06/02/2020	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1.7	1 U	1 U
	Primary Result	05/18/2021	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1.2	1 U	1 U
	Primary Result	04/05/2022	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	2.2	1 U	1 U
	Primary Result	06/06/2023	1 U	1 U	1 U	1 U	1 U	1 U	2.5 UJ	1 U	1 UJ	2.5 U	1 U	1 UJ	1 U	8.4	1 U	1 U
	Primary Result	05/14/2024	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	9.4	1 U	1 U
	Primary Result	06/04/2025	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
MW-55B	Primary Result	06/12/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1.7	3.4	5.4	1 U
	Primary Result	07/02/2018	1 U	1 U	1 U	2	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	6.9	14.5	23.8	1 U
	Field Duplicate	07/02/2018	1 U	1 U	1 U	2	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	7.1	14.4	24	1 U
	Primary Result	11/12/2018	5 U	5 U	5 U	5 U	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	9.1	19.1	25.6	5 U
	Field Duplicate	11/12/2018	5 U	5 U	5 U	5 U	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	8.6	18.4	23.8	5 U
	Primary Result	05/16/2019	5 U	5 U	5 U	5 U	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	5	26.1	21.4	5 U
	Primary Result	06/02/2020	5 U	5 U	5 U	5 U	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	10.2	65.7	5 U	5 U
	Primary Result	05/18/2021	18.6	5 U	5.8	40.5	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5.4	261	687	104	5 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE ORGANIC COMPOUND CONCENTRATIONS
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethene	1,2-Dichloropropane	1,3,5-Trimethylbenzene
		CAS Number	79-34-5	79-00-5	75-34-3	75-35-4	563-58-6	87-61-6	96-18-4	120-82-1	95-63-6	96-12-8	106-93-4	95-50-1	107-06-2	540-59-0	78-87-5	108-67-8
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-55B	Primary Result	04/05/2022	25 U	25 U	25 U	25 U	25 U	25 U	62.5 U	25 U	25 U	62.5 U	25 U	25 U	42.1	127	25 U	25 U
	Primary Result	06/06/2023	50 U	50 U	50 U	76	50 U	50 U	125 U	50 U	50 U	125 U	50 U	50 U	514	1530	144	50 U
	Primary Result	05/14/2024	50 U	50 U	50 U	167 J	50 U	50 U	125 U	50 U	50 U	125 U	50 U	50 U	178	2010	123	50 U
	Primary Result	06/04/2025	21.1	3.03	8.61	68.8	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	17.8	250	1270	73	1 U
MW-56B	Primary Result	06/12/2018	1 U	1 U	1 U	6.4	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	9.8	28.5	33.9	1 U
	Primary Result	07/02/2018	20 U	20 U	20 U	20 U	20 U	20 U	50 U	20 U	20 U	50 U	20 U	20 U	20 U	20 U	22.2	20 U
	Primary Result	11/12/2018	20 U	20 U	20 U	20 U	20 U	20 U	50 U	20 U	20 U	50 U	20 U	20 U	20 U	20 U	20 U	20 U
	Primary Result	05/16/2019	10 U	10 U	10 U	10 U	10 U	10 U	25 U	10 U	10 U	25 U	10 U	10 U	10 U	10.6	18.8	10 U
	Field Duplicate	05/16/2019	10 U	10 U	10 U	10 U	10 U	10 U	25 U	10 U	10 U	25 U	10 U	10 U	10 U	10.8	18.5	10 U
	Primary Result	06/02/2020	5 U	5 U	5 U	5 U	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	5 U	19.9	24.5	5 U
	Field Duplicate	06/02/2020	5 U	5 U	5 U	5 U	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	5 U	19.1	24.5	5 U
	Primary Result	05/18/2021	5 U	5 U	5 U	5 U	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	6.3	17.8	19.3	5 U
	Field Duplicate	05/18/2021	5 U	5 U	5 U	5 U	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	5 U	17.2	19	5 U
	Primary Result	04/05/2022	5 U	5 U	5 U	6.5	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	6.1	22.8	23.7	5 U
	Field Duplicate	04/05/2022	5 U	5 U	5 U	6.4	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	5.6	22.6	23.3	5 U
	Primary Result	06/06/2023	5 U	5 U	5 U	5 U	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	5 U	21.7	14.3	5 U
	Field Duplicate	06/06/2023	5 U	5 U	5 U	5 U	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	5 U	22.5	15.3	5 U
	Primary Result	05/14/2024	5 U	5 U	5 U	6.3 J	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	5.4	19.8	12.5 J	5 U
	Field Duplicate	05/14/2024	5 U	5 U	5 U	5.9 J	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	5	19.3	5 UJ	5 U
	Primary Result	06/04/2025	1 U	1 U	1 U	4.85	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	20 UJ	44.4	20.3	1 U
	Field Duplicate	06/04/2025	1 U	1 U	1 U	5.1	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	5.63 J	42.1	20.2	1 U
MW-57B	Primary Result	11/12/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/17/2019	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/02/2020	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/18/2021	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	04/06/2022	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/08/2023	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/15/2024	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/05/2025	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
MW-58B	Primary Result	11/13/2023	200 U	200 U	200 U	313	200 U	200 U	500 U	200 U	200 U	500 U	200 U	320	977	5980	200 U	200 U
	Primary Result	11/20/2023	200 U	200 U	200 U	505	200 U	200 U	500 U	200 U	200 U	500 U	200 U	404	1110	7600	200 U	200 U
MW-59B	Primary Result	11/13/2023	200 U	200 U	200 U	485	200 U	200 U	500 U	200 U	200 U	500 U	200 U	631	1320	7210	227	200 U
	Primary Result	11/20/2023	250 U	250 U	250 U	597	250 U	250 U	625 U	250 U	250 U	625 U	250 U	518	1240	7530	250 U	250 U
MW-60B	Primary Result	11/13/2023	551	500 U	500 U	1280	500 U	500 U	1250 U	500 U	500 U	1250 U	500 U	925	1630	7090	575	500 U
	Primary Result	11/20/2023	1000 U	1000 U	1000 U	1580	1000 U	1000 U	2500 U	1000 U	1000 U	2500 U	1000 U	1000 U	1610	7430	1000 U	1000 U
	Primary Result	05/15/2024	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	2500 U	1000 U	1000 U	2500 U	1000 U	1100	1860	6320	1000 U	1000 U
	Primary Result	06/04/2025	636	50 U	69.5	1390	50 U	50 U	125 U	50 U	50 U	250 U	50 U	819	1890	7830	617	50 U
	Field Duplicate	06/04/2025	537	200 U	200 U	1580	200 U	200 U	500 U	200 U	200 U	1000 U	200 U	941	2060	8480	633	200 U
PP-3D	Primary Result	03/02/2009	24	8.1 J	24	120	20 U	20 U	20 U	20 U	20 U	40 U	14 J	20 U	1000	-	40	20 U
	Primary Result	10/30/2009	20 U	20 U	15 J	63 J	20 U	20 U	50 U	20 U	20 U	100 UJ	20 U	17 J	200 J	-	16 J	20 U
	Primary Result	06/05/2025	1 U	1 U	2.11	7.95	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1.33	25.7	511	3.87	1 U
PP-4D	Primary Result	02/05/2003	1 U	1 U	0.66 J	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	03/05/2009	1 U	1 U	0.44 J	3.3	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	1.5	-	1 U	1 U
PP-4S	Primary Result	02/05/2003	1 U	1 U	0.39 J	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
PP-5D	Primary Result	02/27/2001	3	10	4	120	-	-	-	-	-	-	-	20	550	-	130	-
	Primary Result	11/04/2002	500 U	500 U	500 U	150 J	500 U	500 U	500 U	500 U	500 U	1000 U	500 U	500 U	460	-	500 U	500 U
	Primary Result	02/06/2003	250 U	250 U	250 U	190 J	250 U	250 U	250 U	250 U	250 U	500 U	250 U	250 U	530	-	160 J	250 U
	Primary Result	10/24/2003	500 U	500 U	500 U	190 J	500 U	500 U	500 U	500 U	500 U	1000 U	500 U	500 U	420	-	500 U	500 U
	Primary Result	03/05/2009	10 U	3.1 J	1.6 J	28	10 U	10 U	10 U	10 U	10 U	20 U	10 U	10 U	170	-	51	10 U
	Primary Result	05/16/2018	1 U	1	1 U	19.8	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	64.6	25.9	25.9	1 U
	Primary Result	11/14/2018	50 U	50 U	50 U	50 U	50 U	50 U	125 U	50 U	50 U	125 U	50 U	50 U	50 U	50 U	50 U	50 U
	Primary Result	06/08/2023	10 U	10 U	10 U	10 U	10 U	10 U	25 U	10 U	10 U	25 U	10 U	10 U	10 U	12.8	10 U	10 U
	Primary Result	05/15/2024	10 U	10 U	10 U	10 U	10 U	10 U	25 U	10 U	10 U	25 U	10 U	10 U	18.5	60.2	10 U	10 U
	Primary Result	06/05/2025	1 U	1 U	1 U	2.5	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1.85	17.7	1 U	1 U
PP-5S	Primary Result	11/14/2018	10 U	10 U	10 U	10 U	10 U	10 U	25 U	10 U	10 U	25 U	10 U	10 U	10 U	65	10 U	10 U
	Primary Result	06/03/2020	10 U	10 U	10 U	10 U	10 U	10 U	25 U	10 U	10 U	25 U	10 U	10 U	10 U	44.4	10 U	10 U
	Primary Result	05/18/2021	10 U	10 U	10 U	10 U	10 U	10 U	25 U	10 U	10 U	25 U	10 U	10 U	10 U	42.5	10 U	10 U
	Primary Result	04/06/2022	10 U	10 U	10 U	10 U	10 U	10 U	25 U	10 U	10 U	25 U	10 U	10 U	10 U	56.5	10 U	10 U
PP-7	Primary Result	11/05/2002	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
PP-8	Primary Result	11/05/2002	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	11/27/2002	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
TMW-001	Primary Result	11/28/2000	620	110	-	-	-	-	-	-	-	-	-	520	-	-	680	-
	Primary Result	12/13/2000	240	43 J	200	4000	-	-	-	-	-	-	-	820	-	-	440	-
	Primary Result	02/06/2003	5000 U	5000 U	1200 J	9100	5000 U	5000 U	5000 U	5000 U	5000 U	10000 U	5000 U	5000 U	11000	-	5000 U	5000 U
	Primary Result	10/24/2003	2500 U	2500 U	1200 J	6500	2500 U	2500 U	2500 U	2500 U	2500 U	5000 U	2500 U	2200 J	8500	-	2500 U	2500 U
	Primary Result	03/05/2009	370	26 J	450	490	130 U	130 U	130 U	130 U	130 U	270 U	130 U	87 J	1200	-	62 J	130 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE ORGANIC COMPOUND CONCENTRATIONS
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethene	1,2-Dichloropropane	1,3,5-Trimethylbenzene
		CAS Number	79-34-5	79-00-5	75-34-3	75-35-4	563-58-6	87-61-6	96-18-4	120-82-1	95-63-6	96-12-8	106-93-4	95-50-1	107-06-2	540-59-0	78-87-5	108-67-8
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
TMW-002	Primary Result	02/27/2001	5000 U	5000 U	5000 U	5000 U	-	-	-	-	-	-	-	23000	220000	-	2400	-
	Primary Result	02/06/2003	12000 U	12000 U	12000 U	12000 U	12000 U	12000 U	12000 U	12000 U	12000 U	25000 U	12000 U	15000	250000	-	12000 U	12000 U
	Primary Result	10/07/2003	10000 U	10000 U	10000 U	10000 U	10000 U	10000 U	10000 U	10000 U	10000 U	20000 U	10000 U	19000	140000	-	10000 U	10000 U
	Primary Result	10/24/2003	10000 U	10000 U	10000 U	10000 U	10000 U	10000 U	10000 U	10000 U	10000 U	20000 U	10000 U	23000	170000	-	10000 U	10000 U
	Primary Result	03/06/2009	170 J	250 J	100 J	680	500 U	500 U	500 U	500 U	500 U	1000 U	500 U	18000	120000	-	500 U	500 U
TMW-003	Primary Result	02/28/2001	110	17	41	130	-	-	-	-	-	-	-	6	-	-	-	-
	Primary Result	02/06/2003	1200 U	1200 U	1200 U	1200 U	1200 U	1200 U	1200 U	1200 U	1200 U	2500 U	1200 U	1200 U	750	-	2400	1200 U
	Primary Result	10/24/2003	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	2000 U	1000 U	1000 U	740	-	2200	1000 U
	Primary Result	03/05/2009	61 J	18 J	31 J	98	67 U	67 U	67 U	67 U	67 U	130 U	67 U	8.2 J	700	-	1600	67 U
TMW-004	Primary Result	02/28/2001	500 U	500 U	500 U	500 U	-	-	-	-	-	-	-	500 U	1200	-	500 U	-
	Primary Result	02/06/2003	12000 U	12000 U	12000 U	12000 U	12000 U	12000 U	12000 U	12000 U	12000 U	25000 U	12000 U	12000 U	6200 U	-	12000 U	12000 U
	Primary Result	10/24/2003	10000 U	10000 U	10000 U	10000 U	10000 U	10000 U	10000 U	10000 U	10000 U	20000 U	10000 U	10000 U	5000 U	-	10000 U	10000 U
	Primary Result	03/06/2009	1000 U	1000 U	1000 U	170 J	1000 U	1000 U	1000 U	1000 U	1000 U	2000 U	1000 U	1000 U	620 J	-	1000 U	1000 U
TMW-005	Primary Result	02/28/2001	-	150	86	570	-	-	-	-	-	-	-	50 U	120	-	58	-
	Primary Result	02/06/2003	160000	25000 U	25000 U	25000 U	25000 U	25000 U	25000 U	25000 U	25000 U	50000 U	25000 U	25000 U	12000 U	-	25000 U	25000 U
	Primary Result	10/24/2003	600	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	1000 U	500 U	500 U	250 U	-	500 U	500 U
	Primary Result	03/05/2009	8200	160 J	130 J	830	330 U	330 U	330 U	330 U	330 U	670 U	330 U	330 U	330 U	-	330 U	330 U
	Field Duplicate	03/05/2009	7700	160 J	130 J	760	330 U	330 U	330 U	330 U	330 U	670 U	330 U	330 U	330 U	-	330 U	330 U
TMW-007	Primary Result	02/28/2001	1900	1500	500 U	26000	-	-	-	-	-	-	-	340	-	-	500 U	-
	Primary Result	03/06/2009	1100 J	860 J	220 J	14000	2000 U	2000 U	2000 U	2000 U	2000 U	4000 U	11000	2000 U	120000	-	2000 U	2000 U
TMW-008	Primary Result	03/01/2001	0.5 U	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	0.5 U	0.5 U	-	0.5 U	-
	Primary Result	02/05/2003	1 U	1 U	0.2 J	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	10/23/2003	1 U	1 U	0.22 J	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Field Duplicate	10/23/2003	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	0.5 U	-	1 U	1 U
	Primary Result	03/04/2009	6.7 U	1.6 J	19	49	6.7 U	6.7 U	6.7 U	6.7 U	6.7 U	13 U	6.7 U	6.2 J	140	-	12	6.7 U
	Primary Result	10/27/2009	1 U	1 U	1.7	1.7	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	0.47 J	9.1	-	0.89 J	1 U
	Field Duplicate	10/27/2009	1 U	1 U	2.3	3.6	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	0.64 J	11	-	1.1	1 U
	Primary Result	10/28/2009	1 U	1 U	2.5	0.69 J	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	3.8	4.4	-	0.94 J	1 U
	Primary Result	07/19/2011	5 U	5 U	11	21	5 U	5 U	13 U	5 U	5 U	25 U	5 U	2.4 J	42 B	-	6.5	5 U
	Primary Result	11/28/2011	6.7 U	6.7 U	16	38	6.7 U	6.7 U	17 U	6.7 U	6.7 U	33 U	6.7 U	8.9	98	-	9.6	6.7 U
	Primary Result	02/22/2012	5 U	5 U	18	36	5 U	5 U	13 U	5 U	5 U	25 U	5 U	5.9	51	-	10	5 U
	Primary Result	06/26/2012	4 U	4 U	5.6	13	4 U	4 U	10 U	4 U	4 U	20 U	4 U	2.3 J	28	-	3.9 J	4 U
	Primary Result	11/05/2012	2 U	0.92 J	3.3	3.4	2 U	2 U	5 U	2 U	2 U	10 U	2 U	0.87 J	14	-	2.9	2 U
	Primary Result	03/13/2013	5 U	1.9 J	16	35	5 U	5 U	13 U	5 U	5 U	25 U	5 U	5 U	19	-	11	5 U
	Primary Result	05/21/2013	1 U	1 U	1.2	2.2	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	2	-	0.67 J	1 U
	Primary Result	05/20/2014	10 U	10 U	26	44	10 U	10 U	25 U	10 U	10 U	50 U	10 U	3.3 J	38	-	15	10 U
	Primary Result	05/19/2015	40 U	40 U	79	170	40 U	40 U	100 U	40 U	40 U	200 U	40 U	67	320	-	47	40 U
	Primary Result	06/01/2016	5 U	5 U	6.6	13	5 U	5 U	13 U	5 U	5 U	25 U	5 U	6.7	36	-	4 J	5 U
	Primary Result	06/20/2017	10 U	10 U	17	30	10 U	10 U	25 U	10 U	10 U	50 U	10 U	7.3 J	47	-	9.8 J	10 U
	Primary Result	11/08/2017	1 U	2.6	46.9	93.6	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	80.1	274	6070	27.7	1 U
	Primary Result	05/15/2018	50 U	50 U	50 U	57.4	50 U	50 U	125 U	50 U	50 U	125 U	50 U	50 U	50 U	4340	50 U	50 U
	Primary Result	11/14/2018	50 U	50 U	50 U	50 U	50 U	50 U	125 U	50 U	50 U	125 U	50 U	50 U	50 U	1420	50 U	50 U
	Primary Result	06/05/2025	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	17.1	1 U	1 U
TMW-009	Primary Result	03/01/2001	1	0.7	1	-	-	-	-	-	-	-	-	0.8	-	-	-	-
	Field Duplicate	03/01/2001	1	0.8	1	-	-	-	-	-	-	-	-	0.8	-	-	5	-
	Primary Result	02/06/2003	50 U	50 U	50 U	50	50 U	50 U	50 U	50 U	50 U	100 U	50 U	50 U	83	-	50 U	50 U
	Field Duplicate	02/06/2003	50 U	50 U	50 U	50	50 U	50 U	50 U	50 U	50 U	100 U	50 U	50 U	85	-	50 U	50 U
	Primary Result	10/24/2003	100 U	100 U	100 U	110	100 U	100 U	100 U	100 U	100 U	200 U	100 U	100 U	87	-	100 U	100 U
	Primary Result	03/04/2009	1 U	1 U	0.23 J	4.2	1 U	1 U	1 U	1 U	1 U	2 U	1 U	1 U	4.8	-	1 U	1 U
	Primary Result	07/18/2011	1 U	1 U	0.36 J	8	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	6.1 B	-	0.3 J	1 U
	Primary Result	11/28/2011	4 U	4 U	1.5 J	31	4 U	4 U	10 U	4 U	4 U	20 U	4 U	4 U	33	-	1.8 J	4 U
	Primary Result	02/22/2012	1 U	1 U	0.89 J	11	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	16	-	0.93 J	1 U
	Primary Result	06/26/2012	2 U	2 U	1.1 J	15	2 U	2 U	5 U	2 U	2 U	10 U	2 U	2 U	16	-	1.3 J	2 U
	Primary Result	11/05/2012	2 U	2 U	0.97 J	19	2 U	2 U	5 U	2 U	2 U	10 U	2 U	2 U	15	-	0.98 J	2 U
	Primary Result	03/13/2013	1 U	1 U	0.28 J	5.4	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1.9	-	0.21 J	1 U
	Primary Result	05/21/2013	1 U	1 U	0.35 J	5.1	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	3.4	-	0.23 J	1 U
	Primary Result	05/20/2014	4 U	4 U	2.8 J	25	4 U	4 U	10 U	4 U	4 U	20 U	4 U	4 U	13	-	2 J	4 U
	Primary Result	05/20/2015	10 U	10 U	3.4 J	31	10 U	10 U	25 U	10 U	10 U	50 U	10 U	10 U	15	-	10 U	10 U
	Primary Result	06/02/2016	2 U	2 U	1.8 J	18	2 U	2 U	5 U	2 U	2 U	10 U	2 U	2 U	8	-	1.3 J	2 U
	Field Duplicate	06/02/2016	2 U	2 U	1.8 J	17	2 U	2 U	5 U	2 U	2 U	10 U	2 U	2 U	8.1	-	1.2 J	2 U
	Primary Result	06/22/2017	1 U	1 U	1.3	10	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	4.5	-	0.87 J	1 U
	Primary Result	11/08/2017	1 U	1 U	1 U	10.1	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	4.3	54.3	1 U	1 U
	Primary Result	05/17/2018	5 U	5 U	5 U	16.8	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	7.8	174	5 U	5 U
	Primary Result	11/14/2018	5 U	5 U	5 U	5 U	5 U	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	5 U	15.6	5 U	5 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE ORGANIC COMPOUND CONCENTRATIONS
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethene	1,2-Dichloropropane	1,3,5-Trimethylbenzene
		CAS Number	79-34-5	79-00-5	75-34-3	75-35-4	563-58-6	87-61-6	96-18-4	120-82-1	95-63-6	96-12-8	106-93-4	95-50-1	107-06-2	540-59-0	78-87-5	108-67-8
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
TMW-010	Primary Result	03/01/2001	4	0.5 U	3	8	-	-	-	-	-	-	-	2	-	-	1	-
	Primary Result	10/24/2003	10 U	10 U	10 U	4.2 J	10 U	10 U	10 U	10 U	10 U	20 U	10 U	10 U	5 U	-	10 U	10 U
	Primary Result	03/04/2009	1 U	1 U	0.16 J	0.44 J	1 U	1 U	1 U	1 U	0.093 J	2 U	1 U	1 U	0.51 J	-	1 U	1 U
	Primary Result	10/27/2009	1 U	1 U	0.77 J	1.7	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	3	-	1 U	1 U
	Primary Result	10/28/2009	1 U	1 U	0.55 J	1.2	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1.8	-	1 U	1 U
	Primary Result	07/19/2011	1 U	1 U	0.22 J	0.53 J	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	0.64 JB	-	1 U	1 U
	Primary Result	11/28/2011	1 U	1 U	1.3	3.8	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1.3	6.9	-	0.59 J	1 U
	Primary Result	02/22/2012	1 U	1 U	0.79 J	1.9	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	0.44 J	3.2	-	1 U	1 U
	Primary Result	06/26/2012	1 U	1 U	0.43 J	0.87 J	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1.5	-	1 U	1 U
	Primary Result	11/05/2012	1 U	1 U	1	0.87 J	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	6.2	-	0.5 J	1 U
	Primary Result	03/13/2013	1 U	1 U	0.77 J	2.2	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	3.7	-	0.3 J	1 U
	Primary Result	05/21/2013	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	0.47 J	-	1 U	1 U
	Primary Result	05/20/2014	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	05/19/2015	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/01/2016	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	1 U	0.3 J	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	0.3 J	-	1 U	1 U
	Field Duplicate	06/20/2017	1 U	1 U	1 U	0.32 J	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	0.29 J	-	1 U	1 U
	Primary Result	11/08/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	27.2	1 U	1 U
	Field Duplicate	11/08/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	25.3	1 U	1 U
	Primary Result	05/15/2018	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	18.7	1 U	1 U
TMW-011	Primary Result	03/01/2001	-	4	9	-	-	-	-	-	-	-	-	7	-	-	-	-
	Primary Result	02/06/2003	31 J	50 U	50 U	22 J	50 U	50 U	50 U	50 U	50 U	100 U	50 U	50 U	23 J	-	83	50 U
	Primary Result	10/24/2003	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	500 U	1000 U	500 U	500 U	250 U	-	180 J	500 U
	Primary Result	03/04/2009	2.5	2 U	1.2 J	3.9	2 U	2 U	2 U	2 U	2 U	4 U	2 U	0.4 J	1.6 J	-	12	2 U
	Primary Result	07/18/2011	1 U	1 U	0.3 J	1.4	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	2.3	1 U
	Primary Result	11/28/2011	0.97 J	1 U	0.5 J	1	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	0.21 J	0.73 J	-	4.2	1 U
	Primary Result	02/22/2012	5.5	4.2	4.4	9.1	2 U	2 U	5 U	2 U	2 U	10 U	2 U	0.8 J	4.9	-	14	2 U
	Primary Result	06/26/2012	8	2.6	3.3	11	2 U	2 U	5 U	2 U	2 U	10 U	2 U	1.8 J	9.6	-	21	2 U
	Primary Result	11/05/2012	1.3 J	5 U	3.7 J	18	5 U	5 U	13 U	5 U	5 U	25 U	5 U	5 U	2.4 J	-	17	5 U
	Primary Result	03/13/2013	2	4.2	2.6	14	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	0.44 J	2.8	-	13	1 U
	Primary Result	05/21/2013	1.3	0.47 J	1.3	4.8	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	0.21 J	2.6	-	8.6	1 U
	Primary Result	05/20/2014	1 J	4 U	2.3 J	7.8	4 U	4 U	10 U	4 U	4 U	20 U	4 U	4 U	16	-	12	4 U
	Primary Result	05/20/2015	0.26 J	1 U	0.5 J	0.9 J	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	0.83 J	-	2.5	1 U
	Primary Result	06/02/2016	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	0.44 J	1 U
	Primary Result	06/22/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	5 U	1 U	1 U	1 U	-	0.28 J	1 U
	Primary Result	11/08/2017	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	28.2	1.6	1 U
	Primary Result	05/17/2018	1 U	1 U	1 U	1.1	1 U	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	31.3	1.9	1 U
TMW-012	Primary Result	02/28/2001	0.5 U	0.5 U	0.5 U	1	-	-	-	-	-	-	-	1	0.8	-	0.5 U	-
TMW-015	Primary Result	02/28/2001	-	50 U	50 U	-	-	-	-	-	-	-	-	50 U	450	-	50 U	-
	Primary Result	02/06/2003	6200	5000 U	5000 U	5400	5000 U	5000 U	5000 U	5000 U	5000 U	10000 U	5000 U	5000 U	2500 U	-	5000 U	5000 U
	Primary Result	10/24/2003	2800 J	5000 U	5000 U	8900	5000 U	5000 U	5000 U	5000 U	5000 U	10000 U	5000 U	5000 U	2500 U	-	5000 U	5000 U
	Primary Result	03/05/2009	540	330 U	330 U	4300	330 U	330 U	330 U	330 U	330 U	670 U	330 U	330 U	320 J	-	330 U	330 U
	Primary Result	06/21/2017	140 J	70 J	200 U	6500	200 U	200 U	500 U	200 U	200 U	1000 U	200 U	200 U	470	-	200 U	200 U
	Primary Result	11/08/2017	1000 U	1000 U	1000 U	7190	1000 U	1000 U	2500 U	1000 U	1000 U	2500 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U
	Field Duplicate	11/08/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Primary Result	05/16/2018	500 U	500 U	500 U	5520	500 U	500 U	1250 U	500 U	500 U	1250 U	500 U	500 U	529	542	500 U	500 U
	Field Duplicate	05/16/2018	500 U	500 U	500 U	5370	500 U	500 U	1250 U	500 U	500 U	1250 U	500 U	500 U	500 U	500 U	500 U	500 U
	Primary Result	11/12/2018	500 U	500 U	500 U	1500	500 U	500 U	1250 U	500 U	500 U	1250 U	500 U	500 U	500 U	500 U	500 U	500 U
	Primary Result	05/15/2024	51.5	50 U	50 U	5930	50 U	50 U	125 U	50 U	50 U	125 U	50 U	50 U	454	482	50 U	50 U
	Primary Result	06/04/2025	48.7	49.6	25 U	7280	25 U	25 U	62.5 U	25 U	25 U	125 U	25 U	25 U	563	338	25 U	25 U
TMW-016D	Primary Result	11/28/2000	110	72	56	-	-	-	-	-	-	-	-	810	-	-	670	-
	Primary Result	12/13/2000	500 U	500 U	500 U	9500	-	-	-	-	-	-	-	500 U	9600	-	500 U	-
	Primary Result	03/06/2009	300 J	76 J	740	13000	400 U	400 U	400 U	400 U	400 U	800 U	400 U	1400	6000	-	350 J	400 U
	Primary Result	11/28/2000	110	93	110	-	-	-	-	-	-	-	-	-	-	-	-	-
	Field Duplicate	11/28/2000	98	92	110	-	-	-	-	-	-	-	-	-	-	-	740	-
	Primary Result	12/13/2000	500 U	500 U	500 U	6200	-	-	-	-	-	-	-	1600	11000	-	500 U	-
	Primary Result	03/06/2009	110 J	330 U	990	3100	330 U	330 U	330 U	330 U	330 U	670 U	330 U	1500	3000	-	100 J	330 U

Notes and Abbreviations:
-: Chemical analysis data was unavailable
B: Contaminant seen in method blank
HTV: Holding time violation
J: Estimated value
JB: Estimated value; Contaminant seen in method blank
U: Non-detect
UJ: Non-detect; Estimated value
Check Data Usability Summary report in Appendix B for definitions of Project Qualifers added

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC SIM	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	1,4-Dioxane	1,4-Dioxane	2,2-Dichloropropane	2-Butanone (Methyl Ethyl Ketone)	2-Chloroethyl vinyl ether	2-Chlorotoluene	2-Hexanone (Methyl Butyl	2-Phenylbutane (sec-Butylbenzene)	4-Chlorotoluene	4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	Acetone	Acrolein	Acrylonitrile	Allyl chloride
		CAS Number	541-73-1	142-28-9	106-46-7	123-91-1	123-91-1	594-20-7	78-93-3	110-75-8	95-49-8	591-78-6	135-98-8	106-43-4	108-10-1	67-64-1	107-02-8	107-13-1	107-05-1
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Location	**Sample Type**	**Sample Date**																	
Bohl Well	Primary Result	10/31/2002	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	10 U	20 U	20 U	-
	Primary Result	09/09/2003	1 U	-	1 U	-	-	1 U	3.7 J	5 U	1 U	5 U	1 U	1 U	5 U	3.9 J	20 U	20 U	-
	Primary Result	10/22/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	10 U	20 U	20 U	-
CCI-101	Primary Result	11/18/1988	0 U	-	745	-	-	-	0 U	-	-	-	-	-	0 U	0 U	-	-	-
	Primary Result	02/24/1989	0 U	-	0 U	-	-	-	8500 J	-	-	-	-	-	0 U	0 U	-	-	-
	Primary Result	12/01/1995	22	5 U	51	-	-	5 U	20 U	10 U	5 U	20 U	5 U	5 U	20 U	20 U	20 U	20 U	10 U
	Primary Result	11/28/2000	13	-	15	-	-	-	50 U	-	-	50 U	-	-	50 U	50 U	-	-	-
	Primary Result	12/13/2000	50 U	-	69	-	-	-	200 UJ	-	-	200 U	-	-	480	200 UJ	-	-	-
	Field Duplicate	12/13/2000	50 U	-	69	-	-	-	200 U	-	-	200 U	-	-	420	200 U	-	-	-
	Primary Result	02/06/2003	5000 U	-	5000 U	-	-	5000 U	25000 U	25000 U	5000 U	25000 U	5000 U	5000 U	25000 U	50000 U	100000 U	100000 U	-
	Primary Result	10/24/2003	5000 U	-	5000 U	-	-	5000 U	25000 U	25000 U	5000 U	25000 U	5000 U	5000 U	25000 U	50000 U	100000 U	100000 U	-
EPA-1	Primary Result	02/24/1989	0 U	-	0 U	-	-	-	9900 J	-	-	-	-	-	0 U	10000 J	-	-	-
	Field Duplicate	02/24/1989	0 U	-	0 U	-	-	-	11000 J	-	-	-	-	-	0 U	69000 J	-	-	-
EPA-2	Primary Result	12/01/1995	10	5 U	11	-	-	5 U	20 U	10 U	5 U	20 U	5 U	5 U	20 U	26	20 U	20 U	10 U
	Primary Result	02/28/2001	50 U	-	28 J	-	-	-	200 U	-	-	200 U	-	-	200 U	200 U	-	-	-
	Primary Result	02/06/2003	250 U	-	250 U	-	-	250 U	1200 U	1200 U	250 U	1200 U	250 U	250 U	1200 U	2500 U	5000 U	5000 U	-
	Primary Result	10/24/2003	1000 U	-	1000 U	-	-	1000 U	5000 U	5000 U	1000 U	5000 U	1000 U	1000 U	5000 U	10000 U	20000 U	20000 U	-
EPA-3	Primary Result	12/01/1995	10 U	5 U	10 U	-	-	5 U	20 U	10 U	5 U	20 U	5 U	5 U	20 U	20 U	20 U	20 U	10 U
	Primary Result	02/28/2001	0.5 U	-	0.5 U	-	-	-	2 U	-	-	2 U	-	-	2 U	2 U	-	-	-
	Primary Result	02/05/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	3.4 J	20 U	20 U	-
	Primary Result	10/23/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	10 U	20 U	20 U	-
	Primary Result	03/04/2009	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	5 U	1 U	1 U	10 U	10 U	-	-	-
ERT-1	Primary Result	12/01/1995	5000 U	2500 U	5000 U	-	-	2500 U	10000 U	5000 U	2500 U	10000 U	2500 U	2500 U	10000 U	10000 U	10000 U	10000 U	5000 U
	Primary Result	03/01/2001	50 U	-	50 U	-	-	-	200 U	-	-	200 U	-	-	200 U	200 U	-	-	-
	Primary Result	02/06/2003	2500 U	-	2500 U	-	-	2500 U	12000 U	12000 U	2500 U	12000 U	2500 U	2500 U	12000 U	25000 U	50000 U	50000 U	-
	Primary Result	10/24/2003	250 U	-	250 U	-	-	250 U	1200 U	1200 U	250 U	1200 U	250 U	250 U	1200 U	2500 U	5000 U	5000 U	-
KDHE-1	Primary Result	12/20/1988	0 U	-	8.5	-	-	-	0 U	-	-	-	-	-	0 U	0 U	-	-	-
	Primary Result	02/24/1989	0 U	-	0 U	-	-	-	3000 J	-	-	-	-	-	0 U	2500 J	-	-	-
KDHE-2	Primary Result	01/06/1989	0 U	-	0 U	-	-	-	0 U	-	-	-	-	-	0 U	0 U	-	-	-
	Primary Result	02/24/1989	0 U	-	0 U	-	-	-	7800 J	-	-	-	-	-	0 U	13000 J	-	-	-
	Primary Result	12/01/1995	10 U	5 U	8.4 J	-	-	5 U	20 U	10 U	5 U	20 U	5 U	5 U	20 U	20 U	20 U	20 U	10 U
KDHE-3	Primary Result	01/06/1989	0 U	-	0 U	-	-	-	0 U	-	-	-	-	-	0 U	0 U	-	-	-
	Primary Result	02/24/1989	0 U	-	0 U	-	-	-	220 J	-	-	-	-	-	0 U	240 J	-	-	-
	Primary Result	12/01/1995	10 U	5 U	0.7 J	-	-	5 U	20 U	10 U	5 U	20 U	5 U	5 U	20 U	20 U	20 U	20 U	10 U
KDHE-4	Primary Result	12/22/1988	0 U	-	8.4	-	-	-	0 U	-	-	-	-	-	0 U	0 U	-	-	-
	Primary Result	02/24/1989	0 U	-	0 U	-	-	-	0 U	-	-	-	-	-	0 U	0 U	-	-	-
	Primary Result	12/01/1995	10 U	5 U	10 U	-	-	5 U	20 U	10 U	5 U	20 U	5 U	5 U	20 U	20 U	20 U	20 U	10 U
MW-18	Primary Result	02/27/2001	0.5 U	-	0.5 U	-	-	-	2 U	-	-	2 U	-	-	2 U	2 U	-	-	-
	Primary Result	02/05/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	10 U	20 U	20 U	-
	Primary Result	10/23/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	10 U	20 U	20 U	-
MW-18B	Primary Result	10/29/2009	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	07/19/2011	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	11	20 U	20 U	-
	Primary Result	06/26/2012	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	2.2 U	20 U	20 U	-
	Field Duplicate	06/26/2012	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	11/05/2012	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Field Duplicate	11/05/2012	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	05/21/2013	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Field Duplicate	05/21/2013	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	05/20/2014	1 U	-	1 U	200 U	-	1 U	3.4 J	3 U	1 U	5 U	1 U	1 U	10 U	9.6 J	20 U	20 U	-
	Field Duplicate	05/20/2014	1 U	-	1 U	200 U	-	1 U	3.3 J	3 U	1 U	5 U	1 U	1 U	10 U	9.4 J	20 U	20 U	-
	Primary Result	05/19/2015	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Field Duplicate	05/19/2015	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	06/01/2016	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Field Duplicate	06/01/2016	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	3.6 J	20 U	20 U	-
	Primary Result	06/20/2017	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	11/07/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	27.9	-	-	-
	Primary Result	05/15/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	20.6	-	-	-
	Primary Result	11/12/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	31.6	-	-	-
	Primary Result	05/16/2019	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10.1	-	-	-
	Primary Result	06/02/2020	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	12	-	-	-
	Primary Result	05/18/2021	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	04/05/2022	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	06/06/2023	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	66.7	-	-	-
	Primary Result	05/14/2024	1 U	1 U	1 U	-	-	1 U	10.4	-	1 U	10 U	1 U	1 U	10 U	553	-	-	-
	Primary Result	06/04/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	96	-	-	-

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC SIM	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	1,4-Dioxane	1,4-Dioxane	2,2-Dichloropropane	2-Butanone (Methyl Ethyl Ketone)	2-Chloroethyl vinyl ether	2-Chlorotoluene	2-Hexanone (Methyl Butyl	2-Phenylbutane (sec-Butylbenzene)	4-Chlorotoluene	4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	Acetone	Acrolein	Acrylonitrile	Allyl chloride
		CAS Number	541-73-1	142-28-9	106-46-7	123-91-1	123-91-1	594-20-7	78-93-3	110-75-8	95-49-8	591-78-6	135-98-8	106-43-4	108-10-1	67-64-1	107-02-8	107-13-1	107-05-1
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-19	Primary Result	02/27/2001	0.5 U	-	0.5 U	-	-	-	2 U	-	-	2 U	-	-	2 U	2 U	-	-	-
	Primary Result	02/06/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	10 U	20 U	20 U	-
	Primary Result	10/23/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	10 U	20 U	20 U	-
	Primary Result	03/05/2009	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	5 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	10/29/2009	1 U	-	1 U	200 U	2 U	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Field Duplicate	10/29/2009	1 U	-	1 U	200 U	2 U	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
MW-20	Primary Result	02/27/2001	0.5 U	-	0.5 U	-	-	-	5	-	-	2 U	-	-	2 U	25	-	-	-
	Primary Result	02/05/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	3 J	20 U	20 U	-
	Primary Result	10/23/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	10 U	20 U	20 U	-
	Primary Result	03/04/2009	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	5 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	10/29/2009	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	11/07/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	30	-	-	-
	Primary Result	05/15/2024	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	111	-	-	-
	Primary Result	06/05/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	50 U	-	-	-
MW-21	Primary Result	02/27/2001	0.5 U	-	0.5 U	-	-	-	2 U	-	-	2 U	-	-	2 U	2 U	-	-	-
	Primary Result	02/05/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	3 J	20 U	20 U	-
	Primary Result	10/22/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	10 U	20 U	20 U	-
	Primary Result	03/03/2009	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	5 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	10/30/2009	1 U	-	1 U	200 U	2 U	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	06/20/2017	1 U	-	1 U	200 U	-	1 U	2.8 J	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	11/07/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	26.3	-	-	-
	Field Duplicate	11/07/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	29	-	-	-
	Primary Result	05/16/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	18.9	-	-	-
	Primary Result	11/12/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	24.6	-	-	-
MW-22	Primary Result	02/27/2001	0.5 U	-	0.5 U	-	-	-	2 U	-	-	2 U	-	-	2 U	2 U	-	-	-
	Primary Result	10/30/2009	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	05/21/2013	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	06/01/2016	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	06/20/2017	1 U	-	1 U	200 U	-	1 U	2.9 J	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	11/07/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	31.6	-	-	-
	Primary Result	05/16/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	12.2	-	-	-
	Primary Result	11/12/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	20.3	-	-	-
MW-22B	Primary Result	09/17/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	10 U	20 U	20 U	-
	Primary Result	10/22/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	10 U	20 U	20 U	-
	Primary Result	03/03/2009	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	5 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	10/28/2009	1 U	-	1 U	200 U	2 U	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	07/18/2011	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	15	20 U	20 U	-
	Primary Result	06/26/2012	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	2.4 U	20 U	20 U	-
	Primary Result	11/05/2012	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	05/21/2013	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	3.1 J	20 U	20 U	-
	Primary Result	05/20/2014	1 U	-	1 U	200 U	-	1 U	5.1 J	3 U	1 U	5 U	1 U	1 U	10 U	12	20 U	20 U	-
	Primary Result	05/20/2015	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	06/01/2016	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	06/20/2017	1 U	-	1 U	200 U	-	1 U	3.4 J	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	11/07/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	24.9	-	-	-
	Primary Result	05/16/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	14.9	-	-	-
	Primary Result	11/12/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	28.9	-	-	-
	Primary Result	05/17/2019	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	05/15/2024	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	526	-	-	-
	Primary Result	06/05/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	50 U	-	-	-
MW-23	Primary Result	02/27/2001	0.5 U	-	0.5 U	-	-	-	3	-	-	2 U	-	-	2 U	11	-	-	-
	Primary Result	03/03/2009	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	5 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	10/28/2009	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	0.3 J	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	05/21/2013	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	05/20/2014	1 U	-	1 U	200 U	-	1 U	3.5 J	3 U	1 U	5 U	1 U	1 U	10 U	8.8 J	20 U	20 U	-
	Primary Result	05/19/2015	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	06/01/2016	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	4.2 J	20 U	20 U	-
	Primary Result	06/20/2017	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	3.1 J	20 U	20 U	-
	Primary Result	11/07/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	05/15/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	22.9	-	-	-
	Primary Result	11/12/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	28.5	-	-	-
MW-23B	Primary Result	09/17/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	10 U	20 U	20 U	-
	Primary Result	10/23/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	10 U	20 U	20 U	-
	Primary Result	03/03/2009	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	5 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	10/27/2009	1 U	-	1 U	200 U	2 U	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	07/19/2011	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	3.6 J	20 U	20 U	-
	Primary Result	06/25/2012	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	3.3 U	20 U	20 U	-

		Chemical Group	VOC	VOC	VOC	VOC	VOC SIM	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	1,4-Dioxane	1,4-Dioxane	2,2-Dichloropropane	2-Butanone (Methyl Ethyl Ketone)	2-Chloroethyl vinyl ether	2-Chlorotoluene	2-Hexanone (Methyl Butyl	2-Phenylbutane (sec-Butylbenzene)	4-Chlorotoluene	4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	Acetone	Acrolein	Acrylonitrile	Allyl chloride
		CAS Number	541-73-1	142-28-9	106-46-7	123-91-1	123-91-1	594-20-7	78-93-3	110-75-8	95-49-8	591-78-6	135-98-8	106-43-4	108-10-1	67-64-1	107-02-8	107-13-1	107-05-1
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-23B	Primary Result	11/05/2012	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	3.6 JB	20 U	20 U	-
	Primary Result	05/21/2013	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	05/20/2014	1 U	-	1 U	200 U	-	1 U	4.1 J	3 U	1 U	5 U	1 U	1 U	10 U	11	20 U	20 U	-
	Primary Result	05/19/2015	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	06/01/2016	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	06/20/2017	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	11/08/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	05/15/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	23.8	-	-	-
	Field Duplicate	05/15/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	22.5	-	-	-
	Primary Result	11/12/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	27.1	-	-	-
	Field Duplicate	11/12/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	25.8	-	-	-
	Primary Result	05/17/2019	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	11.1	-	-	-
	Primary Result	06/03/2020	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	12.2	-	-	-
	Primary Result	05/18/2021	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	04/06/2022	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	29.3	-	-	-
	Primary Result	06/08/2023	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	45.8	-	-	-
	Primary Result	05/16/2024	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	616	-	-	-
	Primary Result	06/05/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	50 U	-	-	-
MW-24	Primary Result	02/27/2001	0.5 U	-	0.5 U	-	-	-	2 U	-	-	2 U	-	-	2 U	3	-	-	-
	Primary Result	02/05/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	10 U	20 U	20 U	-
	Primary Result	10/23/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	10 U	20 U	20 U	-
	Primary Result	03/03/2009	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	5 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	10/28/2009	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	05/20/2015	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	11/07/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	35.4	-	-	-
	Primary Result	05/16/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	20	-	-	-
	Primary Result	11/12/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	23.6	-	-	-
	Primary Result	05/16/2024	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	318	-	-	-
	Primary Result	06/05/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	104	-	-	-
MW-25	Primary Result	02/27/2001	0.5 U	-	0.5 U	-	-	-	2 U	-	-	2 U	-	-	2 U	2	-	-	-
	Field Duplicate	02/27/2001	0.5 U	-	0.5 U	-	-	-	2 U	-	-	2 U	-	-	2 U	2	-	-	-
	Primary Result	02/05/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	3.6 J	20 U	20 U	-
	Primary Result	10/23/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	10 U	20 U	20 U	-
	Primary Result	03/04/2009	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	5 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	10/28/2009	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	06/20/2017	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	11/07/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	33.4	-	-	-
	Primary Result	05/15/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	25.1	-	-	-
	Primary Result	11/12/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	27.7	-	-	-
MW-26B	Primary Result	11/04/2002	2500 U	-	2500 U	-	-	2500 U	12000 U	12000 U	2500 U	12000 U	2500 U	2500 U	12000 U	25000 U	50000 U	50000 U	-
	Primary Result	02/06/2003	2500 U	-	2500 U	-	-	2500 U	12000 U	12000 U	2500 U	12000 U	2500 U	2500 U	12000 U	25000 U	50000 U	50000 U	-
	Primary Result	10/24/2003	5000 U	-	5000 U	-	-	5000 U	25000 U	25000 U	5000 U	25000 U	5000 U	5000 U	25000 U	50000 U	100000 U	100000 U	-
	Primary Result	03/05/2009	270 U	270 U	270 U	-	-	270 U	2700 U	-	270 U	1300 U	270 U	270 U	2700 U	2700 U	-	-	-
	Primary Result	10/30/2009	57 J	-	57 J	40000 U	500 U	200 U	2000 U	600 R	200 U	1000 U	200 U	200 U	2000 U	2000 U	4000 U	4000 U	-
	Primary Result	06/24/2017	500 UJ	-	180 J	100000 UJ	-	500 UJ	5000 UJ	1500 R	500 UJ	2500 UJ	500 UJ	500 UJ	5000 UJ	5000 UJ	10000 UJ	10000 UJ	-
	Primary Result	11/08/2017	200 U	200 U	200 U	-	-	200 U	2000 U	-	200 U	2000 U	200 U	200 U	2000 U	2000 U	-	-	-
	Field Duplicate	11/08/2017	200 U	200 U	200 U	-	-	200 U	2000 U	-	200 U	2000 U	200 U	200 U	2000 U	2000 U	-	-	-
	Primary Result	05/16/2018	500 U	500 U	500 U	-	-	500 U	5000 U	-	500 U	5000 U	500 U	500 U	5000 U	5000 U	-	-	-
	Primary Result	11/14/2018	1000 U	1000 U	1000 U	-	-	1000 U	10000 U	-	1000 U	10000 U	1000 U	1000 U	10000 U	10000 U	-	-	-
	Primary Result	06/03/2020	2000 U	2000 U	2000 U	-	-	2000 U	20000 U	-	2000 U	20000 U	2000 U	2000 U	20000 U	20000 U	-	-	-
	Primary Result	05/18/2021	2000 U	2000 U	2000 U	-	-	2000 U	20000 U	-	2000 U	20000 U	2000 U	2000 U	20000 U	20000 U	-	-	-
	Primary Result	04/06/2022	2000 U	2000 U	2000 U	-	-	2000 U	20000 U	-	2000 U	20000 U	2000 U	2000 U	20000 U	20000 U	-	-	-
	Primary Result	06/08/2023	2000 U	2000 U	2000 U	-	-	2000 U	20000 U	-	2000 U	20000 U	2000 U	2000 U	20000 U	20000 U	-	-	-
MW-26C	Primary Result	10/21/2003	1 U	-	1 U	-	-	1 U	33	5 U	1 U	5.4	1 U	1 U	5 U	180	20 U	20 U	-
	Primary Result	10/23/2003	1 U	-	1 U	-	-	1 U	29	5 U	1 U	3.9 J	1 U	1 U	5 U	190	20 U	20 U	-
	Primary Result	12/17/2003	2.5 U	-	2.5 U	-	-	2.5 U	12 U	12 U	2.5 U	12 U	2.5 U	2.5 U	12 U	130	50 U	50 U	-
	Primary Result	03/05/2009	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	5 U	1 U	1 U	10 U	26 U	-	-	-
	Primary Result	06/24/2017	1 UJ	-	1 UJ	200 UJ	-	1 UJ	3.9 J	3 R	1 UJ	5 UJ	1 UJ	1 UJ	10 UJ	13 J	20 UJ	20 UJ	-
	Primary Result	11/07/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	42.7	-	-	-
	Primary Result	05/16/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	21.1	-	-	-
	Primary Result	11/14/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	36.2	-	-	-
	Primary Result	06/05/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	55.8	-	-	-
MW-27B	Primary Result	02/04/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	4.7 J	20 U	20 U	-
	Primary Result	10/21/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	4.1 J	20 U	20 U	-
	Primary Result	10/23/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	39	20 U	20 U	-
	Primary Result	03/03/2009	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	5 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	10/28/2009	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	07/18/2011	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10	20 U	20 U	-

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC SIM	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	1,4-Dioxane	1,4-Dioxane	2,2-Dichloropropane	2-Butanone (Methyl Ethyl Ketone)	2-Chloroethyl vinyl ether	2-Chlorotoluene	2-Hexanone (Methyl Butyl	2-Phenylbutane (sec-Butylbenzene)	4-Chlorotoluene	4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	Acetone	Acrolein	Acrylonitrile	Allyl chloride
		CAS Number	541-73-1	142-28-9	106-46-7	123-91-1	123-91-1	594-20-7	78-93-3	110-75-8	95-49-8	591-78-6	135-98-8	106-43-4	108-10-1	67-64-1	107-02-8	107-13-1	107-05-1
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-27B	Primary Result	06/26/2012	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	4.7 U	20 U	20 U	-
	Primary Result	11/05/2012	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	05/21/2013	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	2.1 J	20 U	20 U	-
	Primary Result	05/20/2014	1 U	-	1 U	200 U	-	1 U	4.1 J	3 U	1 U	5 U	1 U	1 U	10 U	14	20 U	20 U	-
	Primary Result	05/20/2015	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	06/02/2016	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	2.7 J	20 U	20 U	-
	Primary Result	06/20/2017	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	11/07/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	13	-	-	-
	Primary Result	05/15/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	24.9	-	-	-
	Primary Result	11/12/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	15.7	-	-	-
	Primary Result	05/17/2019	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	16.7	-	-	-
	Primary Result	05/16/2024	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	30.7	-	-	-
	Field Duplicate	05/16/2024	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	31.8	-	-	-
	Primary Result	06/05/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	81.9	-	-	-
MW-28B	Primary Result	11/04/2002	10 U	-	10 U	-	-	10 U	50 U	50 U	10 U	50 U	10 U	10 U	50 U	100 U	200 U	200 U	-
	Primary Result	02/05/2003	2.5 U	-	2.5 U	-	-	2.5 U	12 U	12 U	2.5 U	12 U	2.5 U	2.5 U	12 U	14 J	50 U	50 U	-
	Field Duplicate	02/05/2003	2.5 U	-	2.5 U	-	-	2.5 U	12 U	12 U	2.5 U	12 U	2.5 U	2.5 U	12 U	13 J	50 U	50 U	-
	Primary Result	10/23/2003	5 U	-	5 U	-	-	5 U	25 U	25 U	5 U	25 U	5 U	5 U	25 U	50 U	100 U	100 U	-
	Field Duplicate	10/23/2003	10 U	-	10 U	-	-	10 U	50 U	50 U	10 U	50 U	10 U	10 U	50 U	100 U	200 U	200 U	-
	Primary Result	03/04/2009	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	5 U	1 U	1 U	10 U	10 U	-	-	-
	Field Duplicate	03/04/2009	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	5 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	06/20/2017	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	11/08/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	12.3	-	-	-
	Primary Result	05/15/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	13.3	-	-	-
	Primary Result	11/12/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	28.1	-	-	-
	Primary Result	05/17/2019	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	16.4	-	-	-
	Primary Result	06/03/2020	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	05/18/2021	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	04/06/2022	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	06/08/2023	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	39.1	-	-	-
	Primary Result	05/16/2024	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	212	-	-	-
	Primary Result	06/05/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	50 U	-	-	-
MW-29B	Primary Result	11/06/2002	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	27 U	20 U	20 U	-
	Field Duplicate	11/06/2002	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	29 U	20 U	20 U	-
	Primary Result	02/05/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	19	20 U	20 U	-
	Primary Result	10/22/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	4.3 J	20 U	20 U	-
	Field Duplicate	10/22/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	5.5 J	20 U	20 U	-
	Primary Result	03/04/2009	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	5 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	11/11/2009	1 U	-	1 U	200 U	2.2	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	07/19/2011	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	7.2 J	20 U	20 U	-
	Field Duplicate	07/19/2011	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	11	20 U	20 U	-
	Primary Result	06/26/2012	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	3.6 U	20 U	20 U	-
	Primary Result	11/05/2012	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	05/21/2013	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	05/20/2014	1 U	-	1 U	200 U	-	1 U	3.9 J	3 U	1 U	5 U	1 U	1 U	10 U	9.1 J	20 U	20 U	-
	Primary Result	05/19/2015	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	06/01/2016	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	5.8 J	20 U	20 U	-
	Primary Result	06/20/2017	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Field Duplicate	06/20/2017	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	11/07/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	32.9	-	-	-
	Primary Result	05/15/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	21.7	-	-	-
	Primary Result	11/12/2018	1 UJ	1 UJ	1 UJ	-	-	1 U	10 U	-	1 UJ	10 U	1 U	1 UJ	10 U	21.7 J	-	-	-
	Primary Result	05/17/2019	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	19.7	-	-	-
	Primary Result	05/15/2024	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	112	-	-	-
	Primary Result	06/05/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	94	-	-	-
MW-30B	Primary Result	10/23/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	9.8 J	20 U	20 U	-
	Primary Result	03/03/2009	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	5 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	10/28/2009	1 U	-	1 U	200 U	2 U	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Field Duplicate	10/28/2009	1 U	-	1 U	200 U	2 U	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
MW-31	Primary Result	11/04/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	7.1 J	20 U	20 U	-
	Primary Result	10/27/2009	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	07/19/2011	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	6.1 J	20 U	20 U	-
	Primary Result	06/26/2012	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	9.6 U	20 U	20 U	-
	Primary Result	11/05/2012	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	4.3 JB	20 U	20 U	-
	Primary Result	05/21/2013	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	05/20/2014	1 U	-	1 U	200 U	-	1 U	4.3 J	3 U	1 U	5 U	1 U	1 U	10 U	11	20 U	20 U	-
	Primary Result	05/19/2015	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC SIM	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	1,4-Dioxane	1,4-Dioxane	2,2-Dichloropropane	2-Butanone (Methyl Ethyl Ketone)	2-Chloroethyl vinyl ether	2-Chlorotoluene	2-Hexanone (Methyl Butyl	2-Phenylbutane (sec-Butylbenzene)	4-Chlorotoluene	4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	Acetone	Acrolein	Acrylonitrile	Allyl chloride
		CAS Number	541-73-1	142-28-9	106-46-7	123-91-1	123-91-1	594-20-7	78-93-3	110-75-8	95-49-8	591-78-6	135-98-8	106-43-4	108-10-1	67-64-1	107-02-8	107-13-1	107-05-1
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-31	Primary Result	06/01/2016	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	4 J	20 U	20 U	-
	Primary Result	06/20/2017	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	11/07/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	13.3	-	-	-
	Primary Result	05/15/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	15.8	-	-	-
	Primary Result	11/12/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	27	-	-	-
	Primary Result	05/17/2019	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	16.4	-	-	-
	Primary Result	06/03/2020	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	11.3	-	-	-
	Primary Result	05/18/2021	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	04/06/2022	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	06/08/2023	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	28.3	-	-	-
	Primary Result	05/15/2024	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	394	-	-	-
	Primary Result	06/04/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	278	-	-	-
MW-31B	Primary Result	09/09/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	10 U	20 U	20 U	-
	Primary Result	10/22/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	3.9 J	20 U	20 U	-
	Primary Result	10/27/2009	1 U	-	1 U	200 U	2 U	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	07/19/2011	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	20	20 U	20 U	-
	Primary Result	06/26/2012	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	9.2 U	20 U	20 U	-
	Primary Result	11/05/2012	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	05/21/2013	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	05/20/2014	1 U	-	1 U	200 U	-	1 U	4.6 J	3 U	1 U	5 U	1 U	1 U	10 U	11	20 U	20 U	-
	Primary Result	05/19/2015	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	06/01/2016	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	06/20/2017	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	11/07/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	36	-	-	-
	Primary Result	05/15/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	23	-	-	-
	Primary Result	11/12/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	30.1	-	-	-
	Primary Result	05/17/2019	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	17.1	-	-	-
	Primary Result	06/03/2020	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	05/18/2021	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	04/06/2022	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	13.7	-	-	-
	Primary Result	06/08/2023	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	83.5	-	-	-
	Primary Result	05/15/2024	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	378	-	-	-
	Primary Result	06/04/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	50 U	-	-	-
MW-32B	Primary Result	09/12/2003	1 UJ	-	1 UJ	-	-	1 UJ	5 UJ	5 UJ	1 UJ	5 UJ	1 UJ	1 UJ	5 UJ	10 UJ	20 UJ	20 UJ	-
	Field Duplicate	09/12/2003	1 UJ	-	1 UJ	-	-	1 UJ	5 UJ	5 UJ	1 UJ	5 UJ	1 UJ	1 UJ	5 UJ	10 UJ	20 UJ	20 UJ	-
	Primary Result	10/22/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	10 U	20 U	20 U	-
	Primary Result	03/03/2009	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	5 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	10/27/2009	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
MW-33B	Primary Result	09/12/2003	1 UJ	-	1 UJ	-	-	1 UJ	5 UJ	5 UJ	1 UJ	5 UJ	1 UJ	1 UJ	5 UJ	10 UJ	20 UJ	20 UJ	-
	Primary Result	10/22/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	10 U	20 U	20 U	-
	Primary Result	03/03/2009	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	5 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	10/27/2009	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	11/07/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	28.1	-	-	-
	Primary Result	06/05/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	50 U	-	-	-
MW-34B	Primary Result	10/28/2009	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	07/19/2011	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	13	20 U	20 U	-
	Primary Result	06/26/2012	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	2.9 U	20 U	20 U	-
	Primary Result	11/05/2012	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	3.9 JB	20 U	20 U	-
	Primary Result	05/21/2013	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	05/20/2014	1 U	-	1 U	200 U	-	1 U	3.7 J	3 U	1 U	5 U	1 U	1 U	10 U	12	20 U	20 U	-
	Primary Result	05/19/2015	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	06/01/2016	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	06/20/2017	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	11/07/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	16.9	-	-	-
	Primary Result	05/15/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	21.1	-	-	-
	Primary Result	11/12/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	30.3	-	-	-
	Primary Result	05/17/2019	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	21.3	-	-	-
	Primary Result	05/15/2024	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	159	-	-	-
	Primary Result	06/05/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	138	-	-	-
MW-35B	Primary Result	10/30/2009	20 U	-	20 U	4000 U	-	20 U	200 U	60 R	20 U	100 U	20 U	20 U	200 U	200 U	400 U	400 U	-
	Primary Result	05/20/2015	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	06/02/2016	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	3.8 J	20 U	20 U	-
	Primary Result	06/24/2017	1 UJ	-	1 UJ	200 UJ	-	1 UJ	10 UJ	3 R	1 UJ	5 UJ	1 UJ	1 UJ	10 UJ	5.1 J	20 UJ	20 UJ	-
	Primary Result	11/08/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	35.2	-	-	-
	Primary Result	05/16/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	19.9	-	-	-
MW-36B	Primary Result	10/30/2009	200 U	-	200 U	40000 U	-	200 U	2000 U	600 R	200 U	1000 U	200 U	200 U	2000 U	11000 J	4000 U	4000 U	-
	Primary Result	05/16/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	11/14/2018	1 U	1 U	1.1	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	29.2	-	-	-

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC SIM	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	1,4-Dioxane	1,4-Dioxane	2,2-Dichloropropane	2-Butanone (Methyl Ethyl Ketone)	2-Chloroethyl vinyl ether	2-Chlorotoluene	2-Hexanone (Methyl Butyl	2-Phenylbutane (sec-Butylbenzene)	4-Chlorotoluene	4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	Acetone	Acrolein	Acrylonitrile	Allyl chloride
		CAS Number	541-73-1	142-28-9	106-46-7	123-91-1	123-91-1	594-20-7	78-93-3	110-75-8	95-49-8	591-78-6	135-98-8	106-43-4	108-10-1	67-64-1	107-02-8	107-13-1	107-05-1
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-36BR	Primary Result	11/13/2023	200 U	200 U	200 U	-	-	200 U	2000 U	-	200 U	2000 U	200 U	200 U	2000 U	2000 U	-	-	-
	Primary Result	11/20/2023	250 U	250 U	250 U	-	-	250 U	2500 U	-	250 U	2500 U	250 U	250 U	2500 U	2500 U	-	-	-
MW-37B	Primary Result	10/30/2009	200 U	-	26 J	40000 U	-	200 U	2000 U	600 R	200 U	1000 U	200 U	200 U	2000 U	2000 U	4000 U	4000 U	-
	Primary Result	05/16/2018	1 U	1 U	2.5	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	37.9	-	-	-
	Primary Result	11/15/2018	50 U	50 U	50 U	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	500 U	-	-	-
	Field Duplicate	11/15/2018	50 U	50 U	50 U	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	500 U	-	-	-
	Primary Result	05/15/2024	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	117	-	-	-
	Primary Result	06/05/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	50 U	-	-	-
MW-38B	Primary Result	10/30/2009	500 U	-	500 U	100000 U	-	500 U	5000 U	1500 R	500 U	2500 U	500 U	500 U	5000 U	5000 U	10000 U	10000 U	-
	Primary Result	05/16/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	22.8	-	-	-
	Primary Result	11/15/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	42.5	-	-	-
	Field Duplicate	11/15/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	39.9	-	-	-
	Primary Result	05/15/2024	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	246	-	-	-
	Primary Result	06/05/2025	1 U	1 U	1.77	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	50 U	-	-	-
MW-39B	Primary Result	10/30/2009	1000 U	-	370 J	200000 U	-	1000 U	10000 U	3000 R	1000 U	5000 U	1000 U	1000 U	10000 U	10000 U	20000 U	20000 U	-
	Primary Result	07/18/2011	500 U	-	1100	100000 U	-	500 U	5000 U	1500 U	500 U	2500 U	500 U	500 U	5000 U	5000 U	10000 U	10000 U	-
	Primary Result	11/28/2011	400 U	-	820	80000 U	-	400 U	4000 U	1200 U	400 U	2000 U	400 U	400 U	4000 U	4000 U	8000 U	8000 U	-
	Primary Result	02/22/2012	69 J	-	1000	20000 U	-	100 U	1000 U	300 U	100 U	500 U	100 U	100 U	1000 U	1000 U	2000 U	2000 U	-
	Field Duplicate	02/22/2012	400 U	-	1000	80000 U	-	400 U	4000 U	1200 U	400 U	2000 U	400 U	400 U	4000 U	4000 U	8000 U	8000 U	-
	Primary Result	06/26/2012	400 U	-	840	80000 U	-	400 U	4000 U	1200 U	400 U	2000 U	400 U	400 U	4000 U	1200 U	8000 U	8000 U	-
	Primary Result	11/05/2012	51 J	-	600	20000 U	-	100 U	1000 U	300 U	100 U	500 U	100 U	100 U	1000 U	280 JB	2000 U	2000 U	-
	Primary Result	03/13/2013	47 J	-	370	20000 U	-	100 U	1000 U	300 U	100 U	500 U	100 U	100 U	1000 U	370 JB	2000 U	2000 U	-
	Field Duplicate	03/13/2013	42 J	-	360	20000 U	-	100 U	1000 U	300 U	100 U	500 U	100 U	100 U	1000 U	1000 U	2000 U	2000 U	-
	Primary Result	05/21/2013	42 J	-	380	20000 U	-	100 U	1000 U	300 U	100 U	500 U	100 U	100 U	1000 U	380 JB	2000 U	2000 U	-
	Primary Result	05/20/2014	57 J	-	770	40000 U	-	200 U	2000 U	600 U	200 U	1000 U	200 U	200 U	2000 U	680 J	4000 U	4000 U	-
	Primary Result	05/20/2015	63 J	-	900	20000 U	-	100 U	1000 U	300 U	100 U	500 U	100 U	100 U	1000 U	1000 U	2000 U	2000 U	-
	Primary Result	06/02/2016	39 J	-	380	40000 U	-	200 U	2000 U	600 U	200 U	1000 U	200 U	200 U	2000 U	2000 U	4000 U	4000 U	-
	Primary Result	06/22/2017	36 J	-	310	20000 U	90 J	100 U	1000 U	300 R	100 U	500 U	100 U	100 U	1000 U	1000 U	2000 U	2000 U	-
	Primary Result	11/08/2017	37.8	1 U	500 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	11.8	-	-	-
	Primary Result	05/17/2018	500 U	500 U	500 U	-	-	500 U	5000 U	-	500 U	5000 U	500 U	500 U	5000 U	5000 U	-	-	-
	Primary Result	11/14/2018	500 U	500 U	500 U	-	-	500 U	5000 U	-	500 U	5000 U	500 U	500 U	5000 U	5000 U	-	-	-
	Primary Result	06/05/2025	11.9	10 U	75.4	-	-	10 U	100 U	-	10 U	100 U	10 U	10 U	100 U	500 U	-	-	-
MW-40B	Primary Result	10/29/2009	10 U	-	10 U	2000 U	-	10 U	100 U	30 R	10 U	50 U	10 U	10 U	100 U	100 U	200 U	200 U	-
	Primary Result	07/18/2011	2 U	-	2 U	400 U	-	2 U	20 U	6 U	2 U	10 U	2 U	2 U	20 U	20 U	40 U	40 U	-
	Field Duplicate	07/18/2011	2 U	-	2 U	400 U	-	2 U	20 U	6 U	2 U	10 U	2 U	2 U	20 U	20 U	40 U	40 U	-
	Primary Result	06/26/2012	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	2.8 U	20 U	20 U	-
	Field Duplicate	06/26/2012	2 U	-	2 U	400 U	-	2 U	20 U	6 U	2 U	10 U	2 U	2 U	20 U	5.4 U	40 U	40 U	-
	Primary Result	11/05/2012	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	2.1 JB	20 U	20 U	-
	Field Duplicate	11/05/2012	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	2.1 JB	20 U	20 U	-
	Primary Result	05/21/2013	2 U	-	2 U	400 U	-	2 U	20 U	6 U	2 U	10 U	2 U	2 U	20 U	20 U	40 U	40 U	-
	Field Duplicate	05/21/2013	2 U	-	2 U	400 U	-	2 U	20 U	6 U	2 U	10 U	2 U	2 U	20 U	20 U	40 U	40 U	-
	Primary Result	05/20/2014	2 U	-	2 U	400 U	-	2 U	4.1 J	6 U	2 U	10 U	2 U	2 U	20 U	13 J	40 U	40 U	-
	Field Duplicate	05/20/2014	2 U	-	2 U	400 U	-	2 U	20 U	6 U	2 U	10 U	2 U	2 U	20 U	13 J	40 U	40 U	-
	Primary Result	05/20/2015	4 U	-	4 U	800 U	-	4 U	40 U	12 U	4 U	20 U	4 U	4 U	40 U	40 U	80 U	80 U	-
	Field Duplicate	05/20/2015	2 U	-	2 U	400 U	-	2 U	20 U	6 U	2 U	10 U	2 U	2 U	20 U	20 U	40 U	40 U	-
	Primary Result	06/01/2016	2 U	-	2 U	400 U	-	2 U	20 U	6 U	2 U	10 U	2 U	2 U	20 U	20 U	40 U	40 U	-
	Primary Result	06/24/2017	1 UJ	-	1 UJ	200 UJ	-	1 UJ	3.7 J	3 R	1 UJ	5 UJ	1 UJ	1 UJ	10 UJ	4.6 J	20 UJ	20 UJ	-
	Primary Result	11/08/2017	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	50 U	-	-	-
	Primary Result	05/16/2018	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	50 U	-	-	-
	Primary Result	11/12/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	26.2	-	-	-
	Primary Result	05/17/2019	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	50 U	-	-	-
	Primary Result	06/03/2020	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	50 U	-	-	-
	Primary Result	05/18/2021	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	50 U	-	-	-
	Primary Result	04/06/2022	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	110	-	-	-
	Primary Result	06/08/2023	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	121	-	-	-
	Primary Result	05/15/2024	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	112	-	-	-
	Primary Result	06/05/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	119	-	-	-
MW-41B	Primary Result	10/27/2009	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	05/20/2015	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	06/20/2017	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	11/07/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	05/15/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	17.9	-	-	-
	Primary Result	11/12/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	25.6	-	-	-
	Primary Result	05/17/2019	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	12.8	-	-	-
	Primary Result	05/16/2024	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	508	-	-	-
	Primary Result	06/05/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	50 U	-	-	-

