Haley Griffith (adpce.ad)

From: Vaughn, Kiefer <KVaughn@pmico.com>
Sent: Friday, December 13, 2024 9:49 AM
To: EE GW Reports; Jordan Anderson (adpce.ad)
Cc: Wesson, Jacob; Rasburry, Terri
Subject: Green Bay Packaging 2nd Half 2024 Groundwater Monitoring Report - Solid Waste Permit 284-S3N
Attachments: 2nd Half 2024 GWMR Arkansas Kraft 3N.pdf

See attached.

Kiefer Vaughn, P.G., MSc
Project Geologist I Environmental

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December 13, 2024

Mr. Jordan Anderson
Groundwater Branch
ARKANSAS ENERGY AND ENVIRONMENT
DIVISION OF ENVIRONMENTAL QUALITY
5301 Northshore Drive
North Little Rock, AR 72118-5328

VIA EMAIL: EE.gwreports@arkansas.gov
and Jordan.Anderson@arkansas.gov

RE: Second Half 2024 Groundwater Monitoring Report
Green Bay Packaging
Arkansas Kraft Class 3N Landfill
Solid Waste Permit 284-S3N

Dear Mr. Anderson:

Enclosed please find attached the Second Half 2024 Groundwater Monitoring Report for the above referenced facility. Should you have any questions or require additional information, please do not hesitate to contact me.

Sincerely,
Pollution Management, Inc., *A Terracon Company*

Kiefer A. Vaughn, P.G.
Project Manager

KAV:tlr

cc: Jacob Wesson, w/encl.

Attachments:

KT247004

Explore with us

SECOND HALF 2024
GROUNDWATER MONITORING REPORT

Arkansas Kraft Class 3N Landfill
Solid Waste Permit 284-S3N
AFIN: 15-00001

Green Bay Packaging – Arkansas Kraft Division
338 Highway 113 S
Morrilton, AR 72110-0711

December 2024
Project Number: KT247004

Prepared By:

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LIST OF ABBREVIATIONS

The following is a list of common abbreviations used in this report and their meanings.

APC&EC:	Arkansas Pollution Control and Ecology Commission
DEQ:	Division of Environmental Quality
EPA:	Environmental Protection Agency
FB:	field blank
MCLs:	maximum containment levels
PMI:	Pollution Management, Inc.
QA/QC:	Quality Assurance/Quality Control
RCRA:	Resource Conservation Recovery Act
TDS:	total dissolved solids
TOC:	total organic carbons
TOX:	total organic halides
UG:	unified guidance

1.0 CERTIFICATION STATEMENT

Second Half 2024 Groundwater Monitoring Report
Arkansas Kraft Class 3N Landfill
Morrilton, Arkansas

Prepared for:

Green Bay Packaging—Arkansas Kraft Division
Morrilton, AR

For Submittal to:

Arkansas Energy and Environment
Division of Environmental Quality
Office of Land Resources

Certification

I certify that I am a qualified groundwater scientist who has received a baccalaureate or postgraduate degree in geology. I have sufficient training and experience in groundwater hydrology and related fields, as demonstrated by state registration and completion of accredited university courses, which enable me to make sound professional judgments regarding groundwater monitoring and contaminant fate and transport.

The statistics herein are based upon the statistical program SANITA™ that is guided by the relevant Environment Protection Agency (EPA) Guidance, ASTM Standards, and in accordance with of Arkansas Pollution Control and Ecology Commission (APC&EC) Regulation 22. I further certify that this report was prepared by me or by a subordinate working under my direction.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL GEOLOGIST
No. 2075
KIEFER A. VAUGHN

Kiefer A. Vaughn, P.G.

William D. Ford, P.E.

12-13-24
Date

12-13-24
Date

2.0 INTRODUCTION

Green Bay Packaging Inc.—Arkansas Kraft Division operates a Class 3N Solid Waste Landfill (Landfill) under Solid Waste Permit Number 284-S3N issued on November 8, 1996, under the direction of the Arkansas Energy and Environment, Division of Environmental Quality (DEQ). The groundwater monitoring wells at the Landfill have been monitored in accordance with Condition Number 17 of the Arkansas Kraft Solid Waste Permit. Pollution Management Inc. (PMI) conducted groundwater sampling activities on October 15, 2024, and Pace Analytical, Mount Juliet, Tennessee, performed the laboratory analysis.

2.1 Site Location

The Arkansas Kraft Landfill is located along Highway 113 approximately one mile southeast of Oppelo, Arkansas, see **Figure 1**. More specifically, the Landfill site consists of 185 acres with approximately 100 acres utilized for waste disposal and is located on the south side of the Arkansas Kraft Plant. The Landfill is located within portions of Sections 7, 8, 17, and 18, Township 5 North, Range 16 West, in Conway County, Arkansas.

2.2 Site Groundwater Monitoring System

There are currently eleven monitoring wells, P-1, P-2, P-4, P-5, P-6, P-7, P-8, P-11, P-12, P-13 and P-14, surrounding the Landfill. Four wells, P-1, P-2, P-6, and P-13 are utilized for water level measurements only and are not sampled for chemical analysis. Monitoring wells P-9 and P-10 are decommissioned. Locations of the monitoring wells, in relation to the Landfill, are presented in **Drawing Number 1**.

3.0 GROUNDWATER SAMPLING

The Second Half 2024 Groundwater Sampling Event at the Arkansas Kraft Class 3N Landfill was conducted on October 15, 2024, Pollution Management Inc. personnel collected groundwater samples from seven monitoring wells and measured water levels in four additional monitoring wells. The procedures for obtaining groundwater samples, parameters analyzed, and sample preservation and handling are discussed in the following sections.

3.1 Water Level Determination

Prior to evacuating each well for sampling, the depth to water was measured using an electronic water level probe. The measurements were taken to the nearest 0.01 foot from the

top of the well casing, and this information was used to calculate the volume of water in the well. Water level data for each well can be found on the field data sheets in **Appendix A**. Because non-dedicated equipment was used to obtain water levels, PMI decontaminated the equipment prior to initial use and after each water level measurement to ensure samples were not contaminated and there was no cross contamination of wells. The electronic water level probe is constructed of inert materials and was cleaned with distilled water before each use at each monitoring well.

3.2 Well Evacuation

Prior to sampling the groundwater wells, the PMI field technician purged wells using a peristaltic pump and low-flow techniques. New poly tubing was used to purge and sample each well. Measures were taken to prevent surface soils from encountering the purging equipment and lines, which could introduce contaminants to the well.

To document that formation waters were entering the well, representative samples of the purge water were periodically collected and tested for field water quality parameters. The parameters measured were pH, specific conductance, temperature, dissolved oxygen, and turbidity. Water quality parameters (apart from turbidity) were considered stable if three successive readings did not vary more than 10 percent, see **Appendix A** for field data sheets. Measures were taken to obtain turbidity readings as low as possible prior to sampling.

3.3 Equipment Decontamination Procedure

Equipment that was used in gauging, purging, and sampling the monitoring wells was thoroughly cleaned prior to the work. Equipment utilized included a water level probe, low flow peristaltic pump, turbidity meter, and Aqua TROLL 600 Multiparameter Sonde and flow-through cell.

The water level probe was washed with potable water and phosphate-free laboratory detergent. Next the probe was rinsed with distilled water. The water level probe was then placed in a plastic bag to reduce contact with air and transported into the field. After a water level was measured, a sponge soaked with distilled water was used to clean the tape and probe as it was retrieved from each well.

After use in each well, the pump, Aqua TROLL 600 Multiparameter Sonde, and flow-through cell were flushed with distilled water. New poly/silicone tubing was used for each well. After the well was purged and sampled the poly/silicone tubing was discarded.

3.4 Sample Extraction

The technique used to withdraw each groundwater sample from the wells was selected based on consideration of the parameter analyzed in the samples. To ensure the groundwater sample is representative of the formation, it is important to minimize physically altering or chemically contaminating the sample during the withdrawal process. To minimize the possibility of sample contamination, the PMI field technician:

- made sure clean sampling equipment was not placed directly on the ground or other potentially contaminated surfaces prior to insertion into the well
- used new poly tubing for each sample collection
- transferred samples to the appropriate containers in a manner that minimized agitation and aeration
- samples were placed on ice in coolers for preservation at the site and transported to the laboratory.

Samples were collected and placed into laboratory-provided containers in the order of volatilization sensitivity of the parameters. The list of parameters analyzed is presented in **Table I**.

The collection order for the common groundwater parameters was as follows:

- depth to groundwater, temperature, turbidity, conductivity, pH
- total organic halides (TOX)
- total metals
- total organic carbon
- sulfate, chloride, and total dissolved solids (TDS)
- sulfide

3.5 Field Testing

Some of the parameters evaluated are physically or chemically unstable and were measured immediately after collection by the PMI field technician, using the Aqua TROLL 600 Multiparameter Sonde. Examples of unstable properties include pH and temperature. Although turbidity, dissolved oxygen, and specific conductance (inverse of electrical resistance) of a substance are relatively stable, these parameters were also measured in the field. This information was recorded on a standard Groundwater Monitoring Sampling Record, presented in **Appendix A**. A summary of the field measurements for the Second Half 2024 monitoring

event is presented in **Table II**.

3.6 Field Quality Assurance/Quality Control (QA/QC) Procedures

For QA/QC purposes, a field blank (FB) was collected and labeled FB. Procedures utilized for collecting the field blank consisted of pouring distilled water directly from the distilled water container into the sample containers. The PMI field technician prepared the field blank for all the required monitoring parameters. The field blank was used to verify that the sample collection/handling process and ambient field conditions did not affect the quality of the samples.

A duplicate sample of P-4, labeled Duplicate, was collected to verify the consistency and precision of the sampling and testing procedures. Procedures utilized for collecting the duplicate sample were identical to regular sampling protocol detailed in Section 3.4 and collected at the same time as the P-4 sample.

3.7 Handling/Transport/Custody

Samples were accompanied by a Chain-of-Custody record that includes the name of the facility, collector's signatures, unique sample location, date, time, type of sample, number of containers, and analysis required. Samples collected from the Landfill were placed in sample containers provided by the laboratory. Containers are certified clean by the supplier.

The sample label is attached to the sample container at the time of collection. The following information is recorded on the sample label:

- project or facility name
- sample type
- sample location number (well number)
- preservative type
- sampling date and time, and
- sample collector's name or initials

Documentation for the sample collection process and other important information was recorded on PMI Chain-of-Custody forms. The standard format includes the date, time, type of sample collected, code for sampling analysis, unique sample number, and sampling location.

3.8 Sample Preservation

Samples were collected in laboratory-supplied containers and laboratory-supplied

preservatives were placed into the containers, if applicable. The samples were placed in an ice chest for preservation and cooled to approximately 6° Celsius. Custody was retained by the PMI representative from the time of collection until delivery to Fed Ex who then delivered the samples to Pace Analytical Lab via overnight delivery. Laboratory analytical results and copies of the Chain-of-Custody forms are included in **Appendix B**.

4.0 SECOND HALF 2024 GROUNDWATER MONITORING EVENT

The sampling results described in this report are for the Groundwater Monitoring Event Second Half 2024 at the Landfill. Results of this monitoring event, conducted on October 15, 2024, are provided in the following sections, tables, and appendices. In addition, the historical groundwater data was evaluated statistically to determine if significant differences exist between background and compliance data for each well.

4.1 Groundwater Elevation, Flow Direction, and Rate

There are currently eleven (11) monitoring wells located around the Landfill area. **Table II** lists the results of the water level and field measurements for the Second Half 2024 monitoring event. The highest groundwater elevation was measured in monitoring well P-5 which is located south of the Landfill. The lowest groundwater elevation measured during this event occurred in monitoring well P-14, located on the western flank of the Landfill. The water level data for the Second Half 2024 monitoring event indicates a groundwater flow direction to the east-northeast and west-northwest which is consistent with historical water level data, see **Drawing Number 1**. The average linear velocity (groundwater flow rate) during the Second Half 2024 event was calculated utilizing the following equation based on the principles of Darcian flow:

$$V_x = (K*I) / n_e$$

Where,
V_x is the average linear velocity (length/time),
K is the hydraulic conductivity (length/time),
I is the hydraulic gradient (length/length),
And n_e is the effective porosity (decimal).

Since the groundwater flow directions are not uniform across the site, see **Drawing Number 1**, the hydraulic gradient was calculated for the Second Half 2024 sampling event by averaging the various gradients on-site. The average hydraulic gradient on-site was calculated to be **0.00459 ft/ft** (calculations are included in **Appendix C**). A hydraulic conductivity of 5.0

x 10-6 cm/sec was reported by Grubbs, Garner & Hoskyn Inc. in the Geotechnical and Hydrogeological Study for the Arkansas Kraft Division, Green Bay Packaging Class 3N Landfill (July 1995). This hydraulic conductivity for the uppermost aquifer was used in the groundwater flow rate calculations. For this report, PMI utilized an estimated porosity between 5 percent and 30 percent for fractured shale. An effective porosity was then determined by multiplying the porosity by 0.90 (90 percent). Effective porosity is always equal to or less than the porosity, and utilizing 90 percent is a conservative approach, since part of the total porosity is occupied by static fluid held to the mineral surface by surface tension. An effective porosity was estimated to range between 4.5 percent and 27 percent.

The minimum average linear velocity (least conservative), based on the largest effective porosity, is estimated at 8.12 x 10^{-8} cm/sec. The maximum average linear velocity (most conservative), based on the lowest effective porosity, is estimated at 4.87 x 10^{-7} cm/sec.

Minimum: Vx = [(5.0 x 10-6 cm/sec) (0.00459)] / (0.27) = 8.51 x 10^{-8} cm/sec
Maximum: Vx = [(5.0 x 10-6 cm/sec) (0.00459)] / (0.045) = 5.11 x 10^{-7} cm/sec

4.2 Groundwater Quality

Groundwater quality laboratory results for the Second Half 2024 monitoring event are included in **Appendix B**. **Appendix D** contains the historical groundwater analytical results compiled since the first round of background samples were collected on December 21, 1995. These data were analyzed statistically to determine if significant differences exist between background and compliance concentrations for detected monitoring parameters at each of the wells. The statistical results are presented in **Appendix E** and were generated utilizing the SANITAS™ statistical program.

4.2.1 Comparison to Established Water Quality Standards

Table III compares detected concentrations from the Second Half 2024 analytical results to the applicable maximum contaminant levels (MCLs). There were no MCLs exceedances during the Second Half 2024 monitoring event.

4.2.2 QA/QC Comparison

A comparison of the Second Half 2024 analytical results for P-4 and the duplicate sample is presented in **Table III**. The analytical results of the duplicate sample are consistent with the results of the associated control sample (P-4) with the following exception, a “J” value detection of TOX in the duplicate sample reported as a non-detect

in the control sample. All analytical results for the field blank were reported as non-detect, apart from a detection (18 mg/l) of dissolved solids.

4.3 Statistical Program Design

This section outlines the statistical program design, which adheres to recommendations in EPA's Statistical Analysis of Groundwater Monitoring Data at Resource Conservation and Recovery Act (RCRA) Facilities, Unified Guidance, released in March 2009. The Landfill's permit has listed monitoring parameters which were evaluated using the statistical program SANITAS™. Distributional analyses, including time-series plots and outlier tests, were performed on period-of-record data to identify apparent trends or excursions from normal ranges. Detected parameters are analyzed using either intrawell prediction limits or formal trend tests to detect statistically significant changes in groundwater quality. Intrawell prediction limits are applied to well-parameter combinations that have background populations containing a minimum of eight (8) to ten (10) independent values that have a stationary statistical distribution (i.e., non-trending background). Well-parameter pairs that exhibit non-stationarity background populations are tested for compliance using the Sen's Slope/Mann-Kendall. All other well-parameter pairs are tested using prediction limits. Background datasets used for prediction limit analysis are presented in **Appendix D**.

4.4 Statistical Evaluation Results

4.4.1 Outlier Screening

The data is evaluated for the presence of anomalies or outliers, using the EPA 1989 Outlier Test. Values identified as outliers using this procedure may be either legitimate outliers or observational errors. An outlier, as generally defined, is a valid sample value that has little chance of being observed. Thus, while the value is a legitimate member of the population sampled, its presence in a sample set distorts estimates of population characteristics that can be inferred, and the sample discounted. In accordance with the Unified Guidance (UG), outliers identified by outlier testing will not be automatically removed but the data set will be examined to determine if the outlier will cause an invalid statistical comparison in other statistical testing. If the outlier does not appear to cause adverse statistical conditions, it will not be removed. If the outlier does adversely impact the dataset, it will be removed and no longer be used for statistical analysis.

During the review of the Second Half 2024 sampling data there were no constituents identified as an outlier. An outlier analysis for the Second Half 2024

monitoring event is included in **Appendix E**.

Identified outlier concentrations, chloride at P-7 (November 2013), sulfate at P-12 (December 2001), sulfate at P-5 (November 2013 and May 2015), sulfate at P-4 (May 2008 and November 2011), TDS at P-5 (December 1999), TDS at P-12 (October 1996), TDS at P-14 (May 2008), and total organic carbons (TOC) at P-7 (May 2015) were inconsistent with historical data and have not been verified in the subsequent monitoring events. These data points biased prediction intervals that invalidated their respective statistical analysis. These points will be denoted as an outlier and not be used for future statistical analysis.

4.4.2 Prediction Limits

The prediction interval is a statistical interval where background data are used to construct a prediction limit, which is then compared to observations from a compliance population. In groundwater monitoring, a prediction interval approach may be used to make comparisons between background and compliance data. The interval is constructed to contain all future observations with stated confidence. If any future observation exceeds this interval, this is statistically significant evidence that the observation is not representative of the background group. Parametric prediction intervals are the first choice when performing prediction interval statistics. The parametric alternative is constructed assuming the background data have a normal or transformed-normal distribution. During parametric prediction interval analysis, the mean and the standard deviation are calculated for the raw or transformed background data. However, when the background data are not transformed-normal or contain between 50 and 90 percent observations below the detection limit, SANITAS™ automatically constructs a non-parametric prediction interval. During non-parametric analysis, the second highest value from the background data is used to set the upper limit of the prediction limit.

The results of the intra-well prediction interval analysis identified six (6) constituents as SSIs for the Second Half 2024 monitoring event, these are presented in **Table IV**.

4.4.3 Sen's Slope / Mann-Kendall Test

When used in conjunction with one another, the Mann-Kendall test for temporal trend and the Sen's Slope estimate are two types of Evaluation Monitoring Statistics useful in determining the significance of an apparent trend and to estimate the

magnitude of that trend. The Mann-Kendall trend analysis test for temporal trends and Sen's slope estimate were applied to detected well-parameter pairs where significant trends in the background populations were identified.

The results of the trend analysis identified sulfate and TDS at P-4 as being significantly increasing at the 98 percent confidence level. These are considered SSIs; these are presented in **Table V**.

5.0 CONCLUSIONS

Considering the results of the Second Half 2024 groundwater sampling and analysis, PMI reached the following conclusions:

Groundwater Flow

The water level elevations summarized in **Table II** indicate an east-northeast groundwater flow direction. As described in Section 4.1, the minimum average linear velocity is estimated at 8.51×10^{-8} cm/sec, while the maximum average linear velocity is estimated at 5.11×10^{-7} cm/sec.

Analytical Results

There were no Maximum Contaminant Levels (MCLs) exceedances during the Second Half 2024 monitoring event. The analytical results of the duplicate sample are consistent with the results of the associated control sample (P-4) with the following exception, a “J” value detection of TOX in the duplicate sample reported as a non-detect in the control sample. All analytical results for the field blank were reported as non-detect, apart from a detection of dissolved solids.

Statistical Evaluation

The results of the statistical analysis identified eight (8) constituents, chloride at P-4 and P-14, sulfate at P-4, P-5, and P-7, TDS at P-4 and P-8, manganese at P-11, as SSIs during the Second Half 2024 monitoring event.

Continued Groundwater Sampling

The next semi-annual monitoring event is tentatively scheduled for April 2025.

TABLES

TABLE I

CONSTITUENTS FOR DETECTION MONITORING
2ND HALF 2024
ARKANSAS KRAFT CLASS 3N LANDFILL
MORRILTON, ARKANSAS

CADMIUM

CHLORIDE

IRON

MANGANESSE

SULFATE

SULFIDE

TOTAL DISSOLVED SOLIDS (TDS)

TOTAL ORGANIC CARBON (TOC)

TOTAL ORGANIC HALIDES (TOX)

FIELD MEASURMENTS

TURBIDITY

pH

TEMPERATURE

CONDUCTIVITY

TABLE II
FIELD DATA
2ND HALF 2024
ARKANSAS KRAFT CLASS 3N LANDFILL
MORRILTON, ARKANSAS

Well ID	Date	Time	Datum Elev. (amsl)	Depth to Water (ft)	Water Surf. Elev. (amsl)	Temp. (C°)	pH (su)	Specific Conductance (µS/cm)	Turbidity (NTU)
P-4	10/15/2024	8:50	312.17	12.68	299.49	17.5	6.3	3047	0.20
P-5	10/15/2024	10:05	320.81	15.19	305.62	18.2	6.76	461	11.00
P-7	10/15/2024	12:08	313.66	18.79	294.87	20.2	7.07	2384	6.97
P-8	10/15/2024	11:13	308.84	13.87	294.97	19.0	7.11	4390	3.42
P-11	10/15/2024	15:04	307.40	8.18	299.22	20.4	7.15	1480	1.60
P-12	10/15/2024	14:10	316.44	15.43	301.01	21.3	7.04	909	1.32
P-14	10/15/2024	13:02	307.29	22.70	284.59	20.3	6.68	4999	0.17
Field Quality Assurance/Quality Control									
DUPLICATE	10/15/2024	-	N/A						
Field Blank	10/15/2024	-							
Water Level Only Wells									
P-1	10/15/2024	14:02	312.17	11.76	300.41	N/A			
P-2	10/15/2024	13:58	306.43	8.28	298.15				
P-6	10/15/2024	13:54	305.08	18.79	286.29				
P-13	10/15/2024	14:57	310.64	12.07	298.57				

Notes:
DUPLICATE is a duplicate sample of P-4.
amsl - above mean sea level
su - standard unit
µS/cm - micro siemens per centimeter
NTU - Nephelometric Turbidity Units
N/A = not analyzed/not applicable

TABLE III
GROUNDWATER QUALITY RESULTS
2ND HALF 2024
ARKANSAS KRAFT CLASS 3N LANDFILL
MORRILTON, ARKANSAS

WELL ID	DATE COLLECTED	DISSOLVED SOLIDS mg/l	SULFIDE mg/l	CADMIUM mg/l	IRON mg/l	LEAD mg/l	MANGANESE mg/l	TOX mg/l	CHLORIDE mg/l	SULFATE mg/l	TOC (TOTAL ORGANIC CARBON) mg/l
P-4	10/15/2024	3000	<0.0500	<0.00200	0.0647 J	<0.00600	0.0856	<0.150 P1	108	1820	0.868 J
DUP	10/15/2024	3200	<0.0500	<0.00200	0.0602 J	<0.00600	0.0856	0.0505 J	106	1790	0.865 J
P-5	10/15/2024	298	<0.0500	<0.00200	1.69	<0.00600	0.0414	<0.150	33.4 J6	19.2	0.447 J P1
P-7	10/15/2024	2150	<0.0500	0.000559 J	1.65	<0.00600	0.114	<0.150	107	931	0.144 J
P-8	10/15/2024	3360	<0.0500	<0.00200	0.0379 J	0.00303 J	0.132	0.0656 J	1070	514	0.439 J
P-11	10/15/2024	1250	<0.0500	<0.00200	0.0746 J	<0.00600	0.522	<0.150	51.1 J6	445	0.412 J
P-12	10/15/2024	587	<0.0500	<0.00200	0.279	<0.00600	1.0	<0.150	65.2	105 J5	0.508 J
P-14	10/15/2024	6180	<0.0500	<0.00200	<0.100	<0.00600	0.0751	<0.150	98.2 J6	3470	0.741 J
FB	10/15/2024	13	<0.0500	<0.00200	<0.100	<0.00600	<0.0100	<0.150	<1.00	<5.00	<1.00
LEACHATE	10/15/2024	4080	0.0380 J	<0.00200	3.08	0.00338 J	0.684	0.0443 J P1	163	28	81.9
EPA MCL (May 2024)				***0.005***		***0.015***					

Notes:
DUPLICATE is a duplicate sample of MWP-4.
BOLD - Exceeding applicable EPA MCL (May 2024)
N/A = not analyzed/not applicable

Qualifiers: J: The identification of the analyte is acceptable; the reported value is an estimate.
J6: The sample matrix interfered with the ability to make any accurate determination; spike value is low
P1: RPD value not applicable for sample concentrations less than 5 times the reporting limit.

TABLE IV
Prediction Limit Exceedances
2ND HALF 2024
ARKANSAS KRAFT CLASS 3N LANDFILL
MORRILTON, ARKANSAS

WELL	PARAMETER	PREDICTION LIMIT	OBSERVED CONCENTRATION
P-4	Chloride	72.33	108
P-14	Chloride	60.35	98.2 J6
P-11	Manganese	0.2876	0.522
P-12	Sulfate	111.3	105 J5
P-7	Sulfate	869.5	931
P-8	TDS	3080	3360

Notes:
Exceedances based on intrawell parametric prediction limits.

TABLE V
STATISTICALLY SIGNIFICANT TRENDS
2ND HALF 2024
ARKANSAS KRAFT CLASS 3N LANDFILL
MORRILTON, ARKANSAS

WELL	PARAMETER
P-4	Sulfate
P-4	TDS

Notes:
Trends significant at 98% confidence level

FIGURE

FIGURE NO. 1

SITE LOCATION MAP
(TAKEN FROM GOOGLE)

SEMI-ANNUAL GROUNDWATER MONITORING REPORT
GREENBAY PACKAGING COMPANY
ARKANSAS KRAFT CLASS 3N LANDFILL
MORRILTON, ARKANSAS

CIVIL ENGINEERING AND ENVIRONMENTAL SERVICES
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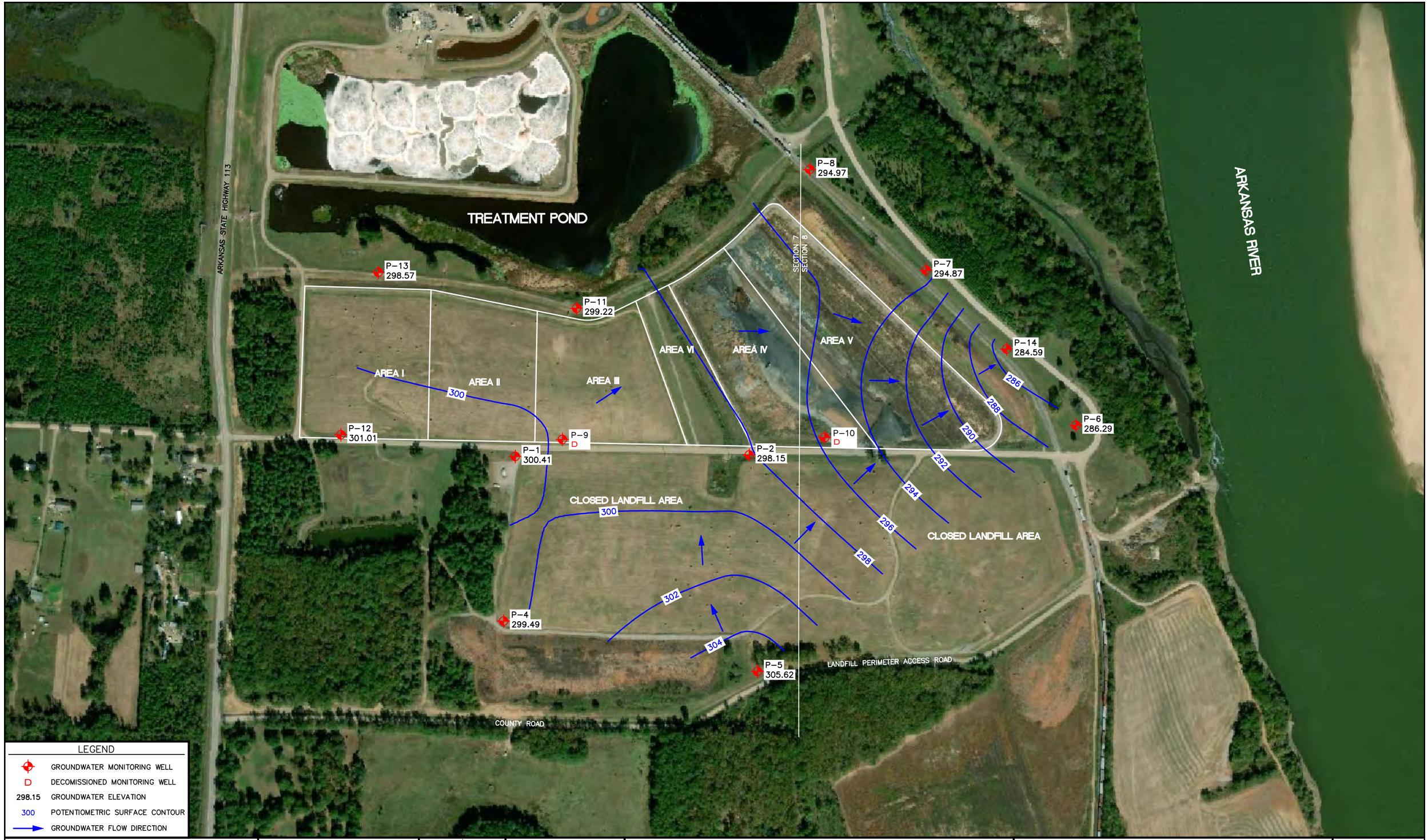
SUBMITTED:	D. FORD
DRAWN:	C. GLOVER
CHECKED:	D. FORD
DATE:	DEC. 4, 2024

SCALE: 0 1500'

JOB NUMBER: GREN-12983

FILE: GREN-12983 2ND HALF 2024.DWG

DRAWING



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SUBMITTED	D. FORD
DRAWN	C. GLOVER
CHECKED	D. FORD
DATE	DEC. 4, 2024

SCALE
0 400'

SEMI-ANNUAL GROUNDWATER MONITORING REPORT
GREEN BAY PACKAGING COMPANY
ARKANSAS KRAFT CLASS 3N LANDFILL
MORRILTON, ARKANSAS

AERIAL OF SITE WITH
POTENTIOMETRIC GROUNDWATER
SURFACE MAP – OCTOBER 15, 2024

JOB NUMBER
GREN-12983

DRAWING NO.:
1

FILE: N:_PMILEGACY\USERDATA-A-L\GREEN BAY PACKAGING\GREN-12983 – 2024 GROUNDWATER SAMPLING & REPORTING\2ND HALF 2024 – ARKANSAS KRAFT 3N\DRAWINGS\GREN-12983 2ND HALF 2024.DWG

APPENDIX A

Groundwater Monitoring Sampling Record

and

Field Data Sheets

PMI
A Terracon Company

GROUNDWATER - FIELD DATA SHEET

2nd HALF 2024 GROUNDWATER SAMPLING EVENT

PROJECT NAME: GREEN BAY PACKAGING

PROJECT LOCATION: MORRILTON, ARKANSAS

JOB NUMBER: ~~KT237086~~ KT247004

DATE: 10/15/24

Well Number	Depth to Water (feet)	Total Depth (feet)	Purge Amount (liters)	Gauging Time (24 hour)	Observations	Sample Time (24 hour)
P-1	11.76	42.8	—	14:02		—
P-2	8.28	42.7	—	13:58		—
P-4	12.68	37.7	6	8:50	✱ DUPLICATE ✱	9:25
P-5	15.19	37.7	6	10:05	✱ FIELD BLANK ✱	10:37
P-6	18.79	25.0	—	13:54		—
P-7	25.10	47.9	4	12:08		12:30
P-8	13.87	42.8	4	11:13		11:36
P-11	8.18	30.4	4	15:04		15:27
P-12	15.43	37.9	4	14:10		14:33
P-13	12.02	27.5	—	14:57		—
P-14	22.70	38.0	4	13:02		13:25

Notes: LEACHATE 16:05

pH = 7.63 @ 25.73 °C

Signature:

PMI
A Terracon Company

ARKANSAS KRAFT CLASS 3N LANDFILL

Green Bay Packaging, Inc.
338 Highway 113 South
Morrilton, Arkansas
~~KT237086~~
KT247004

Well # P-4

PMI Personnel: MWM

Date: 10/15/24

Multi-Parameter Probe: AQUA TROLL 600

Weather: 55° / CLEAR

Well Condition: Good (see notes)

Well Diameter: 2 (inch)

Total Depth: 37.7 (feet)

Depth to Water: 12.68 (feet)

Purge Start Time: 855 (24 hour)

Purge End Time: 9:48 (24 hour)

Purging Rate: 200 (mL / min.)

Sample Time: 9:25 (24 hour)

0.25" / Silicone Tubing: 10 / 1 (feet)

DTW @ Purge End: 14.19 (feet)

Pump Intake Depth: 35.0 (feet)

Pump Type: Peristaltic

TIME (24 hour)	Volume (Liters)	Temp. (Celcius)	Sp. Cond. (µS/cm)	pH (SU)	Turbidity (NTU)	DTW (feet)
900	1	16.91	2973	6.31	0.00	13.37
905	2	16.97	3017	6.30	2.42	13.64
910	3	17.29	2881	6.30	0.30	13.79
915	4	17.37	3066	6.30	1.09	13.88
920	5	17.47	3048	6.30	0.49	13.97
925	6	17.47	3047	6.30	0.20	14.02

Notes: * DUPLICATE *

Signature:

PMI
A Terracon Company

ARKANSAS KRAFT CLASS 3N LANDFILL

Green Bay Packaging, Inc.
338 Highway 113 South
Morrilton, Arkansas
~~KT237086~~ KT247004

Well # P-5

PMI Personnel: MWM

Date: 10/15/24

Multi-Parameter Probe: AQUATROLL 600

Weather: 57° / CLEAR

Well Condition: Good (see notes)		Well Diameter: 2 (inch)	
Total Depth: 37.7 (feet)		Depth to Water: 15.19 (feet)	
Purge Start Time: 10:07 (24 hour)		Purge End Time: 1050 (24 hour)	
Purging Rate: 200 (mL / min.)		Sample Time: 10:37 (24 hour)	
0.25" / Silicone Tubing: 10 / 1 (feet)		DTW @ Purge End: 17.44 (feet)	
Pump Intake Depth: 35.0 (feet)		Pump Type: Peristaltic	

TIME (24 hour)	Volume (Liters)	Temp. (Celcius)	Sp. Cond. (µS/cm)	pH (SU)	Turbidity (NTU)	DTW (feet)
1012	1	18.23	526	6.85	95.8	15.98
1017	2	18.18	491	6.82	64.1	16.25
1022	3	18.31	471	6.77	7.32	16.50
1027	4	18.22	466	6.77	17.3	16.73
1032	5	18.22	458	6.75	10.9	16.96
1037	6	18.21	461	6.76	11.0	17.13

Notes: * FIELD BLANK *

Signature:

PMI
A Terracon Company

ARKANSAS KRAFT CLASS 3N LANDFILL

Green Bay Packaging, Inc.
338 Highway 113 South
Morrilton, Arkansas
~~KT237086~~ KT247334

Well # P-8

PMI Personnel: MWM

Date: 10/15/24

Multi-Parameter Probe: AQUATROLL 600

Weather: 64° / CLEAR

Well Condition: GOOD (see notes)

Well Diameter: 2 (inch)

Total Depth: 42.8 (feet)

Depth to Water: 13.87 (feet)

Purge Start Time: 11:16 (24 hour)

Purge End Time: 11:50 (24 hour)

Purging Rate: 200 (mL / min.)

Sample Time: 11:36 (24 hour)

0.25" / Silicone Tubing: 10 / 1 (feet)

DTW @ Purge End: 21.79 (feet)

Pump Intake Depth: 40.0 (feet)

Pump Type: Peristaltic

TIME (24 hour)	Volume (Liters)	Temp. (Celcius)	Sp. Cond. (µS/cm)	pH (SU)	Turbidity (NTU)	DTW (feet)
1121	1	18.78	4377	7.10	1.50	15.80
1126	2	18.91	4405	7.11	3.06	17.05
1131	3	18.85	4390	7.11	1.64	18.20
1136	4	18.97	4390	7.11	3.42	19.22
1141						

Notes: _____

Signature: _____

PMI
A Terracon Company

ARKANSAS KRAFT CLASS 3N LANDFILL

Green Bay Packaging, Inc.
338 Highway 113 South
Morrilton, Arkansas
~~KI237086~~
KI247004

Well # P-7

PMI Personnel: MWM

Date: 10/15/24

Multi-Parameter Probe: AQUA TROLL 600

Weather: 70° / CLEAR

Well Condition: GOOD (see notes)

Well Diameter: 2 (inch)

Total Depth: 47.9 (feet)

Depth to Water: 25.10 (feet)

Purge Start Time: 12:10 (24 hour)

Purge End Time: 1247 (24 hour)

Purging Rate: 200 (mL / min.)

Sample Time: 1230 (24 hour)

0.25" / Silicone Tubing: 10 / 1 (feet)

DTW @ Purge End: 25.30 (feet)

Pump Intake Depth: 46.0 (feet)

Pump Type: Peristaltic

TIME (24 hour)	Volume (Liters)	Temp. (Celcius)	Sp. Cond. (µS/cm)	pH (SU)	Turbidity (NTU)	DTW (feet)
1215	1	19.92	2379	7.07	2.74	25.27
1220	2	20.03	2381	7.06	3.03	25.28
1225	3	20.14	2382	7.08	5.44	25.29
1230	4	20.17	2384	7.07	6.97	25.30

Notes: _____

Signature: _____

PMI
A Terracon Company

ARKANSAS KRAFT CLASS 3N LANDFILL

Green Bay Packaging, Inc.
338 Highway 113 South
Morrilton, Arkansas
~~KT237086~~

Well # P-14

PMI Personnel: MWM KT247004

Date: 10/15/24

Multi-Parameter Probe: AQUAMAC 6000

Weather: 72° / CLEAR

Well Condition: GOOD (see notes)

Well Diameter: 2 (inch)

Total Depth: 38.0 (feet)

Depth to Water: 22.70 (feet)

Purge Start Time: 1305 (24 hour)

Purge End Time: 13:40 (24 hour)

Purging Rate: 200 (mL / min.)

