

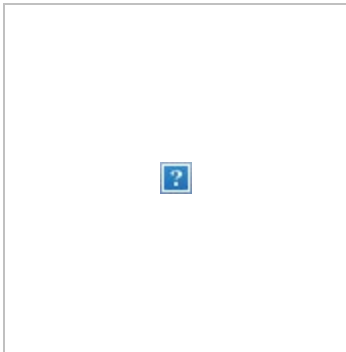
From: [Robert Fedorchak](#)
To: [Waninger, Scott E](#); [IDEM Permits Geology Electronic Data File](#)
Cc: [donald.colvin@indy.gov](#); [Cory Kranek \(cory.kranek@indy.gov\)](#); [Joseph Arnold, LPG, CHMM \(Joseph.Arnold@indy.gov\)](#); [Self, Nathan](#); [James Cody](#); [Ed Joniskan](#)
Subject: Julietta Landfill //SW Program ID 49-UP-07// 22-1783-01E, Former Julietta Landfill (Whispering Hills Golf Course) - Spring 2024 Background Data Update Memo
Date: Wednesday, June 26, 2024 4:16:44 PM
Attachments: [Outlook-wugdtrcu.png](#)
[Outlook-kops1zxa.png](#)
[Outlook-A white cr.png](#)
[Spring 2024 Background Data Update memo.pdf](#)

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Scott,

Please find enclosed an electronic copy of Patriot's Spring 2024 Background Data Update memo for IDEM review and approval. The Site is required to complete an update to the background data every two years and develop updated UPL's using that data per the IDEM approved StEP.

Sincerely,



Robert S. Fedorchak, P.E.
Senior Project Engineer

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Technical Memo

SUBJECT

Former Julietta Landfill – Spring 2024 Background Data Update

TO

Scott Waninger, Geologist
Indiana Department of Environmental
Management, Geology Section

FROM

Robert Fedorchak, P.E., Matthew Deaner, C.H.M.M.
Patriot Engineering and Environmental, Inc.

Patriot Project Number

22-1783-01E

DATE

June 26, 2024

Patriot completed a background dataset update for the former Julietta Landfill in Indianapolis, Indiana following the methods set forth in the Statistical Evaluation Plan (StEP) submitted to the Indiana Department of Environmental Management (IDEM) on August 31, 2017, and revised on April 8, 2019. The StEP is based on the United States Environmental Protection Agency (USEPA) Unified Guidance (USEPA, 2009).

Background Data Set

Intrawell Upper Prediction Intervals (UPLs) were last computed in 2022 for four uses, meaning, for four semi-annual data comparisons. The 2022 background dataset incorporated background data through the end of 2021. The Fall 2023 monitoring event represented the fourth and final use of the existing background data set; therefore, the background data was updated prior to assessing the Spring 2024 groundwater monitoring data. The update was accomplished by incorporating groundwater monitoring data from 2022 and 2023. The new UPLs were computed for 21 analytes in seven monitoring wells from analytical results dating back to February 1986.

Monitoring Wells

Eight groundwater monitoring wells are in the Julietta Landfill groundwater monitoring program. The upgradient monitoring wells are C-2, K-2, and MW-1. Downgradient monitoring wells are DD-1R, EE-1, R-1, MW-2, and MW-3. Monitoring wells MW-1, MW-2, and MW-3 were installed in 2018. Monitoring well DD-1R was installed in Spring 2023 to replace existing monitoring well DD-1, which had been damaged. Insufficient data is present to establish background UPLs for monitoring well DD-1R. Background data were revised for the remaining seven wells.

Constituents

The StEP includes 20 analytes. One analyte (pH) necessitates an upper and lower bound prediction limit, resulting in the calculation of a total of 21 prediction limits. Thirteen (13) of the analytes are metals and include arsenic, barium, cadmium, chromium, cobalt, iron, lead, manganese, mercury, nickel, selenium, silver, and zinc. Inorganic constituents include ammonia, chloride, sodium, sulfate, total dissolved solids (TDS), calcium, and magnesium. In summary, the monitoring program includes the calculation of 21 parameters for eight monitoring wells, comprising 168 well-constituent pairs. The data included in this statistical analysis is provided in **Table 1**.

Updating the Background Data

The UPLs are computed for four future uses. Every four sampling events, the background data set is updated and new UPLs are computed for the updated data set. The background data set was last updated in the Spring of 2022. In the Fall of 2023, the Semi-annual Groundwater Quality Evaluation, dated February 28, 2024, noted that the Fall 2023 data represented the fourth and final use of the previously established UPLs. Consequently, Patriot has completed the following update of the background dataset using the groundwater quality data collected through the end of 2023.

The background data / UPL update is generally accomplished by adding the observations from the previous four semiannual sampling events. The StEP dated April 8, 2019 puts forward the use of the moving window approach to complete UPL updates. Using this approach, the oldest data points are removed from use in computing UPLs whenever newer ones are added. According to the StEP, the data set will expand until there are 16 data points. Once this size is attained, older data points will be/were eliminated from each well-constituent data subset to keep the size of each data set equal to 16. The data sets for most of the 168 well-constituent pairs have already reached the desired size and have had some data points dropped. In 2020, two additional quarters of data were collected from several recently installed monitoring wells (MW-1, MW-2, and MW-3) to provide more data points for statistical analysis and to move all site wells onto the same schedule for UPL updates. This additional data was incorporated into the background dataset along with standard biannual monitoring data.

It is noteworthy that monitoring well DD-1 was replaced with monitoring well DD-1R in February 2023. As per agreement with IDEM, Patriot will amass a new background dataset for DD-1R rather than applying UPLs derived from the historic background dataset from monitoring well DD-1 to monitoring well DD-1R. To date, an insufficient number of samples have been collected from monitoring well DD-1R to develop a background dataset. For this reason, this background dataset update does not include the establishment of background data for DD-1R. Sufficient data will be obtained to calculate UPLs for DD-1R by the time the next background dataset update is slated to occur (Spring, 2026).

Prior to admitting the new data points to the background data set, statistical evaluation was completed to determine whether the new data is or is not from the same statistical population as

the existing data. The existing background data was compared to the new data points using a Mann-Whitney U test at a 0.01 level of statistical significance. If no significant differences are noted between the means, then the four new data points were added. If differences were identified, then the standard procedure is to remove the most extreme of the new data points and retest the remaining data points. If this test also indicated a difference, then the data set is typically not updated and the UPL is recalculated using the older data. In the case in which new data points are not admitted to the background data set for a certain analyte, the StEP proposed that Mann-Whitney U tests for future years explore the newest eight data points in making decisions about admitting the new data as well as testing with just the newest four/six data points.

The Mann-Whitney U Test was used to make decisions concerning whether to admit the new data to the existing background dataset. Mann-Whitney U tests were used to compare sample means associated with the existing background dataset to the 2022 and 2023 data (see **Attachment 1**).

It is noteworthy that the background datasets associated with barium in MW-2, calcium in MW-1 and MW-2, and manganese in MW-2 had historically not been updated with respect to the 2021-2022 background data during the last background dataset update. The update was not completed due to the identification of statistically significant sample mean variation between the existing background dataset and the new 2021-2022 data for each aforementioned well/constituent pair.

In accordance with the StEP dated April 8, 2019, Patriot reassessed the 2021-2022 data for inclusion in the background dataset by first combining it with the new data (2022-2023) as an incoming background dataset for comparison to pre-2020 data. Results indicated that the sample means of the 2020-2023 data exhibited statistically significant variation from the means of the historic (pre-2020) datasets for each aforementioned well-constituent pair. However, for each case except for barium in MW-2, when the 2020-2021 datasets were accepted into the background dataset and compared with the new (2022-2023) datasets, sample mean variations between the two populations were not found to be statistically significant.

Based on the results of the Mann-Whitney population retests for barium in MW-2, calcium in MW-1 and MW-2, and manganese in MW-2, Patriot has frozen the UPL update for each reevaluated well-constituent pair except for calcium in MW-2, where the recalculated UPL with the full background dataset yielded a substantially more conservative (lower) UPL. We believe this decision to be conservative and in line with the goals of the groundwater monitoring program.

Regarding the remainder of the 2022-2023 background data, the Mann-Whitney U-Test identified an unacceptable degree of sample mean variation between the existing background dataset and the new data for sodium in MW-1.

In conclusion, the Mann-Whitney U-Test was used to exclude the 2022-2023 data associated with sodium in MW-1, and the 2020-2023 data for barium in MW-2, calcium in MW-1, and manganese in MW-2 from inclusion in the updated 2024 background data set. Pertinent Mann-Whitney U-Test results are provided in **Attachment 1**.

Data Set Attributes

The computing of UPLs includes a determination of whether parametric or non-parametric methods should be used on each data set. Patriot determined detection frequency, statistical distribution, and the presence of outliers for each of the 168 data sets. Detection frequency was determined by counting the number of analyses and detections and dividing the latter by the former. The statistical distribution was determined using the Shapiro-Wilk test for normality (Shapiro and Wilk, 1965) at the 0.05 alpha level.

All statistical testing was completed using the Sanitas statistical software package, distributed by Sanitas Technologies in Loveland, Colorado. Statistical outliers were identified for parametric data sets using Dixon's Test for outliers (Barnett and Lewis, 1994). EPA's test was used for screening outliers in non-parametric data sets. The results of detection rate, distribution, and outlier determinations are provided in **Attachment 2** and summarized in **Table 2**.

Statistical outliers were excluded when determining the statistical distributions of each data set summarized in **Table 2**. If there were fewer than four detections in any data set, the distribution was assumed to be unknown. Outliers were not reported in data sets with fewer than five members. Due to a preponderance of non-detects and the omission of monitoring well DD-1R from this background update, only 65 of the 168 well-constituent pairs were found to have a known distribution.

Stationarity

Spatial stationarity was historically examined during the preparation of the StEP, and it was concluded that intrawell analysis was appropriate for groundwater statistical evaluation of the Julietta Landfill site.

The Mann-Kendall test (supported by Sen's Slope Estimator) was used to assess intrawell temporal stationarity. The results are provided in **Attachment 3** and are summarized in **Table 3**. Four (4) statistically significant increasing trends were identified. Shewhart-CUSUM control charts were constructed to verify the results of the UPL comparisons (see additional discussion on Page 6).

Computing UPLs

It should be noted that the pH data collected during the Spring 2023 monitoring event was deemed unsuitable due to instrument error and removed from the background dataset for the UPL calculation portion of the background data update. Likewise, any data deemed to be an SSI or a PSSI was removed from the dataset used to calculate UPLs. Consequently, for each test included in this analysis except for the UPL calculation portion, the number of background data points ("n") may be higher than 16 for certain well/constituent pairs in such cases. However, the maximum n for calculating UPLs was kept at or below 16 in all cases.

Prior to computing the UPLs, a test-wise alpha was determined for the parametric tests. Alpha is the statistical significance of the test and is equal to one minus the confidence. There are 43 well-

constituent pairs in down-gradient monitoring wells for which parametric methods could be used. This value is an input for determining a test-wise alpha that allows sufficient statistical power while controlling the site-wide false positive rate (SWFPR).

The StEP provides that,

$$\alpha_{\text{test}} = 1 - (1 - \alpha)^{1/r}$$

where: α_{test} is the test-wise alpha, and
 α is the annualized SWFPR.

The number of parametric tests in downgradient monitoring wells per year is r . The USEPA Unified Guidance provides that $\alpha = 0.1$. The value of r is the number of parametric tests times the number of sampling events per year, in this case, $43 \times 2 = 86$. Inserting 0.1 for α and 86 for r , one obtains the statistical significance for each parametric test, 0.001224. Although this test-wise alpha was computed based on the downgradient wells, it was also used in computing the UPLs for the upgradient monitoring wells. Using the ladder of powers (Box and Cox, 1964), the normality test was run on each well constituent pairs until a transformation was found for which the data was normally distributed. Prediction intervals were computed determined parametrically, based on the sample mean (\bar{x}), the standard deviation (S), the number of samples (n), and a quantile value, in this case the t-statistic (t). The quantile was computed for the number of degrees of freedom in the data ($n - 1$), and α_{test} . The parametric equation for the UPL is:

$$UPL = \bar{x} + S t \sqrt{1 + \frac{1}{n}}$$

In the case of pH, the lower prediction limit is also needed:

$$LPL = \bar{x} - S t \sqrt{1 + \frac{1}{n}}$$

When both a UPL and LPL are needed, the value of t is selected based upon a statistical significance that is one half the value for one-sided calculations. Thus, α_{test} was equal to 0.000612 for computing the LPL and UPL for pH. If a transformation was necessary to achieve normality, the resulting UPL was back transformed to allow for convenient comparison to forthcoming groundwater monitoring data. For non-parametric data sets, the maximum value was used as the UPL.