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC SIM	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	1,4-Dioxane	1,4-Dioxane	2,2-Dichloropropane	2-Butanone (Methyl Ethyl Ketone)	2-Chloroethyl vinyl ether	2-Chlorotoluene	2-Hexanone (Methyl Butyl	2-Phenylbutane (sec-Butylbenzene)	4-Chlorotoluene	4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	Acetone	Acrolein	Acrylonitrile	Allyl chloride
		CAS Number	541-73-1	142-28-9	106-46-7	123-91-1	123-91-1	594-20-7	78-93-3	110-75-8	95-49-8	591-78-6	135-98-8	106-43-4	108-10-1	67-64-1	107-02-8	107-13-1	107-05-1
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-42B	Primary Result	05/18/2011	100 U	-	17 J	20000 U	-	100 U	1000 U	300 U	100 U	500 U	100 U	100 U	1000 U	1000 U	2000 U	2000 U	-
	Field Duplicate	05/18/2011	100 U	-	19 J	20000 U	-	100 U	1000 U	300 U	100 U	500 U	100 U	100 U	1000 U	1000 U	2000 U	2000 U	-
	Primary Result	05/16/2018	1 U	1 U	2.5	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	26.3	-	-	-
	Primary Result	11/15/2018	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
	Primary Result	05/16/2024	10 U	10 U	10 U	-	-	10 U	100 U	-	10 U	100 U	10 U	10 U	100 U	1200	-	-	-
	Primary Result	06/05/2025	1 U	1 U	3.57	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	230	-	-	-
MW-43B	Primary Result	05/18/2011	10 U	-	1.6 J	2000 U	-	10 U	100 U	30 U	10 U	50 U	10 U	10 U	100 U	100 U	200 U	200 U	-
	Primary Result	05/16/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	17.8	-	-	-
	Primary Result	11/15/2018	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	50 U	-	-	-
	Primary Result	05/16/2024	50 U	50 U	50 U	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	500 U	-	-	-
	Primary Result	06/05/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	130	-	-	-
MW-44B	Primary Result	05/23/2011	400 U	-	400 U	80000 U	-	400 U	4000 U	1200 U	400 U	2000 U	400 U	400 U	4000 U	4000 U	8000 U	8000 U	-
	Primary Result	07/18/2011	200 U	-	200 U	40000 U	-	200 U	2000 U	600 U	200 U	1000 U	200 U	200 U	2000 U	2000 U	4000 U	4000 U	-
	Primary Result	11/28/2011	0.57 J	-	3	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	02/22/2012	2 U	-	3.4	400 U	-	2 U	20 U	6 U	2 U	10 U	2 U	2 U	20 U	50	40 U	40 U	-
	Primary Result	06/25/2012	5 U	-	2.7 J	1000 U	-	5 U	50 U	15 U	5 U	25 U	5 U	5 U	50 U	110	100 U	100 U	-
	Primary Result	11/05/2012	10 U	-	2.5 J	2000 U	-	10 U	100 U	30 U	10 U	50 U	10 U	10 U	100 U	88 JB	200 U	200 U	-
	Primary Result	03/13/2013	0.55 J	-	2.9	200 U	-	1 U	10 U	1.9 J	1 U	5 U	1 U	1 U	10 U	150 B	20 U	20 U	-
	Primary Result	05/22/2013	10 U	-	4.6 J	2000 U	-	10 U	100 U	30 U	10 U	50 U	10 U	10 U	100 U	80 JB	200 U	200 U	-
	Primary Result	05/20/2014	5 U	-	3.3 J	1000 U	-	5 U	50 U	15 U	5 U	25 U	5 U	5 U	50 U	52	100 U	100 U	-
	Primary Result	05/20/2015	10 U	-	4.6 J	2000 U	-	10 U	100 U	30 U	10 U	50 U	10 U	10 U	100 U	100 U	200 U	200 U	-
	Primary Result	06/02/2016	1	-	6.3	200 U	-	1 U	2.6 J	3 U	1 U	5 U	1 U	1 U	10 U	71	20 U	20 U	-
	Primary Result	06/24/2017	3.7 J	-	25 J	800 UJ	40 UJ	4 UJ	40 UJ	12 R	4 UJ	20 UJ	4 UJ	4 UJ	40 UJ	19 J	80 UJ	80 UJ	-
	Primary Result	11/07/2017	1 U	1 U	2.7	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	22.1	-	-	-
	Primary Result	05/16/2018	10 U	10 U	12.4	-	-	10 U	100 U	-	10 U	100 U	10 U	10 U	100 U	100 U	-	-	-
	Primary Result	11/15/2018	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
	Primary Result	05/16/2019	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
	Primary Result	06/03/2020	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
	Primary Result	05/18/2021	500 U	500 U	500 U	-	-	500 U	5000 U	-	500 U	5000 U	500 U	500 U	5000 U	5000 U	-	-	-
	Primary Result	04/05/2022	500 U	500 U	500 U	-	-	500 U	5000 U	-	500 U	5000 U	500 U	500 U	5000 U	5000 U	-	-	-
	Primary Result	06/06/2023	50 U	50 U	50 U	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	500 U	-	-	-
	Primary Result	05/14/2024	50 U	50 U	50 U	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	500 U	-	-	-
	Primary Result	06/04/2025	1 U	1 U	2.54	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	50 U	-	-	-
MW-45B	Primary Result	05/23/2011	400 U	-	400 U	80000 U	-	400 U	4000 U	1200 U	400 U	2000 U	400 U	400 U	4000 U	4000 U	8000 U	8000 U	-
	Primary Result	07/18/2011	200 U	-	200 U	40000 U	-	200 U	2000 U	600 U	200 U	1000 U	200 U	200 U	2000 U	2000 U	4000 U	4000 U	-
	Primary Result	11/28/2011	100 U	-	100 U	20000 U	-	100 U	1000 U	300 U	100 U	500 U	100 U	100 U	1000 U	1000 U	2000 U	2000 U	-
	Primary Result	02/22/2012	100 U	-	100 U	20000 U	-	100 U	1000 U	300 U	100 U	500 U	100 U	100 U	1000 U	1000 U	2000 U	2000 U	-
	Primary Result	06/25/2012	200 U	-	200 U	40000 U	-	200 U	2000 U	600 U	200 U	1000 U	200 U	200 U	2000 U	650 U	4000 U	4000 U	-
	Primary Result	11/05/2012	100 U	-	100 U	20000 U	-	100 U	1000 U	300 U	100 U	500 U	100 U	100 U	1000 U	1000 U	2000 U	2000 U	-
	Primary Result	03/13/2013	100 U	-	100 U	20000 U	-	100 U	1000 U	300 U	100 U	500 U	100 U	100 U	1000 U	270 JB	2000 U	2000 U	-
	Primary Result	05/22/2013	2.7 J	-	17	2000 U	-	10 U	100 U	30 U	10 U	50 U	10 U	10 U	100 U	48 JB	200 U	200 U	-
	Primary Result	05/20/2014	200 U	-	200 U	40000 U	-	200 U	2000 U	600 U	200 U	1000 U	200 U	200 U	2000 U	2000 U	4000 U	4000 U	-
	Primary Result	05/19/2015	100 U	-	100 U	20000 U	-	100 U	1000 U	300 U	100 U	500 U	100 U	100 U	1000 U	1000 U	2000 U	2000 U	-
	Primary Result	06/02/2016	200 U	-	200 U	40000 U	-	200 U	2000 U	600 U	200 U	1000 U	200 U	200 U	2000 U	2000 U	4000 U	4000 U	-
	Primary Result	06/24/2017	40 UJ	-	40 UJ	8000 UJ	100 UJ	40 UJ	400 UJ	120 R	40 UJ	200 UJ	40 UJ	40 UJ	400 UJ	400 UJ	800 UJ	800 UJ	-
	Primary Result	11/08/2017	1000 U	1000 U	1000 U	-	-	1000 U	10000 U	-	1000 U	10000 U	1000 U	1000 U	10000 U	10000 U	-	-	-
	Primary Result	05/16/2018	250 U	250 U	250 U	-	-	250 U	2500 U	-	250 U	2500 U	250 U	250 U	2500 U	2500 U	-	-	-
	Primary Result	11/15/2018	500 U	500 U	500 U	-	-	500 U	5000 U	-	500 U	5000 U	500 U	500 U	5000 U	5000 U	-	-	-
	Primary Result	05/16/2019	500 U	500 U	500 U	-	-	500 U	5000 U	-	500 U	5000 U	500 U	500 U	5000 U	5000 U	-	-	-
	Primary Result	06/03/2020	500 U	500 U	500 U	-	-	500 U	5000 U	-	500 U	5000 U	500 U	500 U	5000 U	5000 U	-	-	-
	Primary Result	05/18/2021	500 U	500 U	500 U	-	-	500 U	5000 U	-	500 U	5000 U	500 U	500 U	5000 U	5000 U	-	-	-
	Primary Result	04/05/2022	500 U	500 U	500 U	-	-	500 U	5000 U	-	500 U	5000 U	500 U	500 U	5000 U	5000 U	-	-	-
	Primary Result	06/06/2023	500 U	500 U	500 U	-	-	500 U	5000 U	-	500 U	5000 U	500 U	500 U	5000 U	5000 U	-	-	-
	Primary Result	05/14/2024	500 U	500 U	500 U	-	-	500 U	5000 U	-	500 U	5000 U	500 U	500 U	5000 U	5000 U	-	-	-
	Primary Result	06/04/2025	10 U	10 U	10 U	-	-	10 U	100 U	-	10 U	100 U	10 U	10 U	100 U	500 U	-	-	-
MW-46B	Primary Result	05/23/2011	400 U	-	170 J	80000 U	-	400 U	4000 U	1200 U	400 U	2000 U	400 U	400 U	4000 U	4000 U	8000 U	8000 U	-
	Primary Result	07/18/2011	200 U	-	170 J	40000 U	-	200 U	2000 U	600 U	200 U	1000 U	200 U	200 U	2000 U	2000 U	4000 U	4000 U	-
	Primary Result	11/28/2011	400 U	-	200 J	80000 U	-	400 U	4000 U	1200 U	400 U	2000 U	400 U	400 U	4000 U	4000 U	8000 U	8000 U	-
	Field Duplicate	11/28/2011	400 U	-	200 J	80000 U	-	400 U	4000 U	1200 U	400 U	2000 U	400 U	400 U	4000 U	4000 U	8000 U	8000 U	-
	Primary Result	02/22/2012	200 U	-	160 J	40000 U	-	200 U	2000 U	600 U	200 U	1000 U	200 U	200 U	2000 U	2000 U	4000 U	4000 U	-
	Primary Result	06/26/2012	500 U	-	180 J	100000 U	-	500 U	5000 U	1500 U	500 U	2500 U	500 U	500 U	5000 U	1300 U	10000 U	10000 U	-
	Primary Result	11/05/2012	38 J	-	180 J	40000 U	-	200 U	2000 U	600 U	200 U	1000 U	200 U	200 U	2000 U	2000 U	4000 U	4000 U	-
	Primary Result	03/13/2013	34 J	-	150 J	40000 U	-	200 U	2000 U	600 U	200 U	1000 U	200 U	200 U	2000 U	770 JB	4000 U	4000 U	-
	Primary Result	05/22/2013	30 J	-	160	20000 U	-	100 U	1000 U	300 U	100 U	500 U	100 U	100 U	1000 U	410 JB	2000 U	2000 U	-
	Primary Result	05/20/2014	30 J	-	170 J	40000 U	-	200 U	2000 U	600 U	200 U	1000 U	200 U	200 U	2000 U	680 J	4000 U	4000 U	-
	Primary Result	05/20/2015	23 J	-	120	20000 U	-	100 U	1000 U	300 U	100 U	500 U	100 U	100 U	1000 U	1000 U	2000 U	2000 U	-
	Primary Result	06/02/2016	200 U	-	140 J	40000 U	-	200 U	2000 U	600 U	200 U	1000 U	200 U	200 U	2000 U	2000 U	4000 U	4000 U	-
	Primary Result	06/22/2017	23 J	-	86 J	20000 U	24 J	100 U	1000 U	300 R	100 U	500 U	100 U	100 U	1000 U	1000 U	2000 U	2000 U	-

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC SIM	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	1,4-Dioxane	1,4-Dioxane	2,2-Dichloropropane	2-Butanone (Methyl Ethyl Ketone)	2-Chloroethyl vinyl ether	2-Chlorotoluene	2-Hexanone (Methyl Butyl	2-Phenylbutane (sec-Butylbenzene)	4-Chlorotoluene	4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	Acetone	Acrolein	Acrylonitrile	Allyl chloride
		CAS Number	541-73-1	142-28-9	106-46-7	123-91-1	123-91-1	594-20-7	78-93-3	110-75-8	95-49-8	591-78-6	135-98-8	106-43-4	108-10-1	67-64-1	107-02-8	107-13-1	107-05-1
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-46B	Primary Result	11/08/2017	200 U	200 U	200 U	-	-	200 U	2000 U	-	200 U	2000 U	200 U	200 U	2000 U	2000 U	-	-	-
	Primary Result	05/17/2018	250 U	250 U	250 U	-	-	250 U	2500 U	-	250 U	2500 U	250 U	250 U	2500 U	2500 U	-	-	-
	Primary Result	11/14/2018	250 U	250 U	250 U	-	-	250 U	2500 U	-	250 U	2500 U	250 U	250 U	2500 U	2500 U	-	-	-
	Primary Result	05/16/2024	50 U	50 U	90.9	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	500 U	-	-	-
	Primary Result	06/04/2025	12.1	1 U	55.6	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	170	-	-	-
MW-47B	Primary Result	06/20/2017	40 U	-	40 U	8000 U	12 J	40 U	400 U	120 R	40 U	200 U	40 U	40 U	400 U	400 U	800 U	800 U	-
	Primary Result	06/23/2017	-	-	-	-	50 U	-	-	-	-	-	-	-	-	-	-	-	-
	Primary Result	11/08/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	05/15/2018	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
	Primary Result	11/15/2018	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
	Primary Result	05/16/2019	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
	Primary Result	06/03/2020	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
	Primary Result	05/19/2021	2 U	2 U	2 U	-	-	2 U	20 U	-	2 U	20 U	2 U	2 U	20 U	20 U	-	-	-
	Primary Result	04/06/2022	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	50 U	-	-	-
	Primary Result	06/08/2023	25 U	25 U	25 U	-	-	25 U	250 U	-	25 U	250 U	25 U	25 U	250 U	250 U	-	-	-
	Primary Result	05/16/2024	100 U	100 U	100 U	-	-	100 U	1000 U	-	100 U	1000 U	100 U	100 U	1000 U	1000 U	-	-	-
	Primary Result	06/04/2025	1 U	1 U	2.12	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	145	-	-	-
MW-48B	Primary Result	06/20/2017	40 U	-	40 U	8000 U	40 U	40 U	400 U	120 R	40 U	200 U	40 U	40 U	400 U	400 U	800 U	800 U	-
	Primary Result	06/22/2017	-	-	-	-	25 J	-	-	-	-	-	-	-	-	-	-	-	-
	Primary Result	11/08/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	05/15/2018	50 U	50 U	50 U	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	500 U	-	-	-
	Primary Result	11/15/2018	10 U	10 U	10 U	-	-	10 U	100 U	-	10 U	100 U	10 U	10 U	100 U	100 U	-	-	-
	Primary Result	05/16/2019	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
	Field Duplicate	05/16/2019	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
	Primary Result	06/03/2020	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
	Field Duplicate	06/03/2020	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
	Primary Result	05/19/2021	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
	Field Duplicate	05/19/2021	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
	Primary Result	04/06/2022	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
	Field Duplicate	04/06/2022	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
	Primary Result	06/08/2023	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
	Primary Result	05/16/2024	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
	Primary Result	06/04/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	239	-	-	-
MW-48C	Primary Result	06/20/2017	10 U	-	10 U	2000 U	-	10 U	100 U	30 R	10 U	50 U	10 U	10 U	100 U	100 U	200 U	200 U	-
	Primary Result	06/22/2017	-	-	-	-	5.1 J	-	-	-	-	-	-	-	-	-	-	-	-
	Primary Result	11/08/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	05/15/2018	10 U	10 U	10 U	-	-	10 U	100 U	-	10 U	100 U	10 U	10 U	100 U	100 U	-	-	-
	Field Duplicate	05/15/2018	10 U	10 U	10 U	-	-	10 U	100 U	-	10 U	100 U	10 U	10 U	100 U	100 U	-	-	-
	Primary Result	11/15/2018	10 U	10 U	10 U	-	-	10 U	100 U	-	10 U	100 U	10 U	10 U	100 U	100 U	-	-	-
	Field Duplicate	11/15/2018	10 U	10 U	10 U	-	-	10 U	100 U	-	10 U	100 U	10 U	10 U	100 U	100 U	-	-	-
	Primary Result	05/16/2019	10 U	10 U	10 U	-	-	10 U	100 U	-	10 U	100 U	10 U	10 U	100 U	100 U	-	-	-
	Primary Result	06/03/2020	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10.6	-	-	-
	Primary Result	05/19/2021	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	04/06/2022	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	24.6	-	-	-
	Primary Result	06/08/2023	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
	Field Duplicate	06/08/2023	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
	Primary Result	05/16/2024	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	202	-	-	-
	Field Duplicate	05/16/2024	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
	Primary Result	06/04/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	50 U	-	-	-
MW-49B	Primary Result	06/20/2017	1 U	-	1 U	200 U	2 U	1 U	2.1 J	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	06/22/2017	-	-	-	-	1.9	-	-	-	-	-	-	-	-	-	-	-	-
	Primary Result	11/07/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	05/15/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	20.9	-	-	-
	Primary Result	11/15/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	31.2	-	-	-
	Primary Result	05/16/2019	10 U	10 U	10 U	-	-	10 U	100 U	-	10 U	100 U	10 U	10 U	100 U	100 U	-	-	-
	Primary Result	06/03/2020	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	12.9	-	-	-
	Primary Result	05/18/2021	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10.6	-	-	-
	Primary Result	04/06/2022	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10.4	-	-	-
	Primary Result	06/08/2023	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	129	-	-	-
	Primary Result	05/16/2024	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	347	-	-	-
	Field Duplicate	06/04/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	59.3	-	-	-
	Primary Result	06/05/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	86.7	-	-	-
MW-50B	Primary Result	06/06/2018	4.8	1 U	19.1	-	32.3 J	1 U	10 U	-	9.8	10 U	1 U	1 U	10 U	37.5	-	-	-
	Field Duplicate	06/06/2018	200 U	200 U	200 U	-	27.4 J	200 U	2000 U	-	200 U	2000 U	200 U	200 U	2000 U	2000 U	-	-	-
	Primary Result	11/12/2018	10 U	10 U	11	-	-	10 U	100 U	-	10 U	100 U	10 U	10 U	100 U	100 U	-	-	-
	Field Duplicate	11/12/2018	25 U	25 U	25 U	-	-	25 U	250 U	-	25 U	250 U	25 U	25 U	250 U	250 U	-	-	-
	Primary Result	06/03/2020	10 U	10 U	18.2	-	-	10 U	100 U	-	10 U	100 U	10 U	10 U	100 U	100 U	-	-	-
	Primary Result	05/19/2021	100 U	100 U	100 U	-	-	100 U	1000 U	-	100 U	1000 U	100 U	100 U	1000 U	1000 U	-	-	-

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC SIM	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	1,4-Dioxane	1,4-Dioxane	2,2-Dichloropropane	2-Butanone (Methyl Ethyl Ketone)	2-Chloroethyl vinyl ether	2-Chlorotoluene	2-Hexanone (Methyl Butyl	2-Phenylbutane (sec-Butylbenzene)	4-Chlorotoluene	4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	Acetone	Acrolein	Acrylonitrile	Allyl chloride
		CAS Number	541-73-1	142-28-9	106-46-7	123-91-1	123-91-1	594-20-7	78-93-3	110-75-8	95-49-8	591-78-6	135-98-8	106-43-4	108-10-1	67-64-1	107-02-8	107-13-1	107-05-1
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-50B	Primary Result	04/06/2022	100 U	100 U	100 U	-	-	100 U	1000 U	-	100 U	1000 U	100 U	100 U	1000 U	1000 U	-	-	-
	Primary Result	06/08/2023	100 U	100 U	100 U	-	-	100 U	1000 U	-	100 U	1000 U	100 U	100 U	1000 U	1000 U	-	-	-
	Primary Result	05/16/2024	100 U	100 U	100 U	-	-	100 U	1000 U	-	100 U	1000 U	100 U	100 U	1000 U	1000 U	-	-	-
	Primary Result	06/05/2025	2.7	1 U	7.7	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	190	-	-	-
MW-51B	Primary Result	06/06/2018	1 U	1 U	2.6	-	2.5 J	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	11/12/2018	50 U	50 U	50 U	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	500 U	-	-	-
	Field Duplicate	11/12/2018	100 U	100 U	100 U	-	-	100 U	1000 U	-	100 U	1000 U	100 U	100 U	1000 U	1000 U	-	-	-
	Primary Result	05/16/2019	50 U	50 U	50 U	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	500 U	-	-	-
	Primary Result	06/02/2020	50 U	50 U	50 U	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	500 U	-	-	-
	Primary Result	05/18/2021	50 U	50 U	50 U	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	500 U	-	-	-
	Primary Result	04/05/2022	50 U	50 U	50 U	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	500 U	-	-	-
	Primary Result	06/06/2023	50 U	50 U	50 U	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	500 U	-	-	-
	Primary Result	05/14/2024	50 U	50 U	50 U	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	500 U	-	-	-
	Primary Result	06/04/2025	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	1000 U	-	-	-
MW-52B	Primary Result	06/08/2018	500 U	500 U	500 U	-	-	500 U	5000 U	-	500 U	5000 U	500 U	500 U	5000 U	5000 U	-	-	-
	Primary Result	11/12/2018	5000 U	5000 U	5000 U	-	-	5000 U	50000 U	-	5000 U	50000 U	5000 U	5000 U	50000 U	50000 U	-	-	-
	Primary Result	05/16/2019	2500 U	2500 U	2500 U	-	-	2500 U	25000 U	-	2500 U	25000 U	2500 U	2500 U	25000 U	25000 U	-	-	-
	Primary Result	06/02/2020	1000 U	1000 U	1000 U	-	-	1000 U	10000 U	-	1000 U	10000 U	1000 U	1000 U	10000 U	10000 U	-	-	-
	Primary Result	05/18/2021	1000 U	1000 U	1000 U	-	-	1000 U	10000 U	-	1000 U	10000 U	1000 U	1000 U	10000 U	10000 U	-	-	-
	Primary Result	04/05/2022	1000 U	1000 U	1000 U	-	-	1000 U	10000 U	-	1000 U	10000 U	1000 U	1000 U	10000 U	10000 U	-	-	-
	Primary Result	06/06/2023	1000 U	1000 U	1000 U	-	-	1000 U	10000 U	-	1000 U	10000 U	1000 U	1000 U	10000 U	10000 U	-	-	-
	Primary Result	05/14/2024	1000 U	1000 U	1000 U	-	-	1000 U	10000 U	-	1000 U	10000 U	1000 U	1000 U	10000 U	10000 U	-	-	-
	Primary Result	06/04/2025	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	1000 U	-	-	-
MW-52C	Primary Result	06/08/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	07/02/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	10/01/2018	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
	Field Duplicate	10/01/2018	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
MW-53B1	Primary Result	06/08/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	07/02/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	11/12/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	13.1	-	-	-
	Primary Result	05/16/2019	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	15.9	-	-	-
	Primary Result	06/02/2020	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	05/18/2021	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10.6	-	-	-
	Primary Result	04/05/2022	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	13.4	-	-	-
	Primary Result	06/06/2023	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	28	-	-	-
	Primary Result	05/14/2024	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	85	-	-	-
	Primary Result	06/04/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	265	-	-	-
MW-53B2	Primary Result	06/08/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	07/02/2018	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	50 U	-	-	-
	Primary Result	11/12/2018	100 U	100 U	100 U	-	-	100 U	1000 U	-	100 U	1000 U	100 U	100 U	1000 U	1000 U	-	-	-
	Primary Result	05/16/2019	50 U	50 U	50 U	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	500 U	-	-	-
	Primary Result	06/02/2020	50 U	50 U	50 U	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	500 U	-	-	-
	Primary Result	05/18/2021	50 U	50 U	50 U	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	500 U	-	-	-
	Primary Result	04/05/2022	50 U	50 U	50 U	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	4080	-	-	-
	Primary Result	06/06/2023	50 U	50 U	50 U	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	500 U	-	-	-
	Primary Result	05/14/2024	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
	Primary Result	06/04/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	50 U	-	-	-
MW-53C	Primary Result	06/08/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	07/02/2018	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	50 U	-	-	-
	Primary Result	10/01/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	18.1	-	-	-
MW-54C	Primary Result	07/02/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	11/12/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	23.2	-	-	-
	Primary Result	05/16/2019	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	17.7	-	-	-
	Primary Result	06/02/2020	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	05/18/2021	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	04/05/2022	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10.3	-	-	-
	Primary Result	06/06/2023	1 U	1 U	1 UJ	-	-	1 U	10 U	-	1 UJ	10 U	1 U	1 UJ	10 U	20	-	-	-
	Primary Result	05/14/2024	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	127	-	-	-
	Primary Result	06/04/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	50 U	-	-	-
MW-55B	Primary Result	06/12/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	07/02/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	15.9	-	-	-
	Field Duplicate	07/02/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	17.1	-	-	-
	Primary Result	11/12/2018	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	50 U	-	-	-
	Field Duplicate	11/12/2018	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	50 U	-	-	-
	Primary Result	05/16/2019	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	50 U	-	-	-
	Primary Result	06/02/2020	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	50 U	-	-	-
	Primary Result	05/18/2021	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	50 U	-	-	-

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC SIM	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	1,4-Dioxane	1,4-Dioxane	2,2-Dichloropropane	2-Butanone (Methyl Ethyl Ketone)	2-Chloroethyl vinyl ether	2-Chlorotoluene	2-Hexanone (Methyl Butyl	2-Phenylbutane (sec-Butylbenzene)	4-Chlorotoluene	4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	Acetone	Acrolein	Acrylonitrile	Allyl chloride
		CAS Number	541-73-1	142-28-9	106-46-7	123-91-1	123-91-1	594-20-7	78-93-3	110-75-8	95-49-8	591-78-6	135-98-8	106-43-4	108-10-1	67-64-1	107-02-8	107-13-1	107-05-1
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-55B	Primary Result	04/05/2022	25 U	25 U	25 U	-	-	25 U	250 U	-	25 U	250 U	25 U	25 U	250 U	250 U	-	-	-
	Primary Result	06/06/2023	50 U	50 U	50 U	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	500 U	-	-	-
	Primary Result	05/14/2024	50 U	50 U	50 U	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	500 U	-	-	-
	Primary Result	06/04/2025	1.55	1 U	3.44	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	377	-	-	-
MW-56B	Primary Result	06/12/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	07/02/2018	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
	Primary Result	11/12/2018	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	200 U	20 U	20 U	200 U	200 U	-	-	-
	Primary Result	05/16/2019	10 U	10 U	10 U	-	-	10 U	100 U	-	10 U	100 U	10 U	10 U	100 U	100 U	-	-	-
	Field Duplicate	05/16/2019	10 U	10 U	10 U	-	-	10 U	100 U	-	10 U	100 U	10 U	10 U	100 U	100 U	-	-	-
	Primary Result	06/02/2020	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	50 U	-	-	-
	Field Duplicate	06/02/2020	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	50 U	-	-	-
	Primary Result	05/18/2021	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	50 U	-	-	-
	Field Duplicate	05/18/2021	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	50 U	-	-	-
	Primary Result	04/05/2022	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	59.4	-	-	-
	Field Duplicate	04/05/2022	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	50 U	-	-	-
	Primary Result	06/06/2023	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	50 U	-	-	-
	Field Duplicate	06/06/2023	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	50 U	-	-	-
	Primary Result	05/14/2024	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	493	-	-	-
	Field Duplicate	05/14/2024	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	451	-	-	-
	Primary Result	06/04/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	50 U	-	-	-
	Field Duplicate	06/04/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	50 U	-	-	-
MW-57B	Primary Result	11/12/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	48.7	-	-	-
	Primary Result	05/17/2019	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	16.4	-	-	-
	Primary Result	06/02/2020	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	05/18/2021	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	04/06/2022	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	06/08/2023	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	310	-	-	-
	Primary Result	05/15/2024	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	307	-	-	-
	Primary Result	06/05/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	50 U	-	-	-
MW-58B	Primary Result	11/13/2023	200 U	200 U	200 U	-	-	200 U	2000 U	-	200 U	2000 U	200 U	200 U	2000 U	2000 U	-	-	-
	Primary Result	11/20/2023	200 U	200 U	200 U	-	-	200 U	2000 U	-	200 U	2000 U	200 U	200 U	2000 U	2000 U	-	-	-
MW-59B	Primary Result	11/13/2023	200 U	200 U	200 U	-	-	200 U	2000 U	-	200 U	2000 U	200 U	200 U	2000 U	2000 U	-	-	-
	Primary Result	11/20/2023	250 U	250 U	250 U	-	-	250 U	2500 U	-	250 U	2500 U	250 U	250 U	2500 U	2500 U	-	-	-
MW-60B	Primary Result	11/13/2023	500 U	500 U	500 U	-	-	500 U	5000 U	-	500 U	5000 U	500 U	500 U	5000 U	5000 U	-	-	-
	Primary Result	11/20/2023	1000 U	1000 U	1000 U	-	-	1000 U	10000 U	-	1000 U	10000 U	1000 U	1000 U	10000 U	10000 U	-	-	-
	Primary Result	05/15/2024	1000 U	1000 U	1000 U	-	-	1000 U	10000 U	-	1000 U	10000 U	1000 U	1000 U	10000 U	10000 U	-	-	-
	Primary Result	06/04/2025	50 U	50 U	114	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	2500 U	-	-	-
	Field Duplicate	06/04/2025	200 U	200 U	200 U	-	-	200 U	2000 U	-	200 U	2000 U	200 U	200 U	2000 U	10000 U	-	-	-
PP-3D	Primary Result	03/02/2009	20 U	20 U	20 U	-	-	20 U	200 U	-	20 U	100 U	20 U	20 U	200 U	200 U	-	-	-
	Primary Result	10/30/2009	20 U	-	20 U	4000 U	-	20 U	200 U	60 R	20 U	100 U	20 U	20 U	200 U	200 U	400 U	400 U	-
	Primary Result	06/05/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	50 U	-	-	-
PP-4D	Primary Result	02/05/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	9.4 J	20 U	20 U	-
	Primary Result	03/05/2009	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	5 U	1 U	1 U	10 U	10 U	-	-	-
PP-4S	Primary Result	02/05/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	5.8 J	20 U	20 U	-
PP-5D	Primary Result	02/27/2001	0.3	-	2	-	-	-	3	-	-	2 U	-	-	2 U	2 U	-	-	-
	Primary Result	11/04/2002	500 U	-	500 U	-	-	500 U	2500 U	2500 U	500 U	2500 U	500 U	500 U	2500 U	5000 U	10000 U	10000 U	-
	Primary Result	02/06/2003	250 U	-	250 U	-	-	250 U	1200 U	1200 U	250 U	1200 U	250 U	250 U	1200 U	2500 U	5000 U	5000 U	-
	Primary Result	10/24/2003	500 U	-	500 U	-	-	500 U	2500 U	2500 U	500 U	2500 U	500 U	500 U	2500 U	5000 U	10000 U	10000 U	-
	Primary Result	03/05/2009	10 U	10 U	10 U	-	-	10 U	100 U	-	10 U	50 U	10 U	10 U	100 U	100 U	-	-	-
	Primary Result	05/16/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	11/14/2018	50 U	50 U	50 U	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	500 U	-	-	-
	Primary Result	06/08/2023	10 U	10 U	10 U	-	-	10 U	100 U	-	10 U	100 U	10 U	10 U	100 U	100 U	-	-	-
	Primary Result	05/15/2024	10 U	10 U	10 U	-	-	10 U	100 U	-	10 U	100 U	10 U	10 U	100 U	100 U	-	-	-
	Primary Result	06/05/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	50 U	-	-	-
PP-5S	Primary Result	11/14/2018	10 U	10 U	10 U	-	-	10 U	100 U	-	10 U	100 U	10 U	10 U	100 U	100 U	-	-	-
	Primary Result	06/03/2020	10 U	10 U	10 U	-	-	10 U	100 U	-	10 U	100 U	10 U	10 U	100 U	100 U	-	-	-
	Primary Result	05/18/2021	10 U	10 U	10 U	-	-	10 U	100 U	-	10 U	100 U	10 U	10 U	100 U	100 U	-	-	-
	Primary Result	04/06/2022	10 U	10 U	10 U	-	-	10 U	100 U	-	10 U	100 U	10 U	10 U	100 U	100 U	-	-	-
PP-7	Primary Result	11/05/2002	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	10 U	20 U	20 U	-
PP-8	Primary Result	11/05/2002	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	10 U	20 U	20 U	-
	Primary Result	11/27/2002	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	10 U	20 U	20 U	-
TMW-001	Primary Result	11/28/2000	30	-	61	-	-	-	50 U	-	-	50 U	-	-	38 J	310	-	-	-
	Primary Result	12/13/2000	50 U	-	70	-	-	-	200 UJ	-	-	200 U	-	-	120 J	200 UJ	-	-	-
	Primary Result	02/06/2003	5000 U	-	5000 U	-	-	5000 U	25000 U	25000 U	5000 U	25000 U	5000 U	5000 U	25000 U	50000 U	100000 U	100000 U	-
	Primary Result	10/24/2003	2500 U	-	2500 U	-	-	2500 U	12000 U	12000 U	2500 U	12000 U	2500 U	2500 U	12000 U	25000 U	50000 U	50000 U	-
	Primary Result	03/05/2009	130 U	130 U	130 U	-	-	130 U	1300 U	-	130 U	670 U	130 U	130 U	1300 U	1300 U	-	-	-

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC SIM	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	1,4-Dioxane	1,4-Dioxane	2,2-Dichloropropane	2-Butanone (Methyl Ethyl Ketone)	2-Chloroethyl vinyl ether	2-Chlorotoluene	2-Hexanone (Methyl Butyl	2-Phenylbutane (sec-Butylbenzene)	4-Chlorotoluene	4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	Acetone	Acrolein	Acrylonitrile	Allyl chloride
		CAS Number	541-73-1	142-28-9	106-46-7	123-91-1	123-91-1	594-20-7	78-93-3	110-75-8	95-49-8	591-78-6	135-98-8	106-43-4	108-10-1	67-64-1	107-02-8	107-13-1	107-05-1
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
TMW-002	Primary Result	02/27/2001	5000 U	-	5000 U	-	-	-	20000 U	-	-	20000 U	-	-	20000 U	20000 U	-	-	-
	Primary Result	02/06/2003	12000 U	-	12000 U	-	-	12000 U	62000 U	62000 U	12000 U	62000 U	12000 U	12000 U	62000 U	120000 U	250000 U	250000 U	-
	Primary Result	10/07/2003	10000 U	-	10000 U	-	-	10000 U	50000 U	50000 U	10000 U	50000 U	10000 U	10000 U	50000 U	100000 U	200000 U	200000 U	-
	Primary Result	10/24/2003	10000 U	-	10000 U	-	-	10000 U	50000 U	50000 U	10000 U	50000 U	10000 U	10000 U	50000 U	100000 U	200000 U	200000 U	-
	Primary Result	03/06/2009	240 J	500 U	1200	-	-	500 U	5000 U	-	500 U	2500 U	500 U	500 U	5000	6700	-	-	-
TMW-003	Primary Result	02/28/2001	5 U	-	5 U	-	-	-	20 U	-	-	20 U	-	-	20 U	20 U	-	-	-
	Primary Result	02/06/2003	1200 U	-	1200 U	-	-	1200 U	6200 U	6200 U	1200 U	6200 U	1200 U	1200 U	6200 U	12000 U	25000 U	25000 U	-
	Primary Result	10/24/2003	1000 U	-	1000 U	-	-	1000 U	5000 U	5000 U	1000 U	5000 U	1000 U	1000 U	5000 U	10000 U	20000 U	20000 U	-
	Primary Result	03/05/2009	67 U	67 U	67 U	-	-	67 U	670 U	-	720	330 U	67 U	67 U	670 U	670 U	-	-	-
TMW-004	Primary Result	02/28/2001	500 U	-	500 U	-	-	-	2000 U	-	-	2000 U	-	-	2000 U	2000 U	-	-	-
	Primary Result	02/06/2003	12000 U	-	12000 U	-	-	12000 U	62000 U	62000 U	12000 U	62000 U	12000 U	12000 U	62000 U	120000 U	250000 U	250000 U	-
	Primary Result	10/24/2003	10000 U	-	10000 U	-	-	10000 U	50000 U	50000 U	10000 U	50000 U	10000 U	10000 U	50000 U	100000 U	200000 U	200000 U	-
	Primary Result	03/06/2009	1000 U	1000 U	1000 U	-	-	1000 U	10000 U	-	1000 U	5000 U	1000 U	1000 U	10000 U	10000 U	-	-	-
TMW-005	Primary Result	02/28/2001	50 U	-	50 U	-	-	-	200 U	-	-	200 U	-	-	200 U	200 U	-	-	-
	Primary Result	02/06/2003	25000 U	-	25000 U	-	-	25000 U	120000 U	120000 U	25000 U	120000 U	25000 U	25000 U	120000 U	250000 U	500000 U	500000 U	-
	Primary Result	10/24/2003	500 U	-	500 U	-	-	500 U	2500 U	2500 U	500 U	2500 U	500 U	500 U	2500 U	5000 U	10000 U	10000 U	-
	Primary Result	03/05/2009	330 U	330 U	330 U	-	-	330 U	3300 U	-	330 U	1700 U	330 U	330 U	3300 U	3300 U	-	-	-
	Field Duplicate	03/05/2009	330 U	330 U	330 U	-	-	330 U	3300 U	-	330 U	1700 U	330 U	330 U	3300 U	3300 U	-	-	-
TMW-007	Primary Result	02/28/2001	500 U	-	500 U	-	-	-	2000 U	-	-	2000 U	-	-	17000	-	-	-	-
	Primary Result	03/06/2009	2000 U	2000 U	2000 U	-	-	2000 U	20000 U	-	2000 U	10000 U	2000 U	2000 U	11000 J	20000 U	-	-	-
TMW-008	Primary Result	03/01/2001	0.5 U	-	0.5 U	-	-	-	2 U	-	-	2 U	-	-	2 U	2 U	-	-	-
	Primary Result	02/05/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	3.3 J	20 U	20 U	-
	Primary Result	10/23/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	10 U	20 U	20 U	-
	Field Duplicate	10/23/2003	1 U	-	1 U	-	-	1 U	5 U	5 U	1 U	5 U	1 U	1 U	5 U	10 U	20 U	20 U	-
	Primary Result	03/04/2009	6.7 U	6.7 U	6.7 U	-	-	6.7 U	67 U	-	6.7 U	33 U	6.7 U	6.7 U	67 U	67 U	-	-	-
	Primary Result	10/27/2009	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 J	20 U	20 U	-
	Field Duplicate	10/27/2009	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	11	20 U	20 U	-
	Primary Result	10/28/2009	1 U	-	0.28 J	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 J	20 U	20 U	-
	Primary Result	07/19/2011	5 U	-	5 U	1000 U	-	5 U	50 U	15 U	5 U	25 U	5 U	5 U	50 U	50 U	100 U	100 U	-
	Primary Result	11/28/2011	6.7 U	-	6.7 U	1300 U	-	6.7 U	67 U	20 U	6.7 U	33 U	6.7 U	6.7 U	67 U	67 U	130 U	130 U	-
	Primary Result	02/22/2012	5 U	-	5 U	1000 U	-	5 U	50 U	15 U	5 U	25 U	5 U	5 U	50 U	50 U	100 U	100 U	-
	Primary Result	06/26/2012	4 U	-	4 U	800 U	-	4 U	40 U	12 U	4 U	20 U	4 U	4 U	40 U	40 U	80 U	80 U	-
	Primary Result	11/05/2012	2 U	-	2 U	400 U	-	2 U	20 U	6 U	2 U	10 U	2 U	2 U	20 U	20 U	40 U	40 U	-
	Primary Result	03/13/2013	5 U	-	5 U	1000 U	-	5 U	50 U	15 U	5 U	25 U	5 U	5 U	50 U	50 U	100 U	100 U	-
	Primary Result	05/21/2013	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	05/20/2014	10 U	-	10 U	2000 U	-	10 U	100 U	30 U	10 U	50 U	10 U	10 U	100 U	100 U	200 U	200 U	-
	Primary Result	05/19/2015	40 U	-	40 U	8000 U	-	40 U	400 U	120 U	40 U	200 U	40 U	40 U	400 U	400 U	800 U	800 U	-
	Primary Result	06/01/2016	5 U	-	5 U	1000 U	-	5 U	50 U	15 U	5 U	25 U	5 U	5 U	50 U	50 U	100 U	100 U	-
	Primary Result	06/20/2017	10 U	-	10 U	2000 U	7.9 J	10 U	100 U	30 R	10 U	50 U	10 U	10 U	100 U	100 U	200 U	200 U	-
	Primary Result	11/08/2017	1.2	1 U	6	-	2.3 U	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	05/15/2018	50 U	50 U	50 U	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	500 U	-	-	-
	Primary Result	11/14/2018	50 U	50 U	50 U	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	500 U	-	-	-
	Primary Result	06/05/2025	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	91.5	-	-	-
TMW-009	Primary Result	03/01/2001	0.5 U	-	0.5 U	-	-	-	2 U	-	-	2 U	-	-	2 U	2 U	-	-	-
	Field Duplicate	03/01/2001	0.5 U	-	0.5 U	-	-	-	2 U	-	-	2 U	-	-	2 U	2 U	-	-	-
	Primary Result	02/06/2003	50 U	-	50 U	-	-	50 U	250 U	250 U	50 U	250 U	50 U	50 U	250 U	500 U	1000 U	1000 U	-
	Field Duplicate	02/06/2003	50 U	-	50 U	-	-	50 U	250 U	250 U	50 U	250 U	50 U	50 U	250 U	500 U	1000 U	1000 U	-
	Primary Result	10/24/2003	100 U	-	100 U	-	-	100 U	500 U	500 U	100 U	500 U	100 U	100 U	500 U	1000 U	2000 U	2000 U	-
	Primary Result	03/04/2009	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	5 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	07/18/2011	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	11/28/2011	4 U	-	4 U	800 U	-	4 U	40 U	12 U	4 U	20 U	4 U	4 U	40 U	40 U	80 U	80 U	-
	Primary Result	02/22/2012	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	06/26/2012	2 U	-	2 U	400 U	-	2 U	20 U	6 U	2 U	10 U	2 U	2 U	20 U	7.1 JB	40 U	40 U	-
	Primary Result	11/05/2012	2 U	-	2 U	400 U	-	2 U	20 U	6 U	2 U	10 U	2 U	2 U	20 U	8.2 JB	40 U	40 U	-
	Primary Result	03/13/2013	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	4.3 JB	20 U	20 U	-
	Primary Result	05/21/2013	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	05/20/2014	4 U	-	4 U	800 U	-	4 U	40 U	12 U	4 U	20 U	4 U	4 U	40 U	40 U	80 U	80 U	-
	Primary Result	05/20/2015	10 U	-	10 U	2000 U	-	10 U	100 U	30 U	10 U	50 U	10 U	10 U	100 U	100 U	200 U	200 U	-
	Primary Result	06/02/2016	2 U	-	2 U	400 U	-	2 U	20 U	6 U	2 U	10 U	2 U	2 U	20 U	4.1 J	40 U	40 U	-
	Field Duplicate	06/02/2016	2 U	-	2 U	400 U	-	2 U	20 U	6 U	2 U	10 U	2 U	2 U	20 U	20 U	40 U	40 U	-
	Primary Result	06/22/2017	1 U	-	1 U	200 U	-	1 U	2.8 J	3 R	1 U	5 U	1 U	1 U	10 U	7.7 U	20 U	20 U	-
	Primary Result	11/08/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	22.1	-	-	-
	Primary Result	05/17/2018	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	50 U	-	-	-
	Primary Result	11/14/2018	5 U	5 U	5 U	-	-	5 U	50 U	-	5 U	50 U	5 U	5 U	50 U	50 U	-	-	-

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC SIM	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	1,4-Dioxane	1,4-Dioxane	2,2-Dichloropropane	2-Butanone (Methyl Ethyl Ketone)	2-Chloroethyl vinyl ether	2-Chlorotoluene	2-Hexanone (Methyl Butyl	2-Phenylbutane (sec-Butylbenzene)	4-Chlorotoluene	4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	Acetone	Acrolein	Acrylonitrile	Allyl chloride
		CAS Number	541-73-1	142-28-9	106-46-7	123-91-1	123-91-1	594-20-7	78-93-3	110-75-8	95-49-8	591-78-6	135-98-8	106-43-4	108-10-1	67-64-1	107-02-8	107-13-1	107-05-1
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
TMW-010	Primary Result	03/01/2001	0.5 U	-	0.5 U	-	-	-	2 U	-	-	2 U	-	-	2 U	6	-	-	-
	Primary Result	10/24/2003	10 U	-	10 U	-	-	10 U	50 U	50 U	10 U	50 U	10 U	10 U	50 U	100 U	200 U	200 U	-
	Primary Result	03/04/2009	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	5 U	1 U	1 U	10 U	10 U	-	-	-
	Primary Result	10/27/2009	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	11	20 U	20 U	-
	Primary Result	10/28/2009	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	07/19/2011	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	4.6 J	20 U	20 U	-
	Primary Result	11/28/2011	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	02/22/2012	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	06/26/2012	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	7.5 JB	20 U	20 U	-
	Primary Result	11/05/2012	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	6.5 JB	20 U	20 U	-
	Primary Result	03/13/2013	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	3.8 JB	20 U	20 U	-
	Primary Result	05/21/2013	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	6 JB	20 U	20 U	-
	Primary Result	05/20/2014	1 U	-	1 U	200 U	-	1 U	4.1 J	3 U	1 U	5 U	1 U	1 U	10 U	10	20 U	20 U	-
	Primary Result	05/19/2015	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	06/01/2016	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	1.9 J	20 U	20 U	-
	Primary Result	06/20/2017	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Field Duplicate	06/20/2017	1 U	-	1 U	200 U	-	1 U	10 U	3 R	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	11/08/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	51.8	-	-	-
	Field Duplicate	11/08/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	49.8	-	-	-
	Primary Result	05/15/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	23.6	-	-	-
TMW-011	Primary Result	03/01/2001	0.5 U	-	0.8	-	-	-	2 U	-	-	2 U	-	-	2 U	2 U	-	-	-
	Primary Result	02/06/2003	50 U	-	50 U	-	-	50 U	250 U	250 U	50 U	250 U	50 U	50 U	250 U	500 U	1000 U	1000 U	-
	Primary Result	10/24/2003	500 U	-	500 U	-	-	500 U	2500 U	2500 U	500 U	2500 U	500 U	500 U	2500 U	5000 U	10000 U	10000 U	-
	Primary Result	03/04/2009	2 U	2 U	2 U	-	-	2 U	20 U	-	2 U	10 U	2 U	2 U	20 U	20 U	-	-	-
	Primary Result	07/18/2011	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	3.3 J	20 U	20 U	-
	Primary Result	11/28/2011	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	02/22/2012	2 U	-	2 U	400 U	-	2 U	20 U	6 U	2 U	10 U	2 U	2 U	20 U	20 U	40 U	40 U	-
	Primary Result	06/26/2012	2 U	-	2 U	400 U	-	2 U	20 U	6 U	2 U	10 U	2 U	2 U	20 U	6.4 JB	40 U	40 U	-
	Primary Result	11/05/2012	5 U	-	5 U	1000 U	-	5 U	50 U	15 U	5 U	25 U	5 U	5 U	50 U	18 JB	100 U	100 U	-
	Primary Result	03/13/2013	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	5.4 JB	20 U	20 U	-
	Primary Result	05/21/2013	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	05/20/2014	4 U	-	4 U	800 U	-	4 U	40 U	12 U	4 U	20 U	4 U	4 U	40 U	40 U	80 U	80 U	-
	Primary Result	05/20/2015	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	10 U	20 U	20 U	-
	Primary Result	06/02/2016	1 U	-	1 U	200 U	-	1 U	10 U	3 U	1 U	5 U	1 U	1 U	10 U	2.4 J	20 U	20 U	-
	Primary Result	06/22/2017	1 U	-	1 U	200 U	-	1 U	2.4 J	3 R	1 U	5 U	1 U	1 U	10 U	11 U	20 U	20 U	-
	Primary Result	11/08/2017	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	25.9	-	-	-
	Primary Result	05/17/2018	1 U	1 U	1 U	-	-	1 U	10 U	-	1 U	10 U	1 U	1 U	10 U	17.2	-	-	-
TMW-012	Primary Result	02/28/2001	0.5 U	-	0.5 U	-	-	-	2 U	-	-	2 U	-	-	2 U	2 U	-	-	-
TMW-015	Primary Result	02/28/2001	50 U	-	50 U	-	-	-	200 U	-	-	200 U	-	-	200 U	200 U	-	-	-
	Primary Result	02/06/2003	5000 U	-	5000 U	-	-	5000 U	25000 U	25000 U	5000 U	25000 U	5000 U	5000 U	25000 U	50000 U	100000 U	100000 U	-
	Primary Result	10/24/2003	5000 U	-	5000 U	-	-	5000 U	25000 U	25000 U	5000 U	25000 U	5000 U	5000 U	25000 U	50000 U	100000 U	100000 U	-
	Primary Result	03/05/2009	330 U	330 U	330 U	-	-	330 U	3300 U	-	330 U	1700 U	330 U	330 U	3300 U	3300 U	-	-	-
	Primary Result	06/21/2017	200 U	-	200 U	40000 U	400 U	200 U	2000 U	600 R	200 U	1000 U	200 U	200 U	2000 U	2000 U	4000 U	4000 U	-
	Primary Result	11/08/2017	1000 U	1000 U	1000 U	-	2.8	1000 U	10000 U	-	1000 U	10000 U	1000 U	1000 U	10000 U	10000 U	-	-	-
	Field Duplicate	11/08/2017	-	-	-	-	3.5	-	-	-	-	-	-	-	-	-	-	-	-
	Primary Result	05/16/2018	500 U	500 U	500 U	-	-	500 U	5000 U	-	500 U	5000 U	500 U	500 U	5000 U	5000 U	-	-	-
	Field Duplicate	05/16/2018	500 U	500 U	500 U	-	-	500 U	5000 U	-	500 U	5000 U	500 U	500 U	5000 U	5000 U	-	-	-
	Primary Result	11/12/2018	500 U	500 U	500 U	-	-	500 U	5000 U	-	500 U	5000 U	500 U	500 U	5000 U	5000 U	-	-	-
	Primary Result	05/15/2024	50 U	50 U	50 U	-	-	50 U	500 U	-	50 U	500 U	50 U	50 U	500 U	542	-	-	-
	Primary Result	06/04/2025	25 U	25 U	25 U	-	-	25 U	250 U	-	25 U	250 U	25 U	25 U	250 U	1250 U	-	-	-
TMW-016D	Primary Result	11/28/2000	12 J	-	63	-	-	-	50 U	-	-	28 J	-	-	110	50 U	-	-	-
	Primary Result	12/13/2000	500 U	-	500 U	-	-	-	2000 UJ	-	-	2000 UJ	-	-	2000 UJ	2000 UJ	-	-	-
	Primary Result	03/06/2009	400 U	400 U	93 J	-	-	400 U	4000 U	-	400 U	2000 U	400 U	400 U	4000 U	4000 U	-	-	-
	Primary Result	11/28/2000	31	-	160	-	-	-	50 U	-	-	50 U	-	-	78	94	-	-	-
	Field Duplicate	11/28/2000	30	-	160	-	-	-	50 U	-	-	50 U	-	-	50 U	91	-	-	-
	Primary Result	12/13/2000	500 U	-	500 U	-	-	-	2000 U	-	-	2000 U	-	-	2000 U	2000 U	-	-	-
	Primary Result	03/06/2009	330 U	330 U	130 J	-	-	330 U	3300 U	-	330 U	1700 U	330 U	330 U	3300 U	3300 U	-	-	-

Notes and Abbreviations:

-: Chemical analysis data was unavailable
B: Contaminant seen in method blank
HTV: Holding time violation
J: Estimated value
JB: Estimated value; Contaminant seen in method blank
U: Non-detect
UJ: Non-detect; Estimated value
Check Data Usability Summary report in Appendix B for definitions of Project Qualifers added