Sample Time: 1325 (24 hour)

0.25" / Silicone Tubing: 10 / 1 (feet)

DTW @ Purge End: 23.05 (feet)

Pump Intake Depth: 36.0 (feet)

Pump Type: Peristaltic

TIME (24 hour)	Volume (Liters)	Temp. (Celcius)	Sp. Cond. (µS/cm)	pH (SU)	Turbidity (NTU)	DTW (feet)
1310	1	20.24	4997	6.67	7.31	23.03
1325	2	20.32	5003	6.67	0.18	23.04
1320	3	20.30	5001	6.67	0.23	23.04
1325	4	20.34	4999	6.68	0.17	23.05

Notes: _____

Signature: _____

Page: 1 of 1

PMI
A Terracon Company

ARKANSAS KRAFT CLASS 3N LANDFILL

Green Bay Packaging, Inc.
338 Highway 113 South
Morrilton, Arkansas
~~KT237086~~ KT247004

Well # P-12

PMI Personnel: MWM

Date: 10/15/24

Multi-Parameter Probe: AQUA TROLL 600

Weather: 72°F / CLEAR

Well Condition:	GOOD (see notes)	Well Diameter:	2 (inch)
Total Depth:	37.9 (feet)	Depth to Water:	15.43 (feet)
Purge Start Time:	1413 (24 hour)	Purge End Time:	1445 (24 hour)
Purging Rate:	200 (mL / min.)	Sample Time:	1433 (24 hour)
0.25" / Silicone Tubing:	10 / 1 (feet)	DTW @ Purge End:	17.18 (feet)
Pump Intake Depth:	36.0 (feet)	Pump Type:	Peristaltic

TIME (24 hour)	Volume (Liters)	Temp. (Celcius)	Sp. Cond. (µS/cm)	pH (SU)	Turbidity (NTU)	DTW (feet)
1418	1	21.35	918	7.03	4.17	16.60
1423	2	21.32	919	7.03	1.12	16.91
1428	3	21.39	912	7.04	2.80	17.04
1433	4	21.31	909	7.04	1.32	17.13

Notes: _____

Signature: _____

Page: 1 of 1

PMI
A Terracon Company

ARKANSAS KRAFT CLASS 3N LANDFILL

Green Bay Packaging, Inc.
338 Highway 113 South
Morrilton, Arkansas
~~KT237086~~ KT247004

Well # P-11

PMI Personnel: MVM

Date: 10/15/24

Multi-Parameter Probe: AQUATROLL 600

Weather: 72° / CLEAR

Well Condition: GOOD (see notes)		Well Diameter: 2 (inch)	
Total Depth: 30.4 (feet)		Depth to Water: 8.18 (feet)	
Purge Start Time: 1507 (24 hour)		Purge End Time: 1540 (24 hour)	
Purging Rate: 200 (mL / min.)		Sample Time: 1527 (24 hour)	
0.25" / Silicone Tubing: 10 / 1 (feet)		DTW @ Purge End: 10.01 (feet)	
Pump Intake Depth: 28.0 (feet)		Pump Type: Peristaltic	

TIME (24 hour)	Volume (Liters)	Temp. (Celcius)	Sp. Cond. (µS/cm)	pH (SU)	Turbidity (NTU)	DTW (feet)
1512	1	20.71	1491	7.15	5.64	9.78
1517	2	20.57	1487	7.15	3.05	9.88
1522	3	20.55	1486	7.15	1.95	9.98
1527	4	20.39	1480	7.15	1.60	10.01

Notes: _____

Signature: _____

Page: 1 of 1

PMI
A Terracon Company

ARKANSAS KRAFT CLASS 3N LANDFILL

Green Bay Packaging, Inc.
338 Highway 113 South
Morrilton, Arkansas
KT237086

Well # LEACHATE

PMI Personnel: MWM

Date: 10/15/24

Multi-Parameter Probe: AQUA TROLL 600

Weather: 73° / CLEAR

Well Condition: _____ (see notes)

Well Diameter: _____ (inch)

Total Depth: _____ (feet)

Depth to Water: _____ (feet)

Purge Start Time: 1600 (24 hour)

Purge End Time: _____ (24 hour)

Purging Rate: 200 (mL / min.)

Sample Time: 1605 (24 hour)

0.25" / Silicone Tubing: 40 / 1 (feet)

DTW @ Purge End: _____ (feet)

Pump Intake Depth: _____ (feet)

Pump Type: Peristaltic

TIME (24 hour)	Volume (Liters)	Temp. (Celcius)	Sp. Cond. (µS/cm)	pH (SU)	Turbidity (NTU)	DTW (feet)
1605	1	25.73	4909	7.63	15.1	—

Notes: _____

Signature: _____

APPENDIX B

Laboratory Analytical Reports
and
Chain-of-Custody Forms

ANALYTICAL REPORT

November 07, 2024

Pollution Management, Inc.

Sample Delivery Group:	L1790069
Samples Received:	10/17/2024
Project Number:	KT247004
Description:	Arkansas Kraft LF

Report To: Mr. Keifer Vaughn
3512 South Shackleford
Little Rock, AR 72205

Entire Report Reviewed By:

Craig Cothron
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

TABLE OF CONTENTS

P-11 L1790069-01 GW

Collected by: Matt Marbury | Collected date/time: 10/15/24 15:27 | Received date/time: 10/17/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2384584	1	10/17/24 22:55	10/18/24 16:41	JAC	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG2385937	1	10/20/24 14:44	10/20/24 14:44	SJA	Mt. Juliet, TN
Wet Chemistry by Method 9020B	WG2391794	1	11/03/24 17:38	11/03/24 17:38	ASH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2384728	10	10/21/24 15:49	10/21/24 15:49	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2387814	1	10/23/24 16:21	10/23/24 16:21	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9060A	WG2384897	1	10/22/24 01:53	10/22/24 01:53	AF	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387803	1	10/31/24 03:34	11/01/24 10:03	JTM	Mt. Juliet, TN

P-12 L1790069-02 GW

Collected by: Matt Marbury | Collected date/time: 10/15/24 14:33 | Received date/time: 10/17/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2384584	1	10/17/24 22:55	10/18/24 16:41	JAC	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG2385937	1	10/20/24 14:45	10/20/24 14:45	SJA	Mt. Juliet, TN
Wet Chemistry by Method 9020B	WG2391794	1	11/03/24 17:57	11/03/24 17:57	ASH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2384728	5	10/21/24 16:07	10/21/24 16:07	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2387814	5	10/23/24 16:31	10/23/24 16:31	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9060A	WG2384897	1	10/22/24 04:31	10/22/24 04:31	AF	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387803	1	10/31/24 03:34	11/01/24 10:04	JTM	Mt. Juliet, TN

P-14 L1790069-03 GW

Collected by: Matt Marbury | Collected date/time: 10/15/24 13:25 | Received date/time: 10/17/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2384584	1	10/17/24 22:55	10/18/24 16:41	JAC	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG2385937	1	10/20/24 14:45	10/20/24 14:45	SJA	Mt. Juliet, TN
Wet Chemistry by Method 9020B	WG2391794	1	11/03/24 19:40	11/03/24 19:40	ASH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2384728	50	10/21/24 16:42	10/21/24 16:42	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2387814	1	10/23/24 16:42	10/23/24 16:42	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9060A	WG2384897	1	10/22/24 03:12	10/22/24 03:12	AF	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387803	1	10/31/24 03:34	11/01/24 10:06	JTM	Mt. Juliet, TN

LEACHATE L1790069-04 GW

Collected by: Matt Marbury | Collected date/time: 10/15/24 16:05 | Received date/time: 10/17/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2384584	1	10/17/24 22:55	10/18/24 16:41	JAC	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG2386213	1	10/22/24 12:03	10/22/24 12:03	SJA	Mt. Juliet, TN
Wet Chemistry by Method 9020B	WG2391794	1	11/03/24 20:00	11/03/24 20:00	ASH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2384728	1	10/21/24 16:59	10/21/24 16:59	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2387814	1	10/23/24 16:53	10/23/24 16:53	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9060A	WG2384897	2	10/22/24 02:16	10/22/24 02:16	AF	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387803	1	10/31/24 03:34	11/01/24 10:08	JTM	Mt. Juliet, TN

P-4 L1790069-06 GW

Collected by: Matt Marbury | Collected date/time: 10/15/24 09:25 | Received date/time: 10/17/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385253	1	10/18/24 22:15	10/19/24 16:33	JAC	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG2386213	1	10/22/24 12:04	10/22/24 12:04	SJA	Mt. Juliet, TN
Wet Chemistry by Method 9020B	WG2391794	1	11/03/24 20:19	11/03/24 20:19	ASH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385378	10	10/21/24 21:21	10/21/24 21:21	ZSA	Mt. Juliet, TN

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

P-4 L1790069-06 GW

Collected by: Matt Marbury | Collected date/time: 10/15/24 09:25 | Received date/time: 10/17/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9060A	WG2385649	1	10/20/24 14:46	10/20/24 14:46	AF	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387803	1	10/31/24 03:34	11/01/24 10:09	JTM	Mt. Juliet, TN

P-5 L1790069-07 GW

Collected by: Matt Marbury | Collected date/time: 10/15/24 10:37 | Received date/time: 10/17/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385253	1	10/18/24 22:15	10/19/24 16:33	JAC	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG2386213	1	10/22/24 12:04	10/22/24 12:04	SJA	Mt. Juliet, TN
Wet Chemistry by Method 9020B	WG2391794	1	11/03/24 19:46	11/03/24 19:46	ASH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385378	1	10/21/24 21:34	10/21/24 21:34	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9060A	WG2385649	1	10/20/24 15:51	10/20/24 15:51	AF	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387803	1	10/31/24 03:34	11/01/24 10:11	JTM	Mt. Juliet, TN

P-7 L1790069-08 GW

Collected by: Matt Marbury | Collected date/time: 10/15/24 12:30 | Received date/time: 10/17/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385253	1	10/18/24 22:15	10/19/24 16:33	JAC	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG2386213	1	10/22/24 12:04	10/22/24 12:04	SJA	Mt. Juliet, TN
Wet Chemistry by Method 9020B	WG2391794	1	11/03/24 20:05	11/03/24 20:05	ASH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385378	10	10/21/24 21:47	10/21/24 21:47	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9060A	WG2385649	1	10/20/24 16:29	10/20/24 16:29	AF	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387803	1	10/31/24 03:34	11/01/24 10:16	JTM	Mt. Juliet, TN

P-8 L1790069-09 GW

Collected by: Matt Marbury | Collected date/time: 10/15/24 11:36 | Received date/time: 10/17/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385253	1	10/18/24 22:15	10/19/24 16:33	JAC	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG2385911	1	10/20/24 15:12	10/20/24 15:12	SDE	Mt. Juliet, TN
Wet Chemistry by Method 9020B	WG2391794	1	11/03/24 20:23	11/03/24 20:23	ASH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385378	20	10/21/24 21:59	10/21/24 21:59	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9060A	WG2385649	1	10/20/24 16:48	10/20/24 16:48	AF	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387803	1	10/31/24 03:34	11/01/24 10:18	JTM	Mt. Juliet, TN

DUP L1790069-10 GW

Collected by: Matt Marbury | Collected date/time: 10/15/24 00:00 | Received date/time: 10/17/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385253	1	10/18/24 22:15	10/19/24 16:33	JAC	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG2386213	1	10/22/24 12:04	10/22/24 12:04	SJA	Mt. Juliet, TN
Wet Chemistry by Method 9020B	WG2391794	1	11/05/24 13:05	11/05/24 13:05	ASH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385378	10	10/21/24 22:12	10/21/24 22:12	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9060A	WG2385649	1	10/20/24 17:11	10/20/24 17:11	AF	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387803	1	10/31/24 03:34	11/01/24 10:19	JTM	Mt. Juliet, TN

SAMPLE SUMMARY

FB L1790069-11 GW

Collected by: Matt Marbury
Collected date/time: 10/15/24 10:37
Received date/time: 10/17/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385253	1	10/18/24 22:15	10/19/24 16:33	JAC	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG2385937	1	10/20/24 14:45	10/20/24 14:45	SJA	Mt. Juliet, TN
Wet Chemistry by Method 9020B	WG2391794	1	11/05/24 13:24	11/05/24 13:24	ASH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385378	1	10/21/24 22:25	10/21/24 22:25	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9060A	WG2385649	1	10/20/24 17:32	10/20/24 17:32	AF	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387803	1	10/31/24 03:34	11/01/24 10:21	JTM	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Craig Cothron
Project Manager

Sample Delivery Group (SDG) Narrative

The following analysis were performed from an unpreserved, insufficiently or inadequately preserved sample.

Lab Sample ID	Project Sample ID	Method
L1790069-04	LEACHATE	4500S2 D-2011, 9060A
L1790069-06	P-4	4500S2 D-2011
L1790069-10	DUP	4500S2 D-2011

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	1250000		20000	1	10/18/2024 16:41	WG2384584

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfide	U		6.50	50.0	1	10/20/2024 14:44	WG2385937

Wet Chemistry by Method 9020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOX	U		33.0	150	1	11/03/2024 17:38	WG2391794

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	51100	J6	547	1000	1	10/23/2024 16:21	WG2387814
Sulfate	445000		6370	50000	10	10/21/2024 15:49	WG2384728

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	412	J	102	1000	1	10/22/2024 01:53	WG2384897

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Cadmium	U		0.479	2.00	1	11/01/2024 10:03	WG2387803
Iron	74.6	J	18.0	100	1	11/01/2024 10:03	WG2387803
Lead	U		2.99	6.00	1	11/01/2024 10:03	WG2387803
Manganese	522		0.934	10.0	1	11/01/2024 10:03	WG2387803

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	587000		13300	1	10/18/2024 16:41	WG2384584

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfide	U		6.50	50.0	1	10/20/2024 14:45	WG2385937

Wet Chemistry by Method 9020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOX	U		33.0	150	1	11/03/2024 17:57	WG2391794

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	65200		2740	5000	5	10/23/2024 16:31	WG2387814
Sulfate	105000	J5	3180	25000	5	10/21/2024 16:07	WG2384728

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	508	J	102	1000	1	10/22/2024 04:31	WG2384897

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Cadmium	U		0.479	2.00	1	11/01/2024 10:04	WG2387803
Iron	279		18.0	100	1	11/01/2024 10:04	WG2387803
Lead	U		2.99	6.00	1	11/01/2024 10:04	WG2387803
Manganese	1000		0.934	10.0	1	11/01/2024 10:04	WG2387803

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	6180000		100000	1	10/18/2024 16:41	WG2384584

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfide	U		6.50	50.0	1	10/20/2024 14:45	WG2385937

Wet Chemistry by Method 9020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOX	U		33.0	150	1	11/03/2024 19:40	WG2391794

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	98200	J6	547	1000	1	10/23/2024 16:42	WG2387814
Sulfate	3470000		31800	250000	50	10/21/2024 16:42	WG2384728

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	741	J	102	1000	1	10/22/2024 03:12	WG2384897

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Cadmium	U		0.479	2.00	1	11/01/2024 10:06	WG2387803
Iron	U		18.0	100	1	11/01/2024 10:06	WG2387803
Lead	U		2.99	6.00	1	11/01/2024 10:06	WG2387803
Manganese	75.1		0.934	10.0	1	11/01/2024 10:06	WG2387803

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	4080000		100000	1	10/18/2024 16:41	WG2384584

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Sulfide	38.0	J	6.50	50.0	1	10/22/2024 12:03	WG2386213

Wet Chemistry by Method 9020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TOX	44.3	J P1	33.0	150	1	11/03/2024 20:00	WG2391794

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	163000		547	1000	1	10/23/2024 16:53	WG2387814
Sulfate	28000		637	5000	1	10/21/2024 16:59	WG2384728

Wet Chemistry by Method 9060A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	81900		204	2000	2	10/22/2024 02:16	WG2384897

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium	U		0.479	2.00	1	11/01/2024 10:08	WG2387803
Iron	3080		18.0	100	1	11/01/2024 10:08	WG2387803
Lead	3.38	J	2.99	6.00	1	11/01/2024 10:08	WG2387803
Manganese	684		0.934	10.0	1	11/01/2024 10:08	WG2387803

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	3000000		50000	1	10/19/2024 16:33	WG2385253

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfide	U		6.50	50.0	1	10/22/2024 12:04	WG2386213

Wet Chemistry by Method 9020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOX	U	P1	33.0	150	1	11/03/2024 20:19	WG2391794

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	108000		5470	10000	10	10/21/2024 21:21	WG2385378
Sulfate	1820000		6370	50000	10	10/21/2024 21:21	WG2385378

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	868	J	102	1000	1	10/20/2024 14:46	WG2385649

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Cadmium	U		0.479	2.00	1	11/01/2024 10:09	WG2387803
Iron	64.7	J	18.0	100	1	11/01/2024 10:09	WG2387803
Lead	U		2.99	6.00	1	11/01/2024 10:09	WG2387803
Manganese	85.6		0.934	10.0	1	11/01/2024 10:09	WG2387803

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	298000		10000	1	10/19/2024 16:33	WG2385253

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfide	U		6.50	50.0	1	10/22/2024 12:04	WG2386213

Wet Chemistry by Method 9020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOX	U		33.0	150	1	11/03/2024 19:46	WG2391794

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	33400	J6	547	1000	1	10/21/2024 21:34	WG2385378
Sulfate	19200		637	5000	1	10/21/2024 21:34	WG2385378

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	447	J P1	102	1000	1	10/20/2024 15:51	WG2385649

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Cadmium	U		0.479	2.00	1	11/01/2024 10:11	WG2387803
Iron	1690		18.0	100	1	11/01/2024 10:11	WG2387803
Lead	U		2.99	6.00	1	11/01/2024 10:11	WG2387803
Manganese	41.4		0.934	10.0	1	11/01/2024 10:11	WG2387803

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	2150000		50000	1	10/19/2024 16:33	WG2385253

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfide	U		6.50	50.0	1	10/22/2024 12:04	WG2386213

Wet Chemistry by Method 9020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOX	U		33.0	150	1	11/03/2024 20:05	WG2391794

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	107000		5470	10000	10	10/21/2024 21:47	WG2385378
Sulfate	931000		6370	50000	10	10/21/2024 21:47	WG2385378

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	144	J	102	1000	1	10/20/2024 16:29	WG2385649

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Cadmium	0.559	J	0.479	2.00	1	11/01/2024 10:16	WG2387803
Iron	1650		18.0	100	1	11/01/2024 10:16	WG2387803
Lead	U		2.99	6.00	1	11/01/2024 10:16	WG2387803
Manganese	114		0.934	10.0	1	11/01/2024 10:16	WG2387803

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	3360000		100000	1	10/19/2024 16:33	WG2385253

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfide	U		6.50	50.0	1	10/20/2024 15:12	WG2385911

Wet Chemistry by Method 9020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOX	65.6	J	33.0	150	1	11/03/2024 20:23	WG2391794

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1070000		10900	20000	20	10/21/2024 21:59	WG2385378
Sulfate	514000		12700	100000	20	10/21/2024 21:59	WG2385378

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	439	J	102	1000	1	10/20/2024 16:48	WG2385649

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Cadmium	U		0.479	2.00	1	11/01/2024 10:18	WG2387803
Iron	37.9	J	18.0	100	1	11/01/2024 10:18	WG2387803
Lead	3.03	J	2.99	6.00	1	11/01/2024 10:18	WG2387803
Manganese	132		0.934	10.0	1	11/01/2024 10:18	WG2387803

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	3200000		50000	1	10/19/2024 16:33	WG2385253

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfide	U		6.50	50.0	1	10/22/2024 12:04	WG2386213

Wet Chemistry by Method 9020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOX	50.5	J	33.0	150	1	11/05/2024 13:05	WG2391794

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	106000		5470	10000	10	10/21/2024 22:12	WG2385378
Sulfate	1790000		6370	50000	10	10/21/2024 22:12	WG2385378

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	865	J	102	1000	1	10/20/2024 17:11	WG2385649

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Cadmium	U		0.479	2.00	1	11/01/2024 10:19	WG2387803
Iron	60.2	J	18.0	100	1	11/01/2024 10:19	WG2387803
Lead	U		2.99	6.00	1	11/01/2024 10:19	WG2387803
Manganese	85.6		0.934	10.0	1	11/01/2024 10:19	WG2387803

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	13000		10000	1	10/19/2024 16:33	WG2385253

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfide	U		6.50	50.0	1	10/20/2024 14:45	WG2385937

Wet Chemistry by Method 9020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOX	U		33.0	150	1	11/05/2024 13:24	WG2391794

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	U		547	1000	1	10/21/2024 22:25	WG2385378
Sulfate	U		637	5000	1	10/21/2024 22:25	WG2385378

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	U		102	1000	1	10/20/2024 17:32	WG2385649

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Cadmium	U		0.479	2.00	1	11/01/2024 10:21	WG2387803
Iron	U		18.0	100	1	11/01/2024 10:21	WG2387803
Lead	U		2.99	6.00	1	11/01/2024 10:21	WG2387803
Manganese	U		0.934	10.0	1	11/01/2024 10:21	WG2387803

Method Blank (MB)

(MB) R4135168-1 10/18/24 16:41

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Dissolved Solids	U		10000	10000

L1789837-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1789837-01 10/18/24 16:41 • (DUP) R4135168-3 10/18/24 16:41

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	14800000	15000000	1	1.61		10

L1790020-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1790020-01 10/18/24 16:41 • (DUP) R4135168-4 10/18/24 16:41

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	170000	180000	1	5.71		10

Laboratory Control Sample (LCS)

(LCS) R4135168-2 10/18/24 16:41

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Dissolved Solids	8800000	8620000	98.0	85.0-115	

Method Blank (MB)

(MB) R4136137-1 10/19/24 16:33

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Dissolved Solids	U		10000	10000

L1790069-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1790069-06 10/19/24 16:33 • (DUP) R4136137-3 10/19/24 16:33

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	3000000	3230000	1	7.38		10

L1790437-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1790437-06 10/19/24 16:33 • (DUP) R4136137-4 10/19/24 16:33

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	688000	715000	1	3.85		10

Laboratory Control Sample (LCS)

(LCS) R4136137-2 10/19/24 16:33

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8750000	99.4	85.0-115	

QUALITY CONTROL SUMMARY

L1790069-09

Method Blank (MB)

(MB) R4135116-1 10/20/24 15:04

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Sulfide	U		6.50	50.0

L1789487-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1789487-08 10/20/24 15:09 • (DUP) R4135116-5 10/20/24 15:10

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfide	U	U	1	0.000		20

L1790426-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1790426-01 10/20/24 15:12 • (DUP) R4135116-6 10/20/24 15:13

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfide	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R4135116-2 10/20/24 15:04

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfide	500	511	102	85.0-115	

L1789487-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1789487-01 10/20/24 15:05 • (MS) R4135116-3 10/20/24 15:06 • (MSD) R4135116-4 10/20/24 15:06

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfide	500	15.0	511	506	102	101	1	80.0-120			0.983	20

Method Blank (MB)

(MB) R4135107-1 10/20/24 14:41

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Sulfide	U		6.50	50.0

L1789676-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1789676-02 10/20/24 14:42 • (DUP) R4135107-5 10/20/24 14:43

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfide	U	U	1	0.000		20

L1790589-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1790589-04 10/20/24 14:46 • (DUP) R4135107-6 10/20/24 14:46

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfide	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R4135107-2 10/20/24 14:42

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfide	500	527	105	85.0-115	

L1789676-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1789676-01 10/20/24 14:42 • (MS) R4135107-3 10/20/24 14:42 • (MSD) R4135107-4 10/20/24 14:42

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfide	500	U	453	452	90.6	90.4	1	80.0-120			0.221	20

QUALITY CONTROL SUMMARY

L1790069-04,06,07,08,10

Method Blank (MB)

(MB) R4135794-1 10/22/24 12:00

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Sulfide	U		6.50	50.0

L1789468-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1789468-04 10/22/24 12:01 • (DUP) R4135794-3 10/22/24 12:01

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Sulfide	7.00	U	1	0.000		20

L1790437-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1790437-04 10/22/24 12:04 • (DUP) R4135794-6 10/22/24 12:05

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Sulfide	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R4135794-2 10/22/24 12:01

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Sulfide	500	513	103	85.0-115	

L1789599-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1789599-02 10/22/24 12:02 • (MS) R4135794-4 10/22/24 12:02 • (MSD) R4135794-5 10/22/24 12:02

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Sulfide	500	U	506	514	101	103	1	80.0-120			1.57	20

Method Blank (MB)

(MB) R4141475-2 11/03/24 13:54

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
TOX	U		33.0	150

Method Blank (MB)

(MB) R4141483-2 10/24/24 12:54

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
TOX	U		33.0	150

Method Blank (MB)

(MB) R4142589-2 11/05/24 12:10

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
TOX	U		33.0	150

Method Blank (MB)

(MB) R4142603-2 11/04/24 13:41

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
TOX	U		33.0	150

L1787529-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1787529-09 11/03/24 15:00 • (DUP) R4141475-3 11/03/24 15:09

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
TOX	118	150	1	23.4	J P1	20

L1787563-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1787563-03 11/03/24 15:18 • (DUP) R4141475-4 11/03/24 15:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
TOX	65.2	89.2	1	31.1	J P1	20

L1787529-21 Original Sample (OS) • Duplicate (DUP)

(OS) L1787529-21 11/03/24 15:37 • (DUP) R4141475-5 11/03/24 15:47

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
TOX	U	312	5	200	J P1	20

L1789700-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1789700-03 11/03/24 16:41 • (DUP) R4141475-6 11/03/24 16:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
TOX	U	U	1	0.000		20

L1789837-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1789837-01 11/03/24 17:00 • (DUP) R4141475-7 11/03/24 17:09

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
TOX	84.7	118	1	32.5	J P1	20

L1789837-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1789837-02 11/03/24 17:19 • (DUP) R4141475-8 11/03/24 17:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
TOX	37.7	60.6	1	46.7	J P1	20

L1790069-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1790069-01 11/03/24 17:38 • (DUP) R4141475-9 11/03/24 17:47

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
TOX	U	U	1	0.000		20

L1790069-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1790069-02 11/03/24 17:57 • (DUP) R4141475-10 11/03/24 18:06

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
TOX	U	U	1	0.000		20

L1790069-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1790069-03 11/03/24 19:40 • (DUP) R4141475-13 11/03/24 19:50

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
TOX	U	U	1	0.000		20

L1790069-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1790069-04 11/03/24 20:00 • (DUP) R4141475-14 11/03/24 20:09

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
TOX	44.3	35.6	1	21.9	J P1	20

L1790069-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1790069-06 11/03/24 20:19 • (DUP) R4141475-15 11/03/24 20:29

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
TOX	U	39.3	1	200	J P1	20

L1790069-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1790069-07 11/03/24 19:46 • (DUP) R4141515-3 11/03/24 19:56

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
TOX	U	U	1	0.000		20

L1790069-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1790069-08 11/03/24 20:05 • (DUP) R4141515-4 11/03/24 20:14

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
TOX	U	U	1	0.000		20

L1790069-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1790069-09 11/03/24 20:23 • (DUP) R4141515-5 11/03/24 20:34

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
TOX	65.6	55.9	1	16.1	J	20

L1790135-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1790135-01 11/05/24 12:27 • (DUP) R4142589-3 11/05/24 12:37

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
TOX	60.5	U	1	200	P1	20

L1790220-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1790220-01 11/05/24 12:46 • (DUP) R4142589-4 11/05/24 12:56

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
TOX	85.4	84.7	1	0.854	J	20

L1790069-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1790069-10 11/05/24 13:05 • (DUP) R4142589-5 11/05/24 13:15

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
TOX	50.5	45.9	1	9.56	J	20

L1790069-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1790069-11 11/05/24 13:24 • (DUP) R4142589-6 11/05/24 13:34

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	ug/l	ug/l		%		%
TOX	U	U	1	0.000		20

L1792907-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1792907-01 11/05/24 13:43 • (DUP) R4142589-7 11/05/24 13:52

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	ug/l	ug/l		%		%
TOX	U	U	5	0.000		20

Sample Narrative:

OS: Dilution due to matrix

L1789837-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1789837-03 11/04/24 17:33 • (DUP) R4142603-3 11/04/24 17:43

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	ug/l	ug/l		%		%
TOX	90.4	U	1	200	P1	20

Laboratory Control Sample (LCS)

(LCS) R4141475-1 11/03/24 12:58

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	ug/l	ug/l	%	%	
TOX	250	239	95.4	85.0-115	

Laboratory Control Sample (LCS)

(LCS) R4141483-1 10/24/24 12:02

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	ug/l	ug/l	%	%	
TOX	250	265	106	85.0-115	

Laboratory Control Sample (LCS)

(LCS) R4142603-1 11/04/24 12:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TOX	250	229	91.4	85.0-115	

L1787529-21 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1787529-21 10/24/24 19:37 • (MS) R4141483-4 10/24/24 20:25 • (MSD) R4141483-5 10/24/24 20:45

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TOX	250	434	965	576	213	56.7	1	80.0-120	J5	J3 J6	50.6	20

Sample Narrative:

OS: Duplicate Analysis performed due to QC failure. Results confirm; reporting in hold data

MS: Spike failed due to matrix interference

MSD: Spike failed due to matrix interference

Method Blank (MB)

(MB) R4136363-1 10/21/24 14:05

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Sulfate	U		637	5000

L1790016-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1790016-01 10/21/24 15:15 • (DUP) R4136363-3 10/21/24 23:22

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Sulfate	178000	177000	5	0.423		15

L1790069-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1790069-02 10/21/24 16:07 • (DUP) R4136363-6 10/22/24 00:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Sulfate	105000	107000	5	1.46		15

Laboratory Control Sample (LCS)

(LCS) R4136363-2 10/21/24 14:22

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Sulfate	40000	36300	90.7	80.0-120	

L1790016-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790016-01 10/21/24 15:15 • (MS) R4136363-4 10/21/24 23:40 • (MSD) R4136363-5 10/21/24 23:57

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Sulfate	40000	178000	335000	335000	392	392	5	80.0-120	V	V	0.0697	15

L1790069-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1790069-02 10/21/24 16:07 • (MS) R4136363-7 10/22/24 00:32

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Sulfate	40000	105000	275000	424	5	80.0-120	J5

Method Blank (MB)

(MB) R4135722-1 10/21/24 20:56

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		547	1000
Sulfate	U		637	5000

L1790069-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1790069-07 10/21/24 21:34 • (DUP) R4135722-3 10/22/24 05:37

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	33400	34400	1	2.94		15
Sulfate	19200	20300	1	5.98		15

L1790069-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1790069-11 10/21/24 22:25 • (DUP) R4135722-6 10/22/24 06:15

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	U	U	1	0.000		15
Sulfate	U	U	1	0.000		15

Laboratory Control Sample (LCS)

(LCS) R4135722-2 10/21/24 21:08

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	38700	96.9	80.0-120	
Sulfate	40000	39000	97.4	80.0-120	

L1790069-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790069-07 10/21/24 21:34 • (MS) R4135722-4 10/22/24 05:50 • (MSD) R4135722-5 10/22/24 06:03

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	40000	33400	64100	65800	76.7	81.2	1	80.0-120	J6		2.73	15
Sulfate	40000	19200	53500	54400	85.8	88.2	1	80.0-120			1.77	15

L1790069-11 Original Sample (OS) • Matrix Spike (MS)

(OS) L1790069-11 10/21/24 22:25 • (MS) R4135722-7 10/22/24 06:28

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	U	38000	95.0	1	80.0-120	
Sulfate	40000	U	38200	95.6	1	80.0-120	

Method Blank (MB)

(MB) R4136870-1 10/23/24 15:37

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Chloride	U		547	1000

L1790069-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1790069-01 10/23/24 16:21 • (DUP) R4136870-3 10/23/24 19:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	51100	51300	1	0.583		15

L1790069-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1790069-03 10/23/24 16:42 • (DUP) R4136870-6 10/23/24 20:21

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	98200	98800	1	0.664		15

Laboratory Control Sample (LCS)

(LCS) R4136870-2 10/23/24 15:48

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Chloride	40000	37500	93.6	80.0-120	

L1790069-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790069-01 10/23/24 16:21 • (MS) R4136870-4 10/23/24 19:59 • (MSD) R4136870-5 10/23/24 20:10

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Chloride	40000	51100	81500	81400	76.0	75.9	1	80.0-120	J6	J6	0.0384	15

L1790069-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1790069-03 10/23/24 16:42 • (MS) R4136870-7 10/23/24 20:31

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	ug/l	ug/l	ug/l	%		%	
Chloride	40000	98200	119000	52.2	1	80.0-120	J6

Method Blank (MB)

(MB) R4135662-2 10/21/24 21:00

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
TOC (Total Organic Carbon)	U		102	1000

L1789837-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1789837-02 10/21/24 22:36 • (DUP) R4135662-5 10/21/24 22:58

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
TOC (Total Organic Carbon)	660	333	1	65.8	J P1	20

L1790069-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1790069-02 10/22/24 04:31 • (DUP) R4135662-8 10/22/24 04:53

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
TOC (Total Organic Carbon)	508	514	1	1.25	J	20

Laboratory Control Sample (LCS)

(LCS) R4135662-1 10/21/24 20:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TOC (Total Organic Carbon)	25000	23800	95.0	85.0-115	

L1789837-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1789837-01 10/21/24 21:24 • (MS) R4135662-3 10/21/24 21:49 • (MSD) R4135662-4 10/21/24 22:11

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TOC (Total Organic Carbon)	25000	782	24200	24400	93.8	94.4	1	85.0-115			0.576	20

L1790069-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790069-03 10/22/24 03:12 • (MS) R4135662-6 10/22/24 03:35 • (MSD) R4135662-7 10/22/24 04:00

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TOC (Total Organic Carbon)	25000	741	24800	25000	96.4	97.2	1	85.0-115			0.802	20

QUALITY CONTROL SUMMARY

L1790069-06,07,08,09,10,11

Method Blank (MB)

(MB) R4135212-2 10/20/24 13:05

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
TOC (Total Organic Carbon)	U		102	1000

L1790069-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1790069-07 10/20/24 15:51 • (DUP) R4135212-5 10/20/24 16:10

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
TOC (Total Organic Carbon)	447	344	1	26.1	J P1	20

L1790073-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1790073-02 10/20/24 21:49 • (DUP) R4135212-8 10/20/24 22:10

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
TOC (Total Organic Carbon)	6410	6340	1	1.13		20

Laboratory Control Sample (LCS)

(LCS) R4135212-1 10/20/24 12:47

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TOC (Total Organic Carbon)	25000	24300	97.3	85.0-115	

L1790069-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790069-06 10/20/24 14:46 • (MS) R4135212-3 10/20/24 15:09 • (MSD) R4135212-4 10/20/24 15:33

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TOC (Total Organic Carbon)	25000	868	25500	25600	98.5	99.0	1	85.0-115			0.509	20

L1790073-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790073-01 10/20/24 20:41 • (MS) R4135212-6 10/20/24 21:04 • (MSD) R4135212-7 10/20/24 21:27

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TOC (Total Organic Carbon)	25000	9890	34200	34300	97.3	97.8	1	85.0-115			0.321	20

Method Blank (MB)

(MB) R4140782-1 11/01/24 09:36

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Cadmium	U		0.479	2.00
Iron	U		18.0	100
Lead	U		2.99	6.00
Manganese	U		0.934	10.0

Laboratory Control Sample (LCS)

(LCS) R4140782-2 11/01/24 09:38

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cadmium	1000	980	98.0	80.0-120	
Iron	10000	10100	101	80.0-120	
Lead	1000	1010	101	80.0-120	
Manganese	1000	1030	103	80.0-120	

L1789875-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1789875-01 11/01/24 09:40 • (MS) R4140782-4 11/01/24 09:43 • (MSD) R4140782-5 11/01/24 09:45

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cadmium	1000	U	984	976	98.4	97.6	1	75.0-125			0.750	20
Iron	10000	799	10800	10700	99.6	99.4	1	75.0-125			0.204	20
Lead	1000	U	1000	996	100	99.6	1	75.0-125			0.652	20
Manganese	1000	20.6	1040	1030	102	101	1	75.0-125			0.701	20

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
V	The sample concentration is too high to evaluate accurate spike recoveries.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Pollution Management, Inc.

3512 South Shackleford
Little Rock, AR 72205

Billing Information:
Attn: Accounts Payable
3512 South Shackleford
Little Rock, AR 72205

Pres Chk

Report to:
Mr. Keifer Vaughn

Email To: **kvaughn@pmico.com**

Project Description:
Arkansas Kraft LF

City/State Collected: MORRILTON, AR

Please Circle: PT MT CT ET

Phone: **501-221-7122**

Client Project #
KT247004

Lab Project #
POLMALAR-KRAFT

Collected by (print):
MATT MARBURY

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cd, Fe, Mn, Pb 250mlHDPE-HNO3	Chloride, Sulfate 125mlHDPE-NoPres	SULFIDE 250mlAmb-S-NaOH+ZnAc	TDS 250mlHDPE-NoPres	TOC 250mlHDPE-HCl	TOX 1L-Amb-Add H2SO4					Remarks	Sample # (lab only)
P-4	GRAB	GW	35.0	10/15/24	9:25	6	X	X	X	X	X	X						
P-5	GRAB	GW	35.0	10/15/24	10:37	6	X	X	X	X	X	X						
P-7	GRAB	GW	46.0	10/15/24	12:30	6	X	X	X	X	X	X						
P-8	GRAB	GW	40.0	10/15/24	11:36	6	X	X	X	X	X	X						
P-11	GRAB	GW	28.0	10/15/24	15:27	6	X	X	X	X	X	X						-01
P-12	GRAB	GW	36.0	10/15/24	14:33	6	X	X	X	X	X	X						-02
P-14	GRAB	GW	36.0	10/15/24	13:25	6	X	X	X	X	X	X						-03
LEACHATE	GRAB	GW	—	10/15/24	16:05	6	X	X	X	X	X	X						-04
DUP	GRAB	GW	—	10/15/24	—	6	X	X	X	X	X	X						
FB	GRAB	GW	—	10/15/24	10:37	6	X	X	X	X	X	X						

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L790009
B056

Acctnum: **POLMALAR**
Template: **T175296**
Prelogin: **P1103128**
PM: **034 - Craig Cothron**
PB: BF 9/23/24
Shipped Via: **FedEX Ground**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: ✓Y __N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No (No) HCL / MeoH TBR	If preservation required by Login: Date/Time
MK	10/16/24				
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 24	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) CRONER	Date: 10.17.24 Time: 0900	Hold: Condition: NCF / OK (0)

4179 0069

Fed Ex tracking #	Gun ID	Temperature
4171 6904 1815	TLA9	0.3:0.3:0.6
4171 6904 1826	TLA9	2.6:0.3:2.9

Name

Date

Company Name/Address:
Pollution Management, Inc.