Patriot believes the choice of the maximum value is conservative, and a SWFPR for the nonparametric tests could be expected to exceed the desired level.

The new UPLs and the datasets used to calculate each UPL can be found in **Attachment 4**. The UPL update is summarized in **Table 4**. The new UPLs are presented beside historic UPLs for comparison.

UPLs were not computed for data sets exclusively composed of non-detects. Instead, the Double Quantification rule (DQR) was invoked. The DQ rule states that an SSI is registered for a non-detect data set if a detection above the quantification limit is observed in consecutive samples.

The method used for each statistical test is summarized in **Table 5**. For parametric tests, the table states whether a transformation was needed and if so, which transformation was used. For non-parametric data sets, **Table 5** indicates the reason non-parametric methods were needed. The reason was either a detection rate below 50% or the inability to identify a transformation that would place the data in a normal distribution. **Table 5** indicates that 60 out of 70 parametric data sets (85.7%) did not require a transformation to pass the normality test.

In some cases, the statistical distributions determined in **Table 5** differ from the ones listed in **Table 2**. These differences are attributable to differences in how the distributions were calculated during each stage of the statistical evaluation. The distributions in **Table 2** were related to outlier tests and represent the statistical distribution of the data sets without the suspect outliers. In addition, the ladder of powers was not used in the preliminary normality tests for outlier testing (**Table 2**) but was used for computing UPLs (**Table 5**). Thus, **Table 2** only shows normal, lognormal, and unknown statistical distributions. **Table 5** summarizes distributions that were arrived at using the ladder of powers to select an appropriate transformation and includes outliers in the analysis.

Shewhart-CUSUM Tests

For the four (4) data sets with increasing trends, Shewhart-CUSUM tests were run to be sure the data are in control. The results of these tests can be found in **Attachment 5**, and they are summarized in **Table 6**. In all four (4) cases, the data were found to be in control.

Conclusion

The UPLs were updated with data collected during 2022 and 2023. The updated UPLs will be used for four (4) comparisons (spring and fall 2024 and 2025).

References

Barnett, V., and T. Lewis. 1994. *Outliers in Statistical Data (Third Edition)*. John Wiley & Sons. New York.

Box, G.E.P. and D.R. Cox. 1964. An analysis of transformations (with discussion). *Journal of Royal Statistical Society Series B*, 26, 211-252.

Shapiro, S.S., and M.B. Wilk. 1965. An analysis of variance test for normality (complete samples). *Biometrika*, 52, 591-611.

USEPA. 2009. Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance. Office of Resource Conservation and Recovery, Program Implementation and Information Division, U.S. Environmental Protection Agency. EPA 530-R-09-007. March 2009.

TABLES

TABLE 1
CUMULATIVE MONITORING WELL ANALYTICAL RESULTS
 Former Julietta Landfill (Whispering Hills Golf Course)
 Indianapolis, Indiana

Monitoring Well	Date	General Chemistry				Dissolved Metals																Water Quality						
		Ammonia, Dissolved	Chloride, Dissolved	Sulfate, Dissolved	Total Dissolved Solids	Arsenic	Barium	Cadmium	Calcium	Chromium	Cobalt	Iron	Lead	Magnesium	Manganese	Nickel	Potassium	Selenium	Silver	Sodium	Zinc	Mercury	Specific Conductance	pH	Water Temp	Dissolved Oxygen	ORP / Redox	Turbidity
MCL/RPL					0.01	2	0.005		0.1	0.006	10	0.015		0.40	0.39		0.05	0.090		5	0.002							
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	uS/cm	units	°C	mg/L	mV	NTU	
C-2	3/28/2016	<0.10	34	19	486	<0.010	0.053	<0.005	NS	<0.005	<0.005	NS	<0.005	NS	NS	<0.005	NS	<0.010	<0.005	NS	<0.010	<0.0005	NS	NS	NS	NS	NS	NS
	5/31/2016	<0.10	36	37	406	<0.010	0.053	<0.005	NS	<0.005	<0.005	NS	<0.005	NS	NS	<0.005	NS	<0.010	<0.005	NS	<0.010	<0.0005	NS	NS	NS	NS	NS	NS
	7/18/2016	<0.10	41	29	366	<0.010	0.052	<0.005	NS	<0.005	<0.005	NS	<0.005	NS	NS	<0.005	NS	<0.010	<0.005	NS	<0.010	<0.0005	NS	NS	NS	NS	NS	NS
	11/14/2016	0.13	33.1	26.8	434	<0.010	0.071	<0.002	109	<0.010	<0.100	<0.010	28.2	0.402	<0.010	NS	<0.010	<0.010	22.3	NS	<0.002	802	6.48	14.20	0.15	56	4.1	
	3/29/2017	0.12	33.7	10.3	311	<0.010	0.050	<0.002	78.0	<0.010	<0.100	<0.010	20.5	0.169	<0.010	NS	<0.010	<0.010	26.7	NS	<0.002	658	6.70	14.16	0.00	-3.0	10.3	
	6/12/2017	<0.10	38.5	20.6	404	<0.010	0.053	<0.002	95.1	<0.010	<0.100	<0.010	24.6	0.121	<0.010	NS	<0.010	<0.010	24.1	NS	<0.002	466	6.77	14.76	0.00	99	0.00	
	11/27/2017	<0.10	41.9	18.4	341	<0.010	0.057	<0.002	84.5	<0.010	<0.100	<0.010	21.2	0.205	<0.010	NS	<0.010	<0.010	25.3	NS	<0.002	703	6.87	14.94	0.31	87	16.5	
	3/30/2018	NS	35.4	12.6	474	<0.010	0.052	<0.002	76.7	<0.010	<0.100	<0.010	19.3	0.030	<0.010	NS	<0.010	<0.010	26.8	<0.020	<0.002	740	8.23	10.79	1.78	-124	196	
	6/28/2018	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	7.23	NS	NS	NS	NS	NS
	9/28/2018	<0.10	43.0	20.8	357	<0.010	0.052	<0.002	82.2	<0.010	<0.100	<0.010	22.1	0.138	<0.010	NS	<0.010	<0.010	23.4	<0.020	<0.002	679	7.19	20.02	0.31	65	9.6	
	3/21/2019	0.18	30.5	26.0	474	<0.010	0.067	<0.002	121	<0.010	<0.100	<0.010	32.8	0.047	<0.010	NS	<0.010	<0.010	25.2	<0.020	<0.002	646	6.87	9.30	5.48	137	0.00	
	9/6/2019	<0.10	24.7	24.7	463	<0.010	0.067	<0.002	116	<0.010	<0.100	<0.010	29.8	0.307	<0.010	NS	<0.010	<0.010	20.2	<0.020	<0.002	895	6.85	18.19	0.24	69.0	1.09	
	3/5/2020	<0.10	27.2	14.7	383	<0.010	0.057	<0.002	94.9	<0.010	<0.100	<0.010	24.2	0.148	<0.010	NS	<0.010	<0.010	21.2	<0.020	<0.002	685	7.39	13.89	0.87	77.0	5.85	
	9/16/2020	<0.10	16.8	31.2	460	<0.010	0.069	<0.002	112	<0.010	<0.100	<0.010	27.9	0.266	<0.010	NS	<0.010	<0.010	19.0	<0.020	<0.002	848	7.04	16.91	0.00	-6.0	0.7	
	3/10/2021	<0.10	29.9	16.0	378	<0.010	0.052	<0.002	91.9	<0.010	<0.100	<0.010	21.0	0.180	<0.010	NS	<0.010	<0.010	19.3	<0.020	<0.002	643	7.01	15.50	0.00	119	32.8	
	3/10/2021 (Dup-1)	<0.10	28.9	16.7	359	<0.010	0.051	<0.002	89.7	<0.010	<0.100	<0.010	20.4	0.223	<0.010	NS	<0.010	<0.010	19.1	<0.020	<0.002	643	7.01	15.50	0.00	119	32.8	
	9/2/2021	<0.10	18.2	24.0	377	<0.010	0.056	<0.002	94.7	<0.010	<0.100	<0.010	23.0	0.202	<0.010	NS	<0.010	<0.010	21.9	<0.020	<0.002	649	7.30	18.75	0.00	81.0	0.00	
	3/30/2022	<0.10	34.0	18.4	413	<0.010	0.062	<0.002	101	<0.010	<0.100	0.132	<0.010	26.7	0.299	<0.010	NS	<0.010	<0.010	23.8	<0.020	<0.002	811	6.97	12.04	0.83	165	1.50
	3/30/2022 (Dup-1)	<0.10	33.3	18.4	413	<0.010	0.057	<0.002	101	<0.010	<0.100	0.132	<0.010	26.4	0.137	<0.010	NS	<0.010	<0.010	24.0	<0.020	<0.002	811	6.97	12.04	0.83	165	1.50
	12/8/2022	<0.10	36.5	13.4	327	<0.010	0.052	<0.002	83	<0.010	<0.100	<0.010	19.9	0.206	<0.010	NS	<0.010	<0.010	22.5	<0.020	<0.002	670	7.13	15.25	0.03	81	0.00	
5/31/2023	<0.10	30.1	15.8	379	<0.010	0.0481	<0.002	94	<0.010	<0.100	<0.010	24.8	0.118	<0.010	NS	<0.010	<0.010	20.4	<0.020	<0.002	800	5.79	13.29	0.00	149.2	24.98		
7/25/2023	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	930	6.39	14.47	0.00	202	62.48		
11/28/2023	<0.10	42.3	19.3	411	<0.010	0.0489	<0.002	79.7	<0.010	<0.100	<0.010	20.2	0.224	<0.010	NS	<0.010	<0.010	23.0	<0.020	<0.002	642	7.08	14.40	0.02	61	8.0		

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 Former Julietta Landfill (Whispering Hills Golf Course)
 Indianapolis, Indiana