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Benzene	Bromobenzene	Bromodichloromethane	Bromoethane (Ethyl bromide)	Bromoform	Bromomethane (Methyl Bromide)	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorobromomethane	Chloroethane	Chloroform (Trichloromethane)	Chloromethane (Methyl Chloride)	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Cymene (p-Isopropyltoluene)	Dibromochloromethane	Dibromomethane
		CAS Number	71-43-2	108-86-1	75-27-4	74-96-4	75-25-2	74-83-9	75-15-0	56-23-5	108-90-7	74-97-5	75-00-3	67-66-3	74-87-3	156-59-2	10061-01-5	99-87-6	124-48-1	74-95-3
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Location	**Sample Type**	**Sample Date**																		
Bohl Well	Primary Result	10/31/2002	1 U	1 U	0.93 J	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1.3	2 U	0.68 J	-	1 U	1 U	1 U
	Primary Result	09/09/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	0.47 J	-	1 U	1 U	1 U
	Primary Result	10/22/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	0.88 J	-	1 U	1 U	1 U
CCI-101	Primary Result	11/18/1988	0.6	-	2.5	0 U	4	-	0 U	9690	433	-	-	1110	0 U	-	-	-	0 U	0 U
	Primary Result	02/24/1989	0 U	-	0 U	0 U	0 U	-	0 U	33000	0 U	-	-	1900 J	0 U	-	-	-	0 U	0 U
	Primary Result	12/01/1995	5 U	5 U	5 U	-	5 U	10 U	5 U	57000	170	5 U	10 U	800	10 U	72	5 U	5 U	5 U	5 U
	Primary Result	11/28/2000	14	-	12 U	-	12 U	12 U	50 U	2100	28	-	-	460	12 U	2800	12 U	-	12 U	-
	Primary Result	12/13/2000	50 U	-	50 U	-	50 U	50 U	200 U	5600 D	310	-	-	890	50 U	20000 D	50 U	-	50 U	-
	Field Duplicate	12/13/2000	50 U	-	50 U	-	50 U	50 U	200 U	6500 D	300	-	-	960	50 U	21000 D	50 U	-	50 U	-
	Primary Result	02/06/2003	5000 U	5000 U	5000 U	-	5000 U	10000 U	5000 U	2500 U	4200 J	5000 U	10000 U	1800 J	10000 U	150000	-	5000 U	5000 U	5000 U
	Primary Result	10/24/2003	5000 U	5000 U	5000 U	-	5000 U	10000 U	5000 U	2500 U	1700 J	5000 U	10000 U	5000 U	10000 U	140000	-	5000 U	5000 U	5000 U
EPA-1	Primary Result	02/24/1989	0 U	-	0 U	0 U	0 U	-	0 U	34000	0 U	-	-	0 U	0 U	-	-	-	0 U	0 U
	Field Duplicate	02/24/1989	0 U	-	0 U	0 U	3.1 J	-	0.054	35000	0 U	-	-	0 U	0 U	-	-	-	0 U	0 U
EPA-2	Primary Result	12/01/1995	5 U	5 U	5 U	-	5 U	10 U	5 U	24	12	5 U	10 U	170	10 U	14000	5 U	5 U	5 U	5 U
	Primary Result	02/28/2001	50 U	-	50 U	-	50 U	50 U	200 U	81	29 J	-	-	280	56	14000	50 U	-	50 U	-
	Primary Result	02/06/2003	250 U	250 U	250 U	-	250 U	500 U	250 U	120 U	250 U	250 U	500 U	320	500 U	13000	-	250 U	250 U	250 U
	Primary Result	10/24/2003	1000 U	1000 U	1000 U	-	1000 U	2000 U	1000 U	990	1000 U	1000 U	2000 U	560 J	2000 U	11000	-	1000 U	1000 U	1000 U
EPA-3	Primary Result	12/01/1995	5 U	5 U	5 U	-	5 U	10 U	5 U	5 U	5 U	5 U	10 U	5 U	10 U	5 U	5 U	5 U	5 U	5 U
	Primary Result	02/28/2001	0.5 U	-	0.5 U	-	0.5 U	0.5 U	2 U	0.5 U	0.5 U	-	-	0.5 U	0.5 U	0.5 U	0.5 U	-	0.5 U	-
	Primary Result	02/05/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	10/23/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	03/04/2009	1 U	1 U	1 U	-	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	0.1 J	1 U	1 U	1 U	1 U
ERT-1	Primary Result	12/01/1995	2500 U	2500 U	2500 U	-	2500 U	5000 U	2500 U	160000	2500 U	2500 U	5000 U	4600	1.1 J	2500 U	2500 U	2500 U	2500 U	2500 U
	Primary Result	03/01/2001	50 U	-	50 U	-	50 U	50 U	200 U	32000	50 U	-	-	1000	50 U	170	50 U	-	50 U	-
	Primary Result	02/06/2003	2500 U	2500 U	2500 U	-	2500 U	5000 U	2500 U	75000	2500 U	2500 U	5000 U	2300 J	5000 U	1000 J	-	2500 U	2500 U	2500 U
	Primary Result	10/24/2003	250 U	250 U	250 U	-	250 U	500 U	250 U	6100	250 U	250 U	500 U	250 U	500 U	250 U	-	250 U	250 U	250 U
KDHE-1	Primary Result	12/20/1988	0 U	-	0 U	0 U	0 U	-	0 U	262	5.5	-	-	1380	4.7	-	-	-	0 U	0 U
	Primary Result	02/24/1989	0 U	-	0 U	0 U	0 U	-	0 U	0 U	0 U	-	-	680 J	0 U	-	-	-	0 U	0 U
KDHE-2	Primary Result	01/06/1989	0 U	-	0 U	0 U	0 U	-	0 U	85000	3.2	-	-	500	0 U	-	-	-	0 U	0 U
	Primary Result	02/24/1989	0 U	-	0 U	0 U	0 U	-	0 U	200000	0 U	-	-	0 U	0 U	-	-	-	0 U	0 U
	Primary Result	12/01/1995	5 U	5 U	5 U	-	5 U	10 U	5 U	1200	5 U	5 U	10 U	190	10 U	1000	5 U	5 U	5 U	5 U
KDHE-3	Primary Result	01/06/1989	2.9	-	0 U	0 U	0 U	-	0 U	3410	38.6	-	-	150	8.1	-	-	-	0 U	0 U
	Primary Result	02/24/1989	0 U	-	0 U	0 U	0 U	-	0 U	2900	0 U	-	-	140 J	0 U	-	-	-	0 U	0 U
	Primary Result	12/01/1995	5 U	5 U	5 U	-	5 U	10 U	5 U	170	5 U	5 U	10 U	24	1.1 J	5 U	5 U	5 U	5 U	5 U
KDHE-4	Primary Result	12/22/1988	2.6	-	0 U	0 U	0 U	-	0 U	1090	8.4	-	-	127	0 U	-	-	-	0 U	0 U
	Primary Result	02/24/1989	0 U	-	0 U	0 U	0 U	-	0 U	0 U	0 U	-	-	0 U	0 U	-	-	-	0 U	0 U
	Primary Result	12/01/1995	5 U	5 U	5 U	-	5 U	10 U	5 U	430	5 U	5 U	10 U	19	10 U	260	5 U	5 U	5 U	5 U
MW-18	Primary Result	02/27/2001	0.5 U	-	0.5 U	-	0.5 U	0.5 U	2 U	0.5 U	0.5 U	-	-	0.3	0.5 U	0.5 U	0.5 U	-	0.3	-
	Primary Result	02/05/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	10/23/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
MW-18B	Primary Result	10/29/2009	1 U	1 U	0.5 U	-	1 UJ	2 U	2 U	1 U	1 U	1 U	2 U	1.4 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	07/19/2011	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	06/26/2012	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Field Duplicate	06/26/2012	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	11/05/2012	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Field Duplicate	11/05/2012	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	05/21/2013	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Field Duplicate	05/21/2013	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	05/20/2014	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Field Duplicate	05/20/2014	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	05/19/2015	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Field Duplicate	05/19/2015	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	06/01/2016	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Field Duplicate	06/01/2016	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/15/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/16/2019	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/02/2020	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/18/2021	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	04/05/2022	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/06/2023	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/14/2024	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/04/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	1 U	1 U	1 U	5 U	5 U	2.5 U	1 U	1 U	1 U	1 U	1 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Benzene	Bromobenzene	Bromodichloromethane	Bromoethane (Ethyl bromide)	Bromoform	Bromomethane (Methyl Bromide)	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorobromomethane	Chloroethane	Chloroform (Trichloromethane)	Chloromethane (Methyl Chloride)	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Cymene (p-Isopropyltoluene)	Dibromochloromethane	Dibromomethane
		CAS Number	71-43-2	108-86-1	75-27-4	74-96-4	75-25-2	74-83-9	75-15-0	56-23-5	108-90-7	74-97-5	75-00-3	67-66-3	74-87-3	156-59-2	10061-01-5	99-87-6	124-48-1	74-95-3
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-19	Primary Result	02/27/2001	0.5 U	-	0.5 U	-	0.5 U	0.5 U	2 U	0.5 U	0.5 U	-	-	0.5 U	0.5 U	0.5 U	0.5 U	-	0.5 U	-
	Primary Result	02/06/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	10/23/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	03/05/2009	1 U	1 U	1 U	-	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	0.25 J	1 U	1 U	1 U	1 U
	Primary Result	10/29/2009	1 U	1 U	0.5 U	-	1 UJ	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Field Duplicate	10/29/2009	1 U	1 U	0.5 U	-	1 UJ	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
MW-20	Primary Result	02/27/2001	0.5 U	-	0.5 U	-	0.5 U	0.5 U	2 U	0.5 U	0.5 U	-	-	0.3	0.5 U	0.5 U	0.5 U	-	0.5 U	-
	Primary Result	02/05/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	10/23/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	03/04/2009	1 U	1 U	1 U	-	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	10/29/2009	1 U	1 U	0.5 U	-	1 UJ	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/15/2024	5 U	5 U	5 U	-	5 U	25 U	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Primary Result	06/05/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	1 U	1 U	1 U	5 U	5 U	2.5 U	1 U	1 U	1 U	1 U	1 U
MW-21	Primary Result	02/27/2001	0.5 U	-	0.5 U	-	0.5 U	0.5 U	2 U	0.5 U	0.5 U	-	-	0.5 U	0.5 U	0.5 U	0.5 U	-	0.5 U	-
	Primary Result	02/05/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	10/22/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	03/03/2009	1 U	1 U	1 U	-	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	10/30/2009	1 U	1 U	0.5 U	-	1 U	2 UJ	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Field Duplicate	11/07/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/16/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
MW-22	Primary Result	02/27/2001	0.5	-	0.5 U	-	0.5 U	0.5 U	2 U	0.5 U	0.5 U	-	-	0.5 U	0.5 U	0.5 U	0.5 U	-	0.5 U	-
	Primary Result	10/30/2009	1 U	1 U	0.5 U	-	1 UJ	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	05/21/2013	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	06/01/2016	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/16/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
MW-22B	Primary Result	09/17/2003	1 U	1 U	1 U	-	1 U	2 U	0.68 J	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	10/22/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	03/03/2009	1 U	1 U	1 U	-	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	10/28/2009	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	07/18/2011	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	06/26/2012	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	11/05/2012	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	05/21/2013	1 U	1 U	0.5 U	-	1 U	2 U	0.53 J	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	05/20/2014	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	05/20/2015	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	06/01/2016	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/16/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/15/2024	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/05/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	1 U	1 U	1 U	5 U	5 U	2.5 U	1 U	1 U	1 U	1 U	1 U
MW-23	Primary Result	02/27/2001	0.5 U	-	0.5 U	-	0.5 U	0.5 U	2 U	0.5 U	0.5 U	-	-	0.5 U	0.5 U	0.5 U	0.5 U	-	0.5 U	-
	Primary Result	03/03/2009	1 U	1 U	1 U	-	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	0.17 J	1 U	1 U	1 U	1 U
	Primary Result	10/28/2009	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	05/21/2013	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	05/20/2014	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	05/19/2015	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	06/01/2016	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/15/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1.9	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
MW-23B	Primary Result	09/17/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	10/23/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	03/03/2009	1 U	1 U	1 U	-	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	10/27/2009	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	07/19/2011	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	06/25/2012	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Benzene	Bromobenzene	Bromodichloromethane	Bromoethane (Ethyl bromide)	Bromoform	Bromomethane (Methyl Bromide)	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorobromomethane	Chloroethane	Chloroform (Trichloromethane)	Chloromethane (Methyl Chloride)	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Cymene (p-Isopropyltoluene)	Dibromochloromethane	Dibromomethane
		CAS Number	71-43-2	108-86-1	75-27-4	74-96-4	75-25-2	74-83-9	75-15-0	56-23-5	108-90-7	74-97-5	75-00-3	67-66-3	74-87-3	156-59-2	10061-01-5	99-87-6	124-48-1	74-95-3
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-23B	Primary Result	11/05/2012	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	05/21/2013	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	05/20/2014	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	0.21 J	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	05/19/2015	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	0.24 J	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	06/01/2016	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	0.19 J	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	11/08/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/15/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Field Duplicate	05/15/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Field Duplicate	11/12/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/17/2019	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/03/2020	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/18/2021	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	04/06/2022	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/08/2023	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/16/2024	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/05/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	1 U	1 U	1 U	5 U	5 U	2.5 U	1 U	1 U	1 U	1 U	1 U
MW-24	Primary Result	02/27/2001	0.5 U	-	0.5 U	-	0.5 U	0.5 U	2 U	0.5 U	0.5 U	-	-	0.5 U	0.5 U	0.5 U	0.5 U	-	0.5 U	-
	Primary Result	02/05/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	10/23/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	03/03/2009	1 U	1 U	1 U	-	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	0.12 J	1 U	1 U	1 U	1 U
	Primary Result	10/28/2009	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	05/20/2015	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/16/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/16/2024	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/05/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	1 U	1 U	1 U	5 U	5 U	2.5 U	1 U	1 U	1 U	1 U	1 U
MW-25	Primary Result	02/27/2001	0.5 U	-	0.5 U	-	0.5 U	0.5 U	2 U	0.5 U	0.5 U	-	-	0.5 U	0.5 U	0.4 J	0.5 U	-	0.5 U	-
	Field Duplicate	02/27/2001	0.5 U	-	0.5 U	-	0.5 U	0.5 U	2 U	0.5 U	0.5 U	-	-	0.5 U	0.5 U	0.4 J	0.5 U	-	0.5 U	-
	Primary Result	02/05/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	10/23/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	03/04/2009	1 U	1 U	1 U	-	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	0.39 J	1 U	1 U	1 U	1 U
	Primary Result	10/28/2009	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/15/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
MW-26B	Primary Result	11/04/2002	2500 U	2500 U	2500 U	-	2500 U	5000 U	2500 U	2400	2500 U	2500 U	5000 U	2000 J	5000 U	2500 U	-	2500 U	2500 U	2500 U
	Primary Result	02/06/2003	2500 U	2500 U	2500 U	-	2500 U	5000 U	2500 U	3300	2500 U	2500 U	5000 U	1200 J	5000 U	2500 U	-	2500 U	2500 U	2500 U
	Primary Result	10/24/2003	5000 U	5000 U	5000 U	-	5000 U	10000 U	5000 U	4800	5000 U	5000 U	10000 U	1500 J	10000 U	5000 U	-	5000 U	5000 U	5000 U
	Primary Result	03/05/2009	270 U	270 U	270 U	-	270 U	270 U	1300 U	600	180 J	270 U	270 U	720	270 U	260 J	270 U	270 U	270 U	270 U
	Primary Result	10/30/2009	200 U	200 U	100 U	-	200 U	400 UJ	400 U	1800	380	200 U	400 U	930	400 U	710	-	200 U	200 U	200 U
	Primary Result	06/24/2017	500 UJ	500 UJ	250 UJ	-	500 UJ	1000 UJ	1000 UJ	1800 J	1500 J	500 UJ	1000 UJ	2500 J	160 J	19000 J	-	500 UJ	500 UJ	500 UJ
	Primary Result	11/08/2017	200 U	200 U	200 U	-	200 U	1000 U	1000 U	200	535	200 U	200 U	1500	200 U	13700	200 U	200 U	200 U	200 U
	Field Duplicate	11/08/2017	200 U	200 U	200 U	-	200 U	1000 U	1000 U	228	486	200 U	200 U	1520	200 U	14000	200 U	200 U	200 U	200 U
	Primary Result	05/16/2018	500 U	500 U	500 U	-	500 U	2500 U	2500 U	3250	1070	500 U	500 U	1740	500 U	12300	500 U	500 U	500 U	500 U
	Primary Result	11/14/2018	1000 U	1000 U	1000 U	-	1000 U	5000 U	5000 U	7490	2090	1000 U	1000 U	3060	1000 U	29000	1000 U	1000 U	1000 U	1000 U
	Primary Result	06/03/2020	2000 U	2000 U	2000 U	-	2000 U	10000 U	10000 U	2120	2000 U	2000 U	2000 U	2000 U	2000 U	12800	2000 U	2000 U	2000 U	2000 U
	Primary Result	05/18/2021	2000 U	2000 U	2000 U	-	2000 U	10000 U	10000 U	3390	2000 U	2000 U	2000 U	2000 U	2000 U	9870	2000 U	2000 U	2000 U	2000 U
	Primary Result	04/06/2022	2000 U	2000 U	2000 U	-	2000 U	10000 U	10000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	6780	2000 U	2000 U	2000 U	2000 U
	Primary Result	06/08/2023	2000 U	2000 U	2000 U	-	2000 U	10000 U	10000 U	2000 U	2000 U	2000 U	2000 U	2090	2000 U	17100	2000 U	2000 U	2000 U	2000 U
MW-26C	Primary Result	10/21/2003	1 U	1 U	1 U	-	1 U	2.6	1 U	0.5 U	1 U	1 U	2 U	0.42 J	0.4 J	0.44 J	-	1 U	1 U	1 U
	Primary Result	10/23/2003	1 U	1 U	1 U	-	1 U	2 U	0.32 J	0.5 U	1 U	1 U	2 U	0.49 J	2 U	0.31 J	-	1 U	1 U	1 U
	Primary Result	12/17/2003	2.5 U	2.5 U	2.5 U	-	2.5 U	5 U	2.5 U	1.2 U	2.5 U	2.5 U	5 U	0.84 J	5 U	1.2 J	-	2.5 U	2.5 U	2.5 U
	Primary Result	03/05/2009	0.26 J	1 U	1 U	-	1 U	1 U	5 U	1 U	0.14 J	1 U	1 U	1 U	1 U	2.9	1 U	1 U	1 U	1 U
	Primary Result	06/24/2017	1 UJ	1 UJ	0.5 UJ	-	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	2 UJ	1 UJ	2 UJ	1 UJ	-	1 UJ	1 UJ	1 UJ
	Primary Result	11/07/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/16/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1.7	1 U	1 U	1 U	1 U
	Primary Result	11/14/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/05/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	1 U	1 U	1 U	5 U	5 U	2.5 U	1 U	1 U	1 U	1 U	1 U
MW-27B	Primary Result	02/04/2003	2.1	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	3.9	-	1 U	1 U	1 U
	Primary Result	10/21/2003	11	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	13	-	1 U	1 U	1 U
	Primary Result	10/23/2003	32	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	7.6	-	1 U	1 U	1 U
	Primary Result	03/03/2009	1 U	1 U	1 U	-	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	0.32 J	1 U	1 U	1 U	1 U
	Primary Result	10/28/2009	0.29 J	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1.6	-	1 U	1 U	1 U
	Primary Result	07/18/2011	0.28 J	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	7.9	-	1 U	1 U	1 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Benzene	Bromobenzene	Bromodichloromethane	Bromoethane (Ethyl bromide)	Bromoform	Bromomethane (Methyl Bromide)	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorobromomethane	Chloroethane	Chloroform (Trichloromethane)	Chloromethane (Methyl Chloride)	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Cymene (p-Isopropyltoluene)	Dibromochloromethane	Dibromomethane
		CAS Number	71-43-2	108-86-1	75-27-4	74-96-4	75-25-2	74-83-9	75-15-0	56-23-5	108-90-7	74-97-5	75-00-3	67-66-3	74-87-3	156-59-2	10061-01-5	99-87-6	124-48-1	74-95-3
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-27B	Primary Result	06/26/2012	0.18 J	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	2.4	-	1 U	1 U	1 U
	Primary Result	11/05/2012	0.2 J	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	2.1	-	1 U	1 U	1 U
	Primary Result	05/21/2013	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	2.3	-	1 U	1 U	1 U
	Primary Result	05/20/2014	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	0.88 J	-	1 U	1 U	1 U
	Primary Result	05/20/2015	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	0.95 J	-	1 U	1 U	1 U
	Primary Result	06/02/2016	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	0.61 J	-	1 U	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/15/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/17/2019	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/16/2024	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1.7	1 U	1 U	1 U	1 U
	Field Duplicate	05/16/2024	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1.7	1 U	1 U	1 U	1 U
	Primary Result	06/05/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	1 U	1 U	1 U	5 U	5 U	2.5 U	1 U	1 U	1 U	1 U	1 U
MW-28B	Primary Result	11/04/2002	10 U	10 U	10 U	-	10 U	20 U	10 U	36	10 U	10 U	20 U	7.7 J	20 U	10 U	-	10 U	10 U	10 U
	Primary Result	02/05/2003	2.5 U	2.5 U	2.5 U	-	2.5 U	5 U	2.5 U	22	2.5 U	2.5 U	5 U	4.9	5 U	2.5 U	-	2.5 U	2.5 U	2.5 U
	Field Duplicate	02/05/2003	2.5 U	2.5 U	2.5 U	-	2.5 U	5 U	2.5 U	32	2.5 U	2.5 U	5 U	6.5	5 U	2.5 U	-	2.5 U	2.5 U	2.5 U
	Primary Result	10/23/2003	5 U	5 U	5 U	-	5 U	10 U	5 U	36	5 U	5 U	10 U	6.1	10 U	5 U	-	5 U	5 U	5 U
	Field Duplicate	10/23/2003	10 U	10 U	10 U	-	10 U	20 U	10 U	39	10 U	10 U	20 U	6.3 J	20 U	10 U	-	10 U	10 U	10 U
	Primary Result	03/04/2009	1 U	1 U	1 U	-	1 U	1 U	5 U	0.38 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Field Duplicate	03/04/2009	1 U	1 U	1 U	-	1 U	1 U	5 U	0.37 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1.1	1 U	1 U	2 U	0.92 J	2 U	1.3	-	1 U	1 U	1 U
	Primary Result	11/08/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	2.2	1 U	1 U	1 U	1 U
	Primary Result	05/15/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1.9	1 U	1 U	1 U	1 U	1 U	2.2	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1.3	1 U	2.8	1 U	1 U	1 U	1 U
	Primary Result	05/17/2019	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1.1	1 U	1 U	1 U	1 U
	Primary Result	06/03/2020	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1.1	1 U	1 U	1 U	1 U
	Primary Result	05/18/2021	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	04/06/2022	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/08/2023	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/16/2024	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/05/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	1 U	1 U	1 U	5 U	5 U	2.5 U	1 U	1 U	1 U	1 U	1 U
MW-29B	Primary Result	11/06/2002	1 U	1 U	1 U	-	1 U	2 U	1 U	0.61	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Field Duplicate	11/06/2002	1 U	1 U	1 U	-	1 U	2 U	1 U	0.52	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	02/05/2003	0.7 J	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	10/22/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Field Duplicate	10/22/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	03/04/2009	1 U	1 U	1 U	-	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	0.1 J	1 U	1 U	1 U	1 U
	Primary Result	11/11/2009	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	0.34 J	-	1 U	1 U	1 U
	Primary Result	07/19/2011	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	0.29 J	-	1 U	1 U	1 U
	Field Duplicate	07/19/2011	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	0.28 J	-	1 U	1 U	1 U
	Primary Result	06/26/2012	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	11/05/2012	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	0.19 J	-	1 U	1 U	1 U
	Primary Result	05/21/2013	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	0.16 J	-	1 U	1 U	1 U
	Primary Result	05/20/2014	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	05/19/2015	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	06/01/2016	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Field Duplicate	06/20/2017	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/15/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 UJ	1 UJ	-	1 UJ	5 U	5 U	1 UJ	1 UJ	1 UJ	1 U	1 UJ	1 U	1 UJ	1 U	1 UJ	1 U	1 UJ
	Primary Result	05/17/2019	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/15/2024	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/05/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	1 U	1 U	1 U	5 U	5 U	2.5 U	1 U	1 U	1 U	1 U	1 U
MW-30B	Primary Result	10/23/2003	1	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	03/03/2009	1 U	1 U	1 U	-	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	10/28/2009	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Field Duplicate	10/28/2009	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
MW-31	Primary Result	11/04/2003	0.5 J	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	8.1	-	1 U	1 U	1 U
	Primary Result	10/27/2009	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	2.4	-	1 U	1 U	1 U
	Primary Result	07/19/2011	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1.5	-	1 U	1 U	1 U
	Primary Result	06/26/2012	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1.8	-	1 U	1 U	1 U
	Primary Result	11/05/2012	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	3.2	-	1 U	1 U	1 U
	Primary Result	05/21/2013	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	0.63 J	-	1 U	1 U	1 U
	Primary Result	05/20/2014	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1.1	-	1 U	1 U	1 U
	Primary Result	05/19/2015	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Benzene	Bromobenzene	Bromodichloromethane	Bromoethane (Ethyl bromide)	Bromoform	Bromomethane (Methyl Bromide)	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorobromomethane	Chloroethane	Chloroform (Trichloromethane)	Chloromethane (Methyl Chloride)	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Cymene (p-Isopropyltoluene)	Dibromochloromethane	Dibromomethane
		CAS Number	71-43-2	108-86-1	75-27-4	74-96-4	75-25-2	74-83-9	75-15-0	56-23-5	108-90-7	74-97-5	75-00-3	67-66-3	74-87-3	156-59-2	10061-01-5	99-87-6	124-48-1	74-95-3
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-31	Primary Result	06/01/2016	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	0.94 J	-	1 U	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1.8	-	1 U	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	4.7	1 U	1 U	1 U	1 U
	Primary Result	05/15/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	3.1	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1.4	1 U	1 U	4.3	1 U	1 U	1 U	1 U
	Primary Result	05/17/2019	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	7.1	1 U	1 U	1 U	1 U
	Primary Result	06/03/2020	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5	1 U	1 U	1 U	1 U
	Primary Result	05/18/2021	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1.9	1 U	1 U	1 U	1 U
	Primary Result	04/06/2022	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/08/2023	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1.3	1 U	1 U	1 U	1 U
	Primary Result	05/15/2024	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	3	1 U	1 U	1 U	1 U
	Primary Result	06/04/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	1 U	1 U	1 U	5 U	5 U	2.5 U	3.31	1 U	1 U	1 U	1 U
MW-31B	Primary Result	09/09/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	10/22/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	10/27/2009	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	07/19/2011	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	06/26/2012	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	11/05/2012	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	05/21/2013	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	05/20/2014	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	05/19/2015	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1.2	-	1 U	1 U	1 U
	Primary Result	06/01/2016	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/15/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/17/2019	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/03/2020	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/18/2021	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	04/06/2022	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/08/2023	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/15/2024	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/04/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	1 U	1 U	1 U	5 U	5 U	2.5 U	1 U	1 U	1 U	1 U	1 U
MW-32B	Primary Result	09/12/2003	1 UJ	1 UJ	1 UJ	-	1 UJ	2 UJ	1 UJ	0.5 UJ	1 UJ	1 UJ	2 UJ	0.56 J	2 UJ	1 UJ	-	1 UJ	1 UJ	1 UJ
	Field Duplicate	09/12/2003	1 UJ	1 UJ	1 UJ	-	1 UJ	2 UJ	1 UJ	0.5 UJ	1 UJ	1 UJ	2 UJ	0.57 J	2 UJ	1 UJ	-	1 UJ	1 UJ	1 UJ
	Primary Result	10/22/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	03/03/2009	1 U	1 U	1 U	-	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	10/27/2009	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
MW-33B	Primary Result	09/12/2003	1 UJ	1 UJ	1 UJ	-	1 UJ	2 UJ	1 UJ	0.5 UJ	1 UJ	1 UJ	2 UJ	1 UJ	2 UJ	1 UJ	-	1 UJ	1 UJ	1 UJ
	Primary Result	10/22/2003	0.32 J	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	03/03/2009	1 U	1 U	1 U	-	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	10/27/2009	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/05/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	1 U	1 U	1 U	5 U	5 U	2.5 U	1 U	1 U	1 U	1 U	1 U
MW-34B	Primary Result	10/28/2009	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	2	2 U	18	-	1 U	1 U	1 U
	Primary Result	07/19/2011	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	82	-	1 U	1 U	1 U
	Primary Result	06/26/2012	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	78	-	1 U	1 U	1 U
	Primary Result	11/05/2012	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	74	-	1 U	1 U	1 U
	Primary Result	05/21/2013	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	59	-	1 U	1 U	1 U
	Primary Result	05/20/2014	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	49	-	1 U	1 U	1 U
	Primary Result	05/19/2015	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	42	-	1 U	1 U	1 U
	Primary Result	06/01/2016	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	23	-	1 U	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	9	-	1 U	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	7.5	1 U	1 U	1 U	1 U
	Primary Result	05/15/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	2.3	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1	1 U	1 U	11.2	1 U	1 U	1 U	1 U
	Primary Result	05/17/2019	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1.1	1 U	1 U	1 U	1 U
	Primary Result	05/15/2024	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	28.8	1 U	1 U	1 U	1 U
	Primary Result	06/05/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	1 U	1 U	1 U	5 U	5 U	2.5 U	59.6	1 U	1 U	1 U	1 U
MW-35B	Primary Result	10/30/2009	20 U	20 U	10 U	-	20 UJ	40 U	40 U	52 J	36 J	20 U	40 U	190 J	40 U	120 J	-	20 U	20 U	20 U
	Primary Result	05/20/2015	1 U	1 U	0.5 U	-	1 U	2 U	2 U	0.86 J	0.51 J	1 U	2 U	0.89 J	2 U	8	-	1 U	1 U	1 U
	Primary Result	06/02/2016	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	0.41 J	-	1 U	1 U	1 U
	Primary Result	06/24/2017	1 UJ	1 UJ	0.5 UJ	-	1 UJ	2 UJ	2 UJ	1.1 J	0.2 J	1 UJ	2 UJ	1 UJ	2 UJ	1 J	-	1 UJ	1 UJ	1 UJ
	Primary Result	11/08/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	1.1	1.5	1 U	1 U	1 U	1 U	14.1	1 U	1 U	1 U	1 U
	Primary Result	05/16/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	3.2	1 U	1 U	1 U	1 U
MW-36B	Primary Result	10/30/2009	200 U	200 U	100 U	-	200 U	400 UJ	400 U	3900 J	390 J	200 U	400 U	600 J	400 U	4100 J	-	200 U	200 U	200 U
	Primary Result	05/16/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	7.2	1 U	1 U	1 U	1 U
	Primary Result	11/14/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	16.5	3.9	1 U	1 U	1 U	1 U	19.4	1 U	1 U	1 U	1 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Benzene	Bromobenzene	Bromodichloromethane	Bromoethane (Ethyl bromide)	Bromoform	Bromomethane (Methyl Bromide)	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorobromomethane	Chloroethane	Chloroform (Trichloromethane)	Chloromethane (Methyl Chloride)	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Cymene (p-Isopropyltoluene)	Dibromochloromethane	Dibromomethane
		CAS Number	71-43-2	108-86-1	75-27-4	74-96-4	75-25-2	74-83-9	75-15-0	56-23-5	108-90-7	74-97-5	75-00-3	67-66-3	74-87-3	156-59-2	10061-01-5	99-87-6	124-48-1	74-95-3
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-36BR	Primary Result	11/13/2023	200 U	200 U	200 U	-	200 U	1000 U	1000 U	1990	283	200 U	200 U	446	200 U	4510	200 U	200 U	200 U	200 U
	Primary Result	11/20/2023	250 U	250 U	250 U	-	250 U	1250 U	1250 U	1200	250	250 U	250 U	589	250 U	5070	250 U	250 U	250 U	250 U
MW-37B	Primary Result	10/30/2009	200 U	200 U	100 U	-	200 U	400 UJ	400 U	4500	360	200 U	400 U	1300	400 U	740	-	200 U	200 U	200 U
	Primary Result	05/16/2018	12	1 U	1 U	-	1 U	5 U	5 U	2340	124	1 U	1 U	244	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/15/2018	50.9	50 U	50 U	-	50 U	250 U	250 UJ	944	50 U	50 U	50 U	129	50 U	50 U	50 U	50 U	50 U	50 U
	Field Duplicate	11/15/2018	50 U	50 U	50 U	-	50 U	250 U	250 UJ	1180	50 U	50 U	50 U	141	50 U	50 U	50 U	50 U	50 U	50 U
	Primary Result	05/15/2024	5 U	5 U	5 U	-	5 U	25 U	25 U	74.6	5 U	5 U	5 U	8.2	5 U	10.4	5 U	5 U	5 U	5 U
	Primary Result	06/05/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	249	5.93	1 U	5 U	12.7	2.5 U	7.27	1 U	1 U	1 U	1 U
MW-38B	Primary Result	10/30/2009	500 U	500 U	250 U	-	500 UJ	1000 U	1000 U	3200	270 J	500 U	1000 U	2500	1000 U	6300	-	500 U	500 U	500 U
	Primary Result	05/16/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	122	1.9	1 U	1 U	7.9	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/15/2018	1 U	1 U	1 U	-	1 U	5 U	5 UJ	290	12.5	1 U	1 U	32.6	1 U	1 U	1 U	1 U	1 U	1 U
	Field Duplicate	11/15/2018	1 U	1 U	1 U	-	1 U	5 U	5 UJ	321	12.6	1 U	1 U	30.5	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/15/2024	1 U	1 U	1 U	-	1 U	5 U	5 U	34.1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/05/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	698	15.2	1 U	5 U	56.6	2.5 U	1 U	1 U	1 U	1 U	1 U
MW-39B	Primary Result	10/30/2009	1000 U	1000 U	500 U	-	1000 UJ	2000 U	2000 U	7600 J	4400 J	1000 U	2000 U	2300 J	2000 U	140000 J	-	1000 U	1000 U	1000 U
	Primary Result	07/18/2011	500 U	500 U	250 U	-	500 U	1000 U	1000 U	11000	3500	500 U	1000 U	1600	1000 U	110000	-	500 U	500 U	500 U
	Primary Result	11/28/2011	400 U	400 U	200 U	-	400 U	800 U	800 U	4700	2000	400 U	800 U	1500	800 U	95000	-	400 U	400 U	400 U
	Primary Result	02/22/2012	100 U	100 U	50 U	-	100 U	200 U	200 U	2900	1700	100 U	200 U	1800	200 U	83000	-	100 U	100 U	100 U
	Field Duplicate	02/22/2012	400 U	400 U	200 U	-	400 U	800 U	800 U	2900	1800	400 U	800 U	1800	800 U	80000	-	400 U	400 U	400 U
	Primary Result	06/26/2012	400 U	400 U	200 U	-	400 U	800 U	800 U	2300	1400	400 U	800 U	1600	800 U	62000	-	400 U	400 U	400 U
	Primary Result	11/05/2012	100 U	100 U	50 U	-	100 U	200 U	200 U	1800	1100	100 U	200 U	1300	200 U	39000	-	100 U	100 U	100 U
	Primary Result	03/13/2013	100 U	100 U	50 U	-	100 U	200 U	200 U	1500	1000	100 U	200 U	1400	200 U	41000	-	100 U	100 U	100 U
	Field Duplicate	03/13/2013	100 U	100 U	50 U	-	100 U	200 U	200 U	1900	1100	100 U	200 U	1600	200 U	42000	-	100 U	100 U	100 U
	Primary Result	05/21/2013	100 U	100 U	50 U	-	100 U	200 U	200 U	1200	1000	100 U	200 U	1200	200 U	35000	-	100 U	100 U	100 U
	Primary Result	05/20/2014	200 U	200 U	100 U	-	200 U	400 U	400 U	1800	940	200 U	400 U	1400	400 U	27000	-	200 U	200 U	200 U
	Primary Result	05/20/2015	100 U	100 U	50 U	-	100 U	200 U	200 U	2600	930	100 U	200 U	1700	200 U	29000	-	100 U	100 U	100 U
	Primary Result	06/02/2016	200 U	200 U	100 U	-	200 U	400 U	400 U	1500	680	200 U	400 U	1900	400 U	31000	-	200 U	200 U	200 U
	Primary Result	06/22/2017	100 U	100 U	50 U	-	100 U	200 U	200 U	1100	630	100 U	200 U	1800	200 U	32000	-	100 U	100 U	100 U
	Primary Result	11/08/2017	7.2	1 U	1 U	-	1 U	5 U	5 U	2290	500 U	1 U	1 U	2010	1 U	18800	1 U	1 U	1 U	1 U
	Primary Result	05/17/2018	500 U	500 U	500 U	-	500 U	2500 U	2500 U	2290	500 U	500 U	500 U	867	500 U	9360	500 U	500 U	500 U	500 U
	Primary Result	11/14/2018	500 U	500 U	500 U	-	500 U	2500 U	2500 UJ	1960	507	500 U	500 U	1420	500 U	18500	500 U	500 U	500 U	500 U
	Primary Result	06/05/2025	12	10 U	10 U	-	10 U	50 U	10 U	463	105	10 U	50 U	362	25 U	19500	10 U	10 U	10 U	10 U
MW-40B	Primary Result	10/29/2009	10 U	10 U	5 U	-	10 UJ	20 U	20 U	60 J	12 J	10 U	20 U	640 J	20 U	170 J	-	10 U	10 U	10 U
	Primary Result	07/18/2011	2 U	2 U	1 U	-	2 U	4 U	4 U	9.9	2.3	2 U	4 U	30	4 U	47	-	2 U	2 U	2 U
	Field Duplicate	07/18/2011	2 U	2 U	1 U	-	2 U	4 U	4 U	9.9	2.2	2 U	4 U	30	4 U	47	-	2 U	2 U	2 U
	Primary Result	06/26/2012	0.22 J	1 U	0.5 U	-	1 U	2 U	2 U	9.9	1.9	1 U	2 U	15	2 U	43	-	1 U	1 U	1 U
	Field Duplicate	06/26/2012	2 U	2 U	1 U	-	2 U	4 U	4 U	8.7	1.7 J	2 U	4 U	14	4 U	43	-	2 U	2 U	2 U
	Primary Result	11/05/2012	0.19 J	1 U	0.5 U	-	1 U	2 U	2 U	11	0.64 J	1 U	2 U	13	2 U	47	-	1 U	1 U	1 U
	Field Duplicate	11/05/2012	0.19 J	1 U	0.5 U	-	1 U	2 U	2 U	11	0.61 J	1 U	2 U	13	2 U	46	-	1 U	1 U	1 U
	Primary Result	05/21/2013	2 U	2 U	1 U	-	2 U	4 U	4 U	11	0.36 J	2 U	4 U	24	4 U	59	-	2 U	2 U	2 U
	Field Duplicate	05/21/2013	2 U	2 U	1 U	-	2 U	4 U	4 U	11	0.37 J	2 U	4 U	25	4 U	57	-	2 U	2 U	2 U
	Primary Result	05/20/2014	2 U	2 U	1 U	-	2 U	4 U	4 U	9.7	0.62 J	2 U	4 U	13	4 U	54	-	2 U	2 U	2 U
	Field Duplicate	05/20/2014	2 U	2 U	1 U	-	2 U	4 U	4 U	9.6	0.65 J	2 U	4 U	13	4 U	54	-	2 U	2 U	2 U
	Primary Result	05/20/2015	4 U	4 U	2 U	-	4 U	8 U	8 U	5.5	4 U	4 U	8 U	7.2	8 U	45	-	4 U	4 U	4 U
	Field Duplicate	05/20/2015	2 U	2 U	1 U	-	2 U	4 U	4 U	6.1	2 U	2 U	4 U	7.6	4 U	48	-	2 U	2 U	2 U
	Primary Result	06/01/2016	2 U	2 U	1 U	-	2 U	4 U	4 U	6.5	2 U	2 U	4 U	6.7	4 U	48	-	2 U	2 U	2 U
	Primary Result	06/24/2017	1 UJ	1 UJ	0.5 UJ	-	1 UJ	2 UJ	2 UJ	7.5 J	0.17 J	1 UJ	2 UJ	5.1 J	2 UJ	48 J	-	1 UJ	1 UJ	1 UJ
	Primary Result	11/08/2017	5 U	5 U	5 U	-	5 U	25 U	25 U	8.6	5 U	5 U	5 U	9.9	5 U	87.8	5 U	5 U	5 U	5 U
	Primary Result	05/16/2018	5 U	5 U	5 U	-	5 U	25 U	25 U	5 U	5 U	5 U	5 U	5 U	5 U	50.4	5 U	5 U	5 U	5 U
	Primary Result	11/12/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	21.5	1 U	1 U	1 U	10.3	1 U	89.5	1 U	1 U	1 U	1 U
	Primary Result	05/17/2019	5 U	5 U	5 U	-	5 U	25 U	25 U	9.7	5 U	5 U	5 U	6.9	5 U	65.1	5 U	5 U	5 U	5 U
	Primary Result	06/03/2020	5 U	5 U	5 U	-	5 U	25 U	25 U	10.6	5 U	5 U	5 U	7.7	5 U	73.6	5 U	5 U	5 U	5 U
	Primary Result	05/18/2021	5 U	5 U	5 U	-	5 U	25 U	25 U	22.4	5 U	5 U	5 U	16.9	5 U	81.9	5 U	5 U	5 U	5 U
	Primary Result	04/06/2022	5 U	5 U	5 U	-	5 U	25 U	25 U	33.8	5 U	5 U	5 U	15.8	5 U	89.4	5 U	5 U	5 U	5 U
	Primary Result	06/08/2023	5 U	5 U	5 U	-	5 U	25 U	25 U	21	5 U	5 U	5 U	10.5	5 U	65.1	5 U	5 U	5 U	5 U
	Primary Result	05/15/2024	5 U	5 U	5 U	-	5 U	25 U	25 U	49.1	5 U	5 U	5 U	14	5 U	94.5	5 U	5 U	5 U	5 U
	Primary Result	06/05/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	21.9	1 U	1 U	5 U	5.47	2.5 U	59.5	1 U	1 U	1 U	1 U
MW-41B	Primary Result	10/27/2009	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	0.28 J	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	05/20/2015	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	11/07/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/15/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/17/2019	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/16/2024	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/05/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	1 U	1 U	1 U	5 U	5 U	2.5 U	1 U	1 U	1 U	1 U	1 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Benzene	Bromobenzene	Bromodichloromethane	Bromoethane (Ethyl bromide)	Bromoform	Bromomethane (Methyl Bromide)	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorobromomethane	Chloroethane	Chloroform (Trichloromethane)	Chloromethane (Methyl Chloride)	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Cymene (p-Isopropyltoluene)	Dibromochloromethane	Dibromomethane
		CAS Number	71-43-2	108-86-1	75-27-4	74-96-4	75-25-2	74-83-9	75-15-0	56-23-5	108-90-7	74-97-5	75-00-3	67-66-3	74-87-3	156-59-2	10061-01-5	99-87-6	124-48-1	74-95-3
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-42B	Primary Result	05/18/2011	100 U	100 U	50 U	-	100 U	200 U	200 U	2600	100	100 U	200 U	460	200 U	4300	-	100 U	100 U	100 U
	Field Duplicate	05/18/2011	100 U	100 U	50 U	-	100 U	200 U	200 U	2000	100	100 U	200 U	410	200 U	3900	-	100 U	100 U	100 U
	Primary Result	05/16/2018	1.1	1 U	1 U	-	1 U	5 U	5 U	636	33.5	1 U	1 U	78.7	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/15/2018	20 U	20 U	20 U	-	20 U	100 U	100 UJ	797	39.4	20 U	20 U	107	20 U	20 U	20 U	20 U	20 U	20 U
	Primary Result	05/16/2024	10 U	10 U	10 U	-	10 U	50 U	50 U	659	10 U	10 U	10 U	94.1	10 U	10 U	10 U	10 U	10 U	10 U
	Primary Result	06/05/2025	1.47	1 U	1 U	-	1 U	5 U	1 U	697	40.9	1 U	5 U	97.5	2.5 U	315	1 U	1 U	1 U	1 U
MW-43B	Primary Result	05/18/2011	10 U	10 U	5 U	-	10 U	20 U	20 U	730	11	10 U	20 U	130	20 U	150	-	10 U	10 U	10 U
	Primary Result	05/16/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	208	7.1	1 U	1 U	21.3	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	11/15/2018	5 U	5 U	5 U	-	5 U	25 U	25 U	150	5 U	5 U	5 U	32.7	5 U	5 U	5 U	5 U	5 U	5 U
	Primary Result	05/16/2024	50 U	50 U	50 U	-	50 U	250 U	250 U	192	50 U	50 U	50 U	50 U	50 U	176	50 U	50 U	50 U	50 U
	Primary Result	06/05/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	8.85	1.39	1 U	5 U	42.3	2.5 U	43.4	1 U	1 U	1 U	1 U
MW-44B	Primary Result	05/23/2011	400 U	400 U	200 U	-	400 U	800 U	800 U	4500	360 J	400 U	800 U	450	800 U	400	-	400 U	400 U	400 U
	Primary Result	07/18/2011	200 U	200 U	100 U	-	200 U	400 U	400 U	4600	290	200 U	400 U	990	400 U	570	-	200 U	200 U	200 U
	Primary Result	11/28/2011	4.8	1 U	0.89	-	1 U	2 U	2 U	290	37	1 U	2 U	260	2 U	1 U	-	1 U	0.41 J	1 U
	Primary Result	02/22/2012	5.4	2 U	0.49 J	-	2 U	4 U	4 U	580	56	2 U	4 U	200	4 U	2 U	-	2 U	2 U	2 U
	Primary Result	06/25/2012	4.8 J	5 U	1.5 J	-	5 U	10 U	10 U	910	48	5 U	10 U	140	10 U	5 U	-	5 U	5 U	5 U
	Primary Result	11/05/2012	5 J	10 U	5 U	-	10 U	20 U	20 U	890	38	10 U	20 U	130	20 U	10 U	-	10 U	10 U	10 U
	Primary Result	03/13/2013	5.6	1 U	0.46 J	-	1 U	2 U	2 U	1100	44	1 U	2 U	140	0.42 J	1 U	-	1 U	1 U	1 U
	Primary Result	05/22/2013	6.4 J	10 U	5 U	-	10 U	20 U	20 U	1700	75	10 U	20 U	130	20 U	10 U	-	10 U	10 U	10 U
	Primary Result	05/20/2014	5.5	5 U	2.5 U	-	5 U	10 U	4.2 J	1300	64	5 U	10 U	98	10 U	5 U	-	5 U	5 U	5 U
	Primary Result	05/20/2015	6.1 J	10 U	5 U	-	10 U	20 U	20 U	1500	67	10 U	20 U	99	20 U	10 U	-	10 U	10 U	10 U
	Primary Result	06/02/2016	5.1	1 U	1.2	-	1 U	2 U	2 U	1300	67	1 U	2 U	84	2 U	1 U	-	1 U	0.64 J	1 U
	Primary Result	06/24/2017	14 J	4 UJ	0.81 J	-	4 UJ	8 UJ	8 UJ	3100 J	210 J	4 UJ	8 UJ	230 J	8 UJ	4 UJ	-	4 UJ	4 UJ	4 UJ
	Primary Result	11/07/2017	8.1	1 U	1 U	-	1 U	5 U	5 U	1180	79	1 U	1 U	140	1 U	1	1 U	1 U	1 U	1 U
	Primary Result	05/16/2018	10.4	10 U	10 U	-	10 U	50 U	50 U	2330	157	10 U	10 U	197	10 U	10 U	10 U	10 U	10 U	10 U
	Primary Result	11/15/2018	20 U	20 U	20 U	-	20 U	100 U	100 U	1120	76.8	20 U	20 U	235	20 U	20 U	20 U	20 U	20 U	20 U
	Primary Result	05/16/2019	20 U	20 U	20 U	-	20 U	100 U	100 U	2300	151	20 U	20 U	182	20 U	136	20 U	20 U	20 U	20 U
	Primary Result	06/03/2020	20 U	20 U	20 U	-	20 U	100 U	100 U	3370	36.5	20 U	20 U	287	20 U	1120	20 U	20 U	20 U	20 U
	Primary Result	05/18/2021	500 U	500 U	500 U	-	500 U	2500 U	2500 U	3420	500 U	500 U	500 U	500 U	500 U	1750	500 U	500 U	500 U	500 U
	Primary Result	04/05/2022	500 U	500 U	500 U	-	500 U	2500 U	2500 U	1860	500 U	500 U	500 U	500 U	500 U	1840	500 U	500 U	500 U	500 U
	Primary Result	06/06/2023	50 U	50 U	50 U	-	50 U	250 U	250 U	167	50 U	50 U	50 U	99.3	50 U	879	50 U	50 U	50 U	50 U
	Primary Result	05/14/2024	50 U	50 U	50 U	-	50 U	250 U	250 U	692	50 U	50 U	50 U	213	50 U	2110	50 U	50 U	50 U	50 U
	Primary Result	06/04/2025	6.02	1 U	1 U	-	1 U	5 U	2.43	912	20.8	1 U	5 U	167	2.5 U	2120	1 U	1 U	1 U	1 U
MW-45B	Primary Result	05/23/2011	400 U	400 U	200 U	-	400 U	800 U	800 U	1200	130 J	400 U	800 U	510	800 U	900	-	400 U	400 U	400 U
	Primary Result	07/18/2011	200 U	200 U	100 U	-	200 U	400 U	400 U	1700	89 J	200 U	400 U	470	400 U	1100	-	200 U	200 U	200 U
	Primary Result	11/28/2011	100 U	100 U	50 U	-	100 U	200 U	200 U	1900	87 J	100 U	200 U	260	200 U	2600	-	100 U	100 U	100 U
	Primary Result	02/22/2012	100 U	100 U	50 U	-	100 U	200 U	200 U	1800	36 J	100 U	200 U	210	200 U	3100	-	100 U	100 U	100 U
	Primary Result	06/25/2012	200 U	200 U	100 U	-	200 U	400 U	400 U	2400	100 J	200 U	400 U	250	400 U	4900	-	200 U	200 U	200 U
	Primary Result	11/05/2012	100 U	100 U	50 U	-	100 U	200 U	200 U	1400	77 J	100 U	200 U	120	200 U	2300	-	100 U	100 U	100 U
	Primary Result	03/13/2013	100 U	100 U	50 U	-	100 U	200 U	200 U	2000	33 J	100 U	200 U	160	200 U	3400	-	100 U	100 U	100 U
	Primary Result	05/22/2013	4.5 J	10 U	5 U	-	10 U	20 U	20 U	2100	120	10 U	20 U	150	20 U	240	-	10 U	10 U	10 U
	Primary Result	05/20/2014	200 U	200 U	100 U	-	200 U	400 U	400 U	2900	59 J	200 U	400 U	250	400 U	7000	-	200 U	200 U	200 U
	Primary Result	05/19/2015	100 U	100 U	50 U	-	100 U	200 U	200 U	3000	40 J	100 U	200 U	410	200 U	6800	-	100 U	100 U	100 U
	Primary Result	06/02/2016	200 U	200 U	100 U	-	200 U	400 U	400 U	3400	37 J	200 U	400 U	350	400 U	9100	-	200 U	200 U	200 U
	Primary Result	06/24/2017	40 UJ	40 UJ	20 UJ	-	40 UJ	80 UJ	80 UJ	2300 J	17 J	40 UJ	80 UJ	260 J	80 UJ	4100 J	-	40 UJ	40 UJ	40 UJ
	Primary Result	11/08/2017	1000 U	1000 U	1000 U	-	1000 U	5000 U	5000 U	2320	1000 U	1000 U	1000 U	1000 U	1000 U	21900	1000 U	1000 U	1000 U	1000 U
	Primary Result	05/16/2018	250 U	250 U	250 U	-	250 U	1250 U	1250 U	1570	250 U	250 U	250 U	280	250 U	6820	250 U	250 U	250 U	250 U
	Primary Result	11/15/2018	500 U	500 U	500 U	-	500 U	2500 U	2500 U	2350	500 U	500 U	500 U	2410	500 U	10300	500 U	500 U	500 U	500 U
	Primary Result	05/16/2019	500 U	500 U	500 U	-	500 U	2500 U	2500 U	1860	500 U	500 U	500 U	500 U	500 U	7200	500 U	500 U	500 U	500 U
	Primary Result	06/03/2020	500 U	500 U	500 U	-	500 U	2500 U	2500 U	1930	500 U	500 U	500 U	500 U	500 U	7490	500 U	500 U	500 U	500 U
	Primary Result	05/18/2021	500 U	500 U	500 U	-	500 U	2500 U	2500 U	2370	500 U	500 U	500 U	500 U	500 U	8560	500 U	500 U	500 U	500 U
	Primary Result	04/05/2022	500 U	500 U	500 U	-	500 U	2500 U	2500 U	1180	500 U	500 U	500 U	500 U	500 U	6330	500 U	500 U	500 U	500 U
	Primary Result	06/06/2023	500 U	500 U	500 U	-	500 U	2500 U	2500 U	1150	500 U	500 U	500 U	500 U	500 U	6070	500 U	500 U	500 U	500 U
	Primary Result	05/14/2024	500 U	500 U	500 U	-	500 U	2500 U	2500 U	2030	500 U	500 U	500 U	500 U	500 U	8310	500 U	500 U	500 U	500 U
	Primary Result	06/04/2025	10 U	10 U	10 U	-	10 U	50 U	10 U	2880	24.6	10 U	50 U	332	25 U	9010	10 U	10 U	10 U	10 U
MW-46B	Primary Result	05/23/2011	400 U	400 U	200 U	-	400 U	800 U	800 U	4000	660	400 U	800 U	240 J	800 U	58000	-	400 U	400 U	400 U
	Primary Result	07/18/2011	200 U	200 U	100 U	-	200 U	400 U	400 U	870	680	200 U	400 U	280	400 U	60000	-	200 U	200 U	200 U
	Primary Result	11/28/2011	400 U	400 U	200 U	-	400 U	800 U	800 U	1600	880	400 U	800 U	550	800 U	77000	-	400 U	400 U	400 U
	Field Duplicate	11/28/2011	400 U	400 U	200 U	-	400 U	800 U	800 U	1500	930	400 U	800 U	550	800 U	75000	-	400 U	400 U	400 U
	Primary Result	02/22/2012	200 U	200 U	100 U	-	200 U	400 U	400 U	660	640	200 U	400 U	290	400 U	56000	-	200 U	200 U	200 U
	Primary Result	06/26/2012	500 U	500 U	250 U	-	500 U	1000 U	1000 U	1200	990	500 U	1000 U	850	1000 U	75000	-	500 U	500 U	500 U
	Primary Result	11/05/2012	200 U	200 U	100 U	-	200 U	400 U	400 U	1600	1100	200 U	400 U	950	400 U	76000	-	200 U	200 U	200 U
	Primary Result	03/13/2013	200 U	200 U	100 U	-	200 U	400 U	400 U	340	600	200 U	400 U	350	400 U	48000	-	200 U	200 U	200 U
	Primary Result	05/22/2013	100 U	100 U	50 U	-	100 U	200 U	200 U	280	610	100 U	200 U	310	200 U	42000	-	100 U	100 U	100 U
	Primary Result	05/20/2014	200 U	200 U	100 U	-	200 U	400 U	400 U	400	690	200 U	400 U	380	400 U	43000	-	200 U	200 U	200 U
	Primary Result	05/20/2015	100 U	100 U	50 U	-	100 U	200 U	200 U	360	480	100 U	200 U	280	200 U	44000	-	100 U	100 U	100 U
	Primary Result	06/02/2016	200 U	200 U	100 U	-	200 U	400 U	400 U	540	450	200 U	400 U	270	400 U	45000	-	200 U	200 U	200 U
	Primary Result	06/22/2017	100 U	100 U	50 U	-	100 U	200 U	200 U	740	300	100 U	200 U	430	200 U	39000	-	100 U	100 U	100 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Benzene	Bromobenzene	Bromodichloromethane	Bromoethane (Ethyl bromide)	Bromoform	Bromomethane (Methyl Bromide)	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorobromomethane	Chloroethane	Chloroform (Trichloromethane)	Chloromethane (Methyl Chloride)	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Cymene (p-Isopropyltoluene)	Dibromochloromethane	Dibromomethane
		CAS Number	71-43-2	108-86-1	75-27-4	74-96-4	75-25-2	74-83-9	75-15-0	56-23-5	108-90-7	74-97-5	75-00-3	67-66-3	74-87-3	156-59-2	10061-01-5	99-87-6	124-48-1	74-95-3
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-46B	Primary Result	11/08/2017	200 U	200 U	200 U	-	200 U	1000 U	1000 U	1060	243	200 U	200 U	395	200 U	29300	200 U	200 U	200 U	200 U
	Primary Result	05/17/2018	250 U	250 U	250 U	-	250 U	1250 U	1250 U	362	302	250 U	250 U	250 U	250 U	31900	250 U	250 U	250 U	250 U
	Primary Result	11/14/2018	250 U	250 U	250 U	-	250 U	1250 U	1250 UJ	250 U	277	250 U	250 U	250 U	250 U	29500	250 U	250 U	250 U	250 U
	Primary Result	05/16/2024	50 U	50 U	50 U	-	50 U	250 U	250 U	429	50 U	50 U	50 U	390	50 U	27600	50 U	50 U	50 U	50 U
	Primary Result	06/04/2025	2.5	1 U	1 U	-	1 U	5 U	1 U	356	131	1 U	5 U	38.5	2.5 U	6950	1 U	1 U	1 U	1 U
MW-47B	Primary Result	06/20/2017	40 U	40 U	20 U	-	40 U	80 U	80 U	190	23 J	40 U	80 U	100	80 U	160	-	40 U	40 U	40 U
	Primary Result	06/23/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Primary Result	11/08/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	20.3	3.8	1 U	1 U	16.5	1 U	79.1	1 U	1 U	1 U	1 U
	Primary Result	05/15/2018	20 U	20 U	20 U	-	20 U	100 U	100 U	31.8	20 U	20 U	20 U	20 U	20 U	86.9	20 U	20 U	20 U	20 U
	Primary Result	11/15/2018	20 U	20 U	20 U	-	20 U	100 U	100 U	20 U	20 U	20 U	20 U	81.4	20 U	92.2	20 U	20 U	20 U	20 U
	Primary Result	05/16/2019	20 U	20 U	20 U	-	20 U	100 U	100 U	55.8	20 U	20 U	20 U	20 U	20 U	147	20 U	20 U	20 U	20 U
	Primary Result	06/03/2020	20 U	20 U	20 U	-	20 U	100 U	100 U	37.3	20 U	20 U	20 U	20 U	20 U	162	20 U	20 U	20 U	20 U
	Primary Result	05/19/2021	2 U	2 U	2 U	-	2 U	10 U	10 U	4.6	2 U	2 U	2 U	2.7	2 U	21	2 U	2 U	2 U	2 U
	Primary Result	04/06/2022	5 U	5 U	5 U	-	5 U	25 U	25 U	52	5 U	5 U	5 U	27	5 U	149	5 U	5 U	5 U	5 U
	Primary Result	06/08/2023	25 U	25 U	25 U	-	25 U	125 U	125 U	204	25 U	25 U	25 U	162	25 U	472	25 U	25 U	25 U	25 U
	Primary Result	05/16/2024	100 U	100 U	100 U	-	100 U	500 U	500 U	802	100 U	100 U	100 U	155	100 U	897	100 U	100 U	100 U	100 U
	Primary Result	06/04/2025	3.59	1 U	1.06	-	1 U	5 U	1.15	637	20.7	1 U	5 U	123	2.5 U	802	1 U	1 U	1 U	1 U
MW-48B	Primary Result	06/20/2017	40 U	40 U	20 U	-	40 U	80 U	80 U	250	18 J	40 U	80 U	160	80 U	540	-	40 U	40 U	40 U
	Primary Result	06/22/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Primary Result	11/08/2017	1	1 U	1 U	-	1 U	5 U	5 U	80.5	12.6	1 U	1 U	184	1 U	466	1 U	1 U	1 U	1 U
	Primary Result	05/15/2018	50 U	50 U	50 U	-	50 U	250 U	250 U	121	50 U	50 U	50 U	127	50 U	501	50 U	50 U	50 U	50 U
	Primary Result	11/15/2018	10 U	10 U	10 U	-	10 U	50 U	50 U	22.4	10 U	10 U	10 U	38.4	10 U	170	10 U	10 U	10 U	10 U
	Primary Result	05/16/2019	20 U	20 U	20 U	-	20 U	100 U	100 U	35.6	20 U	20 U	20 U	33.9	20 U	161	20 U	20 U	20 U	20 U
	Field Duplicate	05/16/2019	20 U	20 U	20 U	-	20 U	100 U	100 U	36.3	20 U	20 U	20 U	34.2	20 U	163	20 U	20 U	20 U	20 U
	Primary Result	06/03/2020	20 U	20 U	20 U	-	20 U	100 U	100 U	53	20 U	20 U	20 U	33.2	20 U	190	20 U	20 U	20 U	20 U
	Field Duplicate	06/03/2020	20 U	20 U	20 U	-	20 U	100 U	100 U	55.2	20 U	20 U	20 U	32.4	20 U	186	20 U	20 U	20 U	20 U
	Primary Result	05/19/2021	20 U	20 U	20 U	-	20 U	100 U	100 U	21.3	20 U	20 U	20 U	20 U	20 U	78.9	20 U	20 U	20 U	20 U
	Field Duplicate	05/19/2021	20 U	20 U	20 U	-	20 U	100 U	100 U	23	20 U	20 U	20 U	20 U	20 U	80.7	20 U	20 U	20 U	20 U
	Primary Result	04/06/2022	20 U	20 U	20 U	-	20 U	100 U	100 U	20 U	20 U	20 U	20 U	20 U	20 U	74.7	20 U	20 U	20 U	20 U
	Field Duplicate	04/06/2022	20 U	20 U	20 U	-	20 U	100 U	100 U	40.4	20 U	20 U	20 U	21.7	20 U	146	20 U	20 U	20 U	20 U
	Primary Result	06/08/2023	20 U	20 U	20 U	-	20 U	100 U	100 U	104	20 U	20 U	20 U	26	20 U	221	20 U	20 U	20 U	20 U
	Primary Result	05/16/2024	20 U	20 U	20 U	-	20 U	100 U	100 U	20 U	20 U	20 U	20 U	20 U	20 U	59.1	20 U	20 U	20 U	20 U
	Primary Result	06/04/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	5 U	1 U	1 U	5 U	5 U	2.5 U	175	1 U	1 U	1 U	1 U
MW-48C	Primary Result	06/20/2017	10 U	10 U	5 U	-	10 U	20 U	20 U	210	5.9 J	10 U	20 U	35	20 U	140	-	10 U	10 U	10 U
	Primary Result	06/22/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Primary Result	11/08/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	7.9	1.7	1 U	1 U	25.7	1 U	67.2	1 U	1 U	1 U	1 U
	Primary Result	05/15/2018	10 U	10 U	10 U	-	10 U	50 U	50 U	10 U	10 U	10 U	10 U	16.2	10 U	48.9	10 U	10 U	10 U	10 U
	Field Duplicate	05/15/2018	10 U	10 U	10 U	-	10 U	50 U	50 U	10 U	10 U	10 U	10 U	16.1	10 U	44.4	10 U	10 U	10 U	10 U
	Primary Result	11/15/2018	10 U	10 U	10 U	-	10 U	50 U	50 U	10 U	10 U	10 U	10 U	50.8	10 U	45.3	10 U	10 U	10 U	10 U
	Field Duplicate	11/15/2018	10 U	10 U	10 U	-	10 U	50 U	50 U	10 U	10 U	10 U	10 U	47.5	10 U	43.4	10 U	10 U	10 U	10 U
	Primary Result	05/16/2019	10 U	10 U	10 U	-	10 U	50 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U	36.5	10 U	10 U	10 U	10 U
	Primary Result	06/03/2020	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	4.6	1 U	44.8	1 U	1 U	1 U	1 U
	Primary Result	05/19/2021	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	2.2	1 U	33.9	1 U	1 U	1 U	1 U
	Primary Result	04/06/2022	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1.8	1 U	29.5	1 U	1 U	1 U	1 U
	Primary Result	06/08/2023	20 U	20 U	20 U	-	20 U	100 U	100 U	28.1	20 U	20 U	20 U	20 U	20 U	75.8	20 U	20 U	20 U	20 U
	Field Duplicate	06/08/2023	20 U	20 U	20 U	-	20 U	100 U	100 U	33.7	20 U	20 U	20 U	22.2	20 U	75	20 U	20 U	20 U	20 U
	Primary Result	05/16/2024	20 U	20 U	20 U	-	20 U	100 U	100 U	20 U	20 U	20 U	20 U	20 U	20 U	174	20 U	20 U	20 U	20 U
	Field Duplicate	05/16/2024	20 U	20 U	20 U	-	20 U	100 U	100 U	20 U	20 U	20 U	20 U	20 U	20 U	163	20 U	20 U	20 U	20 U
	Primary Result	06/04/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	1 U	1 U	1 U	5 U	5 U	2.5 U	179	1 U	1 U	1 U	1 U
MW-49B	Primary Result	06/20/2017	0.2 J	1 U	0.5 U	-	1 U	2 U	2 U	24	1.6	1 U	2 U	17	2 U	65	-	1 U	1 U	1 U
	Primary Result	06/22/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Primary Result	11/07/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	11.7	1.2	1 U	1 U	15.1	1 U	58	1 U	1 U	1 U	1 U
	Primary Result	05/15/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	6.9	1 U	1 U	1 U	8.8	1 U	40.6	1 U	1 U	1 U	1 U
	Primary Result	11/15/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	32.3	1.9	1 U	1 U	10.6	1 U	65.5	1 U	1 U	1 U	1 U
	Primary Result	05/16/2019	10 U	10 U	10 U	-	10 U	50 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U	31.2	10 U	10 U	10 U	10 U
	Primary Result	06/03/2020	1 U	1 U	1 U	-	1 U	5 U	5 U	4.6	1 U	1 U	1 U	1.9	1 U	30.1	1 U	1 U	1 U	1 U
	Primary Result	05/18/2021	1 U	1 U	1 U	-	1 U	5 U	5 U	1.1	1 U	1 U	1 U	1 U	1 U	9	1 U	1 U	1 U	1 U
	Primary Result	04/06/2022	1 U	1 U	1 U	-	1 U	5 U	5 U	1.1	1 U	1 U	1 U	1 U	1 U	5.6	1 U	1 U	1 U	1 U
	Primary Result	06/08/2023	1 U	1 U	1 U	-	1 U	5 U	5 U	3.8	1 U	1 U	1 U	2.7	1 U	10.7	1 U	1 U	1 U	1 U
	Primary Result	05/16/2024	1 U	1 U	1 U	-	1 U	5 U	5 U	7	1 U	1 U	1 U	3.1	1 U	17.1	1 U	1 U	1 U	1 U
	Field Duplicate	06/04/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	5.7	1 U	1 U	5 U	5 U	2.5 U	20.2	1 U	1 U	1 U	1 U
	Primary Result	06/05/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	5.32	1 U	1 U	5 U	5 U	2.5 U	20.5	1 U	1 U	1 U	1 U
MW-50B	Primary Result	06/06/2018	15.8	1 U	1 U	-	1 U	5 U	5 U	3750 J	250 U	1 U	1.4	161	1 U	15.4	1 U	1 U	1 U	1 U
	Field Duplicate	06/06/2018	200 U	200 U	200 U	-	200 U	1000 U	1000 U	4380 J	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
	Primary Result	11/12/2018	10 U	10 U	10 U	-	10 U	50 U	50 U	327	76.9	10 U	10 U	50	10 U	10 U	10 U	10 U	10 U	10 U
	Field Duplicate	11/12/2018	25 U	25 U	25 U	-	25 U	125 U	125 U	299	75.1	25 U	25 U	48.7	25 U	25 U	25 U	25 U	25 U	25 U
	Primary Result	06/03/2020	10 U	10 U	10 U	-	10 U	50 U	50 U	301	91.2	10 U	10 U	66	10 U	9710	10 U	10 U	10 U	10 U
	Primary Result	05/19/2021	100 U	100 U	100 U	-	100 U	500 U	500 U	199	100 U	100 U	100 U	100 U	100 U	5740	100 U	100 U	100 U	100 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Benzene	Bromobenzene	Bromodichloromethane	Bromoethane (Ethyl bromide)	Bromoform	Bromomethane (Methyl Bromide)	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorobromomethane	Chloroethane	Chloroform (Trichloromethane)	Chloromethane (Methyl Chloride)	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Cymene (p-Isopropyltoluene)	Dibromochloromethane	Dibromomethane
		CAS Number	71-43-2	108-86-1	75-27-4	74-96-4	75-25-2	74-83-9	75-15-0	56-23-5	108-90-7	74-97-5	75-00-3	67-66-3	74-87-3	156-59-2	10061-01-5	99-87-6	124-48-1	74-95-3
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-50B	Primary Result	04/06/2022	100 U	100 U	100 U	-	100 U	500 U	500 U	165	100 U	100 U	100 U	100 U	100 U	3010	100 U	100 U	100 U	100 U
	Primary Result	06/08/2023	100 U	100 U	100 U	-	100 U	500 U	500 U	160	100 U	100 U	100 U	100 U	100 U	4120	100 U	100 U	100 U	100 U
	Primary Result	05/16/2024	100 U	100 U	100 U	-	100 U	500 U	500 U	150	100 U	100 U	100 U	100 U	100 U	1620	100 U	100 U	100 U	100 U
	Primary Result	06/05/2025	1.89	1 U	1 U	-	1 U	5 U	1 U	149	39.1	1 U	5 U	36.1	2.5 U	3260	1 U	1 U	1 U	1 U
MW-51B	Primary Result	06/06/2018	2.5	1 U	1.6	-	1 U	5 U	5 U	248 J	48.1	1 U	1 U	65.5	1 U	186	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	50 U	50 U	50 U	-	50 U	250 U	250 U	152	50 U	50 U	50 U	296 J	50 U	187	50 U	50 U	50 U	50 U
	Field Duplicate	11/12/2018	100 U	100 U	100 U	-	100 U	500 U	500 U	152	100 U	100 U	100 U	103 J	100 U	216	100 U	100 U	100 U	100 U
	Primary Result	05/16/2019	50 U	50 U	50 U	-	50 U	250 U	250 U	246	50 U	50 U	50 U	113	50 U	602	50 U	50 U	50 U	50 U
	Primary Result	06/02/2020	50 U	50 U	50 U	-	50 U	250 U	250 U	271	50 U	50 U	50 U	76.5	50 U	342	50 U	50 U	50 U	50 U
	Primary Result	05/18/2021	50 U	50 U	50 U	-	50 U	250 U	250 U	342	50 U	50 U	50 U	78.3	50 U	360	50 U	50 U	50 U	50 U
	Primary Result	04/05/2022	50 U	50 U	50 U	-	50 U	250 U	250 U	278	50 U	50 U	50 U	63.7	50 U	318	50 U	50 U	50 U	50 U
	Primary Result	06/06/2023	50 U	50 U	50 U	-	50 U	250 U	250 U	222	50 U	50 U	50 U	69.6	50 U	514	50 U	50 U	50 U	50 U
	Primary Result	05/14/2024	50 U	50 U	50 U	-	50 U	250 U	250 U	450	50 U	50 U	50 U	82.6	50 U	681	50 U	50 U	50 U	50 U
	Primary Result	06/04/2025	20 U	20 U	20 U	-	20 U	100 U	20 U	694	20.3	20 U	100 U	100 U	50 U	784	20 U	20 U	20 U	20 U
MW-52B	Primary Result	06/08/2018	500 U	500 U	500 U	-	500 U	2500 U	2500 U	14700	1040	500 U	500 U	2260	500 U	6770	500 U	500 U	500 U	500 U
	Primary Result	11/12/2018	5000 U	5000 U	5000 U	-	5000 U	25000 U	25000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U
	Primary Result	05/16/2019	2500 U	2500 U	2500 U	-	2500 U	12500 U	12500 U	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U
	Primary Result	06/02/2020	1000 U	1000 U	1000 U	-	1000 U	5000 U	5000 U	3440	1000 U	1000 U	1000 U	1000 U	1000 U	5100	1000 U	1000 U	1000 U	1000 U
	Primary Result	05/18/2021	1000 U	1000 U	1000 U	-	1000 U	5000 U	5000 U	2450	1000 U	1000 U	1000 U	1000 U	1000 U	6600	1000 U	1000 U	1000 U	1000 U
	Primary Result	04/05/2022	1000 U	1000 U	1000 U	-	1000 U	5000 U	5000 U	1580	1000 U	1000 U	1000 U	1000 U	1000 U	7970	1000 U	1000 U	1000 U	1000 U
	Primary Result	06/06/2023	1000 U	1000 U	1000 U	-	1000 U	5000 U	5000 U	1040	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U
	Primary Result	05/14/2024	1000 U	1000 U	1000 U	-	1000 U	5000 U	5000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	13800	1000 U	1000 U	1000 U	1000 U
	Primary Result	06/04/2025	20 U	20 U	20 U	-	20 U	100 U	20 U	2240	261	20 U	100 U	191	50 U	785	20 U	20 U	20 U	20 U
MW-52C	Primary Result	06/08/2018	1 U	1 U	14.4	-	2	5 U	5 U	6.7	1 U	1 U	1 U	17.4	1 U	2.1	1 U	1 U	10	1 U
	Primary Result	07/02/2018	1.1	1 U	1 U	-	1 U	5 U	5 U	1 U	8.5	1 U	1 U	56.3	1 U	58.9	1 U	1 U	1 U	1 U
	Primary Result	10/01/2018	20 U	20 U	20 U	-	20 U	100 U	100 U	20 U	20 U	20 U	20 U	27.1	20 U	2820	20 U	20 U	20 U	20 U
	Field Duplicate	10/01/2018	20 U	20 U	20 U	-	20 U	100 U	100 U	20 U	20 U	20 U	20 U	25.6	20 U	2660	20 U	20 U	20 U	20 U
MW-53B1	Primary Result	06/08/2018	2.9	1 U	1.7	-	1 U	5 U	5 U	13.4	1 U	1 U	1 U	5.6	1 U	10.4	1 U	1 U	1.6	1 U
	Primary Result	07/02/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1.2	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/16/2019	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1.9	1 U	1 U	1 U	1 U
	Primary Result	06/02/2020	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1.1	1 U	3.9	1 U	1 U	1 U	1 U
	Primary Result	05/18/2021	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	04/05/2022	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/06/2023	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/14/2024	1 U	1 U	1 U	-	1 U	5 U	5 U	66.2	1 U	1 U	1 U	6.7	1 U	82.1	1 U	1 U	1 U	1 U
	Primary Result	06/04/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	56.2	1 U	1 U	5 U	5 U	2.5 U	74.1	1 U	1 U	1 U	1 U
MW-53B2	Primary Result	06/08/2018	1 U	1 U	13.1	-	2	5 U	5 U	15.6	1 U	1 U	1 U	14	1 U	2.6	1 U	1 U	9.8	1 U
	Primary Result	07/02/2018	5 U	5 U	5 U	-	5 U	25 U	25 U	157	5 U	5 U	5 U	38.4	5 U	45.4	5 U	5 U	5 U	5 U
	Primary Result	11/12/2018	100 U	100 U	100 U	-	100 U	500 U	500 U	100 U	100 U	100 U	100 U	100 U	100 U	130	100 U	100 U	100 U	100 U
	Primary Result	05/16/2019	50 U	50 U	50 U	-	50 U	250 U	250 U	50 U	50 U	50 U	50 U	50 U	50 U	96	50 U	50 U	50 U	50 U
	Primary Result	06/02/2020	50 U	50 U	50 U	-	50 U	250 U	250 U	188	50 U	50 U	50 U	50 U	50 U	121	50 U	50 U	50 U	50 U
	Primary Result	05/18/2021	50 U	50 U	50 U	-	50 U	250 U	250 U	288	50 U	50 U	50 U	50 U	50 U	222	50 U	50 U	50 U	50 U
	Primary Result	04/05/2022	50 U	50 U	50 U	-	50 U	250 U	250 U	169	50 U	50 U	50 U	50 U	50 U	247	50 U	50 U	50 U	50 U
	Primary Result	06/06/2023	50 U	50 U	50 U	-	50 U	250 U	250 U	214	50 U	50 U	50 U	50 U	50 U	187	50 U	50 U	50 U	50 U
	Primary Result	05/14/2024	20 U	20 U	20 U	-	20 U	100 U	100 U	109	20 U	20 U	20 U	20 U	20 U	70.1	20 U	20 U	135	20 U
	Primary Result	06/04/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	261	1 U	1 U	5 U	25.3	2.5 U	195	1 U	1 U	1 U	1 U
MW-53C	Primary Result	06/08/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	11.1	2.5	1 U	1 U	24.9	1 U	38.2	1 U	1 U	1 U	1 U
	Primary Result	07/02/2018	5 U	5 U	5 U	-	5 U	25 U	25 U	5 U	5 U	5 U	5 U	5 U	5 U	22.6	5 U	5 U	5 U	5 U
	Primary Result	10/01/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	6.8	1 U	1 U	1 U	1 U
MW-54C	Primary Result	07/02/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1.1	1 U	1.4	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1.8	1 U	1 U	1 U	1 U
	Primary Result	05/16/2019	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1.6	1 U	1 U	1 U	1 U
	Primary Result	06/02/2020	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1.7	1 U	1 U	1 U	1 U
	Primary Result	05/18/2021	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1.2	1 U	1 U	1 U	1 U
	Primary Result	04/05/2022	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	2.2	1 U	1 U	1 U	1 U
	Primary Result	06/06/2023	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	8.4	1 U	1 U	1 U	1 U
	Primary Result	05/14/2024	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	9.4	1 U	1 U	1 U	1 U
	Primary Result	06/04/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	1 U	1 U	1 U	5 U	5 U	2.5 U	13.7	1 U	1 U	1 U	1 U
MW-55B	Primary Result	06/12/2018	1.8	1 U	1.1	-	1 U	5 U	5 U	3	1 U	1 U	1 U	11.4	1 U	3.4	1 U	1 U	1 U	1 U
	Primary Result	07/02/2018	1.6	1 U	1 U	-	1 U	5 U	5 U	5.2	1 U	1 U	1 U	23.7	1 U	14.2	1 U	1 U	1 U	1 U
	Field Duplicate	07/02/2018	1.6	1 U	1 U	-	1 U	5 U	5 U	5.1	1 U	1 U	1 U	24.3	1 U	14.1	1 U	1 U	1 U	1 U
	Primary Result	11/12/2018	5 U	5 U	5 U	-	5 U	25 U	25 U	5 U	5 U	5 U	5 U	16.5	5 U	19.1	5 U	5 U	5 U	5 U
	Field Duplicate	11/12/2018	5 U	5 U	5 U	-	5 U	25 U	25 U	5 U	5 U	5 U	5 U	17.6	5 U	18.4	5 U	5 U	5 U	5 U
	Primary Result	05/16/2019	5 U	5 U	5 U	-	5 U	25 U	25 U	21.3	5 U	5 U	5 U	11.8	5 U	26.1	5 U	5 U	5 U	5 U
	Primary Result	06/02/2020	5 U	5 U	5 U	-	5 U	25 U	25 U	29.2	5 U	5 U	5 U	17.5	5 U	65.1	5 U	5 U	5 U	5 U
	Primary Result	05/18/2021	5 U	5 U	5 U	-	5 U	25 U	25 U	101	18.5	5 U	5 U	94.5	5 U	682	5 U	5 U	5 U	5 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Benzene	Bromobenzene	Bromodichloromethane	Bromoethane (Ethyl bromide)	Bromoform	Bromomethane (Methyl Bromide)	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorobromomethane	Chloroethane	Chloroform (Trichloromethane)	Chloromethane (Methyl Chloride)	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Cymene (p-Isopropyltoluene)	Dibromochloromethane	Dibromomethane
		CAS Number	71-43-2	108-86-1	75-27-4	74-96-4	75-25-2	74-83-9	75-15-0	56-23-5	108-90-7	74-97-5	75-00-3	67-66-3	74-87-3	156-59-2	10061-01-5	99-87-6	124-48-1	74-95-3
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-55B	Primary Result	04/05/2022	25 U	25 U	25 U	-	25 U	125 U	125 U	25 U	25 U	25 U	25 U	25 U	25 U	124	25 U	25 U	25 U	25 U
	Primary Result	06/06/2023	50 U	50 U	50 U	-	50 U	250 U	250 U	234	50 U	50 U	50 U	159	50 U	1500	50 U	50 U	50 U	50 U
	Primary Result	05/14/2024	50 U	50 U	50 U	-	50 U	250 U	250 U	241	50 U	50 U	50 U	154	50 U	1990	50 U	50 U	50 U	50 U
	Primary Result	06/04/2025	2.98	1 U	1 U	-	1 U	5 U	1 U	118	20.2	1 U	5 U	87.5	2.5 U	1260	1 U	1 U	1 U	1 U
MW-56B	Primary Result	06/12/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	137	3.7	1 U	1 U	49	1 U	28	1 U	1 U	1 U	1 U
	Primary Result	07/02/2018	20 U	20 U	20 U	-	20 U	100 U	100 U	51.6	20 U	20 U	20 U	40.4	20 U	20 U	20 U	20 U	20 U	20 U
	Primary Result	11/12/2018	20 U	20 U	20 U	-	20 U	100 U	100 U	26.5	20 U	20 U	20 U	26	20 U	20 U	20 U	20 U	20 U	20 U
	Primary Result	05/16/2019	10 U	10 U	10 U	-	10 U	50 U	50 U	52.9	10 U	10 U	10 U	27	10 U	10.6	10 U	10 U	10 U	10 U
	Field Duplicate	05/16/2019	10 U	10 U	10 U	-	10 U	50 U	50 U	51.3	10 U	10 U	10 U	25.9	10 U	10.8	10 U	10 U	10 U	10 U
	Primary Result	06/02/2020	5 U	5 U	5 U	-	5 U	25 U	25 U	79.9	5 U	5 U	5 U	23.9	5 U	19.9	5 U	5 U	5 U	5 U
	Field Duplicate	06/02/2020	5 U	5 U	5 U	-	5 U	25 U	25 U	81.9	5 U	5 U	5 U	24.9	5 U	19.1	5 U	5 U	5 U	5 U
	Primary Result	05/18/2021	5 U	5 U	5 U	-	5 U	25 U	25 U	58	5 U	5 U	5 U	28	5 U	17.8	5 U	5 U	5 U	5 U
	Field Duplicate	05/18/2021	5 U	5 U	5 U	-	5 U	25 U	25 U	59.6	5 U	5 U	5 U	28.3	5 U	17.2	5 U	5 U	5 U	5 U
	Primary Result	04/05/2022	5 U	5 U	5 U	-	5 U	25 U	25 U	90.3	5 U	5 U	5 U	29	5 U	22.8	5 U	5 U	5 U	5 U
	Field Duplicate	04/05/2022	5 U	5 U	5 U	-	5 U	25 U	25 U	90.5	5 U	5 U	5 U	27.6	5 U	22.6	5 U	5 U	5 U	5 U
	Primary Result	06/06/2023	5 U	5 U	5 U	-	5 U	25 U	25 U	44.5	5 U	5 U	5 U	17.6	5 U	21.7	5 U	5 U	5 U	5 U
	Field Duplicate	06/06/2023	5 U	5 U	5 U	-	5 U	25 U	25 U	48.7	5 U	5 U	5 U	18.4	5 U	22.5	5 U	5 U	5 U	5 U
	Primary Result	05/14/2024	5 U	5 U	5 U	-	5 U	25 U	25 U	47.4	5 U	5 U	5 U	15.3	5 U	19.8	5 U	5 U	5 U	5 U
	Field Duplicate	05/14/2024	5 U	5 U	5 U	-	5 U	25 U	25 U	47.3	5 U	5 U	5 U	15.3	5 U	19.3	5 U	5 U	5 U	5 U
	Primary Result	06/04/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	52.4	1 U	1 U	5 U	19.9	2.5 U	44	1 U	1 U	1 U	1 U
	Field Duplicate	06/04/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	52.4	1.05	1 U	5 U	19.3	2.5 U	41.7	1 U	1 U	1 U	1 U
MW-57B	Primary Result	11/12/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/17/2019	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/02/2020	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/18/2021	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	04/06/2022	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/08/2023	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	05/15/2024	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Primary Result	06/05/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	1 U	1 U	1 U	5 U	5 U	2.5 U	1 U	1 U	1 U	1 U	1 U
MW-58B	Primary Result	11/13/2023	200 U	200 U	200 U	-	200 U	1000 U	1000 U	1030	307	200 U	200 U	346	200 U	5950	200 U	200 U	200 U	200 U
	Primary Result	11/20/2023	200 U	200 U	200 U	-	200 U	1000 U	1000 U	1360	390	200 U	200 U	422	200 U	7570	200 U	200 U	200 U	200 U
MW-59B	Primary Result	11/13/2023	200 U	200 U	200 U	-	200 U	1000 U	1000 U	1980	673	200 U	200 U	570	200 U	7170	200 U	200 U	200 U	200 U
	Primary Result	11/20/2023	250 U	250 U	250 U	-	250 U	1250 U	1250 U	1890	250 U	250 U	250 U	542	250 U	7530	250 U	250 U	250 U	250 U
MW-60B	Primary Result	11/13/2023	500 U	500 U	500 U	-	500 U	2500 U	2500 U	6200	603	500 U	500 U	556	500 U	7030	500 U	500 U	500 U	500 U
	Primary Result	11/20/2023	1000 U	1000 U	1000 U	-	1000 U	5000 U	5000 U	6650	1000 U	1000 U	1000 U	1000 U	1000 U	7430	1000 U	1000 U	1000 U	1000 U
	Primary Result	05/15/2024	1000 U	1000 U	1000 U	-	1000 U	5000 U	5000 U	6760	1000 U	1000 U	1000 U	1000 U	1000 U	6320	1000 U	1000 U	1000 U	1000 U
	Primary Result	06/04/2025	50 U	50 U	50 U	-	50 U	250 U	50 U	7890	620	50 U	250 U	478	125 U	7780	50 U	50 U	50 U	50 U
	Field Duplicate	06/04/2025	200 U	200 U	200 U	-	200 U	1000 U	200 U	8720	752	200 U	1000 U	1000 U	500 U	8440	200 U	200 U	200 U	200 U
PP-3D	Primary Result	03/02/2009	20 U	20 U	20 U	-	20 U	20 U	100 U	780	17 J	20 U	20 U	490	20 U	5800	20 U	20 U	20 U	20 U
	Primary Result	10/30/2009	20 U	20 U	10 U	-	20 U	40 UJ	40 U	940 J	21 J	20 U	40 U	130 J	40 U	1700 J	-	20 U	20 U	20 U
	Primary Result	06/05/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	27.5	1.65	1 U	5 U	30.3	2.5 U	509	1 U	1 U	1 U	1 U
PP-4D	Primary Result	02/05/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	13	-	1 U	1 U	1 U
	Primary Result	03/05/2009	1 U	1 U	1 U	-	1 U	1 U	5 U	4.5	0.41 J	1 U	1 U	2.7 U	1 U	9.6	1 U	1 U	1 U	1 U
PP-4S	Primary Result	02/05/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	5.7	-	1 U	1 U	1 U
PP-5D	Primary Result	02/27/2001	6	-	0.5 U	-	0.5 U	0.5 U	0.6	450	41	-	-	1100	0.5 U	15	0.5 U	-	0.5 U	-
	Primary Result	11/04/2002	500 U	500 U	500 U	-	500 U	1000 U	500 U	980	500 U	500 U	1000 U	690	1000 U	500 U	-	500 U	500 U	500 U
	Primary Result	02/06/2003	250 U	250 U	250 U	-	250 U	500 U	250 U	600	250 U	250 U	500 U	910	500 U	250 U	-	250 U	250 U	250 U
	Primary Result	10/24/2003	500 U	500 U	500 U	-	500 U	1000 U	500 U	1300	500 U	500 U	1000 U	560	1000 U	500 U	-	500 U	500 U	500 U
	Primary Result	03/05/2009	2.7 J	10 U	10 U	-	10 U	10 U	50 U	81	1.9 J	10 U	10 U	190	10 U	40	10 U	10 U	10 U	10 U
	Primary Result	05/16/2018	1.9	1 U	1 U	-	1 U	5 U	5 U	89.7	3	1 U	1 U	65.8	1 U	25.3	1 U	1 U	1 U	1 U
	Primary Result	11/14/2018	50 U	50 U	50 U	-	50 U	250 U	250 UJ	74.9	50 U	50 U	50 U	56	50 U	50 U	50 U	50 U	50 U	50 U
	Primary Result	06/08/2023	10 U	10 U	10 U	-	10 U	50 U	50 U	10 U	10 U	10 U	10 U	14.3	10 U	12.8	10 U	10 U	10 U	10 U
	Primary Result	05/15/2024	10 U	10 U	10 U	-	10 U	50 U	50 U	10 U	10 U	10 U	10 U	17.8	10 U	60.2	10 U	10 U	10 U	10 U
	Primary Result	06/05/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	2.54	1.19	1 U	5 U	5 U	2.5 U	17.5	1 U	1 U	1 U	1 U
PP-5S	Primary Result	11/14/2018	10 U	10 U	10 U	-	10 U	50 U	50 UJ	10 U	10 U	10 U	10 U	10 U	10 U	65	10 U	10 U	10 U	10 U
	Primary Result	06/03/2020	10 U	10 U	10 U	-	10 U	50 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U	44.4	10 U	10 U	10 U	10 U
	Primary Result	05/18/2021	10 U	10 U	10 U	-	10 U	50 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U	42.5	10 U	10 U	10 U	10 U
	Primary Result	04/06/2022	10 U	10 U	10 U	-	10 U	50 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U	56.5	10 U	10 U	10 U	10 U
PP-7	Primary Result	11/05/2002	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
PP-8	Primary Result	11/05/2002	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
	Primary Result	11/27/2002	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	1 U	-	1 U	1 U	1 U
TMW-001	Primary Result	11/28/2000	25	-	12 U	-	12 U	12 U	50 U	12 U	480	-	-	570	12 U	-	12 U	-	12 U	-
	Primary Result	12/13/2000	50 U	-	50 U	-	50 U	50 U	200 U	560	270	-	-	520	50 U	-	50 U	-	50 U	-
	Primary Result	02/06/2003	5000 U	5000 U	5000 U	-	5000 U	10000 U	5000 U	2500 U	2700 J	5000 U	10000 U	5000 U	10000 U	130000	-	5000 U	5000 U	5000 U
	Primary Result	10/24/2003	2500 U	2500 U	2500 U	-	2500 U	5000 U	2500 U	1200 U	3600	2500 U	5000 U	2500 U	5000 U	130000	-	2500 U	2500 U	2500 U
	Primary Result	03/05/2009	130 U	130 U	130 U	-	130 U	130 U	670 U	130 U	300	130 U	130 U	130 J	130 U	34000	130 U	130 U	130 U	130 U

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Benzene	Bromobenzene	Bromodichloromethane	Bromoethane (Ethyl bromide)	Bromoform	Bromomethane (Methyl Bromide)	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorobromomethane	Chloroethane	Chloroform (Trichloromethane)	Chloromethane (Methyl Chloride)	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Cymene (p-Isopropyltoluene)	Dibromochloromethane	Dibromomethane
		CAS Number	71-43-2	108-86-1	75-27-4	74-96-4	75-25-2	74-83-9	75-15-0	56-23-5	108-90-7	74-97-5	75-00-3	67-66-3	74-87-3	156-59-2	10061-01-5	99-87-6	124-48-1	74-95-3
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
TMW-002	Primary Result	02/27/2001	5000 U	-	5000 U	-	5000 U	5000 U	20000 U	5000 U	5000 U	-	-	5000 U	13000	17000	5000 U	-	5000 U	-
	Primary Result	02/06/2003	12000 U	12000 U	12000 U	-	12000 U	25000 U	12000 U	6200 U	12000 U	12000 U	25000 U	12000 U	25000 U	23000	-	12000 U	12000 U	12000 U
	Primary Result	10/07/2003	10000 U	10000 U	10000 U	-	10000 U	20000 U	10000 U	5000 U	10000 U	10000 U	20000 U	10000 U	20000 U	20000	-	10000 U	10000 U	10000 U
	Primary Result	10/24/2003	10000 U	10000 U	10000 U	-	10000 U	20000 U	10000 U	5000 U	10000 U	10000 U	20000 U	10000 U	20000 U	14000	-	10000 U	10000 U	10000 U
	Primary Result	03/06/2009	500 U	500 U	500 U	-	500 U	500 U	2500 U	500 U	360 J	500 U	500 U	510	500 U	37000	500 U	500 U	500 U	500 U
TMW-003	Primary Result	02/28/2001	-	-	5 U	-	5 U	5 U	20 U	5 U	68	-	-	-	5 U	-	5 U	-	5 U	-
	Primary Result	02/06/2003	840 J	1200 U	1200 U	-	1200 U	2500 U	1200 U	620 U	1200 U	1200 U	2500 U	11000	2500 U	32000	-	1200 U	1200 U	1200 U
	Primary Result	10/24/2003	420 J	1000 U	1000 U	-	1000 U	2000 U	1000 U	500 U	1000 U	1000 U	2000 U	12000	2000 U	24000	-	1000 U	1000 U	1000 U
	Primary Result	03/05/2009	970	67 U	67 U	-	67 U	67 U	330 U	67 U	110	67 U	67 U	8500	67 U	29000	67 U	67 U	67 U	67 U
TMW-004	Primary Result	02/28/2001	500 U	-	500 U	-	500 U	500 U	2000 U	-	500 U	-	-	12000	500 U	1100	500 U	-	500 U	-
	Primary Result	02/06/2003	12000 U	12000 U	12000 U	-	12000 U	25000 U	12000 U	150000	12000 U	12000 U	25000 U	9400 J	25000 U	12000 U	-	12000 U	12000 U	12000 U
	Primary Result	10/24/2003	10000 U	10000 U	10000 U	-	10000 U	20000 U	10000 U	320000	10000 U	10000 U	20000 U	8000 J	20000 U	10000 U	-	10000 U	10000 U	10000 U
	Primary Result	03/06/2009	1000 U	1000 U	1000 U	-	1000 U	1000 U	5000 U	200000	1000 U	1000 U	1000 U	6600	1000 U	1100	1000 U	1000 U	1000 U	1000 U
TMW-005	Primary Result	02/28/2001	50 U	-	50 U	-	50 U	50 U	200 U	58	50 U	-	-	180	50 U	2500	50 U	-	50 U	-
	Primary Result	02/06/2003	25000 U	25000 U	25000 U	-	25000 U	50000 U	25000 U	12000 U	25000 U	25000 U	50000 U	25000 U	50000 U	25000 U	-	25000 U	25000 U	25000 U
	Primary Result	10/24/2003	500 U	500 U	500 U	-	500 U	1000 U	500 U	250 U	500 U	500 U	1000 U	500 U	1000 U	1400	-	500 U	500 U	500 U
	Primary Result	03/05/2009	330 U	330 U	330 U	-	330 U	330 U	1700 U	330 U	330 U	330 U	330 U	330 J	330 U	71000	330 U	330 U	330 U	330 U
	Field Duplicate	03/05/2009	330 U	330 U	330 U	-	330 U	330 U	1700 U	330 U	330 U	330 U	330 U	330 J	330 U	57000	330 U	330 U	330 U	330 U
TMW-007	Primary Result	02/28/2001	500 U	-	500 U	-	500 U	500 U	2000 U	-	500 U	-	-	5700	500 U	13000	500 U	-	500 U	-
	Primary Result	03/06/2009	2000 U	2000 U	2000 U	-	2000 U	2000 U	10000 U	36000	2000 U	2000 U	2000 U	3600	2000 U	10000	2000 U	2000 U	2000 U	2000 U
TMW-008	Primary Result	03/01/2001	0.5 U	-	0.5 U	-	0.5 U	0.5 U	2 U	0.6	0.5 U	-	-	0.5 U	0.5 U	0.4 J	0.5 U	-	0.5 U	-
	Primary Result	02/05/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	1 U	2 U	10	-	1 U	1 U	1 U
	Primary Result	10/23/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	0.4 J	2 U	14	-	1 U	1 U	1 U
	Field Duplicate	10/23/2003	1 U	1 U	1 U	-	1 U	2 U	1 U	0.5 U	1 U	1 U	2 U	0.38 J	2 U	15	-	1 U	1 U	1 U
	Primary Result	03/04/2009	6.7 U	6.7 U	6.7 U	-	6.7 U	6.7 U	33 U	6.7 U	28	6.7 U	6.7 U	6.7 J	6.7 U	1600	6.7 U	6.7 U	6.7 U	6.7 U
	Primary Result	10/27/2009	0.81 J	1 U	0.5 U	-	1 U	2 U	2 U	1 U	4.5	1 U	2 U	1 U	2 U	190	-	1 U	1 U	1 U
	Field Duplicate	10/27/2009	1.1	1 U	0.5 U	-	1 U	2 U	2 U	1 U	6	1 U	2 U	1 U	2 U	190	-	1 U	1 U	1 U
	Primary Result	10/28/2009	1.5	1 U	0.5 U	-	1 U	2 U	2 U	1 U	4.5	1 U	2 U	1 U	2 U	140	-	1 U	1 U	1 U
	Primary Result	07/19/2011	5 U	5 U	2.5 U	-	5 U	10 U	10 U	5 U	6	5 U	10 U	5 U	10 U	1200	-	5 U	5 U	5 U
	Primary Result	11/28/2011	6.7 U	6.7 U	3.3 U	-	6.7 U	13 U	13 U	6.7 U	20	6.7 U	13 U	6.7 U	13 U	1800	-	6.7 U	6.7 U	6.7 U
	Primary Result	02/22/2012	5 U	5 U	2.5 U	-	5 U	10 U	10 U	5 U	11	5 U	10 U	5 U	10 U	1900	-	5 U	5 U	5 U
	Primary Result	06/26/2012	4 U	4 U	2 U	-	4 U	8 U	8 U	4 U	5.5	4 U	8 U	4 U	8 U	910	-	4 U	4 U	4 U
	Primary Result	11/05/2012	2 U	2 U	1 U	-	2 U	4 U	4 U	2 U	1.2 J	2 U	4 U	2 U	4 U	350	-	2 U	2 U	2 U
	Primary Result	03/13/2013	5 U	5 U	2.5 U	-	5 U	10 U	10 U	5 U	0.87 J	5 U	10 U	5 U	10 U	1500	-	5 U	5 U	5 U
	Primary Result	05/21/2013	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	160	-	1 U	1 U	1 U
	Primary Result	05/20/2014	10 U	10 U	5 U	-	10 U	20 U	20 U	10 U	6.8 J	10 U	20 U	10 U	20 U	2500	-	10 U	10 U	10 U
	Primary Result	05/19/2015	40 U	40 U	20 U	-	40 U	80 U	80 U	40 U	100	40 U	80 U	40 U	80 U	8600	-	40 U	40 U	40 U
	Primary Result	06/01/2016	5 U	5 U	2.5 U	-	5 U	10 U	10 U	5 U	10	5 U	10 U	5 U	10 U	940	-	5 U	5 U	5 U
	Primary Result	06/20/2017	10 U	10 U	5 U	-	10 U	20 U	20 U	10 U	13	10 U	20 U	10 U	20 U	2300	-	10 U	10 U	10 U
	Primary Result	11/08/2017	2.1	1 U	1 U	-	1 U	5 U	5 U	1 U	114	1 U	1.3	1 U	1 U	6040	1 U	1 U	1 U	1 U
	Primary Result	05/15/2018	50 U	50 U	50 U	-	50 U	250 U	250 U	50 U	50 U	50 U	50 U	50 U	50 U	4290	50 U	50 U	50 U	50 U
	Primary Result	11/14/2018	59.3	50 U	50 U	-	50 U	250 U	250 UJ	50 U	50 U	50 U	50 U	50 U	50 U	1410	50 U	50 U	50 U	50 U
	Primary Result	06/05/2025	1 U	1 U	1 U	-	1 U	5 U	1 U	1 U	1 U	1 U	5 U	5 U	2.5 U	16.8	1 U	1 U	1 U	1 U
TMW-009	Primary Result	03/01/2001	0.5 U	-	0.5 U	-	0.5 U	0.5 U	2 U	-	2	-	-	-	0.5 U	15	0.5 U	-	0.5 U	-
	Field Duplicate	03/01/2001	0.5 U	-	0.5 U	-	0.5 U	0.5 U	2 U	-	2	-	-	-	0.5 U	16	0.5 U	-	0.5 U	-
	Primary Result	02/06/2003	50 U	50 U	50 U	-	50 U	100 U	50 U	74	50 U	50 U	100 U	55	100 U	50 U	-	50 U	50 U	50 U
	Field Duplicate	02/06/2003	50 U	50 U	50 U	-	50 U	100 U	50 U	72	50 U	50 U	100 U	56	100 U	50 U	-	50 U	50 U	50 U
	Primary Result	10/24/2003	100 U	100 U	100 U	-	100 U	200 U	100 U	140	100 U	100 U	200 U	58 J	200 U	88 J	-	100 U	100 U	100 U
	Primary Result	03/04/2009	1 U	1 U	1 U	-	1 U	1 U	5 U	0.45 J	1 U	1 U	1 U	3.2	1 U	10	1 U	1 U	1 U	1 U
	Primary Result	07/18/2011	1 U	1 U	0.5 U	-	1 U	2 U	2 U	0.35 J	1 U	1 U	2 U	3.8	2 U	16	-	1 U	1 U	1 U
	Primary Result	11/28/2011	4 U	4 U	2 U	-	4 U	8 U	8 U	1.4 J	4 U	4 U	8 U	21	8 U	91	-	4 U	4 U	4 U
	Primary Result	02/22/2012	1 U	1 U	0.5 U	-	1 U	2 U	2 U	0.62 J	1 U	1 U	2 U	8.6	2 U	65	-	1 U	1 U	1 U
	Primary Result	06/26/2012	2 U	2 U	1 U	-	2 U	4 U	4 U	1 J	2 U	2 U	4 U	13	4 U	70	-	2 U	2 U	2 U
	Primary Result	11/05/2012	2 U	2 U	1 U	-	2 U	4 U	4 U	0.64 J	2 U	2 U	4 U	10	4 U	46	-	2 U	2 U	2 U
	Primary Result	03/13/2013	1 U	1 U	0.5 U	-	1 U	2 U	2 U	0.28 J	1 U	1 U	2 U	2.1	2 U	17	-	1 U	1 U	1 U
	Primary Result	05/21/2013	1 U	1 U	0.5 U	-	1 U	2 U	2 U	0.33 J	1 U	1 U	2 U	3.7	2 U	28	-	1 U	1 U	1 U
	Primary Result	05/20/2014	4 U	4 U	2 U	-	4 U	8 U	8 U	1.7 J	4 U	4 U	8 U	20	8 U	240	-	4 U	4 U	4 U
	Primary Result	05/20/2015	10 U	10 U	5 U	-	10 U	20 U	20 U	10 U	10 U	10 U	20 U	23	20 U	320	-	10 U	10 U	10 U
	Primary Result	06/02/2016	2 U	2 U	1 U	-	2 U	4 U	4 U	0.73 J	2 U	2 U	4 U	13	4 U	140	-	2 U	2 U	2 U
	Field Duplicate	06/02/2016	2 U	2 U	1 U	-	2 U	4 U	4 U	0.73 J	2 U	2 U	4 U	13	4 U	130	-	2 U	2 U	2 U
	Primary Result	06/22/2017	1 U	1 U	0.5 U	-	1 U	2 U	2 U	0.26 J	1 U	1 U	2 U	8	2 U	120	-	1 U	1 U	1 U
	Primary Result	11/08/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	4.4	1 U	53.9	1 U	1 U	1 U	1 U
	Primary Result	05/17/2018	5 U	5 U	5 U	-	5 U	25 U	25 U	5 U	5 U	5 U	5 U	12.3	5 U	172	5 U	5 U	5 U	5 U
	Primary Result	11/14/2018	5 U	5 U	5 U	-	5 U	25 U	25 UJ	5 U	5 U	5 U	5 U	5 U	5 U	15.6	5 U	5 U	5 U	5 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