3512 South Shackleford
Little Rock, AR 72205

Billing Information:
Attn: Accounts Payable
3512 South Shackleford
Little Rock, AR 72205

Pres Chk

Report to:
Mr. Keifer Vaughn

Email To: kvaughn@pmico.com

Project Description:
Arkansas Kraft LF

City/State Collected: MORRILTON, AR

Please Circle: PT MT CT ET

Phone: 501-221-7122

Client Project # KT247004

Lab Project # POLMALAR-KRAFT

Collected by (print):
MATT MARBURY

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

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12065 Lebanon Rd Mount Juliet, TN 37122
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SDG # L1790069
F239

Acctnum: POLMALAR
Template: T175296
Prelogin: P1103128
PM: 034 - Craig Cothron
PB: BF 9/23/24

Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cd, Fe, Mn, Pb 250mlHDPE-HNO3 (<2)	Chloride, Sulfate 125mlHDPE-NoPres	SULFIDE 250mlAmb-S-NaOH+ZnAc	TDS 250mlHDPE-NoPres	TOC 250mlHDPE-HCl	TOX 1L-Amb-Add H2SO4	Remarks	Sample # (lab only)
P-4	GRAB	GW	35.0	10/15/24	9:25	6	X	X	X	X	X	X	-06 -04	-06
P-5	GRAB	GW	35.0	10/15/24	10:37	6	X	X	X	X	X	X	-07 -05	-04
P-7	GRAB	GW	46.0	10/15/24	12:30	6	X	X	X	X	X	X	-08 -06	-07
P-8	GRAB	GW	40.0	10/15/24	11:36	6	X	X	X	X	X	X	-09 -07	-05
P-11	GRAB	GW	28.0	10/15/24	15:27	6	X	X	X	X	X	X		
P-12	GRAB	GW	36.0	10/15/24	14:33	6	X	X	X	X	X	X		
P-14	GRAB	GW	36.0	10/15/24	13:25	6	X	X	X	X	X	X		
LEACHATE	GRAB	GW	—	10/15/24	16:05	6	X	X	X	X	X	X		-11 -09
DUP	GRAB	GW	—	10/15/24	—	6	X	X	X	X	X	X	-10 -08	
FB	GRAB	GW	—	10/15/24	10:37	6	X	X	X	X	X	X	-11 -10 -09	-11

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 2.0+0.3=2.3 °C Bottles Received: 6.0

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	10/16/24		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Christopher D. Gallion

Date: 10/18/24 Time: 0900

10/18

10/17-NCF-L1790069 POLMALAR

R5

Time estimate: oh **Time spent:** oh

Members

Hailey Robertson (responsible) Nicolle Faulk CC Craig Cothron

Due on *21 October 2024 8:00 AM* for target *Done*

- [x] Login Clarification needed
- [ ] Chain of custody is incomplete
- [ ] Please specify Metals requested
- [ ] Please specify TCLP requested
- [ ] Received additional samples not listed on COC
- [ ] Sample IDs on containers do not match IDs on COC
- [ ] Client did not "X" analysis
- [ ] Chain of Custody is missing
- [ ] If no COC: Received by:_____
- [ ] If no COC: Date/Time:_____
- [ ] If no COC: Temp./Cont.Rec./pH:_____
- [ ] If no COC: Carrier:_____
- [ ] If no COC: Tracking #:_____
- [ ] Client informed by call
- [x] Client informed by Email
- [ ] Client informed by Voicemail
- [x] Date/Time:_____10/18/24 @ 08:02
- [x] PM initials:_____DOR
- [x] Client Contact:_____Keifer Vaughn

Comments

Hailey Robertson *17 October 2024 5:30 PM*

1) Only received Ids: P-11, P-12, P-14, LEACHATE
2) Leachate samples received out of pH

Darren O. Reeder *18 October 2024 8:11 AM*

1. Two coolers appear to have been delayed and are indicated as ready for our pick up this morning, 10/18/24.
2. Client notified. Proceed.

Nicolle Faulk *18 October 2024 3:12 PM*

added, done

APPENDIX C

Darcian Flow Calculations

CALCULATION SUMMARY SHEET

PROJECT:				***PROJECT NO.***	
ARKANSAS KRAFT CLASS 3N LANDFILL				KT247004	
2ND HALF 2024					
Calculation Title:	Groundwater Flow				
Originated By:	Date:				
Kiefer Vaughn	12/4/2024				
Wells	Depth to Water (ft)	Water Surf. Elev. (amsl)			
P-1	11.76	300.41			
P-2	8.28	298.15			
P-4	12.68	299.49			
P-5	15.19	305.62			
P-6	18.79	286.29			
P-7	18.79	294.87			
P-8	13.87	294.97			
P-11	8.18	299.22			
P-12	15.43	301.01			
P-13	18.79	286.29			
P-14	22.70	284.59			
ΔHEAD Calculations			Distance from Upgradient Well (ft)		
P-5 →	P-14	21.03	1856		
P-4 →	P-2	1.34	1331		
P-12 →	P-11	1.79	1237		
AVG Gradient (I)					
MWP-5 →	MWP-14	0.01133			
MWP-4 →	MWP-2	0.00101			
MWP-12 →	MWP-11	0.00145			
	AVG	**0.00459**			

Average Linear Velocity

groundwater flow rate

$V_x = (K*I) / n_e$

Where,

V_x *is the average linear velocity (length/time),*

K is the hydraulic conductivity (length/time),

I is the hydraulic gradient (length/length),

And n_e *is the effective porosity (decimal).*

K	5.00E-06	*cm/sec*	*Grubbs, Garner & Hoskyn, 1995*	
I	0.004595			
$n_{e\ (min)}$	0.27			
$n_{e\ (max)}$	0.045			
V_x *(min)*	**8.51E-08 cm/sec**			
V_x *(max)*	**5.11E-07 cm/sec**			

APPENDIX D

Historical Groundwater Analytical Results

		Cadmium	Iron	Lead	Manganese	TDS	Chloride	SO4	TOC	Sulfide	TOX	pH
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	S.U.
LEACHATE	d											
	10/6/2020	0.000567(J)	4.32	<0.006	1.07	3290	134	14.9	102	<0.05	0.0583(J)	n/a
	4/15/2021	0.00075	4.37	<0.006	1.08	2590	124	21.1	59	<0.05	0.181	n/a
	10/12/2021	0.00053(J)	4.28	0.00448(J)	0.684	3410	157	48.4	12.9	<0.05	0.0741	n/a
	4/14/2022	0.000523(J)	2.41	<0.006*	0.878	2330	82.2	68.8	53.1	<0.05*	0.0848(J)	n/a
	11/10/2022	<0.002*	3.08	<0.006*	0.606	2990	148	107	85	<0.05*	0.0598(J)	n/a
	4/5/2023	<0.000479*	4.34	0.0033(J)	0.706	2580	86.1	89.9	59.8	<0.025*	0.0533(J)	n/a
	10/12/2023	<0.002*	4.34	<0.006*	0.634	2730	149	41.1	80	<0.05*	0.0875(J)	n/a
	04/11/2024	<0.00200	1.68	<0.00600	0.515	1430	47.2	73.9	60.3	0.169	0.0524 J P1	n/a
	10/15/2024	<0.002*	3.08	0.00338(J)	0.684	4080	163	28	81.9	0.038(J)	0.0443(J)	n/a

		Cadmium	Iron	Lead	Manganese	TDS	Chloride	SO4	TOC	Sulfide	TOX	pH
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	S.U.
P-4	u											
	12/21/1995	n/a	1.262	n/a	0.352	956	25	510	<3	<0.1	0.01	6.74
	6/24/1996	0.0001	2.05	0.114	0.448	1010	31.5	460	<3	<0.1	0.78	6.37
	10/8/1996	0.005	2.73	0.003	0.536	1122	43	554	<3	<0.1	<0.005	6.65
	6/30/1997	0.001	1.85	<0.002	0.426	1134	38	480	<3	<0.1	0.012	6.47
	12/23/1997	0.0009	1.82	<0.002	0.402	1234	40	556	<3	<1	<0.005	6.58
	6/4/1998	<0.0002	2.36	<0.002	0.54	1312	3.5	800	<3	<1	0.011	6.14
	12/3/1998	<0.001	2.34	<0.002	0.506	1460	48.5	660	<3	<1	0.011	6.05
	6/9/1999	<0.0002	1.82	<0.002	0.471	1610	56.3	800	<1	<1	<0.005	6.04
	12/21/1999	<0.0002	1.4	<0.002	0.426	430	38.9	725	3.13	1.4	0.016	4.97
	6/19/2000	<0.0002	0.978	<0.002	0.771	1520	51.7	706	<1	<1	0.014	6.3
	12/19/2000	<0.0001	0.797	<0.001	0.492	1340	46.4	812	<1	<1	<0.005	6.61
	6/12/2001	<0.001	1.44	<0.003	0.587	1490	41.8	630	<1	<2	0.01	4.65
	12/18/2001	0.005	1.91	<0.003	0.212	1380	33.4	758	<1	<2	<0.005	6.33
	6/18/2002	0.001	0.623	<0.003	0.16	1650	39.8	640	1.31	<0.11	<0.005	5.98
	12/2/2002	<0.001	1.27	<0.003	0.429	1520	32.2	718	<1	<1	<0.005	6.47
	6/23/2003	<0.001	2.4	<0.0038	0.38	1910	40.8	976	1.1	<2	<0.005	6.23
	12/8/2003	<0.001	3.1	<0.003	0.57	1880	45.5	1020	1.4	<2	<0.005	6.43
	6/25/2004	<0.001	3.3	<0.003	0.64	2070	46	1110	1.1	<2	<0.005	6.21
	12/14/2004	<0.001	2.2	<0.003	0.4	1790	45.8	1270	<1	<2	<0.01	6.12
	6/13/2005	<0.004	3.1	<0.001	0.77	2200	50	1100	1.2	<1	<0.005	6.3
	12/21/2005	<0.004	2.9	<0.001	0.54	2000	120	1100	1	<1	0.015	5.55
	6/9/2006	<0.004	2.4	<0.001	0.41	2200	59	1100	1.1	<1	0.017	6.86
	12/14/2006	<0.004	2.9	<0.001	0.68	2000	58	970	<1	<1	<0.1	6.35
	6/13/2007	<0.005	2.6	<0.005	0.51	2200	60	1100	3.7	<0.05	<0.1	6.35
	12/13/2007	<0.005	3	<0.005	0.52	2200	70	1000	1.8	<0.05	<0.1	6.05
	5/27/2008	<0.005	4.4	<0.005	0.72	2500	69	1300	3.4	<0.05	<0.1	6.42
	11/10/2008	<0.005	3.6	<0.005	0.66	2400	81	1200	2.7	<0.05	<0.1	6.39
	5/13/2009	<0.005	2.9	<0.005	0.56	2300	75	1200	1.9	<0.05	<0.1	6.85
	11/6/2009	<0.005	3.1	<0.005	0.51	2500	82	1300	1.8	<0.05	<0.1	5.93
	5/25/2010	<0.005	3.6	<0.005	0.88	3100	78	1800	<1	<0.05	<0.1	7.01
	11/1/2010	<0.005	3.9	<0.025	0.5	2800	94	1500	<1	<0.05	<0.1	6.39
	5/18/2011	<0.0005	1.53	<0.015	0.188	2800	80.7	1370	<1	<0.1	<0.005	6.03
	11/10/2011	<0.0005	1.64	<0.015	0.235	2600	82.9	1250	<1	<0.1	<0.005	6.09
	4/11/2012	<0.0005	1.49	<0.015	0.294	2500	63.6	1100	1.19	<0.1	<0.005	5.944
	10/30/2012	<0.0005	2.04	<0.015	0.307	2500	86.2	1110	<1	<0.1	0.077	6.27
	5/28/2013	0.00072	4.1	<0.005	0.54	2700	91	1500	0.95	<0.05	<0.1	6.36
	11/5/2013	0.0029	3.2	0.0024	0.52	2400	80	13(O)	1	<0.05	<0.1	6.28
	5/19/2014	0.0016	2.2	<0.005	0.38	2100	90	1500	0.73	<0.05	<0.1	6.22
	11/10/2014	<0.005	2.9	0.0033	0.48	2200	94	1300	0.86	<0.05	<0.1	5.16
	5/22/2015	<0.005	1.92	0.00245	0.298	2380	83.2	1290	4.28	<0.05	<0.1	6.47
	11/23/2015	<0.005	3.03	0.00834	0.478	2600	91.7	1570	1.39	<0.05	<0.1	6.35
	6/1/2016	<0.005	2.75	<0.005	0.417	2730	87.8	1520	1.24	<0.05	<0.1	6.42
	11/30/2016	<0.005	1.31	<0.005	0.214	2690	96.5	1470	2.31	<0.05	0.0362	5.93
	5/23/2017	<0.0005	1.14	<0.0156	0.161	3010	86.6	1110	<1	<0.1	0.12	6.11
	11/14/2017	<0.0005	1.21	<0.0156	0.194	2950	97.1	1630	1.43	<0.1	0.14	6.06
	5/8/2018	<0.002	1.98	<0.005	0.368	2840	94.6	1810	1.16(B)	<0.05	0.0167(J)	n/a
	11/15/2018	<0.002	2.92	<0.005	0.448	2920	90.7	1640	1.04	<0.05	<0.1	6.15
	5/21/2019	<0.002	3.18	0.00383	0.418	2740	87.4	1560	1.38	<0.05	<0.1	6.3
	11/18/2019	<0.002	5.7	0.00576	0.41	3120	90.7	1500	0.831	<0.05	<0.1	6.19
	5/7/2020	<0.00125	0.737	<0.0156	0.167	3220	89.4	1630	1.06	<0.15	<300(O)	6.12
	10/6/2020	<0.002	0.21	<0.006	0.0932	3570	115	2080	1.29	<0.05	<0.1	n/a
	4/15/2021	0.000878(J)	0.651	<0.006	0.129	2950	114	1910	1.07	<0.05	0.048(J)	6.09
	10/12/2021	0.0017(J)	0.508	0.00348(J)	0.0925	3540	110	1820	1.13	<0.05	<0.1	6.05
	4/14/2022	0.000973(J)	0.513	<0.006*	0.108	3490	121	2110	1.06	<0.05*	0.0343(J)	6.38
	11/10/2022	0.000568(J)	0.138	0.011	0.0893	2660	112	1990	0.994(J)	<0.05*	<0.1	6.17
	4/5/2023	<0.000479*	0.152	0.00693	0.107	3610	114	1830	1.34	<0.025*	<0.0277*	6.17
	10/12/2023	0.00106(J)	<0.1*	<0.006*	0.0389	5610	82	3210	0.911(J)	<0.05*	<0.1*	6.52
	04/11/2024	<0.00200	0.159	<0.00600	0.196	2320	63.3	1330	1.92	<0.0500	0.0367 J	6.3
	10/15/2024	<0.002*	0.0647(J)	<0.006*	0.0856	3000	108	1820	0.868(J)	<0.05*	<0.15*	6.3

		Cadmium	Iron	Lead	Manganese	TDS	Chloride	SO4	TOC	Sulfide	TOX	pH
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	S.U.
P-5	u											
	12/21/1995	n/a	2.13	n/a	0.218	243	15	<5	<3	<0.1	<0.005	6.75
	6/24/1996	0.0001	1.13	0.102	0.057	327	16	<5	<3	<0.1	0.025	6.5
	10/8/1996	<0.005	1.87	<0.001	0.145	280	28.5	6	<3	<0.1	<0.005	6.74
	6/30/1997	<0.0002	0.26	<0.002	0.18	436	33	<5	<3	<0.1	<0.005	6.57
	12/23/1997	0.0005	0.485	<0.002	0.172	311	18.5	11.4	<3	<1	0.0097	6.51
	6/4/1998	<0.0002	4.43	<0.002	0.245	371	4.5	<5	<3	<1	0.016	6.35
	12/3/1998	<0.001	0.623	<0.002	0.161	328	30.2	16.4	<3	<1	0.016	6.04
	6/9/1999	<0.0002	2.83	<0.002	0.396	444	48.5	<5	<1	<1	<0.005	6.49
	12/21/1999	<0.0002	0.0438	<0.002	0.0304	1450(O)	37.8	6.46	7.19	<1	0.02	6.07
	6/19/2000	<0.0002	0.0776	<0.002	0.0685	374	43.4	6.63	<1	<1	0.0081	6.9
	12/19/2000	<0.0001	0.0858	<0.001	0.0343	349	38.8	4.22	<1	<1	<0.005	7.11
	6/12/2001	<0.001	2.24	<0.003	0.076	390	44.8	5.3	<1	<2	0.016	4.68
	12/18/2001	0.007	0.985	<0.003	0.043	346	35.8	3.9	<1	<2	<0.005	6.7
	6/18/2002	<0.001	0.373	<0.003	0.091	429	50.3	5.1	<1	<0.11	<0.005	7.03
	12/2/2002	<0.001	0.358	<0.003	0.028	342	39.6	6.8	<1	<1	<0.005	7.25
	6/23/2003	<0.001	0.6	<0.0038	0.17	374	49.3	5.5	<1	<2	<0.005	6.7
	12/8/2003	<0.001	0.23	<0.003	0.21	480	58.6	8	1	<2	<0.005	6.88
	6/25/2004	<0.001	0.3	<0.003	0.11	424	70	5.2	<1	<2	<0.005	6.71
	12/14/2004	<0.001	0.41	<0.003	0.24	409	61	7.7	<1	<2	<0.01	6.3
	6/13/2005	<0.004	0.2	<0.001	0.12	360	75	6.6	<1	<1	0.016	6.65
	12/21/2005	<0.004	0.06	<0.001	0.17	340	49	16	<1	<1	0.0051	6.43
	6/9/2006	<0.004	0.043	<0.001	0.12	420	73	9.1	<1	<1	<0.005	7.32
	12/14/2006	<0.004	0.06	<0.001	0.11	410	77	9.2	<1	<1	0.012	6.59
	6/13/2007	<0.005	0.47	<0.005	0.24	400	66	6.5	2.6	<0.05	<0.1	6.78
	12/13/2007	<0.005	0.11	<0.005	0.17	420	89	7.2	1.7	<0.05	<0.1	6.21
	5/27/2008	<0.005	0.14	<0.005	0.23	380	66	6.6	1.9	<0.05	<0.1	6.95
	11/10/2008	<0.005	1.5	<0.005	0.15	450	120	10	2.2	<0.05	<0.1	6.71
	5/13/2009	<0.005	<0.1	<0.005	0.26	520	130	35	1.1	<0.05	<0.1	6.89
	11/6/2009	<0.005	0.25	<0.005	0.25	530	120	10	1.6	<0.05	<0.1	6.39
	5/25/2010	<0.005	0.13	<0.005	0.18	680	160	56	<1	<0.05	<0.1	7.59
	11/1/2010	<0.005	<0.1	<0.005	0.18	490	120	16	<1	<0.05	<0.01	7.04
	5/18/2011	<0.0005	0.38	<0.015	0.324	450	73.5	18	<1	<0.1	<0.005	6.62
	11/10/2011	<0.0005	1.26	<0.015	0.499	470	83.7	23.9	<1	<0.1	<0.005	6.62
	4/11/2012	<0.0005	0.43	<0.015	0.174	520	101	10.3	<1	<0.1	<0.005	6.39
	10/30/2012	<0.0005	0.0782	<0.015	0.0897	380	67.8	9.26	<1	<0.1	0.093	6.58
	5/28/2013	<0.005	4.7	<0.005	0.38	440	79	18	0.47	<0.05	<0.1	6.87
	11/5/2013	0.001	0.14	0.002	0.13	400	140	760(O)	0.81	<0.05	<0.1	6.86
	5/19/2014	<0.005	0.5	<0.005	0.049	440	95	14	0.36	<0.05	<0.1	6.5
	11/10/2014	<0.005	0.41	0.0029	0.19	390	73	13	0.42	<0.05	<0.1	5.87
	5/22/2015	<0.005	0.551	<0.005	0.173	588	101	733(O)	3.45	<0.05	<0.1	6.86
	11/23/2015	<0.005	0.0361	0.0042	0.123	482	90.6	14.9	1.17	0.016	<0.1	6.72
	6/1/2016	<0.005	0.455	<0.005	0.111	436	69.4	15.2	1.55	<0.05	0.0447	6.81
	11/30/2016	<0.005	0.114	<0.005	0.112	378	55.9	17.1	0.901	<0.05	0.0342	6.08
	5/23/2017	<0.0005	0.233	<0.0156	0.0607	451	65.2	13.6	<1	<0.1	0.38	6.52
	11/14/2017	<0.0005	0.231	<0.0156	0.1	366	51.4	18.2	1.07	<0.1	0.14	n/a
	5/8/2018	<0.002	0.465	0.00494(J)	0.17	421	57.7	31.4	0.943(BJ)	<0.05	0.0219(J)	n/a
	11/15/2018	<0.002	0.195	<0.005	0.0495	364	47.2	14.5	0.587	<0.05	0.013	7.06
	5/21/2019	<0.002	2.54	<0.005	0.257	538	77	66	2.6	<0.05	<0.1	7.06
	11/18/2019	<0.002	1.07	<0.005	0.173	443	60.1	22.4	0.56	<0.05	<0.1	6.91
	5/7/2020	<0.00125	0.197	<0.0156	0.112	346	52.6	21.6	<1	<0.15	<300(O)	6.76
	10/6/2020	<0.002	0.698	0.00646	0.0753	426	60.2	19.6	0.737(J)	<0.05	<0.1	n/a
	4/15/2021	0.000697(J)	0.429	<0.006	0.0326	621	92.4	102	0.907(J)	<0.05	0.0465(J)	6.77
	10/12/2021	<0.002	0.89	<0.006	0.155	396	51.7	21.7	0.567(J)	<0.05	<0.1	6.79
	4/14/2022	0.000513(J)	0.982	<0.006*	0.0484	400	45.7	51.2	0.603(J)	<0.05*	<0.1*	6.9
	11/10/2022	<0.002*	1.81	<0.006*	0.204	360	41.7	34.2	0.769(J)	<0.05*	<0.1	6.7
	4/5/2023	<0.000479*	1.5	<0.00299*	0.222	405	40.2	27.4	0.666(J)	<0.025*	<0.0277*	6.7
	10/12/2023	<0.002*	1.28	<0.006*	0.0987	340	37.2	21.2	0.785(J)	<0.05*	<0.1*	6.68
	04/11/2024	<0.00200	0.366	<0.00600	0.0528	328	34.6	22.3	0.303 J	<0.0500	<0.100	6.74
	10/15/2024	<0.002*	1.69	<0.006*	0.0414	298	33.4	19.2	0.447(J)	<0.05*	<0.15*	6.76

		Cadmium	Iron	Lead	Manganese	TDS	Chloride	SO4	TOC	Sulfide	TOX	pH
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	S.U.
P-7	d											
	12/21/1995	n/a	12.15	n/a	0.462	1764	30	817	<3	<0.1	0.0095	7.09
	6/24/1996	0.0001	1.44	0.134	0.257	1825	29.5	705	<3	<0.1	0.02	6.8
	10/8/1996	0.006	2.65	<0.001	0.227	1808	70.5	658	<3	<0.1	<0.005	7.02
	6/30/1997	<0.0002	0.486	<0.002	0.126	1814	56	685	<3	<0.1	0.0056	7.04
	12/23/1997	0.0038	27.7	0.012	0.76	1867	35	708	<3	<1	<0.005	7.1
	6/4/1998	<0.0002	2.29	<0.002	0.143	1811	7.75	825	<3	<1	0.02	6.87
	12/3/1998	<0.001	0.829	<0.002	0.117	1790	35.2	670	<3	<1	0.036	6.42
	6/9/1999	<0.0002	0.604	<0.002	0.141	1780	139	648	<1	<1	<0.005	6.85
	12/21/1999	<0.0002	0.473	<0.002	0.147	2460	128	658	2.84	1	2.7	6.38
	6/19/2000	<0.0002	0.27	<0.002	0.167	1840	138	689	<1	<1	0.027	7.1
	12/19/2000	<0.0001	0.976	<0.001	0.173	1770	139	745	<1	<1	0.0091	6.64
	6/12/2001	<0.001	1.37	<0.003	0.128	1810	138	600	<1	<2	0.014	4.15
	12/18/2001	0.009	9.41	<0.003	0.29	1800	131	632	<1	<2	<0.005	7.05
	6/18/2002	<0.001	0.593	<0.003	0.137	1890	124	500	<1	<0.11	<0.005	6.94
	12/2/2002	<0.001	7.13	<0.003	0.214	1860	142	582	<1	<1	<0.005	7.1
	6/23/2003	<0.001	1.3	<0.0038	0.1	1850	139	603	1.1	<2	0.0343	6.82
	12/8/2003	<0.001	0.89	<0.003	0.098	1940	144	702	1.5	<2	<0.005	6.83
	6/25/2004	<0.001	0.75	<0.003	0.09	1830	200	944	1.1	<2	<0.005	6.89
	12/14/2004	<0.001	0.52	<0.003	0.075	1890	154	707	<1	<2	0.0189	6.02
	6/13/2005	<0.004	1.1	<0.001	0.077	2000	140	700	1.1	<1	0.0059	6.84
	12/21/2005	<0.004	0.79	<0.001	0.092	1900	210	730	<1	<1	0.013	6.62
	6/9/2006	<0.004	0.62	<0.001	0.076	1900	150	700	<1	<1	<0.005	7.27
	12/14/2006	<0.004	0.68	<0.001	0.082	2000	150	710	<1	<1	0.024	6.78
	6/13/2007	<0.005	0.73	<0.005	0.085	2000	150	730	2.3	<0.05	<0.1	7.05
	12/13/2007	<0.005	0.72	<0.005	0.083	1900	150	700	3	<0.05	<0.1	6.31
	5/27/2008	<0.005	0.77	<0.005	0.097	2000	150	690	2.9	<0.05	<0.1	7.14
	11/10/2008	<0.005	1.1	0.0078	0.093	1800	150	700	2.7	<0.05	<0.1	7.05
	5/13/2009	<0.005	0.99	<0.005	0.1	1900	140	710	1.5	<0.05	<0.1	7.24
	11/6/2009	<0.005	0.78	<0.005	0.084	2000	150	720	2.7	<0.05	<0.1	6.5
	5/25/2010	<0.005	0.79	<0.005	0.091	2000	140	780	95(O)	<0.05	<0.1	7.79
	11/1/2010	<0.005	1.1	<0.025	0.1	1900	72	780	<1	<0.05	<0.1	7.19
	5/18/2011	<0.0005	0.92	<0.015	0.0843	2000	140	745	<1	<0.1	0.013	6.87
	11/10/2011	<0.0005	0.806	<0.015	0.109	2000	134	722	<1	<0.1	<0.005	7.89
	4/11/2012	<0.0005	0.638	<0.015	0.0937	2000	123	687	<1	<0.1	<0.005	6.67
	10/30/2012	<0.0005	0.708	<0.015	0.0931	2000	130	666	<1	<0.1	0.085	6.96
	5/28/2013	0.001	2.2	<0.005	0.11	1900	130	780	<1	<0.05	<0.1	7.02
	11/5/2013	0.0029	0.91	0.0046	0.092	1900	930(O)	500	0.58	<0.05	<0.1	7.03
	5/19/2014	<0.005	0.84	<0.005	0.09	1600	190	760	0.31	<0.05	<0.1	6.84
	11/10/2014	<0.005	0.73	<0.005	0.088	1900	140	770	0.22	<0.05	<0.1	5.98
	5/22/2015	<0.005	1.02	<0.005	0.0981	1980	139	847	3.93	<0.05	<0.1	6.94
	11/23/2015	<0.005	0.517	0.00763	0.0954	1880	138	785	1.19	<0.05	<0.1	6.98
	6/1/2016	<0.005	0.945	<0.005	0.0937	1900	134	809	0.192	<0.05	0.0179	7.02
	11/30/2016	<0.005	0.833	<0.005	0.0905	1840	137	814	1.01	<0.05	0.0312	6.34
	5/23/2017	<0.0005	0.732	<0.0156	0.096	2070	121	674	<1	<0.1	0.087	6.88
	11/14/2017	<0.0005	0.853	<0.0156	0.117	2010	123	797	<1	<0.1	0.14	6.84
	5/8/2018	<0.002	1.4	<0.005	0.101	1910	130	842	0.373(BJ)	<0.05	0.0378(J)	n/a
	11/15/2018	<0.002	0.968	<0.005	0.093	1820	123	876	0.572	<0.05	0.0185	6.83
	5/21/2019	<0.002	2.8	0.00461	0.146	1970	128	867	0.688	<0.05	<0.1	6.95
	11/18/2019	0.00118	1.48	<0.005	0.0941	2120	116	802	0.411	<0.05	<0.1	6.92
	5/7/2020	<0.00125	1.15	<0.0156	0.106	2080	97.7	835	<1	<0.15	<300(O)	6.98
	10/6/2020	<0.002	0.947	<0.006	0.0889	2080	122	830	0.625(J)	<0.05	<0.1	n/a
	4/15/2021	<0.002	0.792	<0.006	0.0924	1970	121	922	0.435(J)	<0.05	0.0576(J)	6.9
	10/12/2021	0.000612(J)	1.61	<0.006	0.0942	2110	115	893	0.487(J)	<0.05	<0.1	6.98
	4/14/2022	0.00107(J)	0.919	<0.006*	0.0946	2140	130	976	0.454(J)	<0.05*	<0.1*	7.13
	11/10/2022	<0.002*	1.34	0.0103	0.104	2110	118	924	0.361(J)	<0.05*	<0.1	6.94
	4/5/2023	<0.000479*	1.32	0.00586(J)	0.107	2840	119	949	0.603(J)	<0.025*	<0.0277*	6.94
	10/12/2023	<0.002*	1.28	<0.006*	0.0987	340	37.2	21.2	0.785(J)	<0.05*	<0.1*	6.68
	04/11/2024	<0.00200	0.839	<0.00600	0.114	2100	121	872	<1.00	<0.0500	0.0308 J P1	6.96
	10/15/2024	0.000559(J)	1.65	<0.006*	0.114	2150	107	931	0.144(J)	<0.05*	<0.15*	7.07

		Cadmium	Iron	Lead	Manganese	TDS	Chloride	SO4	TOC	Sulfide	TOX	pH
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	S.U.
P-8	d											
	12/21/1995	n/a	11.53	n/a	0.464	2679	82.5	451	<3	<0.1	0.05	7.28
	6/24/1996	0.0001	31.9	0.161	0.65	2300	220	380	<3	<0.1	0.045	6.93
	10/8/1996	0.008	99.1	0.033	1.67	2482	930	404	<3	<0.1	0.0075	7.15
	6/30/1997	<0.0002	0.532	<0.002	0.063	2979	705	370	<3	<0.1	0.0075	6.97
	12/23/1997	0.001	2.49	<0.002	0.093	2364	580	412	<3	<1	0.0098	7.2
	6/4/1998	<0.0002	2.32	<0.002	0.06	2414	24.5	365	<3	<1	0.2	6.84
	12/3/1998	<0.001	0.561	<0.002	0.069	2450	750	396	<3	<1	0.0087	6.43
	6/9/1999	<0.0002	0.254	<0.002	0.091	2460	35.9	385	<1	<1	0.0091	7.06
	12/21/1999	0.00023	0.45	<0.002	0.161	3140	741	402	2.23	<1	0.018	6.4
	6/19/2000	<0.0002	0.0526	<0.002	0.0606	2370	707	429	<1	<1	0.012	7.1
	12/19/2000	<0.0001	0.198	<0.001	0.0343	2400	724	440	<1	<1	<0.005	6.61
	6/12/2001	<0.001	1.35	<0.003	0.034	2480	730	355	<1	<2	0.03	4.09
	12/18/2001	0.012	1.54	<0.003	0.074	2420	640	412	<1	<2	<0.005	6.84
	6/18/2002	<0.001	0.441	<0.003	0.019	2580	730	410	2.45	<0.11	<0.005	6.61
	12/2/2002	<0.001	1.67	<0.003	0.069	2520	760	335	<1	<1	<0.005	6.73
	6/23/2003	<0.001	2	<0.0038	0.048	2640	672	366	1.4	<2	0.0207	7.06
	12/8/2003	<0.001	1.1	<0.003	0.087	2680	836	435	1.6	<2	<0.005	7.13
	6/25/2004	<0.001	1.5	<0.003	0.038	2910	1110	633	1.3	<2	<0.005	7.03
	12/14/2004	<0.001	1.2	<0.003	0.074	2690	819	463	1.2	<2	0.0308	6.35
	6/13/2005	<0.004	0.58	<0.001	0.048	2700	710	460	1.5	<1	0.12	7.13
	12/21/2005	<0.004	8.8	0.0042	0.24	2700	860	460	2.6	<1	0.075	6.25
	6/9/2006	<0.004	0.027	<0.001	0.0037	2700	790	480	1.4	<1	<0.005	7.39
	12/14/2006	<0.004	0.15	<0.001	0.02	2600	770	440	1.4	<1	0.04	7.09
	6/13/2007	<0.005	1.1	<0.005	0.025	2700	440	370	4.6	<0.05	<0.1	7.19
	12/13/2007	<0.005	0.55	<0.005	<0.01	2700	740	390	3.6	<0.05	<0.1	6.38
	5/27/2008	<0.005	1.2	<0.005	0.062	2700	880	470	4.4	<0.05	<0.1	7.24
	11/10/2008	<0.005	1.4	0.01	0.046	2600	900	420	3.5	<0.05	<0.1	n/a
	5/13/2009	<0.005	0.69	<0.005	0.026	2800	890	420	1.9	<0.05	<0.1	6.8
	11/6/2009	<0.005	1	<0.005	0.048	2800	920	430	3.6	<0.05	<0.1	6.87
	5/25/2010	<0.005	0.46	<0.005	0.032	3000	960	510	<1	<0.05	<0.1	8.25
	11/1/2010	<0.005	1.1	<0.025	<0.01	2800	920	540	1.1	<0.05	<0.1	7.51
	5/18/2011	<0.0005	0.282	<0.015	<0.01	2700	744	472	2.06	<0.1	<0.005	6.92
	11/10/2011	<0.0005	0.106	<0.015	0.0149	2900	821	469	<1	<0.1	<0.005	7.13
	4/11/2012	<0.0005	0.124	<0.015	<0.01	3000	876	413	<1	<0.1	<0.005	6.76
	10/30/2012	<0.0005	0.468	<0.015	0.0308	3000	895	412	<1	<0.1	0.069	7
	5/28/2013	<0.005	0.53	<0.005	0.026	3000	870	490	0.56	<0.05	0.56	7.37
	11/5/2013	0.00074	3.5	0.0052	0.12	2900	180	86	1.2	<0.05	<0.1	7.17
	5/19/2014	<0.005	0.98	<0.005	0.03	2300	890	520	0.48	<0.05	<0.1	6.75
	11/10/2014	<0.005	0.34	<0.005	0.014	2700	990	490	0.57	<0.05	<0.1	5.75
	5/22/2015	<0.005	0.594	<0.005	0.0109	2970	960	514	4	<0.05	<0.1	7.2
	11/23/2015	0.00072	<1	<0.005	<0.01	2950	963	512	2.09	<0.05	<0.1	7.02
	6/1/2016	<0.005	0.93	<0.005	0.0422	2810	974	526	0.479	<0.05	0.0331	7.14
	11/30/2016	<0.005	0.0748	<0.005	0.0046	2850	902	542	0.834	<0.05	0.0395	6.49
	5/23/2017	<0.0005	0.176	<0.0156	<0.0104	3010	909	410	<1	<0.1	0.14	6.99
	11/14/2017	<0.0005	0.241	<0.0156	<0.0104	3060	940	519	1.09	<0.1	0.15	6.97
	5/8/2018	<0.002	0.782	0.00415(J)	0.0487	2660	984	521	0.958(BJ)	<0.05	0.568	n/a
	11/15/2018	<0.002	0.46	<0.005	0.0376	2740	958	530	0.729	<0.05	0.0213	7.11
	5/21/2019	<0.002	1.14	0.00375	0.0293	3150	1030	522	1.26	<0.05	0.0298	7.12
	11/18/2019	0.00115	1.45	<0.005	0.0555	3110	986	494	0.616	<0.05	<0.1	7.18
	5/7/2020	<0.00125	0.242	<0.0156	<0.0104	3010	862	482	<1	<0.15	<300(O)	7.02
	10/6/2020	<0.002	0.0639(J)	<0.006	0.00237(J)	3000	935	519	0.707(J)	<0.05	<0.1	n/a
	4/15/2021	0.000758(J)	0.0357(J)	<0.006	0.00162(J)	2480	815	548	0.577(J)	<0.05	0.0307(J)	6.98
	10/12/2021	0.00066(J)	0.043(J)	<0.006	0.0239	3110	997	556	0.585(J)	<0.05	0.0334(J)	6.99
	4/14/2022	0.00139(J)	0.0358(J)	<0.006*	0.00751(J)	2790	997	570	0.51(J)	<0.05*	<0.1*	7.22
	11/10/2022	<0.002*	<0.1*	<0.006*	0.0405	2640	1210	565	0.549(J)	<0.05*	<0.1	6.97
	4/5/2023	<0.000479*	0.0406(J)	0.00406(J)	0.00602(J)	2860	1070	535	0.825(J)	<0.025*	<0.138*	6.97
	10/12/2023	<0.002*	0.117	<0.006*	0.0182	3330	1190	527	0.612(J)	<0.05*	0.0282(J)	6.97
	04/11/2024	<0.00200	0.0300 J	<0.00600	0.00703 J	3160	987	587	0.523 J	<0.0500	0.0577 J	6.98
	10/15/2024	<0.002*	0.0379(J)	0.00303(J)	0.132	3360	1070	514	0.439(J)	<0.05*	0.0656(J)	7.11