Monitoring Well	Date	General Chemistry				Dissolved Metals																Water Quality							
		Ammonia, Dissolved	Chloride, Dissolved	Sulfate, Dissolved	Total Dissolved Solids	Arsenic	Barium	Cadmium	Calcium	Chromium	Cobalt	Iron	Lead	Magnesium	Manganese	Nickel	Potassium	Selenium	Silver	Sodium	Zinc	Mercury	Specific Conductance	pH	Water Temp	Dissolved Oxygen	ORP / Redox	Turbidity	
MCL/RPL		0.05	25	25	500	0.01	2	0.005	100	0.1	0.006	10	0.015	0.40	0.39	100	0.05	0.090	1	5	0.002	uS/cm	units	°C	mg/L	mV	NTU		
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	uS/cm	units	°C	mg/L	mV	NTU		
DD-1	5/22/1985	0.36	34	NS	638	0.008	1.60	<0.010	120	<10	NS	2.35	<0.010	45	0.70	<0.010	NS	<0.010	NS	16	0.020	<0.0002	NS	6.8	NS	NS	NS	NS	NS
	8/5/1985	0.34	32	73	607	0.005	1.60	<0.010	116	<10	NS	2.44	<0.010	37	0.57	<0.010	NS	<0.010	NS	14	0.020	<0.0002	NS	7.2	NS	NS	NS	NS	NS
	11/20/1985	0.72	42	NS	591	0.016	1.50	<0.010	112	<10	NS	3.14	<0.010	37	0.47	<0.010	NS	<0.010	NS	17	<0.010	<0.0002	NS	7	NS	NS	NS	NS	NS
	12/24/1985	NS	NS	NS	NS	<0.010	<117	<0.004	111	<4	NS	5.10	<0.002	38.6	0.43	<0.007	NS	<0.050	NS	18.1	0.039	<0.0001	NS	NS	NS	NS	NS	NS	NS
	2/10/1986	0.55	52	73	593	0.015	1.80	<0.010	117	<10	NS	3.27	<0.010	38	0.40	<0.010	NS	<0.010	NS	21	<0.010	<0.0002	NS	7.1	NS	NS	NS	NS	NS
	5/19/1986	0.68	63	63	618	0.018	0.02	NS	64	NS	NS	4.69	NS	45	0.36	NS	NS	NS	NS	36	NS	NS	NS	7	NS	NS	NS	NS	NS
	3/11/2015	0.55	69	57	546	<0.010	0.183	<0.005	NS	0.012	0.008	NS	<0.005	NS	NS	0.193	NS	<0.010	<0.005	NS	<100	<0.0005	NS	NS	NS	NS	NS	NS	NS
	3/29/2016	0.7	88	48	576	<0.010	0.220	<0.005	NS	0.062	0.005	NS	<0.005	NS	NS	0.242	NS	<0.010	<0.005	NS	<0.010	<0.0005	NS	NS	NS	NS	NS	NS	NS
	6/1/2016	<0.10	90	55	555	<0.010	0.152	<0.005	NS	0.006	0.016	NS	<0.005	NS	NS	1.01	NS	<0.010	<0.005	NS	<0.010	<0.0005	NS	NS	NS	NS	NS	NS	NS
	7/19/2016	0.29	90	49	578	<0.010	0.158	<0.005	NS	<0.005	<0.005	NS	<0.005	NS	NS	0.96	NS	<0.010	<0.005	NS	<0.010	<0.0005	NS	NS	NS	NS	NS	NS	NS
	6/12/2017	0.34	92.5	51	565	<0.010	0.138	<0.002	111	<0.010	<0.010	<0.100	<0.010	33.6	0.138	0.88	NS	<0.010	<0.010	43.6	NS	<0.002	649	7.08	15.14	0.0	10.0	0.0	
	11/27/2017	1.1	64.6	54.6	588	<0.010	0.197	<0.002	120	<0.010	<0.010	<0.100	<0.010	36.2	0.360	0.59	NS	<0.010	<0.010	35.8	NS	<0.002	1,090	6.75	15.79	3.59	-15	52.7	
	3/30/2018	NS	60	65.2	526	<0.010	0.139	<0.002	116	<0.010	<0.010	NS	<0.010	34.1	0.256	0.91	NS	<0.010	<0.010	32.4	<0.020	<0.002	713	7.83	11.26	2.39	-64	3.6	
	6/27/2018	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	7.05	NS	NS	NS	NS	NS
	9/27/2018	0.71	69.7	44.9	538	0.01	0.189	<0.002	116	<0.010	<0.010	2.98	<0.010	36.0	0.229	0.33	NS	0.0111	<0.010	31.9	<0.020	<0.002	1,000	6.94	16.86	0.24	-56	7.66	
	3/22/2019	<0.10	79	50.6	562	<0.010	0.136	<0.002	117	<0.010	<0.010	<0.100	<0.010	37.6	0.013	0.50	NS	<0.010	<0.010	37.2	<0.020	<0.002	687	7.29	8.19	11.27	161	16.6	
	6/6/2019	NS	NS	NS	NS	NS	NS	NS	116	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1,020	6.28	20.37	2.38	34	11.4	
	9/5/2019	0.34	107	45.7	588	<0.010	0.164	<0.002	124	<0.010	0.015	0.283	<0.010	38.3	0.391	1.24	NS	<0.010	<0.010	40.6	<0.020	<0.002	1,050	6.87	18.8	1.1	59	0.0	
1/7/2020	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.71	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
3/3/2020	0.6	68	44.8	512	<0.010	0.186	<0.002	122	<0.010	<0.010	1.49	<0.010	38.6	0.164	0.295	NS	<0.010	<0.010	41.2	<0.020	<0.002	1,010	7.51	13.3	1.03	-19.0	9.93		
9/17/2020	1.1	76.4	35.9	560	<0.010	0.210	<0.002	118	0.015	<0.010	2.12	<0.010	36.5	0.282	0.353	NS	<0.010	<0.010	40.7	<0.020	<0.002	1,000	6.95	20.2	2.86	-4.0	8.3		
12/11/2020	<0.10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
3/11/2021	0.26	63.8	42.2	524	<0.010	0.153	<0.002	117	<0.010	<0.010	0.757	<0.010	34.1	0.104	0.216	NS	<0.010	<0.010	34.9	<0.020	<0.002	927	7.10	12.62	1.57	36	6.4		
9/1/2021	0.53	66.0	38.5	522	<0.010	0.173	<0.002	110	<0.010	<0.010	1.06	<0.010	34.3	0.39	0.41	NS	<0.010	<0.010	33.2	<0.020	<0.002	888	7.30	18.95	0.31	-15	0.0		
3/30/2022	<0.10	71.0	41.3	526	<0.010	0.136	<0.002	108	<0.010	<0.010	<0.100	<0.010	33.5	<0.010	0.292	NS	<0.010	<0.010	32.3	<0.020	<0.002	882	7.20	13.01	2.4	24.0	0.0		
12/8/2022	<0.10	77.8	37.9	514	<0.010	0.172	<0.002	110	<0.010	0.056	0.246	<0.010	32.5	<0.010	1.10	NS	<0.010	<0.010	37.1	<0.020	<0.002	0	7.53	8.54	11.3	50.1	0.0		
DD-1R	5/31/2023	3.0	73.8	35.1	578	<0.010	0.229	<0.002	117	<0.010	<0.010	1.27	<0.010	36.4	0.215	<0.010	NS	<0.010	<0.010	40.8	<0.020	<0.002	1,170	5.81	12.77	0.00	162.4	11.81	
	7/25/2023	2.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1,430	6.61	14.02	0.0	168.4	36.01	
	11/28/2023	2.1	114	35.3	534	0.0109	0.250	<0.002	120	<0.010	<0.010	2.44	<0.010	35.2	0.195	0.026	NS	<0.010	<0.010	45.9	<0.020	<0.002	1,090	6.86	11.82	7.19	-78	124	

TABLE 1
CUMULATIVE MONITORING WELL ANALYTICAL RESULTS
 Former Julietta Landfill (Whispering Hills Golf Course)
 Indianapolis, Indiana

Monitoring Well	Date	General Chemistry				Dissolved Metals																Water Quality						
		Ammonia, Dissolved	Chloride, Dissolved	Sulfate, Dissolved	Total Dissolved Solids	Arsenic	Barium	Cadmium	Calcium	Chromium	Cobalt	Iron	Lead	Magnesium	Manganese	Nickel	Potassium	Selenium	Silver	Sodium	Zinc	Mercury	Specific Conductance	pH	Water Temp	Dissolved Oxygen	ORP / Redox	Turbidity
		MCL/RPL				0.01	2	0.005		0.1	0.006	10	0.015		0.40	0.39		0.05	0.090		5	0.002						
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	uS/cm	units	°C	mg/L	mV	NTU	
EE-1	5/21/1985	28.8	189	NS	923	0.022	0.4	<0.010	98	<0.010	NS	10.36	<0.010	61	0.10	<0.010	NS	<0.010	NS	106	0.020	<0.0002	NS	NS	NS	NS	NS	NS
	8/1/1985	25.4	126	8	742	0.017	0.23	<0.010	76	<0.010	NS	7.64	<0.010	43	0.06	<0.010	NS	<0.010	NS	98	<0.010	<0.0002	NS	NS	NS	NS	NS	NS
	11/20/1985	25.4	160	NS	777	0.028	0.4	<0.010	89	<0.010	NS	7.7	<0.010	54	0.07	<0.010	NS	<0.010	NS	91	<0.010	<0.0002	NS	NS	NS	NS	NS	NS
	12/24/1985	NS	NS	NS	NS	0.018	0.31	<0.04	84.2	<0.004	NS	3.38	<0.002	52.8	0.065	<0.023	NS	<0.020	NS	89.7	<0.016	<0.0001	NS	NS	NS	NS	NS	NS
	2/11/1986	32.3	190	6	870	0.016	0.48	<0.010	103	<0.010	NS	8.5	<0.010	58	0.05	<0.010	NS	<0.010	NS	104	<0.010	<0.0002	NS	NS	NS	NS	NS	NS
	5/19/1986	38	162	<1	950	0.025	0.32	NS	111	NS	NS	11.75	NS	64	0.08	NS	NS	NS	NS	125	NS	NS	NS	NS	NS	NS	NS	NS
	7/29/1993	NS	NS	NS	NS	0.0096	0.16	NS	NS	NS	NS	1.7	NS	NS	0.72	0.160	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/12/2015	39.3	257	<15	1,070	0.033	0.626	<0.005	NS	<0.005	<0.005	NS	<0.005	NS	NS	0.008	NS	<0.010	<0.005	NS	0.019	<0.0005	NS	NS	NS	NS	NS	NS
	3/29/2016	38.3	213	<15	1,190	0.031	0.605	<0.005	NS	<0.005	<0.005	NS	<0.005	NS	NS	0.008	NS	<0.010	<0.005	NS	<0.010	<0.0005	NS	NS	NS	NS	NS	NS
	6/1/2016	60.8	235	<15	1,040	0.014	0.498	<0.005	NS	<0.005	<0.005	NS	<0.005	NS	NS	0.008	NS	<0.010	<0.005	NS	<0.010	<0.0005	NS	NS	NS	NS	NS	NS
	7/21/2016	39.3	231	<15	999	0.014	0.368	<0.005	NS	<0.005	<0.005	NS	<0.005	NS	NS	0.005	NS	<0.010	<0.005	NS	<0.010	<0.0005	NS	NS	NS	NS	NS	NS
	6/12/2017	38.1	271	<0.25	1,070	0.011	0.426	<0.002	135	<0.010	<0.010	2.93	<0.010	67.6	0.055	<0.010	NS	<0.010	<0.010	153	NS	<0.002	1,580	6.74	15.97	0.13	-87	2.3
	11/27/2017	45.7	234	<0.25	1,020	<0.010	0.504	<0.002	125	<0.010	<0.010	0.823	<0.010	65.2	0.056	<0.010	NS	<0.010	<0.010	155	NS	<0.002	2,300	6.61	14.74	0.34	-76	18.4
	3/30/2018	NS	196	<0.25	969	<0.010	0.486	<0.002	135	<0.010	<0.010	NS	<0.010	60.6	0.077	<0.010	NS	0.021	<0.010	131	<0.020	<0.002	593	7.43	11.21	2.2	-74	10.7
	6/27/2018	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.017	NS	NS	NS	NS	2,150	6.75	13.68	0.0	-82	19.5
	9/27/2018	46.4	217	<0.25	846	0.042	0.556	<0.002	105	<0.010	<0.010	14.2	<0.010	53.4	0.052	<0.010	NS	0.012	<0.010	121	<0.020	<0.002	1,960	6.78	17.07	0.28	-112	9.14
	12/14/2018	NS	NS	NS	NS	0.035	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.010	NS	NS	NS	NS	2,020	6.74	13.02	0.4	-136	14.5
	3/21/2019	53.4	239	<1.0	915	0.041	0.613	<0.002	114	<0.010	<0.010	16.6	<0.010	56.3	0.055	<0.010	NS	0.010	<0.010	142	<0.020	<0.002	1,520	6.75	9.2	25.22	-43	7.7
	6/6/2019	NS	NS	NS	NS	0.037	NS	NS	NS	NS	NS	17.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2,020	5.97	13.66	0.0	-82	0.0
	9/5/2019	38.4	183	0.25	756	0.058	0.477	<0.004	102	<0.020	<0.020	16.2	<0.020	50.1	0.058	<0.020	NS	<0.020	<0.020	109	<0.040	<0.002	1,700	6.66	17.67	2.79	-82	6.1
	1/7/2020	NS	NS	NS	NS	<0.010	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/5/2020	25.7	218	<0.25	906	0.041	0.421	<0.002	153	<0.010	<0.010	17.0	<0.010	70.6	0.071	<0.010	25.9	<0.010	<0.010	136	<0.020	<0.002	2,170	7.08	12.71	0.35	-82	33.1
	6/4/2020	NS	NS	NS	NS	0.042	0.451	<0.002	95.3	<0.010	<0.010	13.9	<0.010	47.3	0.055	<0.010	36.6	<0.010	<0.010	103	<0.020	<0.002	1,700	6.46	13.53	0.22	-61.0	0.0
	9/17/2020	37.9	196	<0.25	788	0.050	0.410	<0.002	112	<0.010	<0.010	15.3	<0.010	52.3	0.082	<0.010	31.5	<0.010	<0.010	107	<0.020	<0.002	1,710	6.88	19.61	2.91	-105.0	2.0
	12/11/2020	NS	NS	NS	NS	0.059	0.533	<0.002	142	<0.010	<0.010	17.9	<0.010	67.1	0.095	<0.010	34.0	<0.010	<0.010	136	<0.020	<0.002	2,030	6.68	15.27	0.0	-71.0	3.0
	3/11/2021	34.4	251	0.38	1,060	0.047	0.553	<0.002	152	<0.010	<0.010	16.4	<0.010	66.5	0.083	<0.010	NS	<0.010	<0.010	148	<0.020	<0.002	2,080	6.67	13.35	0.0	-45.0	8.7
	9/1/2021	30.2	161	5.8	694	0.034	0.446	<0.002	105	<0.010	<0.010	12.9	<0.010	46.5	0.051	<0.010	NS	<0.010	<0.010	94.8	<0.020	<0.002	1,360	6.70	18.34	0.12	-107	0.0
	3/30/2022	51.3	247	<0.010	982	0.048	0.600	<0.002	122	<0.010	<0.010	18.5	<0.010	57.4	0.058	<0.010	NS	<0.010	<0.010	134	<0.020	<0.002	2,150	6.71	11.90	0.00	-79.0	7.8
	12/8/2022	37.5	177	<0.25	714	0.0504	0.477	<0.002	110	<0.010	<0.010	14.3	<0.010	51.6	0.0705	<0.010	NS	<0.010	<0.010	111	<0.020	<0.002	1,850	6.91	14.10	0.01	1.6	0.0
	5/31/2023	38.7	216	2.1	800	0.0363	0.399	<0.002	108	<0.010	<0.010	14.3	<0.010	51.3	0.0647	<0.010	NS	<0.010	<0.010	103	<0.020	<0.002	1,980	5.81	13.01	0.00	203.4	7.65
	5/31/2023 (dup1)	38.7	180	1.9	792	0.0395	0.394	<0.002	106	<0.010	<0.010	14.0	<0.010	50.2	0.0628	<0.010	NS	<0.010	<0.010	103	<0.020	<0.002	1,980	5.81	13.01	0.00	203.4	7.65
	7/25/2023	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2,540	6.56	14.07	0.00	135.9	51.19
	11/28/2023	48.3	185	<0.025	812	0.0672	0.533	<0.002	105	<0.010	<0.010	13.7	<0.010	48.3	0.053	<0.010	NS	<0.010	<0.010	105	<0.020	<0.002	1,910	6.80	13.79	0.00	-118	0.9