	Chemical Group		VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
	Chemical Name		Benzene	Bromobenzene	Bromodichloromethane	Bromoethane (Ethyl bromide)	Bromoform	Bromomethane (Methyl Bromide)	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorobromomethane	Chloroethane	Chloroform (Trichloromethane)	Chloromethane (Methyl Chloride)	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Cymene (p-Isopropyltoluene)	Dibromochloromethane	Dibromomethane
	CAS Number		71-43-2	108-86-1	75-27-4	74-96-4	75-25-2	74-83-9	75-15-0	56-23-5	108-90-7	74-97-5	75-00-3	67-66-3	74-87-3	156-59-2	10061-01-5	99-87-6	124-48-1	74-95-3
	Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
TMW-010	Primary Result	03/01/2001	0.5 U	-	0.5 U	-	0.5 U	0.5 U	2 U	9	0.5	-	-	2	0.5 U	10	0.5 U	-	0.5 U	-
	Primary Result	10/24/2003	10 U	10 U	10 U	-	10 U	20 U	10 U	5 U	10 U	10 U	20 U	10 U	20 U	11	-	10 U	10 U	10 U
	Primary Result	03/04/2009	1 U	1 U	1 U	-	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 J	1 U	16	1 U	1 U	1 U	1 U
	Primary Result	10/27/2009	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	0.17 J	1 U	2 U	1 U	2 U	94	-	1 U	1 U	1 U
	Primary Result	10/28/2009	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	0.13 J	1 U	2 U	1 U	2 U	71	-	1 U	1 U	1 U
	Primary Result	07/19/2011	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	30	-	1 U	1 U	1 U
	Primary Result	11/28/2011	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	0.61 J	1 U	2 U	1 U	2 U	69	-	1 U	1 U	1 U
	Primary Result	02/22/2012	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	0.2 J	1 U	2 U	1 U	2 U	50	-	1 U	1 U	1 U
	Primary Result	06/26/2012	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	76	-	1 U	1 U	1 U
	Primary Result	11/05/2012	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	0.26 J	1 U	2 U	1 U	2 U	34	-	1 U	1 U	1 U
	Primary Result	03/13/2013	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	22	-	1 U	1 U	1 U
	Primary Result	05/21/2013	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	6.2	-	1 U	1 U	1 U
	Primary Result	05/20/2014	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	13	-	1 U	1 U	1 U
	Primary Result	05/19/2015	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	6.1	-	1 U	1 U	1 U
	Primary Result	06/01/2016	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	8.3	-	1 U	1 U	1 U
	Primary Result	06/20/2017	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	16	-	1 U	1 U	1 U
	Field Duplicate	06/20/2017	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	16	-	1 U	1 U	1 U
	Primary Result	11/08/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	27.2	1 U	1 U	1 U	1 U
	Field Duplicate	11/08/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	25.3	1 U	1 U	1 U	1 U
	Primary Result	05/15/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	18.7	1 U	1 U	1 U	1 U
TMW-011	Primary Result	03/01/2001	5	-	0.5 U	-	0.5 U	0.5 U	2 U	-	16	-	-	-	0.5 U	17	0.5 U	-	0.5 U	-
	Primary Result	02/06/2003	50 U	50 U	50 U	-	50 U	100 U	50 U	110	50 U	50 U	100 U	74	100 U	50 U	-	50 U	50 U	50 U
	Primary Result	10/24/2003	500 U	500 U	500 U	-	500 U	1000 U	500 U	1100	500 U	500 U	1000 U	230 J	1000 U	500 U	-	500 U	500 U	500 U
	Primary Result	03/04/2009	0.37 J	2 U	2 U	-	2 U	2 U	10 U	23	0.41 J	2 U	2 U	11	2 U	2	2 U	2 U	2 U	2 U
	Primary Result	07/18/2011	1 U	1 U	0.5 U	-	1 U	2 U	2 U	7.4	1 U	1 U	2 U	2.8	2 U	0.85 J	-	1 U	1 U	1 U
	Primary Result	11/28/2011	1 U	1 U	0.5 U	-	1 U	2 U	2 U	6.2	0.21 J	1 U	2 U	8.1	2 U	9.1	-	1 U	1 U	1 U
	Primary Result	02/22/2012	0.38 J	2 U	1 U	-	2 U	4 U	4 U	1.2 J	6.4	2 U	4 U	37	4 U	590	-	2 U	2 U	2 U
	Primary Result	06/26/2012	0.57 J	2 U	1 U	-	2 U	4 U	4 U	1.1 J	3.2	2 U	4 U	54	4 U	470	-	2 U	2 U	2 U
	Primary Result	11/05/2012	5 U	5 U	2.5 U	-	5 U	10 U	10 U	1.1 J	5 U	5 U	10 U	12	10 U	190	-	5 U	5 U	5 U
	Primary Result	03/13/2013	0.34 J	1 U	0.5 U	-	1 U	2 U	2 U	0.51 J	0.7 J	1 U	2 U	7.6	2 U	180	-	1 U	1 U	1 U
	Primary Result	05/21/2013	0.2 J	1 U	0.5 U	-	1 U	2 U	2 U	1 U	0.44 J	1 U	2 U	5.2	2 U	140	-	1 U	1 U	1 U
	Primary Result	05/20/2014	4 U	4 U	2 U	-	4 U	8 U	8 U	4 U	4 U	4 U	8 U	1.3 J	8 U	110	-	4 U	4 U	4 U
	Primary Result	05/20/2015	1 U	1 U	0.5 U	-	1 U	2 U	2 U	0.69 J	1 U	1 U	2 U	0.33 J	2 U	13	-	1 U	1 U	1 U
	Primary Result	06/02/2016	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	8.3	-	1 U	1 U	1 U
	Primary Result	06/22/2017	1 U	1 U	0.5 U	-	1 U	2 U	2 U	1 U	1 U	1 U	2 U	1 U	2 U	5.4	-	1 U	1 U	1 U
	Primary Result	11/08/2017	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	27.9	1 U	1 U	1 U	1 U
	Primary Result	05/17/2018	1 U	1 U	1 U	-	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	30.5	1 U	1 U	1 U	1 U
TMW-012	Primary Result	02/28/2001	0.5 U	-	0.5 U	-	0.5 U	0.5 U	2 U	11	0.5 U	-	-	1	0.5 U	7	0.5 U	-	0.5 U	-
TMW-015	Primary Result	02/28/2001	50 U	-	50 U	-	50 U	50 U	200 U	-	50 U	-	-	530	50 U	420	50 U	-	50 U	-
	Primary Result	02/06/2003	5000 U	5000 U	5000 U	-	5000 U	10000 U	5000 U	17000	5000 U	5000 U	10000 U	5000 U	10000 U	5000 U	-	5000 U	5000 U	5000 U
	Primary Result	10/24/2003	5000 U	5000 U	5000 U	-	5000 U	10000 U	5000 U	20000	5000 U	5000 U	10000 U	5000 U	10000 U	5000 U	-	5000 U	5000 U	5000 U
	Primary Result	03/05/2009	330 U	330 U	330 U	-	330 U	330 U	1700 U	12000	330 U	330 U	330 U	330 J	330 U	370	330 U	330 U	330 U	330 U
	Primary Result	06/21/2017	200 U	200 U	100 U	-	200 U	400 U	400 U	3000, 13000	200 U	200 U	400 U	920	400 U	310	-	200 U	200 U	200 U
	Primary Result	11/08/2017	1000 U	1000 U	1000 U	-	1000 U	5000 U	5000 U	13400	1000 U	1000 U	1000 U	2300	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U
	Field Duplicate	11/08/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Primary Result	05/16/2018	500 U	500 U	500 U	-	500 U	2500 U	2500 U	4320	500 U	500 U	500 U	3480	500 U	542	500 U	500 U	500 U	500 U
	Field Duplicate	05/16/2018	500 U	500 U	500 U	-	500 U	2500 U	2500 U	3960	500 U	500 U	500 U	3300	500 U	500 U	500 U	500 U	500 U	500 U
	Primary Result	11/12/2018	500 U	500 U	500 U	-	500 U	2500 U	2500 U	865	500 U	500 U	500 U	995	500 U	500 U	500 U	500 U	500 U	500 U
	Primary Result	05/15/2024	50 U	50 U	50 U	-	50 U	250 U	250 U	7860	50 U	50 U	50 U	50 U	50 U	482	50 U	50 U	50 U	50 U
	Primary Result	06/04/2025	25 U	25 U	25 U	-	25 U	125 U	25 U	9540	25 U	25 U	125 U	423	62.5 U	323	25 U	25 U	25 U	25 U
TMW-016D	Primary Result	11/28/2000	20	-	12 U	-	12 U	12 U	50 U	-	190	-	-	930	12 U	-	12 U	-	12 U	-
	Primary Result	12/13/2000	500 U	-	500 U	-	500 U	500 U	2000 U	2300	500 U	-	-	480 J	500 U	540	500 U	-	500 U	-
	Primary Result	03/06/2009	400 U	400 U	400 U	-	400 U	400 U	2000 U	400	1900	400 U	400 U	2000	400 U	100000	400 U	400 U	400 U	400 U
	Primary Result	11/28/2000	39	-	12 U	-	12 U	12 U	50 U	-	610	-	-	-	12 U	-	12 U	-	12 U	-
	Field Duplicate	11/28/2000	37	-	12 U	-	12 U	12 U	50 U	-	600	-	-	-	12 U	-	12 U	-	12 U	-
	Primary Result	12/13/2000	500 U	-	500 U	-	500 U	500 U	2000 U	1900	500 U	-	-	570	500 U	-	500 U	-	500 U	-
	Primary Result	03/06/2009	330 U	330 U	330 U	-	330 U	330 U	1700 U	330 U	530	330 U	330 U	530	330 U	82000	330 U	330 U	330 U	330 U

Notes and Abbreviations:

-: Chemical analysis data was unavailable
B: Contaminant seen in method blank
HTV: Holding time violation
J: Estimated value
JB: Estimated value; Contaminant seen in method blank
U: Non-detect
UJ: Non-detect; Estimated value
Check Data Usability Summary report in Appendix B for definitions of Project Qualifers added

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Dichlorodifluoromethane (CFC-12)	Dichlorofluoromethane	Ethylbenzene	Hexachlorobutadiene	Hexachloroethane	Iodomethane	Isopropylbenzene (Cumene)	m,p-Xylenes	Methyl acrylonitrile	Methyl methacrylate	Methyl Tert Butyl Ether	Methylene chloride	Naphthalene	n-Butyl benzene	n-Propyl benzene	o-Xylene	Propionitrile (Ethyl cyanide)	Styrene	tert-Butyl benzene
		CAS Number	75-71-8	75-43-4	100-41-4	87-68-3	67-72-1	74-88-4	98-82-8	179601-23-1	126-98-7	80-62-6	1634-04-4	75-09-2	91-20-3	104-51-8	103-65-1	95-47-6	107-12-0	100-42-5	98-06-6
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Location	**Sample Type**	**Sample Date**																			
Bohl Well	Primary Result	10/31/2002	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	09/09/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	10/22/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
CCI-101	Primary Result	11/18/1988	0 U	-	4.7	0 U	-	-	-	-	-	-	0 U	18.8	2.5	-	0 U	-	-	-	-
	Primary Result	02/24/1989	0 U	0 U	0 U	0 U	-	-	-	-	-	-	0 U	4200 J	0 U	-	0 U	-	-	-	-
	Primary Result	12/01/1995	10 U	10 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	14	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Primary Result	11/28/2000	-	-	12 U	-	-	-	-	-	-	-	12 U	18	12 U	-	-	-	-	-	-
	Primary Result	12/13/2000	-	-	50 U	-	-	-	-	-	-	-	50 U	50 U	50 U	-	-	-	-	-	-
	Field Duplicate	12/13/2000	-	-	50 U	-	-	-	-	-	-	-	50 U	50 U	50 U	-	-	-	-	-	-
	Primary Result	02/06/2003	5000 U	-	5000 U	5000 U	-	10000 U	5000 U	-	-	-	5000 U	5000 U	5000 U	5000 U	5000 U	-	-	5000 U	5000 U
	Primary Result	10/24/2003	5000 U	-	5000 U	5000 U	-	10000 U	5000 U	-	-	-	5000 U	5000 U	5000 U	5000 U	5000 U	-	-	5000 U	5000 U
EPA-1	Primary Result	02/24/1989	0 U	0 U	0 U	0 U	-	-	-	-	-	-	0 U	8900 J	0 U	-	0 U	-	-	-	-
	Field Duplicate	02/24/1989	0 U	0 U	0 U	0 U	-	-	-	-	-	-	0 U	6300 J	0 U	-	5.4 J	-	-	-	-
EPA-2	Primary Result	12/01/1995	10 U	10 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Primary Result	02/28/2001	-	-	50 U	-	-	-	-	-	-	-	50 U	50 U	100 U	-	-	-	-	-	-
	Primary Result	02/06/2003	250 U	-	250 U	250 U	-	500 U	250 U	-	-	-	250 U	250 U	210 J	250 U	250 U	-	-	250 U	250 U
	Primary Result	10/24/2003	1000 U	-	1000 U	1000 U	-	2000 U	1000 U	-	-	-	1000 U	1000 U	1000 U	1000 U	1000 U	-	-	1000 U	1000 U
EPA-3	Primary Result	12/01/1995	10 U	10 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Primary Result	02/28/2001	-	-	0.5 U	-	-	-	-	-	-	-	0.5 U	0.5 U	1 U	-	-	-	-	-	-
	Primary Result	02/05/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	10/23/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	03/04/2009	1 U	-	1 U	1 U	-	-	1 U	2 U	-	-	1 U	2 U	1 U	1 U	1 U	1 U	-	1 U	1 U
ERT-1	Primary Result	12/01/1995	5000 U	5000 U	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U
	Primary Result	03/01/2001	-	-	50 U	-	-	-	-	-	-	-	50 U	50 U	100 U	-	-	-	-	-	-
	Primary Result	02/06/2003	2500 U	-	2500 U	2500 U	-	5000 U	2500 U	-	-	-	2500 U	2500 U	2500 U	2500 U	2500 U	-	-	2500 U	2500 U
	Primary Result	10/24/2003	250 U	-	250 U	250 U	-	500 U	250 U	-	-	-	250 U	250 U	250 U	250 U	250 U	-	-	250 U	250 U
KDHE-1	Primary Result	12/20/1988	0 U	-	4.7	0 U	-	-	-	-	-	-	0 U	39800	0 U	-	0 U	-	-	-	-
	Primary Result	02/24/1989	0 U	0 U	0 U	0 U	-	-	-	-	-	-	0 U	33000	0 U	-	0 U	-	-	-	-
KDHE-2	Primary Result	01/06/1989	0 U	-	6.5	0 U	-	-	-	-	-	-	0 U	29.2	0 U	-	0 U	-	-	-	-
	Primary Result	02/24/1989	0 U	0 U	0 U	0 U	-	-	-	-	-	-	0 U	11000	0 U	-	0 U	-	-	-	-
	Primary Result	12/01/1995	10 U	10 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	27	5 U	5 U	5 U	5 U	5 U	5 U	5 U
KDHE-3	Primary Result	01/06/1989	0 U	-	0 U	0 U	-	-	-	-	-	-	0 U	3	0 U	-	0 U	-	-	-	-
	Primary Result	02/24/1989	0 U	0 U	0 U	0 U	-	-	-	-	-	-	0 U	260 J	0 U	-	0 U	-	-	-	-
	Primary Result	12/01/1995	10 U	10 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
KDHE-4	Primary Result	12/22/1988	0 U	0 U	1.7	0 U	-	-	-	-	-	-	0 U	3.9	0 U	-	0 U	-	-	-	-
	Primary Result	02/24/1989	0 U	0 U	0 U	0 U	-	-	-	-	-	-	0 U	0 U	0 U	-	0 U	-	-	-	-
	Primary Result	12/01/1995	10 U	10 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
MW-18	Primary Result	02/27/2001	-	-	0.5 U	-	-	-	-	-	-	-	0.5 U	0.5 U	1 U	-	-	-	-	-	-
	Primary Result	02/05/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	10/23/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
MW-18B	Primary Result	10/29/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	07/19/2011	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/26/2012	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	06/26/2012	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/05/2012	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	0.46 JB	0.34 JB	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	11/05/2012	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	0.46 JB	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/21/2013	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	05/21/2013	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/20/2014	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	05/20/2014	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/19/2015	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	05/19/2015	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/01/2016	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	06/01/2016	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/20/2017	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/07/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/15/2018	1 U	-	1 U	1 U	-	-	1 UJ	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/12/2018	1 U	-	1 U	1.5	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/16/2019	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/02/2020	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/18/2021	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	04/05/2022	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/06/2023	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/14/2024	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/04/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Dichlorodifluoromethane (CFC-12)	Dichlorofluoromethane	Ethylbenzene	Hexachlorobutadiene	Hexachloroethane	Iodomethane	Isopropylbenzene (Cumene)	m,p-Xylenes	Methyl acrylonitrile	Methyl methacrylate	Methyl Tert Butyl Ether	Methylene chloride	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	Propionitrile (Ethyl cyanide)	Styrene	tert-Butylbenzene
		CAS Number	75-71-8	75-43-4	100-41-4	87-68-3	67-72-1	74-88-4	98-82-8	179601-23-1	126-98-7	80-62-6	1634-04-4	75-09-2	91-20-3	104-51-8	103-65-1	95-47-6	107-12-0	100-42-5	98-06-6
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-19	Primary Result	02/27/2001	-	-	0.5 U	-	-	-	-	-	-	-	0.5 U	0.5 U	1 U	-	-	-	-	-	-
	Primary Result	02/06/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	10/23/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	03/05/2009	1 U	-	1 U	1 U	-	-	1 U	2 U	-	-	1 U	2 U	1 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	10/29/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	10/29/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
MW-20	Primary Result	02/27/2001	-	-	0.5 U	-	-	-	-	-	-	-	0.5 U	0.5 U	1 U	-	-	-	-	-	-
	Primary Result	02/05/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	10/23/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	03/04/2009	1 U	-	0.14 J	1 U	-	-	1 U	0.36 J	-	-	1 U	2 U	1 U	1 U	1 U	0.16 J	-	1 U	1 U
	Primary Result	10/29/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/07/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/15/2024	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5 U	50 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	06/05/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-21	Primary Result	02/27/2001	-	-	0.5 U	-	-	-	-	-	-	-	0.5 U	0.5 U	1 U	-	-	-	-	-	-
	Primary Result	02/05/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	10/22/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	03/03/2009	1 U	-	1 U	1 U	-	-	1 U	0.14 J	-	-	1 U	2 U	1 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	10/30/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/20/2017	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/07/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	11/07/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/16/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/12/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
MW-22	Primary Result	02/27/2001	-	-	0.5 U	-	-	-	-	-	-	-	0.5 U	0.5 U	1 U	-	-	-	-	-	-
	Primary Result	10/30/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/21/2013	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/01/2016	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/20/2017	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/07/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/16/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/12/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
MW-22B	Primary Result	09/17/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	10/22/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	03/03/2009	1 U	-	1 U	1 U	-	-	1 U	2 U	-	-	1 U	2 U	1 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	10/28/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	07/18/2011	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/26/2012	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/05/2012	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	0.43 JB	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/21/2013	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/20/2014	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/20/2015	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/01/2016	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/20/2017	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/07/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/16/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/12/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/17/2019	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/15/2024	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/05/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-23	Primary Result	02/27/2001	-	-	0.5 U	-	-	-	-	-	-	-	0.5 U	0.5 U	1 U	-	-	-	-	-	-
	Primary Result	03/03/2009	1 U	-	1 U	1 U	-	-	1 U	2 U	-	-	1 U	2 U	1 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	10/28/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/21/2013	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/20/2014	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/19/2015	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/01/2016	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/20/2017	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/07/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/15/2018	1 U	-	1 U	1 U	-	-	1 UJ	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/12/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
MW-23B	Primary Result	09/17/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	10/23/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	03/03/2009	1 U	-	1 U	1 U	-	-	1 U	2 U	-	-	1 U	2 U	1 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	10/27/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	07/19/2011	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/25/2012	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Dichlorodifluoromethane (CFC-12)	Dichlorofluoromethane	Ethylbenzene	Hexachlorobutadiene	Hexachloroethane	Iodomethane	Isopropylbenzene (Cumene)	m,p-Xylenes	Methyl acrylonitrile	Methyl methacrylate	Methyl Tert Butyl Ether	Methylene chloride	Naphthalene	n-Butyl benzene	n-Propyl benzene	o-Xylene	Propionitrile (Ethyl cyanide)	Styrene	tert-Butyl benzene
		CAS Number	75-71-8	75-43-4	100-41-4	87-68-3	67-72-1	74-88-4	98-82-8	179601-23-1	126-98-7	80-62-6	1634-04-4	75-09-2	91-20-3	104-51-8	103-65-1	95-47-6	107-12-0	100-42-5	98-06-6
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-23B	Primary Result	11/05/2012	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	0.45 JB	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/21/2013	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/20/2014	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/19/2015	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/01/2016	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/20/2017	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/08/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/15/2018	1 U	-	1 U	1 U	-	-	1 UJ	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	05/15/2018	1 U	-	1 U	1 U	-	-	1 UJ	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/12/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	11/12/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/17/2019	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/03/2020	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/18/2021	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	04/06/2022	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/08/2023	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/16/2024	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/05/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-24	Primary Result	02/27/2001	-	-	0.5 U	-	-	-	-	-	-	-	0.5 U	0.5 U	11 U	-	-	-	-	-	-
	Primary Result	02/05/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	10/23/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	03/03/2009	1 U	-	1 U	1 U	-	-	1 U	2 U	-	-	1 U	2 U	1 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	10/28/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/20/2015	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/07/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/16/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/12/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/16/2024	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/05/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-25	Primary Result	02/27/2001	-	-	0.5 U	-	-	-	-	-	-	-	0.5 U	0.5 U	1 U	-	-	-	-	-	-
	Field Duplicate	02/27/2001	-	-	0.5 U	-	-	-	-	-	-	-	0.5 U	0.5 U	1 U	-	-	-	-	-	-
	Primary Result	02/05/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	10/23/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	03/04/2009	1 U	-	1.1	1 U	-	-	1 U	2.7	-	-	1 U	2 U	1 U	1 U	1 U	1.1	-	1 U	1 U
	Primary Result	10/28/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/20/2017	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/07/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/15/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/12/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
MW-26B	Primary Result	11/04/2002	2500 U	-	2500 U	2500 U	-	5000 U	2500 U	-	-	-	2500 U	2500 U	2500 U	2500 U	2500 U	-	-	2500 U	2500 U
	Primary Result	02/06/2003	2500 U	-	2500 U	2500 U	-	5000 U	2500 U	-	-	-	2500 U	2500 U	2500 U	2500 U	2500 U	-	-	2500 U	2500 U
	Primary Result	10/24/2003	5000 U	-	5000 U	5000 U	-	10000 U	5000 U	-	-	-	5000 U	5000 U	5000 U	5000 U	5000 U	-	-	5000 U	5000 U
	Primary Result	03/05/2009	270 U	-	270 U	270 U	-	-	270 U	530 U	-	-	270 U	530 U	270 U	270 U	270 U	270 U	-	270 U	270 U
	Primary Result	10/30/2009	400 U	-	200 U	200 U	-	200 U	200 U	-	-	-	1000 U	1000 U	200 U	200 U	200 U	-	-	200 U	200 U
	Primary Result	06/24/2017	1000 UJ	-	500 UJ	500 UJ	-	500 UJ	500 UJ	-	-	-	2500 UJ	2500 UJ	500 UJ	500 UJ	500 UJ	-	-	500 UJ	500 UJ
	Primary Result	11/08/2017	200 U	-	200 U	200 U	-	-	200 U	-	-	-	200 U	200 U	2000 U	200 U	200 U	-	-	200 U	200 U
	Field Duplicate	11/08/2017	200 U	-	200 U	200 U	-	-	200 U	-	-	-	200 U	200 U	2000 U	200 U	200 U	-	-	200 U	200 U
	Primary Result	05/16/2018	500 U	-	500 U	500 U	-	-	500 U	-	-	-	500 U	500 U	5000 U	500 U	500 U	-	-	500 U	500 U
	Primary Result	11/14/2018	1000 U	-	1000 U	1000 U	-	-	1000 U	-	-	-	1000 U	1640	10000 U	1000 U	1000 U	-	-	1000 U	1000 U
	Primary Result	06/03/2020	2000 U	-	2000 U	2000 U	-	-	2000 U	-	-	-	2000 U	2000 U	20000 U	2000 U	2000 U	-	-	2000 U	2000 U
	Primary Result	05/18/2021	2000 U	-	2000 U	2000 U	-	-	2000 U	-	-	-	2000 U	2970	20000 U	2000 U	2000 U	-	-	2000 U	2000 U
	Primary Result	04/06/2022	2000 U	-	2000 U	2000 U	-	-	2000 U	-	-	-	2000 U	2000 U	20000 U	2000 U	2000 U	-	-	2000 U	2000 U
	Primary Result	06/08/2023	2000 U	-	2000 U	2000 U	-	-	2000 U	-	-	-	2000 U	2000 U	20000 U	2000 U	2000 U	-	-	2000 U	2000 U
MW-26C	Primary Result	10/21/2003	1 U	-	1 U	1 U	-	1.5 J	1 U	-	-	-	1 U	1.2	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	10/23/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	0.82 J	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	12/17/2003	2.5 U	-	2.5 U	2.5 U	-	5 U	2.5 U	-	-	-	2.5 U	1.8 J	2.5 U	2.5 U	2.5 U	-	-	2.5 U	2.5 U
	Primary Result	03/05/2009	1 U	-	1 U	1 U	-	-	1 U	0.11 J	-	-	1 U	2 U	1 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/24/2017	2 UJ	-	1 UJ	1 UJ	-	1 UJ	1 UJ	-	-	-	5 UJ	5 UJ	1 UJ	1 UJ	1 UJ	-	-	1 UJ	1 UJ
	Primary Result	11/07/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/16/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/14/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/05/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-27B	Primary Result	02/04/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	10/21/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	10/23/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	0.58 J	1 U
	Primary Result	03/03/2009	1 U	-	1 U	1 U	-	-	1 U	2 U	-	-	1 U	2 U	1 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	10/28/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	07/18/2011	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Dichlorodifluoromethane (CFC-12)	Dichlorofluoromethane	Ethylbenzene	Hexachlorobutadiene	Hexachloroethane	Iodomethane	Isopropylbenzene (Cumene)	m,p-Xylenes	Methyl acrylonitrile	Methyl methacrylate	Methyl Tert Butyl Ether	Methylene chloride	Naphthalene	n-Butyl benzene	n-Propyl benzene	o-Xylene	Propionitrile (Ethyl cyanide)	Styrene	tert-Butyl benzene
		CAS Number	75-71-8	75-43-4	100-41-4	87-68-3	67-72-1	74-88-4	98-82-8	179601-23-1	126-98-7	80-62-6	1634-04-4	75-09-2	91-20-3	104-51-8	103-65-1	95-47-6	107-12-0	100-42-5	98-06-6
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-27B	Primary Result	06/26/2012	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	0.34 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/05/2012	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	0.46 JB	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/21/2013	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/20/2014	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/20/2015	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/02/2016	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/20/2017	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/07/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/15/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/12/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/17/2019	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/16/2024	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	05/16/2024	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/05/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-28B	Primary Result	11/04/2002	10 U	-	10 U	10 U	-	20 U	10 U	-	-	-	10 U	10 U	10 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	02/05/2003	2.5 U	-	2.5 U	2.5 U	-	5 U	2.5 U	-	-	-	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	-	-	2.5 U	2.5 U
	Field Duplicate	02/05/2003	2.5 U	-	2.5 U	2.5 U	-	5 U	2.5 U	-	-	-	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	-	-	2.5 U	2.5 U
	Primary Result	10/23/2003	5 U	-	5 U	5 U	-	10 U	5 U	-	-	-	5 U	5 U	5 U	5 U	5 U	-	-	5 U	5 U
	Field Duplicate	10/23/2003	10 U	-	10 U	10 U	-	20 U	10 U	-	-	-	10 U	10 U	10 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	03/04/2009	1 U	-	1 U	1 U	-	-	1 U	2 U	-	-	1 U	2 U	1 U	1 U	1 U	1 U	-	1 U	1 U
	Field Duplicate	03/04/2009	1 U	-	1 U	1 U	-	-	1 U	2 U	-	-	1 U	2 U	1 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	06/20/2017	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/08/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/15/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/12/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/17/2019	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/03/2020	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/18/2021	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	04/06/2022	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/08/2023	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/16/2024	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/05/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-29B	Primary Result	11/06/2002	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	11/06/2002	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	02/05/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	10/22/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	10/22/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	03/04/2009	1 U	-	1 U	1 U	-	-	1 U	2 U	-	-	1 U	2 U	1 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	11/11/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	07/19/2011	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	07/19/2011	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/26/2012	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/05/2012	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	0.44 JB	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/21/2013	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/20/2014	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/19/2015	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/01/2016	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/20/2017	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	06/20/2017	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/07/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/15/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/12/2018	1 U	-	1 U	1 U	-	-	1 UJ	-	-	-	1 U	1 UJ	10 U	1 U	1 UJ	-	-	1 U	1 UJ
	Primary Result	05/17/2019	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/15/2024	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/05/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-30B	Primary Result	10/23/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	03/03/2009	1 U	-	1 U	1 U	-	-	1 U	2 U	-	-	1 U	2 U	1 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	10/28/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	10/28/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
MW-31	Primary Result	11/04/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	10/27/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	07/19/2011	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/26/2012	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/05/2012	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/21/2013	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	0.43 JB	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/20/2014	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/19/2015	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Dichlorodifluoromethane (CFC-12)	Dichlorofluoromethane	Ethylbenzene	Hexachlorobutadiene	Hexachloroethane	Iodomethane	Isopropylbenzene (Cumene)	m,p-Xylenes	Methyl acrylonitrile	Methyl methacrylate	Methyl Tert Butyl Ether	Methylene chloride	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	Propionitrile (Ethyl cyanide)	Styrene	tert-Butylbenzene
		CAS Number	75-71-8	75-43-4	100-41-4	87-68-3	67-72-1	74-88-4	98-82-8	179601-23-1	126-98-7	80-62-6	1634-04-4	75-09-2	91-20-3	104-51-8	103-65-1	95-47-6	107-12-0	100-42-5	98-06-6
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-31	Primary Result	06/01/2016	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/20/2017	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/07/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/15/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/12/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/17/2019	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/03/2020	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/18/2021	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	04/06/2022	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/08/2023	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/15/2024	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/04/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-31B	Primary Result	09/09/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	10/22/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	10/27/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	07/19/2011	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/26/2012	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/05/2012	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/21/2013	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	0.4 JB	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/20/2014	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/19/2015	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/01/2016	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/20/2017	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/07/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/15/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/12/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/17/2019	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/03/2020	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/18/2021	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	04/06/2022	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/08/2023	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/15/2024	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/04/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-32B	Primary Result	09/12/2003	1 UJ	-	1 UJ	1 UJ	-	2 UJ	1 UJ	-	-	-	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	-	-	1 UJ	1 UJ
	Field Duplicate	09/12/2003	1 UJ	-	1 UJ	1 UJ	-	2 UJ	1 UJ	-	-	-	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	-	-	1 UJ	1 UJ
	Primary Result	10/22/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	03/03/2009	1 U	-	1 U	1 U	-	-	1 U	2 U	-	-	1 U	2 U	1 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	10/27/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
MW-33B	Primary Result	09/12/2003	1 UJ	-	1 UJ	1 UJ	-	2 UJ	1 UJ	-	-	-	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	-	-	1 UJ	1 UJ
	Primary Result	10/22/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	03/03/2009	1 U	-	1 U	1 U	-	-	1 U	2 U	-	-	1 U	2 U	1 U	1 U	1 U	1 U	-	1 UJ	1 U
	Primary Result	10/27/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/07/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/05/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-34B	Primary Result	10/28/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	07/19/2011	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/26/2012	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	0.37 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/05/2012	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/21/2013	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	0.33 JB	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/20/2014	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/19/2015	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/01/2016	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/20/2017	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/07/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/15/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/12/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/17/2019	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/15/2024	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/05/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-35B	Primary Result	10/30/2009	40 U	-	20 U	20 U	-	20 U	20 U	-	-	-	100 U	100 U	20 U	20 U	20 U	-	-	20 U	20 U
	Primary Result	05/20/2015	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/02/2016	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/24/2017	2 UJ	-	1 UJ	1 UJ	-	1 UJ	1 UJ	-	-	-	5 UJ	5 UJ	1 UJ	1 UJ	1 UJ	-	-	1 UJ	1 UJ
	Primary Result	11/08/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/16/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
MW-36B	Primary Result	10/30/2009	400 U	-	200 U	200 U	-	200 U	200 U	-	-	-	1000 U	2500 J	200 U	200 U	200 U	-	-	200 U	200 U
	Primary Result	05/16/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/14/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Dichlorodifluoromethane (CFC-12)	Dichlorofluoromethane	Ethylbenzene	Hexachlorobutadiene	Hexachloroethane	Iodomethane	Isopropylbenzene (Cumene)	m,p-Xylenes	Methyl acrylonitrile	Methyl methacrylate	Methyl Tert Butyl Ether	Methylene chloride	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	Propionitrile (Ethyl cyanide)	Styrene	tert-Butylbenzene
		CAS Number	75-71-8	75-43-4	100-41-4	87-68-3	67-72-1	74-88-4	98-82-8	179601-23-1	126-98-7	80-62-6	1634-04-4	75-09-2	91-20-3	104-51-8	103-65-1	95-47-6	107-12-0	100-42-5	98-06-6
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-36BR	Primary Result	11/13/2023	200 U	-	200 U	200 U	-	-	200 U	-	-	-	200 U	256	2000 U	200 U	200 U	-	-	200 U	200 U
	Primary Result	11/20/2023	250 U	-	250 U	250 U	-	-	250 U	-	-	-	250 U	250 U	2500 U	250 U	250 U	-	-	250 U	250 U
MW-37B	Primary Result	10/30/2009	400 U	-	200 U	200 U	-	200 U	200 U	-	-	-	1000 U	1000 U	200 U	200 U	200 U	-	-	200 U	200 U
	Primary Result	05/16/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	36.2	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/15/2018	50 UJ	-	50 U	50 U	-	-	50 U	-	-	-	50 U	79.7	500 U	50 U	50 U	-	-	50 U	50 U
	Field Duplicate	11/15/2018	50 UJ	-	50 U	50 U	-	-	50 U	-	-	-	50 U	84.7	500 U	50 U	50 U	-	-	50 U	50 U
	Primary Result	05/15/2024	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5 U	50 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	06/05/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-38B	Primary Result	10/30/2009	1000 U	-	500 U	500 U	-	500 U	500 U	-	-	-	2500 U	2500 U	500 U	500 U	500 U	-	-	500 U	500 U
	Primary Result	05/16/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/15/2018	1 UJ	-	1 U	1 U	-	-	1 U	-	-	-	1 U	3.3	10 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	11/15/2018	1 UJ	-	1 U	1 U	-	-	1 U	-	-	-	1 U	2.9	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/15/2024	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/05/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-39B	Primary Result	10/30/2009	2000 U	-	1000 U	1000 U	-	1000 U	1000 U	-	-	-	5000 U	5000 U	1000 U	1000 U	1000 U	-	-	1000 U	1000 U
	Primary Result	07/18/2011	1000 U	-	500 U	500 U	-	500 U	500 U	-	-	-	2500 U	2500 U	500 U	500 U	500 U	-	-	500 U	500 U
	Primary Result	11/28/2011	800 U	-	400 U	400 U	-	400 U	400 U	-	-	-	2000 U	410 JB	400 U	400 U	400 U	-	-	400 U	400 U
	Primary Result	02/22/2012	200 U	-	35 J	100 U	-	100 U	100 U	-	-	-	500 U	170 JB	140	100 U	100 U	-	-	100 U	100 U
	Field Duplicate	02/22/2012	800 U	-	400 U	400 U	-	400 U	400 U	-	-	-	2000 U	500 JB	400 U	400 U	400 U	-	-	400 U	400 U
	Primary Result	06/26/2012	800 U	-	400 U	400 U	-	400 U	400 U	-	-	-	2000 U	430 U	400 U	400 U	400 U	-	-	400 U	400 U
	Primary Result	11/05/2012	200 U	-	100 U	100 U	-	100 U	100 U	-	-	-	500 U	100 JB	72 J	100 U	100 U	-	-	100 U	100 U
	Primary Result	03/13/2013	200 U	-	100 U	100 U	-	100 U	100 U	-	-	-	500 U	53 J	86 J	100 U	100 U	-	-	100 U	100 U
	Field Duplicate	03/13/2013	200 U	-	100 U	100 U	-	100 U	100 U	-	-	-	500 U	500 U	100 U	100 U	100 U	-	-	100 U	100 U
	Primary Result	05/21/2013	200 U	-	100 U	100 U	-	100 U	100 U	-	-	-	500 U	89 JB	47 J	100 U	100 U	-	-	100 U	100 U
	Primary Result	05/20/2014	400 U	-	200 U	200 U	-	200 U	200 U	-	-	-	1000 U	170 JB	49 J	200 U	200 U	-	-	200 U	200 U
	Primary Result	05/20/2015	200 U	-	100 U	100 U	-	100 U	100 U	-	-	-	500 U	34 J	47 J	100 U	100 U	-	-	100 U	100 U
	Primary Result	06/02/2016	400 U	-	200 U	200 U	-	200 U	200 U	-	-	-	1000 U	1000 U	200 U	200 U	200 U	-	-	200 U	200 U
	Primary Result	06/22/2017	61 U	-	100 U	100 U	-	100 U	100 U	-	-	-	500 U	58 J	51 J	100 U	100 U	-	-	100 U	100 U
	Primary Result	11/08/2017	1 U	-	3.5 J	1 U	-	-	1.6	-	-	-	1 U	32.3	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/17/2018	500 U	-	500 U	500 U	-	-	500 U	-	-	-	500 U	500 U	5000 U	500 U	500 U	-	-	500 U	500 U
	Primary Result	11/14/2018	500 UJ	-	500 U	500 U	-	-	500 U	-	-	-	500 U	500 U	5000 U	500 U	500 U	-	-	500 U	500 U
	Primary Result	06/05/2025	50 U	-	10 U	10 U	-	-	10 U	-	-	-	10 U	50 U	50 U	10 U	10 U	-	-	10 U	10 U
MW-40B	Primary Result	10/29/2009	20 U	-	10 U	10 U	-	10 U	10 U	-	-	-	50 U	50 U	10 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	07/18/2011	4 U	-	2 U	2 U	-	2 U	2 U	-	-	-	10 U	10 U	2 U	2 U	2 U	-	-	2 U	2 U
	Field Duplicate	07/18/2011	4 U	-	2 U	2 U	-	2 U	2 U	-	-	-	10 U	10 U	2 U	2 U	2 U	-	-	2 U	2 U
	Primary Result	06/26/2012	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	0.56 U	1 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	06/26/2012	4 U	-	2 U	2 U	-	2 U	2 U	-	-	-	10 U	1.7 U	2 U	2 U	2 U	-	-	2 U	2 U
	Primary Result	11/05/2012	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	11/05/2012	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/21/2013	4 U	-	2 U	2 U	-	2 U	2 U	-	-	-	10 U	2.3 JB	2 U	2 U	2 U	-	-	2 U	2 U
	Field Duplicate	05/21/2013	4 U	-	2 U	2 U	-	2 U	2 U	-	-	-	10 U	1.4 JB	2 U	2 U	2 U	-	-	2 U	2 U
	Primary Result	05/20/2014	4 U	-	2 U	2 U	-	2 U	2 U	-	-	-	10 U	10 U	2 U	2 U	2 U	-	-	2 U	2 U
	Field Duplicate	05/20/2014	4 U	-	2 U	2 U	-	2 U	2 U	-	-	-	10 U	10 U	2 U	2 U	2 U	-	-	2 U	2 U
	Primary Result	05/20/2015	8 U	-	4 U	4 U	-	4 U	4 U	-	-	-	20 U	20 U	4 U	4 U	4 U	-	-	4 U	4 U
	Field Duplicate	05/20/2015	4 U	-	2 U	2 U	-	2 U	2 U	-	-	-	10 U	10 U	2 U	2 U	2 U	-	-	2 U	2 U
	Primary Result	06/01/2016	4 U	-	2 U	2 U	-	2 U	2 U	-	-	-	10 U	10 U	2 U	2 U	2 U	-	-	2 U	2 U
	Primary Result	06/24/2017	2 UJ	-	1 UJ	1 UJ	-	1 UJ	1 UJ	-	-	-	5 UJ	5 UJ	1 UJ	1 UJ	1 UJ	-	-	1 UJ	1 UJ
	Primary Result	11/08/2017	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5 U	50 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	05/16/2018	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5 U	50 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	11/12/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/17/2019	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5 U	50 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	06/03/2020	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5 U	50 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	05/18/2021	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	11	50 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	04/06/2022	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5 U	50 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	06/08/2023	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5 U	50 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	05/15/2024	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5 U	50 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	06/05/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-41B	Primary Result	10/27/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/20/2015	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/20/2017	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/07/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/15/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/12/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/17/2019	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/16/2024	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/05/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Dichlorodifluoromethane (CFC-12)	Dichlorofluoromethane	Ethylbenzene	Hexachlorobutadiene	Hexachloroethane	Iodomethane	Isopropylbenzene (Cumene)	m,p-Xylenes	Methyl acrylonitrile	Methyl methacrylate	Methyl Tert Butyl Ether	Methylene chloride	Naphthalene	n-Butyl benzene	n-Propyl benzene	o-Xylene	Propionitrile (Ethyl cyanide)	Styrene	tert-Butyl benzene
		CAS Number	75-71-8	75-43-4	100-41-4	87-68-3	67-72-1	74-88-4	98-82-8	179601-23-1	126-98-7	80-62-6	1634-04-4	75-09-2	91-20-3	104-51-8	103-65-1	95-47-6	107-12-0	100-42-5	98-06-6
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-42B	Primary Result	05/18/2011	200 U	-	100 U	100 U	-	100 U	100 U	-	-	-	500 U	130 J	100 U	100 U	100 U	-	-	100 U	100 U
	Field Duplicate	05/18/2011	200 U	-	100 U	100 U	-	100 U	100 U	-	-	-	500 U	40 J	100 U	100 U	100 U	-	-	100 U	100 U
	Primary Result	05/16/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	4	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/15/2018	20 UJ	-	20 U	20 U	-	-	20 U	-	-	-	20 U	37.9	200 U	20 U	20 U	-	-	20 U	20 U
	Primary Result	05/16/2024	10 U	-	10 U	10 U	-	-	10 U	-	-	-	10 U	10 U	100 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	06/05/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-43B	Primary Result	05/18/2011	20 U	-	10 U	10 U	-	10 U	10 U	-	-	-	50 U	50 U	10 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	05/16/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/15/2018	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5 U	50 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	05/16/2024	50 U	-	50 U	50 U	-	-	50 U	-	-	-	50 U	50 U	500 U	50 U	50 U	-	-	50 U	50 U
	Primary Result	06/05/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-44B	Primary Result	05/23/2011	800 U	-	400 U	400 U	-	400 U	400 U	-	-	-	2000 U	2000 U	400 U	400 U	400 U	-	-	400 U	400 U
	Primary Result	07/18/2011	400 U	-	200 U	200 U	-	200 U	200 U	-	-	-	1000 U	1000 U	200 U	200 U	200 U	-	-	200 U	200 U
	Primary Result	11/28/2011	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	20 B	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	02/22/2012	4 U	-	2 U	2 U	-	2 U	2 U	-	-	-	10 U	18 B	2 U	2 U	2 U	-	-	2 U	2 U
	Primary Result	06/25/2012	10 U	-	5 U	5 U	-	5 U	5 U	-	-	-	25 U	13 U	5 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	11/05/2012	20 U	-	10 U	10 U	-	10 U	10 U	-	-	-	50 U	18 JB	10 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	03/13/2013	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	15	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/22/2013	20 U	-	10 U	10 U	-	10 U	10 U	-	-	-	50 U	24 JB	10 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	05/20/2014	10 U	-	5 U	5 U	-	5 U	5 U	-	-	-	25 U	16 JB	5 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	05/20/2015	20 U	-	10 U	10 U	-	10 U	10 U	-	-	-	50 U	13 J	10 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	06/02/2016	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	11	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/24/2017	8 UJ	-	4 UJ	4 UJ	-	4 UJ	4 UJ	-	-	-	20 UJ	36 J	4 UJ	4 UJ	4 UJ	-	-	4 UJ	4 UJ
	Primary Result	11/07/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	21.8	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/16/2018	10 U	-	10 U	10 U	-	-	10 U	-	-	-	10 U	33.2	100 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	11/15/2018	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	50.4	200 U	20 U	20 U	-	-	20 U	20 U
	Primary Result	05/16/2019	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	30.8	200 U	20 U	20 U	-	-	20 U	20 U
	Primary Result	06/03/2020	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	45.6	200 U	20 U	20 U	-	-	20 U	20 U
	Primary Result	05/18/2021	500 U	-	500 U	500 U	-	-	500 U	-	-	-	500 U	675	5000 U	500 U	500 U	-	-	500 U	500 U
	Primary Result	04/05/2022	500 U	-	500 U	500 U	-	-	500 U	-	-	-	500 U	500 U	5000 U	500 U	500 U	-	-	500 U	500 U
	Primary Result	06/06/2023	50 U	-	50 U	61.4	-	-	50 U	-	-	-	50 U	66.6	500 U	50 U	50 U	-	-	50 U	50 U
	Primary Result	05/14/2024	50 U	-	50 U	50 U	-	-	50 U	-	-	-	50 U	50 U	500 U	50 U	50 U	-	-	50 U	50 U
	Primary Result	06/04/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	10.4 J	5 U	1 U	1 U	-	-	1 U	1 U
MW-45B	Primary Result	05/23/2011	800 U	-	400 U	400 U	-	400 U	400 U	-	-	-	2000 U	2000 U	400 U	400 U	400 U	-	-	400 U	400 U
	Primary Result	07/18/2011	400 U	-	200 U	200 U	-	200 U	200 U	-	-	-	1000 U	1000 U	200 U	200 U	200 U	-	-	200 U	200 U
	Primary Result	11/28/2011	200 U	-	100 U	100 U	-	100 U	100 U	-	-	-	500 U	88 JB	100 U	100 U	100 U	-	-	100 U	100 U
	Primary Result	02/22/2012	200 U	-	100 U	100 U	-	100 U	100 U	-	-	-	500 U	79 JB	100 U	100 U	100 U	-	-	100 U	100 U
	Primary Result	06/25/2012	400 U	-	200 U	200 U	-	200 U	200 U	-	-	-	1000 U	220 U	200 U	200 U	200 U	-	-	200 U	200 U
	Primary Result	11/05/2012	200 U	-	100 U	100 U	-	100 U	100 U	-	-	-	500 U	500 U	100 U	100 U	100 U	-	-	100 U	100 U
	Primary Result	03/13/2013	200 U	-	100 U	100 U	-	100 U	100 U	-	-	-	500 U	500 U	100 U	100 U	100 U	-	-	100 U	100 U
	Primary Result	05/22/2013	20 U	-	10 U	10 U	-	10 U	10 U	-	-	-	50 U	22 JB	10 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	05/20/2014	400 U	-	200 U	200 U	-	200 U	200 U	-	-	-	1000 U	160 JB	200 U	200 U	200 U	-	-	200 U	200 U
	Primary Result	05/19/2015	200 U	-	100 U	100 U	-	100 U	100 U	-	-	-	500 U	500 U	100 U	100 U	100 U	-	-	100 U	100 U
	Primary Result	06/02/2016	400 U	-	200 U	200 U	-	200 U	200 U	-	-	-	1000 U	1000 U	200 U	200 U	200 U	-	-	200 U	200 U
	Primary Result	06/24/2017	80 UJ	-	40 UJ	40 UJ	-	40 UJ	40 UJ	-	-	-	200 UJ	200 UJ	40 UJ	40 UJ	40 UJ	-	-	40 UJ	40 UJ
	Primary Result	11/08/2017	1000 U	-	1000 U	1000 U	-	-	1000 U	-	-	-	1000 U	1000 U	10000 U	1000 U	1000 U	-	-	1000 U	1000 U
	Primary Result	05/16/2018	250 U	-	250 U	250 U	-	-	250 U	-	-	-	250 U	250 U	2500 U	250 U	250 U	-	-	250 U	250 U
	Primary Result	11/15/2018	500 U	-	500 U	500 U	-	-	500 U	-	-	-	500 U	703	5000 U	500 U	500 U	-	-	500 U	500 U
	Primary Result	05/16/2019	500 U	-	500 U	500 U	-	-	500 U	-	-	-	500 U	500 U	5000 U	500 U	500 U	-	-	500 U	500 U
	Primary Result	06/03/2020	500 U	-	500 U	500 U	-	-	500 U	-	-	-	500 U	500 U	5000 U	500 U	500 U	-	-	500 U	500 U
	Primary Result	05/18/2021	500 U	-	500 U	500 U	-	-	500 U	-	-	-	500 U	558	5000 U	500 U	500 U	-	-	500 U	500 U
	Primary Result	04/05/2022	500 U	-	500 U	500 U	-	-	500 U	-	-	-	500 U	500 U	5000 U	500 U	500 U	-	-	500 U	500 U
	Primary Result	06/06/2023	500 U	-	500 U	500 U	-	-	500 U	-	-	-	500 U	500 U	5000 U	500 U	500 U	-	-	500 U	500 U
	Primary Result	05/14/2024	500 U	-	500 U	500 U	-	-	500 U	-	-	-	500 U	500 U	5000 U	500 U	500 U	-	-	500 U	500 U
	Primary Result	06/04/2025	50 U	-	10 U	10 U	-	-	10 U	-	-	-	10 U	50 U	50 U	10 U	10 U	-	-	10 U	10 U
MW-46B	Primary Result	05/23/2011	800 U	-	400 U	400 U	-	400 U	400 U	-	-	-	2000 U	2000 U	400 U	400 U	400 U	-	-	400 U	400 U
	Primary Result	07/18/2011	400 U	-	200 U	200 U	-	200 U	200 U	-	-	-	1000 U	1000 U	200 U	200 U	200 U	-	-	200 U	200 U
	Primary Result	11/28/2011	800 U	-	400 U	400 U	-	400 U	400 U	-	-	-	2000 U	310 JB	400 U	400 U	400 U	-	-	400 U	400 U
	Field Duplicate	11/28/2011	800 U	-	400 U	400 U	-	400 U	400 U	-	-	-	2000 U	310 JB	400 U	400 U	400 U	-	-	400 U	400 U
	Primary Result	02/22/2012	400 U	-	200 U	200 U	-	200 U	200 U	-	-	-	1000 U	140 JB	200 U	200 U	200 U	-	-	200 U	200 U
	Primary Result	06/26/2012	1000 U	-	500 U	500 U	-	500 U	500 U	-	-	-	2500 U	510 U	500 U	500 U	500 U	-	-	500 U	500 U
	Primary Result	11/05/2012	400 U	-	200 U	200 U	-	200 U	200 U	-	-	-	1000 U	1000 U	65 JB	200 U	200 U	-	-	200 U	200 U
	Primary Result	03/13/2013	400 U	-	200 U	200 U	-	200 U	200 U	-	-	-	1000 U	1000 U	200 U	200 U	200 U	-	-	200 U	200 U
	Primary Result	05/22/2013	200 U	-	100 U	100 U	-	100 U	100 U	-	-	-	500 U	69 JB	100 U	100 U	100 U	-	-	100 U	100 U
	Primary Result	05/20/2014	400 U	-	200 U	200 U	-	200 U	200 U	-	-	-	1000 U	160 JB	200 U	200 U	200 U	-	-	200 U	200 U
	Primary Result	05/20/2015	200 U	-	100 U	100 U	-	100 U	100 U	-	-	-	500 U	500 U	100 U	100 U	100 U	-	-	100 U	100 U
	Primary Result	06/02/2016	400 U	-	200 U	200 U	-	200 U	200 U	-	-	-	1000 U	1000 U	200 U	200 U	200 U	-	-	200 U	200 U
	Primary Result	06/22/2017	70 U	-	100 U	100 U	-	100 U	100 U	-	-	-	500 U	500 U	100 U	100 U	100 U	-	-	100 U	100 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Dichlorodifluoromethane (CFC-12)	Dichlorofluoromethane	Ethylbenzene	Hexachlorobutadiene	Hexachloroethane	Iodomethane	Isopropylbenzene (Cumene)	m,p-Xylenes	Methyl acrylonitrile	Methyl methacrylate	Methyl Tert Butyl Ether	Methylene chloride	Naphthalene	n-Butyl benzene	n-Propyl benzene	o-Xylene	Propionitrile (Ethyl cyanide)	Styrene	tert-Butyl benzene
		CAS Number	75-71-8	75-43-4	100-41-4	87-68-3	67-72-1	74-88-4	98-82-8	179601-23-1	126-98-7	80-62-6	1634-04-4	75-09-2	91-20-3	104-51-8	103-65-1	95-47-6	107-12-0	100-42-5	98-06-6
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-46B	Primary Result	11/08/2017	200 U	-	200 U	200 U	-	-	200 U	-	-	-	200 U	200 U	2000 U	200 U	200 U	-	-	200 U	200 U
	Primary Result	05/17/2018	250 U	-	250 U	250 U	-	-	250 U	-	-	-	250 U	250 U	2500 U	250 U	250 U	-	-	250 U	250 U
	Primary Result	11/14/2018	250 UJ	-	250 U	250 U	-	-	250 U	-	-	-	250 U	250 U	2500 U	250 U	250 U	-	-	250 U	250 U
	Primary Result	05/16/2024	50 U	-	50 U	50 U	-	-	50 U	-	-	-	50 U	50 U	500 U	50 U	50 U	-	-	50 U	50 U
	Primary Result	06/04/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-47B	Primary Result	06/20/2017	80 U	-	40 U	40 U	-	40 U	40 U	-	-	-	200 U	200 U	40 U	40 U	40 U	-	-	40 U	40 U
	Primary Result	06/23/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Primary Result	11/08/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/15/2018	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	20 U	200 U	20 U	20 U	-	-	20 U	20 U
	Primary Result	11/15/2018	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	23.7	200 U	20 U	20 U	-	-	20 U	20 U
	Primary Result	05/16/2019	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	20 U	200 U	20 U	20 U	-	-	20 U	20 U
	Primary Result	06/03/2020	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	20 U	200 U	20 U	20 U	-	-	20 U	20 U
	Primary Result	05/19/2021	2 U	-	2 U	2 U	-	-	2 U	-	-	-	2 U	2 U	20 U	2 U	2 U	-	-	2 U	2 U
	Primary Result	04/06/2022	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5 U	50 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	06/08/2023	25 U	-	25 U	25 U	-	-	25 U	-	-	-	25 U	25 U	250 U	25 U	25 U	-	-	25 U	25 U
	Primary Result	05/16/2024	100 U	-	100 U	100 U	-	-	100 U	-	-	-	100 U	100 U	1000 U	100 U	100 U	-	-	100 U	100 U
	Primary Result	06/04/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	7.37 J	5 U	1 U	1 U	-	-	1 U	1 U
MW-48B	Primary Result	06/20/2017	80 U	-	40 U	40 U	-	40 U	40 U	-	-	-	200 U	200 U	40 U	40 U	40 U	-	-	40 U	40 U
	Primary Result	06/22/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Primary Result	11/08/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/15/2018	50 U	-	50 U	50 U	-	-	50 U	-	-	-	50 U	50 U	500 U	50 U	50 U	-	-	50 U	50 U
	Primary Result	11/15/2018	10 U	-	10 U	10 U	-	-	10 U	-	-	-	10 U	10 U	100 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	05/16/2019	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	20 U	200 U	20 U	20 U	-	-	20 U	20 U
	Field Duplicate	05/16/2019	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	20 U	200 U	20 U	20 U	-	-	20 U	20 U
	Primary Result	06/03/2020	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	20 U	200 U	20 U	20 U	-	-	20 U	20 U
	Field Duplicate	06/03/2020	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	20 U	200 U	20 U	20 U	-	-	20 U	20 U
	Primary Result	05/19/2021	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	20 U	200 U	20 U	20 U	-	-	20 U	20 U
	Field Duplicate	05/19/2021	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	20 U	200 U	20 U	20 U	-	-	20 U	20 U
	Primary Result	04/06/2022	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	20 U	200 U	20 U	20 U	-	-	20 U	20 U
	Field Duplicate	04/06/2022	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	20 U	200 U	20 U	20 U	-	-	20 U	20 U
	Primary Result	06/08/2023	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	20 U	200 U	20 U	20 U	-	-	20 U	20 U
	Primary Result	05/16/2024	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	20 U	200 U	20 U	20 U	-	-	20 U	20 U
	Primary Result	06/04/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-48C	Primary Result	06/20/2017	20 U	-	10 U	10 U	-	10 U	10 U	-	-	-	50 U	50 U	10 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	06/22/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Primary Result	11/08/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	2.4	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/15/2018	10 U	-	10 U	10 U	-	-	10 U	-	-	-	10 U	10 U	100 U	10 U	10 U	-	-	10 U	10 U
	Field Duplicate	05/15/2018	10 U	-	10 U	10 U	-	-	10 U	-	-	-	10 U	10 U	100 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	11/15/2018	10 U	-	10 U	10 U	-	-	10 U	-	-	-	10 U	10.8	100 U	10 U	10 U	-	-	10 U	10 U
	Field Duplicate	11/15/2018	10 U	-	10 U	10 U	-	-	10 U	-	-	-	10 U	10.9	100 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	05/16/2019	10 U	-	10 U	10 U	-	-	10 U	-	-	-	10 U	10 U	100 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	06/03/2020	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/19/2021	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	04/06/2022	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/08/2023	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	20 U	200 U	20 U	20 U	-	-	20 U	20 U
	Field Duplicate	06/08/2023	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	20 U	200 U	20 U	20 U	-	-	20 U	20 U
	Primary Result	05/16/2024	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	20 U	200 U	20 U	20 U	-	-	20 U	20 U
	Field Duplicate	05/16/2024	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	20 U	200 U	20 U	20 U	-	-	20 U	20 U
	Primary Result	06/04/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-49B	Primary Result	06/20/2017	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	0.44 J	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/22/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Primary Result	11/07/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/15/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/15/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/16/2019	10 U	-	10 U	10 U	-	-	10 U	-	-	-	10 U	10 U	100 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	06/03/2020	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/18/2021	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	04/06/2022	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/08/2023	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/16/2024	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	06/04/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 UJ	1 U	-	-	1 U	1 U
	Primary Result	06/05/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-50B	Primary Result	06/06/2018	1 U	-	1.9	1 U	-	-	1 U	-	-	-	1 UJ	7.5 J	10 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	06/06/2018	200 U	-	200 U	200 U	-	-	200 U	-	-	-	200 UJ	200 UJ	2000 U	200 U	200 U	-	-	200 U	200 U
	Primary Result	11/12/2018	10 U	-	10 U	10 U	-	-	10 U	-	-	-	10 U	10 U	100 U	10 U	10 U	-	-	10 U	10 U
	Field Duplicate	11/12/2018	25 U	-	25 U	25 U	-	-	25 U	-	-	-	25 U	25 U	250 U	25 U	25 U	-	-	25 U	25 U
	Primary Result	06/03/2020	10 U	-	10 U	10 U	-	-	10 U	-	-	-	10 U	10 U	100 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	05/19/2021	100 U	-	100 U	100 U	-	-	100 U	-	-	-	100 U	100 U	1000 U	100 U	100 U	-	-	100 U	100 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Dichlorodifluoromethane (CFC-12)	Dichlorofluoromethane	Ethylbenzene	Hexachlorobutadiene	Hexachloroethane	Iodomethane	Isopropylbenzene (Cumene)	m,p-Xylenes	Methyl acrylonitrile	Methyl methacrylate	Methyl Tert Butyl Ether	Methylene chloride	Naphthalene	n-Butyl benzene	n-Propyl benzene	o-Xylene	Propionitrile (Ethyl cyanide)	Styrene	tert-Butyl benzene
		CAS Number	75-71-8	75-43-4	100-41-4	87-68-3	67-72-1	74-88-4	98-82-8	179601-23-1	126-98-7	80-62-6	1634-04-4	75-09-2	91-20-3	104-51-8	103-65-1	95-47-6	107-12-0	100-42-5	98-06-6
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-50B	Primary Result	04/06/2022	100 U	-	100 U	100 U	-	-	100 U	-	-	-	100 U	100 U	1000 U	100 U	100 U	-	-	100 U	100 U
	Primary Result	06/08/2023	100 U	-	100 U	100 U	-	-	100 U	-	-	-	100 U	100 U	1000 U	100 U	100 U	-	-	100 U	100 U
	Primary Result	05/16/2024	100 U	-	100 U	100 U	-	-	100 U	-	-	-	100 U	100 U	1000 U	100 U	100 U	-	-	100 U	100 U
	Primary Result	06/05/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-51B	Primary Result	06/06/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 UJ	4.4 J	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/12/2018	50 U	-	50 U	50 U	-	-	50 U	-	-	-	50 U	74.5	500 U	50 U	50 U	-	-	50 U	50 U
	Field Duplicate	11/12/2018	100 U	-	100 U	100 U	-	-	100 U	-	-	-	100 U	100 U	1000 U	100 U	100 U	-	-	100 U	100 U
	Primary Result	05/16/2019	50 U	-	50 U	50 U	-	-	50 U	-	-	-	50 U	50 U	500 U	50 U	50 U	-	-	50 U	50 U
	Primary Result	06/02/2020	50 U	-	50 U	50 U	-	-	50 U	-	-	-	50 U	50 U	500 U	50 U	50 U	-	-	50 U	50 U
	Primary Result	05/18/2021	50 U	-	50 U	50 U	-	-	50 U	-	-	-	50 U	89.3	500 U	50 U	50 U	-	-	50 U	50 U
	Primary Result	04/05/2022	50 U	-	50 U	50 U	-	-	50 U	-	-	-	50 U	50 U	500 U	50 U	50 U	-	-	50 U	50 U
	Primary Result	06/06/2023	50 U	-	50 U	50 U	-	-	50 U	-	-	-	50 U	50 U	500 U	50 U	50 U	-	-	50 U	50 U
	Primary Result	05/14/2024	50 U	-	50 U	50 U	-	-	50 U	-	-	-	50 U	50 U	500 U	50 U	50 U	-	-	50 U	50 U
	Primary Result	06/04/2025	100 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	100 U	100 U	20 U	20 U	-	-	20 U	20 U
MW-52B	Primary Result	06/08/2018	500 U	-	500 U	500 U	-	-	500 U	-	-	-	500 U	500 U	5000 U	500 U	500 U	-	-	500 U	500 U
	Primary Result	11/12/2018	5000 U	-	5000 U	5000 U	-	-	5000 U	-	-	-	5000 U	5000 U	50000 U	5000 U	5000 U	-	-	5000 U	5000 U
	Primary Result	05/16/2019	2500 U	-	2500 U	2500 U	-	-	2500 U	-	-	-	2500 U	2500 U	25000 U	2500 U	2500 U	-	-	2500 U	2500 U
	Primary Result	06/02/2020	1000 U	-	1000 U	1000 U	-	-	1000 U	-	-	-	1000 U	1000 U	10000 U	1000 U	1000 U	-	-	1000 U	1000 U
	Primary Result	05/18/2021	1000 U	-	1000 U	1000 U	-	-	1000 U	-	-	-	1000 U	1550	10000 U	1000 U	1000 U	-	-	1000 U	1000 U
	Primary Result	04/05/2022	1000 U	-	1000 U	1000 U	-	-	1000 U	-	-	-	1000 U	1000 U	10000 U	1000 U	1000 U	-	-	1000 U	1000 U
	Primary Result	06/06/2023	1000 U	-	1000 U	1000 U	-	-	1000 U	-	-	-	1000 U	1000 U	10000 U	1000 U	1000 U	-	-	1000 U	1000 U
	Primary Result	05/14/2024	1000 U	-	1000 U	1000 U	-	-	1000 U	-	-	-	1000 U	1000 U	10000 U	1000 U	1000 U	-	-	1000 U	1000 U
	Primary Result	06/04/2025	100 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	100 U	100 U	20 U	20 U	-	-	20 U	20 U
MW-52C	Primary Result	06/08/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	07/02/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	29.3	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	10/01/2018	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	20 U	200 U	20 U	20 U	-	-	20 U	20 U
	Field Duplicate	10/01/2018	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	20 U	200 U	20 U	20 U	-	-	20 U	20 U
MW-53B1	Primary Result	06/08/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	07/02/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/12/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/16/2019	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/02/2020	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/18/2021	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	04/05/2022	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/06/2023	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/14/2024	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/04/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-53B2	Primary Result	06/08/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	07/02/2018	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5 U	50 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	11/12/2018	100 U	-	100 U	100 U	-	-	100 U	-	-	-	100 U	100 U	1000 U	100 U	100 U	-	-	100 U	100 U
	Primary Result	05/16/2019	50 U	-	50 U	50 U	-	-	50 U	-	-	-	50 U	50 U	500 U	50 U	50 U	-	-	50 U	50 U
	Primary Result	06/02/2020	50 U	-	50 U	50 U	-	-	50 U	-	-	-	50 U	50 U	500 U	50 U	50 U	-	-	50 U	50 U
	Primary Result	05/18/2021	50 U	-	50 U	50 U	-	-	50 U	-	-	-	50 U	80	500 U	50 U	50 U	-	-	50 U	50 U
	Primary Result	04/05/2022	50 U	-	50 U	50 U	-	-	50 U	-	-	-	50 U	50 U	500 U	50 U	50 U	-	-	50 U	50 U
	Primary Result	06/06/2023	50 U	-	50 U	50 U	-	-	50 U	-	-	-	50 U	50 U	500 U	50 U	50 U	-	-	50 U	50 U
	Primary Result	05/14/2024	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	20 U	200 U	20 U	20 U	-	-	20 U	20 U
	Primary Result	06/04/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-53C	Primary Result	06/08/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	07/02/2018	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	8	50 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	10/01/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
MW-54C	Primary Result	07/02/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/12/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/16/2019	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/02/2020	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/18/2021	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	04/05/2022	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/06/2023	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/14/2024	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/04/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-55B	Primary Result	06/12/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	07/02/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1.7	10 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	07/02/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1.6	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/12/2018	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5 U	50 U	5 U	5 U	-	-	5 U	5 U
	Field Duplicate	11/12/2018	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5 U	50 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	05/16/2019	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5 U	50 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	06/02/2020	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5 U	50 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	05/18/2021	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	8.7	50 U	5 U	5 U	-	-	5 U	5 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Dichlorodifluoromethane (CFC-12)	Dichlorofluoromethane	Ethylbenzene	Hexachlorobutadiene	Hexachloroethane	Iodomethane	Isopropylbenzene (Cumene)	m,p-Xylenes	Methyl acrylonitrile	Methyl methacrylate	Methyl Tert Butyl Ether	Methylene chloride	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	Propionitrile (Ethyl cyanide)	Styrene	tert-Butylbenzene
		CAS Number	75-71-8	75-43-4	100-41-4	87-68-3	67-72-1	74-88-4	98-82-8	179601-23-1	126-98-7	80-62-6	1634-04-4	75-09-2	91-20-3	104-51-8	103-65-1	95-47-6	107-12-0	100-42-5	98-06-6
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-55B	Primary Result	04/05/2022	25 U	-	25 U	25 U	-	-	25 U	-	-	-	25 U	25 U	250 U	25 U	25 U	-	-	25 U	25 U
	Primary Result	06/06/2023	50 U	-	50 U	64.6	-	-	50 U	-	-	-	50 U	75.2	500 U	50 U	50 U	-	-	50 U	50 U
	Primary Result	05/14/2024	50 U	-	50 U	50 U	-	-	50 U	-	-	-	50 U	50 U	500 U	50 U	50 U	-	-	50 U	50 U
	Primary Result	06/04/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-56B	Primary Result	06/12/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1.5	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	07/02/2018	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	20 U	200 U	20 U	20 U	-	-	20 U	20 U
	Primary Result	11/12/2018	20 U	-	20 U	20 U	-	-	20 U	-	-	-	20 U	20 U	200 U	20 U	20 U	-	-	20 U	20 U
	Primary Result	05/16/2019	10 U	-	10 U	10 U	-	-	10 U	-	-	-	10 U	10 U	100 U	10 U	10 U	-	-	10 U	10 U
	Field Duplicate	05/16/2019	10 U	-	10 U	10 U	-	-	10 U	-	-	-	10 U	10 U	100 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	06/02/2020	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5 U	50 U	5 U	5 U	-	-	5 U	5 U
	Field Duplicate	06/02/2020	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5 U	50 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	05/18/2021	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5 U	50 U	5 U	5 U	-	-	5 U	5 U
	Field Duplicate	05/18/2021	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5 U	50 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	04/05/2022	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5 U	50 U	5 U	5 U	-	-	5 U	5 U
	Field Duplicate	04/05/2022	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5 U	50 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	06/06/2023	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5.8	50 U	5 U	5 U	-	-	5 U	5 U
	Field Duplicate	06/06/2023	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5.3	50 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	05/14/2024	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5 U	50 U	5 U	5 U	-	-	5 U	5 U
	Field Duplicate	05/14/2024	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5 U	50 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	06/04/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	06/04/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 UJ	1 U	-	-	1 U	1 U
MW-57B	Primary Result	11/12/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/17/2019	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/02/2020	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/18/2021	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	04/06/2022	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/08/2023	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/15/2024	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/05/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
MW-58B	Primary Result	11/13/2023	200 U	-	200 U	200 U	-	-	200 U	-	-	-	200 U	213	2000 U	200 U	200 U	-	-	200 U	200 U
	Primary Result	11/20/2023	200 U	-	200 U	200 U	-	-	200 U	-	-	-	200 U	200 U	2000 U	200 U	200 U	-	-	200 U	200 U
MW-59B	Primary Result	11/13/2023	200 U	-	200 U	200 U	-	-	200 U	-	-	-	200 U	252	2000 U	200 U	200 U	-	-	200 U	200 U
	Primary Result	11/20/2023	250 U	-	250 U	250 U	-	-	250 U	-	-	-	250 U	250 U	2500 U	250 U	250 U	-	-	250 U	250 U
MW-60B	Primary Result	11/13/2023	500 U	-	500 U	500 U	-	-	500 U	-	-	-	500 U	515	5000 U	500 U	500 U	-	-	500 U	500 U
	Primary Result	11/20/2023	1000 U	-	1000 U	1000 U	-	-	1000 U	-	-	-	1000 U	1000 U	10000 U	1000 U	1000 U	-	-	1000 U	1000 U
	Primary Result	05/15/2024	1000 U	-	1000 U	1000 U	-	-	1000 U	-	-	-	1000 U	1000 U	10000 U	1000 U	1000 U	-	-	1000 U	1000 U
	Primary Result	06/04/2025	250 U	-	50 U	50 U	-	-	50 U	-	-	-	50 U	250 U	250 U	50 U	50 U	-	-	50 U	50 U
	Field Duplicate	06/04/2025	1000 U	-	200 U	200 U	-	-	200 U	-	-	-	200 U	1000 U	1000 U	200 UJ	200 U	-	-	200 U	200 U
PP-3D	Primary Result	03/02/2009	20 U	-	20 U	20 U	-	-	20 U	40 U	-	-	20 U	40 U	20 U	20 U	20 U	20 U	-	20 U	20 U
	Primary Result	10/30/2009	40 U	-	20 U	20 U	-	20 U	20 U	-	-	-	100 U	100 U	20 U	20 U	20 U	-	-	20 U	20 U
	Primary Result	06/05/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
PP-4D	Primary Result	02/05/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	03/05/2009	1 U	-	1 U	1 U	-	-	1 U	2 U	-	-	1 U	2 U	1 U	1 U	1 U	1 U	-	1 U	1 U
PP-4S	Primary Result	02/05/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
PP-5D	Primary Result	02/27/2001	-	-	0.5 U	-	-	-	-	-	-	-	0.5 U	11	1 U	-	-	-	-	-	-
	Primary Result	11/04/2002	500 U	-	500 U	500 U	-	1000 U	500 U	-	-	-	500 U	500 U	500 U	500 U	500 U	-	-	500 U	500 U
	Primary Result	02/06/2003	250 U	-	250 U	250 U	-	500 U	250 U	-	-	-	250 U	250 U	250 U	250 U	250 U	-	-	250 U	250 U
	Primary Result	10/24/2003	500 U	-	500 U	500 U	-	1000 U	500 U	-	-	-	500 U	500 U	500 U	500 U	500 U	-	-	500 U	500 U
	Primary Result	03/05/2009	10 U	-	10 U	10 U	-	-	10 U	20 U	-	-	10 U	20 U	10 U	10 U	10 U	10 U	-	10 U	10 U
	Primary Result	05/16/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1.3	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/14/2018	50 UJ	-	50 U	50 U	-	-	50 U	-	-	-	50 U	72.7	500 U	50 U	50 U	-	-	50 U	50 U
	Primary Result	06/08/2023	10 U	-	10 U	10 U	-	-	10 U	-	-	-	10 U	10 U	100 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	05/15/2024	10 U	-	10 U	10 U	-	-	10 U	-	-	-	10 U	10 U	100 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	06/05/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
PP-5S	Primary Result	11/14/2018	10 UJ	-	10 U	10 U	-	-	10 U	-	-	-	10 U	10 U	100 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	06/03/2020	10 U	-	10 U	10 U	-	-	10 U	-	-	-	10 U	10 U	100 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	05/18/2021	10 U	-	10 U	10 U	-	-	10 U	-	-	-	10 U	10 U	100 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	04/06/2022	10 U	-	10 U	10 U	-	-	10 U	-	-	-	10 U	10 U	100 U	10 U	10 U	-	-	10 U	10 U
PP-7	Primary Result	11/05/2002	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
PP-8	Primary Result	11/05/2002	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/27/2002	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
TMW-001	Primary Result	11/28/2000	-	-	12 U	-	-	-	-	-	-	-	12 U	180	12 U	-	-	-	-	-	-
	Primary Result	12/13/2000	-	-	50 U	-	-	-	-	-	-	-	50 U	50 U	50 U	-	-	-	-	-	-
	Primary Result	02/06/2003	5000 U	-	5000 U	5000 U	-	10000 U	5000 U	-	-	-	5000 U	5000 U	5000 U	5000 U	5000 U	-	-	5000 U	5000 U
	Primary Result	10/24/2003	2500 U	-	2500 U	2500 U	-	5000 U	2500 U	-	-	-	2500 U	2500 U	2500 U	2500 U	2500 U	-	-	2500 U	2500 U
	Primary Result	03/05/2009	130 U	-	130 U	130 U	-	-	130 U	270 U	-	-	130 U	270 U	130 U	130 U	130 U	130 U	-	130 U	130 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Dichlorodifluoromethane (CFC-12)	Dichlorofluoromethane	Ethylbenzene	Hexachlorobutadiene	Hexachloroethane	Iodomethane	Isopropylbenzene (Cumene)	m,p-Xylenes	Methyl acrylonitrile	Methyl methacrylate	Methyl Tert Butyl Ether	Methylene chloride	Naphthalene	n-Butyl benzene	n-Propyl benzene	o-Xylene	Propionitrile (Ethyl cyanide)	Styrene	tert-Butyl benzene
		CAS Number	75-71-8	75-43-4	100-41-4	87-68-3	67-72-1	74-88-4	98-82-8	179601-23-1	126-98-7	80-62-6	1634-04-4	75-09-2	91-20-3	104-51-8	103-65-1	95-47-6	107-12-0	100-42-5	98-06-6
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
TMW-002	Primary Result	02/27/2001	-	-	5000 U	-	-	-	-	-	-	-	5000 U	5000 U	10000 U	-	-	-	-	-	-
	Primary Result	02/06/2003	12000 U	-	12000 U	12000 U	-	25000 U	12000 U	-	-	-	12000 U	12000 U	12000 U	12000 U	12000 U	-	-	12000 U	12000 U
	Primary Result	10/07/2003	10000 U	-	10000 U	10000 U	-	20000 U	10000 U	-	-	-	10000 U	10000 U	10000 U	10000 U	10000 U	-	-	10000 U	10000 U
	Primary Result	10/24/2003	10000 U	-	10000 U	10000 U	-	20000 U	10000 U	-	-	-	10000 U	10000 U	10000 U	10000 U	10000 U	-	-	10000 U	10000 U
	Primary Result	03/06/2009	500 U	-	160 J	500 U	-	-	500 U	470 J	-	-	500 U	1000 U	500 U	500 U	500 U	240 J	-	500 U	500 U
TMW-003	Primary Result	02/28/2001	-	-	4 J	-	-	-	-	-	-	-	5 U	140	10 U	-	-	-	-	-	-
	Primary Result	02/06/2003	1200 U	-	1200 U	1200 U	-	2500 U	1200 U	-	-	-	1200 U	580 J	1200 U	1200 U	1200 U	-	-	1200 U	1200 U
	Primary Result	10/24/2003	1000 U	-	1000 U	1000 U	-	2000 U	1000 U	-	-	-	1000 U	910 J	1000 U	1000 U	1000 U	-	-	1000 U	1000 U
	Primary Result	03/05/2009	67 U	-	8.3 J	67 U	-	-	67 U	8 J	-	-	67 U	140	67 U	67 U	67 U	11 J	-	67 U	67 U
TMW-004	Primary Result	02/28/2001	-	-	500 U	-	-	-	-	-	-	-	500 U	500 U	1000 U	-	-	-	-	-	-
	Primary Result	02/06/2003	12000 U	-	12000 U	12000 U	-	25000 U	12000 U	-	-	-	12000 U	12000 U	12000 U	12000 U	12000 U	-	-	12000 U	12000 U
	Primary Result	10/24/2003	10000 U	-	10000 U	10000 U	-	20000 U	10000 U	-	-	-	10000 U	10000 U	10000 U	10000 U	10000 U	-	-	10000 U	10000 U
	Primary Result	03/06/2009	1000 U	-	150 J	1000 U	-	-	1000 U	490 J	-	-	1000 U	2000 U	1000 U	1000 U	1000 U	1000 U	-	1000 U	1000 U
TMW-005	Primary Result	02/28/2001	-	-	50 U	-	-	-	-	-	-	-	50 U	50 U	100 U	-	-	-	-	-	-
	Primary Result	02/06/2003	25000 U	-	25000 U	25000 U	-	50000 U	25000 U	-	-	-	25000 U	25000 U	25000 U	25000 U	25000 U	-	-	25000 U	25000 U
	Primary Result	10/24/2003	500 U	-	500 U	500 U	-	1000 U	500 U	-	-	-	500 U	500 U	500 U	500 U	500 U	-	-	500 U	500 U
	Primary Result	03/05/2009	330 U	-	330 U	330 U	-	-	330 U	670 U	-	-	330 U	670 U	330 U	330 U	330 U	330 U	-	330 U	330 U
	Field Duplicate	03/05/2009	330 U	-	330 U	330 U	-	-	330 U	670 U	-	-	330 U	670 U	330 U	330 U	330 U	330 U	-	330 U	330 U
TMW-007	Primary Result	02/28/2001	-	-	500 U	-	-	-	-	-	-	-	500 U	410	1000 U	-	-	-	-	-	-
	Primary Result	03/06/2009	2000 U	-	2000 U	2000 U	-	-	2000 U	250 J	-	-	2000 U	4000 U	2000 U	2000 U	2000 U	2000 U	-	2000 U	2000 U
TMW-008	Primary Result	03/01/2001	-	-	0.5 U	-	-	-	-	-	-	-	0.5 U	0.5 U	1 U	-	-	-	-	-	-
	Primary Result	02/05/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	10/23/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	10/23/2003	1 U	-	1 U	1 U	-	2 U	1 U	-	-	-	1 U	1 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	03/04/2009	6.7 U	-	6.7 U	6.7 U	-	-	6.7 U	13 U	-	-	6.7 U	13 U	6.7 U	6.7 U	6.7 U	6.7 U	-	6.7 U	6.7 U
	Primary Result	10/27/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 J B	1 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	10/27/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 J B	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	10/28/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	07/19/2011	10 U	-	5 U	5 U	-	5 U	5 U	-	-	-	25 U	25 U	5 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	11/28/2011	13 U	-	6.7 U	6.7 U	-	6.7 U	6.7 U	-	-	-	33 U	4.6 JB	6.7 U	6.7 U	6.7 U	-	-	6.7 U	6.7 U
	Primary Result	02/22/2012	10 U	-	5 U	5 U	-	5 U	5 U	-	-	-	25 U	2.6 JB	5 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	06/26/2012	8 U	-	4 U	4 U	-	4 U	4 U	-	-	-	20 U	3.8 J	4 U	4 U	4 U	-	-	4 U	4 U
	Primary Result	11/05/2012	4 U	-	2 U	2 U	-	2 U	2 U	-	-	-	10 U	10 U	2 U	2 U	2 U	-	-	2 U	2 U
	Primary Result	03/13/2013	10 U	-	5 U	5 U	-	5 U	5 U	-	-	-	25 U	25 U	5 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	05/21/2013	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	0.41 JB	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/20/2014	20 U	-	10 U	10 U	-	10 U	10 U	-	-	-	50 U	6.4 JB	10 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	05/19/2015	80 U	-	40 U	40 U	-	40 U	40 U	-	-	-	200 U	200 U	40 U	40 U	40 U	-	-	40 U	40 U
	Primary Result	06/01/2016	10 U	-	5 U	5 U	-	5 U	5 U	-	-	-	25 U	25 U	5 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	06/20/2017	20 U	-	10 U	10 U	-	10 U	10 U	-	-	-	50 U	50 U	10 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	11/08/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/15/2018	50 U	-	50 U	50 U	-	-	50 U	-	-	-	50 U	50 U	500 U	50 U	50 U	-	-	50 U	50 U
	Primary Result	11/14/2018	50 UJ	-	50 U	50 U	-	-	50 U	-	-	-	50 U	74.4	500 U	50 U	50 U	-	-	50 U	50 U
	Primary Result	06/05/2025	5 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	5 U	5 U	1 U	1 U	-	-	1 U	1 U
TMW-009	Primary Result	03/01/2001	-	-	0.5 U	-	-	-	-	-	-	-	0.5 U	0.5 U	1 U	-	-	-	-	-	-
	Field Duplicate	03/01/2001	-	-	0.5 U	-	-	-	-	-	-	-	0.5 U	0.5 U	1 U	-	-	-	-	-	-
	Primary Result	02/06/2003	50 U	-	50 U	50 U	-	100 U	50 U	-	-	-	50 U	50 U	50 U	50 U	50 U	-	-	50 U	50 U
	Field Duplicate	02/06/2003	50 U	-	50 U	50 U	-	100 U	50 U	-	-	-	50 U	50 U	50 U	50 U	50 U	-	-	50 U	50 U
	Primary Result	10/24/2003	100 U	-	100 U	100 U	-	200 U	100 U	-	-	-	100 U	100 U	100 U	100 U	100 U	-	-	100 U	100 U
	Primary Result	03/04/2009	1 U	-	1 U	1 U	-	-	1 U	0.11 J	-	-	1 U	2 U	1 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	07/18/2011	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/28/2011	8 U	-	4 U	4 U	-	4 U	4 U	-	-	-	20 U	3 JB	4 U	4 U	4 U	-	-	4 U	4 U
	Primary Result	02/22/2012	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	0.7 JB	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/26/2012	4 U	-	2 U	2 U	-	2 U	2 U	-	-	-	10 U	1.6 J	2 U	2 U	2 U	-	-	2 U	2 U
	Primary Result	11/05/2012	4 U	-	2 U	2 U	-	2 U	2 U	-	-	-	10 U	1.8 JB	2 U	2 U	2 U	-	-	2 U	2 U
	Primary Result	03/13/2013	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/21/2013	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	0.44 JB	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/20/2014	8 U	-	4 U	4 U	-	4 U	4 U	-	-	-	20 U	2.3 JB	4 U	4 U	4 U	-	-	4 U	4 U
	Primary Result	05/20/2015	20 U	-	10 U	10 U	-	10 U	10 U	-	-	-	50 U	3.7 J	10 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	06/02/2016	4 U	-	2 U	2 U	-	2 U	2 U	-	-	-	10 U	10 U	2 U	2 U	2 U	-	-	2 U	2 U
	Field Duplicate	06/02/2016	4 U	-	2 U	2 U	-	2 U	2 U	-	-	-	10 U	10 U	2 U	2 U	2 U	-	-	2 U	2 U
	Primary Result	06/22/2017	0.74 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/08/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/17/2018	5 U	-	5 U	5 U	-	-	5 U	-	-	-	5 U	5 U	50 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	11/14/2018	5 UJ	-	5 U	5 U	-	-	5 U	-	-	-	5 U	10.5	50 U	5 U	5 U	-	-	5 U	5 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Dichlorodifluoromethane (CFC-12)	Dichlorofluoromethane	Ethylbenzene	Hexachlorobutadiene	Hexachloroethane	Iodomethane	Isopropylbenzene (Cumene)	m,p-Xylenes	Methyl acrylonitrile	Methyl methacrylate	Methyl Tert Butyl Ether	Methylene chloride	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	Propionitrile (Ethyl cyanide)	Styrene	tert-Butylbenzene
		CAS Number	75-71-8	75-43-4	100-41-4	87-68-3	67-72-1	74-88-4	98-82-8	179601-23-1	126-98-7	80-62-6	1634-04-4	75-09-2	91-20-3	104-51-8	103-65-1	95-47-6	107-12-0	100-42-5	98-06-6
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
TMW-010	Primary Result	03/01/2001	-	-	0.5 U	-	-	-	-	-	-	-	0.5 U	0.5 U	1 U	-	-	-	-	-	-
	Primary Result	10/24/2003	10 U	-	10 U	10 U	-	20 U	10 U	-	-	-	10 U	10 U	10 U	10 U	10 U	-	-	10 U	10 U
	Primary Result	03/04/2009	1 U	-	1 U	1 U	-	-	1 U	2 U	-	-	1 U	2 U	1 U	1 U	1 U	1 U	-	1 U	1 U
	Primary Result	10/27/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	10/28/2009	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	07/19/2011	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/28/2011	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	0.38 JB	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	02/22/2012	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	0.49 JB	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/26/2012	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/05/2012	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	0.39 JB	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	03/13/2013	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/21/2013	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/20/2014	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/19/2015	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/01/2016	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/20/2017	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	06/20/2017	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/08/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Field Duplicate	11/08/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/15/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
TMW-011	Primary Result	03/01/2001	-	-	0.5 U	-	-	-	-	-	-	-	0.5 U	4	1 U	-	-	-	-	-	-
	Primary Result	02/06/2003	50 U	-	50 U	50 U	-	100 U	50 U	-	-	-	50 U	50 U	50 U	50 U	50 U	-	-	50 U	50 U
	Primary Result	10/24/2003	500 U	-	500 U	500 U	-	1000 U	500 U	-	-	-	500 U	500 U	500 U	500 U	500 U	-	-	500 U	500 U
	Primary Result	03/04/2009	2 U	-	2 U	2 U	-	-	2 U	4 U	-	-	2 U	4 U	2 U	2 U	2 U	2 U	-	2 U	2 U
	Primary Result	07/18/2011	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/28/2011	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	0.87 JB	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	02/22/2012	4 U	-	2 U	2 U	-	2 U	2 U	-	-	-	10 U	2 JB	2 U	2 U	2 U	-	-	2 U	2 U
	Primary Result	06/26/2012	4 U	-	2 U	2 U	-	2 U	2 U	-	-	-	10 U	2.5 J	2 U	2 U	2 U	-	-	2 U	2 U
	Primary Result	11/05/2012	10 U	-	5 U	5 U	-	5 U	5 U	-	-	-	25 U	5.2 JB	5 U	5 U	5 U	-	-	5 U	5 U
	Primary Result	03/13/2013	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/21/2013	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	0.41 JB	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/20/2014	8 U	-	4 U	4 U	-	4 U	4 U	-	-	-	20 U	1.6 JB	4 U	4 U	4 U	-	-	4 U	4 U
	Primary Result	05/20/2015	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/02/2016	2 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	06/22/2017	0.54 U	-	1 U	1 U	-	1 U	1 U	-	-	-	5 U	5 U	1 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	11/08/2017	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
	Primary Result	05/17/2018	1 U	-	1 U	1 U	-	-	1 U	-	-	-	1 U	1 U	10 U	1 U	1 U	-	-	1 U	1 U
TMW-012	Primary Result	02/28/2001	-	-	0.5 U	-	-	-	-	-	-	-	0.5 U	0.5 U	1 U	-	-	-	-	-	-
TMW-015	Primary Result	02/28/2001	-	-	50 U	-	-	-	-	-	-	-	50 U	50 U	100 U	-	-	-	-	-	-
	Primary Result	02/06/2003	5000 U	-	5000 U	5000 U	-	10000 U	5000 U	-	-	-	5000 U	5000 U	5000 U	5000 U	5000 U	-	-	5000 U	5000 U
	Primary Result	10/24/2003	5000 U	-	5000 U	5000 U	-	10000 U	5000 U	-	-	-	5000 U	5000 U	5000 U	5000 U	5000 U	-	-	5000 U	5000 U
	Primary Result	03/05/2009	330 U	-	330 U	330 U	-	-	330 U	670 U	-	-	330 U	670 U	330 U	330 U	330 U	330 U	-	330 U	330 U
	Primary Result	06/21/2017	400 U	-	200 U	200 U	-	200 U	200 U	-	-	-	1000 U	1000 U	200 U	200 U	200 U	-	-	200 U	200 U
	Primary Result	11/08/2017	1000 U	-	1000 U	1000 U	-	-	1000 U	-	-	-	1000 U	1000 U	10000 U	1000 U	1000 U	-	-	1000 U	1000 U
	Field Duplicate	11/08/2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Primary Result	05/16/2018	500 U	-	500 U	500 U	-	-	500 U	-	-	-	500 U	500 U	5000 U	500 U	500 U	-	-	500 U	500 U
	Field Duplicate	05/16/2018	500 U	-	500 U	500 U	-	-	500 U	-	-	-	500 U	500 U	5000 U	500 U	500 U	-	-	500 U	500 U
	Primary Result	11/12/2018	500 U	-	500 U	500 U	-	-	500 U	-	-	-	500 U	500 U	5000 U	500 U	500 U	-	-	500 U	500 U
	Primary Result	05/15/2024	50 U	-	50 U	50 U	-	-	50 U	-	-	-	50 U	50 U	500 U	50 U	50 U	-	-	50 U	50 U
	Primary Result	06/04/2025	125 U	-	25 U	25 U	-	-	25 U	-	-	-	25 U	125 U	125 U	25 U	25 U	-	-	25 U	25 U
TMW-016D	Primary Result	11/28/2000	-	-	10 J	-	-	-	-	-	-	-	12 U	47	32	-	-	-	-	-	-
	Primary Result	12/13/2000	-	-	500 U	-	-	-	-	-	-	-	500 U	500 U	500 U	-	-	-	-	-	-
	Primary Result	03/06/2009	400 U	-	400 U	400 U	-	-	400 U	800 U	-	-	400 U	800 U	400 U	400 U	400 U	43 J	-	400 U	400 U
	Primary Result	11/28/2000	-	-	8 J	-	-	-	-	-	-	-	12 U	84	12 U	-	-	-	-	-	-
	Field Duplicate	11/28/2000	-	-	8 J	-	-	-	-	-	-	-	12 U	76	12 U	-	-	-	-	-	-
	Primary Result	12/13/2000	-	-	500 U	-	-	-	-	-	-	-	500 U	500 U	500 U	-	-	-	-	-	-
	Primary Result	03/06/2009	330 U	-	330 U	330 U	-	-	330 U	75 J	-	-	330 U	670 U	330 U	330 U	330 U	32 J	-	330 U	330 U