		Cadmium	Iron	Lead	Manganese	TDS	Chloride	SO4	TOC	Sulfide	TOX	pH
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	S.U.
P-11	d											
	12/21/1995	n/a	12.8	n/a	0.262	3501	25	2580	<3	<0.1	0.012	7.06
	6/24/1996	<0.0001	1.47	0.193	0.06	3890	25.5	2000	8.6	<0.1	25	6.64
	10/8/1996	0.007	1.14	0.002	0.067	3378	38.5	1690	<3	<0.1	7.8	6.95
	6/30/1997	<0.0002	0.355	<0.002	0.016	3500	12	1760	<3	<0.1	0.012	6.86
	12/23/1997	0.0004	0.214	<0.002	0.105	3139	9	1510	<3	<1	0.0079	6.56
	6/4/1998	<0.0002	2.92	<0.002	0.061	3267	5.5	1700	<3	<1	0.025	6.67
	12/3/1998	<0.001	0.899	<0.002	0.032	2970	24.5	1420	<3	<1	0.0053	6.19
	6/9/1999	<0.0002	0.221	<0.002	0.0904	3500	74.1	1760	<1	<1	<0.005	6.67
	12/21/1999	<0.0002	0.134	<0.002	0.0924	4220	75.6	1750	3.71	<1	11	6.63
	6/19/2000	<0.0002	0.0663	<0.002	0.0824	1930	44.6	840	1.31	<1	0.0052	6.9
	12/19/2000	<0.0001	0.0982	<0.001	0.13	1990	46.5	1030	1.1	<1	<0.005	6.7
	6/12/2001	<0.001	3.36	<0.003	0.184	1920	40	760	<1	<2	0.011	6.59
	12/18/2001	0.013	1.58	<0.003	0.153	1600	29.6	690	<1	<2	<0.005	6.92
	6/18/2002	<0.001	0.454	<0.003	0.133	1580	28.4	480	<1	<0.11	<0.005	6.84
	12/2/2002	<0.001	0.1	0.004	0.137	1460	31.7	485	<1	<1	<0.005	7.12
	6/23/2003	<0.001	0.21	<0.0038	0.13	1330	24.9	445	1.6	<2	0.0288	6.95
	12/8/2003	<0.001	0.21	<0.003	0.15	1280	22.5	322	1.9	<2	<0.005	7.02
	6/25/2004	<0.001	0.15	<0.003	0.015	1260	29	636	1.4	<2	<0.005	6.95
	12/14/2004	<0.001	0.12	<0.003	0.15	1130	22.5	570	1.3	<2	<0.01	6.29
	6/13/2005	<0.004	0.11	<0.001	0.15	1200	23	460	1.5	<1	<0.005	6.96
	12/21/2005	<0.004	0.021	<0.001	0.16	1200	30	470	1.4	<1	0.015	6.23
	6/9/2006	<0.004	0.014	<0.001	0.15	1200	26	450	1.4	<1	<0.005	7.45
	12/14/2006	<0.004	0.27	<0.001	0.14	1300	26	410	1.4	<1	0.0012	6.97
	6/13/2007	<0.005	<0.1	<0.005	0.18	1200	23	440	2.9	<0.05	<0.1	7.2
	12/13/2007	<0.005	0.18	<0.005	0.19	1100	24	380	3.2	<0.05	<0.1	6.48
	5/27/2008	<0.005	0.42	<0.005	0.19	1100	24	400	3.4	<0.05	<0.1	7.17
	11/10/2008	<0.005	0.62	0.0096	0.2	1000	23	370	3.4	<0.05	<0.1	7.07
	5/13/2009	<0.005	<0.1	<0.005	0.14	1000	22	380	1.9	<0.05	<0.1	6.81
	11/6/2009	<0.005	<0.1	<0.005	0.17	1000	21	340	1.6	<0.05	<0.1	6.67
	5/25/2010	<0.005	0.31	<0.005	0.15	1100	20	370	<1	<0.05	<0.1	7.93
	11/1/2010	<0.005	0.16	<0.025	0.14	990	22	340	<1	0.091	<0.1	7.21
	5/18/2011	<0.0005	0.094	<0.015	0.223	1100	33.1	368	<1	<0.1	0.0064	6.97
	11/10/2011	<0.0005	0.264	<0.015	0.38	1000	27.8	317	<1	<0.1	<0.005	7.03
	4/11/2012	<0.0005	0.0844	<0.015	0.253	1100	18.8	262	1	<0.1	<0.005	6.72
	10/30/2012	<0.0005	0.0939	<0.015	0.169	1100	33.2	305	<1	<0.1	0.084	6.98
	5/28/2013	<0.005	0.51	<0.005	0.18	1100	34	380	0.72	<0.05	<0.1	7.14
	11/5/2013	0.0022	0.21	0.0022	0.2	1000	42	360	1.2	<0.05	<0.1	7.07
	5/19/2014	<0.005	0.073	<0.005	0.18	1000	44	380	0.86	<0.05	<0.1	6.95
	11/10/2014	<0.005	0.033	0.0025	0.22	1000	46	370	0.62	<0.05	<0.1	6.07
	5/22/2015	<0.005	0.145	<0.005	0.206	1100	51.9	415	3.6	<0.05	<0.1	7.15
	11/23/2015	<0.005	0.0232	0.00526	0.223	1150	48.9	376	1.97	<0.05	<0.1	7
	6/1/2016	<0.005	0.0651	<0.005	0.161	1070	46	400	1.22	<0.05	<0.1	7.07
	11/30/2016	<0.005	0.373	<0.005	0.481	1170	47.6	411	1.62	<0.05	0.028	6.34
	5/23/2017	<0.0005	0.135	<0.0156	0.0614	1220	41	347	<1	<0.1	0.17	6.96
	11/14/2017	<0.0005	0.196	<0.0156	0.23	1190	42	388	1.33	<0.1	0.15	n/a
	5/8/2018	<0.002	0.215	<0.005	0.259	1180	46.7	428	1.03(B)	<0.05(J6)	0.0307(J)	n/a
	11/15/2018	<0.002	0.0564	<0.005	0.145	1160	42.5	445	1.1	<0.05	<0.1	6.92
	5/21/2019	<0.002	0.478	0.00434	0.259	1180	43.8	429	1.12	<0.05	<0.1	7.14
	11/18/2019	0.000775	0.542	0.00246	0.246	1130	41.9	398	0.772	<0.05	<0.1	6.94
	5/7/2020	<0.00125	0.197	<0.0156	0.452	1130	34.2	391	<1	<0.15	<300(O)	7.15
	10/6/2020	<0.002	0.0631(J)	<0.006	0.254	1180	45.3	467	0.975(J)	<0.05	<0.1	n/a
	4/15/2021	<0.002	0.05(J)	<0.006	0.209	1120	48.5	461	0.773(J)	<0.05	<0.1	7.01
	10/12/2021	<0.002	0.0557(J)	<0.006	0.337	1210	47.5	447	0.863(J)	<0.05	<0.1	7.04
	4/14/2022	0.000805(J)	0.0689(J)	<0.006*	0.282	1280	52.8	491	0.718(J)	<0.05*	<0.1*	7.21
	11/10/2022	<0.002*	0.746	0.00575(J)	0.511	1190	55	491	0.743(J)	<0.05*	<0.1	7.03
	4/5/2023	<0.000479*	0.121	<0.00299*	0.352	1360	51.1	480	0.832(J)	<0.025*	<0.0277*	7.03
	10/12/2023	<0.002*	0.0391(J)	<0.006*	0.331	1230	51.4	450	0.775(J)	<0.05*	0.0408(J)	7.01
	04/11/2024	<0.00200	0.0557 J	<0.00600	0.253	1330	51.7	487	0.512 J	<0.0500	<0.100 P1	7.06
	10/15/2024	<0.002*	0.0746(J)	<0.006*	0.522	1250	51.1	445	0.412(J)	<0.05*	<0.15*	7.15

		Cadmium	Iron	Lead	Manganese	TDS	Chloride	SO4	TOC	Sulfide	TOX	pH
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	S.U.
P-12	u											
	12/21/1995	n/a	33.08	n/a	0.441	481	25	64.7	<3	<0.1	0.015	7.19
	6/24/1996	0.0004	13.9	0.124	0.256	539	33.5	62.6	<3	<0.1	0.016	6.89
	10/8/1996	<0.005	7.57	0.002	0.189	1989(O)	45	56.2	<3	<0.1	<0.005	7.17
	6/30/1997	<0.0002	0.109	<0.002	0.012	597	58	66	<3	<0.1	<0.005	6.95
	12/23/1997	0.003	20.6	0.01	0.483	524	5.5	87	<3	<1	0.0074	6.68
	6/4/1998	<0.0002	17.6	0.009	0.501	517	8	75.5	<3	<1	0.026	6.85
	12/3/1998	<0.001	2.39	<0.002	0.383	552	92.5	118	<3	<1	0.0064	6.55
	6/9/1999	<0.0002	0.0774	<0.002	0.0219	572	75.2	63.8	<1	<1	<0.005	7.04
	12/21/1999	<0.0002	0.061	<0.002	0.00816	559	62.1	68.4	1.53	1	0.017	6.28
	6/19/2000	<0.0002	0.0394	<0.002	0.194	580	66.9	64.8	1.25	<1	<0.005	6.9
	12/19/2000	0.00021	0.0962	<0.001	0.351	565	67.6	66.4	<1	<1	<0.005	6.74
	6/12/2001	<0.001	1.99	<0.003	0.563	563	62	60	<1	<2	0.016	6.93
	12/18/2001	0.011	2.94	<0.003	0.728	567	60	3710(O)	<1	<2	0.02	6.55
	6/18/2002	0.001	0.752	<0.003	0.769	573	53	51.8	1.28	<0.11	<0.005	6.74
	12/2/2002	<0.001	0.487	<0.003	1.34	618	66	52.5	<1	<1	<0.005	6.2
	6/23/2003	<0.001	3.9	<0.0038	2.3	717	64.5	66.6	1.5	<2	<0.005	6.58
	12/8/2003	<0.001	2.8	0.031	1.2	598	61.4	62.8	1.4	<2	<0.005	6.8
	6/25/2004	<0.001	1.6	<0.003	2.2	788	97.4	125	1.3	<2	<0.005	6.77
	12/14/2004	<0.001	2	<0.003	1.9	548	45.1	57.9	<1	<2	<0.01	6.17
	6/13/2005	<0.004	22	0.015	0.76	580	69	75	<1	<1	<0.005	7.01
	12/21/2005	<0.004	0.8	<0.001	1.2	670	100	97	2.4	<1	0.011	5.66
	6/9/2006	<0.004	0.032	<0.001	1.5	730	92	74	2.5	<1	<0.005	7.17
	12/14/2006	<0.004	0.71	<0.001	2.4	820	94	77	2.9	<1	0.014	6.57
	6/13/2007	<0.005	2.4	<0.005	2.8	840	110	93	3.7	<0.05	<0.1	6.98
	12/13/2007	<0.005	0.55	<0.005	2.1	740	110	75	3.1	<0.05	<0.1	6.49
	5/27/2008	<0.005	1.8	<0.005	3	920	140	100	3.3	<0.05	<0.1	6.92
	11/10/2008	<0.005	2.2	0.0072	2.6	740	120	83	4	<0.05	<0.1	n/a
	5/13/2009	<0.005	0.88	<0.005	1	690	120	75	2.1	<0.05	<0.1	6.5
	11/6/2009	<0.005	0.76	<0.005	1.2	660	110	61	2.1	<0.05	<0.1	7.25
	5/25/2010	<0.005	0.52	<0.005	0.55	660	100	51	<1	<0.05	<0.1	8.18
	11/1/2010	<0.005	1.8	<0.025	1.1	640	120	53	<1	<0.05	<0.1	7.63
	5/18/2011	<0.0005	0.109	<0.015	1.13	520	58.5	38.2	<1	<0.1	<0.005	6.67
	11/10/2011	<0.0005	0.954	<0.015	2.22	680	79	42.6	<1	<0.1	<0.005	6.94
	4/11/2012	<0.0005	0.237	<0.015	0.336	470	40.3	22.6	<1	<0.1	<0.005	6.6
	10/30/2012	<0.0005	0.649	<0.015	1.47	680	100	36.8	<1	<0.1	0.089	6.75
	5/28/2013	<0.005	0.44	<0.005	0.88	660	110	41	0.77	<0.05	<0.1	7.05
	11/5/2013	<0.005	1.8	0.016	1.1	660	110	38	1.1	<0.05	<0.1	7.08
	5/19/2014	<0.005	2.1	<0.005	0.42	520	75	31	0.49	<0.05	<0.1	6.73
	11/10/2014	<0.005	0.25	<0.005	0.48	530	80	32	0.26	<0.05	0.29	5.72
	5/22/2015	<0.005	0.291	<0.005	0.15	549	82.2	32.3	2.58	<0.05	<0.1	7.17
	11/23/2015	<0.005	0.325	0.00372	0.687	694	137	44.9	1.37	<0.05	<0.1	6.95
	6/1/2016	<0.005	2.06	<0.005	0.174	637	120	37.9	3.63	<0.05	0.0383	7.24
	11/30/2016	<0.005	0.166	<0.005	0.0446	562	98.3	30.2	1.02	<0.05	0.0154	6.4
	5/23/2017	<0.0005	0.0779	<0.0156	<0.0104	436	47.3	17.9	<1	<0.1	0.17	6.82
	11/14/2017	<0.0005	0.103	<0.0156	0.0849	471	60.7	26.9	<1	<0.1	0.14	6.76
	5/8/2018	<0.002	0.758	0.00231(J)	0.107	605	99.5	28.6	0.695(BJ)	<0.05	0.343	n/a
	11/15/2018	<0.002	0.89	<0.005	0.134	644	124	31.9	0.718	<0.05	0.0371	7.29
	5/21/2019	<0.002	0.631	<0.005	0.0725	391	40.1	22.5	4.6	<0.05	<0.1	7.19
	11/18/2019	0.000773	0.9	0.002	0.156	740	146	35	0.823	<0.05	<0.1	7.25
	5/7/2020	<0.00125	0.164	<0.0156	0.0375	363	39.9	20.7	<1	<0.15	<300(O)	7.07
	10/6/2020	<0.002	0.0541(J)	<0.006	0.0279	388	39.2	23	0.569(J)	<0.05	<0.1	n/a
	4/15/2021	<0.002	0.0276(J)	<0.006	0.0352	389	36.6	22.5	0.343(J)	<0.05	<0.1	6.99
	10/12/2021	<0.002	0.206	<0.006	0.191	408	35.9	20.3	0.534(J)	<0.05	<0.1	7.01
	4/14/2022	0.000598(J)	0.0626(J)	<0.006*	0.0427	405	45.4	27.8	0.378(J)	<0.05*	<0.1*	7.17
	11/10/2022	<0.002*	0.062(J)	<0.006*	0.243	475	55.7	24.8	0.597(J)	<0.05*	<0.1	6.92
	4/5/2023	<0.000479*	0.142	<0.00299*	0.283	630	64.5	20.5	0.8(J)	<0.025*	<0.0277*	6.92
	10/12/2023	<0.002*	0.0574(J)	<0.006*	0.661	572	67.6	21.4	0.577(J)	<0.05*	<0.1*	6.89
	04/11/2024	<0.00200	0.0333 J	<0.00600	0.222	601	75.5 J6	22.8	0.308 J	<0.0500	0.0427 J	6.98
	10/15/2024	<0.002*	0.279	<0.006*	1	587	65.2	105	0.508(J)	<0.05*	<0.15*	7.04

		Cadmium	Iron	Lead	Manganese	TDS	Chloride	SO4	TOC	Sulfide	TOX	pH
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	S.U.
P-13	d											
	6/30/1997	<0.0002	0.002	<0.002	<0.0001	28	1.5	<5	<3	<0.1	0.016	n/a
	12/23/1997	0.0003	0.047	<0.002	0.002	6	1	<5	<3	<1	0.011	n/a

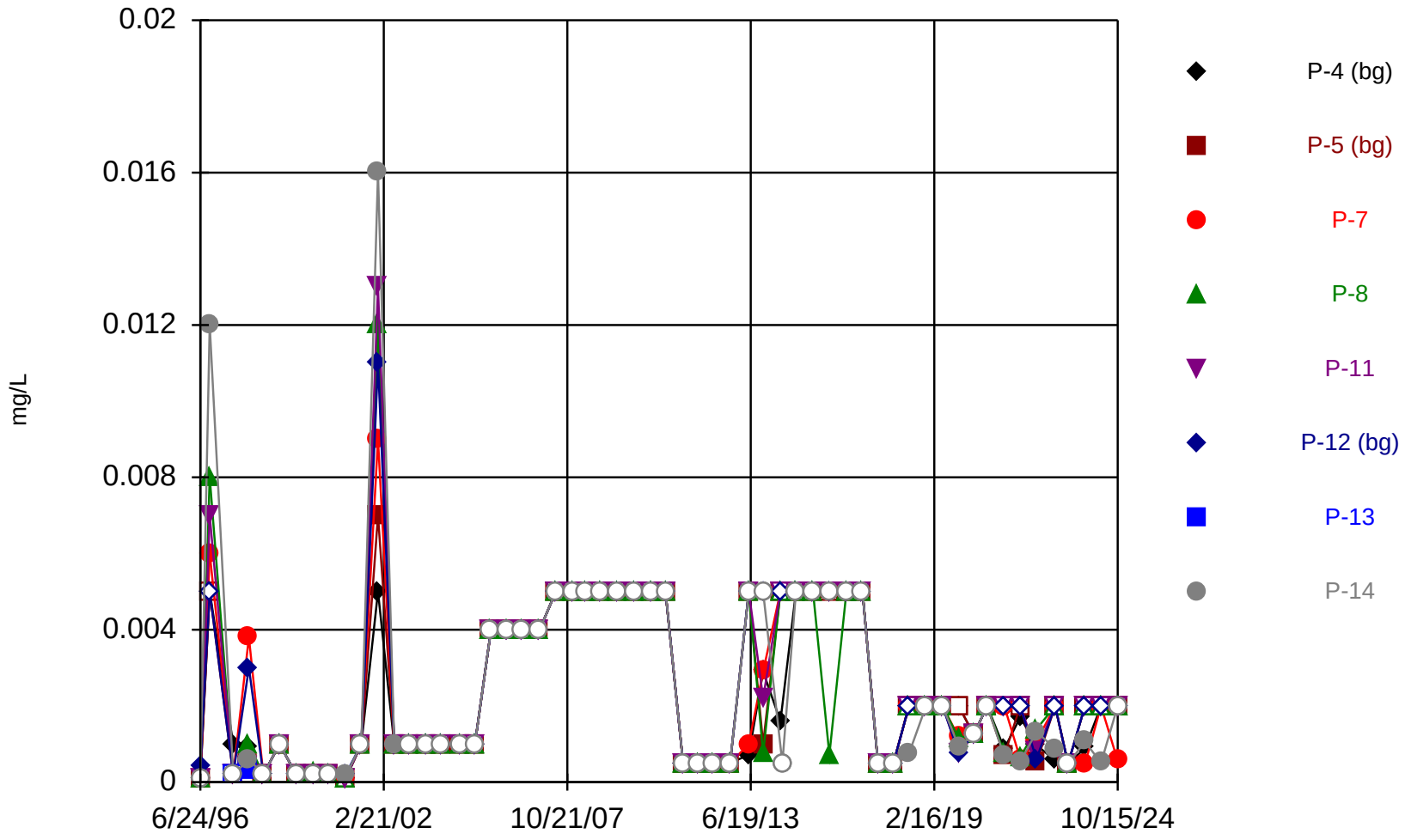
		Cadmium	Iron	Lead	Manganese	TDS	Chloride	SO4	TOC	Sulfide	TOX	pH
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	S.U.
P-14	d											
	12/21/1995	n/a	4.13	n/a	0.097	5420	15	4140	<3	<0.1	0.0074	6.74
	6/24/1996	<0.0001	9.52	0.23	0.145	5680	20.2	3530	<3	<0.1	0.024	6.48
	10/8/1996	0.012	0.532	<0.001	0.056	5989	27	3390	<3	<0.1	<0.005	6.65
	6/30/1997	<0.0002	0.069	<0.002	0.018	5677	5.5	2910	<3	<0.1	0.0055	6.56
	12/23/1997	0.0006	0.529	<0.002	0.032	5727	4.5	3300	<3	<1	<0.005	6.58
	6/4/1998	<0.0002	1.83	<0.002	0.024	5570	1.5	3500	<3	<1	0.018	6.55
	12/3/1998	<0.001	<0.01	<0.002	0.0026	5550	11.5	2840	<3	<1	<0.005	6.15
	6/9/1999	<0.0002	0.114	<0.002	0.021	5610	34.5	3110	<1	<1	<0.005	6.4
	12/21/1999	<0.0002	0.0916	<0.002	0.0496	7800	36.7	3120	1.72	<1	0.016	6.21
	6/19/2000	<0.0002	0.0273	<0.002	0.054	5410	37.4	3360	<1	<1	0.0088	6.6
	12/19/2000	0.00017	0.107	<0.001	0.0627	5190	36.4	3640	<1	<1	<0.005	6.55
	6/12/2001	<0.001	0.918	<0.003	0.029	5720	42	3420	1.16	<2	0.0097	3.7
	12/18/2001	0.016	1.4	<0.003	0.065	5790	35.6	3780	<1	<2	<0.005	6.67
	6/18/2002	0.001	0.242	<0.003	0.036	5500	37	3170	1.29	<0.11	<0.005	6.68
	12/2/2002	<0.001	<0.05	<0.003	0.02	5620	38.8	3320	<1	<1	<0.005	6.88
	6/23/2003	<0.001	0.22	<0.0038	0.018	5720	37.5	3620	1.4	<2	<0.005	6.47
	12/8/2003	<0.001	0.11	<0.003	0.017	5330	43.7	3180	1.8	<2	0.0075	6.59
	6/25/2004	<0.001	0.067	<0.003	0.013	5080	45.2	3550	1.4	<2	<0.005	6.53
	12/14/2004	<0.001	0.14	<0.003	0.022	5400	41.7	4670	1	<2	<0.01	6.3
	6/13/2005	<0.004	0.7	<0.001	0.013	5500	43	3400	1.3	<1	<0.005	6.48
	12/21/2005	<0.004	0.024	<0.001	0.017	5800	110	3600	1.2	<1	0.014	7.36
	6/9/2006	<0.004	0.015	<0.001	0.0062	6100	46	3500	1.1	<1	<0.005	7.05
	12/14/2006	<0.004	0.064	<0.001	0.01	4800	44	3400	<1	<1	0.0074	6.59
	6/13/2007	<0.005	<0.1	<0.005	<0.01	5900	40	3000	3.2	<0.05	<0.1	6.74
	12/13/2007	<0.005	<0.1	0.015	0.012	5800	43	3400	2.6	<0.05	<0.1	6.17
	5/27/2008	<0.005	4.7	<0.005	0.26	360(O)	8	7.5(O)	23	<0.05	<0.1	6.75
	11/10/2008	<0.005	1.2	0.014	0.052	5700	44	3500	4	<0.05	<0.1	6.56
	5/13/2009	<0.005	<0.1	<0.005	<0.01	5700	46	3400	1.5	<0.05	<0.1	7.18
	11/6/2009	<0.005	<0.1	<0.005	<0.01	5900	45	3600	2.8	<0.05	<0.1	6.15
	5/25/2010	<0.005	0.14	<0.005	<0.01	5900	46	3900	<1	<0.05	<0.1	7.36
	11/1/2010	<0.005	0.11	<0.025	<0.01	5800	46	3800	<1	<0.05	3.8	6.82
	5/18/2011	<0.0005	0.2	<0.015	0.042	6100	49.6	3580	<1	<0.1	<0.005	6.55
	11/10/2011	<0.0005	4.54	<0.015	1.12	6100	46.6	3310	<1	<0.1	<0.005	6.59
	4/11/2012	<0.0005	0.0844	<0.015	0.0177	6100	42.7	2970	<1	<0.1	<0.005	6.35
	10/30/2012	<0.0005	0.129	<0.015	0.0159	5900	46.8	3040	<1	<0.1	0.077	6.62
	5/28/2013	<0.005	0.14	<0.005	0.0066	6000	61	3800	0.42	<0.05	<0.1	6.65
	11/5/2013	<0.005	<0.1	<0.005	<0.01	5900	50	3700	0.22	<0.05	<0.1	6.79
	6/10/2014	<0.0005	0.033	0.00028	0.015	6200	50	3800	0.37	<0.05	<0.1	6.44
	11/10/2014	<0.005	<0.1	<0.005	0.0085	5800	970(O)	490(O)	0.16	0.007	<0.1	5.47
	5/22/2015	<0.005	<0.1	<0.005	<0.01	6070	51.8	3880	2.64	<0.05	<0.1	6.77
	11/23/2015	<0.005	<0.1	0.00391	0.028	5260	52	4340	2.26	0.007	<0.1	6.58
	6/1/2016	<0.005	<0.1	<0.005	0.028	6240	51.4	3920	10.3	<0.05	0.0183	6.71
	11/30/2016	<0.005	<0.1	<0.005	0.0245	6080	52	3730	1.28	<0.05	0.0279	6.08
	5/23/2017	<0.0005	0.183	<0.0156	0.0488	6140	50.9	2580	<1	<0.1	0.16	6.64
	11/14/2017	<0.0005	0.258	<0.0156	0.0304	6160	48.1	3540	<1	<0.1	0.15	6.47
	5/8/2018	0.000751(J)	<0.1	<0.005	0.0185	5830	55.8	3700	0.888(BJ)	<0.05	0.0314(J)	n/a
	11/15/2018	<0.002	<0.1	<0.005	0.0473	4020	51	3880	0.834	<0.05	<0.1	6.48
	5/21/2019	<0.002	<0.1	<0.005	0.032	5810	58.5	3610	0.919	<0.05	<0.1	6.73
	11/18/2019	0.000934	0.0206	<0.005	0.0449	5940	55.5	3500	1	<0.05	<0.1	6.58
	5/7/2020	<0.00125	0.24	<0.0156	0.0474	5860	53	3120	<1	<0.15	<300(O)	6.58
	10/6/2020	<0.002	<0.1	<0.006	0.0296	6220	58.6	4000	0.622(J)	<0.05	<0.1	n/a
	4/15/2021	0.000674(J)	<0.1	<0.006	0.0356	4910	58.1	3820	0.424(J)	<0.05	<0.1	6.55
	10/12/2021	0.000527(J)	<0.1	<0.006	0.0129	6200	66.2	3700	0.585(J)	<0.05	<0.1	6.58
	4/14/2022	0.00132(J)	<0.1*	<0.006*	0.0243	6080	70.5	3990	0.572(J)	<0.05*	<0.1*	6.74
	11/10/2022	0.000881(J)	0.0853(J)	0.00726	0.0515	4220	76.6	3690	0.881(J)	<0.05*	<0.1	6.55
	4/5/2023	<0.000479*	0.0182(J)	0.00568(J)	0.0613	4540	88.8	3120	1.12	<0.025*	<0.0277*	6.55
	10/12/2023	0.00106(J)	<0.1*	<0.006*	0.0389	5610	82	3210	0.911(J)	<0.05*	<0.1*	6.52
	04/11/2024	0.000506 J	0.0187 J	<0.00600	0.0514	6180	84.3	3520	0.518 J	<0.0500	<0.100 P1	6.57
	10/15/2024	<0.002*	<0.1*	<0.006*	0.0751	6180	98.2	3470	0.741(J)	<0.05*	<0.15*	6.68

APPENDIX E

Statistical Results

Sanitas™ v.10.0.23 Software licensed to Pollution Management, Inc. UG
Hollow symbols indicate censored values.

Time Series



Constituent: Cadmium Analysis Run 12/10/2024 9:36 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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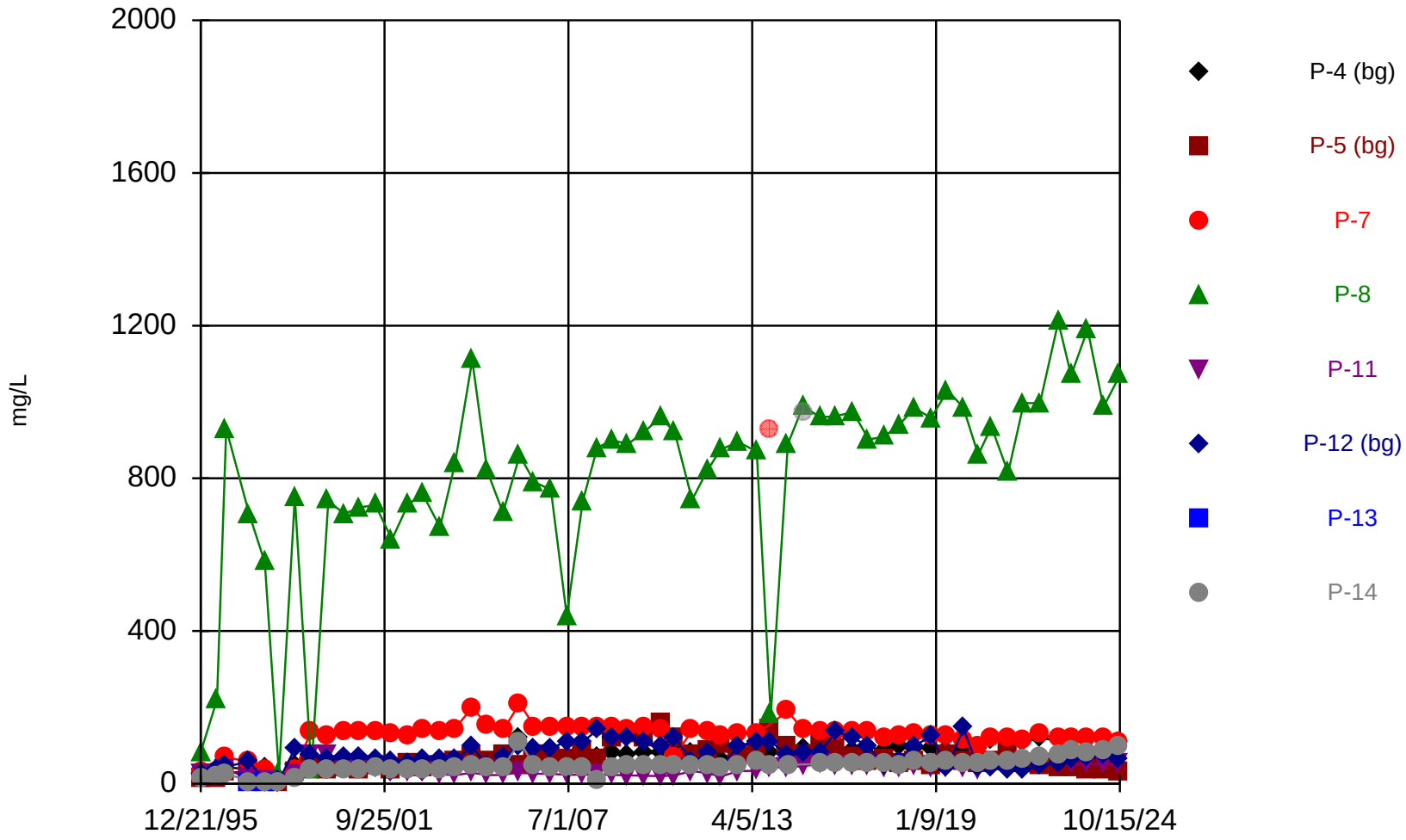
Time Series



Constituent: Chloride Analysis Run 12/10/2024 9:36 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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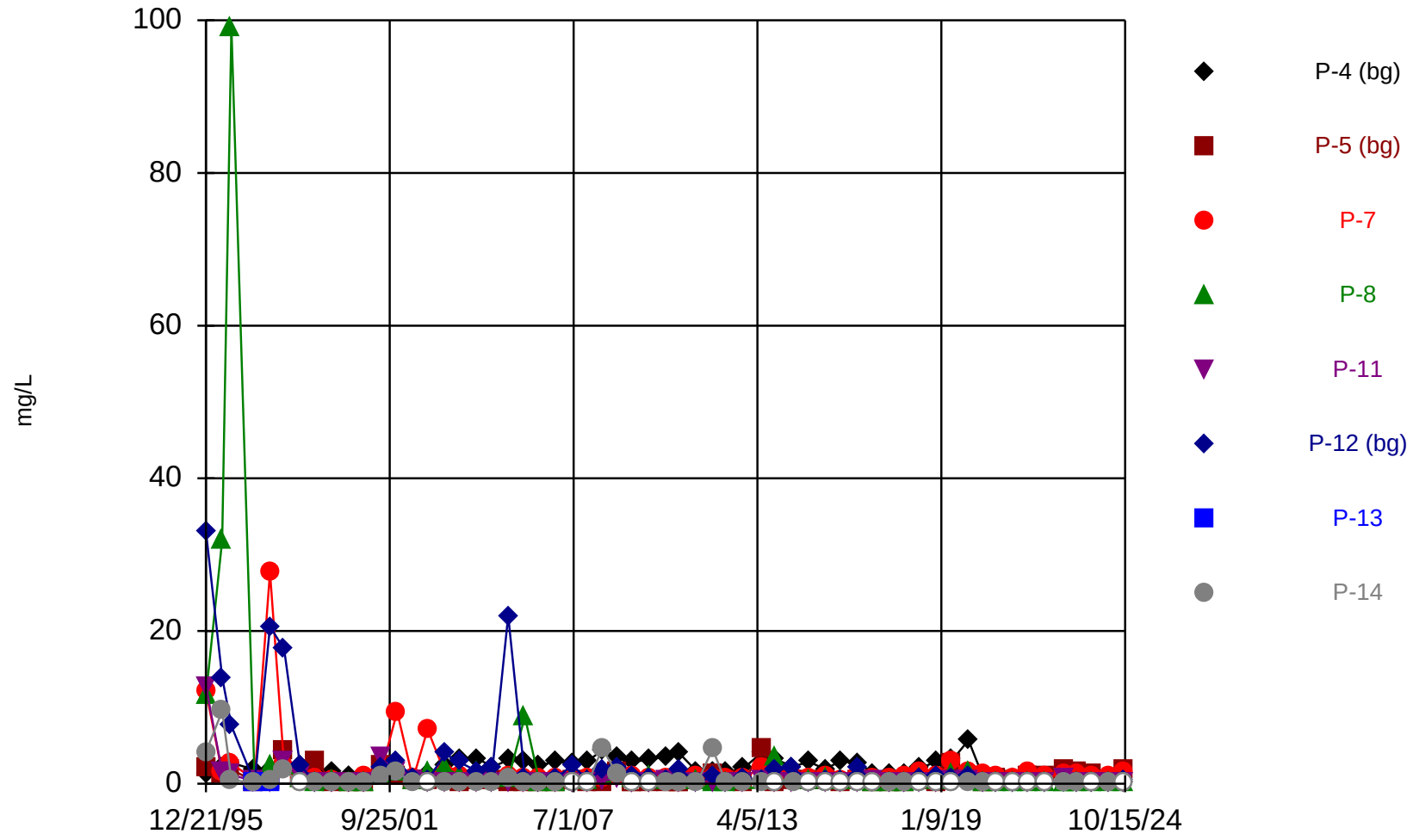
Hollow symbols indicate censored values.