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Monitoring Well	Date	General Chemistry				Dissolved Metals																Water Quality							
		Ammonia, Dissolved	Chloride, Dissolved	Sulfate, Dissolved	Total Dissolved Solids	Arsenic	Barium	Cadmium	Calcium	Chromium	Cobalt	Iron	Lead	Magnesium	Manganese	Nickel	Potassium	Selenium	Silver	Sodium	Zinc	Mercury	Specific Conductance	pH	Water Temp	Dissolved Oxygen	ORP / Redox	Turbidity	
MCL/RPL		0.05	25	50	500	0.01	2	0.005	100	0.1	0.006	10	0.015	0.40	0.39	100	0.05	0.090	100	5	0.002	uS/cm	units	°C	mg/L	mV	NTU		
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	uS/cm	units	°C	mg/L	mV	NTU		
K-2	3/9/2015	0.32	70.0	64.0	545	<0.010	0.396	0.005	NS	<0.005	<0.005	NS	<0.005	NS	<0.005	NS	<0.010	<0.005	NS	<0.010	<0.0005	NS	NS	NS	NS	NS	NS	NS	
	3/28/2016	<0.10	78.0	<15	481	<0.010	0.289	<0.005	NS	<0.005	<0.005	NS	<0.005	NS	<0.005	NS	<0.010	<0.005	NS	<0.010	<0.0005	NS	NS	NS	NS	NS	NS	NS	
	5/31/2016	0.27	124	63.0	621	<0.010	0.378	<0.005	NS	<0.005	<0.005	NS	0.866	NS	<0.005	NS	<0.010	<0.005	NS	<0.010	<0.0005	NS	NS	NS	NS	NS	NS	NS	
	7/18/2016	0.13	111	63.0	625	<0.010	0.404	<0.005	NS	<0.005	<0.005	NS	<0.005	NS	<0.005	NS	<0.010	<0.005	NS	<0.010	<0.0005	NS	NS	NS	NS	NS	NS	NS	
	11/14/2016	<0.10	284	58.1	872	<0.010	0.125	<0.002	121	<0.010	<0.010	<0.100	<0.010	33.8	<0.010	<0.010	NS	<0.010	<0.010	161	<0.002	1,560	6.87	13.32	0.0	53.0	12.5		
	3/29/2017	0.17	277	36.7	796	<0.010	0.112	<0.002	105	<0.010	<0.010	<0.100	<0.010	30.8	<0.010	<0.010	NS	<0.010	<0.010	177	NS	<0.002	1,600	7.04	14.24	1.82	58	12	
	6/12/2017	1.4	82.7	12.2	401	<0.010	0.049	<0.002	62.0	<0.010	<0.010	<0.100	<0.010	15.2	<0.010	<0.010	NS	<0.010	<0.010	84.7	NS	<0.002	479	7.19	13.15	6.34	131	0.0	
	11/27/2017	<0.10	315	62.2	980	<0.010	0.154	<0.002	140	<0.010	<0.010	<0.100	<0.010	39.5	<0.010	<0.010	NS	<0.010	<0.010	171	NS	<0.002	1,820	6.85	14.25	0.57	86	111	
	3/29/2018	NS	82.0	14.0	445	<0.010	0.048	<0.002	61.0	<0.010	<0.010	NS	<0.010	17.1	<0.010	<0.010	NS	<0.010	<0.010	104	<0.020	<0.002	813	7.95	11.08	1.79	-98	33.7	
	6/28/2018	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	7.20	NS	NS	NS	NS	NS
	9/27/2018	<0.10	74.4	14.4	433	<0.010	0.052	<0.002	58.4	<0.010	<0.010	NS	<0.010	16.0	<0.010	<0.010	NS	<0.010	<0.010	102	<0.020	<0.002	875	7.19	14.57	3.76	113	12.4	
	3/22/2019	<0.10	211	15.9	570	<0.010	0.068	<0.002	92.0	<0.010	<0.010	NS	<0.010	23.4	<0.010	<0.010	NS	<0.010	<0.010	98.2	<0.020	<0.002	826	7.27	8.72	26.0	192	78.1	
	9/5/2019	<0.10	203	61.8	746	<0.010	0.103	<0.002	119	<0.010	<0.010	NS	<0.010	29.9	<0.010	<0.010	NS	<0.010	<0.010	130	<0.020	<0.002	1,370	7.04	17.50	0.0	43	11.4	
	3/5/2020	<0.10	163	13.7	526	<0.010	0.059	<0.002	70.6	<0.010	<0.010	NS	<0.010	20.9	<0.010	<0.010	NS	<0.010	<0.010	110	<0.020	<0.002	1,020	7.84	13.55	5.97	116	15.2	
	9/16/2020	<0.10	326	52.8	914	<0.010	0.126	<0.002	114	<0.010	<0.010	NS	<0.010	31.4	<0.010	<0.010	NS	<0.010	<0.010	167	<0.020	<0.002	1,710	7.20	14.33	3.06	73	8.3	
	3/10/2021	<0.10	266	42.0	812	<0.010	0.108	<0.002	107	<0.010	<0.010	NS	<0.010	29.7	<0.010	<0.010	NS	<0.010	<0.010	169	<0.020	<0.002	1,500	7.06	15.42	0.0	157	8.9	
	9/3/2021	<0.10	243	33.7	672	<0.010	0.097	<0.002	102	<0.010	<0.010	NS	<0.010	27.4	<0.010	<0.010	NS	<0.010	<0.010	127	<0.020	<0.002	1,100	7.35	13.89	0.0	156	3.0	
	3/31/2022	<0.10	154	8.7	555	<0.010	0.055	<0.002	80.0	<0.010	<0.010	NS	<0.010	20.4	<0.010	<0.010	NS	<0.010	<0.010	69.4	<0.020	<0.002	963	7.40	11.15	8.13	150	0.0	
	12/8/2022	<0.10	195	36.7	654	<0.010	0.116	<0.002	103	<0.010	<0.010	NS	<0.010	30.3	<0.010	<0.010	NS	<0.010	<0.010	123	<0.020	<0.002	1,360	7.16	14.02	0.01	56	0.0	
	5/31/2023	<0.10	229	27.8	624	<0.010	0.080	<0.002	89	<0.010	<0.010	<0.10	<0.010	25.8	<0.010	<0.010	NS	<0.010	<0.010	108	<0.020	<0.002	1,310	6.12	12.95	1.09	172	14.2	
7/25/2023	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	6.68	13.67	0.00	189	35.7		
11/28/2023	<0.10	153	33.4	588	<0.010	0.108	<0.002	103	<0.010	<0.010	<0.10	<0.010	30.3	<0.010	<0.010	NS	<0.010	<0.010	86.8	<0.020	<0.002	1,160	6.90	13.00	0.00	33	174		
11/28/2023 (dup)	<0.10	149	33.2	585	<0.010	0.107	<0.002	102	<0.010	<0.010	<0.10	<0.010	30.0	<0.010	<0.010	NS	<0.010	<0.010	85.4	<0.020	<0.002	1,160	6.90	13.00	0.00	33	174		

TABLE 1
CUMULATIVE MONITORING WELL ANALYTICAL RESULTS
 Former Julietta Landfill (Whispering Hills Golf Course)
 Indianapolis, Indiana