Notes and Abbreviations:

-: Chemical analysis data was unavailable
B: Contaminant seen in method blank
HTV: Holding time violation
J: Estimated value
JB: Estimated value; Contaminant seen in method blank
U: Non-detect
UJ: Non-detect; Estimated value
Check Data Usability Summary report in Appendix B for definitions of Project Qualifers added

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Tetrachloro ethene	Tetrahydro furan	Toluene	Total Target Chlorinated	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	trans-1,4-Dichloro-2-butene	Trichloro ethene	Trichlorofluoro methane (CFC-11)	Trifluorotrichloro ethane (Freon 113)	Vinyl acetate	Vinyl chloride	Xylene (Total)
		CAS Number	127-18-4	109-99-9	108-88-3	TOTTARCVOC	156-60-5	10061-02-6	110-57-6	79-01-6	75-69-4	76-13-1	108-05-4	75-01-4	1330-20-7
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Location	**Sample Type**	**Sample Date**													
Bohl Well	Primary Result	10/31/2002	1.2	10 U	1 U	-	1 U	-	-	6.6	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	09/09/2003	0.82 J	10 U	1 U	-	1 U	-	-	5.2	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	10/22/2003	1.1	10 U	1 U	-	1 U	-	-	7	2 U	1 U	5 U	0.5 U	1 U
CCI-101	Primary Result	11/18/1988	961	-	95.2	-	0 U	-	-	61200	0 U	-	-	1.2	13.8
	Primary Result	02/24/1989	3700 J	-	0 U	-	0 U	-	-	220000	0 U	-	-	0 U	0 U
	Primary Result	12/01/1995	1500	5 U	38	288107.1	5.4	5 U	5 U	190000	5 U	5 U	20 U	5 U	-
	Primary Result	11/28/2000	760	-	12 U	-	11 J	12 U	-	42000	-	-	-	12 U	12 U
	Primary Result	12/13/2000	2200	-	450	-	61	50 U	-	140000 D	-	-	-	110	27 J
	Field Duplicate	12/13/2000	2000	-	410	-	51	50 U	-	140000 D	-	-	-	88	50 U
	Primary Result	02/06/2003	2200 J	50000 U	5000 U	-	5000 U	-	-	59000	10000 U	5000 U	25000 U	1700 J	5000 U
	Primary Result	10/24/2003	1800 J	50000 U	5000 U	-	5000 U	-	-	16000	10000 U	5000 U	25000 U	2500 U	5000 U
EPA-1	Primary Result	02/24/1989	3400 J	-	0 U	-	0 U	-	-	330000	0 U	-	-	0 U	6.4 J
	Field Duplicate	02/24/1989	0 U	-	0 U	-	0 U	-	-	460000	0 U	-	-	0 U	0 U
EPA-2	Primary Result	12/01/1995	50	5 U	5 U	22561	89	5 U	5 U	6600	5 U	5 U	20 U	2.2 J	-
	Primary Result	02/28/2001	340	-	50 U	-	37 J	50 U	-	17000	-	-	-	50 U	50 U
	Primary Result	02/06/2003	230 J	2500 U	250 U	-	250 U	-	-	13000	500 U	250 U	1200 U	120 U	250 U
	Primary Result	10/24/2003	1100	10000 U	1000 U	-	1000 U	-	-	43000	2000 U	1000 U	5000 U	500 U	1000 U
EPA-3	Primary Result	12/01/1995	5 U	5 U	5 U	5	5 U	5 U	5 U	5	5 U	5 U	20 U	5 U	-
	Primary Result	02/28/2001	0.8	-	0.5 U	-	0.5 U	0.5 U	-	3	-	-	-	0.5 U	0.5 U
	Primary Result	02/05/2003	1 U	10 U	1 U	-	1 U	-	-	1 U	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	10/23/2003	1 U	10 U	1 U	-	1 U	-	-	1 UJ	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	03/04/2009	1 U	-	0.071 J	-	1 U	1 U	-	0.26 J	1 U	-	-	1 U	-
ERT-1	Primary Result	12/01/1995	2600	2500 U	5400	552500	2500 U	2500 U	2500 U	290000	2500 U	2500 U	10000 U	2500 U	-
	Primary Result	03/01/2001	300	-	650	-	50 U	50 U	-	77000	-	-	-	50 U	50 U
	Primary Result	02/06/2003	2500 U	25000 U	1700 J	-	2500 U	-	-	150000	5000 U	2500 U	12000 U	1200 U	2500 U
	Primary Result	10/24/2003	250 U	2500 U	250 U	-	250 U	-	-	3200	500 U	250 U	1200 U	120 U	250 U
KDHE-1	Primary Result	12/20/1988	142000	-	8.5	-	0 U	-	-	69200	0 U	-	-	0 U	23.4
	Primary Result	02/24/1989	140000	-	0 U	-	0 U	-	-	70000	0 U	-	-	0 U	0 U
KDHE-2	Primary Result	01/06/1989	809	-	457	-	0 U	-	-	18000	0 U	-	-	0 U	29.7
	Primary Result	02/24/1989	1600 J	-	0 U	-	0 U	-	-	37000	0 U	-	-	0 U	0 U
	Primary Result	12/01/1995	26	5 U	5 U	4685.8	110	5 U	5 U	630	5 U	5 U	20 U	5 U	-
KDHE-3	Primary Result	01/06/1989	163	-	53.3	-	0 U	-	-	8870	0 U	-	-	0 U	0 U
	Primary Result	02/24/1989	140 J	-	0 U	-	0 U	-	-	7600	0 U	-	-	0 U	0 U
	Primary Result	12/01/1995	11	5 U	5 U	1166	5 U	5 U	5 U	890	5 U	5 U	20 U	5 U	-
KDHE-4	Primary Result	12/22/1988	201	-	157	-	0 U	-	-	2460	0 U	-	-	0 U	10.3
	Primary Result	02/24/1989	3 J	-	0 U	-	0 U	-	-	6	0 U	-	-	0 U	0 U
	Primary Result	12/01/1995	23	5 U	5 U	1873	5 U	5 U	5 U	990	5 U	5 U	20 U	4.7 J	-
MW-18	Primary Result	02/27/2001	1	-	0.5 U	-	0.5 U	0.5 U	-	0.6	-	-	-	0.5 U	0.5 U
	Primary Result	02/05/2003	1 U	10 U	1 U	-	1 U	-	-	1 U	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	10/23/2003	1 U	10 U	1 U	-	1 U	-	-	1 UJ	2 U	1 U	5 U	0.5 U	1 U
MW-18B	Primary Result	10/29/2009	0.41 J	7 U	1 U	-	1 U	-	-	1.8	2 U	3 U	3 U	1 U	2 U
	Primary Result	07/19/2011	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/26/2012	1 U	7 U	0.18 J	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Field Duplicate	06/26/2012	1 U	7 U	0.22 J	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/05/2012	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Field Duplicate	11/05/2012	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/21/2013	1 U	7 U	1 U	-	1 U	-	-	0.61 J	2 U	3 U	3 U	1 U	2 U
	Field Duplicate	05/21/2013	1 U	7 U	1 U	-	1 U	-	-	0.55 J	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/20/2014	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Field Duplicate	05/20/2014	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/19/2015	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Field Duplicate	05/19/2015	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/01/2016	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Field Duplicate	06/01/2016	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/20/2017	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/07/2017	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/15/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	11/12/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/16/2019	2	-	1 U	-	1 U	1 U	-	3.5	1 U	-	-	1 U	3 U
	Primary Result	06/02/2020	1.8 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/18/2021	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	04/05/2022	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	06/06/2023	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/14/2024	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	06/04/2025	1 U	-	1 U	-	1 U	1 U	-	1 U	5 U	-	-	1 U	3 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Tetrachloroethene	Tetrahydrofuran	Toluene	Total Target Chlorinated	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	trans-1,4-Dichloro-2-butene	Trichloroethene	Trichlorofluoromethane (CFC-11)	Trifluorotrichloroethane (Freon 113)	Vinyl acetate	Vinyl chloride	Xylene (Total)
		CAS Number	127-18-4	109-99-9	108-88-3	TOTTARCVOC	156-60-5	10061-02-6	110-57-6	79-01-6	75-69-4	76-13-1	108-05-4	75-01-4	1330-20-7
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-19	Primary Result	02/27/2001	0.5 U	-	0.5 U	-	0.5 U	0.5 U	-	0.4 J	-	-	-	0.5 U	0.5 U
	Primary Result	02/06/2003	1 U	10 U	1 U	-	1 U	-	-	0.46 J	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	10/23/2003	1 U	10 U	1 U	-	1 U	-	-	1 UJ	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	03/05/2009	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	-
	Primary Result	10/29/2009	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Field Duplicate	10/29/2009	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
MW-20	Primary Result	02/27/2001	0.7	-	0.9	-	0.5 U	0.5 U	-	0.5 U	-	-	-	0.5 U	0.5 U
	Primary Result	02/05/2003	1 U	10 U	1 U	-	1 U	-	-	1 U	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	10/23/2003	1 U	10 U	1 U	-	1 U	-	-	1 UJ	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	03/04/2009	1 U	-	0.072 J	-	1 U	1 U	-	0.18 J	1 U	-	-	1 U	-
	Primary Result	10/29/2009	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/07/2017	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/15/2024	5 U	-	5 U	-	5 U	5 U	-	5 U	5 U	-	-	5 U	15 U
	Primary Result	06/05/2025	1 U	-	1 U	-	1 U	1 U	-	1 U	5 U	-	-	1 U	3 U
MW-21	Primary Result	02/27/2001	0.5 U	-	0.5 U	-	0.5 U	0.5 U	-	0.5 U	-	-	-	0.5 U	0.5 U
	Primary Result	02/05/2003	1 U	10 U	1 U	-	1 U	-	-	1 U	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	10/22/2003	1 U	10 U	1 U	-	1 U	-	-	1 U	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	03/03/2009	1 U	-	1 U	-	1 U	1 U	-	0.28 J	1 U	-	-	1 U	-
	Primary Result	10/30/2009	1 U	7 U	0.18 J	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/20/2017	1 U	7 U	0.42 J	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/07/2017	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Field Duplicate	11/07/2017	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/16/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	11/12/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
MW-22	Primary Result	02/27/2001	0.5 U	-	0.5 U	-	0.5 U	0.5 U	-	2	-	-	-	0.5 U	0.5 U
	Primary Result	10/30/2009	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/21/2013	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/01/2016	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/20/2017	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/07/2017	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/16/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	11/12/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
MW-22B	Primary Result	09/17/2003	1 U	10 U	1 U	-	1 U	-	-	1 U	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	10/22/2003	1 U	10 U	1 U	-	1 U	-	-	1 U	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	03/03/2009	1 U	-	1 U	-	1 U	1 U	-	0.57 J	1 U	-	-	1 U	-
	Primary Result	10/28/2009	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	07/18/2011	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/26/2012	0.91 J	7 U	1 U	-	1 U	-	-	0.23 J	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/05/2012	0.43 J	7 U	1 U	-	1 U	-	-	0.2 J	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/21/2013	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/20/2014	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/20/2015	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/01/2016	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/20/2017	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/07/2017	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/16/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	11/12/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/17/2019	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/15/2024	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	06/05/2025	1 U	-	1 U	-	1 U	1 U	-	1 U	5 U	-	-	1 U	3 U
MW-23	Primary Result	02/27/2001	0.5 U	-	0.3 J	-	0.5 U	0.5 U	-	0.5 U	-	-	-	0.5 U	0.5 U
	Primary Result	03/03/2009	1 U	-	1 U	-	1 U	1 U	-	0.22 J	1 U	-	-	1 U	-
	Primary Result	10/28/2009	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/21/2013	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/20/2014	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/19/2015	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/01/2016	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/20/2017	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/07/2017	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/15/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	11/12/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
MW-23B	Primary Result	09/17/2003	1 U	10 U	1 U	-	1 U	-	-	1 U	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	10/23/2003	1 U	10 U	1 U	-	1 U	-	-	1 UJ	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	03/03/2009	1 U	-	1 U	-	1 U	1 U	-	0.36 J	1 U	-	-	1 U	-
	Primary Result	10/27/2009	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	07/19/2011	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/25/2012	1 U	7 U	1 U	-	1 U	-	-	0.19 J	2 U	3 U	3 U	1 U	2 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Tetrachloroethene	Tetrahydrofuran	Toluene	Total Target Chlorinated	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	trans-1,4-Dichloro-2-butene	Trichloroethene	Trichlorofluoromethane (CFC-11)	Trifluorotrichloroethane (Freon 113)	Vinyl acetate	Vinyl chloride	Xylene (Total)
		CAS Number	127-18-4	109-99-9	108-88-3	TOTTARCVOC	156-60-5	10061-02-6	110-57-6	79-01-6	75-69-4	76-13-1	108-05-4	75-01-4	1330-20-7
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-23B	Primary Result	11/05/2012	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/21/2013	1 U	7 U	1 U	-	1 U	-	-	1.5	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/20/2014	1 U	7 U	1 U	-	1 U	-	-	3.4	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/19/2015	0.23 J	7 U	1 U	-	1 U	-	-	3.9	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/01/2016	1 U	7 U	1 U	-	1 U	-	-	3	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/20/2017	1 U	7 U	1 U	-	1 U	-	-	2	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/08/2017	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/15/2018	1 U	-	1 U	-	1 U	1 U	-	2.2	1 U	-	-	1 U	3 U
	Field Duplicate	05/15/2018	1 U	-	1 U	-	1 U	1 U	-	2.3	1 U	-	-	1 U	3 U
	Primary Result	11/12/2018	1 U	-	1 U	-	1 U	1 U	-	1.3	1 U	-	-	1 U	3 U
	Field Duplicate	11/12/2018	1 U	-	1 U	-	1 U	1 U	-	1.3	1 U	-	-	1 U	3 U
	Primary Result	05/17/2019	1 U	-	1 U	-	1 U	1 U	-	2.7	1 U	-	-	1 U	3 U
	Primary Result	06/03/2020	1.7 U	-	1 U	-	1 U	1 U	-	2.5	1 U	-	-	1 U	3 U
	Primary Result	05/18/2021	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	04/06/2022	1 U	-	1 U	-	1 U	1 U	-	2.3	1 U	-	-	1 U	3 U
	Primary Result	06/08/2023	1 U	-	1 U	-	1 U	1 U	-	3.7	1 U	-	-	1 U	3 U
	Primary Result	05/16/2024	1 U	-	1 U	-	1 U	1 U	-	6.9	1 U	-	-	1 U	3 U
	Primary Result	06/05/2025	1 U	-	1 U	-	1 U	1 U	-	7.15	5 U	-	-	1 U	3 U
MW-24	Primary Result	02/27/2001	0.5	-	0.5 U	-	0.5 U	0.5 U	-	1	-	-	-	0.5 U	0.5 U
	Primary Result	02/05/2003	1 U	10 U	1 U	-	1 U	-	-	1 U	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	10/23/2003	1 U	10 U	1 U	-	1 U	-	-	1 UJ	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	03/03/2009	1 U	-	0.089 J	-	1 U	1 U	-	0.42 J	1 U	-	-	1 U	-
	Primary Result	10/28/2009	1 U	7 U	1 U	-	1 U	-	-	0.24 J	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/20/2015	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/07/2017	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/16/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	11/12/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/16/2024	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	06/05/2025	1 U	-	1 U	-	1 U	1 U	-	1 U	5 U	-	-	1 U	3 U
MW-25	Primary Result	02/27/2001	0.5 U	-	0.5 U	-	0.5 U	0.5 U	-	3	-	-	-	0.5 U	0.5 U
	Field Duplicate	02/27/2001	0.5 U	-	0.5 U	-	0.5 U	0.5 U	-	3	-	-	-	0.5 U	0.5 U
	Primary Result	02/05/2003	1 U	10 U	1 U	-	1 U	-	-	0.8 J	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	10/23/2003	1 U	10 U	1 U	-	1 U	-	-	0.54 J	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	03/04/2009	1 U	-	0.17 J	-	1 U	1 U	-	0.24 J	1 U	-	-	1 U	-
	Primary Result	10/28/2009	1 U	7 U	0.088 J	-	1 U	-	-	0.19 J	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/20/2017	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/07/2017	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/15/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	11/12/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
MW-26B	Primary Result	11/04/2002	14000	25000 U	2500 U	-	2500 U	-	-	110000	5000 U	2500 U	12000 U	1200 U	2500 U
	Primary Result	02/06/2003	15000	25000 U	2500 U	-	2500 U	-	-	100000	5000 U	2500 U	12000 U	1200 U	2500 U
	Primary Result	10/24/2003	20000	50000 U	5000 U	-	5000 U	-	-	160000	10000 U	5000 U	25000 U	2500 U	5000 U
	Primary Result	03/05/2009	6200	-	270 U	-	270 U	270 U	-	51000	270 U	-	-	270 U	-
	Primary Result	10/30/2009	14000	1400 U	21 J	-	20 J	-	-	93000	400 U	600 U	600 U	200 U	400 U
	Primary Result	06/24/2017	43000 J	3500 UJ	170 J	-	500 UJ	-	-	180000 J	1000 UJ	1500 UJ	1500 UJ	510 J	1000 UJ
	Primary Result	11/08/2017	4990	-	200 U	-	200 U	200 U	-	61200	200 U	-	-	213	600 U
	Field Duplicate	11/08/2017	4920	-	200 U	-	200 U	200 U	-	63700	200 U	-	-	200	600 U
	Primary Result	05/16/2018	19800	-	500 U	-	500 U	500 U	-	125000	500 U	-	-	500 U	1500 U
	Primary Result	11/14/2018	31600	-	1000 U	-	1000 U	1000 U	-	141000	1000 U	-	-	1000 U	3000 U
	Primary Result	06/03/2020	18000	-	2000 U	-	2000 U	2000 U	-	132000	2000 U	-	-	2000 U	6000 U
	Primary Result	05/18/2021	17900	-	2000 U	-	2000 U	2000 U	-	126000	2000 U	-	-	2000 U	6000 U
	Primary Result	04/06/2022	10600	-	2000 U	-	2000 U	2000 U	-	70900	2000 U	-	-	2000 U	6000 U
	Primary Result	06/08/2023	11900	-	2000 U	-	2000 U	2000 U	-	77000	2000 U	-	-	2000 U	6000 U
MW-26C	Primary Result	10/21/2003	3.1	10 U	5.9	-	1 U	-	-	37	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	10/23/2003	2	10 U	4.1	-	1 U	-	-	30 J	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	12/17/2003	4.6	25 U	3.6	-	2.5 U	-	-	130	5 U	2.5 U	12 U	1.2 U	2.5 U
	Primary Result	03/05/2009	0.6 J	-	0.74 J	-	0.4 J	1 U	-	15	1 U	-	-	0.17 J	-
	Primary Result	06/24/2017	1 UJ	7 UJ	1 UJ	-	1 UJ	-	-	1 UJ	2 UJ	3 UJ	3 UJ	1 UJ	2 UJ
	Primary Result	11/07/2017	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/16/2018	1 U	-	1 U	-	1 U	1 U	-	1.6	1 U	-	-	1 U	3 U
	Primary Result	11/14/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	06/05/2025	1 U	-	1 U	-	1 U	1 U	-	1 U	5 U	-	-	1 U	3 U
MW-27B	Primary Result	02/04/2003	1 U	10 U	1 U	-	1 U	-	-	0.55 J	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	10/21/2003	1 U	10 U	1 U	-	1 U	-	-	0.97 J	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	10/23/2003	1 U	10 U	1 U	-	1 U	-	-	0.65 J	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	03/03/2009	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	-
	Primary Result	10/28/2009	1 U	7 U	0.084 J	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	07/18/2011	1 U	7 U	0.18 J	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Tetrachloro ethene	Tetrahydro furan	Toluene	Total Target Chlorinated	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	trans-1,4-Dichloro-2-butene	Trichloro ethene	Trichlorofluoro methane (CFC-11)	Trifluorotrichloro ethane (Freon 113)	Vinyl acetate	Vinyl chloride	Xylene (Total)
		CAS Number	127-18-4	109-99-9	108-88-3	TOTTARCVOC	156-60-5	10061-02-6	110-57-6	79-01-6	75-69-4	76-13-1	108-05-4	75-01-4	1330-20-7
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-27B	Primary Result	06/26/2012	1 U	7 U	0.38 J	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/05/2012	1 U	7 U	0.18 J	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/21/2013	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/20/2014	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/20/2015	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/02/2016	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/20/2017	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/07/2017	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/15/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	11/12/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/17/2019	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/16/2024	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Field Duplicate	05/16/2024	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	06/05/2025	1 U	-	1 U	-	1 U	1 U	-	1 U	5 U	-	-	1 U	3 U
MW-28B	Primary Result	11/04/2002	11	100 U	10 U	-	10 U	-	-	280	20 U	10 U	50 U	5 U	10 U
	Primary Result	02/05/2003	4.4	25 U	2.5 U	-	2.5 U	-	-	140	5 U	2.5 U	12 U	1.2 U	2.5 U
	Field Duplicate	02/05/2003	6.1	25 U	2.5 U	-	2.5 U	-	-	190	5 U	2.5 U	12 U	1.2 U	2.5 U
	Primary Result	10/23/2003	8	50 U	5 U	-	5 U	-	-	230	10 U	5 U	25 U	2.5 U	5 U
	Field Duplicate	10/23/2003	8.2 J	100 U	10 U	-	10 U	-	-	240	20 U	10 U	50 U	5 U	10 U
	Primary Result	03/04/2009	0.19 J	-	0.09 J	-	1 U	1 U	-	7.7	1 U	-	-	1 U	-
	Field Duplicate	03/04/2009	0.2 J	-	0.09 J	-	1 U	1 U	-	7.7	1 U	-	-	1 U	-
	Primary Result	06/20/2017	1.7	7 U	1 U	-	1 U	-	-	70	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/08/2017	1.3	-	1 U	-	1 U	1 U	-	78.4	1 U	-	-	1 U	3 U
	Primary Result	05/15/2018	1.1	-	1 U	-	1 U	1 U	-	51.1	1 U	-	-	1 U	3 U
	Primary Result	11/12/2018	1.2	-	1 U	-	1 U	1 U	-	75.9	1 U	-	-	1 U	3 U
	Primary Result	05/17/2019	1 U	-	1 U	-	1 U	1 U	-	35.6	1 U	-	-	1 U	3 U
	Primary Result	06/03/2020	2.3 U	-	1 U	-	1 U	1 U	-	36.3	1 U	-	-	1 U	3 U
	Primary Result	05/18/2021	1 U	-	1 U	-	1 U	1 U	-	32.4	1 U	-	-	1 U	3 U
	Primary Result	04/06/2022	1 U	-	1 U	-	1 U	1 U	-	20.4	1 U	-	-	1 U	3 U
	Primary Result	06/08/2023	1 U	-	1 U	-	1 U	1 U	-	8.3	1 U	-	-	1 U	3 U
	Primary Result	05/16/2024	1 U	-	1 U	-	1 U	1 U	-	18.3	1 U	-	-	1 U	3 U
	Primary Result	06/05/2025	1 U	-	1 U	-	1 U	1 U	-	16.6	5 U	-	-	1 U	3 U
MW-29B	Primary Result	11/06/2002	1 U	10 U	1 U	-	1 U	-	-	3.4	2 U	1 U	5 U	0.5 U	1 U
	Field Duplicate	11/06/2002	1 U	10 U	1 U	-	1 U	-	-	2.7	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	02/05/2003	1 U	10 U	1 U	-	1 U	-	-	1 U	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	10/22/2003	1 U	10 U	1 U	-	1 U	-	-	0.68 J	2 U	1 U	5 U	0.5 U	1 U
	Field Duplicate	10/22/2003	1 U	10 U	1 U	-	1 U	-	-	0.64 J	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	03/04/2009	1 U	-	1 U	-	1 U	1 U	-	0.69 J	1 U	-	-	1 U	-
	Primary Result	11/11/2009	1 U	7 U	1 U	-	1 U	-	-	1.4	2 U	3 U	3 U	1 U	2 U
	Primary Result	07/19/2011	1 U	7 U	0.62 J	-	1 U	-	-	1.8	2 U	3 U	3 U	1 U	2 U
	Field Duplicate	07/19/2011	1 U	7 U	0.6 J	-	1 U	-	-	1.8	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/26/2012	1 U	7 U	1 U	-	1 U	-	-	0.72 J	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/05/2012	1 U	7 U	1 U	-	1 U	-	-	0.96 J	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/21/2013	1 U	7 U	1 U	-	1 U	-	-	1	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/20/2014	1 U	7 U	1 U	-	1 U	-	-	0.39 J	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/19/2015	1 U	7 U	1 U	-	1 U	-	-	0.48 J	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/01/2016	1 U	7 U	1 U	-	1 U	-	-	0.29 J	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/20/2017	1 U	7 U	1 U	-	1 U	-	-	0.28 J	2 U	3 U	3 U	1 U	2 U
	Field Duplicate	06/20/2017	1 U	7 U	1 U	-	1 U	-	-	0.28 J	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/07/2017	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/15/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	11/12/2018	1 UJ	-	1 U	-	1 UJ	1 U	-	1 U	1 U	-	-	1 U	3 UJ
	Primary Result	05/17/2019	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/15/2024	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	06/05/2025	1 U	-	1 U	-	1 U	1 U	-	1 U	5 U	-	-	1 U	3 U
MW-30B	Primary Result	10/23/2003	1 U	10 U	1 U	-	1 U	-	-	1 U	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	03/03/2009	0.56 J	-	1 U	-	1 U	1 U	-	3.3	1 U	-	-	1 U	-
	Primary Result	10/28/2009	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Field Duplicate	10/28/2009	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
MW-31	Primary Result	11/04/2003	1 U	10 U	0.58 J	-	1 U	-	-	3.3	2 U	1 U	5 U	0.3 J	1 U
	Primary Result	10/27/2009	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	07/19/2011	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/26/2012	1 U	7 U	1 U	-	1 U	-	-	0.16 J	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/05/2012	1 U	7 U	1 U	-	1 U	-	-	0.46 J	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/21/2013	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/20/2014	1 U	7 U	1 U	-	1 U	-	-	0.21 J	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/19/2015	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Tetrachloroethene	Tetrahydrofuran	Toluene	Total Target Chlorinated	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	trans-1,4-Dichloro-2-butene	Trichloroethene	Trichlorofluoromethane (CFC-11)	Trifluorotrichloroethane (Freon 113)	Vinyl acetate	Vinyl chloride	Xylene (Total)
		CAS Number	127-18-4	109-99-9	108-88-3	TOTTARCVOC	156-60-5	10061-02-6	110-57-6	79-01-6	75-69-4	76-13-1	108-05-4	75-01-4	1330-20-7
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-31	Primary Result	06/01/2016	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/20/2017	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/07/2017	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/15/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	11/12/2018	1 U	-	1 U	-	1 U	1 U	-	1.3	1 U	-	-	1 U	3 U
	Primary Result	05/17/2019	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	06/03/2020	1.3 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/18/2021	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	04/06/2022	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	06/08/2023	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/15/2024	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	06/04/2025	1 U	-	1 U	-	1 U	1 U	-	1 U	5 U	-	-	1 U	3 U
MW-31B	Primary Result	09/09/2003	1 U	10 U	1 U	-	1 U	-	-	1 U	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	10/22/2003	1 U	10 U	1 U	-	1 U	-	-	1 U	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	10/27/2009	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	07/19/2011	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/26/2012	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/05/2012	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/21/2013	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/20/2014	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/19/2015	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/01/2016	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/20/2017	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/07/2017	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/15/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	11/12/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/17/2019	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	06/03/2020	1.4 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/18/2021	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	04/06/2022	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	06/08/2023	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/15/2024	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	06/04/2025	1 U	-	1 U	-	1 U	1 U	-	1 U	5 U	-	-	1 U	3 U
MW-32B	Primary Result	09/12/2003	1 UJ	10 UJ	1 UJ	-	1 UJ	-	-	1 UJ	2 UJ	1 UJ	5 UJ	0.5 UJ	1 UJ
	Field Duplicate	09/12/2003	1 UJ	10 UJ	1 UJ	-	1 UJ	-	-	1 UJ	2 UJ	1 UJ	5 UJ	0.5 UJ	1 UJ
	Primary Result	10/22/2003	1 U	10 U	1 U	-	1 U	-	-	1 U	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	03/03/2009	1 U	-	0.073 J	-	1 U	1 U	-	1 U	1 U	-	-	1 U	-
	Primary Result	10/27/2009	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
MW-33B	Primary Result	09/12/2003	1 UJ	10 UJ	1 UJ	-	1 UJ	-	-	1 UJ	2 UJ	1 UJ	5 UJ	0.5 UJ	1 UJ
	Primary Result	10/22/2003	1 U	10 U	1 U	-	1 U	-	-	1 U	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	03/03/2009	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	-
	Primary Result	10/27/2009	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/07/2017	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	06/05/2025	1 U	-	1 U	-	1 U	1 U	-	1 U	5 U	-	-	1 U	3 U
MW-34B	Primary Result	10/28/2009	1 U	7 U	0.29 J	-	0.08 J	-	-	0.18 J	2 U	3 U	3 U	1 U	2 U
	Primary Result	07/19/2011	0.33 J	7 U	1 U	-	0.53 J	-	-	14	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/26/2012	1 U	7 U	1 U	-	0.45 J	-	-	6	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/05/2012	1 U	7 U	1 U	-	0.63 J	-	-	5.6	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/21/2013	1 U	7 U	1 U	-	0.28 J	-	-	2.3	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/20/2014	1 U	7 U	1 U	-	0.25 J	-	-	1.5	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/19/2015	1 U	7 U	1 U	-	0.28 J	-	-	1.2	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/01/2016	1 U	7 U	1 U	-	1 U	-	-	0.82 J	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/20/2017	1 U	7 U	1 U	-	1 U	-	-	0.47 J	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/07/2017	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/15/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	11/12/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/17/2019	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/15/2024	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	06/05/2025	1 U	-	1 U	-	1 U	1 U	-	1 U	5 U	-	-	1 U	3 U
MW-35B	Primary Result	10/30/2009	310 J	140 U	2.4 J	-	20 U	-	-	3800 J	40 U	60 U	60 U	20 U	40 U
	Primary Result	05/20/2015	4.2	7 U	0.47 J	-	1 U	-	-	55	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/02/2016	0.36 J	7 U	1 U	-	1 U	-	-	2.1	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/24/2017	7.5 J	7 UJ	1 UJ	-	1 UJ	-	-	12 J	2 UJ	3 UJ	3 UJ	1 UJ	2 UJ
	Primary Result	11/08/2017	5.7	-	1 U	-	1 U	1 U	-	90.8	1 U	-	-	1 U	3 U
	Primary Result	05/16/2018	1 U	-	1 U	-	1 U	1 U	-	8.6	1 U	-	-	1 U	3 U
MW-36B	Primary Result	10/30/2009	9300 J	1400 U	200 U	-	200 U	-	-	64000 J	400 U	600 U	600 U	200 U	400 U
	Primary Result	05/16/2018	1.6	-	1 U	-	1 U	1 U	-	21.9	1 U	-	-	1 U	3 U
	Primary Result	11/14/2018	64.6	-	1 U	-	1 U	1 U	-	102	1 U	-	-	1.1	3 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Tetrachloroethene	Tetrahydrofuran	Toluene	Total Target Chlorinated	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	trans-1,4-Dichloro-2-butene	Trichloroethene	Trichlorofluoromethane (CFC-11)	Trifluorotrichloroethane (Freon 113)	Vinyl acetate	Vinyl chloride	Xylene (Total)
		CAS Number	127-18-4	109-99-9	108-88-3	TOTTARCVOC	156-60-5	10061-02-6	110-57-6	79-01-6	75-69-4	76-13-1	108-05-4	75-01-4	1330-20-7
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-36BR	Primary Result	11/13/2023	9050	-	200 U	-	200 U	200 U	-	36700	200 U	-	-	228	600 U
	Primary Result	11/20/2023	6050	-	250 U	-	250 U	250 U	-	28200	250 U	-	-	351 J	750 U
MW-37B	Primary Result	10/30/2009	11000	1400 U	52 J	-	18 J	-	-	110000	400 U	600 U	600 U	200 U	400 U
	Primary Result	05/16/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	2.1	-	-	1 U	3 U
	Primary Result	11/15/2018	50 U	-	50 U	-	50 U	50 U	-	50 U	50 UJ	-	-	50 U	150 U
	Field Duplicate	11/15/2018	50 U	-	50 U	-	50 U	50 U	-	50 U	50 UJ	-	-	50 U	150 U
	Primary Result	05/15/2024	54.5	-	5 U	-	5 U	5 U	-	220	5 U	-	-	5 U	15 U
	Primary Result	06/05/2025	181	-	1 U	-	1 U	1 U	-	722	5 U	-	-	1 U	3 U
MW-38B	Primary Result	10/30/2009	9500	3500 U	500 U	-	500 U	-	-	78000	1000 U	1500 U	1500 U	500 U	1000 U
	Primary Result	05/16/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	11/15/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 UJ	-	-	1 U	3 U
	Field Duplicate	11/15/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 UJ	-	-	1 U	3 U
	Primary Result	05/15/2024	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	06/05/2025	1 U	-	1 U	-	1 U	1 U	-	25 U	5 U	-	-	1 U	3 U
MW-39B	Primary Result	10/30/2009	12000 J	7000 U	360 J	-	680 J	-	-	100000 J	2000 U	3000 U	3000 U	1400 J	300 J
	Primary Result	07/18/2011	13000	3500 U	250 J	-	530	-	-	130000	1000 U	390 J	1500 U	1900	440 J
	Primary Result	11/28/2011	6800	2800 U	160 J	-	380 J	-	-	32000	800 U	1200 U	1200 U	800	290 J
	Primary Result	02/22/2012	7400	700 U	150	-	300	-	-	34000	200 U	160 J	300 U	3200	250
	Field Duplicate	02/22/2012	7800	2800 U	160 J	-	330 J	-	-	33000	800 U	1200 U	1200 U	3500	260 J
	Primary Result	06/26/2012	6500	2800 U	140 J	-	230 J	-	-	34000	800 U	1200 U	1200 U	6500	210 J
	Primary Result	11/05/2012	5300	700 U	120	-	210	-	-	24000	200 U	91 J	300 U	9300	140 J
	Primary Result	03/13/2013	4700	700 U	110	-	320	-	-	27000	200 U	110 J	300 U	14000	100
	Field Duplicate	03/13/2013	5600	700 U	120	-	210	-	-	27000	200 U	59 J	300 U	14000	100
	Primary Result	05/21/2013	5000	700 U	90 J	-	180	-	-	26000	200 U	91 J	300 U	7800	83 J
	Primary Result	05/20/2014	5700	1400 U	80 J	-	130 J	-	-	28000	400 U	92 J	600 U	3600	100 J
	Primary Result	05/20/2015	6200	700 U	110	-	120	-	-	37000	200 U	120 J	300 U	2000	170 J
	Primary Result	06/02/2016	6400	1400 U	47 J	-	140 J	-	-	37000	400 U	110 J	600 U	2200	400 U
	Primary Result	06/22/2017	3900	700 U	49 J	-	110	-	-	35000	200 U	60 J	300 U	1300	43 J
	Primary Result	11/08/2017	3920	-	43.2	-	500 U	1 U	-	35500	1 U	-	-	513	31.7
	Primary Result	05/17/2018	4250	-	500 U	-	500 U	500 U	-	28900	500 U	-	-	500 U	1500 U
	Primary Result	11/14/2018	3910	-	500 U	-	500 U	500 U	-	39600	500 UJ	-	-	674	1500 U
	Primary Result	06/05/2025	1060	-	10 U	-	145	10 U	-	13000	50 U	-	-	1950	30 U
MW-40B	Primary Result	10/29/2009	70 J	70 U	1.6 J	-	0.82 J	-	-	3000 J	20 U	30 U	30 U	1.9 J	20 U
	Primary Result	07/18/2011	12	14 U	2 U	-	2 U	-	-	460	4 U	6 U	6 U	2 U	4 U
	Field Duplicate	07/18/2011	11	14 U	2 U	-	2 U	-	-	480	4 U	6 U	6 U	2 U	4 U
	Primary Result	06/26/2012	9.3	7 U	1 U	-	0.28 J	-	-	360	2 U	3 U	3 U	1 U	2 U
	Field Duplicate	06/26/2012	9.2	14 U	2 U	-	2 U	-	-	390	4 U	6 U	6 U	2 U	4 U
	Primary Result	11/05/2012	10	7 U	1 U	-	0.37 J	-	-	500	2 U	3 U	3 U	1 U	2 U
	Field Duplicate	11/05/2012	9.8	7 U	1 U	-	0.34 J	-	-	370	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/21/2013	9.8	14 U	2 U	-	2 U	-	-	500	4 U	6 U	6 U	2 U	4 U
	Field Duplicate	05/21/2013	9.7	14 U	2 U	-	0.31 J	-	-	490	4 U	6 U	6 U	2 U	4 U
	Primary Result	05/20/2014	11	14 U	2 U	-	0.31 J	-	-	400	4 U	6 U	6 U	2 U	4 U
	Field Duplicate	05/20/2014	11	14 U	2 U	-	0.32 J	-	-	380	4 U	6 U	6 U	2 U	4 U
	Primary Result	05/20/2015	7.7	28 U	4 U	-	4 U	-	-	390	8 U	12 U	12 U	4 U	8 U
	Field Duplicate	05/20/2015	8.4	14 U	2 U	-	0.32 J	-	-	410	4 U	6 U	6 U	2 U	4 U
	Primary Result	06/01/2016	7.5	14 U	2 U	-	2 U	-	-	330	4 U	6 U	6 U	2 U	4 U
	Primary Result	06/24/2017	8.2 J	7 UJ	1 UJ	-	0.33 J	-	-	330 J	2 UJ	3 UJ	3 UJ	1 UJ	2 UJ
	Primary Result	11/08/2017	5 U	-	5 U	-	5 U	5 U	-	332	5 U	-	-	5 U	15 U
	Primary Result	05/16/2018	5 U	-	5 U	-	5 U	5 U	-	209	5 U	-	-	5 U	15 U
	Primary Result	11/12/2018	5.1	-	1 U	-	1 U	1 U	-	302	1 U	-	-	1 U	3 U
	Primary Result	05/17/2019	5 U	-	5 U	-	5 U	5 U	-	228	5 U	-	-	5 U	15 U
	Primary Result	06/03/2020	5 U	-	5 U	-	5 U	5 U	-	234	5 U	-	-	5 U	15 U
	Primary Result	05/18/2021	5 U	-	5 U	-	5 U	5 U	-	298	5 U	-	-	5 U	15 U
	Primary Result	04/06/2022	5	-	5 U	-	5 U	5 U	-	296	5 U	-	-	5 U	15 U
	Primary Result	06/08/2023	5 U	-	5 U	-	5 U	5 U	-	242	5 U	-	-	5 U	15 U
	Primary Result	05/15/2024	6.8	-	5 U	-	5 U	5 U	-	375	5 U	-	-	5 U	15 U
	Primary Result	06/05/2025	3.69	-	1 U	-	1 U	1 U	-	193	5 U	-	-	1 U	3 U
MW-41B	Primary Result	10/27/2009	1 U	7 U	0.13 J	-	1 U	-	-	0.42 J	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/20/2015	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/20/2017	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/07/2017	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/15/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	11/12/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/17/2019	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/16/2024	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	06/05/2025	1 U	-	1 U	-	1 U	1 U	-	1 U	5 U	-	-	1 U	3 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Tetrachloroethene	Tetrahydrofuran	Toluene	Total Target Chlorinated	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	trans-1,4-Dichloro-2-butene	Trichloroethene	Trichlorofluoromethane (CFC-11)	Trifluorotrichloroethane (Freon 113)	Vinyl acetate	Vinyl chloride	Xylene (Total)
		CAS Number	127-18-4	109-99-9	108-88-3	TOTTARCVOC	156-60-5	10061-02-6	110-57-6	79-01-6	75-69-4	76-13-1	108-05-4	75-01-4	1330-20-7
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-42B	Primary Result	05/18/2011	1900	700 U	100 U	-	100 U	-	-	22000	200 U	300 U	300 U	100 U	200 U
	Field Duplicate	05/18/2011	1700	700 U	100 U	-	100 U	-	-	18000	200 U	300 U	300 U	100 U	200 U
	Primary Result	05/16/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	11/15/2018	20 U	-	20 U	-	20 U	20 U	-	20 U	20 UJ	-	-	20 U	60 U
	Primary Result	05/16/2024	10 U	-	10 U	-	10 U	10 U	-	10 U	10 U	-	-	10 U	30 U
	Primary Result	06/05/2025	321	-	1 U	-	1 U	1 U	-	1590	5 U	-	-	1 U	3 U
MW-43B	Primary Result	05/18/2011	140	70 U	10 U	-	10 U	-	-	3300	20 U	30 U	30 U	10 U	20 U
	Primary Result	05/16/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	11/15/2018	5.4	-	5 U	-	5 U	5 U	-	16.1	5 U	-	-	5 U	15 U
	Primary Result	05/16/2024	50 U	-	50 U	-	50 U	50 U	-	898	50 U	-	-	50 U	150 U
	Primary Result	06/05/2025	5.34	-	1 U	-	1 U	1 U	-	192	5 U	-	-	1 U	3 U
MW-44B	Primary Result	05/23/2011	12000	2800 U	400 U	-	400 U	-	-	98000	800 U	1200 U	1200 U	400 U	800 U
	Primary Result	07/18/2011	11000	1400 U	39 J	-	200 U	-	-	76000	400 U	600 U	600 U	200 U	400 U
	Primary Result	11/28/2011	1 U	7 U	1 U	-	1 U	-	-	1 U	2 U	1.9 J	3 U	1 U	2 U
	Primary Result	02/22/2012	2 U	14 U	2 U	-	2 U	-	-	2 U	4 U	2.6 J	6 U	2 U	4 U
	Primary Result	06/25/2012	5 U	35 U	5 U	-	5 U	-	-	5 U	10 U	15 U	15 U	5 U	10 U
	Primary Result	11/05/2012	10 U	70 U	10 U	-	10 U	-	-	10 U	20 U	30 U	30 U	10 U	20 U
	Primary Result	03/13/2013	1 U	7 U	1 U	-	1 U	-	-	1 U	0.44 J	3.3	3 U	1 U	1 U
	Primary Result	05/22/2013	10 U	70 U	10 U	-	10 U	-	-	10 U	20 U	4.2 J	30 U	10 U	20 U
	Primary Result	05/20/2014	5 U	35 U	5 U	-	5 U	-	-	5 U	10 U	4.3 J	15 U	5 U	10 U
	Primary Result	05/20/2015	10 U	70 U	10 U	-	10 U	-	-	10 U	20 U	9.8 J	30 U	10 U	20 U
	Primary Result	06/02/2016	1 U	7 U	1 U	-	1 U	-	-	1 U	0.77 J	10	3 U	1 U	2 U
	Primary Result	06/24/2017	4 UJ	28 UJ	4 UJ	-	4 UJ	-	-	4 UJ	1.8 J	13 J	12 UJ	4 UJ	8 UJ
	Primary Result	11/07/2017	1 U	-	1 U	-	1 U	1 U	-	2.4	1 U	-	-	1 U	3 U
	Primary Result	05/16/2018	10 U	-	10 U	-	10 U	10 U	-	10 U	10 U	-	-	10 U	30 U
	Primary Result	11/15/2018	20 U	-	20 U	-	20 U	20 U	-	20 U	20 U	-	-	20 U	60 U
	Primary Result	05/16/2019	782	-	20 U	-	20 U	20 U	-	4500	20 U	-	-	20 U	60 U
	Primary Result	06/03/2020	3970	-	20 U	-	20 U	20 U	-	32300	20 U	-	-	20 U	60 U
	Primary Result	05/18/2021	5850	-	500 U	-	500 U	500 U	-	42100	500 U	-	-	500 U	1500 U
	Primary Result	04/05/2022	4620	-	500 U	-	500 U	500 U	-	33000	500 U	-	-	500 U	1500 U
	Primary Result	06/06/2023	502	-	50 U	-	50 U	50 U	-	3830	50 U	-	-	50 U	150 U
	Primary Result	05/14/2024	1690	-	50 U	-	50 U	50 U	-	17500	50 U	-	-	50 U	150 U
	Primary Result	06/04/2025	1820	-	1 U	-	28.1	1 U	-	14900	5 U	-	-	15.9	3 U
MW-45B	Primary Result	05/23/2011	3800	2800 U	400 U	-	400 U	-	-	48000	800 U	1200 U	1200 U	400 U	800 U
	Primary Result	07/18/2011	4000	1400 U	200 U	-	200 U	-	-	27000	400 U	600 U	600 U	200 U	400 U
	Primary Result	11/28/2011	3100	700 U	100 U	-	100 U	-	-	22000	200 U	300 U	300 U	21 J	200 U
	Primary Result	02/22/2012	3700	700 U	100 U	-	16 J	-	-	25000	200 U	300 U	300 U	100 U	200 U
	Primary Result	06/25/2012	5100	1400 U	200 U	-	200 U	-	-	27000	400 U	600 U	600 U	25 J	400 U
	Primary Result	11/05/2012	2800	700 U	100 U	-	100 U	-	-	14000	200 U	300 U	300 U	100 U	200 U
	Primary Result	03/13/2013	3600	700 U	100 U	-	23 J	-	-	28000	200 U	300 U	300 U	22 J	100 U
	Primary Result	05/22/2013	1200	70 U	2.8 J	-	10 U	-	-	3200	20 U	13 J	30 U	10 U	20 U
	Primary Result	05/20/2014	6900	1400 U	200 U	-	200 U	-	-	40000	400 U	600 U	600 U	88 J	400 U
	Primary Result	05/19/2015	7300	700 U	100 U	-	28 J	-	-	51000	200 U	300 U	300 U	32 J	200 U
	Primary Result	06/02/2016	8000	1400 U	200 U	-	32 J	-	-	48000	400 U	600 U	600 U	200 U	400 U
	Primary Result	06/24/2017	4900 J	280 UJ	40 UJ	-	11 J	-	-	27000 J	80 UJ	120 UJ	120 UJ	16 J	80 UJ
	Primary Result	11/08/2017	3980	-	1000 U	-	1000 U	1000 U	-	33200	1000 U	-	-	1000 U	3000 U
	Primary Result	05/16/2018	3570	-	250 U	-	250 U	250 U	-	27400	250 U	-	-	250 U	750 U
	Primary Result	11/15/2018	3850	-	500 U	-	500 U	500 U	-	38300	500 U	-	-	500 U	1500 U
	Primary Result	05/16/2019	4050	-	500 U	-	500 U	500 U	-	28200	500 U	-	-	500 U	1500 U
	Primary Result	06/03/2020	3780	-	500 U	-	500 U	500 U	-	27800	500 U	-	-	500 U	1500 U
	Primary Result	05/18/2021	3810	-	500 U	-	500 U	500 U	-	29700	500 U	-	-	500 U	1500 U
	Primary Result	04/05/2022	2360	-	500 U	-	500 U	500 U	-	19300	500 U	-	-	500 U	1500 U
	Primary Result	06/06/2023	2700	-	500 U	-	500 U	500 U	-	13700	500 U	-	-	500 U	1500 U
	Primary Result	05/14/2024	4130	-	500 U	-	500 U	500 U	-	28100	500 U	-	-	500 U	1500 U
	Primary Result	06/04/2025	5240	-	10 U	-	45.8	10 U	-	32000	50 U	-	-	25.1	30 U
MW-46B	Primary Result	05/23/2011	1700	2800 U	400 U	-	400 U	-	-	18000	800 U	1200 U	1200 U	2400	800 U
	Primary Result	07/18/2011	520	1400 U	63 J	-	220	-	-	12000	400 U	170 J	600 U	3300	400 U
	Primary Result	11/28/2011	710	2800 U	79 J	-	300 J	-	-	13000	800 U	1200 U	1200 U	2700	800 U
	Field Duplicate	11/28/2011	690	2800 U	81 J	-	310 J	-	-	12000	800 U	1200 U	1200 U	2800	800 U
	Primary Result	02/22/2012	300	1400 U	81 J	-	240	-	-	6700	400 U	600 U	600 U	4600	400 U
	Primary Result	06/26/2012	680	3500 U	500 U	-	280 J	-	-	14000	1000 U	1500 U	1500 U	3900	1000 U
	Primary Result	11/05/2012	690	1400 U	62 J	-	370	-	-	15000	400 U	200 J	600 U	6800	39 J
	Primary Result	03/13/2013	280	1400 U	61 J	-	270	-	-	5500	400 U	98 J	600 U	8400	200 U
	Primary Result	05/22/2013	290	700 U	47 J	-	170	-	-	5900	200 U	79 J	300 U	5400	200 U
	Primary Result	05/20/2014	310	1400 U	42 J	-	170 J	-	-	8600	400 U	84 J	600 U	4600	400 U
	Primary Result	05/20/2015	240	700 U	44 J	-	140	-	-	7000	200 U	59 J	300 U	3300	200 U
	Primary Result	06/02/2016	320	1400 U	51 J	-	150 J	-	-	7700	400 U	600 U	600 U	4300	400 U
	Primary Result	06/22/2017	330	700 U	33 J	-	130	-	-	11000	200 U	51 J	300 U	2500	200 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Tetrachloroethene	Tetrahydrofuran	Toluene	Total Target Chlorinated	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	trans-1,4-Dichloro-2-butene	Trichloroethene	Trichlorofluoromethane (CFC-11)	Trifluorotrichloroethane (Freon 113)	Vinyl acetate	Vinyl chloride	Xylene (Total)
		CAS Number	127-18-4	109-99-9	108-88-3	TOTTARCVOC	156-60-5	10061-02-6	110-57-6	79-01-6	75-69-4	76-13-1	108-05-4	75-01-4	1330-20-7
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-46B	Primary Result	11/08/2017	310	-	200 U	-	200 U	200 U	-	11400	200 U	-	-	1290	600 U
	Primary Result	05/17/2018	310	-	250 U	-	621	250 U	-	6040	250 U	-	-	3190	750 U
	Primary Result	11/14/2018	250 U	-	250 U	-	250 U	250 U	-	4620	250 UJ	-	-	5510	750 U
	Primary Result	05/16/2024	269	-	50 U	-	112	50 U	-	7960	50 U	-	-	2620	150 U
	Primary Result	06/04/2025	107	-	14.2	-	96.1	1 U	-	1920	5 U	-	-	1030	6.36
MW-47B	Primary Result	06/20/2017	1200	280 U	40 U	-	40 U	-	-	6700	80 U	120 U	120 U	40 U	80 U
	Primary Result	06/23/2017	-	-	-	-	-	-	-	-	-	-	-	-	-
	Primary Result	11/08/2017	104	-	1 U	-	1 U	1 U	-	1170	1 U	-	-	9.3	3 U
	Primary Result	05/15/2018	116	-	20 U	-	20 U	20 U	-	1260	20 U	-	-	20 U	60 U
	Primary Result	11/15/2018	66	-	20 U	-	20 U	20 U	-	920	20 U	-	-	20 U	60 U
	Primary Result	05/16/2019	196	-	20 U	-	20 U	20 U	-	1570	20 U	-	-	20 U	60 U
	Primary Result	06/03/2020	161	-	20 U	-	20 U	20 U	-	1420,	20 U	-	-	20 U	60 U
	Primary Result	05/19/2021	27.8	-	2 U	-	2 U	2 U	-	203	2 U	-	-	2 U	6 U
	Primary Result	04/06/2022	312	-	5 U	-	5 U	5 U	-	2580	5 U	-	-	5 U	15 U
	Primary Result	06/08/2023	881	-	25 U	-	25 U	25 U	-	6640	25 U	-	-	25 U	75 U
	Primary Result	05/16/2024	2560	-	100 U	-	100 U	100 U	-	18800	100 U	-	-	100 U	300 U
	Primary Result	06/04/2025	2030	-	1 U	-	3.79	1 U	-	16200	5 U	-	-	8.13	3 U
MW-48B	Primary Result	06/20/2017	600	280 U	40 U	-	40 U	-	-	5000	80 U	120 U	120 U	40 U	80 U
	Primary Result	06/22/2017	-	-	-	-	-	-	-	-	-	-	-	-	-
	Primary Result	11/08/2017	254	-	1 U	-	50 U	1 U	-	3990	1 U	-	-	9	3 U
	Primary Result	05/15/2018	234	-	50 U	-	50 U	50 U	-	3970	50 U	-	-	50 U	150 U
	Primary Result	11/15/2018	57.3	-	10 U	-	10 U	10 U	-	1140	10 U	-	-	10 U	30 U
	Primary Result	05/16/2019	83.1	-	20 U	-	20 U	20 U	-	1130	20 U	-	-	20 U	60 U
	Field Duplicate	05/16/2019	86.5	-	20 U	-	20 U	20 U	-	1160	20 U	-	-	20 U	60 U
	Primary Result	06/03/2020	90.5	-	20 U	-	20 U	20 U	-	1320	20 U	-	-	20 U	60 U
	Field Duplicate	06/03/2020	82.8	-	20 U	-	20 U	20 U	-	1320	20 U	-	-	20 U	60 U
	Primary Result	05/19/2021	43	-	20 U	-	20 U	20 U	-	531	20 U	-	-	20 U	60 U
	Field Duplicate	05/19/2021	42.5	-	20 U	-	20 U	20 U	-	548	20 U	-	-	20 U	60 U
	Primary Result	04/06/2022	38.1	-	20 U	-	20 U	20 U	-	468	20 U	-	-	20 U	60 U
	Field Duplicate	04/06/2022	76.1	-	20 U	-	20 U	20 U	-	943	20 U	-	-	20 U	60 U
	Primary Result	06/08/2023	91.2	-	20 U	-	20 U	20 U	-	1050	20 U	-	-	20 U	60 U
	Primary Result	05/16/2024	20 U	-	20 U	-	20 U	20 U	-	168	20 U	-	-	20 U	60 U
	Primary Result	06/04/2025	6.55	-	1 U	-	1 U	1 U	-	69.7	5 U	-	-	1 U	3 U
MW-48C	Primary Result	06/20/2017	210	70 U	10 U	-	10 U	-	-	2100	20 U	30 U	30 U	3.7 J	20 U
	Primary Result	06/22/2017	-	-	-	-	-	-	-	-	-	-	-	-	-
	Primary Result	11/08/2017	20.4	-	1 U	-	1 U	1 U	-	544	1 U	-	-	1.8	3 U
	Primary Result	05/15/2018	17.6	-	10 U	-	10 U	10 U	-	464	10 U	-	-	10 U	30 U
	Field Duplicate	05/15/2018	16.6	-	10 U	-	10 U	10 U	-	445	10 U	-	-	10 U	30 U
	Primary Result	11/15/2018	10 U	-	10 U	-	10 U	10 U	-	347	10 U	-	-	10 U	30 U
	Field Duplicate	11/15/2018	10 U	-	10 U	-	10 U	10 U	-	336	10 U	-	-	10 U	30 U
	Primary Result	05/16/2019	10 U	-	10 U	-	10 U	10 U	-	197	10 U	-	-	10 U	30 U
	Primary Result	06/03/2020	8.5 U	-	1 U	-	1 U	1 U	-	196	1 U	-	-	1 U	3 U
	Primary Result	05/19/2021	6.2	-	1 U	-	1 U	1 U	-	156	1 U	-	-	1 U	3 U
	Primary Result	04/06/2022	5.5	-	1 U	-	1 U	1 U	-	138	1 U	-	-	1 U	3 U
	Primary Result	06/08/2023	45.7	-	20 U	-	20 U	20 U	-	633	20 U	-	-	20 U	60 U
	Field Duplicate	06/08/2023	49.3	-	20 U	-	20 U	20 U	-	792	20 U	-	-	20 U	60 U
	Primary Result	05/16/2024	20 U	-	20 U	-	20 U	20 U	-	102 J	20 U	-	-	20 U	60 U
	Field Duplicate	05/16/2024	20 U	-	20 U	-	20 U	20 U	-	79.4 J	20 U	-	-	20 U	60 U
	Primary Result	06/04/2025	3.46 J	-	1 U	-	1 U	1 U	-	80.8	5 U	-	-	1 U	3 U
MW-49B	Primary Result	06/20/2017	5.9	7 U	0.36 J	-	0.5 J	-	-	230	2 U	3 U	3 U	1.4	2 U
	Primary Result	06/22/2017	-	-	-	-	-	-	-	-	-	-	-	-	-
	Primary Result	11/07/2017	3.2	-	1 U	-	1 U	1 U	-	184	1 U	-	-	1.3	3 U
	Primary Result	05/15/2018	2.3	-	1 U	-	1 U	1 U	-	139	1 U	-	-	1 U	3 U
	Primary Result	11/15/2018	4.4	-	1 U	-	1 U	1 U	-	209	1 U	-	-	1 U	3 U
	Primary Result	05/16/2019	10 U	-	10 U	-	10 U	10 U	-	101	10 U	-	-	10 U	30 U
	Primary Result	06/03/2020	3.4 U	-	1 U	-	1 U	1 U	-	98.6	1 U	-	-	1 U	3 U
	Primary Result	05/18/2021	1 U	-	1 U	-	1 U	1 U	-	33	1 U	-	-	1 U	3 U
	Primary Result	04/06/2022	1 U	-	1 U	-	1 U	1 U	-	19.5	1 U	-	-	1 U	3 U
	Primary Result	06/08/2023	1.1	-	1 U	-	1 U	1 U	-	41.7	1 U	-	-	1 U	3 U
	Primary Result	05/16/2024	1.6	-	1 U	-	1 U	1 U	-	76.6	1 U	-	-	1 U	3 U
	Field Duplicate	06/04/2025	1.78	-	1 U	-	1 U	1 U	-	97.6	5 U	-	-	1 UJ	3 U
	Primary Result	06/05/2025	1.3	-	1 U	-	1 U	1 U	-	77.5	5 U	-	-	1 U	3 U
MW-50B	Primary Result	06/06/2018	17200	-	14.5	-	1 U	1 U	-	40500 J	1.9 J	-	-	1 U	3 U
	Field Duplicate	06/06/2018	20400	-	200 U	-	200 U	200 U	-	73600 J	200 UJ	-	-	200 U	600 U
	Primary Result	11/12/2018	81.8	-	10 U	-	10 U	10 U	-	44.3	10 U	-	-	10 U	30 U
	Field Duplicate	11/12/2018	72.9	-	25 U	-	25 U	25 U	-	54.4	25 U	-	-	25 U	75 U
	Primary Result	06/03/2020	157	-	10 U	-	100 U	10 U	-	3890	10 U	-	-	1240	30 U
	Primary Result	05/19/2021	121	-	100 U	-	100 U	100 U	-	1960	100 U	-	-	1620	300 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Tetrachloroethene	Tetrahydrofuran	Toluene	Total Target Chlorinated	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	trans-1,4-Dichloro-2-butene	Trichloroethene	Trichlorofluoromethane (CFC-11)	Trifluorotrichloroethane (Freon 113)	Vinyl acetate	Vinyl chloride	Xylene (Total)
		CAS Number	127-18-4	109-99-9	108-88-3	TOTTARCVOC	156-60-5	10061-02-6	110-57-6	79-01-6	75-69-4	76-13-1	108-05-4	75-01-4	1330-20-7
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-50B	Primary Result	04/06/2022	120	-	100 U	-	100 U	100 U	-	1680	100 U	-	-	956	300 U
	Primary Result	06/08/2023	218	-	100 U	-	100 U	100 U	-	3460	100 U	-	-	436	300 U
	Primary Result	05/16/2024	158	-	100 U	-	100 U	100 U	-	1990	100 U	-	-	100 U	300 U
	Primary Result	06/05/2025	148	-	1 U	-	27.6	1 U	-	2180	5 U	-	-	397	3 U
MW-51B	Primary Result	06/06/2018	308	-	1 U	-	100 U	1 U	-	4100	1 UJ	-	-	1.8	3 U
	Primary Result	11/12/2018	123	-	50 U	-	50 U	50 U	-	2710	50 U	-	-	50 U	150 U
	Field Duplicate	11/12/2018	150	-	100 U	-	100 U	100 U	-	3200	100 U	-	-	100 U	300 U
	Primary Result	05/16/2019	339	-	50 U	-	50 U	50 U	-	4940	50 U	-	-	50 U	150 U
	Primary Result	06/02/2020	272	-	50 U	-	50 U	50 U	-	4800	50 U	-	-	50 U	150 U
	Primary Result	05/18/2021	317	-	50 U	-	50 U	50 U	-	5280	50 U	-	-	50 U	150 U
	Primary Result	04/05/2022	336	-	50 U	-	50 U	50 U	-	4610	50 U	-	-	50 U	150 U
	Primary Result	06/06/2023	298	-	50 U	-	50 U	50 U	-	3770	50 U	-	-	50 U	150 U
	Primary Result	05/14/2024	441	-	50 U	-	50 U	50 U	-	6850	50 U	-	-	50 U	150 U
	Primary Result	06/04/2025	573	-	20 U	-	20 U	20 U	-	9180	100 U	-	-	20 U	60 U
MW-52B	Primary Result	06/08/2018	89000	-	500 U	-	500 U	500 U	-	373000	500 U	-	-	500 U	1500 U
	Primary Result	11/12/2018	17700	-	5000 U	-	5000 U	5000 U	-	177000	5000 U	-	-	5000 U	15000 U
	Primary Result	05/16/2019	11900	-	2500 U	-	2500 U	2500 U	-	44600	2500 U	-	-	2500 U	7500 U
	Primary Result	06/02/2020	26300	-	1000 U	-	1000 U	1000 U	-	80700	1000 U	-	-	1000 U	3000 U
	Primary Result	05/18/2021	11300	-	1000 U	-	1000 U	1000 U	-	45900	1000 U	-	-	1000 U	3000 U
	Primary Result	04/05/2022	10900	-	1000 U	-	1000 U	1000 U	-	34700	1000 U	-	-	1000 U	3000 U
	Primary Result	06/06/2023	6900	-	1000 U	-	1000 U	1000 U	-	34800	1000 U	-	-	1000 U	3000 U
	Primary Result	05/14/2024	1870	-	1000 U	-	1000 U	1000 U	-	11900	1000 U	-	-	1000 U	3000 U
	Primary Result	06/04/2025	11700	-	29.7	-	43.8	20 U	-	50800	100 U	-	-	20 U	60 U
MW-52C	Primary Result	06/08/2018	15	-	1 U	-	1 U	1 U	-	73	1 U	-	-	1 U	3 U
	Primary Result	07/02/2018	337	-	3.2	-	12.1	1 U	-	1420	1 U	-	-	1 U	3 U
	Primary Result	10/01/2018	56.2	-	20 U	-	20 U	20 U	-	321	20 U	-	-	20 U	60 U
	Field Duplicate	10/01/2018	52.7	-	20 U	-	20 U	20 U	-	286	20 U	-	-	20 U	60 U
MW-53B1	Primary Result	06/08/2018	84.2	-	4	-	1 U	1 U	-	379	1 U	-	-	1 U	3 U
	Primary Result	07/02/2018	2.1	-	1 U	-	1 U	1 U	-	12.5	1 U	-	-	1 U	3 U
	Primary Result	11/12/2018	1 U	-	1 U	-	1 U	1 U	-	3.7	1 U	-	-	1 U	3 U
	Primary Result	05/16/2019	1 U	-	1 U	-	1 U	1 U	-	19.7	1 U	-	-	1 U	3 U
	Primary Result	06/02/2020	5.9 U	-	1 U	-	1 U	1 U	-	41.8	1 U	-	-	1 U	3 U
	Primary Result	05/18/2021	1 U	-	1 U	-	1 U	1 U	-	2.3	1 U	-	-	1 U	3 U
	Primary Result	04/05/2022	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	06/06/2023	3.6	-	1 U	-	1 U	1 U	-	6.2	1 U	-	-	1 U	3 U
	Primary Result	05/14/2024	142	-	1 U	-	1 U	1 U	-	1030	1 U	-	-	1 U	3 U
	Primary Result	06/04/2025	123	-	1 U	-	1 U	1 U	-	886	5 U	-	-	1 U	3 U
MW-53B2	Primary Result	06/08/2018	52.8	-	1 U	-	1 U	1 U	-	244	1 U	-	-	1 U	3 U
	Primary Result	07/02/2018	353	-	5 U	-	5 U	5 U	-	3550 J	5 U	-	-	5 U	15 U
	Primary Result	11/12/2018	172	-	100 U	-	100 U	100 U	-	2570	100 U	-	-	100 U	300 U
	Primary Result	05/16/2019	143	-	50 U	-	50 U	50 U	-	2960	50 U	-	-	50 U	150 U
	Primary Result	06/02/2020	208	-	50 U	-	50 U	50 U	-	3660	50 U	-	-	50 U	150 U
	Primary Result	05/18/2021	327	-	50 U	-	50 U	50 U	-	4580	50 U	-	-	50 U	150 U
	Primary Result	04/05/2022	340	-	50 U	-	50 U	50 U	-	3450	50 U	-	-	50 U	150 U
	Primary Result	06/06/2023	217	-	50 U	-	50 U	50 U	-	3590	50 U	-	-	50 U	150 U
	Primary Result	05/14/2024	159	-	20 U	-	20 U	20 U	-	1800	20 U	-	-	20 U	60 U
	Primary Result	06/04/2025	378	-	1 U	-	1.43	1 U	-	4650	5 U	-	-	1 U	3 U
MW-53C	Primary Result	06/08/2018	200	-	1.5	-	1 U	1 U	-	884	1 U	-	-	1 U	3 U
	Primary Result	07/02/2018	22.2	-	5 U	-	5 U	5 U	-	197	5 U	-	-	5 U	15 U
	Primary Result	10/01/2018	1 U	-	1 U	-	1 U	1 U	-	36	1 U	-	-	1 U	3 U
MW-54C	Primary Result	07/02/2018	1.5	-	1 U	-	1 U	1 U	-	15.7	1 U	-	-	1 U	3 U
	Primary Result	11/12/2018	1 U	-	1 U	-	1 U	1 U	-	17.8	1 U	-	-	1 U	3 U
	Primary Result	05/16/2019	1 U	-	1 U	-	1 U	1 U	-	17.9	1 U	-	-	1 U	3 U
	Primary Result	06/02/2020	2.6 U	-	1 U	-	1 U	1 U	-	17.9	1 U	-	-	1 U	3 U
	Primary Result	05/18/2021	1 U	-	1 U	-	1 U	1 U	-	12.8	1 U	-	-	1 U	3 U
	Primary Result	04/05/2022	1 U	-	1 U	-	1 U	1 U	-	15	1 U	-	-	1 U	3 U
	Primary Result	06/06/2023	1 U	-	1 U	-	1 U	1 U	-	8.7	1 U	-	-	1 U	3 U
	Primary Result	05/14/2024	1 U	-	1 U	-	1 U	1 U	-	7.8	1 U	-	-	1 U	3 U
	Primary Result	06/04/2025	1 U	-	1 U	-	1 U	1 U	-	5.05	5 U	-	-	1 U	3 U
MW-55B	Primary Result	06/12/2018	12.8	-	2.4	-	1 U	1 U	-	78.4	1 U	-	-	1.7	3 U
	Primary Result	07/02/2018	33.5	-	1.5	-	1 U	1 U	-	216	1 U	-	-	4.9	3 U
	Field Duplicate	07/02/2018	32.3	-	1.7	-	1 U	1 U	-	191	1 U	-	-	5.3	3 U
	Primary Result	11/12/2018	5 U	-	5 U	-	5 U	5 U	-	142	5 U	-	-	5 U	15 U
	Field Duplicate	11/12/2018	5 U	-	5 U	-	5 U	5 U	-	141	5 U	-	-	5 U	15 U
	Primary Result	05/16/2019	61.4	-	5 U	-	5 U	5 U	-	344	5 U	-	-	5 U	15 U
	Primary Result	06/02/2020	67.6 J+	-	5 U	-	5 U	5 U	-	569	5 U	-	-	5 U	15 U
	Primary Result	05/18/2021	227	-	5 U	-	5.8	5 U	-	3010	5 U	-	-	93.9	15 U