Time Series

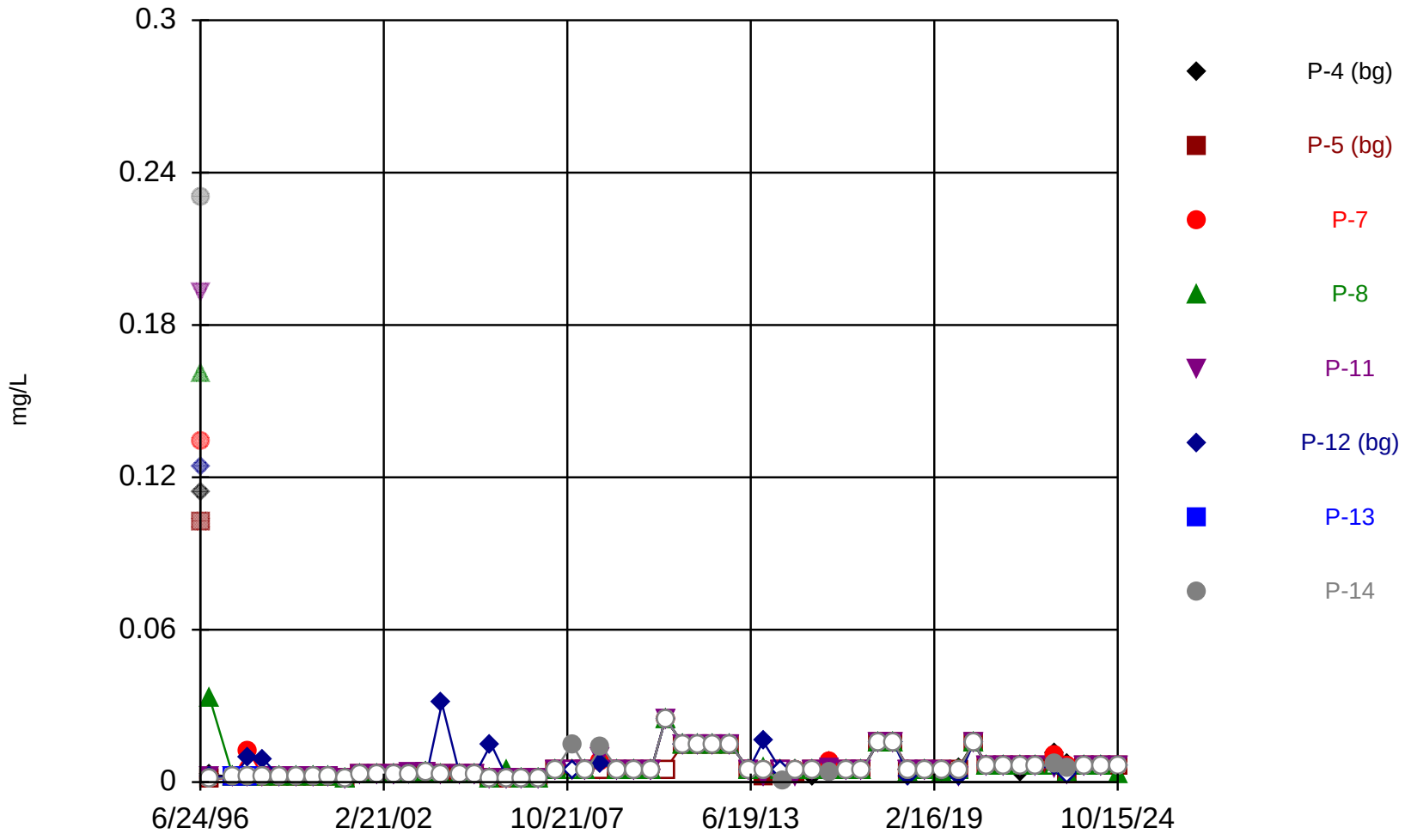


Constituent: Iron Analysis Run 12/10/2024 9:36 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

Sanitas™ v.10.0.23 Software licensed to Pollution Management, Inc. UG
Hollow symbols indicate censored values.

Time Series



Constituent: Lead Analysis Run 12/10/2024 9:36 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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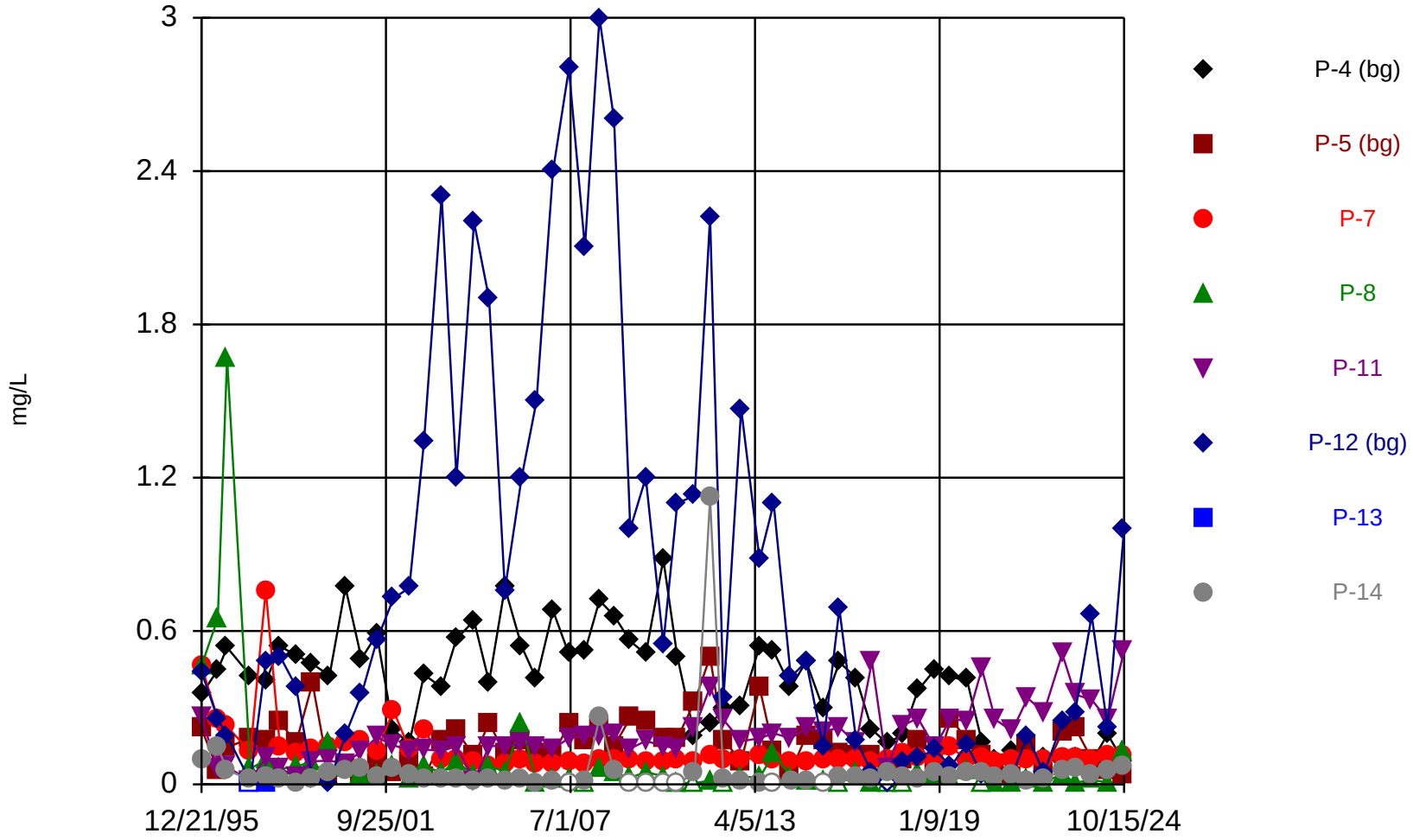
Hollow symbols indicate censored values.

Time Series

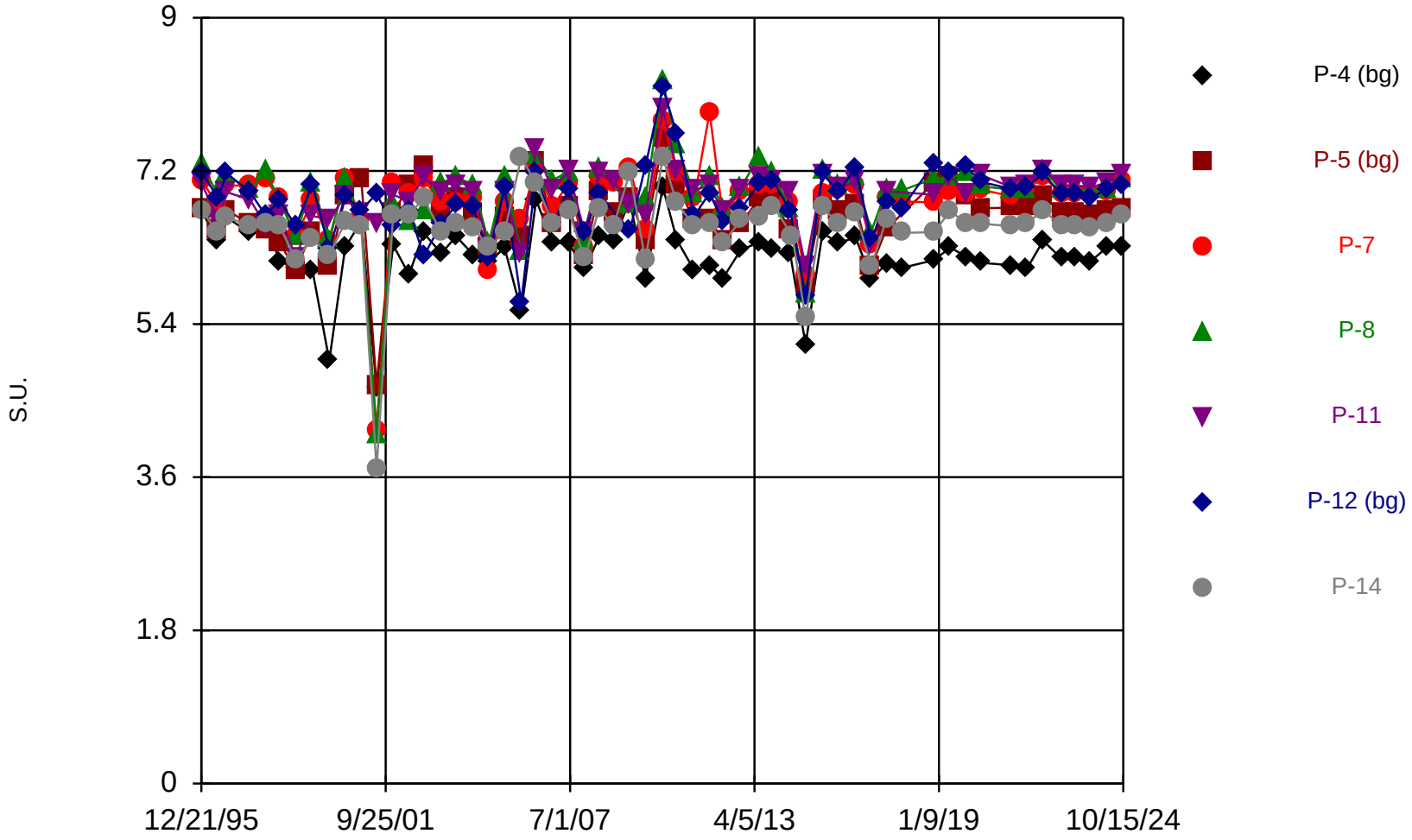


Constituent: Manganese Analysis Run 12/10/2024 9:36 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

Sanitas™ v.10.0.23 Software licensed to Pollution Management, Inc. UG

Time Series

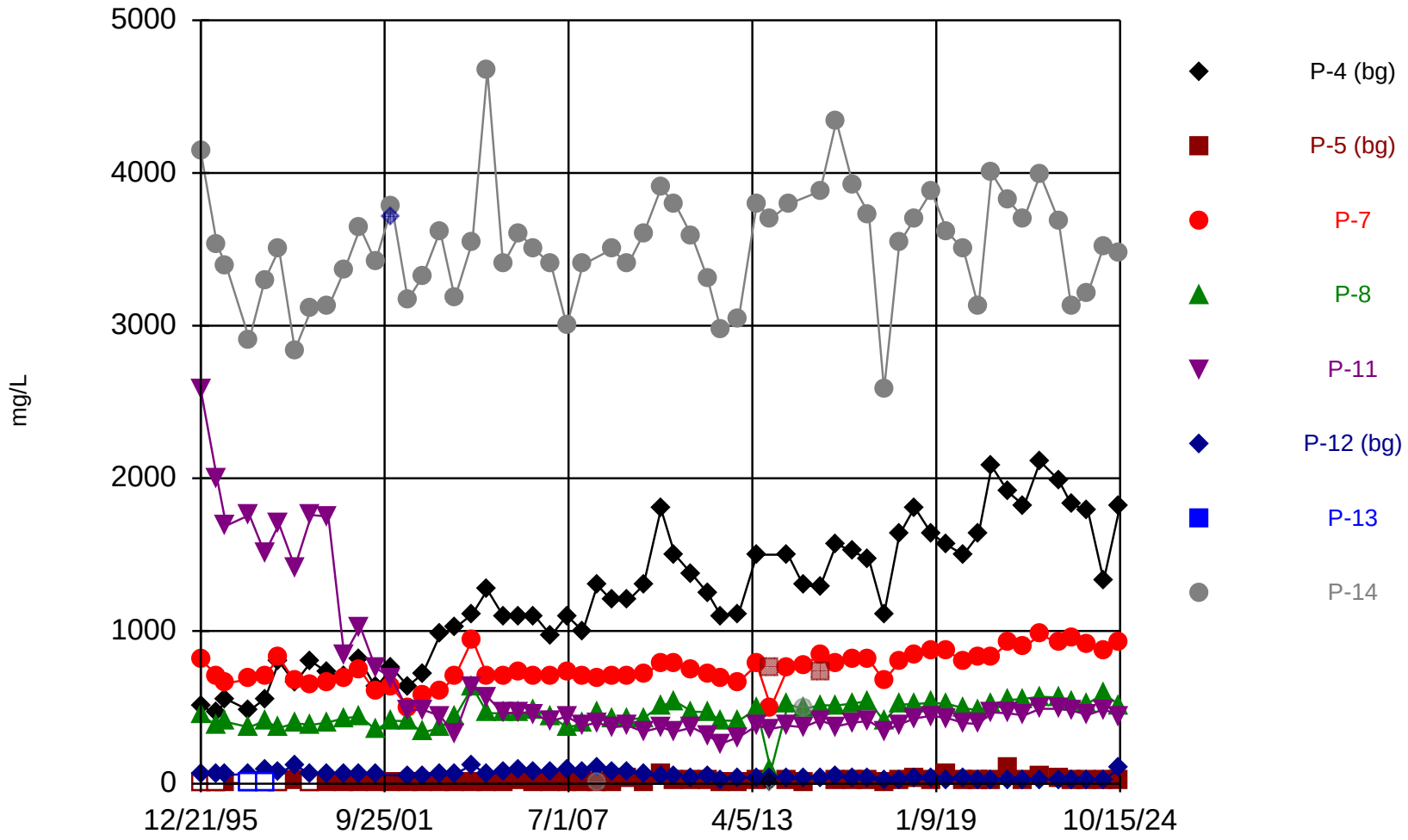


Constituent: pH Analysis Run 12/10/2024 9:36 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

Sanitas™ v.10.0.23 Software licensed to Pollution Management, Inc. UG
Hollow symbols indicate censored values.

Time Series

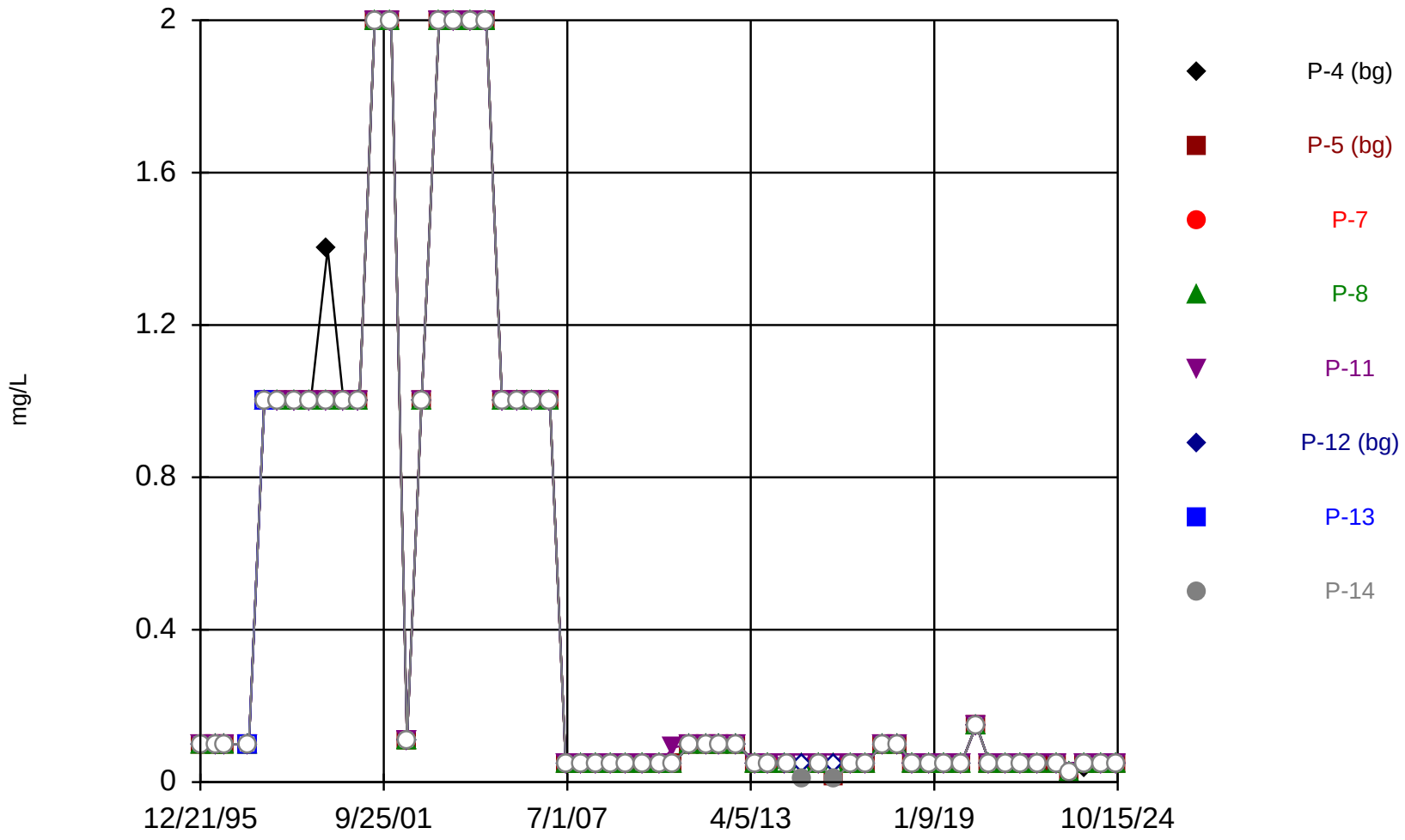


Constituent: Sulfate as SO4 Analysis Run 12/10/2024 9:36 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

Sanitas™ v.10.0.23 Software licensed to Pollution Management, Inc. UG
Hollow symbols indicate censored values.

Time Series

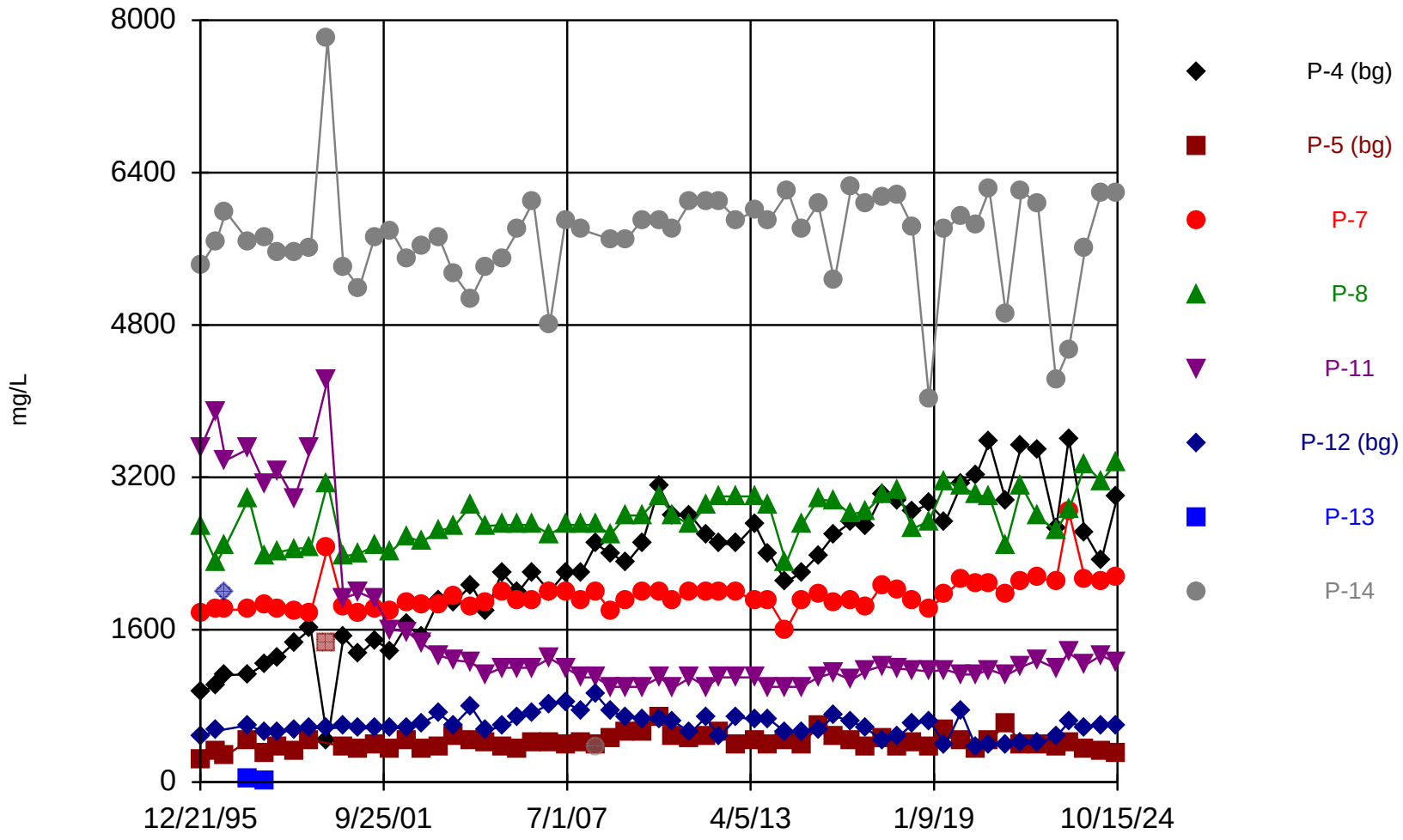


Constituent: Sulfide Analysis Run 12/10/2024 9:36 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

Sanitas™ v.10.0.23 Software licensed to Pollution Management, Inc. UG

Time Series

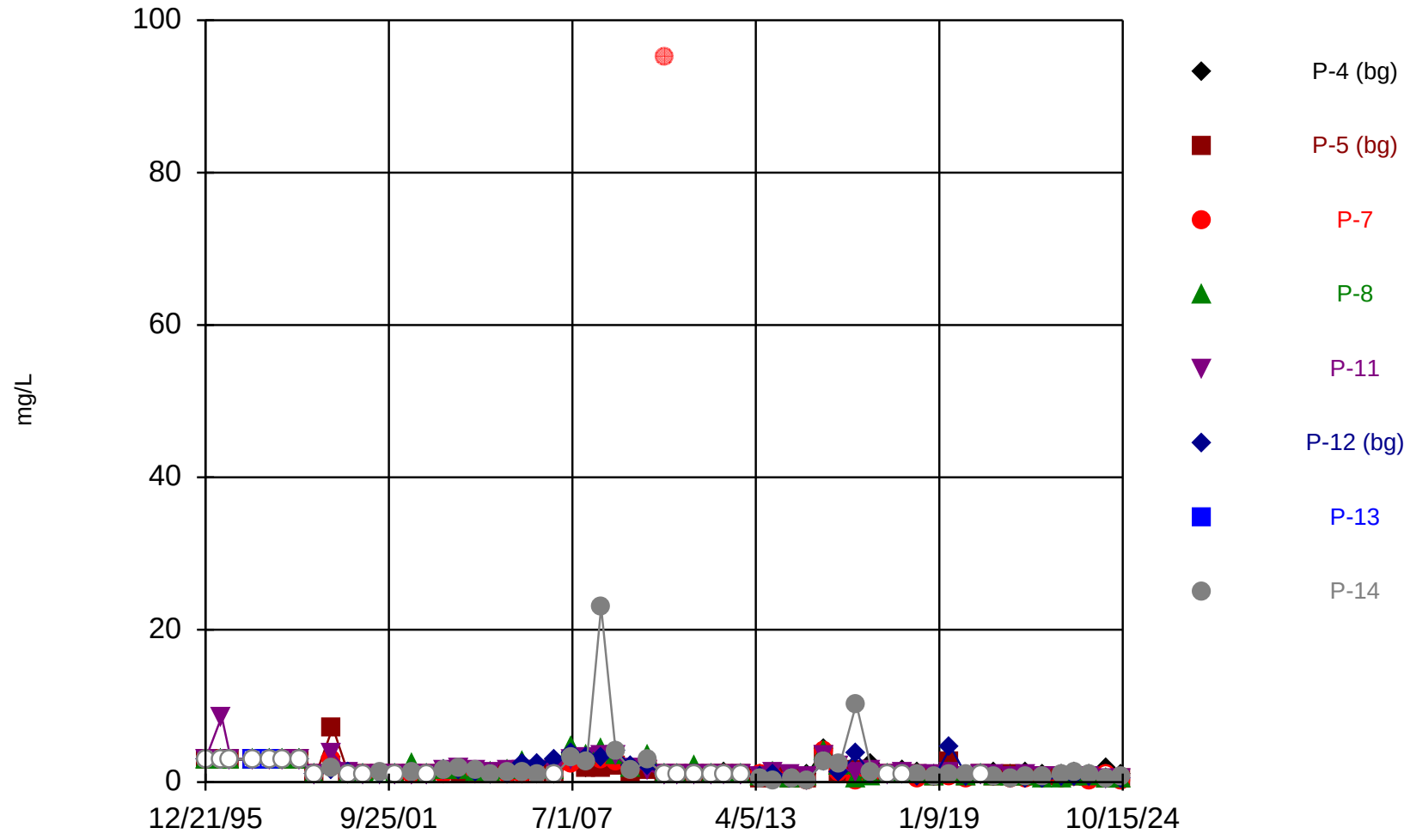


Constituent: TDS Analysis Run 12/10/2024 9:36 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

Sanitas™ v.10.0.23 Software licensed to Pollution Management, Inc. UG
Hollow symbols indicate censored values.

Time Series

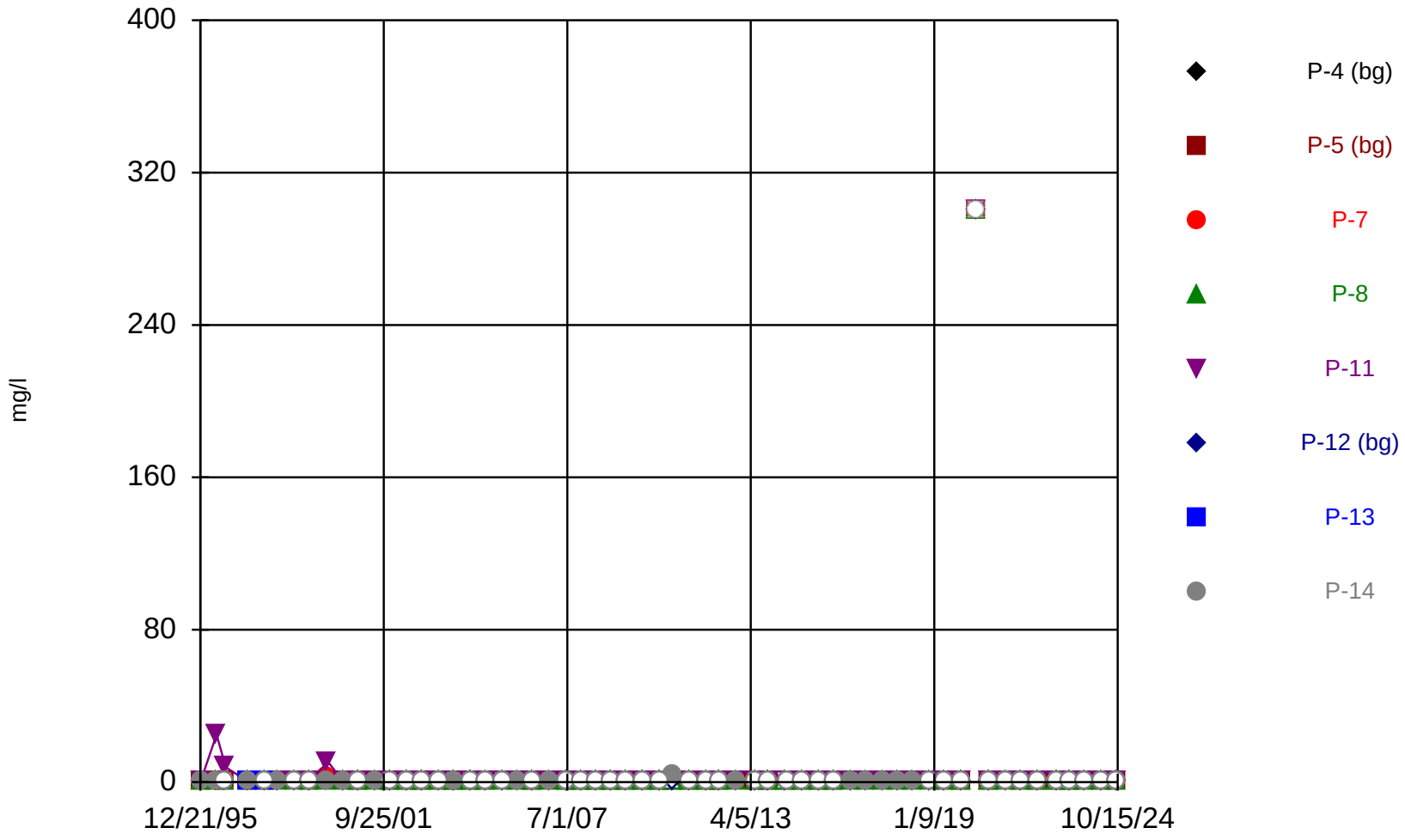


Constituent: TOC Analysis Run 12/10/2024 9:36 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

Sanitas™ v.10.0.23 Software licensed to Pollution Management, Inc. UG
Hollow symbols indicate censored values.

Time Series



Constituent: TOX Analysis Run 12/10/2024 9:36 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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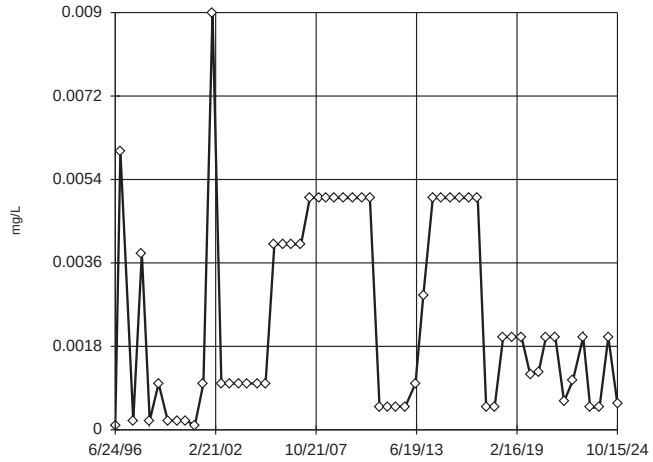
Tukey's Outlier Screening

P-7



n = 58

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were cube root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because both the lower and upper quartiles represent reporting limits.

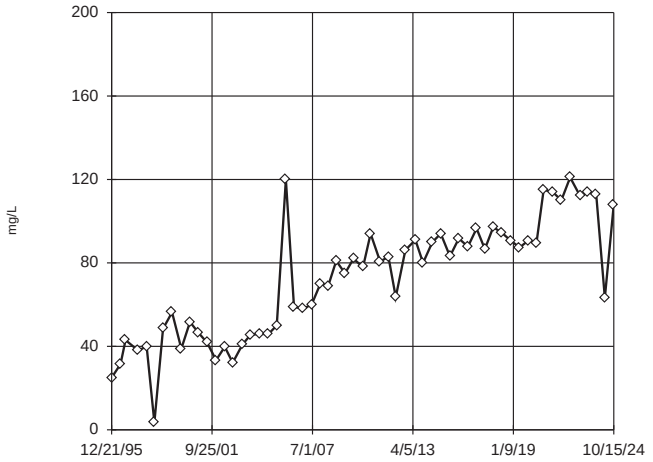
Constituent: Cadmium Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

Sanitas™ v.10.0.23 Software licensed to Pollution Management, Inc. UG

Tukey's Outlier Screening

P-4 (bg)



n = 59

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

High cutoff = 228.8, low cutoff = -91.1, based on IQR multiplier of 3.

Constituent: Chloride Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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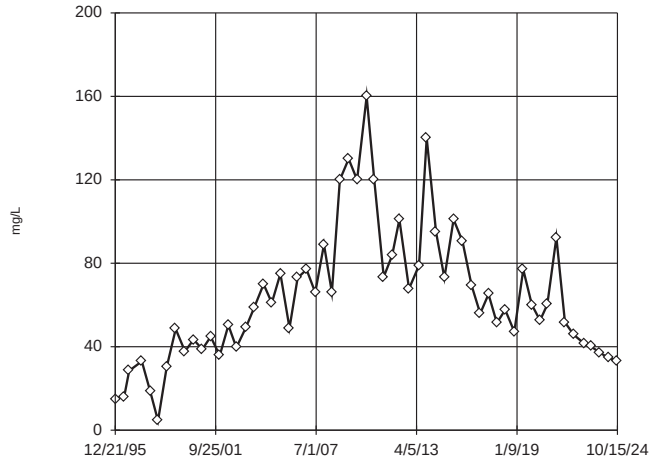
Tukey's Outlier Screening

P-5 (bg)



n = 59

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were square root transformed to achieve best W statistic (graph shown in original units).

High cutoff = 258.5, low cutoff = -0.9283, based on IQR multiplier of 3.

Constituent: Chloride Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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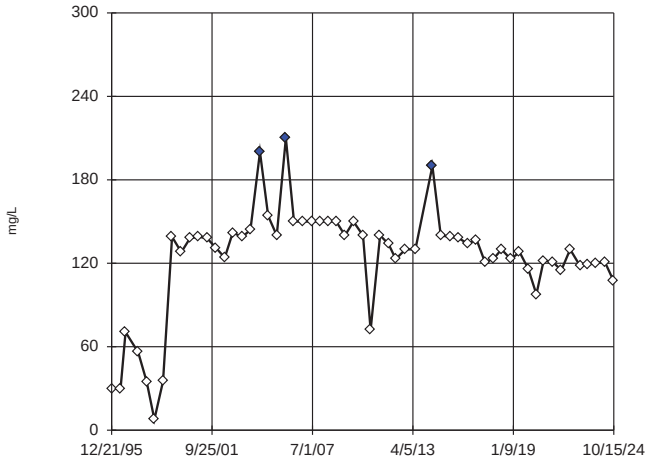
Tukey's Outlier Screening

P-7



n = 58

Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.

Data were square transformed to achieve best W statistic (graph shown in original units).

High cutoff = 188.6, low cutoff = -40.96, based on IQR multiplier of 3.

Constituent: Chloride Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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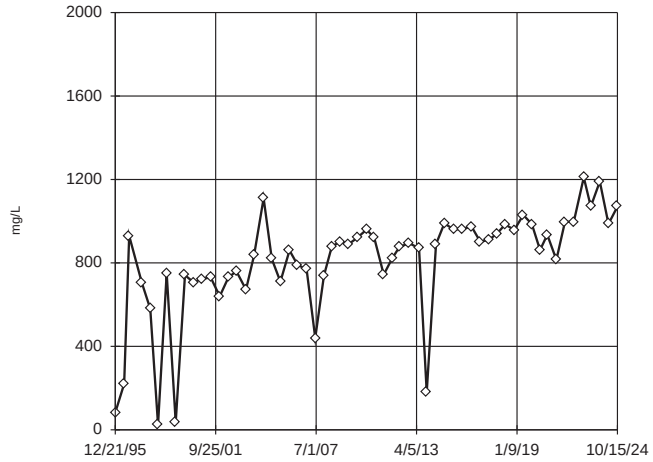
Tukey's Outlier Screening

P-8



n = 59

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were cube transformed to achieve best W statistic (graph shown in original units).

High cutoff = 1334, low cutoff = -1032, based on IQR multiplier of 3.

Constituent: Chloride Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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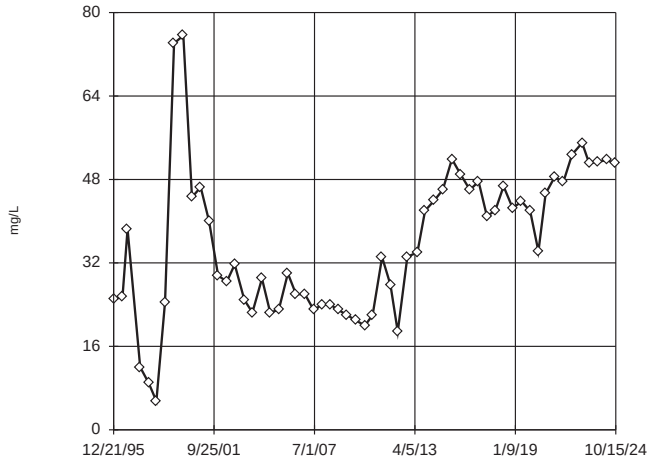
Tukey's Outlier Screening

P-11



n = 59

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were square root transformed to achieve best W statistic (graph shown in original units).

High cutoff = 158.2, low cutoff = -0.7419, based on IQR multiplier of 3.

Constituent: Chloride Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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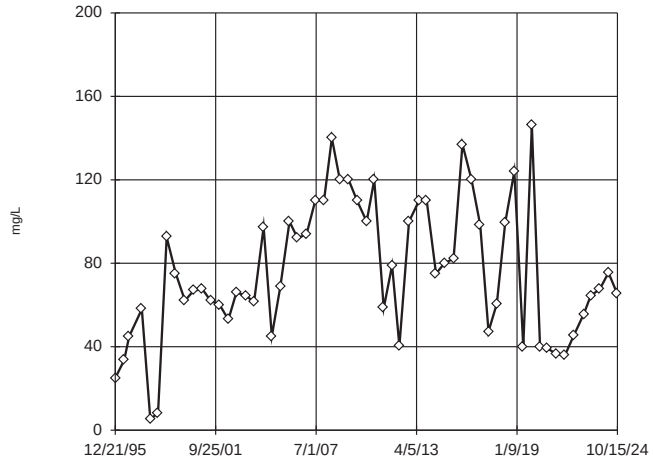
Rosner's Outlier Test

P-12 (bg)



n = 59

No statistical outliers.

k = 2
r = 2.147
Tabulated value = 3.161
Alpha = 0.01

Normality test used:
Shapiro Francia@alpha = 0.1
Calculated = 0.9822
Critical = 0.966
The distribution was found to be normally distributed.