Monitoring Well	Date	General Chemistry				Dissolved Metals																Water Quality								
		Ammonia, Dissolved	Chloride, Dissolved	Sulfate, Dissolved	Total Dissolved Solids	Arsenic	Barium	Cadmium	Calcium	Chromium	Cobalt	Iron	Lead	Magnesium	Manganese	Nickel	Potassium	Selenium	Silver	Sodium	Zinc	Mercury	Specific Conductance	pH	Water Temp	Dissolved Oxygen	ORP / Redox	Turbidity		
		MCL/RPL				0.01	2	0.005		0.1	0.006	10	0.015		0.40	0.39		0.05	0.090		5	0.002								
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	uS/cm	units	°C	mg/L	mV	NTU			
R-1	5/20/1985	7.54	80	NS	702	0.005	0.180	<0.010	114	<0.010	NS	4.92	<0.010	42	0.08	0.03	NS	<0.010	NS	44	<0.010	<0.0002	NS	7	NS	NS	NS	NS	NS	
	8/77/1985	4.23	82	85.0	664	<0.01	0.230	<0.010	116	<0.010	NS	5.64	<0.010	39	0.09	0.02	NS	<0.010	NS	42	<0.010	0.0006	NS	7	NS	NS	NS	NS	NS	
	11/4/1985	4.35	123	NS	794	0.002	0.260	<0.010	121	<0.010	NS	6.24	<0.010	42	0.09	0.02	NS	<0.010	NS	46	<0.010	<0.0002	NS	7	NS	NS	NS	NS	NS	
	2/12/1986	2.76	116	83.0	733	0.002	0.190	<0.010	125	<0.010	NS	5.32	<0.010	45	0.09	<0.010	NS	<0.010	NS	42	<0.010	<0.0002	NS	7	NS	NS	NS	NS	NS	
	5/12/1986	2.51	109	90.0	806	0.003	0.140	NS	136	NS	NS	6.62	<0.010	46	0.09	NS	NS	NS	NS	52	NS	NS	NS	7	NS	NS	NS	NS	NS	
	7/20/2016	6.87	75	<15	613	<0.010	0.085	<0.005	NS	<0.005	<0.005	NS	<0.005	NS	NS	0.012	NS	<0.010	<0.005	NS	<0.010	<0.0005	NS	NS	NS	NS	NS	NS	NS	NS
	11/14/2016	13.1	192	27.0	855	<0.010	0.705	<0.002	140	<0.010	<0.010	5.35	<0.010	56.9	0.255	0.023	NS	<0.010	<0.010	76.8	NS	<0.002	1,590	6.38	12.95	5.92	-128	0.0		
	3/29/2017	12.1	180	29.9	803	<0.010	0.682	<0.002	137	<0.010	<0.010	6.14	<0.010	56.1	0.229	0.023	NS	<0.010	<0.010	79.4	NS	<0.002	1,540	6.62	14.77	0.05	-84	2.53		
	6/12/2017	10.4	172	37.7	818	<0.010	0.561	<0.002	130	<0.010	<0.010	2.52	<0.010	52.1	0.234	0.020	NS	<0.010	<0.010	72.0	NS	<0.002	905	6.79	19.03	0.0	-69	0.0		
	11/27/2017	13.0	184	20.4	849	<0.010	0.698	<0.002	143	<0.010	<0.010	3.22	<0.010	55.3	0.230	0.025	NS	<0.010	<0.010	82.5	NS	<0.002	1,650	6.73	14.73	0.08	-61	0.0		
	3/29/2018	NS	186	28.4	844	<0.010	0.636	<0.002	145	<0.010	<0.010	NS	<0.010	56.0	0.232	0.023	NS	0.012	<0.010	82.3	<0.020	<0.002	1,600	6.71	12.94	1.87	-86	16.3		
	6/28/2018	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.010	NS	NS	NS	NS	1,500	6.49	15.29	0.0	-70	18.3		
	9/28/2018	14.1	194	31.4	834	<0.010	0.685	<0.002	135	<0.010	<0.010	8.28	<0.010	55.0	0.223	0.025	NS	0.0173	<0.010	75.7	<0.020	<0.002	1,590	6.85	16.83	0.86	-56	8.77		
	12/14/2018	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.010	NS	NS	NS	NS	1,220	6.95	12.68	0.0	-49	3.6		
	3/22/2019	12.7	179	22.1	799	<0.010	0.717	<0.002	134	<0.010	<0.010	8.32	<0.010	55.4	0.191	0.020	NS	<0.010	<0.010	80.7	<0.020	<0.002	1,200	6.79	12.35	0.66	-13	0.0		
	9/5/2019	10.5	149	80.6	796	<0.020	0.594	<0.004	135	<0.020	<0.020	7.62	<0.020	55.0	0.231	0.023	NS	<0.020	<0.020	69.8	<0.040	<0.002	1,450	6.98	18.17	0.0	-64	1.4		
	3/5/2020	11.9	189	32.7	888	<0.020	0.649	<0.002	144	<0.010	<0.010	8.39	<0.010	59.4	0.199	0.028	15.3	<0.010	<0.010	86.9	<0.020	<0.002	1,750	7.27	13.72	0.48	-72	3.36		
	6/4/2020	NS	NS	NS	NS	<0.020	0.680	<0.002	138	<0.010	<0.010	8.36	<0.010	55.2	0.181	0.022	14.3	<0.010	<0.010	82.3	<0.020	<0.002	1,520	6.48	14.32	3.71	-50	0.0		
	9/16/2020	12.9	190	31.1	865	<0.010	0.490	<0.002	93.2	<0.010	<0.010	0.529	<0.010	55.3	0.062	0.021	18.0	<0.010	<0.010	82.8	<0.020	<0.002	1,570	6.88	15.22	2.93	-86	2.0		
	12/10/2020	NS	NS	NS	NS	<0.010	0.702	<0.002	142	<0.010	<0.010	8.80	<0.010	54.3	0.172	0.024	15.7	<0.010	<0.010	81.9	<0.020	<0.002	1,570	6.64	13.62	0.0	-76	1.9		
3/10/2021	13.6	176	11.1	844	<0.010	0.751	<0.002	143	<0.010	<0.010	8.47	<0.010	53.2	0.155	0.020	NS	<0.010	<0.010	85.3	<0.020	<0.002	1,580	6.70	15.98	0.0	-46	2.4			
6/1/2021	NS	NS	NS	NS	NS	0.702	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	77.4	NS	NS	1,440	7.45	14.05	1.11	231	97.4			
9/2/2021	8.6	165	21.1	790	<0.010	0.774	<0.002	137	<0.010	<0.010	0.951	<0.010	55.4	0.104	0.021	NS	<0.010	<0.010	83.2	<0.020	<0.002	1,230	7.80	14.57	0.0	-88	3.0			
11/30/2021	NS	NS	NS	NS	NS	0.975	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	82.0	NS	NS	1,760	7.50	9.72	1.65	75	0.0			
3/29/2022	12.4	167	30.7	808	<0.010	0.698	<0.002	135	<0.010	<0.010	7.86	<0.010	56.0	0.148	0.0225	NS	<0.010	<0.010	74.0	<0.020	<0.002	1,640	6.84	9.52	0.66	-75	0.0			
12/7/2022	12.4	172	22.1	774	<0.010	0.704	<0.002	137	<0.010	<0.010	8.36	<0.010	52.6	0.129	0.023	NS	<0.010	<0.010	79.8	<0.020	<0.002	1,630	6.95	13.60	1.63	13	0.0			
6/1/2023	10.9	203	35.3	830	<0.010	0.619	<0.002	139	<0.010	<0.010	8.01	<0.010	57.2	0.127	0.023	NS	<0.010	<0.010	72.1	<0.020	<0.002	1,730	5.68	14.42	0.00	219.9	26.0			
7/25/2023	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1,960	6.67	14.25	5.64	90.6	78.2			
11/27/2023	13.2	169	20.5	856	<0.010	0.658	<0.002	139	<0.010	<0.010	8.42	<0.010	53.2	0.125	0.021	NS	<0.010	<0.010	73.8	<0.020	<0.002	1,630	6.73	12.70	0.00	-95	5.5			

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 Former Julietta Landfill (Whispering Hills Golf Course)
 Indianapolis, Indiana

Monitoring Well	Date	General Chemistry				Dissolved Metals																Water Quality						
		Ammonia, Dissolved	Chloride, Dissolved	Sulfate, Dissolved	Total Dissolved Solids	Arsenic	Barium	Cadmium	Calcium	Chromium	Cobalt	Iron	Lead	Magnesium	Manganese	Nickel	Potassium	Selenium	Silver	Sodium	Zinc	Mercury	Specific Conductance	pH	Water Temp	Dissolved Oxygen	ORP / Redox	Turbidity
		MCL/RPL				0.01	2	0.005		0.1	0.006	10	0.015		0.40	0.39		0.05	0.090		5	0.002						
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	uS/cm	units	°C	mg/L	mV	NTU	
MW-1	4/13/2018	NS	25.8	60.1	428	<0.010	0.350	<0.002	95.8	<0.010	<0.010	<0.100	<0.010	37.6	0.0345	<0.010	NS	<0.010	<0.010	8.86	NS	<0.002	784	6.73	13.07	0.1	-124	22.1
	9/28/2018	0.36	23.7	64.0	438	<0.010	0.358	<0.002	94.7	<0.010	<0.010	2.67	<0.010	36.9	0.0345	<0.010	NS	<0.010	<0.010	8.29	<0.020	<0.002	787	7.22	14.05	0.7	-102	8.5
	3/21/2019	0.34	24.0	64.5	415	<0.010	0.363	<0.002	98.2	<0.010	<0.010	2.75	<0.010	37.8	0.0375	<0.010	NS	<0.010	<0.010	8.26	<0.020	<0.002	571	7.18	10.11	0.6	-32	0.0
	6/7/2019	0.33	19.6	59.3	446	<0.010	0.331	<0.002	91.3	<0.010	<0.010	2.79	<0.010	34.8	0.0367	<0.010	NS	<0.010	<0.010	7.70	<0.020	<0.002	749	6.62	15.23	0.0	-113	0.0
	9/6/2019	0.33	20.7	64.7	411	<0.010	0.344	<0.002	99.5	<0.010	<0.010	2.77	<0.010	37.0	0.0375	<0.010	NS	<0.010	<0.010	8.06	<0.020	<0.002	802	7.14	15.37	0.4	-91	2.3
	12/12/2019	0.32	20.7	59.4	416	<0.010	0.332	<0.002	95.8	<0.010	<0.010	2.67	<0.010	36.4	0.0365	<0.010	NS	<0.010	<0.010	7.24	<0.020	<0.002	808	7.16	10.36	0.0	-77	8.3
	3/5/2020	0.32	25.0	59.9	456	<0.010	0.354	<0.002	103	<0.010	<0.010	2.79	<0.010	38.3	0.0392	<0.010	NS	<0.010	<0.010	8.65	<0.020	<0.002	804	7.84	11.56	0.5	-104	3.1
	6/4/2020	0.36	25.9	59.0	422	<0.010	0.354	<0.002	99.7	<0.010	<0.010	2.94	<0.010	36.3	0.0392	<0.010	NS	<0.010	<0.010	8.64	<0.020	<0.002	759	6.76	14.07	0.4	-78	8.3
	9/17/2020	0.31	24.0	72.2	427	<0.010	0.350	<0.002	96.9	<0.010	<0.010	2.79	<0.010	35.6	0.0369	<0.010	NS	<0.010	<0.010	8.61	<0.020	<0.002	827	7.30	15.21	1.0	-130	7.3
	12/11/2020	0.34	25.2	60.8	429	<0.010	0.356	<0.002	103	<0.010	<0.010	2.86	<0.010	36.3	0.0395	<0.010	NS	<0.010	<0.010	8.99	<0.020	<0.002	764	7.28	12.22	2.9	-93	8.0
	3/11/2021	0.33	30.4	60.1	452	<0.010	0.349	<0.002	104	<0.010	<0.010	2.70	<0.010	35.4	0.0374	<0.010	NS	<0.010	<0.010	9.87	<0.020	<0.002	772	7.21	12.24	2.6	-90	7.5
	9/1/2021	0.32	28.0	60.0	447	<0.010	0.360	<0.002	102	<0.010	<0.010	3.01	<0.010	37.5	0.0452	<0.010	NS	<0.010	<0.010	9.58	<0.020	<0.002	690	7.45	17.70	0.4	-108	9.0
	3/30/2022	0.33	26.9	56.3	469	<0.010	0.362	<0.002	100	<0.010	<0.010	2.76	<0.010	37.3	0.0359	<0.010	NS	<0.010	<0.010	9.51	<0.020	<0.002	742	7.24	15.43	5.29	-108	10
	12/7/2022	0.33	27.3	53.2	431	<0.010	0.362	<0.002	98.3	<0.010	<0.010	2.66	<0.010	36.5	0.0366	<0.010	NS	<0.010	<0.010	10.2	<0.020	<0.002	810	7.41	12.80	0.07	-21	0
	5/31/2023	0.35	30.3	48.7	459	<0.010	0.344	<0.002	102	<0.010	<0.010	2.64	<0.010	39.4	0.0372	<0.010	NS	<0.010	<0.010	10.4	<0.020	<0.002	890	6.13	12.99	0.00	156	29.6
	7/25/2023	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1,100	6.81	13.52	0.00	162	60.5
12/5/2023	0.38	28.8	48.4	387	<0.010	0.362	<0.002	97.3	<0.010	<0.010	2.55	<0.010	36.8	0.0346	<0.010	NS	<0.010	<0.010	10.1	<0.020	<0.002	810	7.02	12.98	0.00	-142	22.3	
1/25/2024	0.37	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	600	7.28	12.71	0.00	-109	4.68	