APPENDIX E
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CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Tetrachloroethene	Tetrahydrofuran	Toluene	Total Target Chlorinated	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	trans-1,4-Dichloro-2-butene	Trichloroethene	Trichlorofluoromethane (CFC-11)	Trifluorotrichloroethane (Freon 113)	Vinyl acetate	Vinyl chloride	Xylene (Total)
		CAS Number	127-18-4	109-99-9	108-88-3	TOTTARCVOC	156-60-5	10061-02-6	110-57-6	79-01-6	75-69-4	76-13-1	108-05-4	75-01-4	1330-20-7
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-55B	Primary Result	04/05/2022	212	-	25 U	-	25 U	25 U	-	786	25 U	-	-	25 U	75 U
	Primary Result	06/06/2023	544	-	50 U	-	50 U	50 U	-	6360	50 U	-	-	160	150 U
	Primary Result	05/14/2024	926	-	50 U	-	50 U	50 U	-	8680	50 U	-	-	66.4	150 U
	Primary Result	06/04/2025	370	-	1 U	-	12	1 U	-	6060	5 U	-	-	69.3	3 U
MW-56B	Primary Result	06/12/2018	123	-	1 U	-	1 U	1 U	-	603	1 U	-	-	2.7	3 U
	Primary Result	07/02/2018	71.3	-	20 U	-	20 U	20 U	-	490	20 U	-	-	20 U	60 U
	Primary Result	11/12/2018	27.1	-	20 U	-	20 U	20 U	-	345	20 U	-	-	20 U	60 U
	Primary Result	05/16/2019	40	-	10 U	-	10 U	10 U	-	389	10 U	-	-	10 U	30 U
	Field Duplicate	05/16/2019	38.9	-	10 U	-	10 U	10 U	-	383	10 U	-	-	10 U	30 U
	Primary Result	06/02/2020	41.4 J+	-	5 U	-	5 U	5 U	-	522	5 U	-	-	5 U	15 U
	Field Duplicate	06/02/2020	41.8 J+	-	5 U	-	5 U	5 U	-	532	5 U	-	-	5 U	15 U
	Primary Result	05/18/2021	29.3	-	5 U	-	5 U	5 U	-	410	5 U	-	-	5 U	15 U
	Field Duplicate	05/18/2021	28.2	-	5 U	-	5 U	5 U	-	410	5 U	-	-	5 U	15 U
	Primary Result	04/05/2022	52.6	-	5 U	-	5 U	5 U	-	621	5 U	-	-	5 U	15 U
	Field Duplicate	04/05/2022	53.9	-	5 U	-	5 U	5 U	-	621	5 U	-	-	5 U	15 U
	Primary Result	06/06/2023	31.8	-	5 U	-	5 U	5 U	-	331	5 U	-	-	5 U	15 U
	Field Duplicate	06/06/2023	33.4	-	5 U	-	5 U	5 U	-	355	5 U	-	-	5 U	15 U
	Primary Result	05/14/2024	54.4	-	5 U	-	5 U	5 U	-	393	5 U	-	-	5 U	15 U
	Field Duplicate	05/14/2024	52.9	-	5 U	-	5 U	5 U	-	381	5 U	-	-	5 U	15 U
	Primary Result	06/04/2025	41.5	-	1 U	-	1 U	1 U	-	586	5 U	-	-	1.9	3 U
	Field Duplicate	06/04/2025	51.9	-	1 U	-	1 U	1 U	-	554	5 U	-	-	1.36 J	3 U
MW-57B	Primary Result	11/12/2018	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/17/2019	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	06/02/2020	1.5 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/18/2021	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	04/06/2022	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	06/08/2023	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	05/15/2024	1 U	-	1 U	-	1 U	1 U	-	1 U	1 U	-	-	1 U	3 U
	Primary Result	06/05/2025	1 U	-	1 U	-	1 U	1 U	-	1 U	5 U	-	-	1 U	3 U
MW-58B	Primary Result	11/13/2023	2100	-	200 U	-	200 U	200 U	-	18900	200 U	-	-	200 U	600 U
	Primary Result	11/20/2023	2600	-	200 U	-	200 U	200 U	-	24500	200 U	-	-	276 J	600 U
MW-59B	Primary Result	11/13/2023	4430	-	200 U	-	200 U	200 U	-	34100	200 U	-	-	200 U	600 U
	Primary Result	11/20/2023	3550	-	250 U	-	250 U	250 U	-	32800	250 U	-	-	250 U	750 U
MW-60B	Primary Result	11/13/2023	28800	-	500 U	-	500 U	500 U	-	120000	500 U	-	-	500 U	1500 U
	Primary Result	11/20/2023	28100	-	1000 U	-	1000 U	1000 U	-	121000	1000 U	-	-	1000 U	3000 U
	Primary Result	05/15/2024	27300	-	1000 U	-	1000 U	1000 U	-	106000	1000 U	-	-	1000 U	3000 U
	Primary Result	06/04/2025	29400 J	-	52.1	-	50 U	50 U	-	114000	250 U	-	-	421	150 U
	Field Duplicate	06/04/2025	17600 J	-	200 U	-	200 U	200 U	-	95400	1000 U	-	-	316 J	600 U
PP-3D	Primary Result	03/02/2009	110	-	20 U	-	14 J	20 U	-	4400	20 U	-	-	3.1 J	-
	Primary Result	10/30/2009	120 J	140 U	20 U	-	4.5 J	-	-	3500 J	40 U	60 U	60 U	9.4 J	40 U
	Primary Result	06/05/2025	21.6	-	1 U	-	1.51	1 U	-	330	5 U	-	-	1 U	3 U
PP-4D	Primary Result	02/05/2003	1 U	10 U	0.58 J	-	1 U	-	-	0.71 J	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	03/05/2009	21	-	0.09 J	-	0.13 J	1 U	-	260	1 U	-	-	0.17 J	-
PP-4S	Primary Result	02/05/2003	1 U	10 U	1 U	-	1 U	-	-	0.35 J	2 U	1 U	5 U	0.5 U	1 U
PP-5D	Primary Result	02/27/2001	280	-	1	-	2	0.5 U	-	7400	-	-	-	0.5 U	0.5 U
	Primary Result	11/04/2002	760	5000 U	500 U	-	500 U	-	-	14000	1000 U	500 U	2500 U	250 U	500 U
	Primary Result	02/06/2003	640	2500 U	250 U	-	250 U	-	-	12000	500 U	250 U	1200 U	120 U	250 U
	Primary Result	10/24/2003	1100	5000 U	500 U	-	500 U	-	-	17000	1000 U	500 U	2500 U	250 U	500 U
	Primary Result	03/05/2009	90	-	10 U	-	0.77 J	10 U	-	2000	10 U	-	-	10 U	-
	Primary Result	05/16/2018	254	-	1 U	-	1 U	1 U	-	2090	1 U	-	-	1 U	3 U
	Primary Result	11/14/2018	268	-	50 U	-	50 U	50 U	-	2080	50 UJ	-	-	50 U	150 U
	Primary Result	06/08/2023	46.9	-	10 U	-	10 U	10 U	-	339	10 U	-	-	10 U	30 U
	Primary Result	05/15/2024	117	-	10 U	-	10 U	10 U	-	682	10 U	-	-	10 U	30 U
	Primary Result	06/05/2025	28	-	1 U	-	1 U	1 U	-	212	5 U	-	-	1 U	3 U
PP-5S	Primary Result	11/14/2018	10.9	-	10 U	-	10 U	10 U	-	348	10 UJ	-	-	10 U	30 U
	Primary Result	06/03/2020	20 J+	-	10 U	-	10 U	10 U	-	282	10 U	-	-	10 U	30 U
	Primary Result	05/18/2021	11.2	-	10 U	-	10 U	10 U	-	283	10 U	-	-	10 U	30 U
	Primary Result	04/06/2022	10 U	-	10 U	-	10 U	10 U	-	325	10 U	-	-	10 U	30 U
PP-7	Primary Result	11/05/2002	1 U	10 U	1 U	-	1 U	-	-	0.35 J	2 U	1 U	5 U	0.5 U	1 U
PP-8	Primary Result	11/05/2002	0.71 J	10 U	1 U	-	1 U	-	-	2.8	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	11/27/2002	1 U	10 U	1 U	-	1 U	-	-	1 U	2 U	1 U	5 U	0.5 U	1 U
TMW-001	Primary Result	11/28/2000	-	-	92	-	350	12 U	-	-	-	-	-	290	21
	Primary Result	12/13/2000	2000	-	76	-	47 J	50 U	-	-	-	-	-	65	50 U
	Primary Result	02/06/2003	5000 U	50000 U	5000 U	-	5000 U	-	-	18000	10000 U	5000 U	25000 U	1800 J	5000 U
	Primary Result	10/24/2003	1200 J	25000 U	2500 U	-	2500 U	-	-	13000	5000 U	2500 U	12000 U	1700	2500 U
	Primary Result	03/05/2009	170	-	21 J	-	220	130 U	-	1100	130 U	-	-	1000	-

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
OLATHE, KANSAS

		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Tetrachloro ethene	Tetrahydro furan	Toluene	Total Target Chlorinated	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	trans-1,4-Dichloro-2-butene	Trichloro ethene	Trichlorofluoro methane (CFC-11)	Trifluorotrichloro ethane (Freon 113)	Vinyl acetate	Vinyl chloride	Xylene (Total)
		CAS Number	127-18-4	109-99-9	108-88-3	TOTTARCVOC	156-60-5	10061-02-6	110-57-6	79-01-6	75-69-4	76-13-1	108-05-4	75-01-4	1330-20-7
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
TMW-002	Primary Result	02/27/2001	9200	-	9000	-	5000 U	5000 U	-	-	-	-	-	5000 U	5000 U
	Primary Result	02/06/2003	5000 J	120000 U	8100 J	-	12000 U	-	-	320000	25000 U	12000 U	62000 U	6200 U	12000 U
	Primary Result	10/07/2003	6700 J	100000 U	10000	-	10000 U	-	-	270000	20000 U	10000 U	50000 U	5000 U	10000 U
	Primary Result	10/24/2003	7000 J	100000 U	7700 J	-	10000 U	-	-	310000	20000 U	10000 U	50000 U	5000 U	10000 U
	Primary Result	03/06/2009	3800	-	12000	-	310 J	500 U	-	190000	500 U	-	-	180 J	-
TMW-003	Primary Result	02/28/2001	-	-	82	-	76	5 U	-	-	-	-	-	7	19
	Primary Result	02/06/2003	2700	12000 U	1200 U	-	1200 U	-	-	31000	2500 U	1200 U	6200 U	620 U	1200 U
	Primary Result	10/24/2003	3200	10000 U	1000 U	-	1000 U	-	-	35000	2000 U	1000 U	5000 U	500 U	1000 U
	Primary Result	03/05/2009	3400	-	59 J	-	68	67 U	-	21000	67 U	-	-	20 J	-
TMW-004	Primary Result	02/28/2001	2300	-	510	-	500 U	500 U	-	-	-	-	-	500 U	720
	Primary Result	02/06/2003	12000 U	120000 U	12000 U	-	12000 U	-	-	270000	25000 U	12000 U	62000 U	6200 U	12000 U
	Primary Result	10/24/2003	10000 U	100000 U	10000 U	-	10000 U	-	-	320000	20000 U	10000 U	50000 U	5000 U	10000 U
	Primary Result	03/06/2009	880 J	-	330 J	-	1000 U	1000 U	-	250000	1000 U	-	-	1000 U	-
TMW-005	Primary Result	02/28/2001	-	-	35	-	98	50 U	-	-	-	-	-	50 U	50 U
	Primary Result	02/06/2003	64000	250000 U	25000 U	-	25000 U	-	-	760000	50000 U	25000 U	120000 U	12000 U	25000 U
	Primary Result	10/24/2003	2300	5000 U	500 U	-	500 U	-	-	14000	1000 U	500 U	2500 U	250 U	500 U
	Primary Result	03/05/2009	5700	-	36 J	-	170 J	330 U	-	73000	330 U	-	-	79 J	-
	Field Duplicate	03/05/2009	5300	-	36 J	-	160 J	330 U	-	61000	330 U	-	-	81 J	-
TMW-007	Primary Result	02/28/2001	6400	-	1000	-	500 U	500 U	-	-	-	-	-	500 U	840
	Primary Result	03/06/2009	2400	-	570 J	-	190 J	2000 U	-	640000	2000 U	-	-	2000 U	-
TMW-008	Primary Result	03/01/2001	0.4 J	-	0.5 U	-	0.5 U	0.5 U	-	6	-	-	-	0.5 U	0.5 U
	Primary Result	02/05/2003	1 U	10 U	1 U	-	0.44 J	-	-	2.2	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	10/23/2003	0.38 J	10 U	1 U	-	0.62 J	-	-	9.5	2 U	1 U	5 U	0.5 U	1 U
	Field Duplicate	10/23/2003	0.38 J	10 U	1 U	-	0.69 J	-	-	9.7	2 U	1 U	5 U	0.5 U	1 U
	Primary Result	03/04/2009	18	-	0.55 J	-	11	6.7 U	-	1600	6.7 U	-	-	14	-
	Primary Result	10/27/2009	0.44 J	7 U	0.18 J	-	1.8	-	-	230	2 U	3 U	3 U	7.9	2 U
	Field Duplicate	10/27/2009	0.83 J	7 U	0.24 J	-	2.7	-	-	240	2 U	3 U	3 U	14	0.13 J
	Primary Result	10/28/2009	0.41 J	7 U	0.089 J	-	3.1	-	-	36	2 U	3 U	3 U	48	0.38 J
	Primary Result	07/19/2011	2.1 J	35 U	5 U	-	7.7	-	-	520	10 U	15 U	15 U	14	10 U
	Primary Result	11/28/2011	2.4 J	47 U	1.1 J	-	12	-	-	900	13 U	20 U	20 U	21	13 U
	Primary Result	02/22/2012	5	35 U	5 U	-	10	-	-	930	10 U	15 U	15 U	13	10 U
	Primary Result	06/26/2012	4 U	28 U	4 U	-	5.1	-	-	370	8 U	12 U	12 U	4.9	8 U
	Primary Result	11/05/2012	0.87 J	14 U	2 U	-	1.7 J	-	-	140	4 U	6 U	6 U	1.4 J	4 U
	Primary Result	03/13/2013	12	35 U	5 U	-	9.3	-	-	940	10 U	15 U	15 U	1.4 J	5 U
	Primary Result	05/21/2013	0.71 J	7 U	1 U	-	1.2	-	-	110	2 U	3 U	3 U	0.62 J	2 U
	Primary Result	05/20/2014	15	70 U	10 U	-	12	-	-	1500	20 U	30 U	30 U	6.5 J	20 U
	Primary Result	05/19/2015	79	280 U	40 U	-	47	-	-	4700	80 U	120 U	120 U	52	80 U
	Primary Result	06/01/2016	1.4 J	35 U	5 U	-	5.3	-	-	280	10 U	15 U	15 U	11	10 U
	Primary Result	06/20/2017	10 U	70 U	10 U	-	12	-	-	420	20 U	30 U	30 U	17	20 U
	Primary Result	11/08/2017	3.6	-	1 U	-	50 U	1 U	-	1230	1 U	-	-	70	3 U
	Primary Result	05/15/2018	50 U	-	50 U	-	50 U	50 U	-	882	50 U	-	-	50 U	150 U
	Primary Result	11/14/2018	50 U	-	50 U	-	50 U	50 U	-	355	50 UJ	-	-	50 U	150 U
	Primary Result	06/05/2025	1 U	-	1 U	-	1 U	1 U	-	4.37	5 U	-	-	1 U	3 U
TMW-009	Primary Result	03/01/2001	-	-	0.5 U	-	0.5 U	0.5 U	-	-	-	-	-	0.5 U	0.5 U
	Field Duplicate	03/01/2001	-	-	0.5 U	-	0.5 U	0.5 U	-	-	-	-	-	0.5 U	0.5 U
	Primary Result	02/06/2003	140	500 U	50 U	-	50 U	-	-	2200	100 U	50 U	250 U	25 U	50 U
	Field Duplicate	02/06/2003	130	500 U	50 U	-	50 U	-	-	2100	100 U	50 U	250 U	25 U	50 U
	Primary Result	10/24/2003	110	1000 U	100 U	-	100 U	-	-	3200	200 U	100 U	500 U	50 U	100 U
	Primary Result	03/04/2009	3.4	-	1 U	-	0.08 J	1 U	-	150	1 U	-	-	1 U	-
	Primary Result	07/18/2011	4.5	7 U	1 U	-	1 U	-	-	250	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/28/2011	14	28 U	4 U	-	1 J	-	-	900	8 U	12 U	12 U	4 U	8 U
	Primary Result	02/22/2012	9.3	7 U	1 U	-	0.43 J	-	-	330	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/26/2012	9.3	14 U	2 U	-	0.42 J	-	-	560	4 U	6 U	6 U	2 U	4 U
	Primary Result	11/05/2012	5.2	14 U	2 U	-	0.42 J	-	-	470	4 U	6 U	6 U	2 U	4 U
	Primary Result	03/13/2013	3.3	7 U	1 U	-	0.15 J	-	-	110	2 U	3 U	3 U	1 U	1 U
	Primary Result	05/21/2013	3	7 U	1 U	-	0.16 J	-	-	160	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/20/2014	23	28 U	4 U	-	1.1 J	-	-	800	8 U	12 U	12 U	4 U	8 U
	Primary Result	05/20/2015	24	70 U	10 U	-	1.9 J	-	-	1200	20 U	30 U	30 U	10 U	20 U
	Primary Result	06/02/2016	17	14 U	2 U	-	0.83 J	-	-	490	4 U	6 U	6 U	2 U	4 U
	Field Duplicate	06/02/2016	16	14 U	2 U	-	0.78 J	-	-	460	4 U	6 U	6 U	2 U	4 U
	Primary Result	06/22/2017	8.3	7 U	1 U	-	0.66 J	-	-	330	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/08/2017	2.7	-	1 U	-	1 U	1 U	-	272	1 U	-	-	1 U	3 U
	Primary Result	05/17/2018	11.6	-	5 U	-	5 U	5 U	-	486	5 U	-	-	5 U	15 U
	Primary Result	11/14/2018	5 U	-	5 U	-	5 U	5 U	-	83.1	5 UJ	-	-	5 U	15 U

APPENDIX E
COMPREHENSIVE HISTORICAL GROUNDWATER VOLATILE O
CHEMICAL COMMODITIES, INC.
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		Chemical Group	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC	VOC
		Chemical Name	Tetrachloro ethene	Tetrahydro furan	Toluene	Total Target Chlorinated	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	trans-1,4-Dichloro-2-butene	Trichloro ethene	Trichlorofluoro methane (CFC-11)	Trifluorotrichloro ethane (Freon 113)	Vinyl acetate	Vinyl chloride	Xylene (Total)
		CAS Number	127-18-4	109-99-9	108-88-3	TOTTARCVOC	156-60-5	10061-02-6	110-57-6	79-01-6	75-69-4	76-13-1	108-05-4	75-01-4	1330-20-7
		Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
TMW-010	Primary Result	03/01/2001	22	-	0.7	-	0.5 U	0.5 U	-	-	-	-	-	0.5 U	0.5 U
	Primary Result	10/24/2003	16	100 U	10 U	-	10 U	-	-	380	20 U	10 U	50 U	5 U	10 U
	Primary Result	03/04/2009	0.22 J	-	1 U	-	1 U	1 U	-	11	1 U	-	-	1 U	-
	Primary Result	10/27/2009	0.17 J	7 U	0.14 J	-	0.13 J	-	-	36	2 U	3 U	3 U	1 U	0.12 J
	Primary Result	10/28/2009	1 U	7 U	0.078 J	-	0.12 J	-	-	15	2 U	3 U	3 U	1 U	2 U
	Primary Result	07/19/2011	0.23 J	7 U	1 U	-	1 U	-	-	15	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/28/2011	4.2	7 U	1 U	-	0.28 J	-	-	170	2 U	3 U	3 U	0.23 J	2 U
	Primary Result	02/22/2012	2.2	7 U	1 U	-	0.18 J	-	-	84	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/26/2012	1 U	7 U	1 U	-	0.15 J	-	-	14	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/05/2012	2.3	7 U	1 U	-	1 U	-	-	120	2 U	3 U	3 U	1 U	2 U
	Primary Result	03/13/2013	5.6	7 U	1 U	-	0.19 J	-	-	100	2 U	3 U	3 U	1 U	1 U
	Primary Result	05/21/2013	0.66 J	7 U	1 U	-	1 U	-	-	30	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/20/2014	0.65 J	7 U	1 U	-	1 U	-	-	39	2 U	3 U	3 U	1 U	2 U
	Primary Result	05/19/2015	0.67 J	7 U	1 U	-	1 U	-	-	9.1	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/01/2016	0.26 J	7 U	1 U	-	1 U	-	-	13	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/20/2017	1 U	7 U	1 U	-	1 U	-	-	11	2 U	3 U	3 U	1 U	2 U
	Field Duplicate	06/20/2017	1 U	7 U	1 U	-	1 U	-	-	11	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/08/2017	1 U	-	1 U	-	1 U	1 U	-	10.1	1 U	-	-	1 U	3 U
	Field Duplicate	11/08/2017	1 U	-	1 U	-	1 U	1 U	-	7.1	1 U	-	-	1 U	3 U
	Primary Result	05/15/2018	1 U	-	1 U	-	1 U	1 U	-	14	1 U	-	-	1 U	3 U
TMW-011	Primary Result	03/01/2001	-	-	0.5 U	-	1	0.5 U	-	-	-	-	-	0.5 U	0.5 U
	Primary Result	02/06/2003	300	500 U	50 U	-	50 U	-	-	2600	100 U	50 U	250 U	25 U	50 U
	Primary Result	10/24/2003	2100	5000 U	500 U	-	500 U	-	-	10000	1000 U	500 U	2500 U	250 U	500 U
	Primary Result	03/04/2009	160	-	2 U	-	2 U	2 U	-	580	2 U	-	-	2 U	-
	Primary Result	07/18/2011	52	7 U	1 U	-	1 U	-	-	180 HTV	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/28/2011	90	7 U	1 U	-	1 U	-	-	170	2 U	3 U	3 U	1 U	2 U
	Primary Result	02/22/2012	120	14 U	0.46 J	-	0.96 J	-	-	280	4 U	6 U	6 U	2 U	4 U
	Primary Result	06/26/2012	310	14 U	2 U	-	0.65 J	-	-	930	4 U	6 U	6 U	0.52 J	4 U
	Primary Result	11/05/2012	400	35 U	5 U	-	5 U	-	-	1200	10 U	15 U	15 U	5 U	10 U
	Primary Result	03/13/2013	220	7 U	1 U	-	0.38 J	-	-	640	2 U	1.1 J	3 U	0.62 J	1 U
	Primary Result	05/21/2013	130	7 U	1 U	-	0.18 J	-	-	540	2 U	3 U	3 U	0.46 J	2 U
	Primary Result	05/20/2014	210	28 U	4 U	-	4 U	-	-	710	8 U	5 J	12 U	1.3 J	8 U
	Primary Result	05/20/2015	60	7 U	0.28 J	-	1 U	-	-	150	2 U	0.66 J	3 U	1 U	2 U
	Primary Result	06/02/2016	21	7 U	1 U	-	1 U	-	-	32	2 U	3 U	3 U	1 U	2 U
	Primary Result	06/22/2017	4.2	7 U	1 U	-	1 U	-	-	20	2 U	3 U	3 U	1 U	2 U
	Primary Result	11/08/2017	5.1	-	1 U	-	1 U	1 U	-	61	1 U	-	-	1 U	3 U
	Primary Result	05/17/2018	6.3	-	1 U	-	1 U	1 U	-	65.7	1 U	-	-	1 U	3 U
TMW-012	Primary Result	02/28/2001	3	-	0.5 U	-	0.5 U	0.5 U	-	81	-	-	-	0.5 U	0.5 U
TMW-015	Primary Result	02/28/2001	-	-	220	-	50 U	50 U	-	-	-	-	-	50 U	50 U
	Primary Result	02/06/2003	65000	50000 U	5000 U	-	5000 U	-	-	130000	10000 U	5000 U	25000 U	2500 U	5000 U
	Primary Result	10/24/2003	130000	50000 U	5000 U	-	5000 U	-	-	120000	10000 U	5000 U	25000 U	2500 U	5000 U
	Primary Result	03/05/2009	69000	-	95 J	-	330 U	330 U	-	56000	330 U	-	-	330 U	-
	Primary Result	06/21/2017	97000, 97000	1400 U	200 U	-	200 U	-	-	70000	400 U	600 U	600 U	200 U	400 U
	Primary Result	11/08/2017	53000	-	1000 U	-	1000 U	1000 U	-	69500	1000 U	-	-	1000 U	3000 U
	Field Duplicate	11/08/2017	-	-	-	-	-	-	-	-	-	-	-	-	-
	Primary Result	05/16/2018	51000	-	500 U	-	500 U	500 U	-	55300	500 U	-	-	500 U	1500 U
	Field Duplicate	05/16/2018	49600	-	500 U	-	500 U	500 U	-	52400	500 U	-	-	500 U	1500 U
	Primary Result	11/12/2018	5500	-	500 U	-	500 U	500 U	-	14100	500 U	-	-	500 U	1500 U
	Primary Result	05/15/2024	51300	-	50 U	-	50 U	50 U	-	63300	50 U	-	-	50 U	150 U
	Primary Result	06/04/2025	57100	-	25 U	-	25 U	25 U	-	59000	125 U	-	-	25 U	75 U
TMW-016D	Primary Result	11/28/2000	-	-	150	-	21	12 U	-	290000	-	-	-	10 J	64
	Primary Result	12/13/2000	4200	-	500 U	-	500 U	500 U	-	-	-	-	-	500 U	500 U
	Primary Result	03/06/2009	7400	-	90 J	-	340 J	400 U	-	47000	400 U	-	-	910	-
	Primary Result	11/28/2000	-	-	280	-	65	12 U	-	-	-	-	-	170	48
	Field Duplicate	11/28/2000	-	-	280	-	64	12 U	-	-	-	-	-	170	46
	Primary Result	12/13/2000	3700	-	600	-	500 U	500 U	-	-	-	-	-	500 U	500 U
	Primary Result	03/06/2009	820	-	160 J	-	300 J	330 U	-	7700	330 U	-	-	2300	-

Notes and Abbreviations:
-: Chemical analysis data was unavailable
B: Contaminant seen in method blank
HTV: Holding time violation
J: Estimated value
JB: Estimated value; Contaminant seen in method blank
U: Non-detect
UJ: Non-detect; Estimated value
Check Data Usability Summary report in Appendix B for definitions of Project Qualifers added

Table 5 - Mann-Kendal and MNA Evaluation

Adapted from Table F1A of Haley & Aldrich Inc., 2025 Groundwater Report
TABLE F1A
TETRACHLOROETHENE MANN-KENDALL TRENDS

Well-ID	Number Total	Measurable Number (above ND)	Year sampling began	Trend	Coeff of variation	S Value	Confidence %	Notes
MW-26B	13	13	2002	Stable	0.59	-5	59.4	
MW-28B	15	8	2002	Decreasing	1.44	-60	99.9	
MW-39B	16	16	2009	Decreasing	0.49	-82	99.9	
MW-40B	19	13	2009	Decreasing	1.57	-100	99.9	
MW-44B	22	9	2011	Probably Decreasing	0.91	-16	94	Values from Nov. 2011 through 2018 removed due to elevated permanganate concentrations. A total of 9 analyses were included for MK trend analysis.
MW-45B	22	22	2011	No trend	0.20	7	67.6	Values from Nov. 2011 through 2017 removed due to elevated permanganate. A total of 11 analyses were included for MK trend analysis.
MW-46B	17	16	2011	Decreasing	0.84	-71	99.85	
MW-47B	11	11	2017	Probably Increasing	1.27	21	94	Exception for wells that were installed in 2017&2018
MW-48B	11	10	2017	Decreasing	1.27	-39	99.9	Exception for wells that were installed in 2017&2018
MW-48C	11	7	2017	Probably Dreasing	2.01	-18	90.45	Exception for wells that were installed in 2017&2018
MW-49B	11	7	2017	Decreasing	0.75	-28	98.35	Exception for wells that were installed in 2017&2018
MW-50B	8	8	2018	No trend	2.65	0	45.2	Exception for wells that were installed in 2017&2018
MW-51B	9	9	2018	Increasing	0.37	18	96.2	Exception for wells that were installed in 2017&2018
MW-52B	9	9	2018	Decreasing	1.27	-24	99.4	Exception for wells that were installed in 2017&2018
MW-53B1	10	5	2018	No trend	1.59	11	81	Exception for wells that were installed in 2017&2018
MW-53B2	10	10	2018	No trend	0.46	15	89.2	Exception for wells that were installed in 2017&2018
MW-55B	10	9	2018	Increasing	1.21	35	100	Exception for wells that were installed in 2017&2018
MW-56B	10	10	2018	Stable	0.56	-3	56.9	Exception for wells that were installed in 2017&2018
PP-5D	10	10	2001	Decreasing	1.00	-25	98.6	
TMW-008	21	15	2001	Increasing	1.88	81	99.25	
TMW-009	17	16	2003	Probably Drecreasing	1.71	-39	94.1	
TMW-010	18	13	2001	No trend	1.88	-21	77.3	
TMW-011	16	16	2003	Decreasing	1.93	-58	99.6	
TMW-015	9	9	2003	Probably Decreasing	0.53	-16	94	

Well-ID	Number Total	Measurable Number (above ND)	Year began	Trend	Coeff of variation	S Value	Confidence %	Notes
MW-23B	22	15	2003	Increasing	0.94	114	99.95	
MW-25	9	5	2001	Probably Decreasing	1.14	-14	91	
MW-26B	13	9	2002	Stable	0.35	-4	57.1	
MW-26C	9	5	2009	Decreasing	1.76	-22	98.8	
MW-28B	15	15	2002	Decreasing	1.12	-69	99.9	
MW-29B	19	12	2002	Decreasing	0.89	-56	97.3	
MW-31	20	5	2003	No trend	1.02	17	69.6	
MW-34B	15	9	2009	Decreasing	1.59	-50	99.3	
MW-39B	16	16	2009	Stable	0.73	-12	68.7	
MW-40B	19	19	2009	Decreasing	1.31	-105	99.9	
MW-44B	22	9	2011	Decreasing	0.90	-18	96.2	Values from Nov. 2011 through 2018 removed due to elevated permanganate concentrations. A total of 9 analyses were included for MK trend analysis.
MW-45B	22	22	2011	Stable	0.31	-7	67.6	Values from Nov. 2011 through 2017 removed due to elevated permanganate concentrations. A total of 11 analyses were included for MK trend analysis.
MW-46B	17	17	2011	Decreasing	0.46	-54	98.6	
MW-47B	11	11	2017	Probably Increasing	1.24	21	94	Exception for wells that were installed in 2017 & 2018
MW-48B	11	11	2017	Decreasing	1.06	-47	99.9	Exception for wells that were installed in 2017 & 2018
MW-48C	11	11	2017	Decreasing	1.21	-37	99.8	Exception for wells that were installed in 2017 & 2018
MW-49B	11	11	2017	Decreasing	0.65	-33	99.5	Exception for wells that were installed in 2017 & 2018
MW-50B	8	8	2018	No trend	1.95	-2	54.8	Exception for wells that were installed in 2017 & 2018
MW-51B	9	9	2018	Probably Increasing	0.37	16	94	Exception for wells that were installed in 2017 & 2018
MW-52B	9	9	2018	Decreasing	1.21	-20	97.8	Exception for wells that were installed in 2017 & 2018
MW-53B1	10	9	2018	No trend	1.67	3	56.9	Exception for wells that were installed in 2017 & 2018
MW-53B2	10	10	2018	Probably Increasing	0.42	17	92.2	Exception for wells that were installed in 2017 & 2018
MW-54C	9	9	2018	Decreasing	0.37	-23	99.1	
MW-55B	10	10	2018	Increasing	1.23	37	99.9	Exception for wells that were installed in 2017 & 2018
MW-56B	10	10	2018	Stable	0.23	-1	50	Exception for wells that were installed in 2017 & 2018
PP-5D	10	10	2001	Decreasing	1.10	-29	99.5	
TMW-008	21	21	2001	Probably Increasing	1.44	46	91.2	
TMW-009	17	17	2003	No trend	1.17	-31	89	
TMW-010	17	17	2003	Decreasing	1.50	-47	97.1	
TMW-011	16	16	2003	Decreasing	2.16	-60	99.7	
TMW-015	9	9	2003	Decreasing	0.49	-20	97.8	

Well-ID	Number Total	Measurable Number (above ND)	Year began	Trend	Coeff of variation	S Value	Confidence %	Notes
MW-26B	13	9	2002	No trend	0.59	21	88.6	
MW-26C	9	5	2003	Decreasing	1.25	-26	99.7	
MW-28B	15	9	2002	Decreasing	1.02	-58	99.85	
MW-37B	5	5	2009	Decreasing	1.16	-8	95.8	
MW-38B	5	5	2009	No trend	1.78	-2	59.2	
MW-39B	16	16	2009	Decreasing	0.37	-42	96.8	
MW-40B	19	14	2009	Decreasing	2.07	-91	99.9	
MW-42B	5	5	2011	Stable	0.65	-2	59.2	
MW-44B	22	21	2011	Decreasing	0.65	-20	97.8	Values from Nov. 2011 through 2018 removed due to elevated permanganate concentrations. A total of 9 analyses were included for MK trend analysis.
MW-45B	22	21	2011	No Trend	0.34	15	85.9	Values from Nov. 2011 through 2017 removed due to elevated permanganate concentrations. A total of 11 analyses were included for MK trend analysis.
MW-46B	17	17	2011	Decreasing	0.38	-70	99.8	
MW-47B	11	8	2017	Probably Increasing	1.24	18	90.45	Exception for wells that were installed in 2017 & 2018
MW-48B	11	5	2017	Decreasing	1.18	-34	99.6	Exception for wells that were installed in 2017 & 2018
MW-48C	11	6	2017	Decreasing	1.07	-31	99.2	Exception for wells that were installed in 2017 & 2018
MW-49B	11	9	2017	Decreasing	0.96	-35	99.7	Exception for wells that were installed in 2017 & 2018
MW-50B	8	7	2018	Stable	0.66	-4	64	
MW-51B	9	9	2018	Increasing	0.35	18	96.2	Exception for wells that were installed in 2017 & 2018
MW-52B	9	6	2018	Stable	0.58	-12	87	Exception for wells that were installed in 2017 & 2019
MW-55B	10	10	2018	Increasing	1.34	31	99.8	Exception for wells that were installed in 2017 & 2018
PP-5D	10	8	2001	Decreasing	1.05	-41	99.9	
TMW-008	21	15	2001	No Trend	1.57	42	89.1	
TMW-009	17	16	2003	Decreasing	1.38	-64	99.6	
TMW-010	17	11	2003	Decreasing	1.06	-52	98.3	
TMW-011	16	10	2003	Decreasing	2.57	-50	98.7	
TMW-015	10	6	2003	Stable	0.59	-2	53.45	

Well-ID	Number Total	Measurable Number (above ND)	Year began	Trend	Coeff of variation	S Value	Confidence %	Notes
MW-26B	13	11	2002	Stable	0.77	-8	66.2	
MW-28B	15	6	2002	Decreasing	1.92	-40	97.4	
MW-37B	5	5	2009	Decreasing	1.13	-8	95.8	
MW-38B	5	5	2009	No trend	1.53	-2	59.2	
MW-39B	16	16	2009	Decreasing	0.93	-63	99.8	
MW-40B	19	18	2009	Probably Increasing	0.87	38	90.1	
MW-42B	5	5	2011	Stable	0.79	-2	59.2	
MW-43B	5	5	2011	Decreasing	1.07	-8	95.8	
MW-44B	22	22	2011	Decreasing	0.68	-22	98.8	Values from Nov. 2011 through 2018 removed due to elevated permanganate concentrations. A total of 9 analyses were included for MK trend analysis.
MW-45B	22	22	2011	No trend	0.30	15	85.9	Values from Nov. 2011 through 2017 removed due to elevated permanganate concentrations. A total of 11 analyses were included for MK trend analysis.
MW-46B	17	16	2011	Decreasing	1.05	-55	98.75	
MW-47B	11	10	2017	Probably Increasing	1.48	21	94	Exception for wells that were installed in 2017 & 2018
MW-48B	11	8	2017	Decreasing	1.14	-34	99.6	Exception for wells that were installed in 2017 & 2018
MW-49B	11	10	2017	Probably Decreasing	1.06	-22	94.85	Exception for wells that were installed in 2017 & 2018
MW-50B	8	8	2018	Decreasing	1.93	-28	99.9	Exception for wells that were installed in 2017 & 2018
MW-51B	9	9	2018	Increasing	0.50	20	97.8	Exception for wells that were installed in 2017 & 2018
MW-52B	9	6	2018	Decreasing	1.32	-20	97.8	Exception for wells that were installed in 2017 & 2018
MW-53B2	10	8	2018	Increasing	0.65	21	96.4	Exception for wells that were installed in 2017 & 2018
MW-55B	10	8	2018	Increasing	1.22	31	99.8	Exception for wells that were installed in 2017 & 2018
MW-56B	10	10	2018	Stable	0.49	-5	63.6	Exception for wells that were installed in 2017 & 2018
PP-5D	10	8	2001	Decreasing	1.30	-32	99.85	
TMW-009	17	13	2003	No trend	2.71	-7	59.6	
TMW-011	16	10	2003	Decreasing	3.49	-93	99.9	
TMW-015	9	9	2003	Decreasing	0.55	-18	96.2	

Well-ID	Number Total	Measurable Number (above ND)	Year began	Trend	Coeff of variation	S Value	Confidence %	Notes
MW-26B	13	10	2002	No Trend	0.45	4	57.1	
MW-28B	15	6	2002	Decreasing	1.28	-35	95.4	
MW-37B	5	5	2009	Decreasing	1.61	-8	95.8	
MW-39B	16	16	2009	Stable	0.30	-25	85.7	
MW-40B	19	18	2009	Probably Decreasing	3.20	-48	94.95	
MW-42B	5	5	2011	Stable	0.98	-2	59.2	
MW-44B	22	20	2011	Decreasing	0.84	-21	98.30	Values from Nov. 2011 through 2018 removed due to elevated permanganate concentrations. A total of 9 analyses were included for MK trend analysis.
MW-45B	22	15	2011	Probably Decreasing	1.28	-20	92.9	Values from Nov. 2011 through 2017 removed due to elevated permanganate concentrations. A total of 11 analyses were included for MK trend analysis.
MW-46B	17	15	2011	Stable	0.64	-28	86.5	
MW-47B	11	8	2017	No trend	0.99	10	75.3	Exception for wells that were installed in 2017 & 2018
MW-48B	11	6	2017	Decreasing	1.14	-46	99.9	Exception for wells that were installed in 2017 & 2018
MW-48C	11	8	2017	Decreasing	1.07	-28	98.35	Exception for wells that were installed in 2017 & 2018
MW-49B	11	7	2017	Decreasing	0.95	-32	99.35	Exception for wells that were installed in 2017 & 2018
MW-51B	9	8	2018	Stable	0.76	-12	87	Exception for wells that were installed in 2017 & 2018
MW-55B	10	9	2018	Increasing	1.02	21	96.4	Exception for wells that were installed in 2017 & 2018
MW-56B	10	10	2018	Decreasing	0.37	-25	98.6	Exception for wells that were installed in 2017 & 2018
PP-5D	10	9	2001	Decreasing	1.16	-41	99.9	
TMW-009	17	16	2003	No trend	1.11	-25	83.6	
TMW-011	16	12	2003	Decreasing	2.12	-74	99.9	
TMW-015	10	7	2001	Stable	0.87	-8	72.9	

TABLE F1F
1,1,2,2-TETRACHLOROETHANE MANN-KENDALL TRENDS

Well-ID	Number Total	Measurable Number (above ND)	Year began	Trend	Coeff of variation	S Value	Confidence %
MW-39B	16	13	2009	Decreasing	0.53	-96	99.9
MW-46B	17	7	2011	Decreasing	0.87	-42	95.4
TMW-011	16	10	2003	Decreasing	3.24	-65	99.85

Well-ID	Number Total	Measurable Number (above ND)	Year began	Trend	Coeff of variation	S Value	Confidence %	Notes
MW-26B	13	13	2002	Stable	0.62	-1	50	
MW-39B	16	13	2011	Decreasing	0.76	-77	99.9	
MW-34B	15	6	2009	Stable	0.23	-12	70.4	
MW-40B	19	10	2009	No Trend	0.60	8	59.55	
MW-42B	5	5	2011	Stable	0.74	0	40.8	Exception for wells that were installed in 2017 & 2018
MW-44B	22	19	2011	Decreasing	0.57	-23	99.1	Values from Nov. 2011 through 2018 removed due to elevated permanganate concentrations. A total of 9 analyses were included for MK trend analysis.
MW-46B	17	14	2011	Decreasing	0.44	-70	99.8	
MW-47B	11	5	2018	Increasing	1.01	25	97	Exception for wells that were installed in 2017 & 2018
MW-48C	11	6	2018	Stable	0.70	-15	85.9	Exception for wells that were installed in 2017 & 2018
MW-55B	10	8	2018	Probably Increasing	0.99	17	92.2	Exception for wells that were installed in 2017 & 2018
MW-56B	10	9	2018	Stable	0.34	-11	81	Exception for wells that were installed in 2017 & 2018
TMW-008	21	15	2001	Increasing	1.19	90	99.7	
TMW-009	17	10	2003	No Trend	2.27	-1	50	
TMW-011	16	16	2003	Decreasing	1.98	-65	99.85	

Table 6 - Oxidant Delivery

Adapted from Table 1X of Haley & Aldrich Inc., 2025 Groundwater Report
TABLE IX
SUMMARY OF OXIDANT DELIVERY CHEMICAL COMMODITIES, INC. OLATHE, KANSAS

Location	First Oxidant Delivery Event: Date	Volume (Gallons)	Average Injection Pressure	Second Oxidant Delivery Event: Date	Volume (Gallons)	Average Injection Pressure
On-Site Oxidant Delivery Total						
Trench 1	8/9/2011	640.3	6 psi	2/23/2012	720.8	NM
Trench 2		640.0	6 psi		642.5	NM
Trench 3		320.2	10 psi		366.0	NM
Trench 4		371.0	10 psi		360.0	NM
Off-Site Oxidant Delivery Total						
MW-36B	8/9/2011	400.1	16 psi	2/23/2012	Approx. 2,000 gallons delivered. Flow meters inoperable, unable to document delivery to individual wells.	NM
MW-37B		400.0	16 psi			NM
MW-38B		318.3	18 psi			NM
MW-42B		400.1	25 psi			NM
MW-43B		125.8	25 psi			NM

Location	Third Oxidant Delivery Event: Date	Volume (Gallons)	Average Injection Pressure	Fourth Oxidant Delivery Event: Date	Volume (Gallons)	Average Injection Pressure
On-Site Oxidant Delivery Total						
Trench 1	9/21/2012	957.6	8 psi	3/20/2013	801.2	1 psi
Trench 2		966.3	8 psi		866.1	0 psi
Trench 3		741.2	9 psi		NI*	NM
Trench 4		503.5	9 psi		320.2	0 psi
Off-Site Oxidant Delivery Total						
MW-36B	9/21/2012	NI*	NM	3/20/2013	NI*	NM
MW-37B		NI*	NM		NI*	NM
MW-38B		401.2	20 psi		387.9	23 psi
MW-42B		56.5	17 psi		50.3	25 psi
MW-43B		198.6	20 psi		202.2	22 psi

Location	Fifth Oxidant Delivery Event: Date	Volume (Gallons)	Average Injection Pressure	Sixth Oxidant Delivery Event: Date	Volume (Gallons)	Average Injection Pressure
On-Site Oxidant Delivery Total						
Trench 1	9/25/2013	652.3	0 psi	9/24/2014	640.0	0 psi
Trench 2		784.1	0 psi		908.7	1 psi
Trench 3		359.7	0 psi		363.6	1 psi
Trench 4		359.7	0 psi		363.2	0 psi
Off-Site Oxidant Delivery Total						
MW-36B	9/25/2013	197.9	16 psi	9/24/2014	100.4	20 psi
MW-37B		377.4	14 psi		200.2	17 psi
MW-38B		351.7	25 psi		351.9	18 psi
MW-42B		50.2	30 psi		50.6	22 psi
MW-43B		192.9	22 psi		200.2	25 psi

Location	Seventh Oxidant Delivery Event: Date	Volume (Gallons)	Average Injection Pressure	Eighth Oxidant Delivery Event: Date	Volume (Gallons)	Average Injection Pressure
On-Site Oxidant Delivery Total						
Trench 1	3/31/2015	640.2	0 psi	9/29/2015	640.9	0 psi
Trench 2		709.7	0 psi		679.5	0 psi
Trench 3		360.4	0 psi		361.9	4 psi
Trench 4		322.5	0 psi		362.1	0 psi
Off-Site Oxidant Delivery Total						
MW-36B	3/31/2015	0.0	NM	9/29/2015	0.0	NM
MW-37B		150.4	15 psi		150.4	17 psi
MW-38B		391.8	15 psi		351.1	14 psi
MW-42B		52.0	30 psi		51.0	21 psi
MW-43B		201.2	21 psi		195.5	19 psi

Location	Ninth Oxidant Delivery Event: Date	Volume (Gallons)	Average Injection Pressure
On-Site Oxidant Delivery Total			
Trench 1	3/29/2016	642.1	1 psi
Trench 2		690.7	1 psi
Trench 3		362.3	0 psi
Trench 4		363.1	0 psi
Off-Site Oxidant Delivery Total			
MW-36B	3/29/2016	0.0	NM
MW-37B		150.7	17.0
MW-38B		352.3	15.0
MW-42B		50.2	17.0
MW-43B		200.7	17.0

Location	Off-Site Oxidant Delivery Event: Date	Volume (Gallons)	Average Injection Pressure
Off-Site Oxidant Delivery Total			
MW-36BR	11/20/2024	175.0	6 psi
MW-58B		325.0	8.5 psi
MW-59B		525.0	10 psi

Abbreviations:

NI = No injection this event*

NM = Not measured during the injection event

APPENDIX D – SITE INSPECTION

Five-Year Review Site Inspection Checklist (Template)

(Working document for site inspection. Information may be completed by hand and attached to the Five-Year Review report as supporting documentation of site status. "N/A" refers to "not applicable.")

I. SITE INFORMATION	
Site name: Chemical Commodities Inc.	**Date of inspections:** November 17, 2025 December 9, 2025 (With KDHE) April 23, 2026
Location and Region: 305 S Blake St, Olathe, Kansas 66061 EPA Region 7	**EPA ID:** KSD031349624
Agency, office, or company leading the five-year review: Environmental Protection Agency	**Weather/temperature:** Sunny, with a high near 42. Northwest wind 8 to 22 mph, with gusts as high as 38 mph.
Remedy Includes (check all that apply)**:** ☑ Landfill cover/containment ☐ Access Controls ☑ Institutional Controls ☐ Groundwater pump and treatment ☐ Other type of remedy:	☐ Surface water collection and treatment ☐ Monitored natural attenuation ☐ Groundwater containment ☐ Vertical barrier walls
Attachments: ☐ Inspection team roster attached ☑ Site map attached	
II. INTERVIEWS (Check all that apply)	
1. **O&M site manager** Jennifer Kingston (Name) / Program Manager (Title) / 12/11/2025 (Date) Interviewed: ☐ at site ☐ at office ☑ by phone Phone no. 913-693-1905 Problems, suggestions; ☐ Report Attached	
2. **O&M staff** ____ (Name) / ____ (Title) / ____ (Date) Interviewed: ☐ at site ☐ at office ☐ by phone Phone no. Problems, suggestions; ☐ Report Attached	
3. **Local regulatory authorities and response agencies** (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply.	

Agency	Kansas Department of Health and Environment			
Contact	Sean Hammersburg	Section Chief/Project Manager	12/10/2025	785-291-3089
	Name	Title	Date	Phone no.

Problems, suggestions; ☑ Report Attached

4. **Other interviews** (optional) ☑ Report Attached

III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)

1. **O&M Documents**

O&M manual	☑ Readily available	☑ Up to date	☐ N/A
As-build drawings	☑ Readily available	☑ Up to date	☐ N/A
Maintenance logs	☑ Readily available	☑ Up to date	☐ N/A

Remarks Cap maintenance and trench system inspections are kept at Haley and Aldrich office.

2. **Site-Specific Health and Safety Plan**	☑ Readily available	☑ Up to date	☐ N/A
Contingency plan/emergency response plan	☐ Readily available	☐ Up to date	☑ N/A

Remarks

3. **O&M and OSHA Training Records**	☑ Readily available	☑ Up to date	☐ N/A

Remarks PRP's consultant provides periodic inspections of the cap. Their consultant keeps the O&M plans and training records up to date.

4. **Permits and Service Agreements**

Air discharge permit	☐ Readily available	☐ Up to date	☑ N/A
Effluent discharge	☐ Readily available	☐ Up to date	☑ N/A
Waste disposal, POTW	☐ Readily available	☐ Up to date	☑ N/A

Remarks

5. **Gas Generation Records**

☐ Readily available ☐ Up to date ☑ N/A

Remarks

6. **Settlement Monument Records**

☐ Readily available ☐ Up to date ☑ N/A

Remarks

7. **Groundwater Monitoring Records**

☑ Readily available	☑ Up to date	☐ N/A	
Remarks			
8. **Leachate Extraction Records**			
☑ Readily available	☑ Up to date	☐ N/A	
Remarks			
9. **Discharge Compliance Records**			
Air	☐ Readily available	☐ Up to date	☑ N/A
Water (effluent)	☐ Readily available	☐ Up to date	☑ N/A
Remarks			
10. **Daily Access/Security Logs**			
☐ Readily available	☐ Up to date	☑ N/A	
Remarks			
IV. O&M COSTS			
1. **O&M Organization**			
☐ State in-house		☐ Contractor for State	
☐ PRP in-house		☑ Contractor for PRP	
☐ Federal Facility in-house		☐ Contractor for Federal Facility	
☐ Other			
2. **O&M Cost Records**			
☑ Readily available		☑ Up to date	
☐ Funding mechanism/agreement in place			
Original O&M cost estimate ☐ Breakdown attached			
Total annual cost by year for review period if available			
3. **Unanticipated or Unusually High O&M Costs During Review Period**			
Describe costs and reasons:			
V. ACCESS AND INSTITUTIONAL CONTROLS ☑ Applicable ☐ N/A			
A. Fencing			
1. **Fencing damaged**	☐ Location shown on site map	☐ Gates secured	☑ N/A
Remarks			
B. Other Access Restrictions			
1. **Signs and other security measures**	☐ Location shown on site map		☑ N/A

C. Institutional Controls (ICs)

1. **Implementation and enforcement**

Site conditions imply ICs not properly implemented	☐ Yes	☑ No	☐ N/A
Site conditions imply ICs not being fully enforced	☐ Yes	☑ No	☐ N/A

Type of monitoring (e.g., self-reporting, drive by) Self-reporting, drive by

Frequency Semi annually

Responsible party/agency PRP

Contact	Name	Title	Date	Phone No.
	Kathy Beaty	Remediation Project Manager	12/09/2025	316-209-6329

Reporting is up-to-date	☑ Yes	☐ No	☐ N/A
Reports are verified by the lead agency	☑ Yes	☐ No	☐ N/A
Specific requirements in deed or decision documents have been met	☑ Yes	☐ No	☐ N/A
Violations have been reported	☐ Yes	☐ No	☑ N/A

Other problems or suggestions: ☐ Report attached

A utility company was working next to the cap along South Keeler the summer of 2025. Work was stopped before damage to the cap occurred.

2. **Adequacy** ☑ ICs are adequate ☐ ICs are inadequate ☐ N/A

Remarks

D. General

1. **Vandalism/trespassing** ☐ Location shown on site map ☑ No vandalism evident

Remarks

2. **Land use changes on site** ☑ N/A

Remarks

3. **Land use changes off site** ☑ N/A

Remarks

VI. GENERAL SITE CONDITIONS

A. Roads ☐ Applicable ☑ N/A

1. **Roads damaged** ☐ Location shown on site map ☐ Roads Adequate ☐ N/A

Remarks

B. Other Site Conditions

Remarks Some erosional areas or animal damage observed on the cap. Large holes should be filled in. Some areas of dead grass was noticed by the gazebo.			
VII. LANDFILL COVERS ☐ Applicable ☑ N/A			
A. Landfill Surface			
1. **Settlement** (Low spots)	☐ Location shown on site map	☐ Settlement not evident	
Areal extent	Depth		
Remarks			
2. **Cracks**	☐ Location shown on site map	☐ Cracking not evident	
Lengths	Widths	Depths	
Remarks			
3. **Erosion**	☐ Location shown on site map	☐ Erosion not evident	
Areal extent	Depth		
Remarks			
4. **Holes**	☐ Location shown on site map	☐ Holes not evident	
Areal extent	Depth		
Remarks			
5. **Vegetative Cover** ☐ Grass	☐ Cover properly established	☐ No signs of stress	
☐ Trees/Shrubs (indicate size and locations on a diagram)			
Remarks			
6. **Alternative Cover (armored rock, concrete, etc.)** ☐ N/A			
Remarks			
7. **Bulges**	☐ Location shown on site map	☐ Bulges not evident	
Areal extent	Depth		
Remarks			
8. **Wet Areas/Water Damage**	☐ Wet areas/water damage not evident		
☐ Wet Area	☐ Location shown on site map	Areal extent	
☐ Ponding	☐ Location shown on site map	Areal extent	
☐ Seeps	☐ Location shown on site map	Areal extent	
☐ Soft subgrade	☐ Location shown on site map	Areal extent	
Remarks			
9. **Slope Instability** ☐ Slides	☐ Location shown on site map	☐ No evidence of slope instability	
Areal extent			

	Remarks		
B. Benches	☐ Applicable	☐ N/A	
	(Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)		
1. **Flows Bypass Bench**	☐ Location shown on site map	☐ N/A or okay	
	Remarks		
2. **Bench Breached**	☐ Location shown on site map	☐ N/A or okay	
	Remarks		
3. **Bench Overtopped**	☐ Location shown on site map	☐ N/A or okay	
	Remarks		
C. Letdown Channels	☐ Applicable	☐ N/A	
	(Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)		
1. **Settlement**	☐ Location shown on site map	☐ No evidence of settlement	
	Areal extent	Depth	
	Remarks		
2. **Material Degradation**	☐ Location shown on site map	☐ No evidence of degradation	
	Material type	Areal extent	
	Remarks		
3. **Erosion**	☐ Location shown on site map	☐ No evidence of erosion	
	Areal extent	Depth	
	Remarks		
4. **Undercutting**	☐ Location shown on site map	☐ No evidence of undercutting	
	Areal extent	Depth	
	Remarks		
5. **Obstructions**	☐ Location shown on site map	☐ No obstructions	
	Type	Areal extent	Size
	Remarks		
6. **Excessive Vegetative Growth**	☐ Location shown on site map	☐ Vegetation in channels does not obstruct flow	☐ No evidence of excessive growth
	Type	Areal Extent	
	Remarks		

D. Cover Penetrations	☐ Applicable	☐ N/A
1. **Gas Vents**	☐ Active	☐ Passive
☐ Properly secured/locked	☐ Functioning	☐ Routinely sampled
☐ Good Condition	☐ Evidence of leakage at penetration	☐ Needs maintenance
☐ N/A		
Remarks		
2. **Gas Monitoring Probes**		
☐ Properly secured/locked	☐ Functioning	☐ Routinely sampled
☐ Good Condition	☐ Evidence of leakage at penetration	☐ Needs maintenance
☐ N/A		
Remarks		
3. **Monitoring Wells**		
☐ Properly secured/locked	☐ Functioning	☐ Routinely sampled
☐ Good Condition	☐ Evidence of leakage at penetration	☐ Needs maintenance
☐ N/A		
Remarks		
4. **Leachate Extraction Wells**		
☐ Properly secured/locked	☐ Functioning	☐ Routinely sampled
☐ Good Condition	☐ Evidence of leakage at penetration	☐ Needs maintenance
☐ N/A		
Remarks		
5. **Settlement Monuments**		
☐ Located	☐ Routinely Surveyed	☐ N/A
Remarks		
E. Gas Collection and Treatment	☐ Applicable	☐ N/A
1. **Gas Treatment Facilities**		
☐ Flaring	☐ Thermal destruction	☐ Collection for reuse
☐ Good condition	☐ Needs maintenance	
Remarks		

2. **Gas Collection Wells, Manifolds and Piping**			
☐ Good condition	☐ Needs maintenance		
Remarks			
3. **Gas Monitoring Facilities** (e.g., gas monitoring of adjacent homes or buildings)			
☐ Good condition	☐ Needs maintenance	☐ N/A	
Remarks			
F. Cover Drainage Layer	☐ Applicable	☐ N/A	
1. **Outlet Pipes Inspected**	☐ Functioning	☐ N/A	
Remarks			
2. **Outlet Rock Inspected**	☐ Functioning	☐ N/A	
Remarks			
G. Detention/Sedimentation Ponds	☐ Applicable	☐ N/A	
1. **Siltation** Areal extent	Depth	☐ N/A	
☐ Siltation not evident			
Remarks			
2. **Erosion** Areal extent	Depth		
☐ Erosion not evident			
Remarks			
3. **Outlet Works**	☐ Functioning	☐ N/A	
Remarks			
4. **Dam**	☐ Functioning	☐ N/A	
Remarks			
H. Retaining Walls	☐ Applicable	☐ N/A	
1. **Deformations**	☐ Location shown on site map	☐ Deformation is not evident	
Horizontal displacement	Vertical displacement	Rotational displacement	
Remarks			
2. **Degradation**	☐ Location shown on site map	☐ Deformation is not evident	
Remarks			
I. Perimeter Ditches/Off-Site Discharge	☐ Applicable	☐ N/A	
1. **Siltation**	☐ Location shown on site map	☐ Siltation is not evident	
Areal extent	Depth		

Remarks

2. **Vegetative Growth** ☐ Location shown on site map ☐ N/A

☐ Vegetation does not impede flow

Areal extent Type

Remarks

3. **Erosion** ☐ Location shown on site map ☐ Erosion not evident

Areal extent Depth

Remarks

4. **Discharge Structure** ☐ Functioning ☐ N/A

Remarks

VIII. VERTICAL BARRIER WALLS ☐ Applicable ☑ N/A

1. **Settlement** ☐ Location shown on site map ☐ Settlement not evident

Areal extent Depth

Remarks

2. **Performance Monitoring** Type of monitoring

☐ Performance not monitored

Frequency ☐ Evidence of breaching

Head differential

Remarks

IX. GROUNDWATER/SURFACE WATER REMEDIES ☑ Applicable ☐ N/A

A. Groundwater Extraction Wells, Pumps, and Pipelines ☐ Applicable ☐ N/A

1. **Pumps, Wellhead Plumbing, and Electrical**

☐ Good condition ☐ All required wells properly operating ☐ Needs maintenance ☐ N/A

Remarks

2. **Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances**

☐ Good condition ☐ Needs maintenance

Remarks

3. **Spare Parts and Equipment**

☐ Readily available ☐ Good condition ☐ Requires upgrade ☐ Needs to be provided

Remarks

B. Surface Water Collection Structures, Pumps, and Pipelines ☐ Applicable ☑ N/A

1. **Collection Structures, Pumps, and Electrical**

☐ Good condition ☐ Needs maintenance

Remarks

2. **Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances**

☐ Good condition ☐ Needs maintenance

Remarks

3. **Spare Parts and Equipment**

☐ Readily available ☐ Good condition ☐ Requires upgrade ☐ Needs to be provided

Remarks

C. Treatment System ☑ Applicable ☐ N/A

1. **Treatment Train** (Check components that apply)

☐ Metals removal ☐ Oil/water Separation ☐ Bioremediation

☐ Air stripping ☐ Carbon adsorbers

☐ Filters

☐ Additive (*e.g.*, chelation agent, flocculent)

☑ Others Sodium permanganate injection trenches and injection wells

☑ Good condition ☐ Needs maintenance

☐ Sampling ports properly marked and functional

☐ Sampling/maintenance log displayed and up to date

☐ Equipment properly identified

Quantity of groundwater treated annually NA

Quantity of surface water treated annually NA

Remarks Last injection occurred in 2023 during a pilot test.

2. **Electrical Enclosures and Panels** (properly rated and functional)

☐ N/A ☑ Good Condition ☐ Needs maintenance

Remarks

3. **Tanks, Vaults, Storage Vessels**

☐ N/A ☑ Good Condition ☐ Proper secondary containment ☐ Needs maintenance

Remarks

4. **Discharge Structure and Appurtenances**

☑ N/A ☐ Good Condition ☐ Needs maintenance

Remarks

5. **Treatment Building(s)**

☑ N/A ☐ Good Condition (esp. roof and doorways) ☐ Needs repair

☐ Chemicals and equipment properly stored

Remarks

6. **Monitoring Wells** (pump and treatment remedy)

☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition

☐ All required wells located ☐ Needs maintenance ☑ N/A

Remarks

D. Monitoring Data

1. **Monitoring Data**

☑ Is routinely submitted on time ☑ Is of acceptable quality

2. **Monitoring data suggests:**

☐ Groundwater plume is effectively contained ☐ Contaminant concentrations are declining

A. Monitored Natural Attenuation

☑ Properly secured/locked ☑ Functioning ☑ Routinely sampled ☐ Good condition

☑ All required wells located ☑ Needs maintenance ☐ N/A

Remarks

X. OTHER REMEDIES

If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

XI. OVERALL OBSERVATIONS

A. Implementation of the Remedy

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).