Constituent: Chloride Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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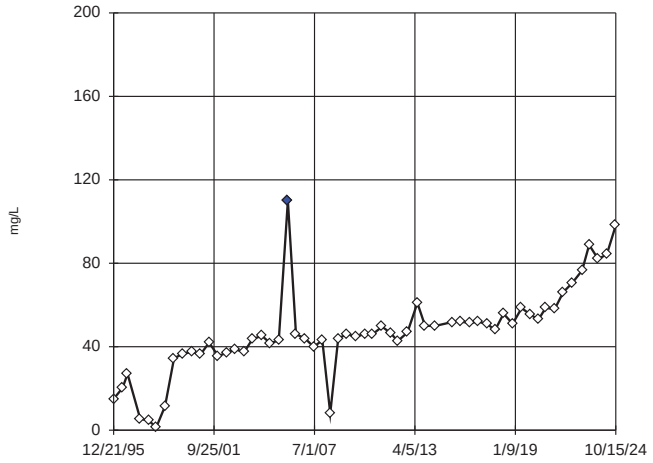
Tukey's Outlier Screening

P-14



n = 58

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

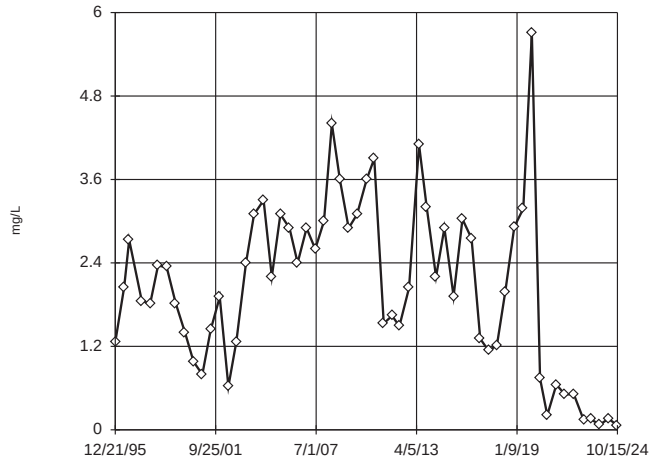
High cutoff = 104.7, low cutoff = -12.95, based on IQR multiplier of 3.

Constituent: Chloride Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

Rosner's Outlier Test

P-4 (bg)



n = 59

No statistical outliers.

k = 2
r = 2.985
Tabulated value = 3.161
Alpha = 0.01

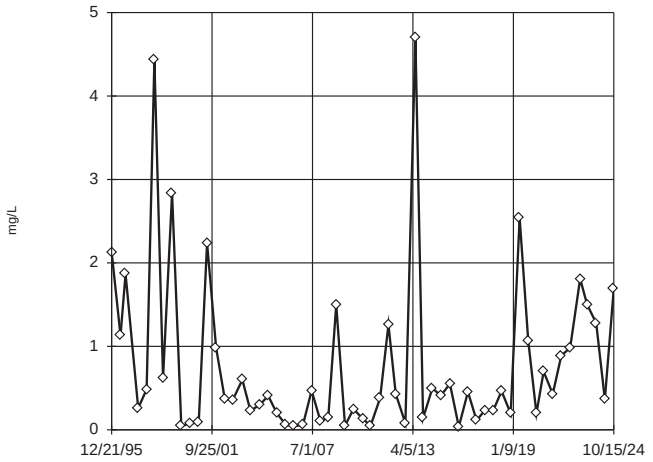
Normality test used:
Shapiro Francia@alpha = 0.1
Calculated = 0.9816
Critical = 0.966
The distribution was found to be normally distributed.

Constituent: Iron Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

EPA Screening (suspected outliers for Rosner's Test)

P-5 (bg)



n = 59

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.7823, std. dev. 0.9884, critical Tn 3.019

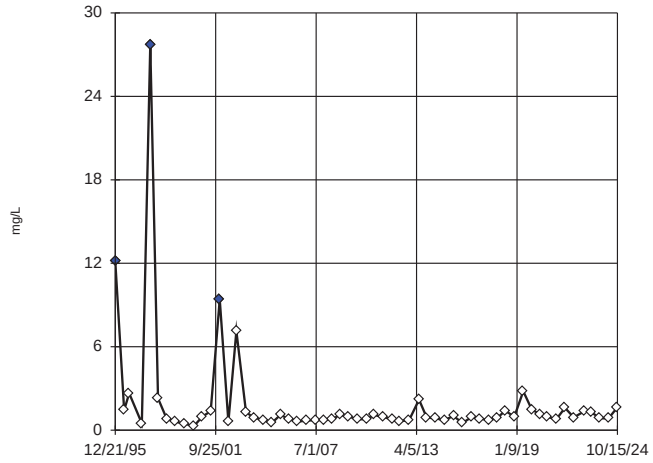
Normality test used:
Shapiro Francia@alpha = 0.1
Calculated = 0.9875
Critical = 0.967 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Iron Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

Tukey's Outlier Screening

P-7



n = 59

Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

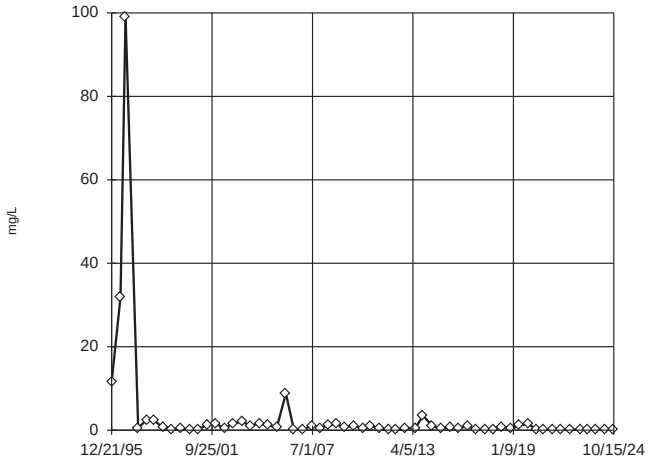
High cutoff = 8.22, low cutoff = 0.1193, based on IQR multiplier of 3.

Constituent: Iron Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

Tukey's Outlier Screening

P-8



n = 59

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 614.4, low cutoff = 0.000293, based on IQR multiplier of 3.

Constituent: Iron Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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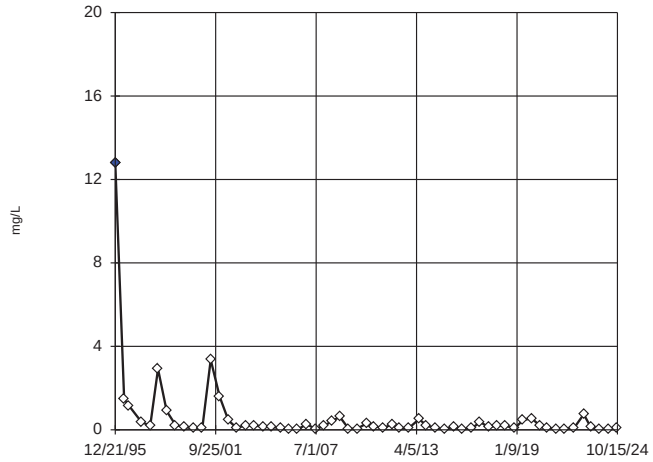
Rosner's Outlier Test

P-11



n = 59

Statistical outlier is drawn as solid.

k = 1
r = 3.265
Tabulated value = 3.161
Alpha = 0.01

Normality test used:
Shapiro Francia@alpha = 0.1
Calculated = 0.9783
Critical = 0.966 (after natural log transformation)
The distribution, after removal of suspect value, was found to be log-normal.

Constituent: Iron Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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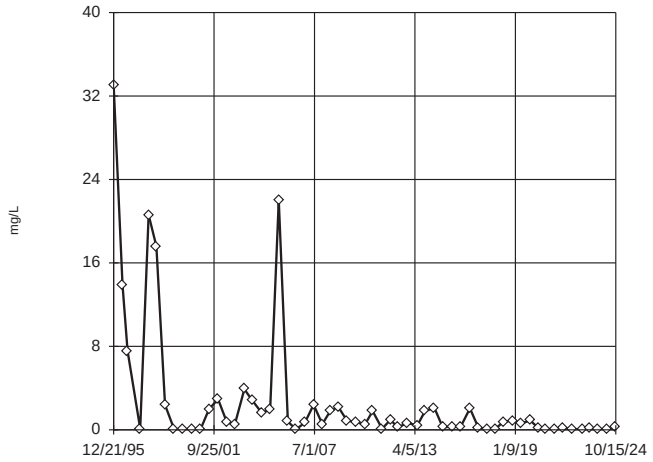
EPA Screening (suspected outliers for Rosner's Test)

P-12 (bg)



n = 59

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 2.716, std. dev. 6.177, critical Tn 3.019

Normality test used:
Shapiro Francia@alpha = 0.1
Calculated = 0.9764
Critical = 0.967 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Iron Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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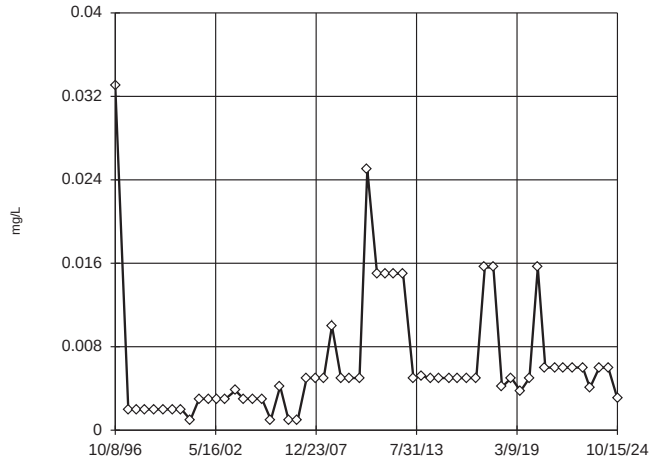
Tukey's Outlier Screening

P-8



n = 57

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because both the lower and upper quartiles represent reporting limits.

Constituent: Lead Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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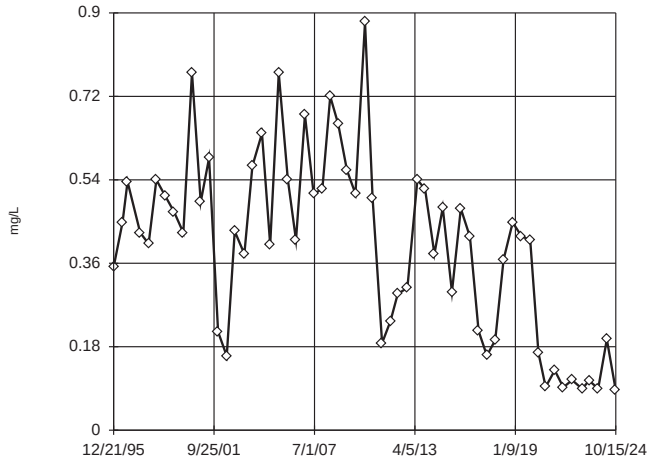
EPA Screening (suspected outliers for Rosner's Test)

P-4 (bg)



n = 59

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.3986, std. dev. 0.1965, critical Tn 3.019

Normality test used:
Shapiro Francia@alpha = 0.1
Calculated = 0.9685
Critical = 0.967
The distribution was found to be normally distributed.

Constituent: Manganese Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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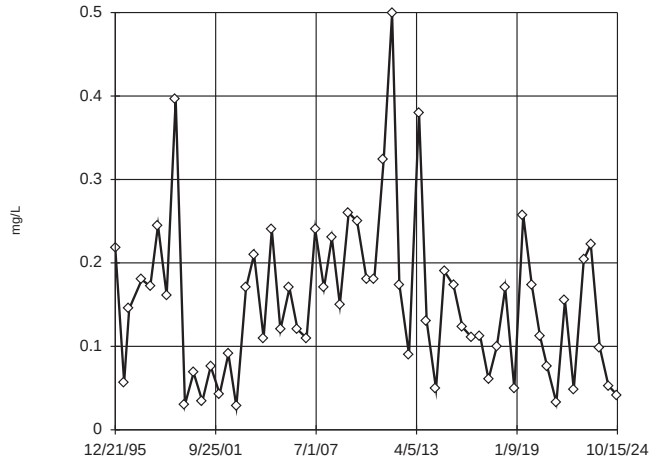
Tukey's Outlier Screening

P-5 (bg)



n = 59

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were cube root transformed to achieve best W statistic (graph shown in original units).

High cutoff = 1.274, low cutoff = -0.0003686, based on IQR multiplier of 3.

Constituent: Manganese Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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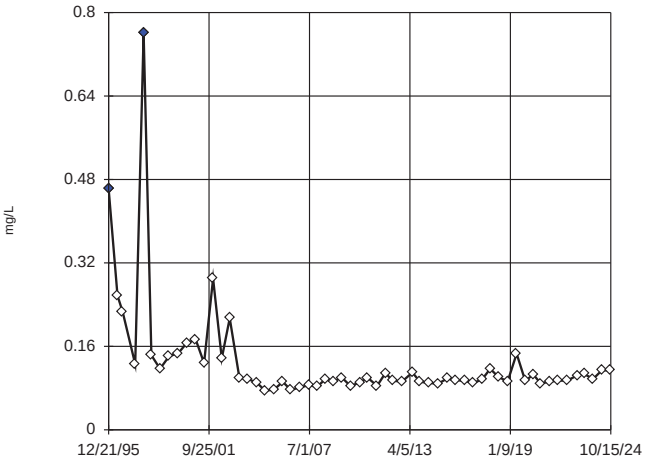
Tukey's Outlier Screening

P-7



n = 59

Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.3237, low cutoff = 0.03581, based on IQR multiplier of 3.

Constituent: Manganese Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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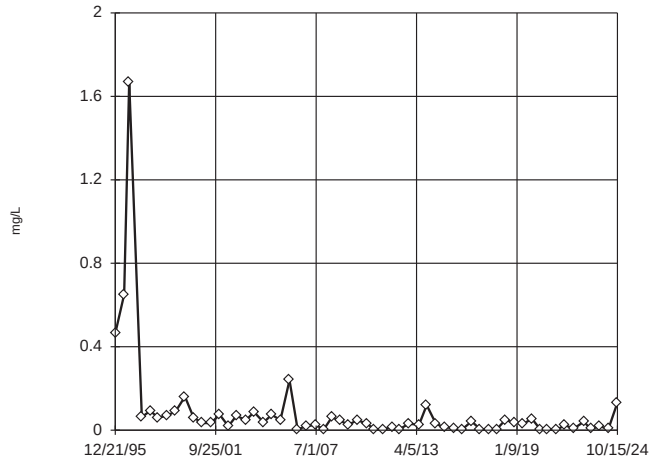
Tukey's Outlier Screening

P-8



n = 59

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 37.19, low cutoff = 0.00001272, based on IQR multiplier of 3.

Constituent: Manganese Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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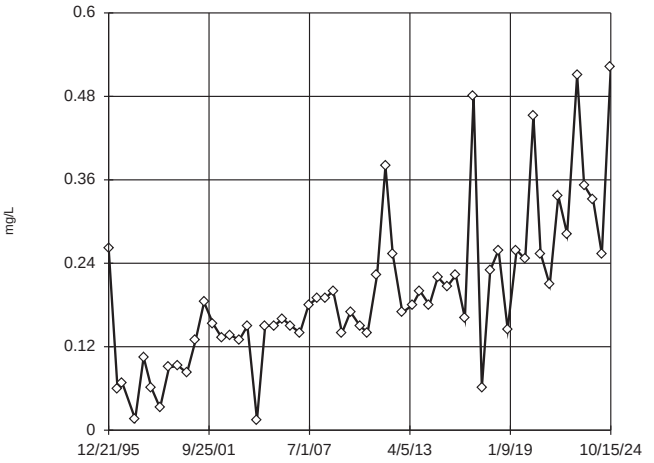
Tukey's Outlier Screening

P-11



n = 59

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were square root transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.8128, low cutoff = -0.0008084, based on IQR multiplier of 3.

Constituent: Manganese Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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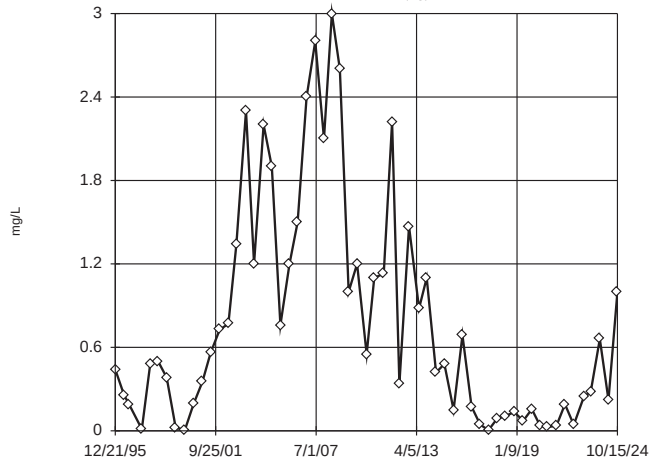
Tukey's Outlier Screening

P-12 (bg)



n = 59

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were cube root transformed to achieve best W statistic (graph shown in original units).

High cutoff = 18.31, low cutoff = -1.108, based on IQR multiplier of 3.

Constituent: Manganese Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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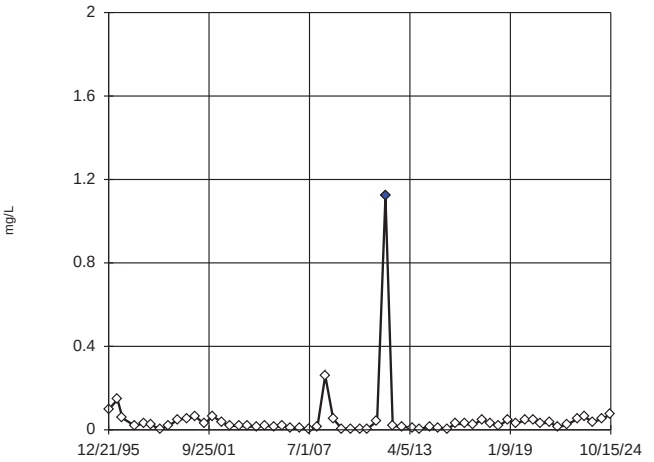
Rosner's Outlier Test

P-14



n = 59

Statistical outlier is drawn as solid.

k = 1
r = 3.575
Tabulated value = 3.161
Alpha = 0.01

Normality test used:
Shapiro Francia@alpha = 0.1
Calculated = 0.9717
Critical = 0.966 (after natural log transformation)
The distribution, after removal of suspect value, was found to be log-normal.

Constituent: Manganese Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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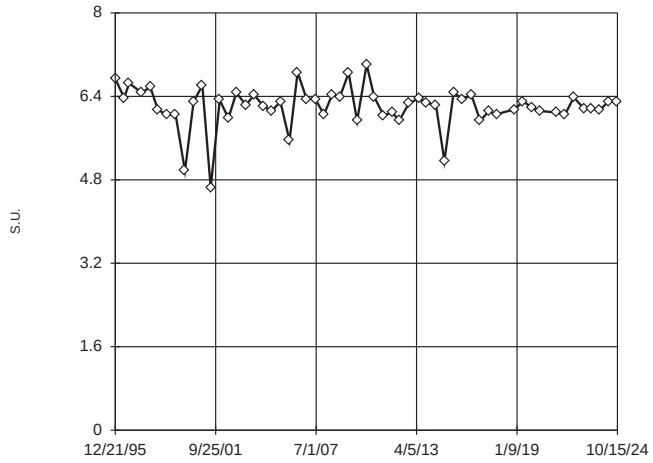
Tukey's Outlier Screening

P-4 (bg)



n = 57

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were x^6 transformed to achieve best W statistic (graph shown in original units).

High cutoff = 7.038, low cutoff = -3.829, based on IQR multiplier of 3.

Constituent: pH Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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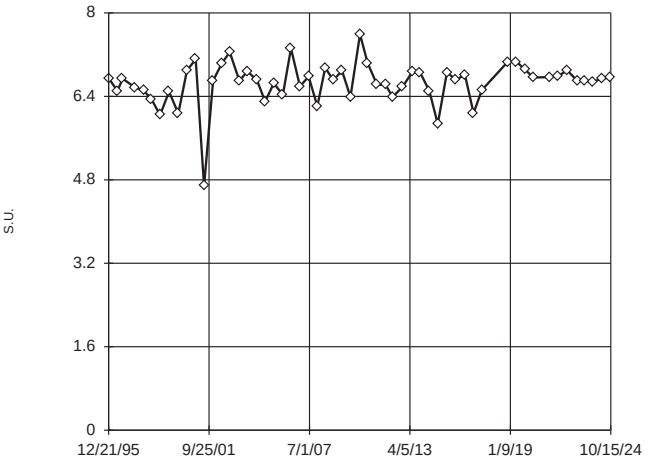
Tukey's Outlier Screening

P-5 (bg)



n = 56

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were x^5 transformed to achieve best W statistic (graph shown in original units).

High cutoff = 7.667, low cutoff = 3.484, based on IQR multiplier of 3.

Constituent: pH Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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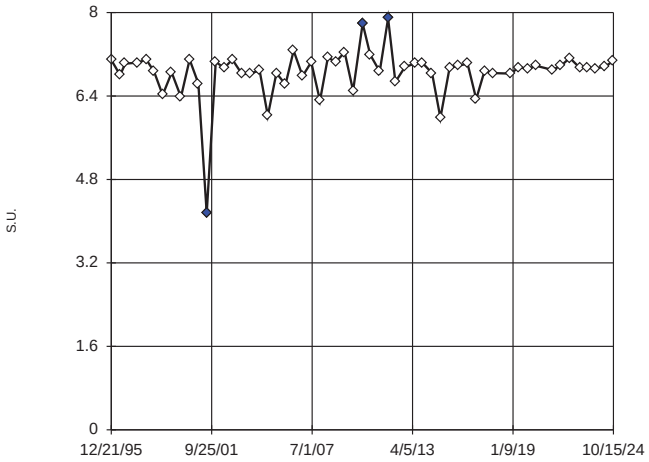
Tukey's Outlier Screening

P-7



n = 57

Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were x^5 transformed to achieve best W statistic (graph shown in original units).

High cutoff = 7.593, low cutoff = 5.873, based on IQR multiplier of 3.

Constituent: pH Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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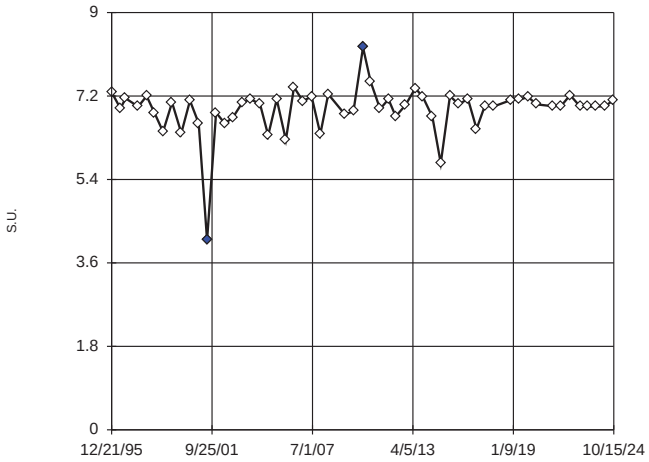
Tukey's Outlier Screening

P-8



n = 56

Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were x^4 transformed to achieve best W statistic (graph shown in original units).

High cutoff = 7.89, low cutoff = 5.445, based on IQR multiplier of 3.

Constituent: pH Analysis Run 12/4/2024 1:47 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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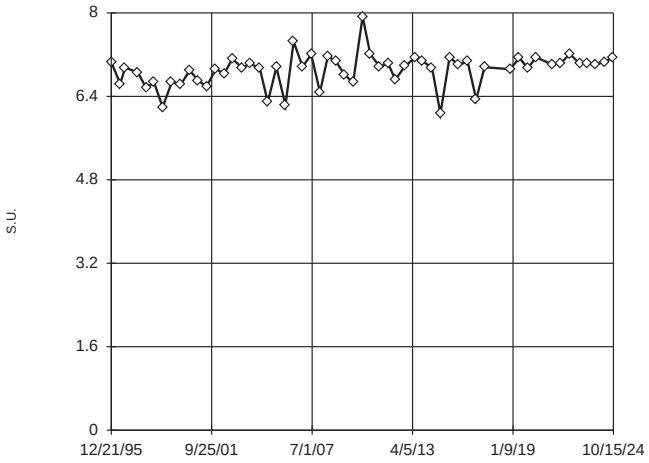
Tukey's Outlier Screening

P-11



n = 56

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

High cutoff = 8.15, low cutoff = 5.63, based on IQR multiplier of 3.

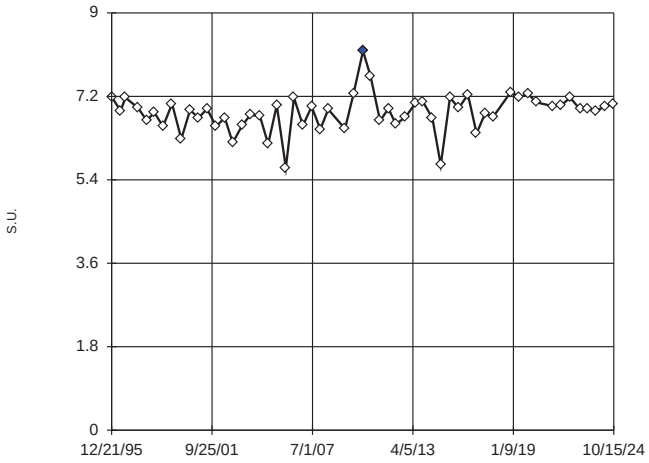
Constituent: pH Analysis Run 12/4/2024 1:48 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

Sanitas™ v.10.0.23 Software licensed to Pollution Management, Inc. UG

Tukey's Outlier Screening

P-12 (bg)



n = 56

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were square transformed to achieve best W statistic (graph shown in original units).

High cutoff = 8.106, low cutoff = 5.356, based on IQR multiplier of 3.

Constituent: pH Analysis Run 12/4/2024 1:48 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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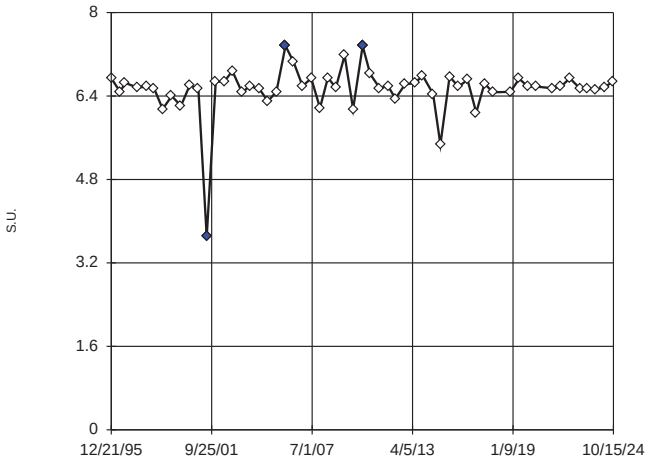
Tukey's Outlier Screening

P-14



n = 57

Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were x^6 transformed to achieve best W statistic (graph shown in original units).

High cutoff = 7.19, low cutoff = 5.442, based on IQR multiplier of 3.

Constituent: pH Analysis Run 12/4/2024 1:48 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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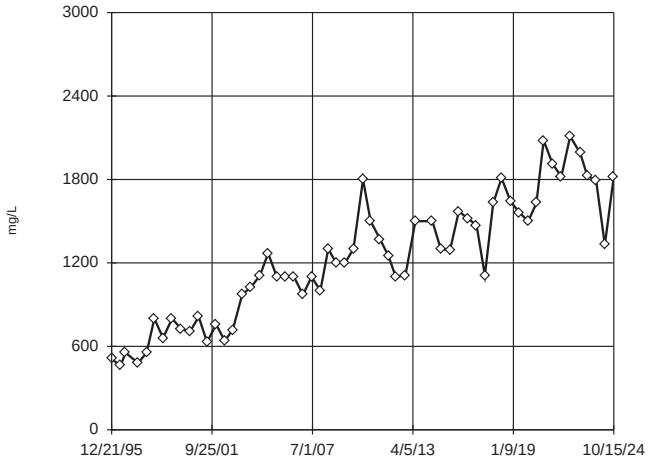
EPA Screening (suspected outliers for Rosner's Test)

P-4 (bg)



n = 58

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 1231, std. dev. 445.2, critical Tn 3.013

Normality test used:
Shapiro Francia@alpha = 0.1
Calculated = 0.9825
Critical = 0.966
The distribution was found to be normally distributed.

Constituent: Sulfate as SO4 Analysis Run 12/4/2024 1:48 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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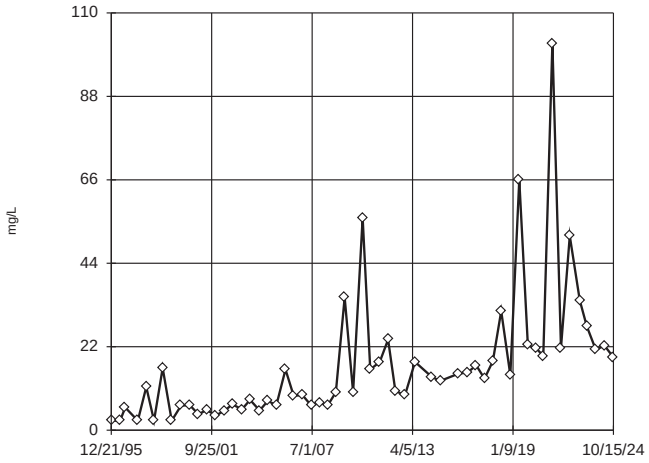
EPA Screening (suspected outliers for Rosner's Test)

P-5 (bg)



n = 57

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 16.83, std. dev. 17.33, critical Tn 3.006

Normality test used:
Shapiro Francia@alpha = 0.1
Calculated = 0.9823
Critical = 0.966 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Sulfate as SO4 Analysis Run 12/4/2024 1:48 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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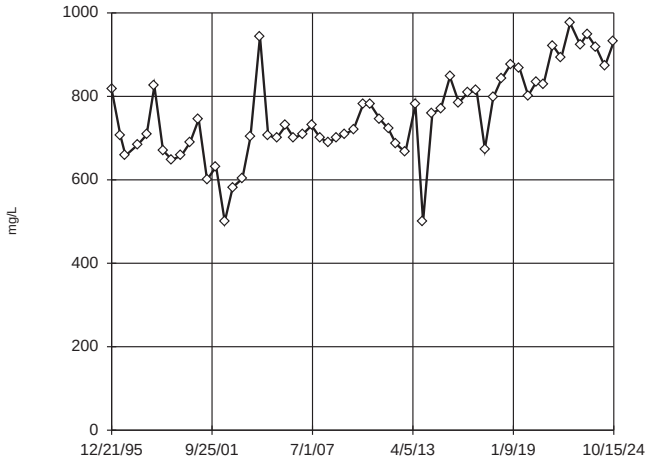
EPA Screening (suspected outliers for Rosner's Test)

P-7



n = 59

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 754.6, std. dev. 107.3, critical Tn 3.019

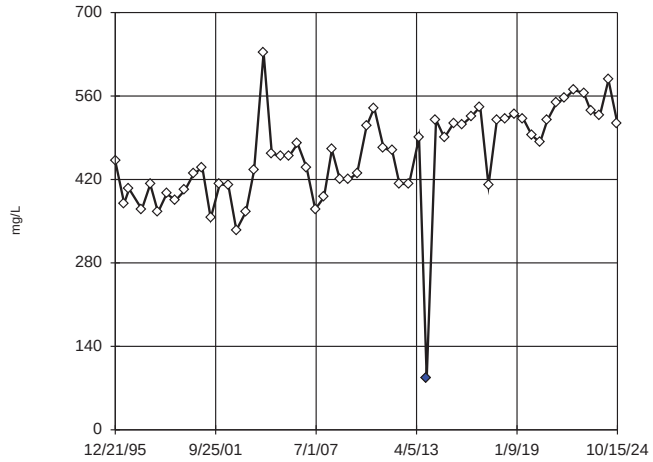
Normality test used:
Shapiro Francia@alpha = 0.1
Calculated = 0.9788
Critical = 0.967
The distribution was found to be normally distributed.

Constituent: Sulfate as SO4 Analysis Run 12/4/2024 1:48 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

Rosner's Outlier Test

P-8



n = 59

Statistical outlier is drawn as solid.

k = 1
r = 4.487
Tabulated value = 3.161
Alpha = 0.01

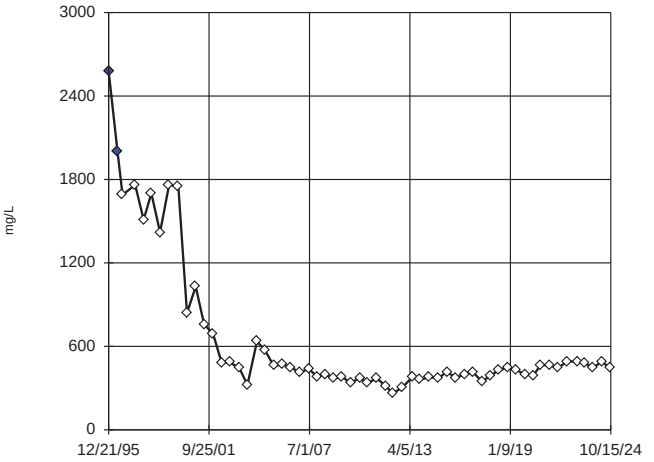
Normality test used:
Shapiro Francia@alpha = 0.1
Calculated = 0.9805
Critical = 0.966
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Sulfate as SO4 Analysis Run 12/4/2024 1:48 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

Tukey's Outlier Screening

P-11



n = 59

Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

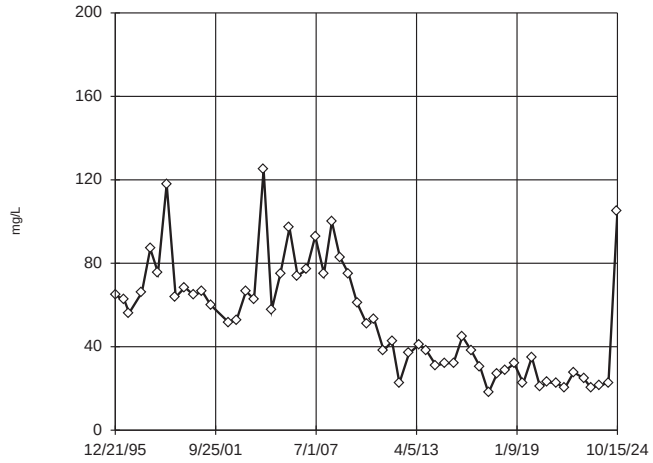
High cutoff = 1924, low cutoff = 112.6, based on IQR multiplier of 3.

Constituent: Sulfate as SO4 Analysis Run 12/4/2024 1:48 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

EPA Screening (suspected outliers for Rosner's Test)

P-12 (bg)



n = 58

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 53.16, std. dev. 26.82, critical Tn 3.013

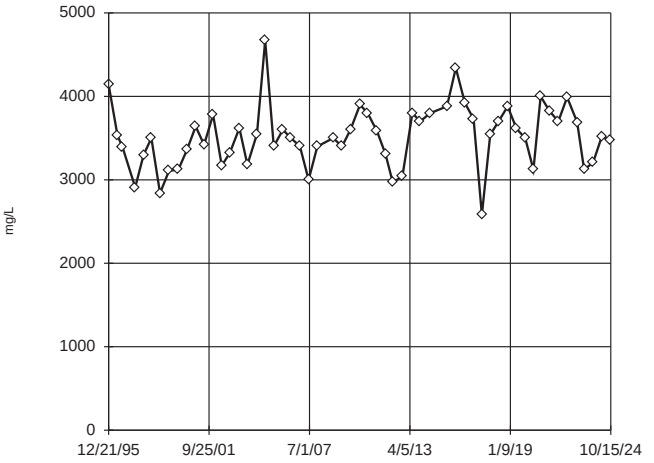
Normality test used:
Shapiro Francia@alpha = 0.1
Calculated = 0.9672
Critical = 0.966 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Sulfate as SO4 Analysis Run 12/4/2024 1:48 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

EPA Screening (suspected outliers for Rosner's Test)

P-14



n = 57

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 3519, std. dev. 372.2, critical Tn 3.006

Normality test used:
Shapiro Francia@alpha = 0.1
Calculated = 0.973
Critical = 0.966
The distribution was found to be normally distributed.

Constituent: Sulfate as SO4 Analysis Run 12/4/2024 1:48 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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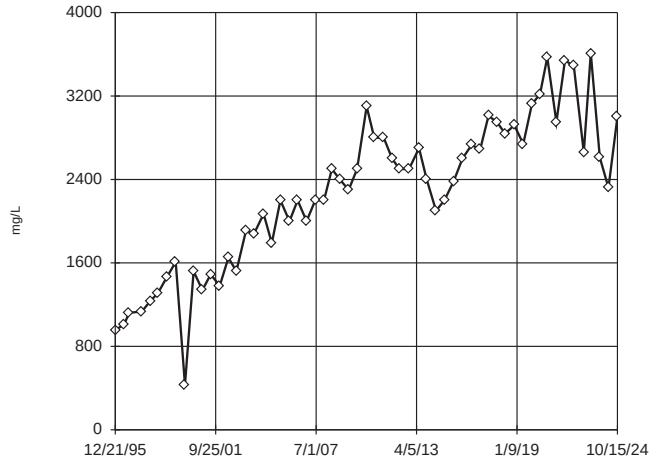
Rosner's Outlier Test

P-4 (bg)



n = 59

No statistical outliers.

k = 1
r = 2.531
Tabulated value = 3.161
Alpha = 0.01

Normality test used:
Shapiro Francia@alpha = 0.1
Calculated = 0.9841
Critical = 0.966
The distribution was found to be normally distributed.