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 Indianapolis, Indiana

Monitoring Well	Date	General Chemistry				Dissolved Metals															Water Quality							
		Ammonia, Dissolved	Chloride, Dissolved	Sulfate, Dissolved	Total Dissolved Solids	Arsenic	Barium	Cadmium	Calcium	Chromium	Cobalt	Iron	Lead	Magnesium	Manganese	Nickel	Potassium	Selenium	Silver	Sodium	Zinc	Mercury	Specific Conductance	pH	Water Temp	Dissolved Oxygen	ORP / Redox	Turbidity
		MCL/RPL				0.01	2	0.005		0.1	0.006	10	0.015		0.40	0.39		0.05	0.090		5	0.002						
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	uS/cm	units	°C	mg/L	mV	NTU	
MW-2	3/29/2018	NS	28.4	47.7	428	<0.010	0.114	<0.002	88.4	<0.010	<0.010	NS	<0.010	41.4	0.060	<0.010	NS	<0.010	<0.010	11.0	<0.020	<0.002	786	7.37	12.62	0.55	-130	180
	9/28/2018	<0.10	45.1	40.1	386	<0.010	0.106	<0.002	65.5	<0.010	<0.010	0.12	<0.010	40.4	0.039	<0.010	NS	0.0163	<0.010	15.2	<0.020	<0.002	704	7.58	15.63	3.09	-172	12.20
	3/21/2019	0.17	28.8	70.0	470	<0.010	0.186	<0.002	113	<0.010	<0.010	4.04	<0.010	42.1	0.098	<0.010	NS	<0.010	<0.010	9.72	<0.020	<0.002	641	7.25	11.03	0.41	-56	7.50
	6/6/2019	0.20	29.6	66.2	518	<0.010	0.166	<0.002	102	<0.010	<0.010	2.85	<0.010	39.0	0.088	<0.010	NS	<0.010	<0.010	11.7	<0.020	<0.002	836	6.55	11.03	0.00	-117	21.6
	9/5/2019	0.17	31.2	71.8	484	<0.010	0.181	<0.002	110	<0.010	<0.010	3.29	<0.010	40.9	0.094	<0.010	NS	<0.010	<0.010	10.8	<0.020	<0.002	899	6.92	17.44	0.92	-81	20.7
	12/12/2019	0.16	33.6	63.5	518	<0.010	0.179	<0.002	106	<0.010	<0.010	3.14	<0.010	40.2	0.086	<0.010	NS	<0.010	<0.010	11.5	<0.020	<0.002	904	7.19	10.79	8.46	-114	4.70
	3/5/2020	0.18	30.5	67.8	530	<0.010	0.212	<0.002	120	<0.010	<0.010	3.61	<0.010	43.6	0.108	<0.010	NS	<0.010	<0.010	8.71	<0.020	<0.002	923	7.71	13.56	7.71	-94.0	22.2
	6/4/2020	0.22	30.3	96.6	510	<0.010	0.229	<0.002	120	<0.010	<0.010	3.99	<0.010	42.0	0.126	<0.010	NS	<0.010	<0.010	8.84	<0.020	<0.002	857	6.90	14.70	1.40	-68.0	6.00
	9/16/2020	0.16	31.4	73.2	528	<0.010	0.248	<0.002	113	<0.010	<0.010	2.35	<0.010	39.8	0.099	<0.010	NS	<0.010	<0.010	7.55	<0.020	<0.002	907	7.19	13.64	4.60	-90.0	10.00
	12/10/2020	0.20	30.7	69.3	502	<0.010	0.269	<0.002	123	<0.010	<0.010	2.20	<0.010	41.9	0.124	<0.010	NS	<0.010	<0.010	7.59	<0.020	<0.002	859	7.00	12.56	0.00	-90.0	8.30
	3/10/2021	0.20	29.5	72.1	508	<0.010	0.270	<0.002	122	<0.010	<0.010	1.92	<0.010	39.7	0.116	<0.010	NS	<0.010	<0.010	7.32	<0.020	<0.002	0.0	6.68	19.71	9.08	-30.0	13.50
	9/2/2021	0.11	30.6	68.6	525	<0.010	0.257	<0.002	114	<0.010	<0.010	0.16	<0.010	40.4	0.014	<0.010	NS	<0.010	<0.010	7.97	<0.020	<0.002	755	7.93	15.32	1.59	-8.0	3.00
	Dup-1	0.14	30.3	67.0	528	<0.010	0.257	<0.002	114	<0.010	<0.010	0.17	<0.010	40.5	0.014	<0.010	NS	<0.010	<0.010	7.92	<0.020	<0.002	755	7.93	15.32	1.59	-8.0	3.00
	3/29/2022	0.17	33.8	65.4	522	<0.010	0.293	<0.002	117	<0.010	<0.010	1.26	<0.010	42.8	0.089	<0.010	NS	<0.010	<0.010	8.59	<0.020	<0.002	909	7.08	9.90	3.48	-68.0	0.00
	12/7/2022	0.18	35.5	72.2	507	<0.010	0.288	<0.002	120	<0.010	<0.010	1.79	<0.010	41.6	0.112	<0.010	NS	<0.010	<0.010	7.90	<0.020	<0.002	920	7.23	12.90	0.10	20.4	22.21
	6/1/2023	0.17	33.2	61.8	545	<0.010	0.273	<0.002	120	<0.010	<0.010	1.42	<0.010	42.2	0.110	<0.010	NS	<0.010	<0.010	6.86	<0.020	<0.002	1,000	5.82	13.83	0.28	263.6	29.81
	7/25/2023	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1,230	6.68	14.88	0.35	163.3	114.7
11/27/2023	0.25	35.8	62.2	505	<0.010	0.300	<0.002	121	<0.010	<0.010	1.54	<0.010	40.9	0.118	<0.010	NS	<0.010	<0.010	7.32	<0.020	<0.002	898	7.03	12.49	0.00	-121	289	
1/25/2024	NS	NS	NS	NS	NS	0.297	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	702	7.08	12.94	0.00	-72.1	255	

TABLE 1
CUMULATIVE MONITORING WELL ANALYTICAL RESULTS
 Former Julietta Landfill (Whispering Hills Golf Course)
 Indianapolis, Indiana

Monitoring Well	Date	General Chemistry				Dissolved Metals																Water Quality						
		Ammonia, Dissolved	Chloride, Dissolved	Sulfate, Dissolved	Total Dissolved Solids	Arsenic	Barium	Cadmium	Calcium	Chromium	Cobalt	Iron	Lead	Magnesium	Manganese	Nickel	Potassium	Selenium	Silver	Sodium	Zinc	Mercury	Specific Conductance	pH	Water Temp	Dissolved Oxygen	ORP / Redox	Turbidity
MCL/RPL					0.01	2	0.005		0.1	0.006	10	0.015		0.40	0.39		0.05	0.090		5	0.002							
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	uS/cm	units	°C	mg/L	mV	NTU	
MW-3	3/30/2018	NS	205	<0.25	790	<0.010	0.592	<0.002	104	<0.010	<0.010	NS	<0.010	35.7	0.054	0.0132	NS	0.013	<0.010	135	<0.020	<0.002	630	6.93	11.1	1.7	-135	33.6
	6/28/2018	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1,770	6.23	13.4	3.5	-67.0	125	
	9/28/2018	54.4	214	<0.25	980	0.019	0.819	<0.002	121	<0.010	<0.010	17.6	<0.010	48.2	0.046	0.0127	NS	0.016	<0.010	142	<0.020	<0.002	2,170	6.58	16.2	0.0	-64.0	56.2
	3/21/2019	<0.10	168	<1	658	0.020	0.508	<0.002	82.3	<0.010	<0.010	9.2	<0.010	29.0	0.033	0.0112	NS	<0.010	<0.010	113	<0.020	<0.002	1,260	6.88	12.1	2.3	-10.0	219
	6/7/2019	48.9	171	<0.25	733	0.019	0.494	<0.002	76.9	<0.010	<0.010	8.4	<0.010	31.2	0.027	<0.010	NS	0.014	<0.010	93.1	<0.020	<0.002	1,630	6.19	15.1	0.0	-85.0	53.0
	9/6/2019	47.7	149	<0.25	765	<0.020	0.676	<0.004	110	<0.020	<0.020	11.9	<0.020	44.6	0.039	<0.020	NS	<0.020	<0.010	93.7	<0.040	<0.002	1,750	6.63	17.7	0.0	-59.0	4.6
	12/12/2019	49.4	192	<0.25	791	0.020	0.703	<0.002	109	<0.010	<0.010	13.4	<0.010	41.3	0.043	<0.010	NS	<0.010	<0.010	125	<0.020	<0.002	1,950	6.60	11.0	6.9	-68.0	6.8
	3/5/2020	48.0	183	<0.25	755	0.021	0.610	<0.002	101	<0.010	<0.010	11.3	<0.010	34.0	0.036	0.0112	47.8	<0.010	<0.010	120	<0.020	<0.002	1,870	7.18	12.3	1.5	-57.0	30.1
	6/4/2020	50.5	170	<0.25	708	0.016	0.651	<0.002	98.6	<0.010	<0.010	10.3	<0.010	35.5	0.032	<0.010	46.9	<0.010	<0.010	109	<0.020	<0.002	1,670	6.56	14.0	6.0	-55.0	6.9
	9/16/2020	49.6	192	<0.25	972	0.034	0.798	<0.002	122	<0.010	<0.010	16.7	<0.010	44.6	0.038	0.0138	47.1	<0.010	<0.010	121	<0.020	<0.002	2,190	6.61	14.6	1.3	-70.0	7.8
	12/10/2020	63.6	250	0.27	778	0.017	0.696	<0.002	115	<0.010	<0.010	13.9	<0.010	38.8	0.044	<0.010	44.3	<0.010	<0.010	114	<0.020	<0.002	1,850	6.53	14.0	0.0	-64.0	9.0
	3/10/2021	51.0	172	0.35	720	0.019	0.626	<0.002	103	<0.010	<0.010	11.4	<0.010	32.7	0.034	<0.010	NS	<0.010	<0.010	110	<0.020	<0.002	1,540	6.65	18.3	2.4	-31.0	7.2
	9/1/2021	53.1	164	0.83	768	0.065	0.840	<0.002	113	<0.010	<0.010	15.8	<0.010	41.0	0.046	<0.010	NS	<0.010	<0.010	104	<0.020	<0.002	1,620	6.65	18.0	0.7	-76.0	0.0
	11/30/2021	NS	NS	NS	NS	0.030	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2,200	7.08	13.6	0.4	-30.0	4.5
	3/30/2022	44.2	192	<0.25	764	0.016	0.621	<0.002	91.6	<0.010	<0.010	11.1	<0.010	32.6	0.032	0.0110	NS	<0.010	<0.010	120	<0.020	<0.002	1,680	6.76	13.90	0.20	-81.0	0.0
	12/7/2022	48.1	175	<0.25	694	0.011	0.679	<0.002	99.5	<0.010	<0.010	11.8	<0.010	33.1	0.040	<0.010	NS	0.0108	<0.010	119	<0.020	<0.002	1,840	6.86	14.02	0.00	1.9	6.0
6/1/2023	49.9	165	<0.25	694	0.017	0.546	<0.002	93.6	<0.010	<0.010	10.1	<0.010	31.6	0.031	<0.010	NS	<0.010	<0.010	103	<0.020	<0.002	1,860	5.73	12.90	0.00	172.0	20.2	
7/25/2023	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2,410	6.45	14.17	0.00	95.2	56.5	
11/27/2023	47.5	167	<0.25	658	0.013	0.584	<0.002	86.5	<0.010	<0.010	10.6	<0.010	29.0	0.037	<0.010	NS	<0.010	<0.010	100	<0.020	<0.002	1,760	6.72	12.72	0.00	-117	236	