Permanganate injections are used to degrade the CVOC. While dechlorination may be occurring there has not been a large reduction in contaminate mass and VI issues have been discovered in homes without VIMS.

B. Adequacy of O&M

Describe issues and observations related to the implementation and scope of O&M procedures. In

	particular, discuss their relationship to the current and long-term protectiveness of the remedy. The permanganate stays in the formation but does not reduce the continuation mass leaving the site and may have caused migration of the plume.
C.	**Early Indicators of Potential Remedy Problems**
	Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be compromised in the future. The increase in VI in homes is a protectiveness concern for homes without a VIMS.
D.	**Opportunities for Optimization**
	Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy. A feasibility study is recommended to determine if another remedy would be more successful in reducing contaminate mass.

Photo No: 1	**Date:** 11/17/2025	**Time:** 11:03 AM	**Photographer:** S. Pfannenstiel
Latitude: 38.877745	**Longitude:** -94.805962		**Direction:** Northeast

Description: Brown turf patches were noted on the west side of the cap; the distribution suggests species-specific dormancy rather than widespread stress, but the area will be monitored to confirm.

Photo No: 2	**Date:** 11/17/2025	**Time:** 11:04 AM	**Photographer:** S. Pfannenstiel
Latitude: 38.877793	**Longitude:** -94.805918		**Direction:** East
Description: Photo of the east side of the cap.			

Photo No: 3	**Date:** 11/17/2025	**Time:** 11:05 AM	**Photographer:** S. Pfannenstiel
Latitude: 38.877659	**Longitude:** -94.805493		**Direction:** North

Description: Photo of the east side of the cap

Photo No: 4	**Date:** 11/17/2025	**Time:** 11:06 AM	**Photographer:** S. Pfannenstiel
Latitude: 38.877607	**Longitude:** -94.805420		**Direction:** East

Description: Two well pads need repair located southeast of the site near the trail.

Photo No: 5	**Date:** 11/17/2025	**Time:** 11:11 AM	**Photographer:** S. Pfannenstiel
Latitude: 38.877324	**Longitude:** -94.805609		**Direction:** South

Description: Close up of needed well repair located southeast of the site near the trail.

Photo No: 6	**Date:** 11/17/2025	**Time:** 11:13 AM	**Photographer:** S. Pfannenstiel
Latitude: 38.877771	**Longitude:** -94.805659		**Direction:** West

Description: Recent aeration of the grass over the entire site.

Photo No: 7	**Date:** 11/17/2025	**Time:** 11:15 AM	**Photographer:** S. Pfannenstiel
Latitude: 38.877912	**Longitude:** -94.805763		**Direction:** North

Description: Photo of the north area of the site cap.

Photo No: 8	**Date:** 11/17/2025	**Time:** 11:18 AM	**Photographer:** S. Pfannenstiel
Latitude: 38.878627	**Longitude:** -94.805273		**Direction:** Northeast

Description: Northeast side of the site cap, near the bird garden.

Photo No: 9	**Date:** 11/17/2025	**Time:** 11:21 AM	**Photographer:** S. Pfannenstiel
Latitude: 38.878172	**Longitude:** -94.805496		**Direction:** South

Description: Nested monitoring wells are being installed along South Keeler Street to characterize the bedrock contact and assess whether vertical migration of contaminated groundwater is occurring.

Photo No: 11	**Date:** 12/09/2025	**Time:** 10:14 AM	**Photographer:** S. Pfannenstiel
Latitude: 38.878316	**Longitude:** -94.805124		**Direction:** South
Description: Trench Access			

Photo No: 12	**Date:** 12/09/2025	**Time:** 10:19 AM	**Photographer:** S. Pfannenstiel
Latitude: 38.877307	**Longitude:** -94.805568		**Direction:** East

Description: Photograph of dormant plants on site cap.

Photo No: 13	**Date:** 12/09/2025	**Time:** 10:33 AM	**Photographer:** S. Pfannenstiel
Latitude: 38.878495	**Longitude:** -94.805268		**Direction:** West

Description: Sprinkler system and hose.

Photo No: 14	**Date:** 12/09/2025	**Time:** 10:36 AM	**Photographer:** S. Pfannenstiel
Latitude: 38.878613	**Longitude:** -94.805589		**Direction:** South

Description: Photograph taken from north to south on the west side of the site cap.

Photo No: 15	**Date:** 12/09/2025	**Time:** 10:46 AM	**Photographer:** S. Pfannenstiel
Latitude: 38.877733	**Longitude:** -94.806082		**Direction:** Northeast

Description: Photograph of the west side of the site cap.

Photo No: 16	**Date:** 12/09/2025	**Time:** 10:48 AM	**Photographer:** S. Pfannenstiel
Latitude: 38.878192	**Longitude:** -94.805945		**Direction:** North

Description: Photograph of nested wells on the west side of the site cap.

Photo No: 17	**Date:** 12/09/2025	**Time:** 11:07 AM	**Photographer:** S. Pfannenstiel
Latitude: 38.878578	**Longitude:** -94.804892		**Direction:**

Description: A new well installed for the 5YR support investigation.

Photo No: 10	**Date:** 04/23/2026	**Time:** 10:55 AM	**Photographer:** S. Pfannenstiel
Latitude: 38.878178	**Longitude:** -94.805562		**Direction:** East

Description: Repaired well pads located southeast of the site near the trail.

Photo No: 18	**Date:** 04/23/2026	**Time:** 10:59 AM	**Photographer:** S. Pfannenstiel
Latitude: 38.877909	**Longitude:** -94.805795		**Direction:** Northeast

Description: Spring green-up was observed in areas that exhibited dormancy in November, no persistent stress is evident.

Photo No: 19	**Date:** 04/23/2026	**Time:** 11:00 AM	**Photographer:** S. Pfannenstiel
Latitude: 38.878335	**Longitude:** -94.805455		**Direction:** East

Description: Photo of new trees planted on the site cap (bee garden).

Photo No: 20	**Date:** 04/23/2026	**Time:** 11:01 AM	**Photographer:** S. Pfannenstiel
Latitude: 38.878332	**Longitude:** -94.805397		**Direction:** Southeast

Description: The name of the trees that were planted in the bee garden.

Photo No: 21	**Date:** 04/23/2026	**Time:** 11:02 AM	**Photographer:** S. Pfannenstiel
Latitude: 38.878321	**Longitude:** -94.805435		**Direction:** East

Description: A sign notifying gardeners who to call prior to planting.

Photo No: 22	**Date:** 04/23/2026	**Time:** 11:03 AM	**Photographer:** S. Pfannenstiel
Latitude: 38.878464	**Longitude:** -94.805508		**Direction:** East

Description: New trees planted on the site cap (bird garden).

Photo No: 23	**Date:** 04/23/2026	**Time:** 11:03 AM	**Photographer:** S. Pfannenstiel
Latitude: 38.878447	**Longitude:** -94.805411		**Direction:** East

Description: The name of the new tree planted in the bird garden.

APPENDIX E - INTERVIEW RECORDS

INTERVIEW RECORD

Site Name: Chemical Commodities Inc.	**EPA ID No.:** KSD031349624	
Subject: Five-Year Review Interview	**Time:** 10:00AM	**Date:** 2/9/2026

Type: ☐ In Person ☐ Telephone ☒ Email ☐ Other:

Location: ☐ Site ☒ Work/Office ☐ Home ☐ Other:

Contact Made By:

Name: Stephanie Pfannenstiel	**Title:** Remedial Project Manager	**Organization:** Environmental Protection Agency

Individual Contacted:

Name: Sean Hammersburg	**Title:** Professional Environmental Geologist Supervisor / Project Manager	**Organization:** KDHE Superfund Program

Telephone No: Office: 785-291-3089 or Cellphone: 785-266-1726

E-Mail Address: sean.hammersburg@ks.gov

Street Address: 1000 SW Jackson St., STE. 410
City, State, Zip: Topeka, KS 66612

Summary of Conversation

1. What is your overall impression of the project (general sentiment)?

The site remedy is likely working according to the ROD's timeline but not working on a timeline that is best for the environment, human health, and sit reuse.

2. Is the remedy functioning as expected? How well is the remedy performing?

Per the remedial goals set forth the ROD estimated time to reach them (100 years), Yes. For achieving remedial goals as soon as practicable and returning the site to beneficial use, no. The mass destruction via the permanganate ISCO treatments is not occurring at rates needed to reduce the groundwater concentrations influencing the vapor intrusion of COCs in the nearby residential properties.

3. What does the monitoring data show? Are there any trends that show contaminant levels are decreasing?

According to the monitoring data present at the 2025 annual meeting for the site, Haley-Aldrich presented Mann-Kendall trends for the major COCs and argued that the plume is stable. TCE is increasing in several wells while decreasing in others. The wells seeing a TCE increase are either side gradient or further downgradient which suggest that plume may not be stable.

4. Is there a continuous on-site O&M presence? Describe the staff and frequency of site inspections and activities.

EPA and its contractors conduct semi-annual VI sampling at the site. Roughly 50% of the residential properties are sampled during each event. Confirmation sampling occurs when exceedances are found and to determine if system repairs are needed.

Haley-Aldrich conducts annual groundwater sampling events at the site on behalf of the PRPs. Haley-Aldrich performs occasional site maintenance.

5. Have there been any significant changes in the O&M requirements, maintenance schedules, or sampling routines since start-up?

The GW monitoring schedule has changed from the sampling schedule from the Final OMM Workplan. The OMM Workplan only planned for five years of sample (2 years of semi-annual sampling & 3 years of annual sampling). The site is still monitored on an annual schedule.

The prolonged ROD, high groundwater concentrations, and the increasing number of residential units needing VI mitigation has increased the O&M requirements at the site and are stretching EPA's site budget thin and at risk of running out of funds.

6. Have there been unexpected O&M difficulties or costs at the site since start-up?

Costs for the EPA's VI mitigation efforts have increased significantly. This is partly to do with property owners not following instructions to protect the vapor barriers and systems when conducting property maintenance. Other increases are due to the increasing system repair and maintenance for standard maintenance. ISCO has not yielded significant mass destruction to see significant decline in concentrations which quickly rebound after application.

7. Have there been opportunities to optimize O&M, or sampling efforts?

In Fall 2024, an optimization study was initiated for the site and preliminary findings were submitted to the EPA RPMs, PRPs, and KDHE in late March 2025. Due to the March 31, 2025 contract end date between EPA OSRTI and their review subcontractors, EA Engineering, Science, & Technology Inc. PBC and ICF Incorporated, LLC., there was no opportunity to review and provide comment by PRPs, KDHE, or the EPA RPMs. Included in the draft final optimization review report were several recommendations for additional sampling and site characterization, screening interval & geology review, additional investigation to the east of the site (upgradient), soil gas investigation along the utility corridor and across the railroad, calculate the total VOC mass via mass flux tracers, and suggestions for other remedial methods to consider (horizontal injection wells; hydraulic fracturing; and in-situ thermal remediation). Currently, the PRPs and their consultants, Haley & Aldrich, are working on collecting sampling data from multiple wells (including several new wells) with flux tracers to calculate the total VOC mass. Soil gas samples will be collected along the utility corridor across the CCI property and across the railroad tracks. Additional transects along Keeler, Ocheltree, and Glendale. Slug testing will also occur. This work is in addition to the annual monitoring done by the PRPs and the semi-annual VI sampling by EPA.

8. Are you aware of any community concerns regarding the site or its operation and administration?

No.

9. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, or emergency responses from local authorities? If so, please give details.

At one point during the last five years, the gate to the site was damaged due to a vehicle impact and had to be replaced. In April 2025, Atmos Energy began construction of a utility on the CCI property along Keeler Street without notifying KDHE, EPA, or PRPs prior to beginning excavation. Contaminated groundwater began entering the trench exposing the utility workers to the site COCs. Eventually the contaminated groundwater was containerized, and the trench was backfilled by Atmos Energy with Haley-Aldrich oversight.

10. Do you have any comments, suggestions, or recommendations regarding the site's management or operations?

Changing the ISCO from permanganate to another oxidant (e.g., Fenton's solution or persulfate) at higher dosages and more frequent intervals may increase the COC mass destruction. Consideration should be given to the recommendations for remedial alternatives provided in the draft Final Optimization Report from EPA OSRTI as it is KDHE's opinion that the current remedy is not working.

INTERVIEW RECORD

Site Name: Chemical Commodities Inc.	**EPA ID No.:** KSD031349624	
Subject: Five-Year Review Interview	**Time:** 2:31 PM	**Date:** 2/5/2026

Type: ☐ In Person ☐ Telephone ☒ Email ☐ Other: kathy.l.beaty@boeing.com

Location: ☐ Site ☒ Work/Office ☐ Home ☐ Other: 2727 E. MacArthur, Wichita, KS 6216

Contact Made By:

Name: Stephanie Pfannenstiel	**Title:** Remedial Project Manager	**Organization:** Environmental Protection Agency

Individual Contacted:

Name: Kathy Beaty	**Title:** Remediation Project Manager	**Organization:** The Boeing Company, Global Enterprise Sustainability Organization

Telephone No: 316-209-6329

E-Mail Address: Kathy.L.Beaty@Boeing.com

Street Address: 2727 E. MacArthur
City, State, Zip: Wichita, Kansas 67216

Summary of Conversation

1. What is your overall impression of the project (general sentiment)?

The CCI project has been a very interesting project to work on due to the Superfund designation and the beneficial re-use piece. I am proud of the Pollinator Prairie and its impact in the community. The Remediation piece is challenging due to the fractured bedrock and the concentrations encroaching in the adjacent neighborhood. I am pleased that the relationship with EPA is more transparent and collaborative than we have seen in the past and look forward to solving challenging issues.

2. What effects have the site operations had on the surrounding community?

Since the restoration of the area and the community collaboration to establish the Pollinator Prairie, I believe the operations have had a positive impact in the community both immediately adjunct and at-large.

3. Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details.

I am not aware of community concerns since I became project manager in 2019. We hold two community events each year at the location and the opportunity is there if someone wishes to voice a concern but we have had none.

4. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, or emergency response from local authorities? If so, please give details.

In the past five years, we had one incident where a local police department vehicle chase ended with damage to a fence. No other incidents come to mind.

5. Do you feel well-informed about the site's activities and progress?

Yes. I very much appreciate the monthly status update calls with EPA and the face to face meetings.

6. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

None

7. Any other general comments?
None

INTERVIEW RECORD

Site Name: Chemical Commodities Inc.	**EPA ID No.:** KSD031349624	
Subject: Five-Year Review Interview	**Time:**	**Date:** 4/10/26.

Type: ☐ In Person ☐ Telephone ☒ Email ☐ Other:

Type: ☒ In Person ☐ Telephone ☐ Email ☐ Other:

Location: ☐ Site ☒ Work/Office ☐ Home ☐ Other:

Contact Made By:

Name: Stephanie Pfannenstiel	**Title:** Remedial Project Manager	**Organization:** Environmental Protection Agency

Individual Contacted:

Name: Davin Sederquist	**Title: Owner**	**Organization:** Navy Hill Associates, LLC

Telephone No: 816-878-4928

E-Mail Address: davin@quistllc.com

Street Address: 5127 Maple St

City, State, Zip: Mission, KS 66202

Summary of Conversation

1. What is your overall impression of the project (general sentiment)?

Not good at all. The project seems to be solely dealing with remediation and not remedy. I am extremely upset due to this 30+ year issue only getting worse and from my standpoint it appears no legitimate attempt to clean up the site has been made.

2. What effects have the site operations had on the surrounding community?

The site scares residents, creates a huge inconvenience and disrupts their right to a quiet enjoyment of the property. The scare of the site caused residents to create or blame symptoms on possible contaminants. It has significantly impacted the income from the property to the owners.

3. Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details.

Our tenants are very concerned about the continued inconvenience and uncertainty surrounding the property. The ownership group is very concerned since this has had a huge economic impact on our investment ongoing and if we were to sell the property.

4. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, or emergency response from local authorities? If so, please give details.

No

5. Do you feel well-informed about the site's activities and progress?

I feel that we get good information about what remediation projects will happen and when. What we do not get is any information on actual clean up plans to address the actual contamination or any permanent solutions. As the plume continues to move this will just further disrupt the residents and continue and increase the economic effect it is having on us. When current remedies have failed and new remedies are needed I do not feel like we have gotten good information on when those will take place, we had a unit sit for nearly a year waiting on work to take place, when it was first done the contractor did not use the right materials, waiting for additional work to be completed took months longer, all while our unit sat vacant, and we continued to get informed that work would be done in a timeframe that came and went with no work being done. This was with the previous manager Trenton mentioned below. There seemed to be no urgency on his part or concern for our losses that continue and still continue to mount.

6. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

The ongoing cost of continuing to manage the site as it has been as opposed to addressing the actual contamination will be extremely costly and I would hope that some attempt at an actual solution will be considered.

7. Any other general comments?

I have been very pleased working with Stephanie Pfannenstiel, she has been very responsive, and understanding of our situation. Trenton, one of the previous managers until recently was not that way, he seemed to have an attitude that he was doing us a favor and treated us as if we were part of the cause of the problem as opposed to the victim in this situation.

INTERVIEW RECORD

Site Name: Chemical Commodities Inc.	**EPA ID No.:** KSD031349624	
Subject: Five-Year Review Interview	**Time:**	**Date:** April 14, 2026

Type: ☐ In Person ☐ Telephone ☒ Email ☐ Other:

Type: ☒ In Person ☐ Telephone ☐ Email ☐ Other:

Location: ☐ Site ☒ Work/Office ☐ Home ☐ Other:

Contact Made By:

Name: Stephanie Pfannenstiel	**Title:** Remedial Project Manager	**Organization:** Environmental Protection Agency

Individual Contacted:

Name: Josh Wilson	**Title: Property Manager**	**Organization:** Sederson Management Co

Telephone No: 913-940-0719

E-Mail Address: josh@sederson.com

Street Address: 4200 Genessee Street
City, State, Zip: KCMO 64111

Summary of Conversation

1. What is your overall impression of the project (general sentiment)?

Frustrated. I have been a property manager at Sederson Management for 14+ years and there doesn't seem to be an end in sight regarding the constant testing and re-testing of the duplexes. We have had many tenants leave over the years due to the testing and remediation efforts.

2. What effects have the site operations had on the surrounding community?

Many of our tenants have complained over the years about the frequency of testing and some have left due to the inconvenience of the testing and fear of the unknown.

3. Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details.

Many tenants have voiced concerns about why the EPA is testing.

4. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, or emergency response from local authorities? If so, please give details.

No

5. Do you feel well-informed about the site's activities and progress?

Stephanie has done an excellent job of keeping in touch with me, my boss Steve Wheeler and Davin, one of the owners of the duplexes. Over the years we have had several managers of the site and Stephanie has definitely been the best and most pro-active.

6. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

I don't know if it is possible to come up with a spreadsheet to document where we are in the grand scheme of things. It feels as if we are not all on the same page with where we are currently and what it is going to take to get to the finish line, if there is such a place.

7. Any other general comments?

I feel badly for the owners who are paying for our company to open and close doors and sit with the EPA and Midwest Radon while they try to mitigate the problem. It doesn't seem fair that between paying us and losing tenants that they are not compensated. I also feel sorry for the tenants that have to deal with people coming through their homes multiple times a year for testing. And lastly, I'm frustrated that our technicians are held up from helping our other tenants and properties elsewhere.

APPENDIX F – RESTRICTIVE COVENENTS

Declaration of Restrictive Covenants

City of Olathe

Legal Description
See Attached Sheet

Return to: City Clerk's Office
City of Olathe
P.O. Box 768
Olathe, KS 66051-0768

DECLARATION OF RESTRICTIVE COVENANTS

This Declaration of Restrictive Covenants is made this 21 day of Mar., 2006, by and between Chemical Commodities, Inc. (Grantor) and the City of Olathe, Kansas, a Municipal Corporation (Grantee). The United States of America, c/o the United States Environmental Protection Agency (EPA) is an intended Third-Party Beneficiary to this Agreement.

WITNESSETH:

WHEREAS, Grantor is the owner of real property located in the county of Johnson, State of Kansas, more particularly described in Exhibit A attached hereto and made a part hereof (the Property); and

WHEREAS, the Property is part of the Chemical Commodities, Inc. Superfund Site (Site) at which the EPA, pursuant to 40 C.F.R. § 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), has performed removal actions; and

WHEREAS, the parties hereto have agreed to impose on the Property use restrictions as covenants that will run with the land for the purpose of protecting human health and the environment; and

WHEREAS, the Grantor wishes to cooperate fully with the Grantee and the Third-Party Beneficiary in the implementation of all response actions at the Site.

NOW, THEREFORE:

1. Grant: Grantor, on behalf of itself, its successors and assigns does hereby covenant and declare that the Property shall be subject to the restrictions on use as set forth below, and does give, grant, and convey to the Grantee, and its assigns, the perpetual right to enforce said use restrictions.

2. Purpose: It is the purpose of this instrument to establish use restrictions as covenants, which will run with the land, to facilitate the remediation of past environmental contamination and to protect the human health and the environment by reducing the risk of exposure to contaminants.

3. Restrictions on use. The following covenants, conditions, and restrictions apply to the use of the Property, run with the land and are binding on the Grantor, its successors, transferees, and assigns:

A. Unless approved in writing by the EPA, the Property shall not be used for residential, commercial or industrial purposes.

B. Unless approved in writing by the EPA, there shall be no disturbance of the surface or subsurface of the Property by filling, drilling, excavation, removal of topsoil, rock or minerals, or change of topography in any manner.

C. The Property will not be used for the purpose of livestock grazing, for the production of food-chain crops intended for human consumption, including but not limited to tobacco, leafy vegetables or root crops, or for the production of food-chain crops intended for use as animal feed.

D. No water wells, for the purpose of drinking water or otherwise, shall be installed, used, maintained or renewed on the Property.

4. Termination of Covenants: The covenants contained herein shall be deemed covenants running with the land, and shall remain in full force and effect upon conveyance of the Property.

5. EPA Right of Entry: Nothing in this document shall limit or otherwise affect EPA's rights of entry and access or the EPA's authority to take response actions under the Comprehensive Environmental Response, Compensation and Liability Act, as amended, 42 U.S.C. § 9601 et seq., (CERCLA), the NCP or other federal law.

6. No Public Access and Use: No right of access or use by the general public to any portion of the Property is conveyed by this instrument.

7. Notice requirement: Grantor agrees to include in any instrument conveying any interest in any portion of the Property, including but not limited to deeds, leases and mortgages, a notice which is in substantially the same form:

NOTICE: THE INTEREST CONVEYED HEREBY IS SUBJECT TO RESTRICTIVE COVENANTS, DATED _____, 2005, RECORDED IN THE PUBLIC LAND RECORDS ON _____, 2005, IN BOOK _____, PAGE _____, IN FAVOR OF, AND ENFORCEABLE, BY THE UNITED STATES OF AMERICA.

Within thirty (30) calendar days of the date any such instrument of conveyance is executed, Grantor must provide Grantee and the Third-Party Beneficiary with a certified true copy of said instrument and, if it has been recorded in the public land records, its recording reference.

8. Administrative jurisdiction: The federal agency having administrative jurisdiction over the interest acquired by the United States by this instrument is the EPA.

9. Enforcement: The Grantee and the Third-Party Beneficiary shall be entitled to enforce the terms of this instrument by resort to specific performance or legal process. All remedies available hereunder shall be in addition to any and all other remedies at law or in equity, including CERCLA. Enforcement of the terms of this instrument shall be at the discretion of the Grantee and the Third-Party Beneficiary and any forbearance, delay or omission to exercise their rights under this instrument in the event of a breach of any term of this instrument shall not be deemed to be a waiver by the Grantee or the Third-Party Beneficiary of such term or of any subsequent breach of the same or any other term, or of any of the rights of the Grantee or the Third-Party Beneficiary under this instrument.

10. Damages: Grantee and the Third-Party Beneficiary shall be entitled to recover damages for violations of the terms of this instrument, or for any injury to the remedial action, to the public or the environment protected by this instrument.

11. Waiver of certain defenses: Grantor on behalf of itself and its successors, transferees, and assigns hereby waive any defense of laches, estoppel, or prescription.

12. Waiver of certain claims: Grantor on behalf of itself and its successors, transferees, and assigns hereby waives all claims related to the Property, including but not limited to takings claims, against the United States, the city of Olathe, Kansas, a Municipal Corporation, and their successors.

13. Covenants: Grantor hereby covenants to and with the Grantee, that Grantor is lawfully seized in fee simple of the Property, that the Grantor has good and lawful right and power to impose the restrictive covenants specified herein, that the Property is free and clear of encumbrances.

14. Notices: Any notice, demand, request, consent, approval, or communication that either party desires or is required to give to the other shall be in writing an shall either be served personally or sent first class mail, postage prepaid, addressed as follows:

To Grantor:

Chemical Commodities, Inc.
c/o Steven Osman, Registered Agent
4948 W. 88th
Prairie Village, Kansas 66207

To Grantee:

City Clerk
City of Olathe
100 East Santa Fe
Olathe, Kansas 66051

With a Copy to Third-Party Beneficiary:

United States of America
c/o Office of Regional Counsel, Region 7
Chemical Commodities, Inc. Superfund Site
United States Environmental Protection Agency
901 N. 5th Street
Kansas City, Kansas 66101

15. Controlling law: The interpretation and performance of this instrument shall be governed by the laws of the United States or, if there are no applicable federal laws, by the law of the state and municipality where the Property is located.

16. Liberal construction: Any general rule of construction to the contrary notwithstanding, this instrument shall be liberally construed in favor of the grant to effect the purpose of this instrument and the policy and purpose of CERCLA, 42 U.S.C. § 9601 et seq., including but not limited to § 104(j)(3). If any provision of this instrument is found to be ambiguous, an interpretation consistent with the purpose of this instrument that would render the provision valid shall be favored over any interpretation that would render it invalid.

17. Severability: If any provision of this instrument, or the application of it to any person or circumstance, is found to be invalid, the remainder of the provisions of this instrument, or the application of such provisions to person or circumstances other than those to which it is found to be invalid , as the case may be shall not be affected thereby.

18. Entire Agreement: This instrument sets forth the entire Agreement of the parties with respect to rights and restrictions created hereby, and supercedes all prior discussions, negotiations, understanding, or agreements relating thereto, all of which are merged herein..

19. No forfeiture: Nothing contained herein will result in a forfeiture or reversion of Grantor's title in any respect.

20. Successors: The covenants, terms, conditions, and restrictions of this instrument shall be binding upon, and inure to the benefit of, the parties hereto and their respective personal representatives, heirs, successors, and assigns and shall continue as a servitude running in perpetuity with the Property. The term "Grantor", wherever it is used herein, and any pronouns used in place thereof, shall include the persons and/or entities named at the beginning of this document, identified as "Grantor" and its representatives, successors, and assigns. The rights of the Grantee and Grantor under this Agreement are freely assignable, subject to the notice provisions hereof.

20. Captions: The captions in this instrument have been inserted solely for the convenience of reference and are not a part of this instrument and shall have no effect upon construction or interpretation.

21. Counterparts: The parties may execute this instrument in two or more counterparts, which shall, in aggregate, be signed by both parties, each counterpart shall be deemed an original instrument as against any party who has signed it. In the event of any disparity between the counterparts produced, the recorded counterpart shall be controlling.

TO HAVE AND TO HOLD unto the City of Olathe and its assigns forever.

IN WITNESS WHEREOF, Grantor has caused the Agreement to be signed in its name.

Executed this 21 day of March, 2006.

By: Jerald Gershan

Its: Past President Jerald Gershan

STATE OF KANSAS)
) ss
COUNTY OF JOHNSON)

On this 21st day of March, 2006, before me, the undersigned, a Notary Public in and for the State of Kansas, duly commissioned and sworn, personally appeared Gerald Gerson the Grantor that executed the foregoing instrument, and acknowledged that execution of this instrument to be the free and voluntary act of said Grantor, for the uses and purposes stated in this instrument, and on oath stated that they are authorized to execute this instrument.

Witness my hand and official seal hereto affixed the day and the year written above.

CHRISTINE A. MORGAN
Notary Public
State of Kansas
My Appointment Expires 9/8/08

Christine A. Morgan
Notary Public

My Commission Expires: 9/08/08

This restrictive covenant is accepted this 5th day of Sept, 2006.

STATE OF KANSAS

The persons and/or entities named at the beginning of this document, identified as "Grantee" and their personal representatives, successors and assigns.

CITY OF OLATHE, KANSAS

By: _____

Its: Mayor Michael Copeland

EXHIBIT A — LEGAL DESCRIPTION OF THE SITE

DECLARATION OF RESTRICTIVE COVENANTS
Chemical Commodities, Inc., Grantee
City of Olathe, Kansas, Grantor

EXHIBIT A
(Legal Description)

The Declaration of Restrictive Covenants attached hereto applies to the following described tracts or parcels of land situated in the City of Olathe, Johnson County, Kansas:

1. Lots One (1), Two (2), Three (3), and Four (4), in Block Six (6), in Burris and Ocheltree's Addition in the City of Olathe, Johnson County, Kansas

2. Lots One (1), Two (2), Three (3), Thirteen (13), Fourteen (14), Fifteen (15) and Sixteen (16) in Block Seven (7) Burris and Ocheltree's Addition to the City of Olathe, Johnson County, Kansas

3. The South One-half (S½) of Lot Ten (10), and the North One-half (N½) of Lot Eleven (11), Block Seven (7), Burris and Ocheltree's Addition to the City of Olathe, Johnson County, Kansas

4. All of Lot (Twelve) 12 and the South Half of Lot Eleven (11), Burris and Ocheltree's Addition to the City of Olathe, Johnson County, Kansas

ACKNOWLEDGMENT

STATE OF KANSAS)
) SS
COUNTY OF JOHNSON)

BE IT REMEMBERED, that on this 5th day of September, 2006, before me, the undersigned, A Notary Public in and for the County and State aforesaid, come Michael Copeland, Mayor of the City of Olathe, Kansas, who is personally known to me to be the same person who executed as such officer, the within instrument on behalf of said City, and such person duly acknowledged the execution of the same to be the act and deed of said City.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year first above written.

MARY KIM
Notary Public - State of Kansas
My Appt. Expires 3/13/07

Mary Kim
Notary Public

My Appointment Expires: 3/13/07

APPENDIX G – CITY ORDINANCES

ORDINANCE NO. 03-17

AN ORDINANCE ADDING CHAPTER 13.32 PERTAINING TO WATER WELLS.

BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF OLATHE, KANSAS:

SECTION ONE: That Chapter 13.32 is hereby added to the Olathe Municipal Code and shall read as follows:

"Chapter 13.32
Water Wells

Sections:

13.32.010 Definitions
13.32.020 Inspection Requirements
13.32.030 Water Well Sampling Requirements
13.32.040 Responsibility for Inspection and Sampling Fees
13.32.050 Construction and Connection Requirements
13.32.060 Adoption of State of Kansas Construction, Location and Abandonment Regulations
13.32.070 Water Well Record
13.32.080 Request for Waivers
13.32.090 Referral of Waivers
13.32.100 Inspection
13.32.105 Water Wells in Contaminated Areas
13.32.110 Penalty

13.32.010 Definitions. Unless otherwise specified, the following terms as used in this code shall mean as follows:

BACTERIOLOGICALLY SAFE WATER SAMPLE means a water sample collected by the health officer and analyzed by a certified laboratory that is determined to have no detectable fecal coliform in 100 ml.

CERTIFIED LABORATORY means a laboratory certified by the Environmental Protection Agency or any EPA-approved state water quality certification procedures to conduct tests for specific parameters.

CONTAMINATED AREA means an area designated by official action of the Environmental Protection Agency or Kansas Department of Health and Environment as having groundwater that is environmentally contaminated to an extent that requires remediation or similar action for the protection of human health and the environment.

CONTAMINATED WATER SAMPLE means a water sample which does not meet public drinking water standards. A water sample that does meet public

drinking water standards for bacteria is defined as being a bacteriologically safe water sample.

DEPARTMENT means the City of Olathe Municipal Services Department.

HEALTH OFFICER means the director of the Municipal Services Department or his or her authorized representative.

PERSONAL USE means the use of water from a well for purposes including drinking, cooking, bathing and sewage disposal.

PIT WELL means any well installed in a structure or excavation below grade, including but not limited to wells in pits, vaults or storm cellars.

SCREENING TESTS are preliminary water tests performed through the use of disposable color change strips or appliances to determine if further testing is required.

WATER WELL means any excavation that is drilled, cored, bored, washed, driven, dug, jetted, or otherwise constructed when the intended use of the excavation is for the location, diversion, artificial recharge, or acquisition of groundwater.

13.32.020 Inspection Requirements.

A. The Municipal Services Department is authorized to inspect newly constructed, reconstructed, existing or abandoned water wells.

B. The property owner shall notify the Municipal Services Department of the existence of any water well at the time of construction, reconstruction, or abandonment, and of any existing active, inactive, or abandoned water well prior to the transfer of ownership of any property.

13.32.030 Water Well Sampling Requirements.

A. The Municipal Services Department is authorized to collect samples from private water wells for bacteriological, organic, or inorganic analysis of newly constructed or reconstructed water wells, and existing wells prior to the transfer of ownership of any property.

1. If a bacteriologically safe water sample is not obtained, the property owner must have the water well disinfected and sampled until a bacteriologically safe water sample is obtained.

2. If a contaminated sample is obtained, the property owner must take whatever action is deemed necessary by the Municipal Services Department to obtain a potable water supply for personal use. These actions may include but are not limited to: abandoning the well and connecting to a public water supply; abandoning the well and connecting to a cistern; or installing a water treatment system designed

to treat the type of contamination to an acceptable level to be considered potable water by the Kansas Department of Health and Environment.

B. The Municipal Services Department is authorized to collect water samples from semi-public water wells for an annual bacteriological analysis and for organic or inorganic chemical analysis, if positive results are obtained through screening tests.

1. If a bacteriologically safe water sample is not obtained, the property owner must have the water well disinfected and sampled until a bacteriologically safe sample is obtained.

2. If a contaminated sample is obtained, the property owner must take whatever action is deemed necessary by the health department to obtain a potable water supply for personal use.

C. The Municipal Services Department is authorized to collect water samples from noncommunity water supplies for a semiannual bacteriological analysis and for organic or inorganic chemical analysis, if positive results are obtained through screening tests.

1. Until a bacteriologically safe or uncontaminated sample has been obtained, the property owner must meet the following requirements:

a. Any water used for cooking or human consumption must be bottled water from a source approved by the health department.

b. Any ice used on the premises must be packaged ice from a source approved by the health department.

c. Any water used for sanitizing must be sanitized by a chemical additive or by heating as approved by the health department.

2. If a bacteriologically safe water sample is not obtained, the property owner must have the water well disinfected and sampled until a bacteriologically safe water sample is obtained.

3. If a contaminated sample is obtained, the property owner must take whatever action is deemed necessary by the health department to obtain a potable water supply for personal use.

D. All water sampling and testing shall be completed by a Kansas Department of Health and Environment certified laboratory.

13.32.040 Responsibility for Inspection and Sampling Fees. The property owner shall be responsible for any inspection and sampling fees. The fees for

the inspections and sampling are to be determined by the Municipal Services Department and shall be established by resolution yearly.

13.32.050 Construction and Connection Requirements. The property owner shall be responsible for meeting the following requirements:

A. All active, inactive, or abandoned water wells are to meet current construction, location, and plugging standards.

B. Personal use water wells are to meet the following pump and pressure tank standards:

1. Pumps shall be a minimum of 1/3 horsepower and be mounted to be free from flooding, pollution and freezing.

2. Pressure tanks must have a minimum capacity of forty-two (42) gallons. However, pressurized tanks and other pressurizing devices are acceptable provided that delivery between pump cycles equals or exceeds that of a standard forty-two (42) gallon tank.

C. The separation distance between wells and soils or foundations which have been treated or pretreated with a sub-surface pressurized application of a termiticide shall be a minimum of twenty-five (25) feet.

D. Pressure Water Line and Sewer Line Requirements.

1. The sewer line is to be two (2) or more feet below the water line, or:

2. If a sewer line is within ten (10) feet of a water line, the sewer line is to be constructed of cast iron pipe with fitted joints or approved plastic pipe with solvent weld joints.

3. A water well shall not be located within 100 feet of a septic tank, absorption field, waste stabilization pond, feedlot, or other source of pollution.

E. The property owner is to have personal use water wells disconnected and connection made to a public water supply system at the time the property is offered for sale or rent, if:

1. A public water supply system is within two hundred (200) feet of the property lines; and

2. A potable water sample cannot be obtained from a properly constructed and located existing well or a newly constructed water well.

F. No new water well shall be constructed if a public water supply system is within two hundred (200) feet of the property line, except for the purpose of irrigation and other outside, nonpotable water use.

13.32.060 Adoption of State of Kansas Construction, Location and Abandonment Regulations. Water well regulations as specified in the Kansas Statutes Annotated Groundwater Exploration and Protection Act, 82a-1201, *et seq.*, and amendments thereto and Water Well Contractor License; Water Well Construction and Abandonment, Kansas Administrative Regulations 28-30-2, *et seq.*, and amendments thereto shall be incorporated by reference and adopted as regulations for water wells in the corporate limits of the city.

13.32.070 Water Well Record. Within thirty (30) days after construction or reconstruction of a water well, the water well installer, whether a licensed water well contractor or property owner, shall submit a copy of the water well record to the Municipal Services Department.

13.32.080 Request for Waivers. A request for a waiver from any of the foregoing rules and regulations shall be submitted to the Municipal Services Department by the property owner in writing and shall contain all information relevant to the request.

A. The request shall specifically set forth why an exception should be considered.

B. The Municipal Services Department may grant a waiver when conditions warrant, and when a waiver is in keeping with the purposes of the Kansas Water Well Construction and Abandonment Administrative Regulations 28-30-2, *et seq.*

13.32.090 Referral of Waivers. If required, a request for waiver will be referred to the Kansas Department of Health and Environment for consideration prior to the issuance of a waiver by the Municipal Services Department.

13.32.100 Inspection. The health officer shall be responsible for the enforcement of this chapter and is authorized to make such investigations, inspections, to issue notice, orders and directions, to take such actions and carry out such activities as necessary for enforcement of this chapter.

13.32.105 Water Wells in Contaminated Areas.

A. From and after the date of the ordinance codified in this section, no new water well shall be constructed and used for personal use if the health officer determines that such well is in a contaminated area or within five hundred (500) feet of a contaminated area.

B. Any existing water well shall cease to be used for personal use if the health officer determines that (1) the well is in a contaminated area or is within 500 feet of a contaminated area, (2) public water is available to the water

well user, and (3) the cessation of use of the water well for personal use is in the best interest of public health, safety and welfare.

13.32.110 Penalty. Any person, individual, partnership, corporation or association who violates any of the provisions of this chapter is guilty of a misdemeanor, and upon conviction, shall be punished by a fine not to exceed Five Hundred Dollars ($500) or by imprisonment of not more than six (6) months, or by both such fine and imprisonment. Each day any violation hereof is found to exist or continues to exist shall be a separate offense and punishable as such hereunder."

SECTION TWO: This Ordinance shall take effect and be in force from and after its passage and publication as provided by law.

PASSED by the Governing Body this 18th day of February, 2003.

SIGNED by the Mayor this 18th day of February, 2003.

Mayor

ATTEST:

City Clerk

(SEAL)

APPROVED AS TO FORM:

City Attorney

Publish one time and return one Proof of Publication to the City Clerk and one to the City Attorney.

Ordinance No. 06-101

City of Olathe

Legal Description
See Attached Sheet

Return to: City Clerk's Office
City of Olathe
P.O. Box 768
Olathe, KS 66051-0768

ORDINANCE NO. 06-101

AN ORDINANCE AMENDING THE ZONING MAP OF THE CITY OF OLATHE, KANSAS, AS ADOPTED BY REFERENCE IN SECTION 18.14.020 OF THE OLATHE MUNICIPAL CODE; FURTHER AMENDING SAID SECTION 18.14.020 BY REINCORPORATING SUCH MAP AS AMENDED.

WHEREAS, Rezoning Application No. RZ-06-018 requesting rezoning from M-2 and R-1 to RP-1 was filed with the City of Olathe, Kansas, on the 23rd day of June 2006; and

WHEREAS, proper notice of such rezoning application was given pursuant to K.S.A. 12-757 and Section 18.12 of the Olathe Municipal Code; and

WHEREAS, a public hearing on such application was held before the Planning Commission of the City of Olathe, Kansas, on the 14th day of August 2006; and

WHEREAS, said Planning Commission has recommended that such rezoning application be approved.

NOW, THEREFORE, BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF OLATHE, KANSAS:

SECTION ONE: That the Zoning Map of the City of Olathe, Kansas, is hereby ordered to be amended insofar as the same relates to certain parcels of land legally described as:

All of Lots 1 and 10A of Block 7 and all of Lots 1, 2, 3 & 4 of Block 6 of Burris & Ocheltrees Addition, a subdivision in the City of Olathe, Johnson County, Kansas and all Elm Street right-of-way lying between Lot 1, Block 7 and Lot 4, Block 6, of Burris & Ocheltrees Addition measuring approximately 210 feet by 57 feet.

Also described as:

1. Lots One (1), Two (2), Three (3) and Four (4), in Block Six (6), in Burris and Ocheltrees Addition in the City of Olathe, Johnson County, Kansas.

2. Lots One (1), Two (2), Three (3), Thirteen (13) Fourteen (14), Fifteen (15) and Sixteen (16) in Block Seven (7), Burris and Ocheltrees Addition to the City of Olathe, Johnson County, Kansas.

3. The South One-half (S½) of Lot Ten (10) and the North One-half (N½) of Lot Eleven (11), Block Seven (7), Burris and Ocheltrees Addition to the City of Olathe, Johnson County, Kansas.

4. All of Lot Twelve (12) and the South One-half (S½) of Lot Eleven (11), Burris and Ocheltree's Addition to the City of Olathe, Johnson County, Kansas.

by changing the classification of the zone district from M-2 and R-1 to RP-1.

SECTION TWO: That this rezoning is approved subject to the following stipulations:

a. Prior to publishing the zoning ordinance and within thirty (30) days following approval by the Governing Body, a statement that a preliminary development plan has been approved for the subject property shall be filed in accordance with the requirements of Section 18.12.120 of the *Unified Development Ordinance (UDO)*.

SECTION THREE: That Section 18.14.020 of the Olathe Municipal Code, which incorporates by reference the Olathe Zoning Map, is hereby amended by reincorporating by reference the said Zoning Map as it has been amended in Section One of the Ordinance.

SECTION FOUR: That this Ordinance shall take effect from and after its passage and publication as provided by law.

PASSED by the Council this 5th day of September 2006.

SIGNED by the Mayor this 5th day of September 2006.

Mayor Michael Copeland

ATTEST:

City Clerk Debra S Gragg

(Seal)

APPROVED AS TO FORM:

Municipal Counsel Thomas A Gunstra

APPENDIX H – SITE GEOLOGY/HYDROLOGY

The site is within the Osage Cuestas division of the Osage Plains physiographic province (Fluor Daniel GTI, 1996). These are characterized by gently rolling uplands with hilly areas along streams. The surficial soils mainly consist of clay and silts with some granular material from the weathered limestone and shale units below (MWH, 2001a). These surficial soils are referred to as the residuum at the site. The residuum can be up to 20 feet thick in some locations. The residuum can be divided into two zones, the upper zone containing mostly topsoil and is generally less dense. While the lower zone of the residuum is denser and tends to be more uniform in structure (MWH, 2001a). Beneath the residuum is reported to be a transition zone consisting of partially weathered bedrock a few inches thick and is believed to behave as a porous medium facilitating the flow of groundwater and transmission of contaminants (MWH, 2001a).

The bedrock surface directly beneath the site appears to dip slightly towards the south and further from the site it appears the bedrock surface dips towards the south and west (MWH, 2001a). The upper 65 feet of bedrock beneath the site is the Pennsylvanian aged Stanton Limestone Formation. The Stanton Limestone Formation consists, in descending order, the South Bend Limestone Member, the Rock Lake Shale Member, the Stoner Limestone Member, the Eudora Shale Member and the Captain Creek Limestone Member (MWH, 2001b).

The South Bend Limestone is reported to be thick bedded, dense, very fine-grained limestone and is reported to be approximately one to five feet thick, where present (Fluor Daniel GTI, 1996; MWH, 2001). Underlying the South Bend Limestone is the Rock Lake Shale.
The Rock Lake Shale includes shale, siltstone, and sandstone layers at the site. The Rock Lake Shale is reported to be approximately two and half to four feet thick, where present (MWH, 2001b). In rock cores collected at the site, a sandstone containing layers of siltstone was present directly beneath the South Bend Limestone. This sandstone interval is reported to be one and half feet to two feet thick. Under this sandstone is a dark gray shale approximately two feet thick (MWH, 2001b).

Underlying the Rock Lake Shale is the Stoner Limestone and is the thickest member of the Stanton Limestone Formation at the site. The Stoner Limestone is thin to medium-bedded, fine to medium-grained limestone with a few fossils. The thickness at the site is reported to be approximately 20 feet thick and is encountered approximately 30 feet below ground surface. The limestone is reported to be fossiliferous containing brachiopods and crinoids and is very hard and dry (MWH, 2001b).

The Eudora Shale lies beneath the Stoner Limestone and is a blacky platy shale. It is suspected this unit is six to eight feet thick in Johnson County but may be as thick as 11 feet in a few locations. The three rock cores collected in 2001 contained six to eight feet of the Eudora Shale (MWH, 2001b). The Captain Creek Limestone underlies the Eudora Shale and is the bottom unit within the Stanton Limestone Formation. The bedrock investigation reported that the Captain Creek Limestone is seven to eight feet thick. It is medium bedded, very fine grained, grey to blue grey in color, and hard and dry. A generalized stratigraphic column is presented in Table 3.

Vertical hydraulic gradients from the residuum to the transition zone/South Bend Limestone and within the bedrock units were assessed during remedial investigation activities. Based on these results it appears there is generally a downward gradient from the residuum towards the transition zone/South Bend Limestone (MWH, 2001a). The gradients varied by location but ranged from 0.4 to 0.65 ft/ft. A multi-port monitoring system was installed in borehole B-2. Generally, it appears there is a downward hydraulic gradient between the bedrock units. Horizontal gradients were only assessed within the transition zone/South Bend Limestone during the remedial investigation and were reported to be approximately 0.02 to 0.04 ft/ft (MWH, 2001a). Hydraulic conductivity was measured between the residuum and the transition zone/ South Bend Limestone. The conductivities ranged from 8x10-8 to 4x10-4 centimeters per second (MWH, 2001a). Currently, work is being conducted by the potentially responsible party to better understand the contaminant mass flux and flow conditions between the other bedrock contacts. Additional conductivity and gradient information will likely be obtained after these activities are completed.

APPENDIX I – TECHNICAL REVIEW COMMENTS RELATED TO SITE CAP, TRENCH SYSTEM, AND MEETING RAOS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
CENTER FOR ENVIRONMENTAL SOLUTIONS AND EMERGENCY RESPONSE
TECHNICAL SUPPORT COORDINATION DIVISION
919 KERR RESEARCH DRIVE • ADA, OK 74820

December 2, 2024

OFFICE OF
RESEARCH AND DEVELOPMENT

MEMORANDUM

SUBJECT: Technical Review Comments for Chemical Commodities, Inc. Site, Olathe, Kansas (25-R07-02).

FROM: Randall Ross, Director
Groundwater Technical Support Center

TO: Trenton Chriestenson, RPM
U.S. EPA Region 7 SEMD-RB-SRES

Per your request for continued technical support from the Groundwater Technical Support Center (GWTSC), the following comments are provided for the Chemical Commodities, Inc. site. These comments are provided by ERG (Eastern Research Group), a STREAMS IV contractor that provides technical support to the GWTSC. If you have any questions or comments, please do not hesitate to contact me at your convenience (580-436-8611).

Introduction

EPA requested technical assistance with review of the 2024 Annual Groundwater Monitoring Report for Chemical Commodities, Inc. Site and an assessment of whether the Site remedy is working as intended, is not meeting its objectives or timeline, or if there is not enough information to make an accurate determination (Part I). In addition, technical assistance was requested with reviewing the cap and trench system at the Site (Part II). The specific questions (highlighted in italics) from Region 7 are addressed in this report. ERG was supported in this work by team subcontractors, Dr. Thomas Boving, Dr. Jim Weaver, and Dr. Scott Huling.

Document Reviewed: 2024 Annual Groundwater Monitoring Report, Chemical Commodities, Inc., Olathe, KS.

Site Description

The Chemical Commodities, Inc. site served as a chemical brokerage and recycling facility for multiple clients from 1951 through 1989. Chemical Commodities Inc. purchased chemicals from many sources and sold new, used, off-specification, and surplus chemicals of all types, including chlorinated solvents, pesticides, and other waste chemicals and oils. Since 1988, more than 50 permanent groundwater monitoring wells and 15 piezometers have been installed, both on and

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off the Site, to monitor the extent of a groundwater plume emanating from the Site. Chloroethenes (trichloroethene (TCE), tetrachloroethene (PCE) and dichloroethanes (primarily cis-1,2-DCE)) are the most prevalent chlorinated VOCs (cVOCs) detected in the subsurface. At the southern part of the Site, soils have also been contaminated with metals. In addition, a number of vapor intrusion (VI) measurement stations have been installed downgradient from the Site.

Groundwater is generally encountered between 0 to 12 feet below ground surface (bgs) at the Site. The groundwater gradient generally slopes to the northwest, west, and southwest away from the Site. Lateral migration of contaminated groundwater downgradient from the Site primarily occurs within higher permeability weathered and fractured intervals in the uppermost portion of the underlying bedrock, predominantly in relatively thin zones within the South Bend Limestone and the Rock Lake Shale, where present. Vertical flow of groundwater below the Rock Lake Shale appears negligible, as it is limited by the low vertical hydraulic conductivities of the competent bedrock.

Monitoring and the analysis of groundwater quality and biodegradation parameter data collected from 2017 to 2024 led Haley & Aldrich, Inc. (H&A), on behalf of The Boeing Company (Boeing) to the conclusion that (1) the VOC plume is generally stable and (2) biodegradation is occurring based on VOC concentration trends, detection of degradation byproducts, and geochemistry at various locations.

Part I

1. General Comments

a. Does the data support that the remedy is operating as intended and will reach remediation goals within the 100-year time frame as stated in the ROD? (Section 3.6, paragraph 4)

The following section provides an analysis of the temporal distribution of VOC contamination along the main groundwater plume. This analysis is the basis for evaluating if the remedy works as intended and if the remediation goals can plausibly be reached within a 100-year time frame. Remedies at the Site include excavation, capping, in situ chemical oxidation (ISCO), and monitored natural attenuation (MNA). VOC and metal impacted soils have been excavated 5 feet from surface at two locations at the Site (see MWH (2010) Fig.6-23: Excavation Areas). A cap has been constructed over the excavated areas and beyond (see MWH (2010) Fig.15-23 to 17-23).

Currently active remedies at the Site include monitored natural attenuation (MNA) and periodic in-situ chemical oxidation (ISCO) injection events. For ISCO treatment, perimeter injection trenches were installed on the Site and large-diameter auger excavation with chemical oxidant backfill in high concentration areas were installed on-site and downgradient along Ocheltree Street. Haley & Aldrich reported on 28 March 2023 that nine discrete chemical oxidant injection events were conducted from 2011 to 2016, totaling 23,490 gallons of injected oxidant (permanganate; MnO_4^-), which has persisted for over 39 months in some locations. The injections were suspended in 2017 to evaluate if additional oxidant applications would further benefit mass reduction. From 2017 to 2020, additional groundwater performance monitoring and

supplemental investigations were performed. Another round of off-site oxidant delivery (1,025 gal) was completed using three wells (MW-36B, MW-58B and MW-59B) in November 2023.

For this report, the evolution of TCE (considered to be the primary contaminant) concentrations and concentrations of other chloroethenes (such as PCE, DCEs, VC) in groundwater were examined along two transects (Fig. 1). These transects approximately follow the main axis of the TCE groundwater plume emanating from the Site (see: H&A 2024, Fig. 4). Other contaminants (chloroethanes, chloromethanes, chlorobenzenes, and select VOC) were also examined along the orange transect.

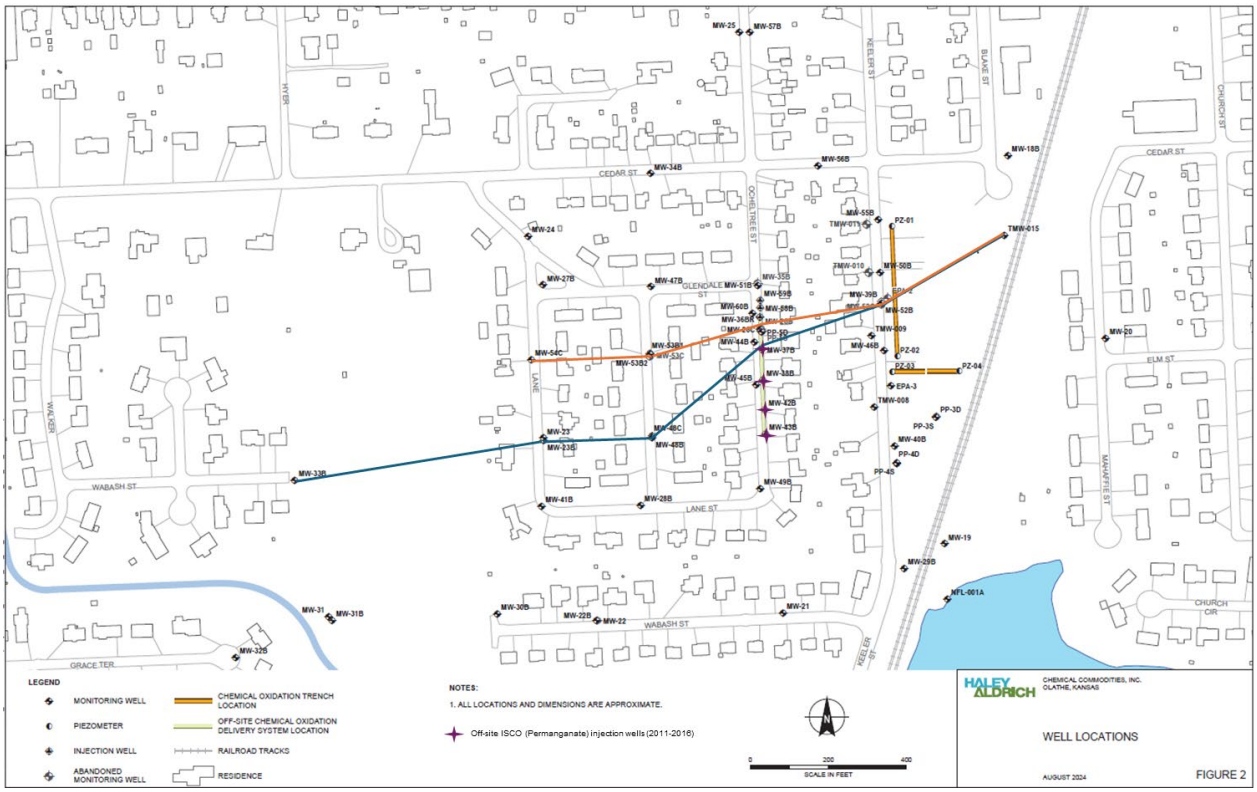

Figure 1: Two transects (blue and orange lines) along which the evolution of VOC in the groundwater at the Site was investigated (*Modified after*: Haley & Aldrich 2024).

Groundwater monitoring data (see: H&A 2024, Table V) suggests that TCE concentrations in most wells along the transects decreased over time (Figures 2a and 2b). However, there are a few wells where TCE concentrations remain fairly stable at high levels (TMW-015, located on-site and upgradient from the trenches; MW-39B, located immediately downgradient from the N-S trench; MW-53B2, located approximately 500 feet downgradient from the Ocheltree Street) and one well where TCE concentrations are increasing (MW-23B, located approximately 500 feet downgradient from Ocheltree Street). During the most recent sampling event (2024), a spike in chloroethenes, specifically in TCE (~1,000 µg/L), was observed in MW-53B1. The presence of elevated vinyl chloride concentrations in a few wells (e.g. MW-39B; 674 µg/L in 2018 or MW-36BR; 351 µg/L in 2023) suggests that anaerobic reductive dehalogenation processes are

occurring locally. However, vinyl chloride is not detected in all wells where TCE or PCE are present. The absence of vinyl chloride in these wells could be taken as an indication of ongoing ISCO processes in these locations.

Along the blue transects (data not shown), VOC contaminants other-than-chloroethenes were detected in wells MW-23 and MW-23B, MW-44B, MW-48B and MW-48C. The VOC concentrations are decreasing in most of these wells, except in wells MW-23 and MW-23B (both located at Ocheltree Street), where acetone concentrations have been increasing. Similarly, at well MW-44B (located at Ocheltree Street), the concentrations of the following contaminants are trending higher: 1,2-dichloropropane (1,2-DCP), chlorobenzenes, 1,2-DCA, 1,2-dibromomethane (1,2-DBM), and benzene.

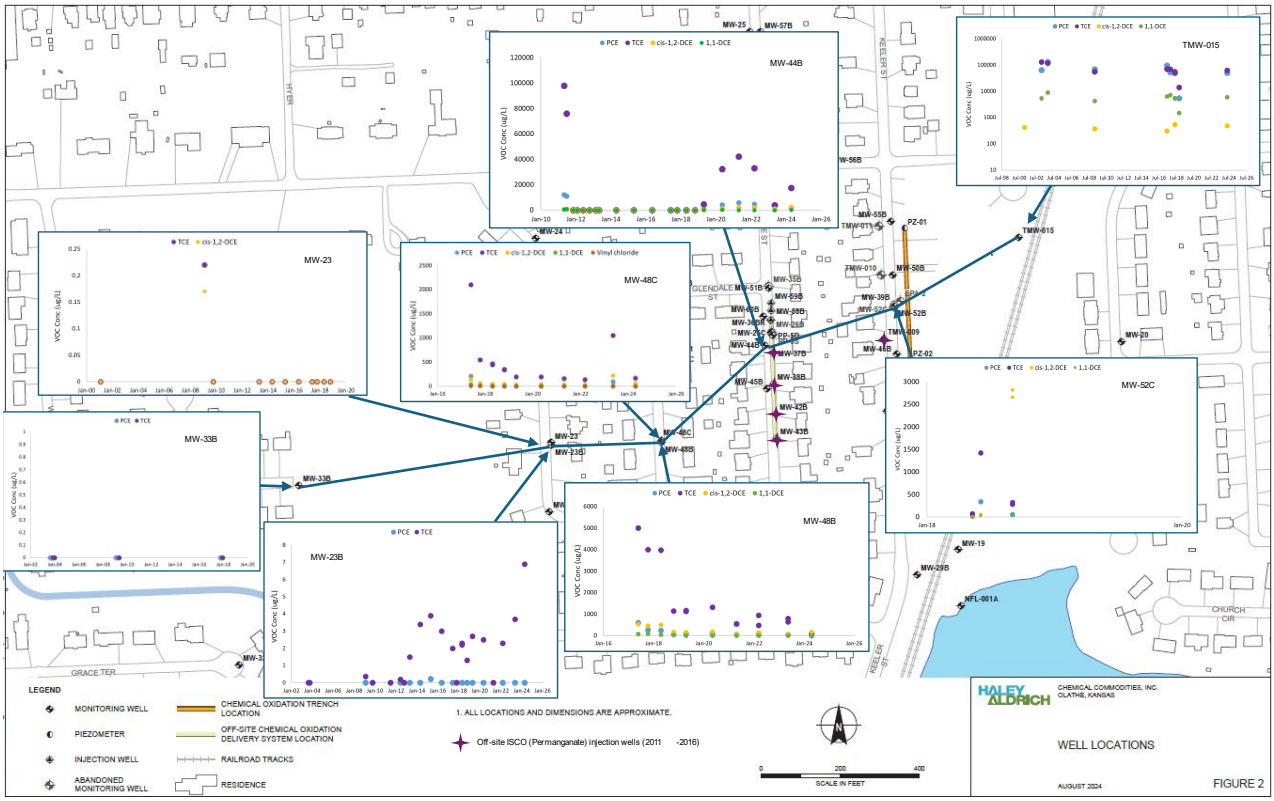

Figure 2a: Chloroethene concentrations over time along the blue transect. Inserted graphs show cVOC concentrations at transect wells. Purple circles show TCE concentrations. The other cVOC compounds are color coded as indicated in each graph's legend. Note, the concentrations in observation well TMW-15 are shown on a log scale.

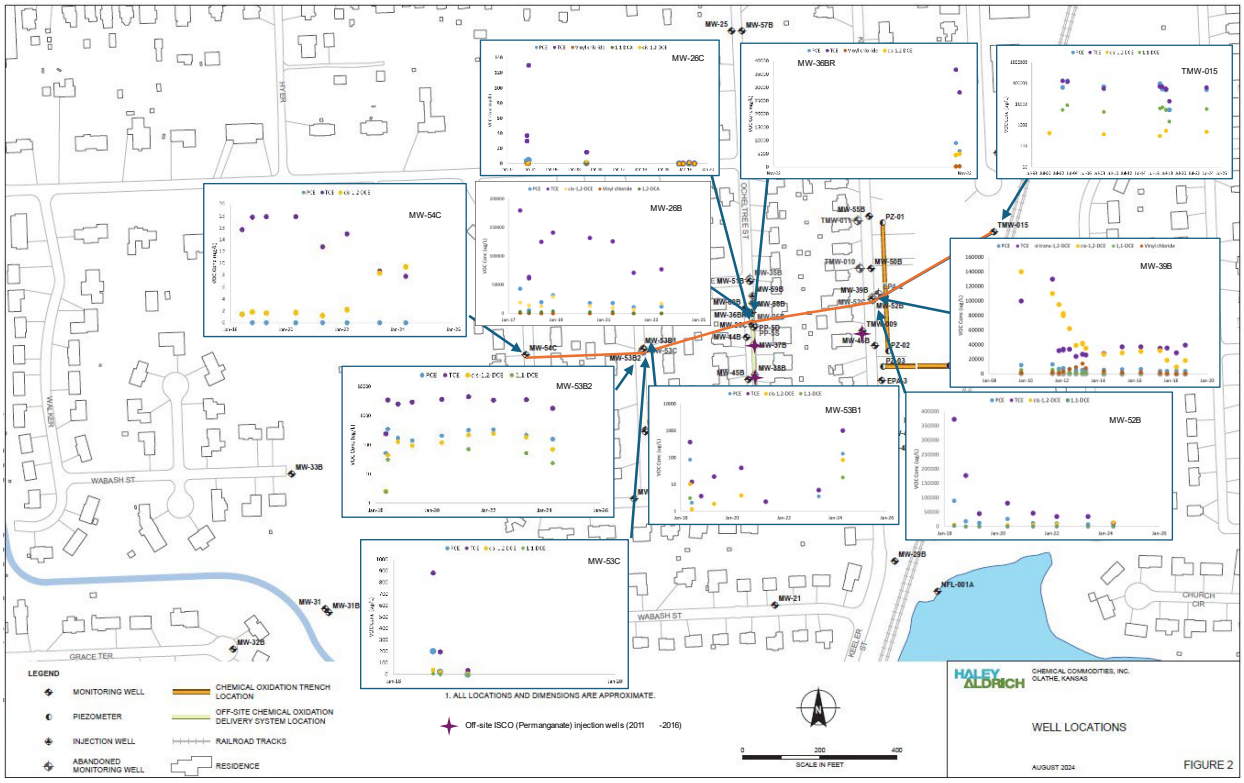

Figure 2b: Chloroethene concentrations over time along the orange transect. Inserted graphs show cVOC concentrations at transect wells. Purple circles show TCE concentrations. The other cVOC compounds are color coded as indicated in each graph's legend. Note, the concentrations in observation wells TMW-15 and MW-53B2 are shown on a log scale.

Figure 3 shows chloroethane concentrations (primarily TCA and 1,1-DCA) trending lower over time, except at wells TMW-015 and MW-39B, where concentrations appear to have stabilized at comparative high levels (e.g., ~800 µg/L TCA at MW-39B). At well MW-26B, a spike in TCA concentrations (~2,000 µg/L) was observed in 2018, followed by non-detects afterwards. Similarly, elevated TCA concentrations (>400 µg/L) were detected at MS-36B in 2023. However, only two consecutive data sets are available at this sampling location. Therefore, a trend assessment is not possible without additional data.

Figure 4 shows chloromethane concentration profiles of carbon tetrachloride (CT), chloroform (CL), and methylene chloride (MeCl). Of these, CT is the most prominent with concentrations as high as ~8,000 µg/L reported at the Site (TMW-015) in 2024. CT concentrations exceeding 1,000 µg/L are found downgradient as recently as 2024 (MW-36B). Overall, chloromethanes have been detected along all transect wells, except in the one most distant from the source zone (MW-54C).

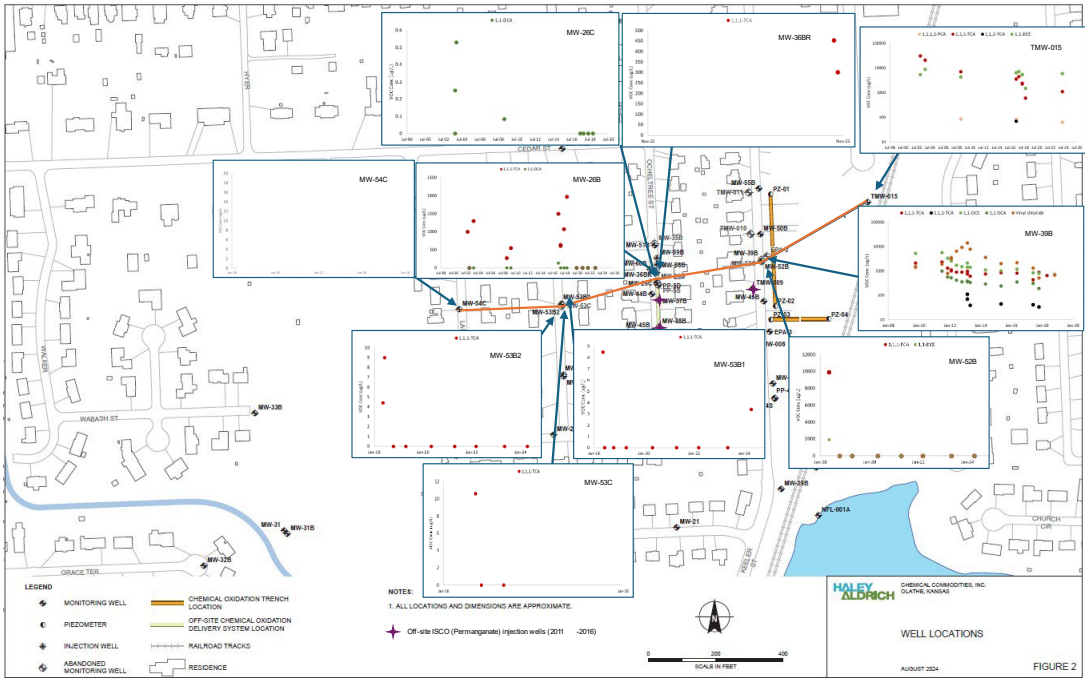

Figure 3. Chloroethane VOC concentrations along the orange transect. Note that the concentrations in observation wells TMW-15 and MW-39B are shown on a log scale.

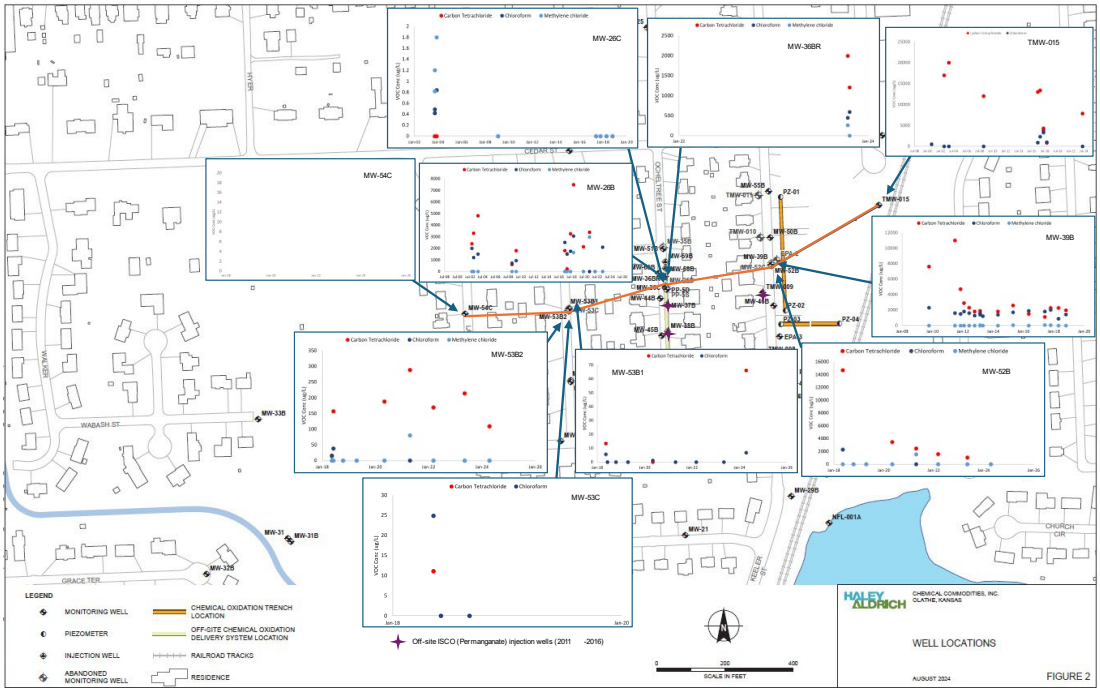

Figure 4. Chloromethane VOC concentrations along the orange transect.

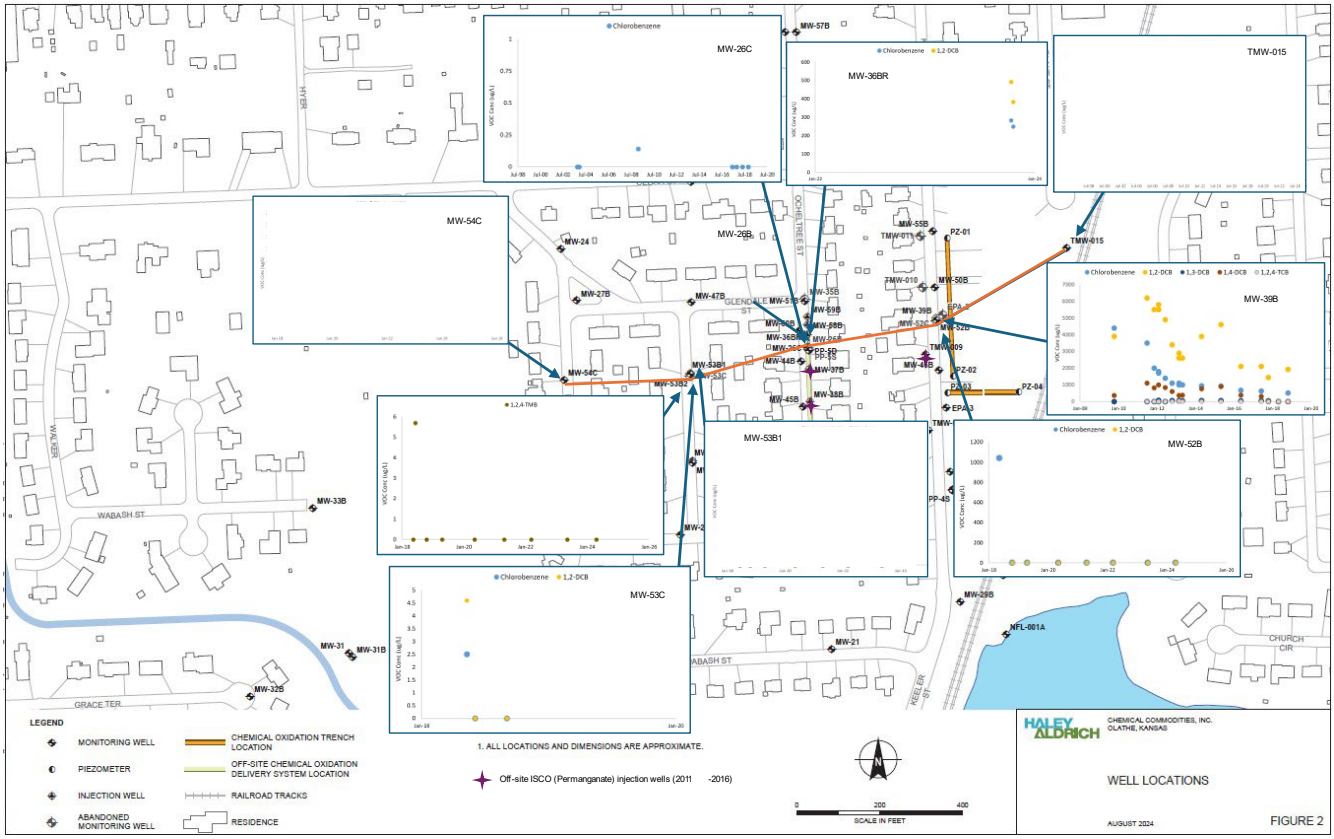

Figure 5. Chlorobenzenes VOC concentrations along the orange transect.

Chlorobenzenes (primarily chlorobenzene (CB) and 1,2-dichlorobenzene (DCB)) are detected in most wells along the orange transect (Fig. 5). The highest concentrations were measured at well MW-39B (~1,900 µg/L in 2018; more recent data is not reported). Notably, no chlorobenzenes were reported in the on-site well TMW-015. Downgradient, CB (~250 µg/L) and DCB (~450 µg/L) are present in MW-36B in 2024, respectively. Similar to the spike in chloroethanes (see above) at well MW-26B, a spike in CB (~2,000 µg/L) and DCB (~1,500 µg/L) was observed in 2018, followed by non-detects afterwards. No chlorobenzenes were detected in wells MW-54C and MW-53B1 between 2018 and the present.