Constituent: TDS Analysis Run 12/4/2024 1:48 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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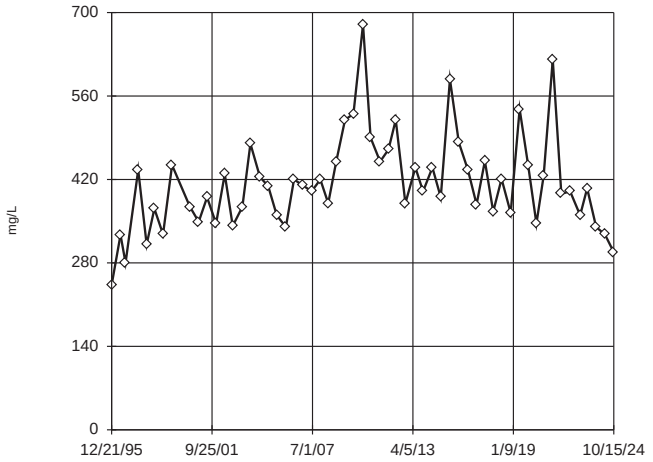
EPA Screening (suspected outliers for Rosner's Test)

P-5 (bg)



n = 58

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 412.7, std. dev. 80.16, critical Tn 3.013

Normality test used:
Shapiro Francia@alpha = 0.1
Calculated = 0.9754
Critical = 0.966 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: TDS Analysis Run 12/4/2024 1:48 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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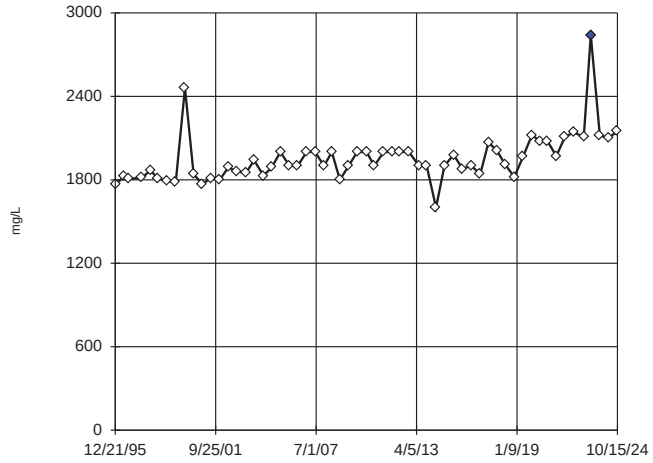
Tukey's Outlier Screening

P-7



n = 59

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 2568, low cutoff = 1433, based on IQR multiplier of 3.

Constituent: TDS Analysis Run 12/4/2024 1:48 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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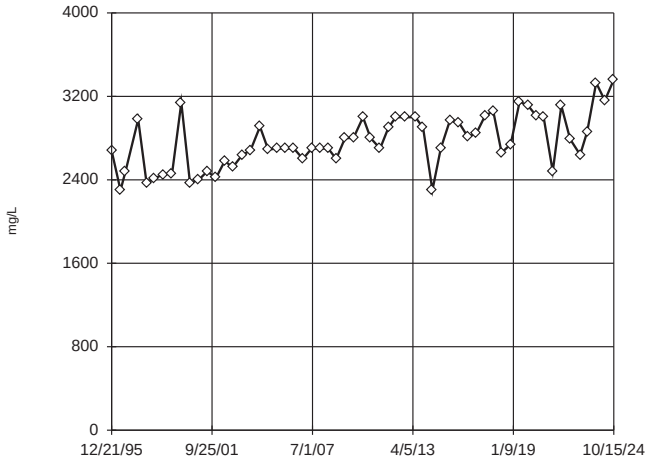
EPA Screening (suspected outliers for Rosner's Test)

P-8



n = 59

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 2768, std. dev. 257.5, critical Tn 3.019

Normality test used:
Shapiro Francia@alpha = 0.1
Calculated = 0.9836
Critical = 0.967
The distribution was found to be normally distributed.

Constituent: TDS Analysis Run 12/4/2024 1:48 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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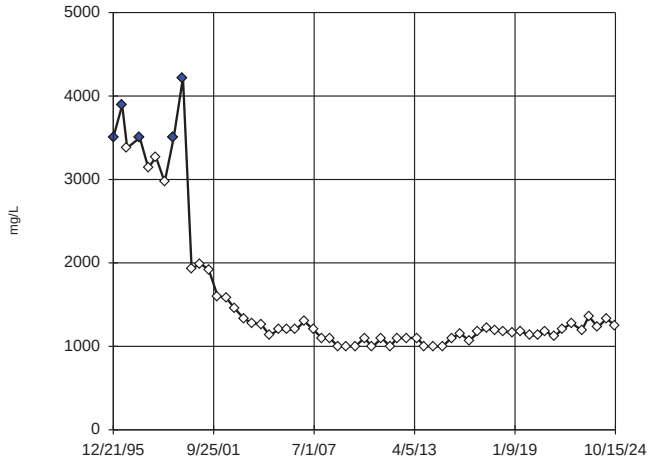
Tukey's Outlier Screening

P-11



n = 59

Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 3414, low cutoff = 470.4, based on IQR multiplier of 3.

Constituent: TDS Analysis Run 12/4/2024 1:48 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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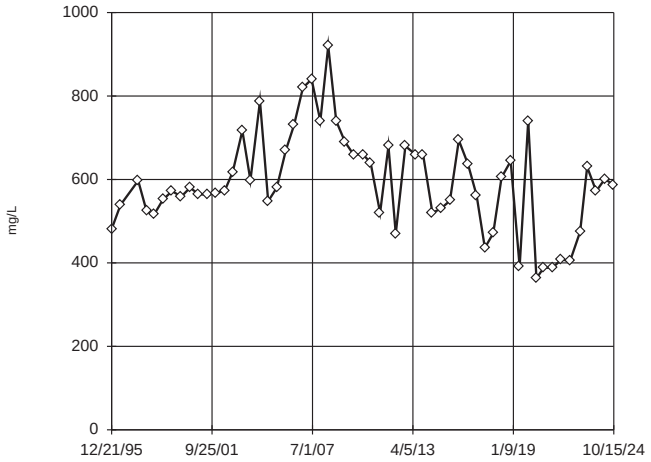
EPA Screening (suspected outliers for Rosner's Test)

P-12 (bg)



n = 58

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 593.4, std. dev. 117.9, critical Tn 3.013

Normality test used:
Shapiro Francia@alpha = 0.1
Calculated = 0.9813
Critical = 0.966
The distribution was found to be normally distributed.

Constituent: TDS Analysis Run 12/4/2024 1:48 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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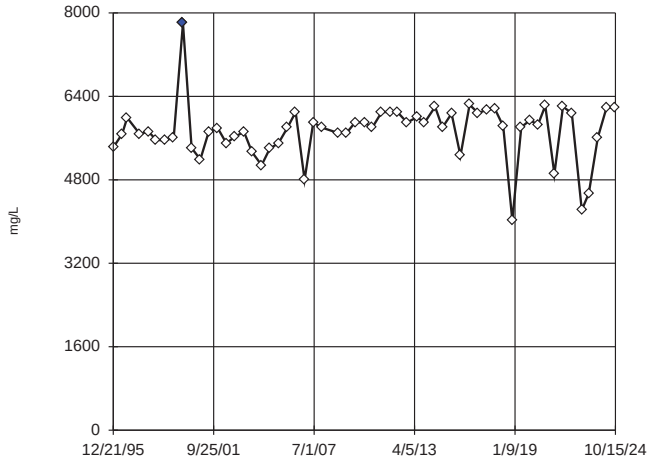
Tukey's Outlier Screening

P-14



n = 58

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

High cutoff = 7745, low cutoff = 3860, based on IQR multiplier of 3.

Constituent: TDS Analysis Run 12/4/2024 1:48 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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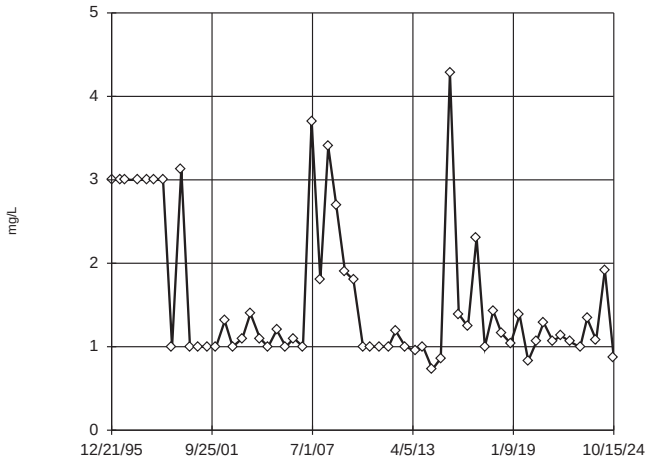
Tukey's Outlier Screening

P-4 (bg)



n = 59

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

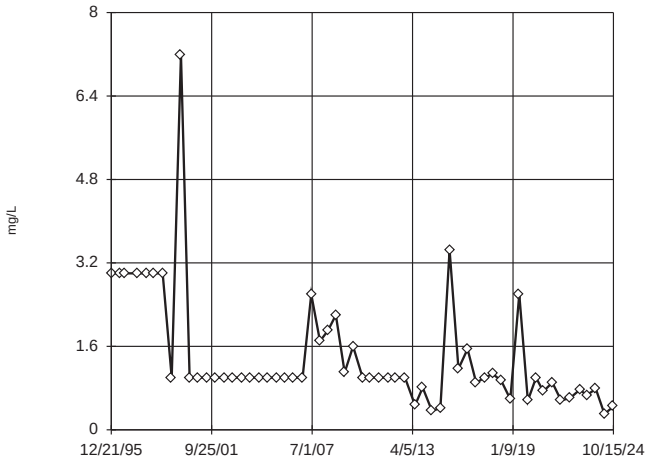
High cutoff = 13.03, low cutoff = 0.1458, based on IQR multiplier of 3.

Constituent: TOC Analysis Run 12/4/2024 1:48 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

Tukey's Outlier Screening

P-5 (bg)



n = 59

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 8.96, low cutoff = 0.1609, based on IQR multiplier of 3.

Constituent: TOC Analysis Run 12/4/2024 1:48 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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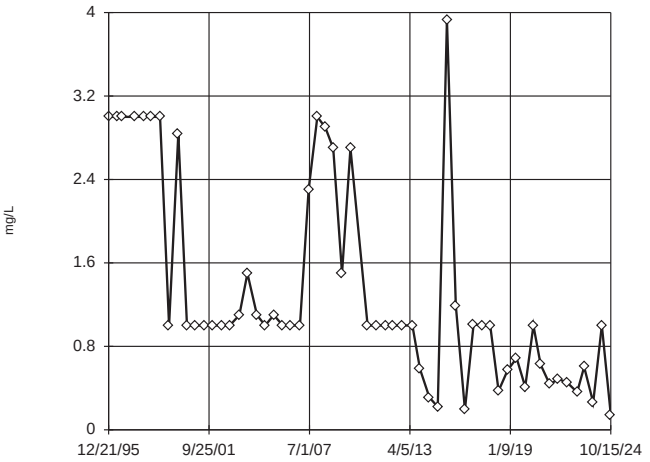
Tukey's Outlier Screening

P-7



n = 58

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 51.44, low cutoff = 0.02216, based on IQR multiplier of 3.

Constituent: TOC Analysis Run 12/4/2024 1:48 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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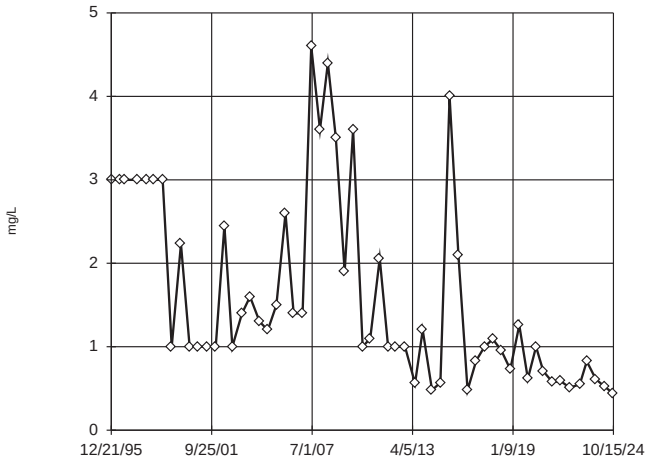
Tukey's Outlier Screening

P-8



n = 59

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 64.17, low cutoff = 0.0315, based on IQR multiplier of 3.

Constituent: TOC Analysis Run 12/4/2024 1:48 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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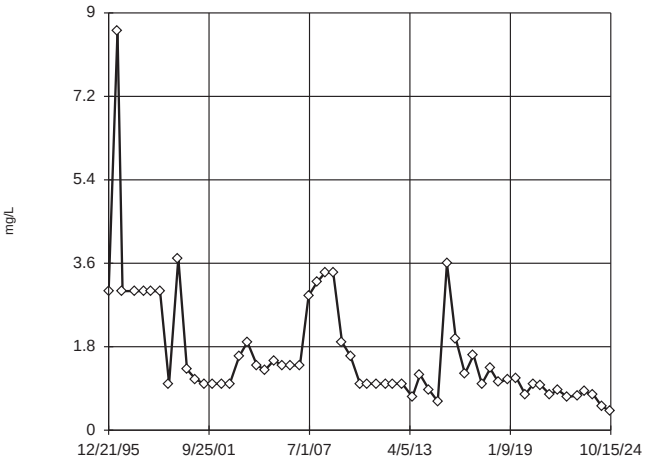
Tukey's Outlier Screening

P-11



n = 59

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 13.03, low cutoff = 0.1458, based on IQR multiplier of 3.

Constituent: TOC Analysis Run 12/4/2024 1:48 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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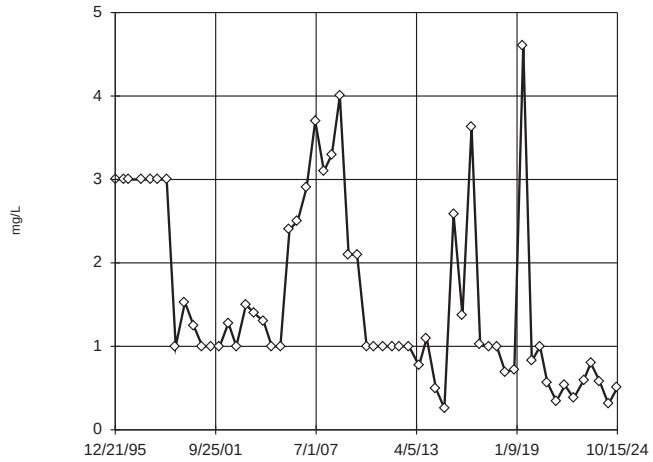
Tukey's Outlier Screening

P-12 (bg)



n = 59

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 79.48, low cutoff = 0.02671, based on IQR multiplier of 3.

Constituent: TOC Analysis Run 12/4/2024 1:48 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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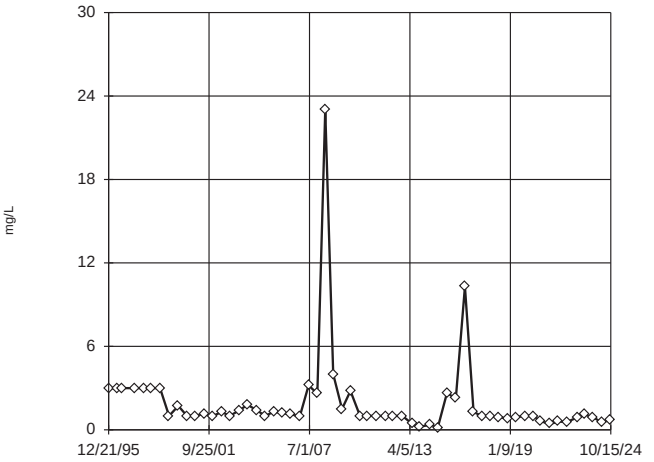
Tukey's Outlier Screening

P-14



n = 59

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 33.61, low cutoff = 0.06179, based on IQR multiplier of 3.

Constituent: TOC Analysis Run 12/4/2024 1:48 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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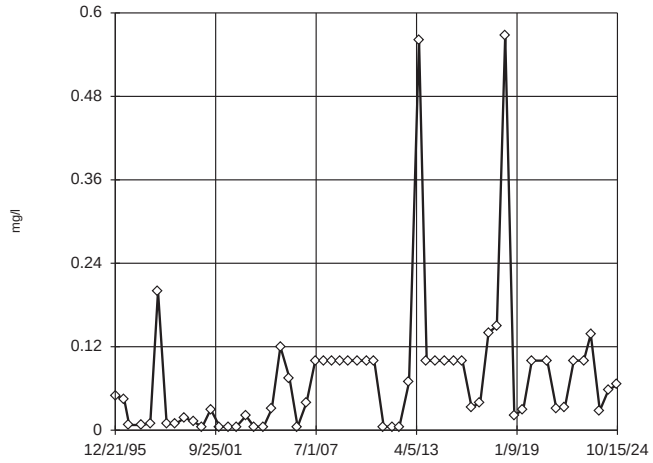
Tukey's Outlier Screening

P-8



n = 58

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 118.7, low cutoff = 0.000007953, based on IQR multiplier of 3.

Constituent: TOX Analysis Run 12/4/2024 1:48 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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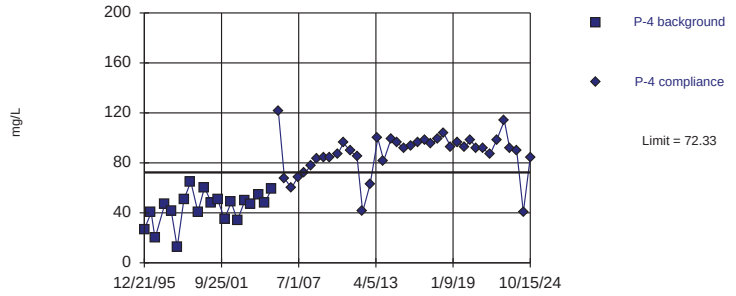
Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=43.93, Std. Dev.=13.24, n=20. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9398, critical = 0.868. Kappa = 2.146 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: Chloride Analysis Run 12/10/2024 9:54 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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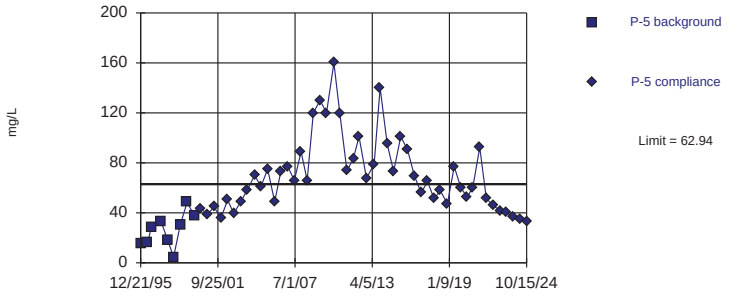
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=25.78, Std. Dev.=13.5, n=9. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9789, critical = 0.764. Kappa = 2.753 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: Chloride Analysis Run 12/10/2024 9:59 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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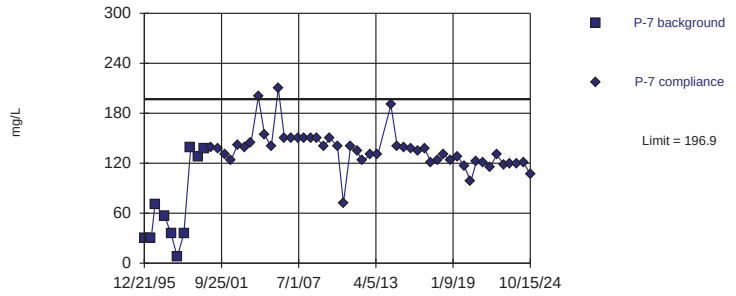
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=66.9, Std. Dev.=49.89, n=10. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8402, critical = 0.781. Kappa = 2.606 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: Chloride Analysis Run 12/10/2024 9:59 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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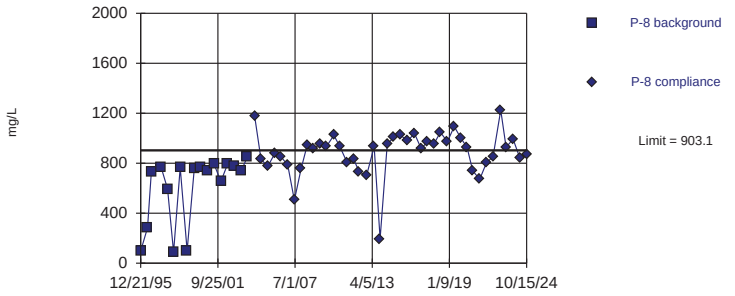
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on x^4 transformation): Mean=2.4e11, Std. Dev.=1.9e11, n=17. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8767, critical = 0.851. Kappa = 2.224 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: Chloride Analysis Run 12/10/2024 10:00 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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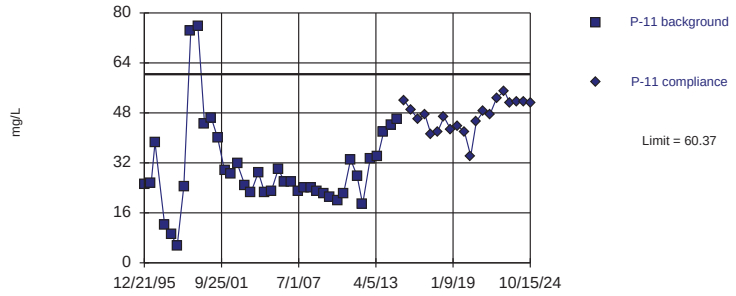
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on square root transformation): Mean=5.347, Std. Dev.=1.226, n=39. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9277, critical = 0.917. Kappa = 1.976 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: Chloride Analysis Run 12/10/2024 10:01 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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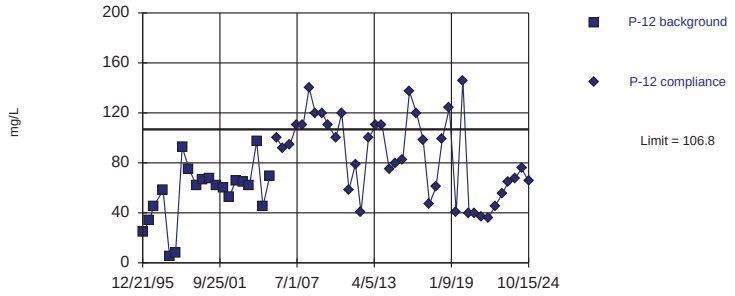
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=55.89, Std. Dev.=23.73, n=20. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9253, critical = 0.868. Kappa = 2.146 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: Chloride Analysis Run 12/10/2024 10:01 AM

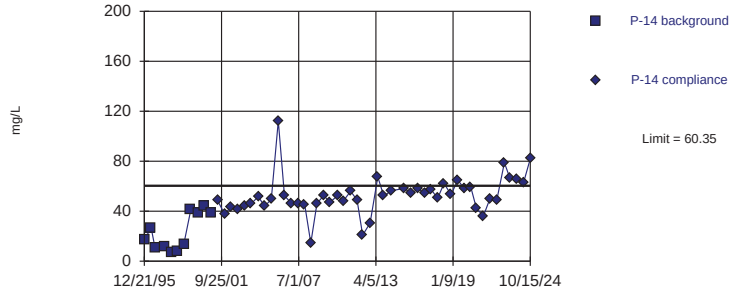
Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

Sanitas™ v.10.0.23 Software licensed to Pollution Management, Inc. UG

Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=23.42, Std. Dev.=14.65, n=11. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8525, critical = 0.792. Kappa = 2.52 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: Chloride Analysis Run 12/10/2024 10:01 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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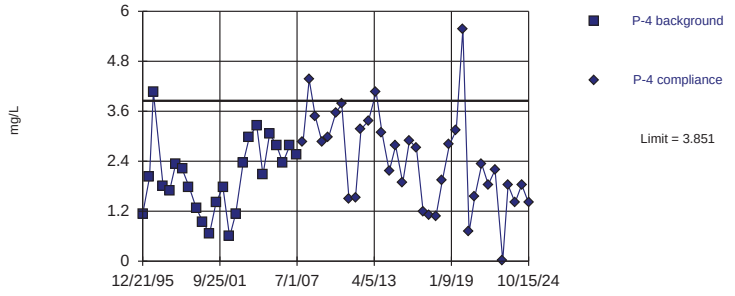
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2.043, Std. Dev.=0.8671, n=24. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9821, critical = 0.884. Kappa = 2.085 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: Iron Analysis Run 12/10/2024 10:53 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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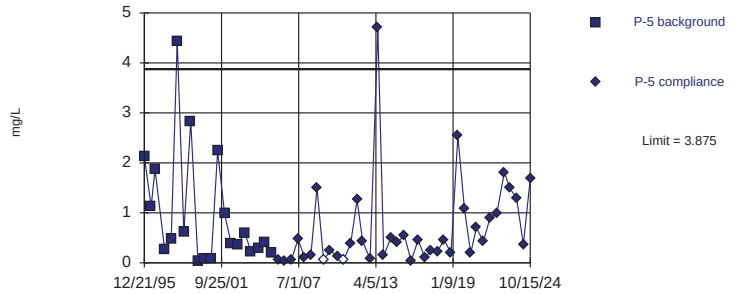
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on square root transformation): Mean=0.852, Std. Dev.=0.5202, n=20. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9055, critical = 0.868. Kappa = 2.146 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: Iron Analysis Run 12/10/2024 10:53 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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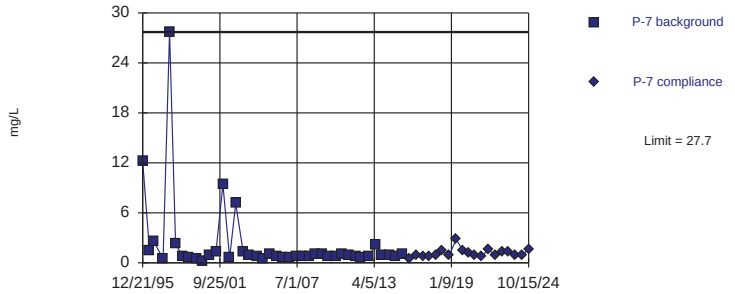
Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 40 background values. Well-constituent pair annual alpha = 0.002316. Individual comparison alpha = 0.001159 (1 of 2). Seasonality was not detected with 95% confidence.

Constituent: Iron Analysis Run 12/10/2024 10:55 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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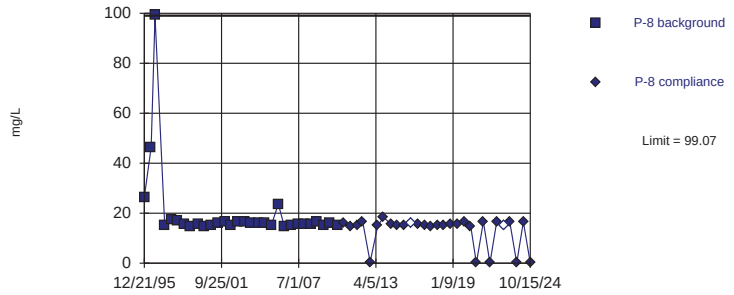
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 30 background values. Well-constituent pair annual alpha = 0.004011. Individual comparison alpha = 0.002008 (1 of 2). Data were deseasonalized.

Constituent: Iron Analysis Run 12/10/2024 10:55 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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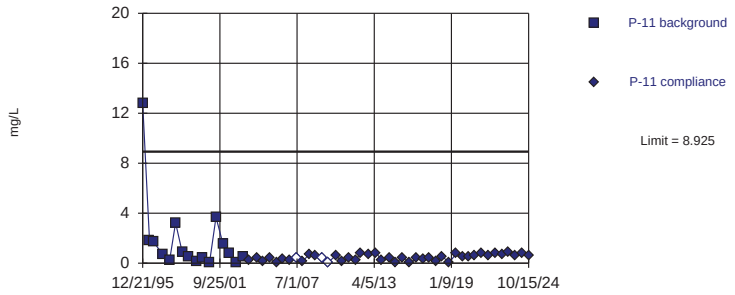
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on cube root transformation): Mean=0.9183, Std. Dev.=0.5138, n=16. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8918, critical = 0.844. Kappa = 2.25 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: Iron Analysis Run 12/10/2024 10:55 AM

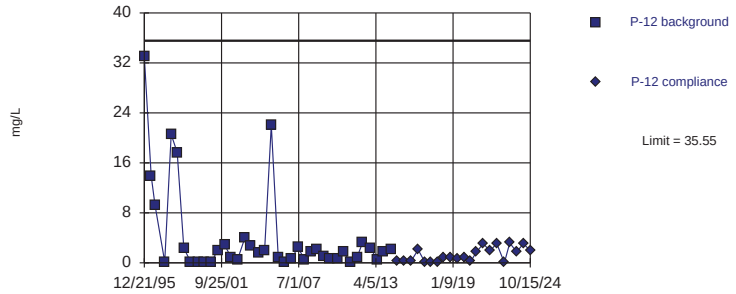
Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

Sanitas™ v.10.0.23 Software licensed to Pollution Management, Inc. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on natural log transformation): Mean=0.07184, Std. Dev.=1.767, n=38. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9633, critical = 0.916. Kappa = 1.98 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: Iron Analysis Run 12/10/2024 10:57 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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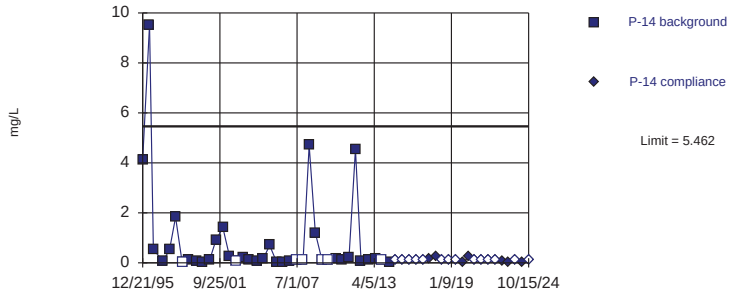
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on natural log transformation) (after Kaplan-Meier Adjustment): Mean=-1.881, Std. Dev.=1.807, n=38, 18.42% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9252, critical = 0.916. Kappa = 1.98 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: Iron Analysis Run 12/10/2024 10:57 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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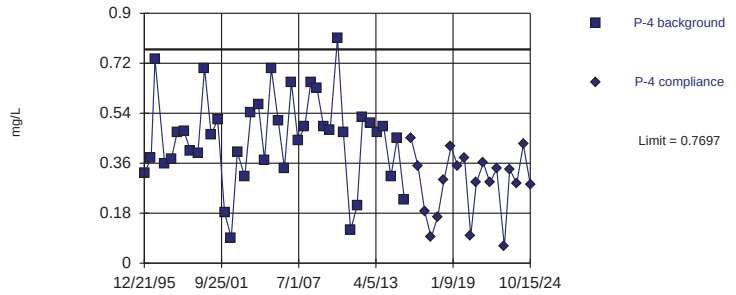
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.4512, Std. Dev.=0.1615, n=40. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9766, critical = 0.919. Kappa = 1.972 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: Manganese Analysis Run 12/10/2024 10:59 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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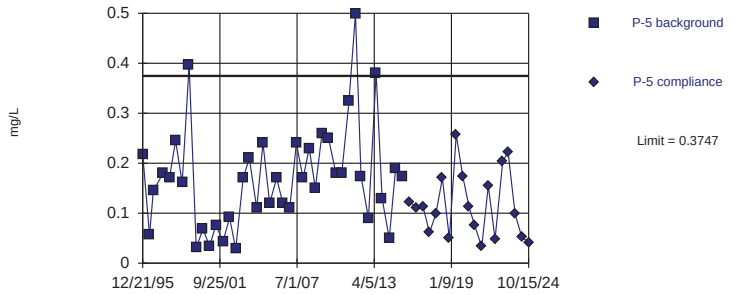
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1716, Std. Dev.=0.103, n=40. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9216, critical = 0.919. Kappa = 1.972 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: Manganese Analysis Run 12/10/2024 10:59 AM

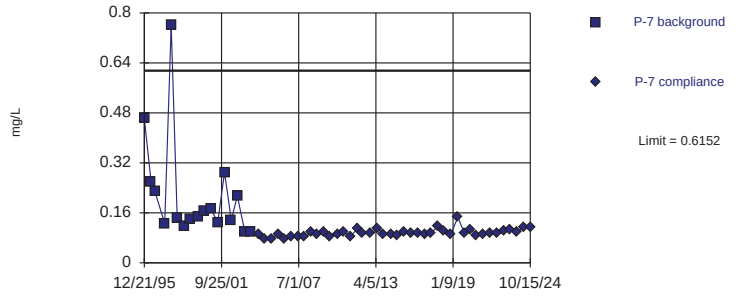
Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

Sanitas™ v.10.0.23 Software licensed to Pollution Management, Inc. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on natural log transformation): Mean=-1.701, Std. Dev.=0.5464, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8779, critical = 0.851. Kappa = 2.224 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: Manganese Analysis Run 12/10/2024 10:59 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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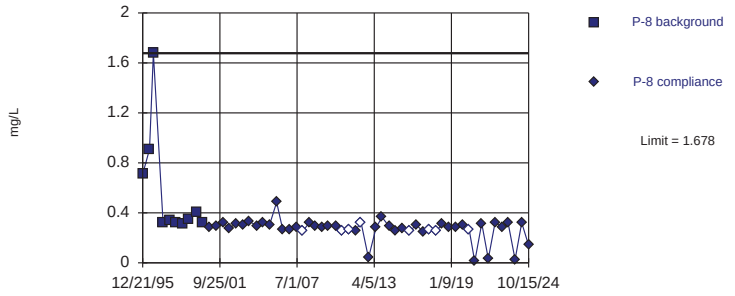
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 10 background values. Well-constituent pair annual alpha = 0.0293. Individual comparison alpha = 0.01476 (1 of 2). Data were deseasonalized.

Constituent: Manganese Analysis Run 12/10/2024 11:00 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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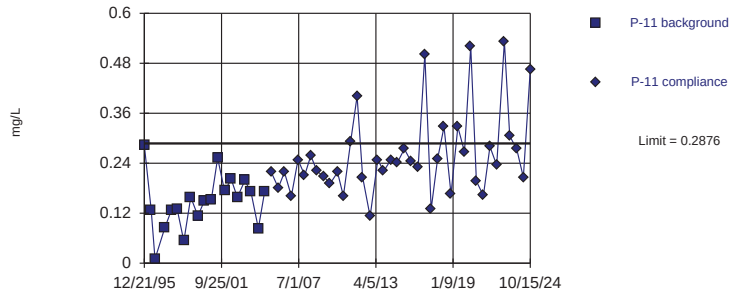
Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1472, Std. Dev.=0.06462, n=19. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9774, critical = 0.863. Kappa = 2.172 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: Manganese Analysis Run 12/10/2024 11:00 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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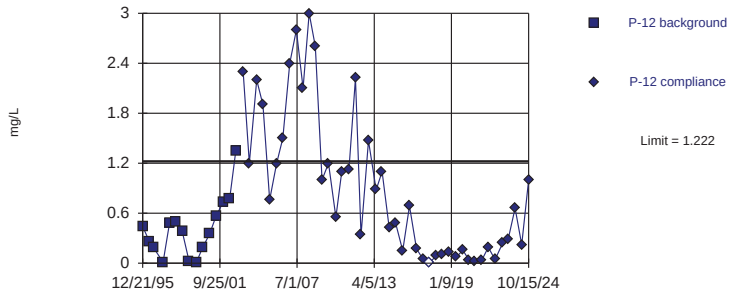
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.416, Std. Dev.=0.3511, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9022, critical = 0.835. Kappa = 2.296 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: Manganese Analysis Run 12/10/2024 11:01 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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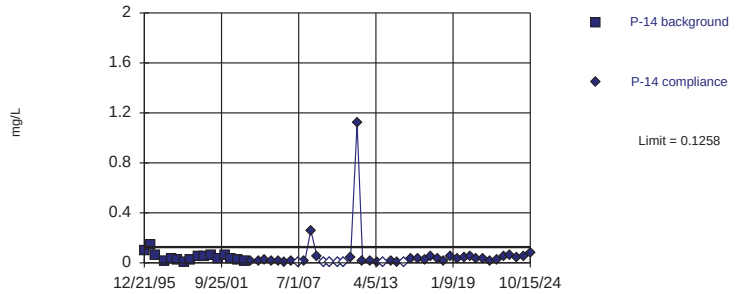
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.04562, Std. Dev.=0.03563, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8538, critical = 0.844. Kappa = 2.25 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: Manganese Analysis Run 12/10/2024 11:01 AM

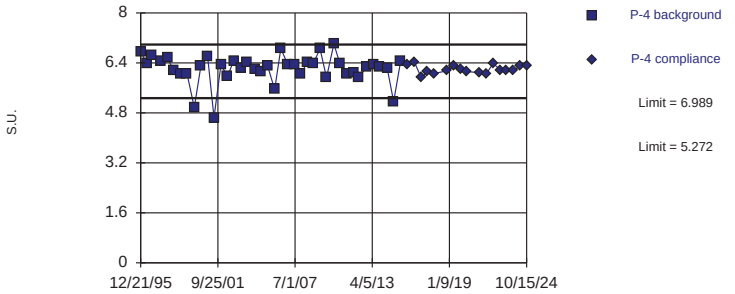
Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

Sanitas™ v.10.0.23 Software licensed to Pollution Management, Inc. UG

Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary (based on cube transformation): Mean=243.9, Std. Dev.=49.38, n=40. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9285, critical = 0.919. Kappa = 1.972 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: pH Analysis Run 12/10/2024 12:26 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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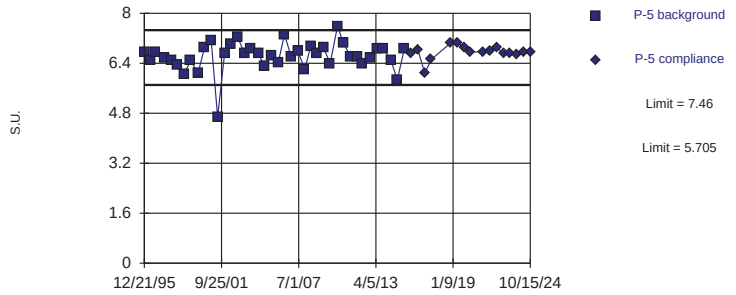
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary (based on square transformation): Mean=44.1, Std. Dev.=5.859, n=40. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.929, critical = 0.919. Kappa = 1.972 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: pH Analysis Run 12/10/2024 12:26 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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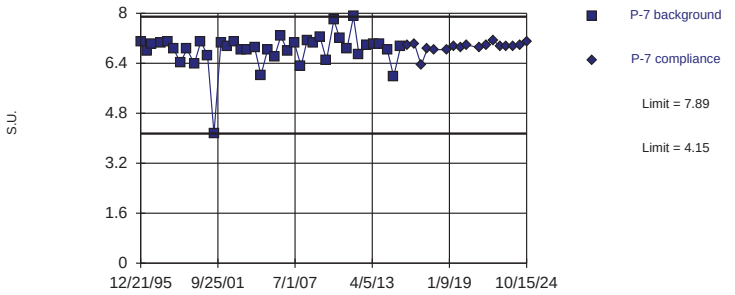
Within Limits

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 40 background values. Well-constituent pair annual alpha = 0.004632. Individual comparison alpha = 0.002317 (1 of 2). Seasonality was not detected with 95% confidence.