- Notes**
- 'NS' indicates the sample was not analyzed for that specific analyte for this event
 - A number appearing after '<' indicates the reporting limit
 - All concentrations reported in milligrams per liter (mg/L). Data compared to the IDEM R2 Published Levels .
 - MCL = Maximum Contaminant Level under the National Primary Drinking Water Standards
 - RSL = Reportable Screening Level
 - Concentrations in bold type exceed MCL/Secondary MCL.
 - Prior to the Fourth Quarter 2016, select constituents presented for Total and Dissolved Metals. Prior to the Fourth Quarter 2016, all data compared to historical MCLs.
 - Beginning in March 2018, sampling analyses were reduced per the Sampling Analysis Plan submitted to the IDEM. Only current analyses per the Sampling Analysis Plan are presented in this table

Table 2
Detection Frequency, Statistical Distribution and Outliers in Background Data
 Former Julietta Landfill
 Indianapolis, Indiana

Metals	Ammonia	Arsenic	Barium	Cadmium	Calcium	Chloride	Chromium	Cobalt	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	pH	Selenium	Silver	Sodium	Sulfate	TDS	Zinc
Monitoring Well C-2 (Upgradient)																					
Detections	3	0	16	0	15	16	0	0	1	0	15	15	0	0	16	0	0	15	16	16	0
Samples	16	16	16	16	15	16	16	16	14	16	15	15	16	16	16	16	16	15	16	16	14
Detection Rate	18.8%	0.0%	100.0%	0.0%	100.0%	100.0%	0.0%	0.0%	7.1%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	100.0%	100.0%	0.0%
Distributions	a	a	unknown	a	normal	normal	a	a	a	a	normal	normal	a	a	normal	a	a	normal	normal	normal	a
Outliers	N/A	N/A	Yes	N/A	No	No	N/A	N/A	N/A	N/A	No	No	N/A	N/A	Yes (2)**	N/A	N/A	No	No	No	N/A
Monitoring Well EE-1 (Downgradient)																					
Detections	16	15	16	0	16	16	0	0	16	0	16	16	0	0	16	4	0	16	4	16	0
Samples	16	16	16	16	16	16	16	16	16	16	16	16	16	16	17	16	16	16	16	16	16
Detection Rate	100.0%	93.8%	100.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	0.0%	100.0%	100.0%	0.0%	0.0%	94.1%	25.0%	0.0%	100.0%	25.0%	100.0%	0.0%
Distributions	normal	normal	normal	a	normal	normal	a	a	normal	a	normal	unknown	a	a	normal	unknown	a	normal	unknown	normal	a
Outliers	No	Yes	No	N/A	No	No	N/A	N/A	Yes (2)	N/A	No	No	N/A	N/A	Yes (2)**	Yes	N/A	No	No	No	N/A
Monitoring Well K-2 (Upgradient)																					
Detections	3	0	16	0	16	16	0	0	0	0	16	0	0	0	16	0	0	16	16	16	0
Samples	16	16	16	16	16	16	16	16	6	16	16	16	16	16	17	16	16	16	16	16	16
Detection Rate	18.8%	0.0%	100.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	94.1%	0.0%	0.0%	100.0%	100.0%	100.0%	0.0%
Distributions	a	a	normal	a	normal	normal	a	a	a	a	normal	a	a	a	normal	a	a	normal	ln(x)	normal	a
Outliers	N/A	N/A	No	N/A	No	No	N/A	N/A	N/A	N/A	No	N/A	N/A	N/A	Yes**	N/A	N/A	No	No	No	N/A
Monitoring Well MW-1 (Upgradient)																					
Detections	15	0	16	0	16	16	0	0	16	0	16	16	0	0	16	0	0	16	16	16	0
Samples	15	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	15
Detection Rate	100.0%	0.0%	100.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	100.0%	100.0%	0.0%
Distributions	normal	a	unknown	a	normal	normal	a	a	normal	a	normal	normal	a	a	normal	a	a	normal	normal	normal	unknown
Outliers	No	N/A	No	N/A	No	No	N/A	N/A	Yes	N/A	No	Yes	N/A	N/A	Yes**	N/A	N/A	No	No	No	No
Monitoring Well MW-2 (Downgradient)																					
Detections	14	0	16	0	15	16	0	0	15	0	16	16	0	0	16	1	0	16	16	16	0
Samples	15	16	17*	16	16	16	16	16	15	16	16	16	16	16	16	16	16	16	16	16	16
Detection Rate	93.3%	0.0%	94.1%	Unknown	93.8%	100.0%	0.0%	0.0%	100.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	6.3%	0.0%	100.0%	100.0%	100.0%	0.0%
Distributions	normal	a	unknown	a	unknown	normal	a	a	normal	a	normal	normal	a	a	normal	a	a	ln(x)	normal	normal	a
Outliers	Yes	N/A	No	N/A	Yes	Yes	N/A	N/A	No	N/A	No	Yes (2)	N/A	N/A	Yes**	N/A	N/A	No	Yes (3)	Yes (2)	N/A
Monitoring Well MW-3 (Downgradient)																					
Detections	14	16	16	0	16	16	0	0	15	0	16	16	0	5	16	4	0	16	3	16	0
Samples	15	17*	16	16	16	16	16	16	15	16	16	16	16	16	17	16	16	16	16	16	16
Detection Rate	93.3%	94.1%	100.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	0.0%	100.0%	100.0%	0.0%	31.3%	94.1%	25.0%	0.0%	100.0%	18.8%	100.0%	0.0%
Distributions	normal	unknown	normal	a	normal	normal	a	a	normal	a	normal	normal	a	unknown	normal	unknown	a	normal	unknown	unknown	a
Outliers	Yes (2)	Yes (2)	No	N/A	No	Yes	N/A	N/A	No	N/A	No	No	N/A	No	Yes**	Yes	N/A	No	Yes	No	N/A
Monitoring Well R-1 (Downgradient)																					
Detections	16	0	16	0	16	16	0	0	16	0	16	16	0	16	16	2	0	16	16	16	0
Samples	16	16	18*	16	16	16	16	16	16	16	16	16	16	16	17*	16	16	16	16	16	16
Detection Rate	100.0%	0.0%	100.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	0.0%	100.0%	100.0%	0.0%	100.0%	94.1%	12.5%	0.0%	100.0%	100.0%	100.0%	0.0%
Distributions	normal	a	normal	a	normal	normal	a	a	normal	a	normal	normal	a	normal	ln(x)	a	a	normal	normal	normal	a
Outliers	Yes	N/A	Yes	N/A	Yes	No	N/A	N/A	Yes (5)	N/A	No	Yes	N/A	No	Yes**	N/A	N/A	No	Yes	No	N/A

Footnotes:

a. There was an insufficient number of detections (<4) in the data set to determine the distribution.

b. If the "outlier" identified by the analysis was actually a higher detection limit, a "No" answer was imposed. This convention was adopted to avoid cases in which differing detection limits triggered a positive result.

No outliers were reported if there were less than seven samples in the data set.

If more than one outlier is found, the number is indicated in parentheses after "Yes".

N/A - Outliers not applicable because outlier test could not be applied.

* = N includes data from SSI events that were flagged out of subsequent analysis

** = Includes pH data from Spring, 2023 monitoring event that was subsequently deemed unsuitable and removed from the background dataset.

Table 3
Sen's Slope Estimator and Mann-Kendall Test Results
Former Julietta Landfill
Indianapolis, Indiana

Parameter	C-2	DD-1R	EE-1	K-2	R-1	MW-1	MW-2	MW-3
Arsenic	N	X	N	N	N	N	N	N
Barium	N	X	N	N	N	N	Inc	N
Cadmium	N	X	N	N	N	N	N	N
Chromium	N	X	N	N	N	N	N	N
Cobalt	N	X	N	N	N	N	N	N
Iron	N	X	N	N	N	N	N	N
Lead	N	X	N	N	N	N	N	N
Manganese	N	X	N	N	D	N	N	N
Mercury	N	X	N	N	N	N	N	N
Nickel	N	X	N	N	N	N	N	N
Selenium	N	X	N	N	N	N	N	N
Silver	N	X	N	N	N	N	N	N
Zinc	N	X	N	N	N	N	N	N
Ammonia	N	X	N	N	N	N	N	N
Calcium	N	X	N	N	N	N	Inc	N
Chloride	N	X	N	N	N	Inc	N	N
Magnesium	N	X	N	N	N	N	N	N
Sodium	N	X	N	N	N	Inc	D	N
Sulfate	N	X	N	N	N	D	N	N
TDS	N	X	D	N	N	N	N	N
pH	N	X	N	N	N	N	N	N

Footnotes:

N Trend not significant at the 98% confidence level.

Inc Increasing Trend

D Decreasing Trend

Na Change in Detection Limit

Nb Insufficient number of samples in data set to perform a trend test.

X Not Analyzed

TABLE 4
2024 Background Data Update
Recalculated and Former UPLs
Former Julietta Landfill
Indianapolis, Indiana

Parameter	Units of Measure	C-2			EE-1			K-2			MW-1		
		UPL 2019	UPL 2021	UPL 2023	UPL 2019	UPL 2021	UPL 2023	UPL 2019	UPL 2021	UPL 2023	UPL 2019	UPL 2021	UPL 2023
Arsenic	µg/L	DQR	DQR	DQR	54.36	71.91	74.23	DQR	DQR	DQR	DQR	DQR	DQR
Barium	µg/L	72.85	71	71*	749.2	677.7	641.6	350.6	548.6	164.8	382.5	375.5	374.5
Cadmium	µg/L	10	DQR	DQR	10	DQR	DQR	10	5	DQR	DQR	DQR	DQR
Chromium	µg/L	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR
Cobalt	µg/L	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR
Iron	µg/L	100	DQR	DQR*	21,999	21,040	20,790	372	DQR	DQR	3,129	3,129***	3,067
Lead	µg/L	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR
Manganese	µg/L	565.4	449.3	407.6	72.0	72.0	94.74	70	DQR	DQR	42.25	42.25***	42.25*
Mercury	µg/L	2	DQR	DQR	DQR	DQR	DQR	2	DQR	DQR	DQR	DQR	DQR
Nickel	µg/L	DQR	DQR	DQR	160	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR
Selenium	µg/L	DQR	DQR	DQR	20	20.5	16.9	DQR	DQR	DQR	DQR	DQR	DQR
Silver	µg/L	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR
Zinc	µg/L	20	DQR	DQR	40	20	DQR	DQR	DQR	DQR	DQR	DQR	DQR
Ammonia	mg/L	0.18	0.18	0.18	62.83	60.47	61.48	1.4	1.4	1.4	0.3925	0.3748	0.3753
Calcium	mg/L	126.5	134.1	125.7	152.4	165.3	160.9	173.3	164.2	148.6	107.8	107.8**	107.8**
Chloride	mg/L	54.68	51.02	49.34	289.2	291.3	284.4	387	400.4	384.3	30.47	32.19	32.19***
Magnesium	mg/L	33.64	35.20	33.06	74.35	76.29	75.18	51.03	45.63	41.84	40.05	39.31	38.80
Sodium	mg/L	29.95	29.83	28.28	174.7	173.1	168.7	202.3	218.2	202.0	9.788	10.41	10.41**,***
Sulfate	mg/L	38.01	39.34	33.48	15	7.5	7.5	64.0	64.0	74.45	71.99	72.2	72.63
TDS	mg/L	525.3	537.4	509.4	1,239	1,254	1,181	1,161	1,075	1,057	476.4	470.6	480.4
pH (upper bound)	s.u.	7.789	8.138	7.952	7.093	7.431	7.197	7.572	8.041	7.935	8.215	7.995	7.828
pH (lower bound)	s.u.	6.312	6.005	6.175	6.044	6.044	6.157	6.712	6.428	6.480	5.947	6.32	6.537

Footnotes:

- * = UPL not updated due to SSI event.
- ** = UPL not updated due to failed Mann-Whitney U Test.
- *** = UPL not updated due to increasing trends. (Table 3)
- **** = Increasing trend identified, but UPL updated because 2019 UPL established based on limited data, and updated UPL is more stringent. The 2019 UPL was established by a previous consulting firm.
- † = Monitoring Well DD-1 replaced on Feb 23, 2023. UPLs will be calculated for this well when a minimum of six (6) quarters of data have been obtained.
- µg/L = micrograms per liter
- mg/L = milligrams per liter
- s.u. = standard units
- P.L. = Prediction Limit
- DQR indicates that there were no detections in the background data set; the Double Quantification Rule applies.