Other noteworthy groundwater contaminant concentrations along the orange transect are summarized in Figure 6. Increasing acetone concentrations are evident in wells MW-54C (~140 µg/L) and MW-53B1(~85 µg/L) between 2018 and current. Petroleum hydrocarbons and 1,2-DCP are present at well MW-39B but largely absent everywhere else.

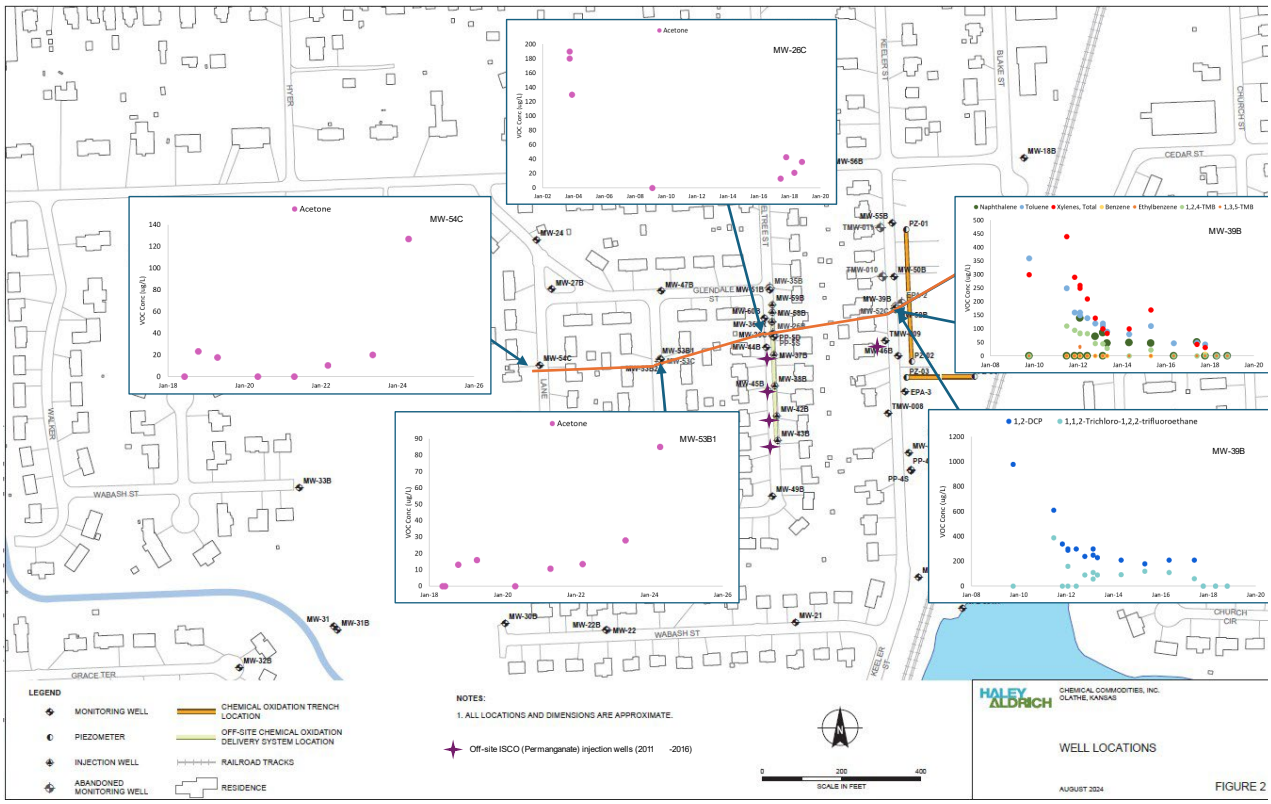

Figure 6. Select other VOC concentrations along the orange transect.

Overall, the analysis of Figures 2 through 6 suggests that most chloroethene (primarily TCE and PCE) concentrations are declining while local hotspots remain. For example, the bedrock well MW-36BR has TCE concentrations in excess of 30,000 µg/L in 2023. The presence of elevated vinyl chloride concentrations in a few wells suggests that anaerobic reductive dehalogenation processes are occurring while the absence of vinyl chloride in other wells could be taken as an indication of ongoing ISCO processes at these locations. However, the data record at some well locations is too limited or too recent to assess temporal trends, if present. Other classes of cVOC contaminants (primarily chloroethanes, such as TCA, and chloromethanes, such as CT and CL) have stabilized at comparatively high levels in upgradient wells but show declining trends farther away from the site. Generally, the highest and most stable cVOC concentrations in wells along the transects were detected at the Site and immediately downgradient from the NS trench. This spatial and temporal distribution suggests that (1) the source zone strength remains high, (2) the trenches only partially impede the off-site migration of the groundwater plume, and (3) contaminated groundwater appears to have entered the bedrock.

Although ISCO treatment with permanganate will oxidize a wide range of contaminants, particularly cholorethenes (such as TCE and PCE), there are notable exceptions for compounds that are more recalcitrant and less susceptible to this type of ISCO, such as 1,1,1-trichloroethane (TCA), 1,1-dichloroethane (DCA), carbon tetrachloride (CT), chloroform (CF), methylene chloride (MC), chlorobenzene (CB), and benzene (EPA 600R06072). All of these compounds

have been detected at and downgradient from the Site before, during, and after ISCO treatment (Fig. 3 to b).

Based on the limited effectiveness of permanganate chemical oxidant for treating non-chloroethene cVOCs, it appears that the current ISCO remedy likely will not reach the remediation goals for all cVOCs. It is recommended to consider replacing permanganate with other, stronger chemical oxidants (capable of degrading a broader range of VOCs), such as advanced oxidation processes (AOP), or to consider altogether different remedies. Also, it is concerning that the source zone strength remains comparatively high which implies that ISCO treatment must continue for the foreseeable future, unless the source zone is removed or degraded first. Further, the effectiveness of the second Site remedy (MNA) has not been sufficiently demonstrated. Therefore, no conclusion about its current and long-term effectiveness can be reached at the current time. In summary, based on the available data, it is not possible to determine if the remediation goals can be reached with the current set of remedies within the 100-year time frame, as stated in the ROD.

b. Are site conditions continuing to be the same or improved from the time frame when the remedy was developed as stated in the document? If the data from prior to the remedy being implemented is included (Appendix E) into the timeframe, do conditions remain the same or improved (specifically off-site)? (Section 3.6, paragraph 3).

In absolute terms, the greatest improvement of groundwater conditions regarding chloroethenes are manifested in wells immediately downgradient from the NS trench and Ocheltree Street. These are the locations where ISCO solution was injected repeatedly between 2011 and 2016, followed by another round of injection in November 2023. This observation confirms expectations and speaks to the apparent effectiveness of ISCO treatment of chloroethenes in the vicinity of the oxidant injection locations. For instance, TCE concentrations in well MW-39B declined from over 100,000 µg/L prior to ISCO treatment in 2010 to about 40,000 µg/L in 2018. Further downgradient, at well MW-26C, concentrations of chloroethenes have decreased to or near non-detect limits since first tested in 2004. A notable decline has also been observed at wells MW-48B and MW-48C even further downgradient, while TCE concentration have been consistently well above 1,500 µg/L at well MW-53B2, which is located just north of the aforementioned two wells. Another well with persistently high TCE concentration is MW-26B, located just upgradient from MW-53B, which measured above 60,000 µg/L TCE since mid-2017. Complicating the picture further, other wells show a spike(s) in TCE concentration, like MW-44B and MW-23B. For instance, TCE concentrations in MW-44B began to increase in mid-2019 and reached 42,100 µg/L in 2021 after years of mostly non-detects reported since late 2011. By mid-2024, TCE concentrations at MW-44B declined again but were still relatively high (17,500 µg/L).

Overall, the observed TCE concentration trends suggest that contamination has declined in some areas downgradient from the ISCO injection points while in other areas, TCE concentrations have remained at similar, elevated levels for years or have re-emerged after years of non-detection. These very different trends suggests that contaminant degradation is occurring in some areas whereas Site remedies have not reduced the contaminant concentration to the desired

degree in other areas. Further, it appears that remedial agents have been consumed to the degree that contaminants re-emerge after years of non-detection in some locations.

It is plausible that re-emergence of TCE is related to the ISCO treatment becoming ineffective after the oxidant suppressed TCE concentration for several years (i.e., since the ISCO injections in 2016). A disturbance of the aquifer system, such as ISCO solution injection upgradient from MW-44B, could also have caused the TCE re-emergence at that well location. However, because the TCE spike in MW-44B occurred about two years before the ISCO treatment was resumed upgradient (at wells MW-36B, MW-58B and MW-59B in November 2023), the TCE re-emergence is likely not related to the remedy itself.

In summary, the data suggests that the ISCO treatment remained effective for several years in some locations but, more recently, its effectiveness has largely declined. This conclusion largely confirms H&A (2024), which sees evidence that permanganate remained effective for up to 39 months. Further, the groundwater VOC data suggest that parts of the plume were apparently not reached by the ISCO solution, as indicated by the continued presence of dehalogenation daughter products, such as DCEs and VC. It is also plausible that parts of the plume where ISCO might have been active in the past are now undergoing natural degradation processes. The currently available data in H&A (2024) is insufficient and does not provide clarity regarding the possibility of ongoing MNA processes. Additional data, such as detailed microbial community assays, would be required to determine if and where biological processes may be taking place.

2. Geological and Hydrological Characterization

a. Are the boundaries in the report supported by defensible data or are data gaps needing to be addressed? Specifically in the areas of plume stability and whether further evaluation is warranted east of the Site. (Section 3.3.1, paragraph 4)

With reference to H&A (2024; Fig. 4) (see Fig. 7 herein) and our analysis of the transect data (see Section 1), the plume appears well delineated to the north, west, and southwest. It is noted that a set of new wells were installed in 2017 and later, after onsite remedial actions were completed (MW-23B, MW-47B, MW-51B, MW-53B, MW-55B). According to H&A (2024), "there were no consistent trends or causes of higher concentrations identified" in these wells, but it is noted that concentrations in MW-47B and MW-55B have been trending upward for several years.

To the east of the Site, the delineation of the plume largely rests on a single well (MW-20), which has been monitored since 2001 but rather infrequently (i.e., about every two to eight years). During the entire monitoring period, VOC concentrations were at or near their respective detection limits. Three wells (MW-19, MW-29B, and NFL-001A) demarcate the plume to the south. Of those three wells, NFL-001A appears to be missing from the VOC analytical data set included in H&A (2024). While MW-29B was monitored as recent as mid-2024, MW-19 was monitored during three campaigns only, dating back to 2001, 2003, and 2009. During the monitoring periods, VOC concentrations in both wells were at or near their respective detection limits with the exception of acetone, which was detected in MW-29B as shown in Fig. 8. The appearance of acetone at the periphery of the groundwater plume to the south coincides with increasing acetone detects to the west of the site, as highlighted in Fig. 6.

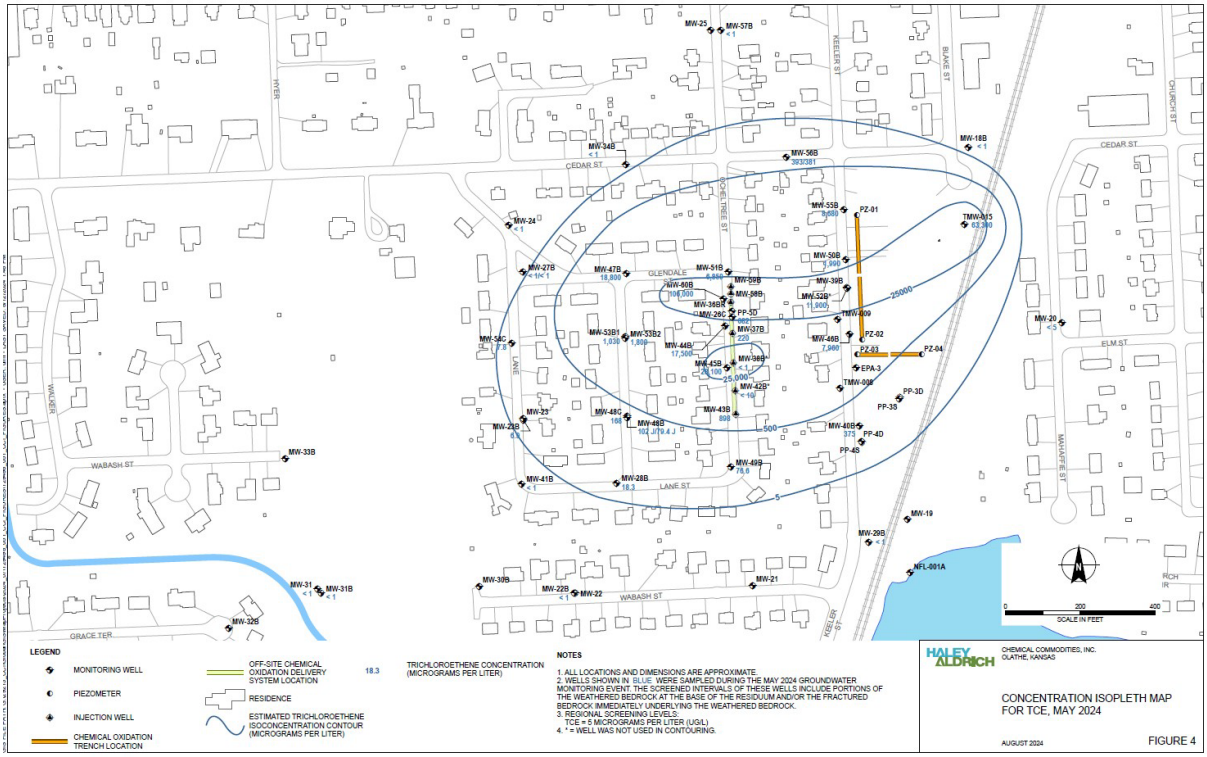

Figure 7: Concentration isopleth map for TCE (May 2024). Source: H&A 2024.08.12 CCI – Annual GW Report.

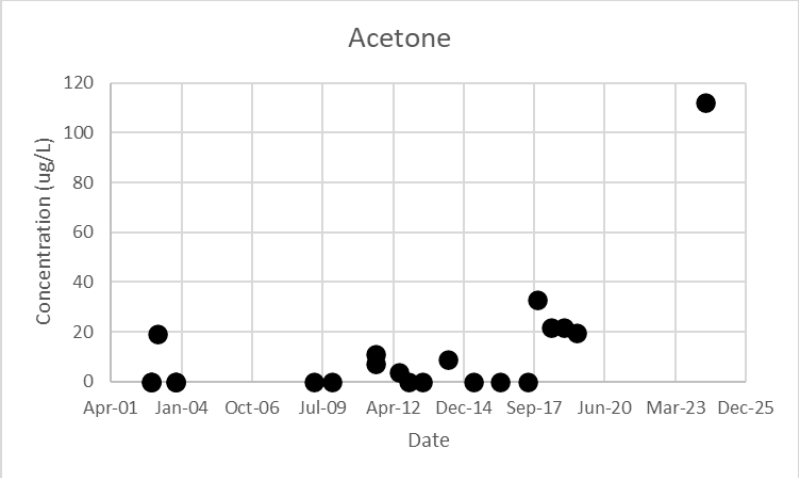

Figure 8: Well MW-29B, located to the south of the Site shows up-trending acetone concentrations in the local groundwater since 2017.

Regarding MW-19, it is plausible that VOCs could have reached this monitoring location since the last monitoring campaign in 2009. Therefore, drawing the plume boundaries as shown in

H&A 2024 (Fig. 7) may be a misinterpretation of existing site conditions. It is strongly recommended that this and other less frequently monitored wells on the southern and eastern periphery be included in future well sampling campaigns.

b. *Is there supporting evidence of contaminates isolated above the Rock Lake Shale as stated or is there evidence of hydrological interaction from the South Bend Limestone, through the Rock Lake Shale, to the Stoner Limestone as was stated in the Feasibility Study? Please take into consideration MW-26B, an open hole well that was recently plugged, as it was screened throughout the entire lithology, but exhibited the highest levels of contamination throughout the entire site. Comments have been this was a collector of contaminants which potentially spread the compounds to a lower lithology layer, the deeper lithology had higher levels of contamination as it is not seen in surrounding wells, or further evaluation should be conducted to characterize this area. (Section 1.2, paragraph 2).*

As stated by H&A (2024; Section 1.2), "the South Bend Limestone as well as the Rock Lake Shale have been eroded away or converted to residuum and are not present at a distance from the Site; in these locations, the residuum directly overlies the Rock Lake Shale or the Stoner Limestone. The bedrock units display horizontal intervals of weathering and fractures, particularly at the interfaces between the different units, alternating with competent bedrock."

Well MW-26B was installed in November 2002 and abandoned in November 2023. The well was 26.2 feet deep and screened (i.e. open bore hole) from 16.5 feet bgs downward. The open bore hole interval penetrated "up to 10 feet of fractured bedrock underlying layer of weathered bedrock at the base of residuum," according to H&A (2024, Table 1: B2 Geology). It is unclear if the fractured bedrock is the Stoner Limestone.

The well's connection to the fractured bedrock below the low-permeability residuum is a potential pathway for the shallow groundwater to enter into the deeper, fractured bedrock lithology (H&A 2024). Well MW-26B is not the only location where a direct connection to the bedrock might exist (see H&A 2024; Table 1). Therefore, it is unclear why this well was singled out and then abandoned. Given the complex and not fully described on- and off-site geology, it is likely that other wells can provide a hydraulic connection between the residuum and the bedrock below. Even the on-site injection trenches connect the shallow groundwater to the bedrock. That is, the four on-site injection trenches reach into the bedrock (South Bend Limestone and the Rock Lake Shale). Even though H&A (2024) holds that the "vertical flow of groundwater below the Rock Lake Shale appears negligible, as it is limited by the low vertical hydraulic conductivities of the competent bedrock intervals," it is recommended to further delineate the horizonal and vertical extent of the Rock Lake Shale and clearly map the areas where the Stoner Limestone is in direct contact with the residuum above. This may require drilling new wells in areas where geologic coverage is sparse.

c. *Does evidence support a stable plume and plume boundary as stated? (Section 1.3, paragraph 1)*

See responses under Sections 1 – General Comments and 2a.

Part II -Review of the cap and trench remedy at Chemical Commodities, Inc. in preparation of the FYR start in FY2025.

1. *The cap was built atypically using (from lowest layer to highest layer) a one-foot gravel "vent" layer, 10-ounce geotextile, one foot of compactable clay, and one foot of topsoil. The gravel layer was included as a passive system to allow collection and venting of soil vapor that may emanate from beneath the soil cover.*

a. *Does this cap appear technically sound in its use as a cap and vent for the underlying contamination?*

A cap that meets typical RCRA Subtitle C Cap Requirements is depicted in Fig. 9. Quoting from FRTR (2024), a "cap is typically designed to restrict surface water and rainwater infiltration into the subsurface waste body or contamination source area to reduce the potential for leaching of site contaminants." Covers are usually constructed in a crowned or domed shape with side slopes as low as is consistent with good runoff capability. Caps can also control gas emissions from underlying waste. In such cases, a gas collection layer consisting of porous material, such as sand/gravel, geotextile, or geonet, is constructed on top of the foundation base layer (EPA 1993; FRTR 2024). The layer transmits gas to collection points for removal or cogeneration. A gas collection layer may be similar to a drainage layer in its characteristics, but it does not need to be.

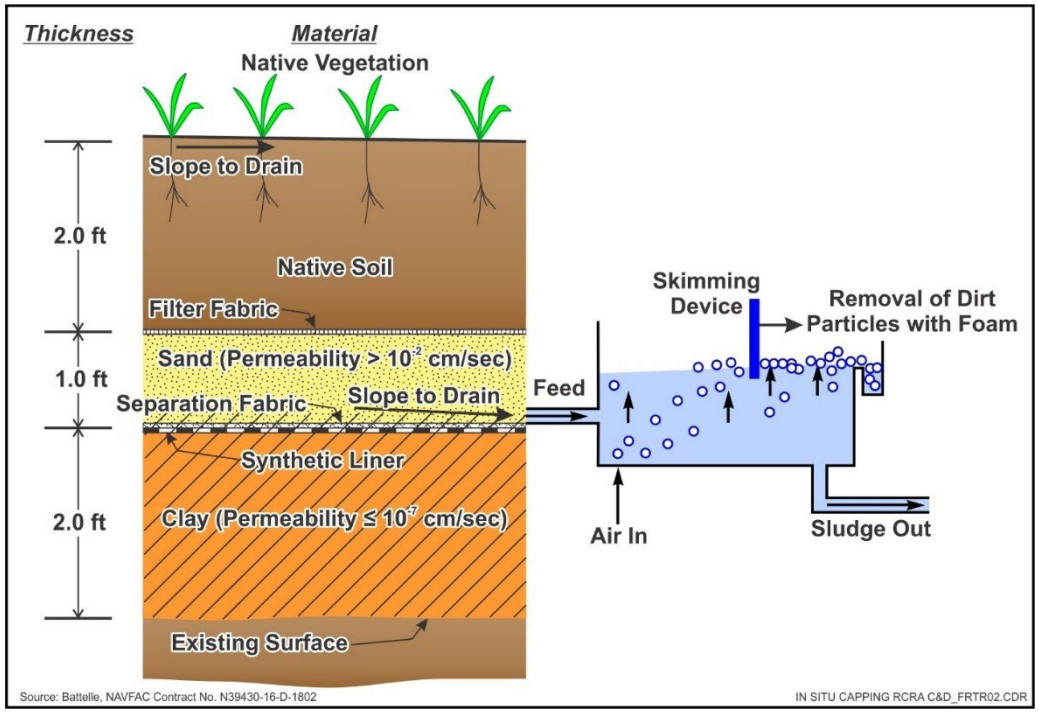

Figure 9: Typical RCRA Subtitle C Cap Requirements (Source: FRTR 2024). Caps can also control gas emissions from underlying waste. In such cases, a gas collection layer consisting of porous material, such as sand, geotextile or geonet, is constructed directly on top of the waste (EPA 1993).

RCRA regulations contained in Title 40 of the Code of Federal Regulations (CFR) provide criteria for hazardous waste treatment, storage, and disposal facilities. Subtitle C specifies the minimum design criteria for the establishment of caps. The typical requirements for Subtitle C caps are listed in Table 1. Compared to these requirements, the cap at the Site (covering approximately 1.5 acres or about 6000 m^2) is atypical in that it lacks (from bottom upward) a (1) foundation base layer and (2) drainage layer. The purpose of the drainage layer is to quickly remove infiltrating water to prevent ponding and damage to liners and to protect barrier layer from freeze-thaw damage. The purpose of the foundation base layer is to provide stability and base for the layers above. Further, the geological material barrier layer at the site, consisting of 12-inch compacted clay, and the vegetative/erosion control layer ("topsoil") are both only half as thick as typical. Besides being constructed with thinner than recommended cap elements, the absence of a foundation base layer and drainage layer create significant uncertainty regarding the ability of the cap to perform as intended.

Table 1. Typical Requirements for RCRA Subtitle C Caps (Source: FRTR 2024).

Cap Element[(a)]	**Subtitle C Cap[(b)]** **(Hazardous Waste Treatment, Storage, and Disposal Facilities)**
Vegetative/erosion control layer	A 24-inch thick layer of earthen material
Drainage layer	A 12-inch thick layer of sand (permeability >$1x10^{-2}$ cm/sec) or geocomposite membrane
Geosynthetic barrier	Geosynthetic membrane or GCL (>20-140 mil thickness)
Geological material barrier	A 24-inch thick layer of low- permeability compacted clay (permeability <$1x10^{-7}$ cm/sec)
Gas vent layer	Necessary if methane will be generated due to the presence and degradation of organic compounds. Consists of a high permeability layer, which can either be a geonet composite membrane or a 12-inch thick layer of sand or pea gravel [(c)]
Foundation Base Layer	Installed immediately above the waste to provide stability and base for the other layers

a. Cap elements are tabulated in order from the surface down.
b. Final cover must be designed and constructed to have a permeability less than or equal to the bottom liner system or natural subsoils.
c. Requirement for the gas vent layer depends on site-specific conditions.

Furthermore, the one-foot gravel "vent" layer is not actively used currently as it was anticipated to be used in the Record of Decision, which states "The vent layer will incorporate 4-inch perforated CPEP installed at a spacing of approximately 50 feet across the site. Each leg will connect into a main header pipe of the same material that is located above the perimeter trench, collecting vapors possibly emitted from this trench. The ends of all pipes will be capped. The exact location of both ends of the main header pipe will be surveyed to *permit future relocation and uncovering to connect a stack for barometric pumping (check-valve to off-gas only) if monitoring data indicate this is necessary*. The RA draft O&M Plan will address future monitoring needs and trigger(s) for any such modifications." (Italic added for emphasis). Also, there is no information provided that shows monitoring of this vent layer other than the piezometers located at the trenches. These piezometers are discussed in Section 2.

In summary, the cap at the Site deviates from the RCRA Subtitle C Cap Requirements. It is noted that the design of covers is site-specific and depends on the intended functions of the system. Therefore, deviations from the recommended C cap design are possible but need to be supported by tests (EPA 1993). It is unknow if such tests were performed at the Site and if they were, it is unknown whether tests supported the deviations from the typical cap design.

b. *The Final Remedial Design states, "To prevent infiltration of fines into the gravel during placement of the clay layer, a 10-ounce (oz) geotextile (Section 02274 – Geotextiles) will be placed over the gravel layer, including the perimeter trench. This relatively light-weight material can be penetrated by deep rooting plants/scrubs but will provide an additional visual indicator during any future plantings to indicate the maximum permitted planting depth." Considering the reuse of this site as a pollinator garden, does this provide adequate protection to prevent infiltration if damaged by root systems?*

The 10-oz geotextile liner is covered by one foot of compactable clay and one foot of topsoil. Thus, damage of the geotextile liner due to root systems must be anticipated when the cap is vegetated with plants/scrubs whose roots penetrate at least 2 feet deep. Once the protective geotextile layer is damaged, infiltrating fines from the layers above will decrease the pneumatic conductivity of the gas collection layer. The potential for damages to the geotextile liner by root systems could be avoided by planting the cap with shallow rooted plants. It is unclear if the cap maintenance protocol and the pollinator garden design include such a provision. More importantly, potential damages could have been reduced if thicker barrier and topsoil layers had been installed, as recommended in the RCRA Subtitle C Cap Requirements. Additional protection from damages would have resulted from installing a recommended drainage layer (see Table 1).

2. *Minimal excavation was completed in "hot spots" before the cap was constructed on the site's prior elevation. This left contaminated soil in place a total of approximately 20 feet below current site elevation for near the entirety of the site. Due to the site's location on a structural high from downgradient areas west and south, does the cap and trench system provide technically adequate protections to minimize further offsite migration of groundwater containing VOCs in excess of target cleanup levels?*

Properly designed and maintained caps can isolate the wastes from human and environmental exposure for very long periods of time. However, capping does not lessen the toxicity, mobility, or volume of hazardous wastes. That is, a cap by itself cannot prevent the horizontal flow of groundwater through the waste, only the vertical entry of water into the waste (EPA 1993).

The water table at the Site is approximately 6 to 7 feet bgs (TMW-015), shallower in the trenches (see below). Contaminated soil is present from the surface to approximately 20 feet bgs (see MWH (2010) Figure 8-23). Therefore, groundwater is in contact with contaminated soil, implying that the cap alone does not provide technically adequate protections to minimize further offsite migration of groundwater containing VOCs potentially in excess of target cleanup levels. However, the cap is bordered by four trenches: two the west and two to the south (see MWH (2010) Figures 6-23 and 9-23 to 11-23). These trenches serve two purposes: (1) to intercept the shallow groundwater and minimize migration of on-site contaminated groundwater, while (2) providing treatment of the contaminated groundwater via ISCO injections.

The trench design includes a 4-inch vent pipe installed about 3 feet below the land surface and covered by either compacted native soil (Trenches 1, 3 and 4). Trench 2 is at least partially covered by the cap. A trench fill pipe in each trench is connected to an oxidant conveyance line (see MWH (2010) Figure 11-23) through which ISCO solution was gravity fed to the trenches from a distribution vault located at the northeast section of the Site. The last distribution of ISCO was approximately 215 gallons into Trench 4 on November 21, 2023. This injection was not part of the recently approved work plan but was exercised under the original O&M plan that allowed for excess ISCO to be placed within the on-site trenches. Prior to that, ISCO was last delivered to the on-site trenches on March 29, 2016. Trench piezometers (PZ) are installed at opposing ends of the trenches. Beyond these installations, there are no active controls of the trench water level (such as dewatering pumps) or other technical best management practices (BMPs) in place to control trench water levels and capture stormwater runoff from the capped area and beyond. Therefore, stormwater runoff can enter and possibly flood the trench system. Further, it is plausible that under certain flooding conditions, polluted water collected in Trench 2 could flood the vent layer and migrate under the cap. This is because at least Trench 2 appears to be directly connected with the gravel "vent" layer under the cap. For reference, during parts of 2024, depth to water for PZ-1 was 3.41 feet, PZ-2 was 1.30 feet, and PZ-4 was 4.76 feet. PZ-3 field notes indicated water depth was level with the open valve (0.01 feet). These measurements indicate a nearly five-foot increase in groundwater elevation relative to the adjacent off-site monitoring wells (personal communication T. Chriestenson). It is noted that high water levels in the trenches can increase the hydraulic gradient (i.e., mounding) and thereby may force additional water to flow into the downgradient formations.

In summary, the cap and trench system does not provide technically adequate protections to minimize further offsite migration of groundwater containing VOCs unless the interceptor trenches are actively managed beyond the occasional injection of ISCO solution and stormwater runoff is prevented from entering the trenches.

3. *The trenches were constructed to hold a minimum of nearly 4,500 gallons using on-site data and trench design specs. Per the Final Remedial Design, the trench gravel would be interconnected to the "vent" gravel layer to provide "overfill protection" of the*

permanganate. Fluids in the trench would flow out into the gravel layer under the cap and also allow infiltrated stormwater to flow to the perimeter trenches.

a. *Does this allow groundwater to be cycled onto the cap during injection or periods of high rainfall due to the construction of this "vent" layer under the geotextile?*

As outlined in Section 2, the connection between the trench and the cap's vent layer potentially links the two remedial systems. Each of these systems was designed for very different purposes, however. The primary function of the vent layer is to capture volatile compounds emanating from the contaminated soil residing under the cap and preventing the gases from escaping into the environment. The trench's function is to intercept and capture contaminated groundwater and prevent or minimize its offsite migration, besides serving as an occasional ISCO delivery system.

Depending on the amount of fluid entering the trench systems, it is plausible that some fluid may overflow and enter the vent layer. Partial or complete flooding of the vent layer would temporarily decrease or fully disable the layer's primary function. In addition, the trench overflow would then infiltrate into the contaminated soil beneath the cap because the vent layer's gravel pack is in direct contact with the contaminated soil. In addition, stormwater can be expected to increase the spreading of contaminants away from the capped area, which is the opposite of what the cap was designed for. If ISCO fluid overflows into the vent layer, the vent layer's function would also be temporarily impeded but the infiltrating oxidant could degrade some (but not all) cVOCs.

Typical caps are designed to route surface water away from the waste area while minimizing erosion. Water diversion and detention structures, often in combination with wells that control the groundwater flow beneath the cap, are examples of water BMPs associated with caps. It appears that none of these, and no related practices, are employed at the Site. The trenches functioning as a de-facto stormwater control for at least a fraction of the water originating from the cap area was apparently not planned for.

As pointed out above, the cap does not have a drainage layer that would capture infiltrating rainwater. It is plausible that this seepage water could pool on top of the geotextile layer, assuming it is impermeable and undamaged. Regardless, seepage water would eventually move out of the flanks of the cap or reach deeper layers, especially if roots damage the geotextile layer. Water seeping out of the cap flank should not be contaminated unless it has come in contact with contaminated soil. This may not be the case for seepage penetrating the geotextile layer and the underlying vent layer. That water will eventually enter the contaminated soil, thereby increasing the amount of water that need to be decontaminated.

In addition, direct runoff from the cap surface, such as sheet flow during heavy rain events, will accumulate at the base of the cap. The cap slopes toward the property boundary to the east, south, and west. In the north, two slightly higher mounds may impede the runoff to some extent (see MWH (2010) Fig. 17-23). Besides the trenches to the south and west of the cap, it appears that there are no stormwater containment and capture facilities in place to manage the direct runoff from the cap surface. The estimated capacity of the trenches is nearly 4,500 gallons. Assuming a quarter of the cap surface area (about 1.5 acre) drains to the west and another quarter to the south, a rain event producing one inch, and accounting for 75% of evapotranspiration

losses, would potentially exceed the holding capacity of all trenches combined. At that point, water from the trench may be at a level where flooding of the vent layer below the cap cannot be ruled out.

b. Due to the tightly compacted residuum, will this design allow storm / groundwater to pool in the trenches or under the cap in the gravel layer? If so, will this facilitate groundwater movement within the contaminated residuum, allowing additional diffusion to occur and reach the fractured limestone layer below?

The horizontal groundwater migration in the residuum is limited due to its low permeability (measured as hydraulic conductivity with values as low as 10^{-8} centimeters per second [cm/s]); however, there can be relatively rapid vertical migration through localized cracks and fractures (Haley Aldrich 2018). In comparison, the typical hydraulic conductivity of gravel inside the trench ranges between 10^{-4} and 10^{-1} cm/s. The large difference in hydraulic conductivity suggests that water quickly saturates the gravel-filled trench but that it will take additional time for the water to infiltrate into the less permeable residuum. Because of this delay, including the potential mounding of water inside the trenches, the water is likely to infiltrate into the fractured limestone layer that is in contact with the trench bottom. While the water captured in the trenches may not be contaminated (see above), the added volume and the hydraulic pressure exerted by the water column in the trench can plausibly accelerate the flow of already contaminated fluid in the limestone layer off site.

For the potential of back diffusion polluting the water temporarily captured in the trench to be effective, the water would need to remain trapped in the trench for a considerably long time (i.e., weeks or longer). For the same reasons as outlined above, it is unlikely that the residence time in the trench will be sufficiently long enough for back diffusion to have a significant impact on the water quality. However, field tests are recommended to test if this assessment reflects the Site conditions. Such test could include a tracer dilution test inside the trench well or piezometer.

4. Does the cap and trench system in place adequately consider preferential pathways from the active natural gas and sanitary sewer lines that run through the south boundary of the site?

Sewage pipes are present to the south and west of the site, according to MWH (2010) Figure 4-23. In addition, water mains are present to the west and gas lines are present to the south. Some of these lines and pipes are located within the reconstructed and capped area of the Site, especially in the southern part of the Site. It is unclear if some or all of these lines have been preserved, removed, or relocated. If still present, even if inactive, these pieces of infrastructure could become preferential pathways if the plume of contaminated shallow groundwater intercepts them. Trenches 3 and 4 are located to the south of the sewage and gas pipes on the southern side of the property (see MWH (2010) Figure 4-23). Therefore, contaminated shallow groundwater flowing in a southerly direction can intercept those sewage lines if the groundwater table is sufficiently shallow. Details about how these trenches are constructed were not examined. But assuming that trenches are about 5 feet deep (which is within the groundwater level measured within the trench piezometers, see above), and lines and pipes are embedded in a sandy matrix, these horizontal features could serve as lateral preferential pathways. In addition,

should the sewer lines be damaged, it is plausible that contaminated groundwater might enter the sewage system.

Regarding runoff toward the east, an abandoned interceptor trench in combination with an elevated railroad track running parallel to the site boundary should keep those waters from moving a great distance past the Site's boundaries. However, the abandoned interceptor trench is not extending all the way to the southern end of the eastern property boundary.

References

EPA 1993. Engineering Bulletin Landfill Covers, Office of Research and Development, Cincinnati, OH, EPA/540/S-93/500 (1993) (PDF) (8 pp, 819 KB)

FRTR 2020. https://www.frtr.gov/matrix/Enhanced-In-Situ-Reductive-Dechlorinated-for-Groundwater/

FRTR 2024. https://www.frtr.gov/matrix/Landfill-and-Soil-Capping/

cc: Rob Weber, Region 7 Superfund & Technology Liaison

APPENDIX J - TECHNICAL REVIEW COMMENTS RELATED TO IN SITU CHEMICAL OXIDATION

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
CENTER FOR ENVIRONMENTAL SOLUTIONS AND EMERGENCY RESPONSE
TECHNICAL SUPPORT COORDINATION DIVISION
919 KERR RESEARCH DRIVE • ADA, OK 74820

April 11, 2025

OFFICE OF
RESEARCH AND DEVELOPMENT

MEMORANDUM

SUBJECT: Revised Technical Review Comments Related to ISCO at the Chemical Commodities, Inc. Site, Olathe, KS (25-R07-02).

FROM: Randall Ross, Director
Groundwater Technical Support Center

TO: Trenton Chriestenson
U.S. EPA Region 7 SEMD-RB-SRES

Per your request for continued technical support from the Groundwater Technical Support Center (GWTSC), the following comments are provided for the Chemical Commodities, Inc. Site, Olathe, KS. These comments are provided by ERG (Eastern Research Group), a STREAMS IV contractor that provides technical support to the GWTSC. If you have any questions or comments, please do not hesitate to contact me at your convenience (580-436-8611).

Introduction

EPA requested technical assistance with review of the 2024 Annual Groundwater Monitoring Report for Chemical Commodities, Inc. Site and an assessment of whether the Site remedy is working as intended, is not meeting its objectives or timeline, or if there is not enough information to make an accurate determination (Part I). In addition, technical assistance was requested with reviewing the cap and trench system at the Site (Part II). Prior reports already addressed all of the questions for Part II and most of those for Part I. This report focuses on the remaining Part I questions related to the performance of the ISCO and MNA remedies. ERG was supported in this work by team subcontractors, Dr. Thomas Boving, Dr. Jim Weaver, and Dr. Scott Huling.

- Document Reviewed: 2024 Annual Groundwater Monitoring Report, Chemical Commodities, Inc., Olathe, KS

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General Comments

Should consideration be given to ISCO injection causing formation pressure and thereby plume migration? (Section 3.3.1, paragraph 4).

Plume migration is an unavoidable and common side-effect of ISCO. The injectate is comprised of an oxidant dissolved in water, an incompressible fluid. When this fluid is injected into the groundwater (i.e., saturated and unconsolidated porous media), displacement of the native (i.e., contaminated) groundwater will occur. Low injection pressures cannot prevent such groundwater displacement, but they do limit the potential for some other undesirable fate and transport processes. For example, when high injection pressures are used in wells or direct-push injection equipment, potential effects include surfacing, breakout, and hydro-fracture. These are undesirable effects as they may result in the delivery of oxidant into non-target layers. However, when injecting oxidant into large-scale high permeability infiltration trenches, these injection systems are less vulnerable to the undesirable effects as the high permeable trench rapidly dissipates the injection pressure.

At this site, ISCO treatments were conducted during two campaigns (i.e., between 2011 and 2016 and again in Nov. 2023). Injection trenches were used on-site, and injection wells were installed off-site along Ochel Tree Street (Figure 1). ISCO injection wells are Schedule 40 polyvinyl chloride (PVC), 4-inch diameter, screened across the South Bend Limestone and Rock Lake Shale bedrock interfaces, installed 5 to 10 feet into bedrock with 0.010-inch slot screens (H&A, March 2023). In preparation for a new round of ISCO injection in Nov. 2023, three new injection wells (MW-36B, MW-58B and MW-59B, Figure 1) were installed along Ochel Tree Street with the same specifications and in accordance with the procedures outlined in the Final Design (MWH, 2010). During off-site oxidant delivery in Nov. 2023, the injection pressures ranged from 6 to 10 PSI. Higher (up to 30 PSI) injection pressures were applied during the 2011 to 2016 off-site ISCO injection campaign. A total of 23,490 gallons oxidant solution (100,000 mg/L Na-permanganate) were injected over several events between 2011 and 2016, compared to 1,240 gallons in Nov. 2023. Approximately 1,025 gallons total oxidant were delivered to MW-36B, MW-58B and MW-59B. The remaining permanganate solution was placed in Trench 4 of the on-Site oxidant system (H&A Sept. 2024).

Oxidant Injection, Preferential Pathways, and Hydraulic Short-circuiting. The rate at which an aquifer can accept fluids and the lateral migration of these fluids before reaching structural failure is significantly influenced by the vertical acceptance rate (Huling et al., 2017). Maximum injection pressure can be estimated by the density of the dry soil and saturated soil, the thickness of the vadose zone, and the height of the saturated zone above the injection point (LARWQB, 2009).

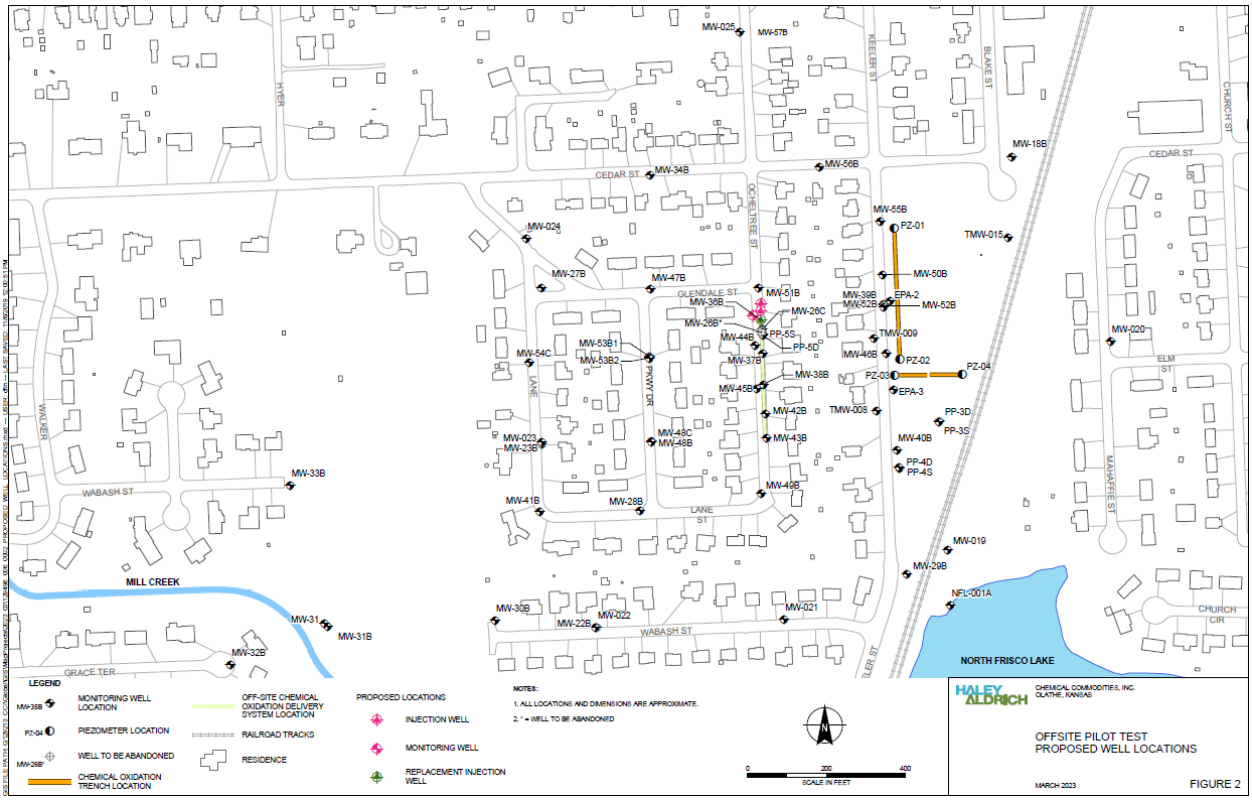

Figure 1: ISCO injection trenches and off-site well locations were used during ISCO injection in late 2023. During off-site oxidant delivery at three injection wells (MW-36B, MW-58B and MW-59B) in November 2023, the injection pressures ranged from 6 to 10 PSI. Higher (up to 30 PSI) injection pressures were applied during the 2011 to 2016 off-site ISCO injection campaign (H&A August 2022, Table IX). Wells MW-37B, MW-44B, MW-51B, MW-59B and MW-60B served as permanganate monitoring locations in the time after the Nov. 2023 ISCO injection (see Table III, H&A Sept. 2024).

In addition to the 2024 Annual Groundwater Monitoring Report, the following study pertaining to the surfacing of permanganate (MnO_4^-) has been reviewed for this report:

> Haley and Aldrich Memorandum, June 19, 2012. CCI Oxidant Delivery Ocheltree Street Day Lighting Assessment and Corrective Actions. From Haley & Aldrich, Inc., Bruce Wilkinson; To Jeff Field, USEPA Region 7.

It was reported that the root cause of MnO_4^- daylighting was due to the limited storativity of the flow network along Ocheltree Street. The term "limited storativity" is vague, and other more specific and plausible explanations are provided here. Because this is an urbanized area and various utilities and geotechnical investigations were conducted, vertical and lateral preferential pathways likely played a dominant role in the daylighting. Assuming the injected oxidant was under pressure and encountered a preferential pathway, a disproportionate volume of oxidant

would naturally migrate along a low-pressure preferential pathway. Potential pathways include subsurface utilities (i.e., sanitary sewer, gas, water, and communication lines). Additionally, improperly sealed abandoned exploratory boreholes, or poorly sealed injection/monitoring wells represent high probability preferential pathways. A single preferential pathway could shift oxidant solution transport from the ideal Darcian flow regime to a non-ideal, high-flow non-Darcian condition. It is noted that the volume of MnO_4^- diverted from the injection trench was likely greater than 30 – 40 gal. For example, when the hydraulic short-circuiting of the MnO_4^- reached the pavement at ground level, it migrated laterally beneath the pavement until it daylighted at a weak spot in the pavement. Collectively, the volume of MnO_4^- needed to fill these preferential pathways is likely much greater than 30-40 gal.

The fact that the oxidant was daylighting at ground level in significant volume is an indication that the injection pressure was sufficient to overcome the hydrostatic pressure above the injection point (22.5 ft) and cause the oxidant to reach the ground surface elevation. This scenario suggests the injection pressure was > 10 psi. To avoid similar MnO_4^- short-circuiting in the future, it is recommended to inject the oxidant solution at a slower rate and lower pressure. Additionally, the pore volume of the trench can be estimated and the volume of the oxidant injected should be lower than the pore volume. The estimated pore volume should encompass a safety factor preventing oxidant solution from rising too near the surface of the trench (e.g., < 5 ft from the ground surface). Empirical results from previous injection volumes and MnO_4^- levels in the trench can also be used to adjust future injection volumes. Surfacing of MnO_4^- solutions are generally easy to spot because of the purple coloration of the permanganate in solution (see photograph).

The oxidant used at the Site is sodium permanganate ($NaMnO_4$) (100 g/L; 10% solution, well below the solubility (40%)). Some studies involving potassium permanganate ($KMnO_4(s)$) report temporary reductions of permeability in injection wells. This is often attributed to the injection of an oxidant solution containing solid phase $KMnO_4(s)$, and over time, the permeability is restored as the $KMnO_4(s)$ dissolves in the groundwater. Because $NaMnO_4$ is highly soluble and does not involve a solid phase, permeability reductions do not occur as a result of oxidant clogging, suggesting that other causes may be responsible for longer-lasting changes in the formation's permeability.

Chemicals of Concerns and Geochemistry

Does the data support significant reductive dechlorination or if the remedy is functioning as intended? (Section 3.6, page 11-12, paragraph 2-3).

Some chlorinated compounds can be readily oxidized by chemical oxidants or can be reduced by chemical or biological reduction reactions. These reductive dechlorination processes successively remove chlorine atoms until a non-chlorinated end-product is reached. Full oxidation results in carbon dioxide, chloride ions, and water. Chemical oxidation raises the redox conditions and oxidation-reduction potential (ORP) of the treatment area while reductive dechlorination can occur only under highly reducing conditions, as indicted by negative redox and ORP field measurements. Chemical oxidation and reductive dechlorination are opposing

processes and typically cannot be applied at the same site at the same time. However, cVOC treatment by chemical oxidation can be followed by biotic/abiotic reductive dehalogenation processes, especially if these processes are enhanced through the addition of electron donors.

Natural degradation of cVOC might occur biotically due to the presence of an adequate number of active microorganisms under specific redox conditions, as well as abiotically in the presence of reduced iron (Fe) minerals. A common biological anaerobic dechlorination pathway is the degradation of PCE to TCE to *cis*-1,2-DCE and small amounts of *trans*-DCE to VC to ethene. This process takes place in strictly anaerobic systems. The presence of *cis*-1,2-DCE can generally be taken as evidence that anaerobic dechlorination processes might be at work. However, the absence of daughter products does not necessarily indicate the absence of reductive dichlorination processes because DCEs and VC may not be present at detectable concentrations in some locations.

Chloroethanes and chloromethanes may also be sequentially reduced by anaerobic dechlorination. With the case of chloroethanes, 1,1,1- trichloroethane (TCA) is reduced to 1,1-dichloroethane (DCA) then chloroethane (CA), and finally to ethane. For chloromethanes, carbon tetrachloride (CT) can be reduced to chloroform (CF), then methylene chloride (MC) and chloromethane (CM), and finally to methane (FRTR 2020). All of these compounds have been detected in the groundwater at the Site.

Table 1. First order transformation of chlorinate volatile organic compounds.

contaminants	[1] reaction rate constant, k (s^{-1}) (20 ^{O}C)	[2] reaction rate constant, k (s^{-1}) (10 ^{O}C)	Time required for 50% loss in contaminant in binary sample (hours) (20 ^{O}C)	(10 ^{O}C)
PCE	4.5×10^{-5}	2.25×10^{-5}	4.3	8.6
TCE	6.5×10^{-4}	3.25×10^{-4}	0.3	0.6
c-DCE	9.2×10^{-4}	4.6×10^{-4}	0.2	0.4
t-DCE	3.0×10^{-2}	1.5×10^{-2}	< 0.1	< 0.1
1,1-DCE	2.38×10^{-3}	1.19×10^{-3}	4.9	9.7

[1] The first-order reaction rate constant involved MnO_4^- at 1 mM (Yan and Schwartz, 1999); rate constant adjusted for temperature ($k_{10} = k_{20} / 2$).

Table 1 summarizes the PCE/TCE transformation products, including reaction rates, when treated with permanganate oxidant. In contrast to anaerobic dechlorination processes, the most stable daughter product is not *cis*-1,2-DCE but 1,1-DCE. Therefore, a prevalence of 1,1-DCE can be taken as an indication of ongoing ISCO processes.

The screening intervals of the monitoring wells mentioned in the ISCO Technical review report are included below (Table 2; Haley Aldrich, 2022). When $NaMnO_4$ solution is injected at the surface through a 4" solid HDPE pipe, the oxidant solution drains down to a 4" perforated HDPE oxidant delivery pipe located at the bottom of the trenches. Once the oxidant leaks out of the perforated PVC pipe at the bottom of the trench (~19 ft bgs), it is projected to undergo both lateral and vertical transport. For example, a 10% (100 g/L) solution will have a density greater than groundwater and consequently, will migrate vertically downward due to density differences with groundwater. Assuming the oxidant migrates vertically downward, it may pass underneath downgradient wells screened higher in elevation (i.e., MW-39B). This description is intended to

help understand why low concentrations (i.e., 4 orders of magnitude decline from injection concentration) of $NaMnO_4$ were measured in nearby downgradient monitoring well MW-39B and perhaps others.

Table 2: The screening intervals of the monitoring wells mentioned in the ISCO Technical review report (Table 1 in Haley & Aldrich, 2022).

Well	Screened Interval (ft bgs)	Approximate Distance Downgradient from Injection (ft)
MW-48C	20-25	600
MW-36BR	17.5-22.5	300
MW-26	16.5-27	<50
MW-53B2	11-16	700
MW-39B	15-20	<50

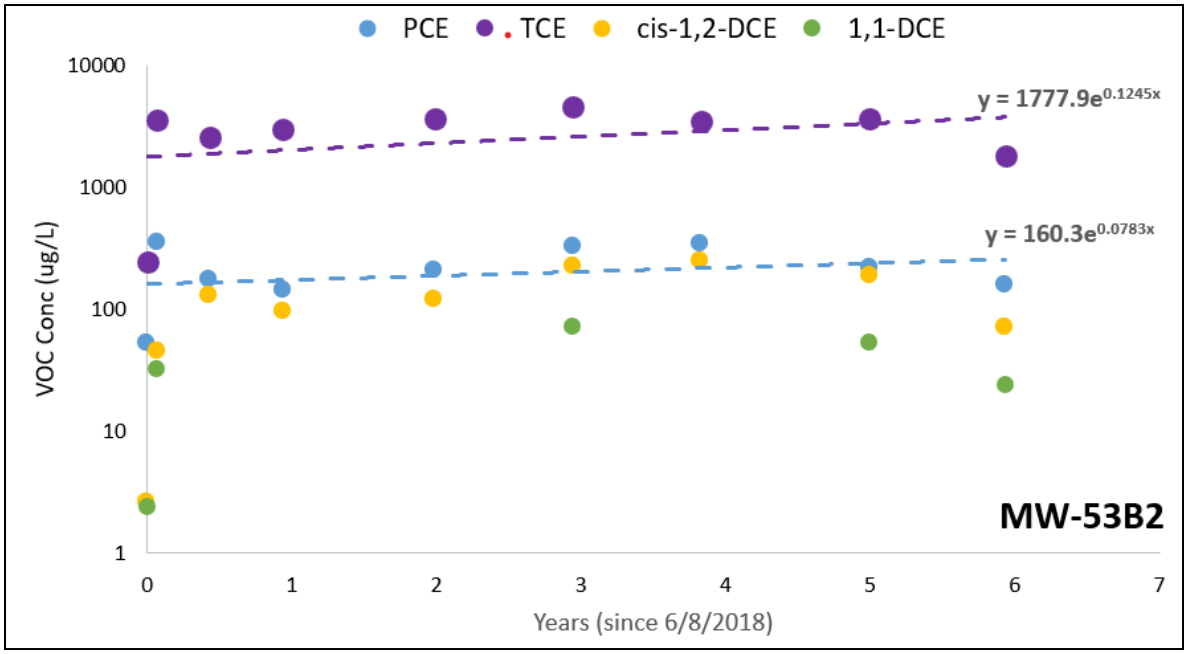

Figure 2: Chloroethene degradation rates at well MW-53B2, located approximately 300 ft downgradient from the Ochel Tree Street ISCO injection wells and monitoring well MW-44B (See below). Six years' worth of chloroethene data (i.e., since July 2018) were evaluated for trends in concentrations. Both the TCE and PCE point degradation rates (k_{TCE}= -0.125 yr^{-1} and

k_{PCE}= -0.078 yr^{-1}) are negative, indicating that neither of these two are decaying at this location (Newell et al. 2002).

The spatial and temporal distribution of 1,1-DCE has been discussed previously. Specifically, wells with detectable concentrations of DCEs and VC downgradient from the Site include MW-48C, MW-36BR, MW-26B, and MW-53B2, besides others. Notably, well MW-39B, located immediately downgraded from the north-south injection trenches has been testing positive for VC for many years, including during times when ISCO was injected. The presence of VC in the vicinity of ISCO injection locations can indicate that VC is moving in from a source upgradient without being fully oxidized or that the area surrounding the well location has not been reached by ISCO solution. With regard to the case of ISCO performance monitoring well MW39B, sampling data from 2011 to 2017 indicate that permanganate concentrations in both shallow and deep layers never exceeded 11.6 mg/L, relative to 100,000 mg/L of the injected ISCO solution (Table VI, H&A Aug. 2017). Further, ORP values have been positive for much of the time during and after the ISCO treatment campaign (2011 to 2017) (Table VI, H&A Aug. 2017). These data sets strongly suggest that areas in close vicinity to some ISCO injection locations have not been adequately reached by the oxidant solution. This may be partially attributed to (1) post-injection density-driven vertical migration (downward) of the 10% $NaMnO_4$ solution; and (2) differences between the injection interval (~ 19 ft bgs via the 4" perforated HDPE oxidant fill pipes at the bottom of the trenches) and the screened interval of MW-39B (15-20 ft bgs).

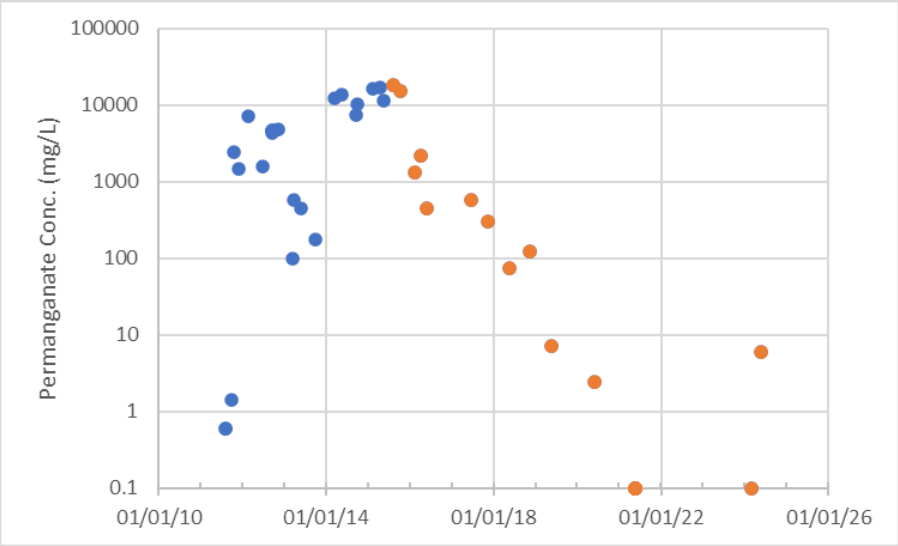

Figure 3: Permanganate concentration at well **MW-44B**. This well is located less than 50 ft from the ISCO injection well MW-37B on Ochel Tree Street and about 300 ft upgradient from well MW-53B2. At MW-37B, ISCO solution was last injected on 3/29/2016. New wells on Ochel Tree Street, about 50 ft north of MW-44B, were installed for the latest round of ISCO injection in Nov. 2023. Although more data are needed, the last data point may signal the breakthrough of permanganate six months after renewed ISCO injection.

In between the areas where ISCO or anaerobic dechlorination processes dominate is a mixed condition zone where reductive and oxidative conditions occur in nearly the same locations. The subsurface is often considered a discontinuous porous medium where micro-sites, layers, and discontinuities exist that exhibit a range of redox conditions, including strongly reducing or strongly oxidative conditions. Consequently, one could measure byproducts from both oxidative and reductive processes (especially over long screened intervals). At a site where periodic injections of oxidant are carried out, such as the Chemical Commodities Inc. site, it becomes even more difficult to establish trends in contaminant concentrations and other monitoring parameters over time. This is the case with the PCE and TCE degradation rates at well MW-53B2, located approximately 300 ft downgradient from the Ochel Tree Street ISCO injection wells and monitoring well MW-44B. Six years' worth of chloroethene data, i.e., since July 2018 were evaluated for trends in concentrations (Fig. 2). Both, the TCE and PCE point degradation rates (k_{TCE}=-0.125 yr^{-1} and k_{PCE}=-0.078 yr^{-1}) are negative, indicating that neither of these two is decaying at this location (Newell et al. 2002). Further, at this location, both *cis*-1,2-DCE and 1,1-DCE are present, suggesting that both ISCO and MNA processes might be occurring in the vicinity of this well location. In this context, it is noted that the cVOC data at MW-53B2 only date back to the mid-2018 when permanganate concentrations upgradient had already declined to less than 50 mg/L (Fig. 3).

Figures 4 and 5 indicate that the permanganate concentration in the ISCO performance monitoring well MW-44B are exponentially declining. The shallow/middle injection depth interval is experiencing a faster oxidant decline (point rate $k_{S/M}$= 1.81 yr^{-1}) relative to the deeper interval (point rate k_D= 1.195 yr^{-1}) (Newell et al. 2002). These trends suggest that the ISCO solution has lost much of its initial strength.

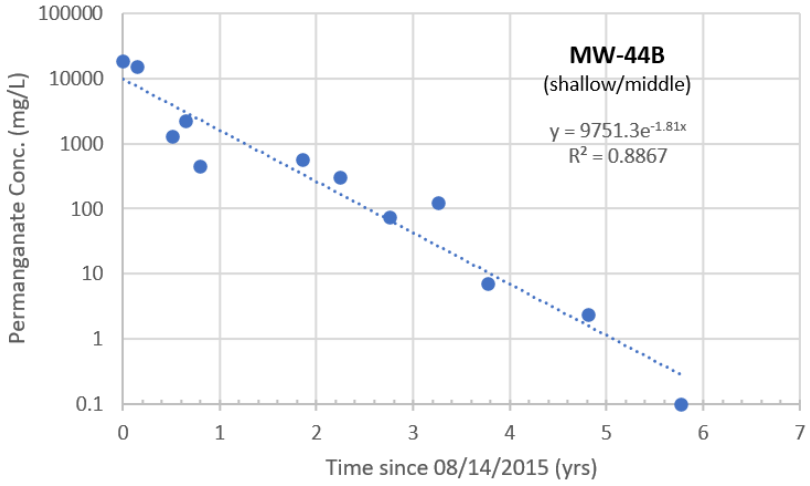

Figure 4: Permanganate concentrations in the shallow/middle depth interval at ISCO injection well MW-44B in the years since Aug. 2015.

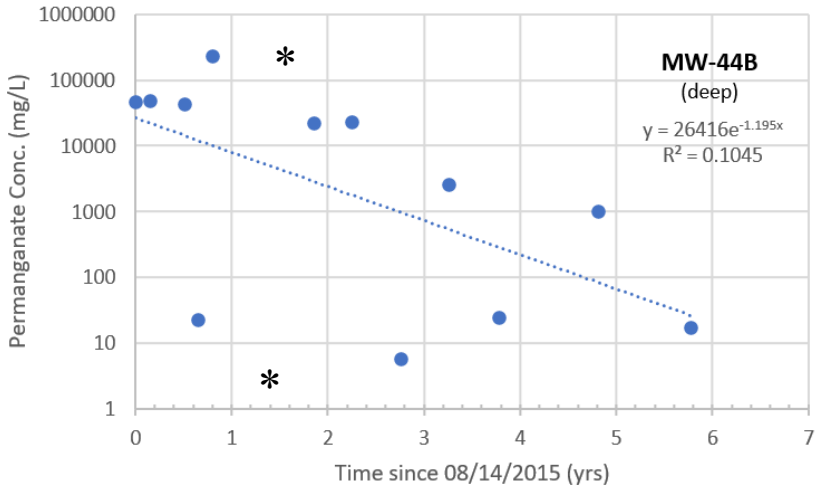

Figure 5. Permanganate concentrations in the deep depth interval at ISCO injection well MW-44B in the years since Aug. 2015. The coefficient of correlation is lower in the deeper interval. Inspection of the original data suggest errors in the reporting of the permanganate concentrations at two data points (*) relative to the reported permanganate concentration in the injection solution (100,000 mg/L).

In summary, while biological processes have not been actively stimulated at the Site and enhanced reductive dichlorination remedies have not been applied, it appears that abiotic reductive dechlorination processes are occurring in areas not directly impacted by the ISCO treatment, including areas where the ISCO agent activity might have diminished over time. However, the discussion of the site data in the H&A (Sept. 2024) report is insufficient and does not identify if and where and to what extent processes other than ISCO contribute to the treatment of the plume downgradient from the Site. While ISCO performance data is tabulated and mapped, no iso-contour maps of ISCO or MNA parameters have been drawn. Such maps would provide insights into areas where ISCO or anaerobic conditions exist, where permanganate is still detectable, and where conditions support MNA processes, including identifying areas where data gaps exist. It is recommended to produce iso-contour maps from existing dissolved oxygen, ORP, permanganate, and methane data, besides MNA indicator data (see Tables IV, VII and VIII in H&A, 2024) and use these maps to better assess treatment processes. In addition, areas with data gaps should be identified and marked for additional sampling in the future.

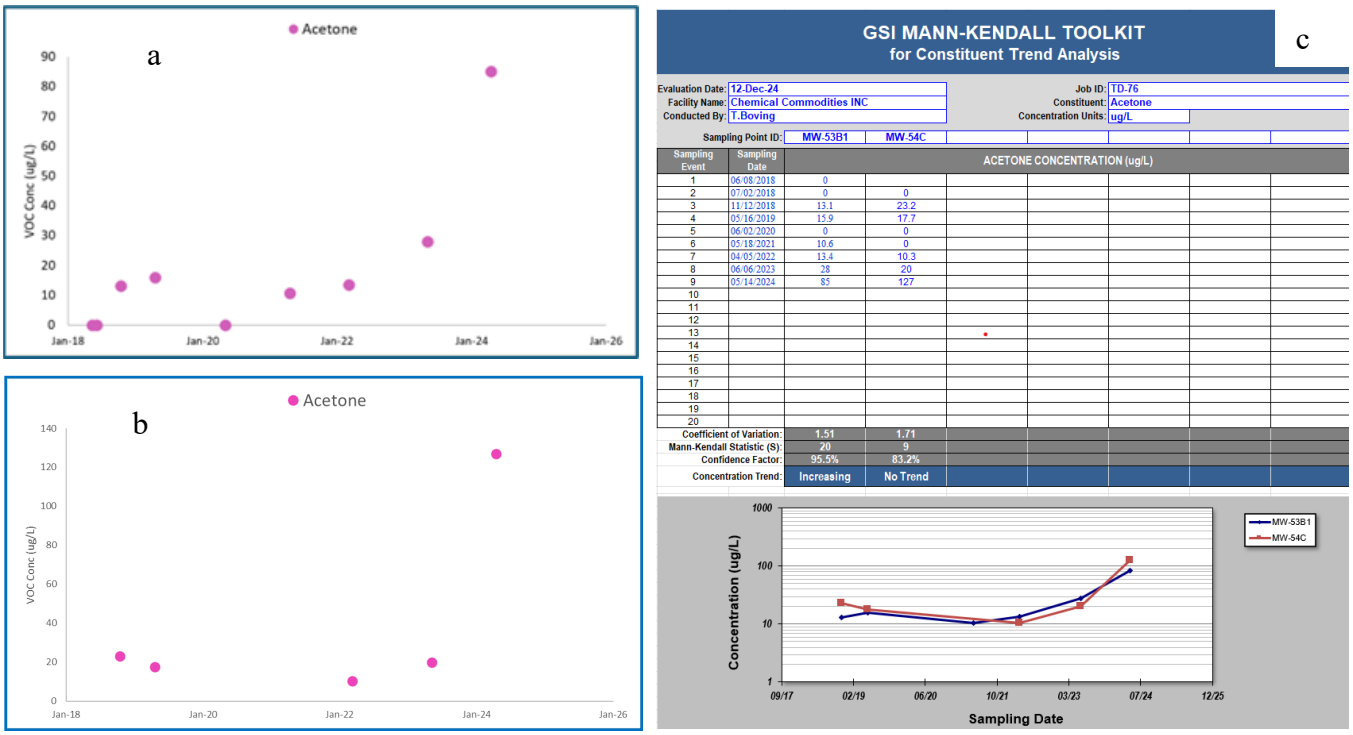

Figure 6: Acetone concentration in groundwater at well (a) MW-53B1 and (b) MW-54C, (c) Mann-Kendall analysis of well MW-53B1 indicates an increasing trend in acetone concentration, while no trend was identified in MW-54C.

Are other compounds outside of TCE reacting with the ISCO remedy due to a higher oxidation potential? Should we evaluate other compound degradation pathways for potential VI exposure?

Well TMW-15 is located on-site and inside the source zone in the northern portion of the Site. The groundwater characterized by TMW-15 is contaminated with a range of chlorinated and non-chlorinated compounds, including carbon tetrachloride and other chloromethanes, 1,1,1-TCA and other chloroethanes, and potential chloroethene precursors, like 1,1,2,2-tetrachloroethane (1,1,2,2-PCA) as well as PCE/TCE and other chloroethenes. Benzene, toluene, ethylbenzene, and xylenes (BTEX) were detected in a few samples. A similar contaminant consortium has been reported in ISCO performance monitoring well MW-39B, located immediately downgradient from the NS-injection trench, except that at this location chlorobenzene-type contaminants are present and BTEX detection was more frequent and at higher concentrations. Of these contaminant classes, chloroethenes, BTEX, and chlorobenzenes are most amenable to ISCO, whereas chloroethanes and chloromethanes are less amenable (Siegrist et al. 2011).

The concentrations of contaminants other than TCE (i.e., chloroethenes) in the downgradient groundwater are generally low (i.e., in the single- or double-digit µg/L range). Decreasing trends

in concentration dominate, except in a few well locations. Notably, a spike in TCA was observed in MW-26B in 2017 and 2018, followed by non-detections until recently. TCA, including chlorobenzene and 1,2-DCB, were detected in MW-36BR around the time of the ISCO treatment in 2023. MW-26B also shows persistently high CT and CL concentrations with a spike as high as 7,490 µg/L CT and 3,060 µg/L CL in late 2018. Persistent CT concentrations (100 µg/L) have also been present in MW-53B2 since 2018 and until recently. An increasing trend in acetone concentration is noted in well MW-53B1 and MW-54C (Figures 6a and 6b). The Mann-Kendall analysis of MW-53B confirms that observation but did not identify a trend in MW-54C (Figure 6c) and well MW-29B (data not shown).

The observed production of acetone (i.e., ketones) is likely caused by the reaction between permanganate and petroleum hydrocarbons, including BTEX. Acetone exhibits less toxicity than its parent compounds. It is a highly mobile, poorly volatile compound, and it is biodegradable. Because acetone has a high vapor pressure but a low Henry's constant and is biodegradable, it does not pose a vapor intrusion concern.

The emergence of acetone in some wells suggests that it may have formed via ISCO processes and that the delay in acetone's detection in downgradient wells, like MW-19B, may simply be due to travel time. However, it is logical that acetone would have shown up in other wells that lie between the ISCO deployment areas and wells farther downgradient. Therefore, acetone could have been produced in areas where ISCO solution encountered BTEX compounds. It is recommended to continue monitoring acetone in the shallow and deeper parts of the aquifer and to assess its long-term persistence, including identifying potential BTEX sources downgradient from the Site.

General over-arching question for the site as a whole, including a trend analysis for TCE, 1,2-DCA, cis-1,2-DCE, and vinyl chloride.

1. Overall Conceptual Remediation Strategy of an Upgradient Source.

The overall conceptual remediation strategy appears to assume that the source area has been sufficiently diminished (i.e., as a result of previously implemented emergency soil removal actions) or isolated (i.e., by installation of a cap) and that the ongoing ISCO remediation (i.e., injection wells and trenches) will address the lingering residuals undergoing downgradient groundwater transport beyond the property boundary. There are multiple lines of evidence that suggest a strong cVOC source currently remains on the property and is supporting strong off-site mass flux of cVOC in groundwater.

Specifically, the TCE concentrations in groundwater (Figure 4 in H&A 2024) clearly indicate that TCE residuals remain on-site and that a continuous downgradient groundwater contamination plume originates from these residuals. The groundwater plume serves as a potential TCE source for indoor air contamination in the downgradient neighborhood (Figure 5 in H&A 2024).

In the Phase II Bedrock Groundwater Investigations report (2004), it was reported that DNAPL has persisted on-site, was physically observed in wells TMW-005, -007, and -015, and may have migrated to bedrock. Consequently, these observations help explain the very high groundwater cVOC concentrations currently measured today.

It is unclear whether detailed site characterization was carried out to delineate post-removal cVOC residuals, i.e., after the emergency soil removal action. It is reasonable to assume that while a significant amount of contaminant mass was removed, a significant mass of residual remains and is capable of supporting the existing groundwater plume. Treating a strong groundwater plume downgradient from its upgradient source is challenging and inefficient for several reasons, as discussed further below.

2. ***Source Area versus Diffuse Plume Treatment.***

Despite the significant soil removal actions and source area remediation that has occurred over the years, cVOCs have continued to persist for a long period of time. Based on the very high concentration of TCE extending well off-site, it can be concluded that a strong and sustained TCE source exists at the site. For example, upgradient sources of cVOCs, and specifically TCE, includes the slow desorption from aquifer materials, slow back diffusion from low permeable media, dissolution from dense non-aqueous phase liquid (DNAPL), and low hydraulic conductivity. The effects of the cVOC residuals and the mass transport/transfer mechanisms and parameters, collectively contribute to cVOC elution from the source area which is generally projected to continue for a very long time (> 100 years).

The ISCO treatment zone, located upgradient from the neighborhood, but downgradient from a cVOC source areas is problematic. Based on the location of the downgradient ISCO remediation trenches and wells, ISCO can only treat contaminated groundwater as fast as it elutes from the upgradient source areas. Under this condition, a temporary clean-water wedge may result from ISCO deployment. However, under post-oxidation conditions (i.e., if ISCO is discontinued), untreated groundwater from upgradient will be continually sustained, and will move down into the treated area. Therefore, at best, a clean-water wedge will exist temporarily as long as ISCO is deployed. This is an undesirable result because if ISCO ceases or is deployed intermittently, the upgradient contaminated groundwater will move down into the treated zones and re-contaminate aquifer solids and groundwater. Assuming the current conditions, where remedial treatment is deployed downgradient from the source area, ISCO operations will need to be continuously deployed to avoid recontamination, and to limit cVOC transport towards the neighborhood. The continuous deployment of ISCO underscores the concept that oxidant applications will be required in perpetuity to meet the treatment objectives.

The following recommendations are offered to improve overall treatment effectiveness and efficiency.

A. Conceptually, the Site's source areas appear to be located in the triangular area between the train tracks, Cedar Street, and Keeler Street. It is recommended that existing site characterization data and information from this area be used to establish an updated source area conceptual site model (CSM).

B. It is recommended that additional site characterization be deployed to supplement existing data and information. The objective is to definitively establish specific source areas within the Site property boundary.

C. It is recommended to develop a revised remediation plan that takes into consideration the newly developed and improved CSM. Treatment objectives of the remediation plan are to focus remedial efforts on well-defined source areas, and to limit source area contaminant mass and mass flux from the Site property. It is noted that source area ISCO is more efficient and effective than when deployed in the dilute plume.

D. It is recommended that the remediation of cVOCs in the source areas consider using any candidate technologies based on their efficiency, effectiveness, and cost. This may include source area technologies other than ISCO.

Background material was also provided by supporting documents. The following comments on these documents are intended to improve the overall quality of data and the remediation outcome.

3. Reports/ISCO/2018-0424_HAI_CCI Supplemental Invs WP_F2

The groundwater sampling procedure did not explain whether binary samples (i.e., contaminated groundwater samples that also contain MnO_4^-) would be neutralized when the monitoring wells were sampled. If the MnO_4^- is not neutralized, false negative results could occur (Johnson et al., 2012). Johnson (2012) explains EPA recommended guidelines on how to neutralize groundwater samples collected in the field that are to be analyzed for CVOCs.

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