Constituent: pH Analysis Run 12/10/2024 12:26 PM

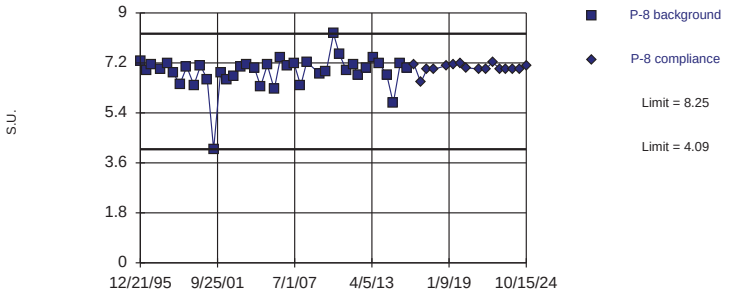
Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

Sanitas™ v.10.0.23 Software licensed to Pollution Management, Inc. UG

Within Limits

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 40 background values. Well-constituent pair annual alpha = 0.004632. Individual comparison alpha = 0.002317 (1 of 2). Seasonality was not detected with 95% confidence.

Constituent: pH Analysis Run 12/10/2024 12:28 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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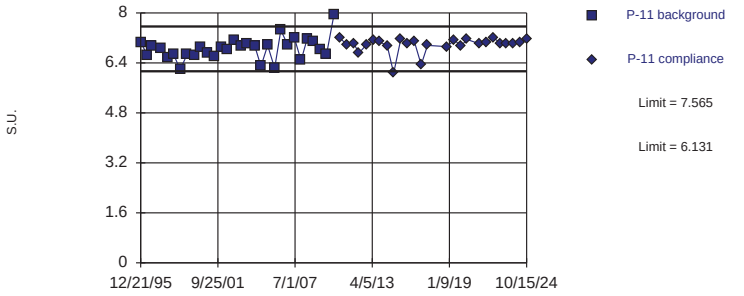
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.848, Std. Dev.=0.3546, n=30. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9495, critical = 0.9. Kappa = 2.022 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: pH Analysis Run 12/10/2024 12:28 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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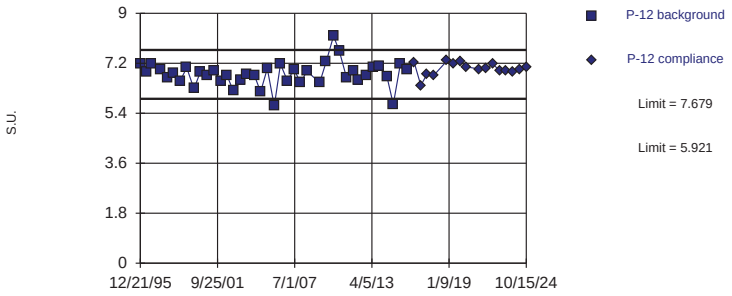
Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.8, Std. Dev.=0.4456, n=40. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9432, critical = 0.919. Kappa = 1.972 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: pH Analysis Run 12/10/2024 12:28 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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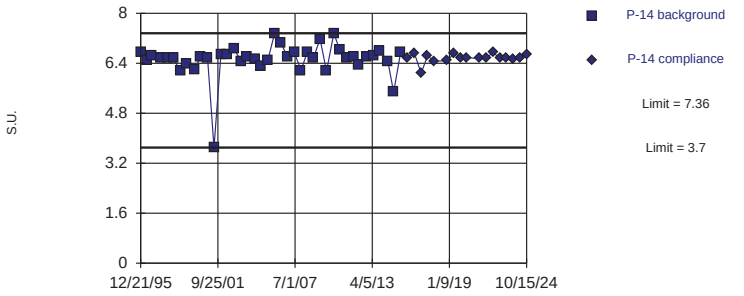
Within Limits

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 40 background values. Well-constituent pair annual alpha = 0.004632. Individual comparison alpha = 0.002317 (1 of 2). Seasonality was not detected with 95% confidence.

Constituent: pH Analysis Run 12/10/2024 12:29 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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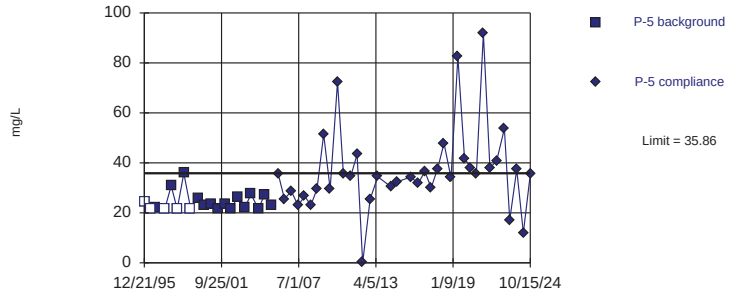
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 20 background values. 25% NDs. Well-constituent pair annual alpha = 0.008564. Individual comparison alpha = 0.004291 (1 of 2). Data were deseasonalized.

Constituent: Sulfate as SO4 Analysis Run 12/10/2024 10:50 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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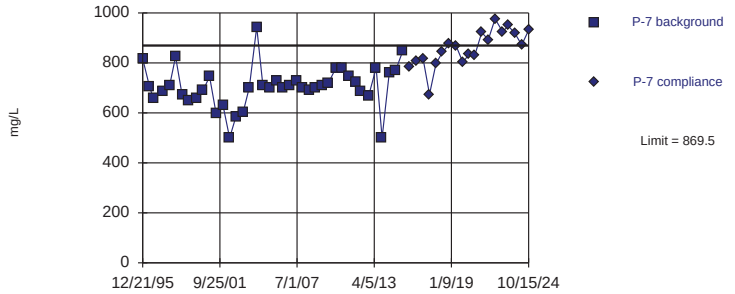
Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=705.1, Std. Dev.=83.37, n=40. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9547, critical = 0.919. Kappa = 1.972 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: Sulfate as SO4 Analysis Run 12/10/2024 10:50 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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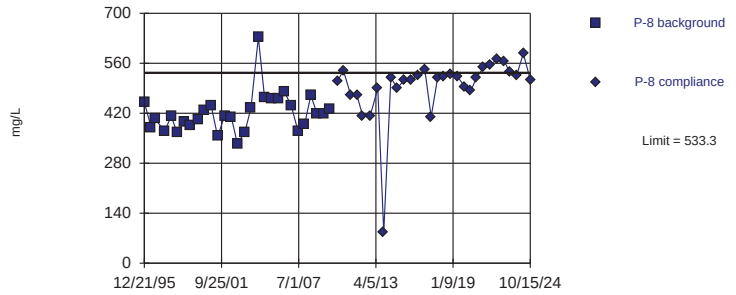
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on cube root transformation): Mean=7.477, Std. Dev.=0.3113, n=29. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9036, critical = 0.898. Kappa = 2.032 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: Sulfate as SO4 Analysis Run 12/10/2024 10:51 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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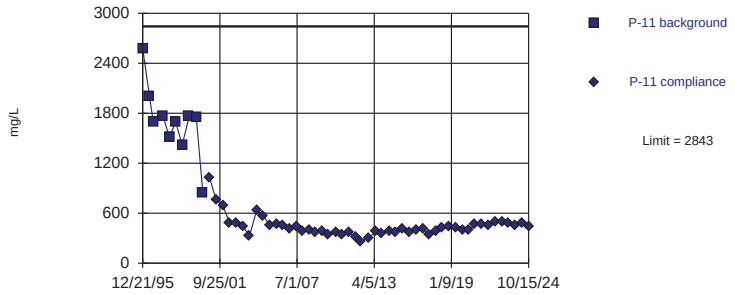
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1701, Std. Dev.=438.2, n=10. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9092, critical = 0.781. Kappa = 2.606 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: Sulfate as SO4 Analysis Run 12/10/2024 10:51 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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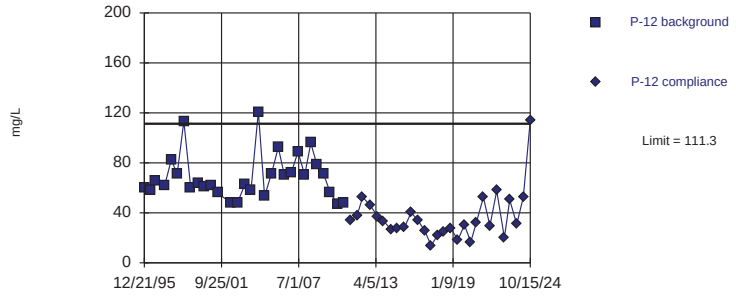
Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on square root transformation): Mean=8.472, Std. Dev.=1.027, n=30. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9125, critical = 0.9. Kappa = 2.022 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: Sulfate as SO4 Analysis Run 12/10/2024 10:52 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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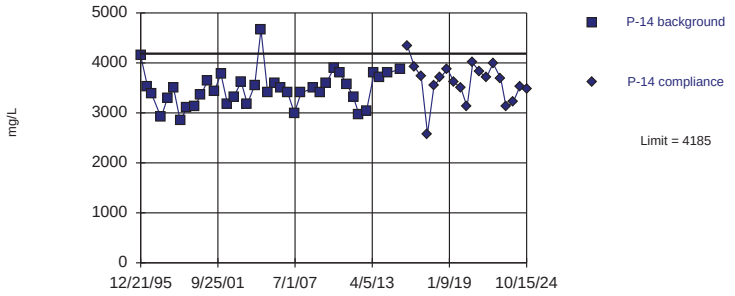
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=3477, Std. Dev.=357.8, n=38. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9542, critical = 0.916. Kappa = 1.98 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: Sulfate as SO4 Analysis Run 12/10/2024 10:52 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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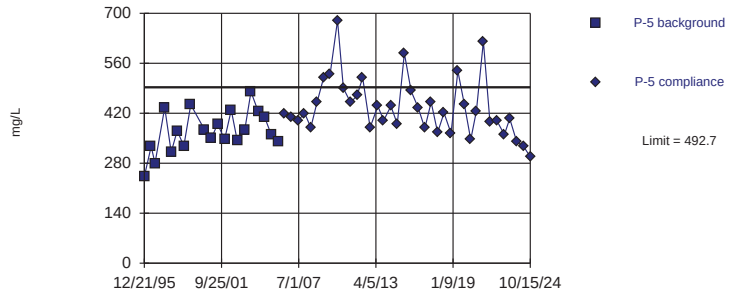
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=367.9, Std. Dev.=58.18, n=20. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9846, critical = 0.868. Kappa = 2.146 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: TDS Analysis Run 12/10/2024 11:03 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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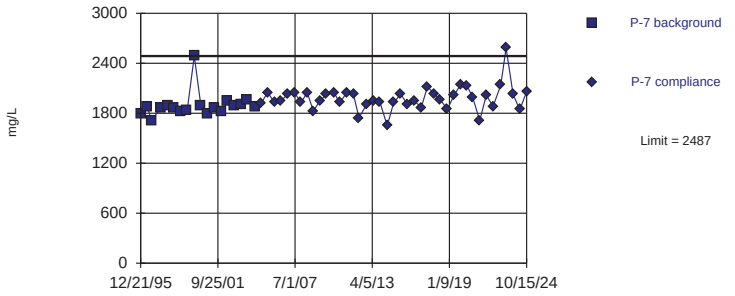
Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 18 background values. Well-constituent pair annual alpha = 0.01072. Individual comparison alpha = 0.005373 (1 of 2). Data were deseasonalized.

Constituent: TDS Analysis Run 12/10/2024 11:03 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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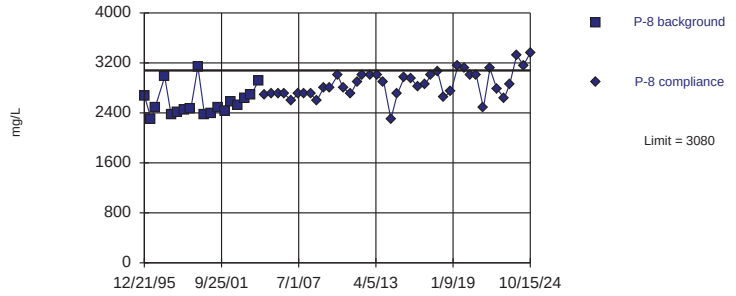
Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2570, Std. Dev.=231.7, n=18. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8628, critical = 0.858. Kappa = 2.198 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: TDS Analysis Run 12/10/2024 11:04 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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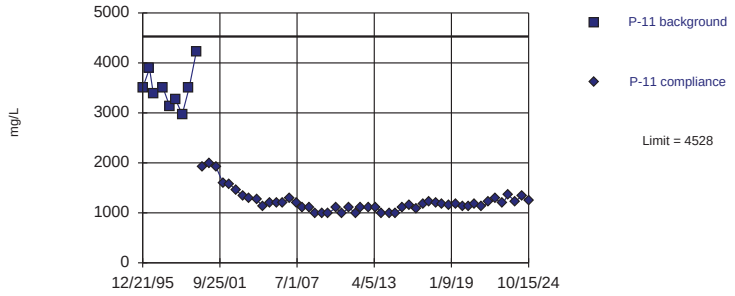
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=3485, Std. Dev.=379, n=9. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9368, critical = 0.764. Kappa = 2.753 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: TDS Analysis Run 12/10/2024 11:04 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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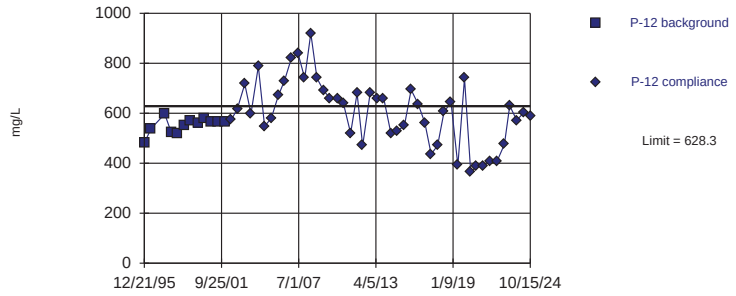
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=551.3, Std. Dev.=31.6, n=12. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9374, critical = 0.805. Kappa = 2.434 (c=9, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.00117.

Constituent: TDS Analysis Run 12/10/2024 11:04 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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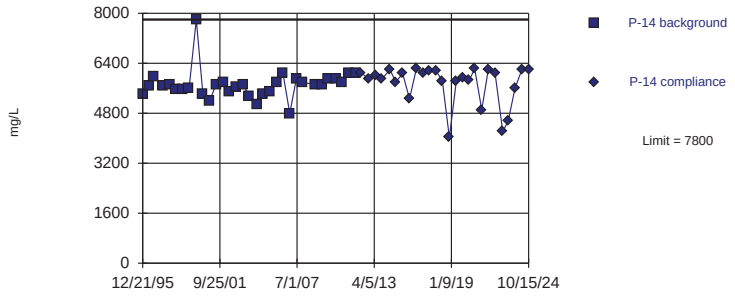
Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 32 background values. Well-constituent pair annual alpha = 0.003603. Individual comparison alpha = 0.001803 (1 of 2). Seasonality was not detected with 95% confidence.

Constituent: TDS Analysis Run 12/10/2024 11:05 AM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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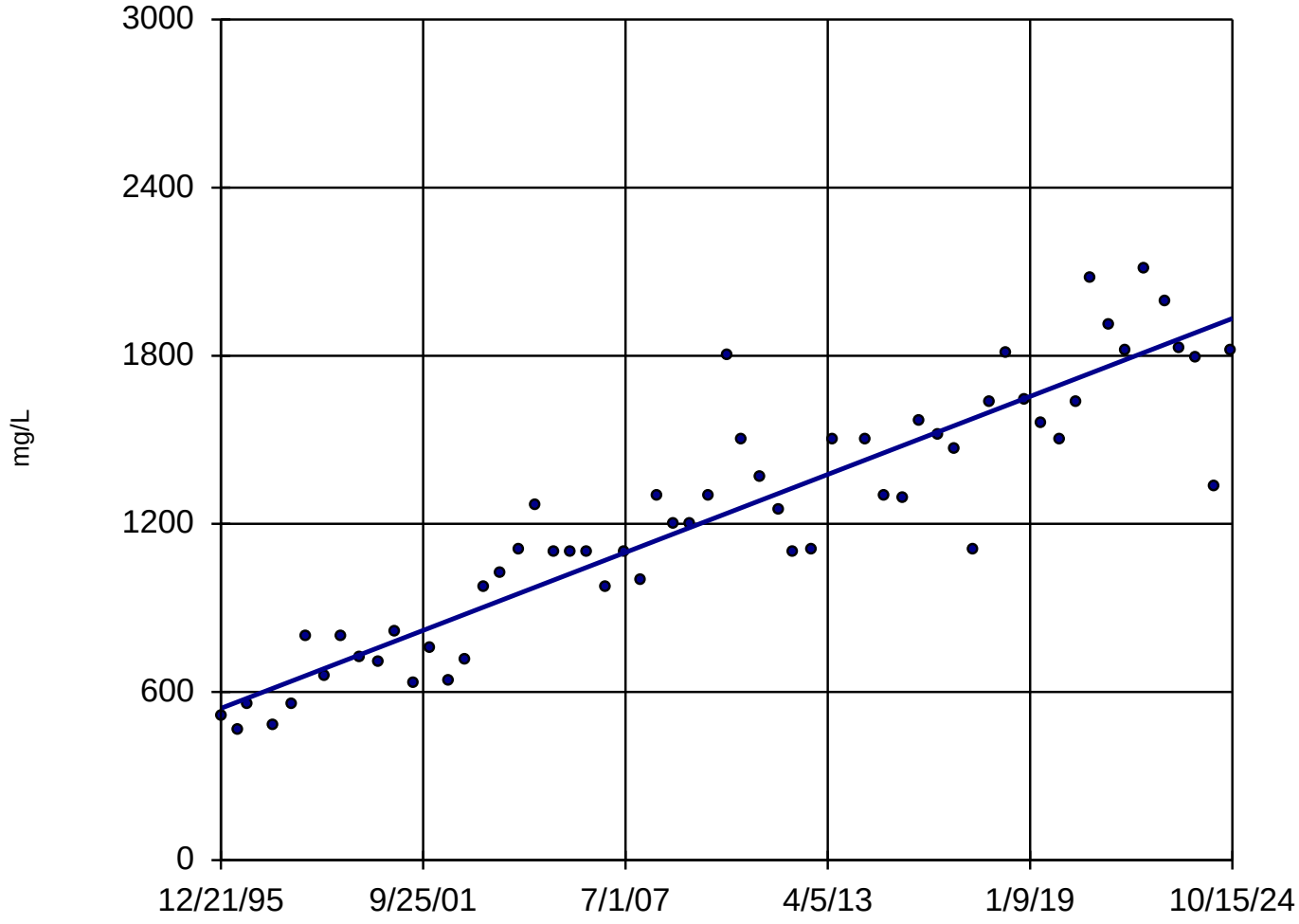
Sen's Slope Estimator

P-4 (bg)



n = 58

Slope = 48.23 units per year.

Mann-Kendall normal approx. = 8.432
critical = 2.33

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate as SO4 Analysis Run 12/10/2024 12:39 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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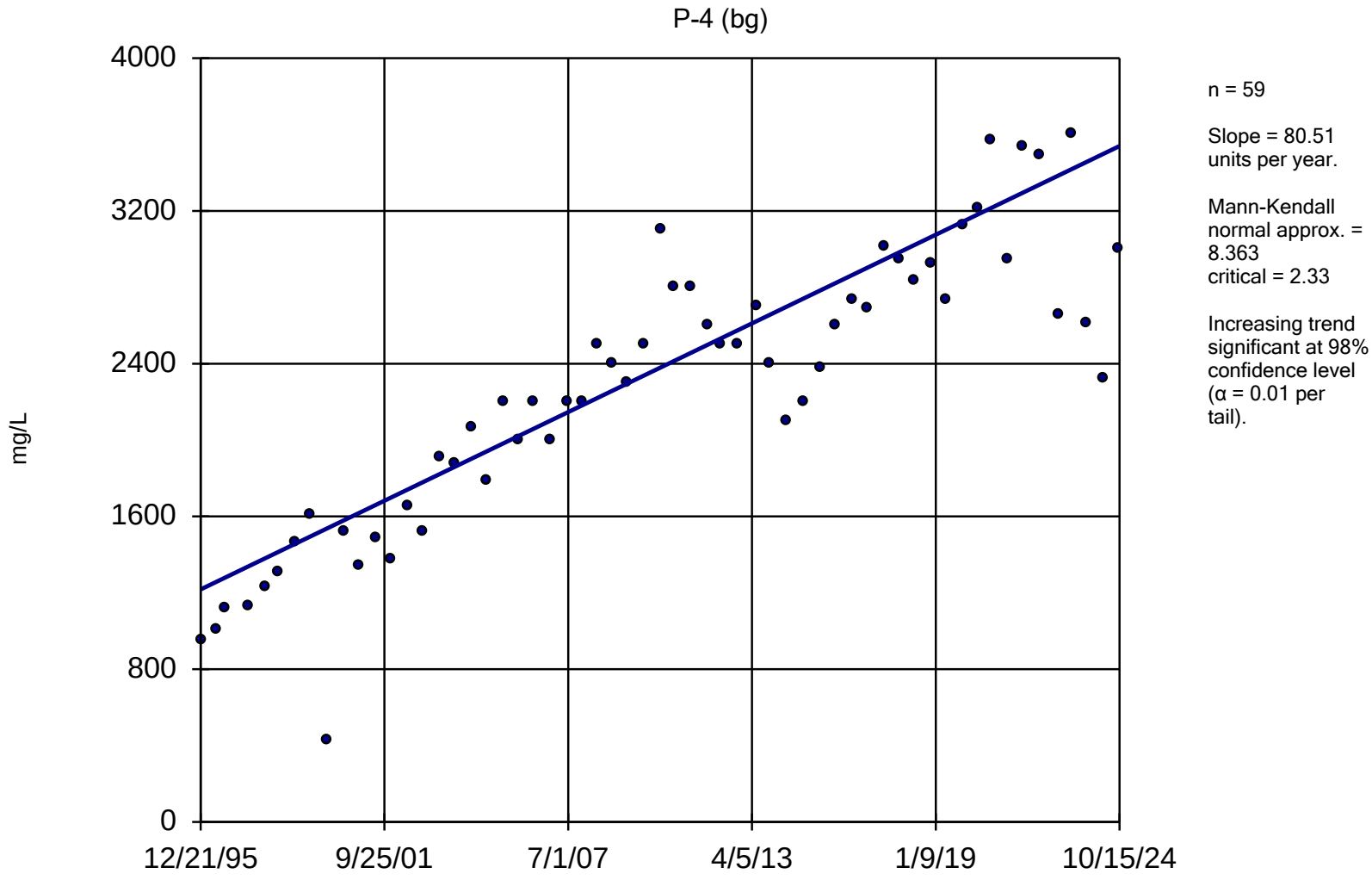
Sen's Slope Estimator



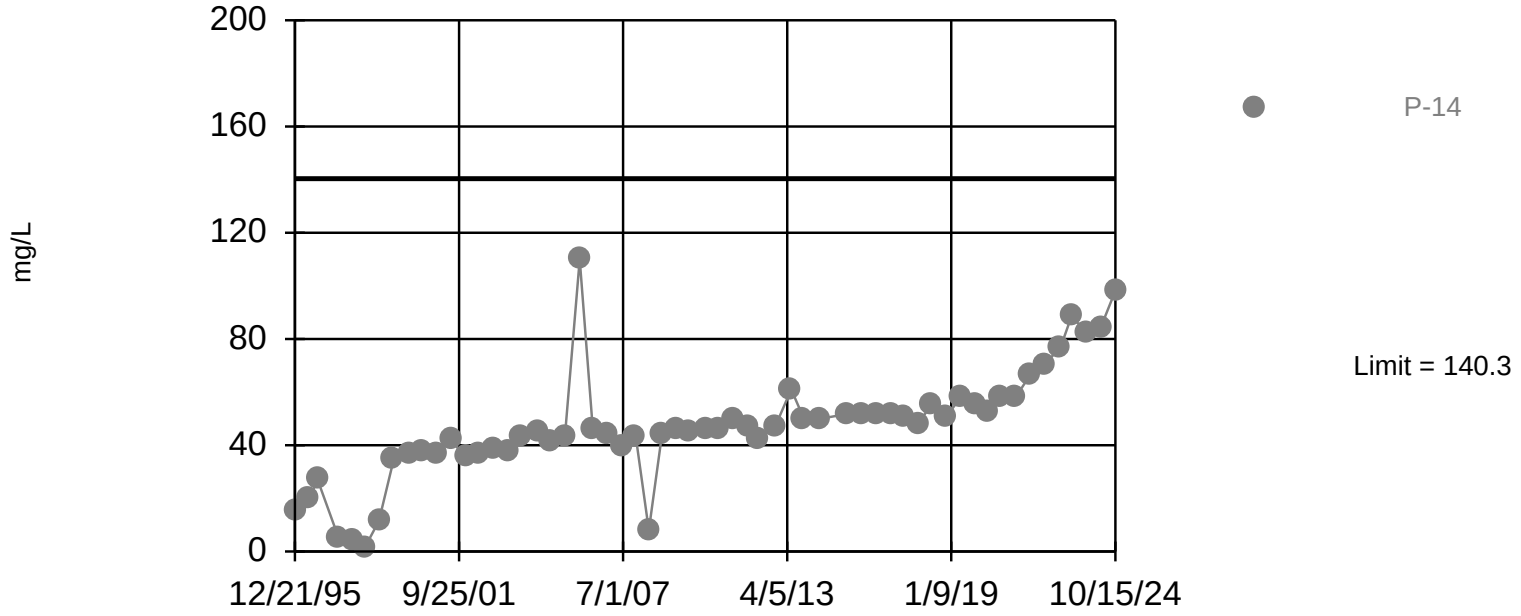
Constituent: TDS Analysis Run 12/10/2024 12:40 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

Within Limit

Prediction Limit

Interwell Parametric



Background Data Summary (based on square root transformation): Mean=8.165, Std. Dev.=1.984, n=177. Seasonality was not detected with 95% confidence. Normality test: Chi Squared @alpha = 0.01, calculated = 7.802, critical = 14.07. Kappa = 1.856 (c=9, w=5, 1 of 2, event alpha = 0.05132). N exceeds UG tables; Kappa based on n=150. Report alpha = 0.005836. Individual comparison alpha = 0.00117. Assumes 4 future values.

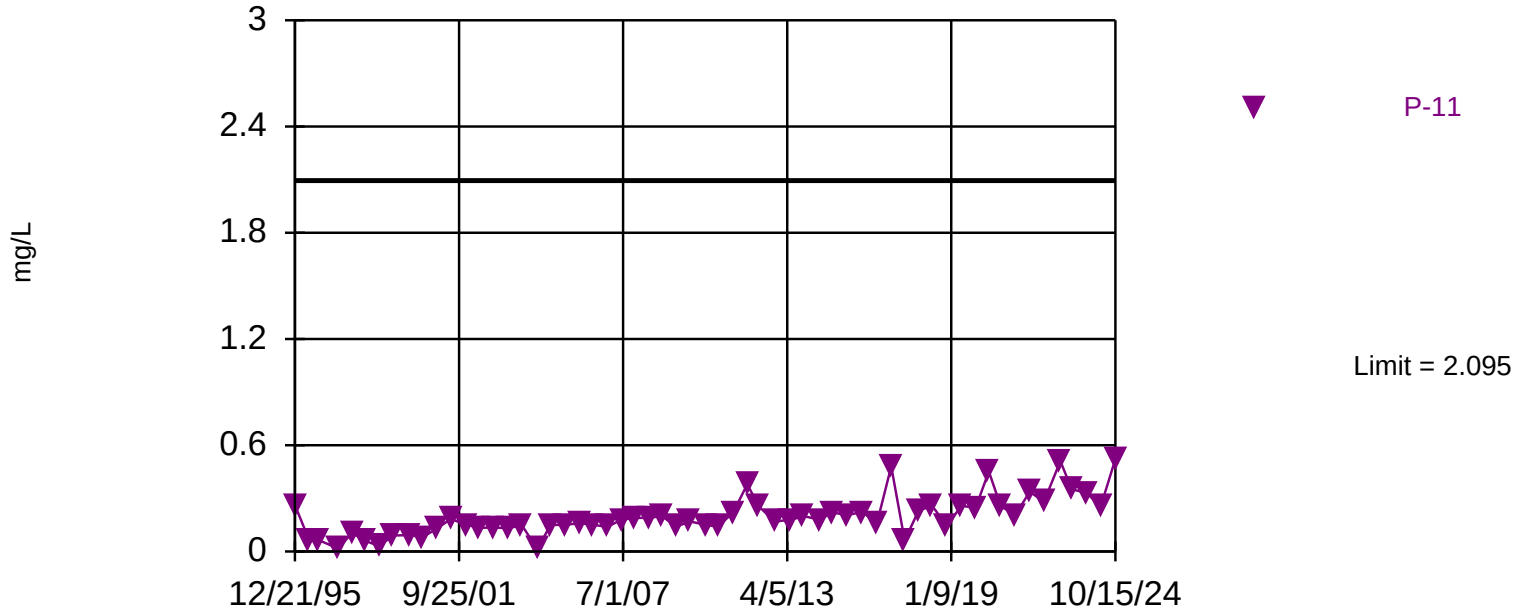
Constituent: Chloride Analysis Run 12/10/2024 12:54 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

Within Limit

Prediction Limit

Interwell Parametric



Background Data Summary (based on natural log transformation): Mean=-1.395, Std. Dev.=1.15, n=177, 0.565% NDs. Seasonality was not detected with 95% confidence. Normality test: Chi Squared @alpha = 0.01, calculated = 10.29, critical = 14.07. Kappa = 1.856 (c=9, w=5, 1 of 2, event alpha = 0.05132). N exceeds UG tables; Kappa based on n=150. Report alpha = 0.005836. Individual comparison alpha = 0.00117. Assumes 4 future values.

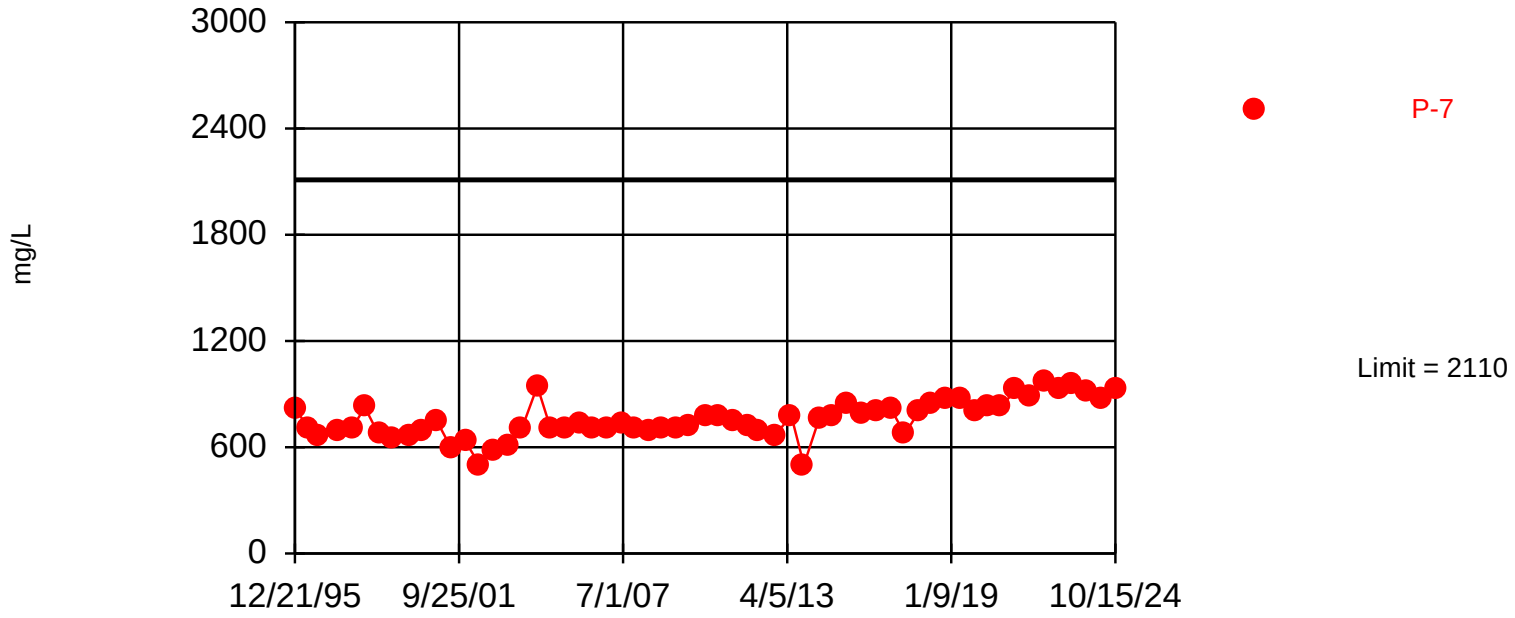
Constituent: Manganese Analysis Run 12/10/2024 12:55 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 173 background values. 2.89% NDs. Annual per-constituent alpha = 0.0006619. Individual comparison alpha = 0.00006621 (1 of 2). Assumes 4 future values. Seasonality was not detected with 95% confidence.

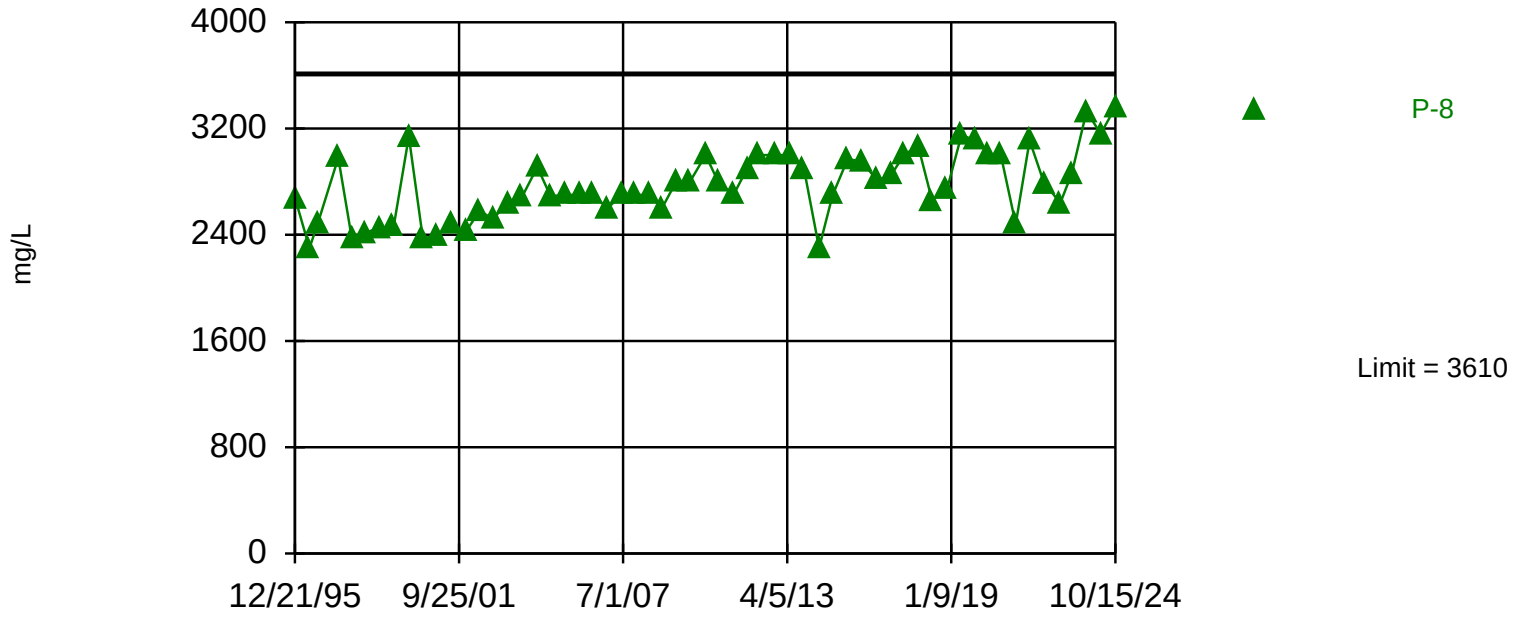
Constituent: Sulfate as SO4 Analysis Run 12/10/2024 12:55 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 175 background values. Annual per-constituent alpha = 0.000646. Individual comparison alpha = 0.00006462 (1 of 2). Assumes 4 future values. Seasonality was not detected with 95% confidence.

Constituent: TDS Analysis Run 12/10/2024 12:56 PM

Arkansas Kraft Division Class 3N LF Client: Green Bay Packaging Data: Kraft

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