TABLE 4
2024 Background Data Update
Recalculated and Former UPLs

Former Julietta Landfill
Indianapolis, Indiana

Parameter	Units of Measure	MW-2			MW-3			R-1		
		UPL 2019	UPL 2021	UPL 2023	UPL 2019	UPL 2021	UPL 2023	UPL 2019	UPL 2021	UPL 2023
Arsenic	µg/L	DQR	DQR	DQR	25.28	25.28*	32.66	20	5	DQR
Barium	µg/L	297.2	297.2**,***	297.2**,***	941.7	949.5	778.4	717	717*	807.4
Cadmium	µg/L	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR
Chromium	µg/L	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR
Cobalt	µg/L	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR
Iron	µg/L	5,354	6,060	5,082	21,720	20,620	15,630	10,243	12,360	9,152
Lead	µg/L	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR
Manganese	µg/L	167.3	167.3**	167.3**	64.55	58.56	56.59	255	323.5	289.2
Mercury	µg/L	DQR	DQR	DQR	DQR	DQR	DQR	2	DQR	DQR
Nickel	µg/L	DQR	DQR	DQR	20	13.8	11.5	33.7	29.76	27.59
Selenium	µg/L	16.3	16.3	16.3	20	15.9	15.9	20	17.3	17.3
Silver	µg/L	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR
Zinc	µg/L	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR	DQR
Ammonia	mg/L	0.3411	0.2883	0.2759	61.12	65.67	63.6	19.01	18.88	16.08
Calcium	mg/L	156.7	156.7***	132.1****	142.9	139.5	121.4	155.6	151.6	149.8
Chloride	mg/L	45.1	45.1	45.1****	244	254.3	237.7	194	225.8	209.2
Magnesium	mg/L	45.31	44.2	43.94	56.91	53.09	43.58	56.9	60.67	59.02
Sodium	mg/L	16.98	15.68	14.29	174.2	152.2	144.4	82.5	90.8	90.5
Sulfate	mg/L	114.9	101.8	93.56	DQR	DQR*	DQR	179.6	110.2	65.41
TDS	mg/L	628.5	589.8	571.8	1050	1029	977.0	917.9	938.2	898.5
pH (upper bound)	s.u.	8.281	8.225	7.925	7.527	7.137	7.087	7.253	7.813	7.772
pH (lower bound)	s.u.	6.079	6.154	6.265	5.757	6.254	6.291	6.385	6.063	6.169

Footnotes:

* = UPL not updated due to SSI event.

** = UPL not updated due to failed Mann-Whitney U Test.

*** = UPL not updated due to increasing trends. (Table 3)

**** = Increasing trend identified, but UPL updated because 2019 UPL established based on limited data, and updated UPL is more stringent. The 2019 UPL was established by a previous consulting firm.

† = Monitoring Well DD-1 replaced on Feb 23, 2023. UPLs will be calculated for this well when a minimum of six (6) quarters of data have been obtained.

- µg/L = micrograms per liter

- mg/L = milligrams per liter

- s.u. = standard units

- P.L. = Prediction Limit

**Table 5
Prediction Interval Determination Methods
Former Julietta Landfill
Indianapolis, Indiana**

Well	Ammonia	Arsenic	Barium	Cadmium	Calcium	Chloride	Chromium	Cobalt	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	pH	Selenium	Silver	Sodium	Sulfate	TDS	Zinc
C-2																					
Method	NP	NP	NP	NP	Param.	Param.	NP	NP	NP	NP	Param.	Param.	NP	NP	Param.	NP	NP	Param.	Param.	Param.	NP
Transformation	freq.	freq.	sqrt(x)	freq.	none	none	freq.	freq.	freq.	freq.	none	none	freq.	freq.	none	freq.	freq.	none	none	none	freq.
EE-1																					
Method	Param.	Param.	Param.	NP	Param.	Param.	NP	NP	Param.	NP	Param.	Param.	NP	NP	Param.	NP	NP	Param.	NP	Param.	NP
Transformation	none	none	none	freq.	none	none	freq.	freq.	x2	freq.	none	none	freq.	freq.	x^2	freq.	freq.	none	freq.	none	freq.
K-2																					
Method	NP	NP	Param.	NP	Param.	Param.	NP	NP	NP	NP	Param.	NP	NP	NP	Param.	NP	NP	Param.	Param.	Param.	NP
Transformation	freq.	freq.	none	freq.	none	none	freq.	freq.	freq.	freq.	none	freq.	freq.	freq.	none	freq.	freq.	none	freq.	none	freq.
MW-1																					
Method	Param.	NP	Param.	NP	Param.	Param.	NP	NP	Param.	NP	Param.	Param.	NP	NP	Param.	NP	NP	Param.	Param.	Param.	NP
Transformation	none	freq.	none	freq.	none	none	freq.	freq.	x5	freq.	none	none	freq.	freq.	none	freq.	freq.	none	none	none	freq.
MW-2																					
Method	Param.	NP	Param.	NP	Param.	NP	NP	NP	Param.	NP	Param.	Param.	NP	NP	Param.	NP	NP	Param.	Param.	Param.	NP
Transformation	none	freq.	none	freq.	x^4	freq.	freq.	freq.	none	freq.	none	none	freq.	freq.	none	freq.	freq.	none	none	x^3	freq.
MW-3																					
Method	NP	Param.	Param.	NP	Param.	Param.	NP	NP	Param.	NP	Param.	Param.	NP	NP	Param.	NP	NP	Param.	NP	Param.	NP
Transformation	freq.	none	none	freq.	none	none	freq.	freq.	none	freq.	none	ln(x)	freq.	freq.	none	freq.	freq.	none	freq.	x^(1/3)	freq.
R-1																					
Method	Param.	NP	Param.	NP	Param.	Param.	NP	NP	Param.	NP	Param.	Param.	NP	Param.	Param.	NP	NP	Param.	Param.	Param.	NP
Transformation	none	freq.	none	freq.	x^6	none	freq.	freq.	x^6	freq.	none	none	freq.	none	none	freq.	freq.	none	x^(1/3)	none	freq.

Footnotes:

The prediction interval was determined by a parametric methods (Param.) if the data was distributed normally, or if a transformation could be found using the Ladder of Powers by which the data could become normally distributed. If a transformation could not be found (failed), a non parametric method (NP) was used.

The Ladder of Powers was used to find a transformation that could produce a normal distribution. If no transformation was necessary, "none" was indicated; if not the first transformation in the Ladder of Powers was used. The chosen transformation is indicated on this table.

If the detection frequency was less than 50%, a nonparametric method (NP) was used, and "freq" was indicated.

If the detection frequency was less than 85% but greater than or equal to 50%, the Kaplan-Meier method was used.

Table 6
Shewhart-CUSUM Test Results
 Former Julietta Landfill
 Indianapolis, Indiana

Parameter	Well	Units	Computed Prediction Limit	Method	Maximum Value	Shewhart-CUSUM Limit	Shewhart-CUSUM Result
Barium	MW-2	µg/L	297.2	Param	297.0	531.9	<SCL
Calcium	MW-2	mg/L	132.1	Param	123.0	142.6	<SCL
Chloride	MW-1	mg/L	32.19	Param	30.4	41.64	<SCL
Sodium	MW-1	mg/L	10.41	Param	10.4	13.6	<SCL

Footnotes:

Maximum Value denotes the maximum value of a parameter in the given well in the background data.

µ/L - micrograms per liter

mg/L = milligrams per liter

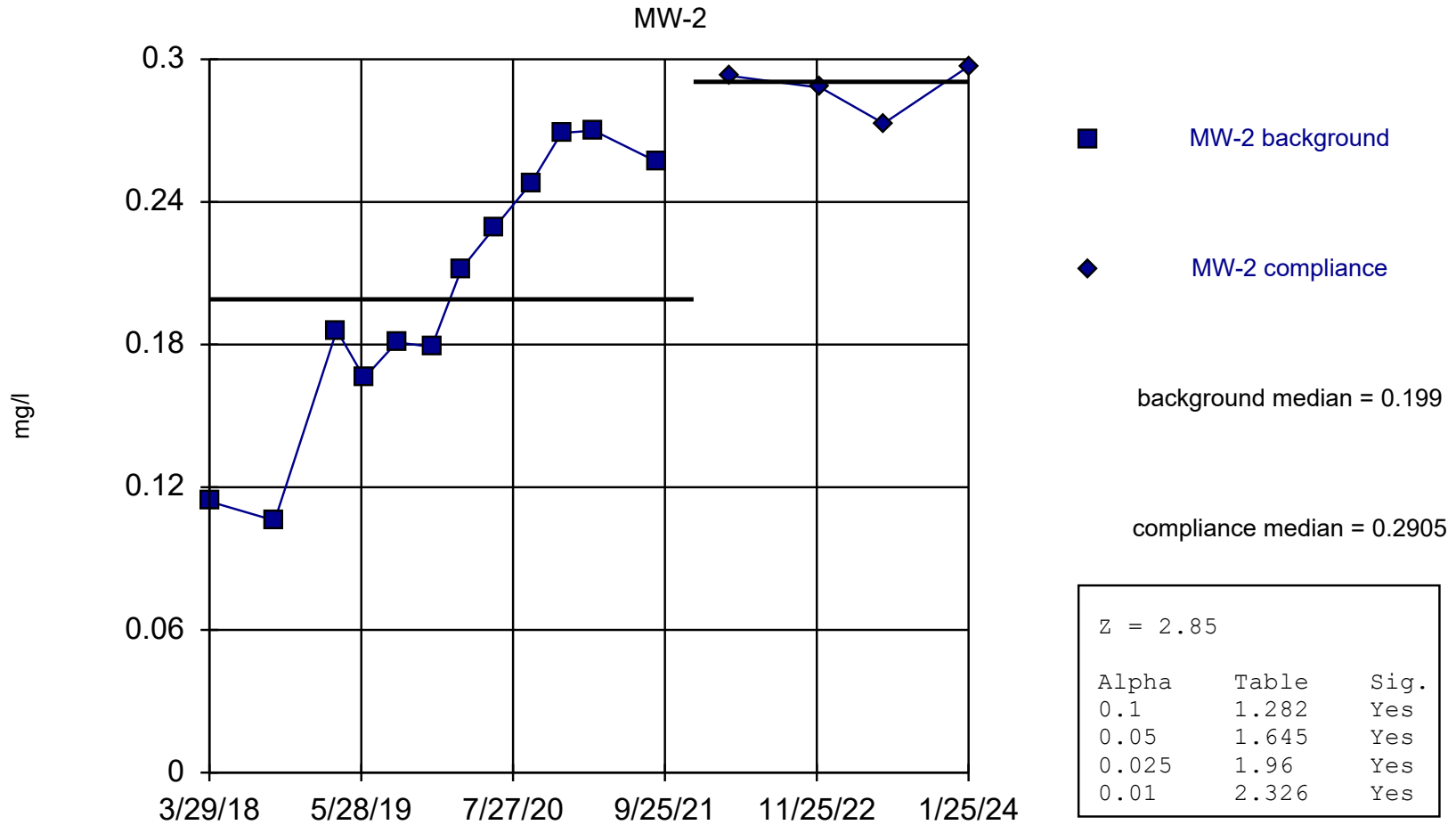
<SCL The Combined Shewhart-CUSUM chart shows a cumulative sum (CUSUM) that is less than the Shewhart-CUSUM control limit (SCL).

>SCL The Combined Shewhart-CUSUM chart shows a cumulative sum (CUSUM) that exceeds the SCL, suggesting the presence of an SSI.

Attachment 1

Mann-Whitney U-Test Results

Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Barium Analysis Run 4/28/2024 1:49 PM View: Full UPL Run

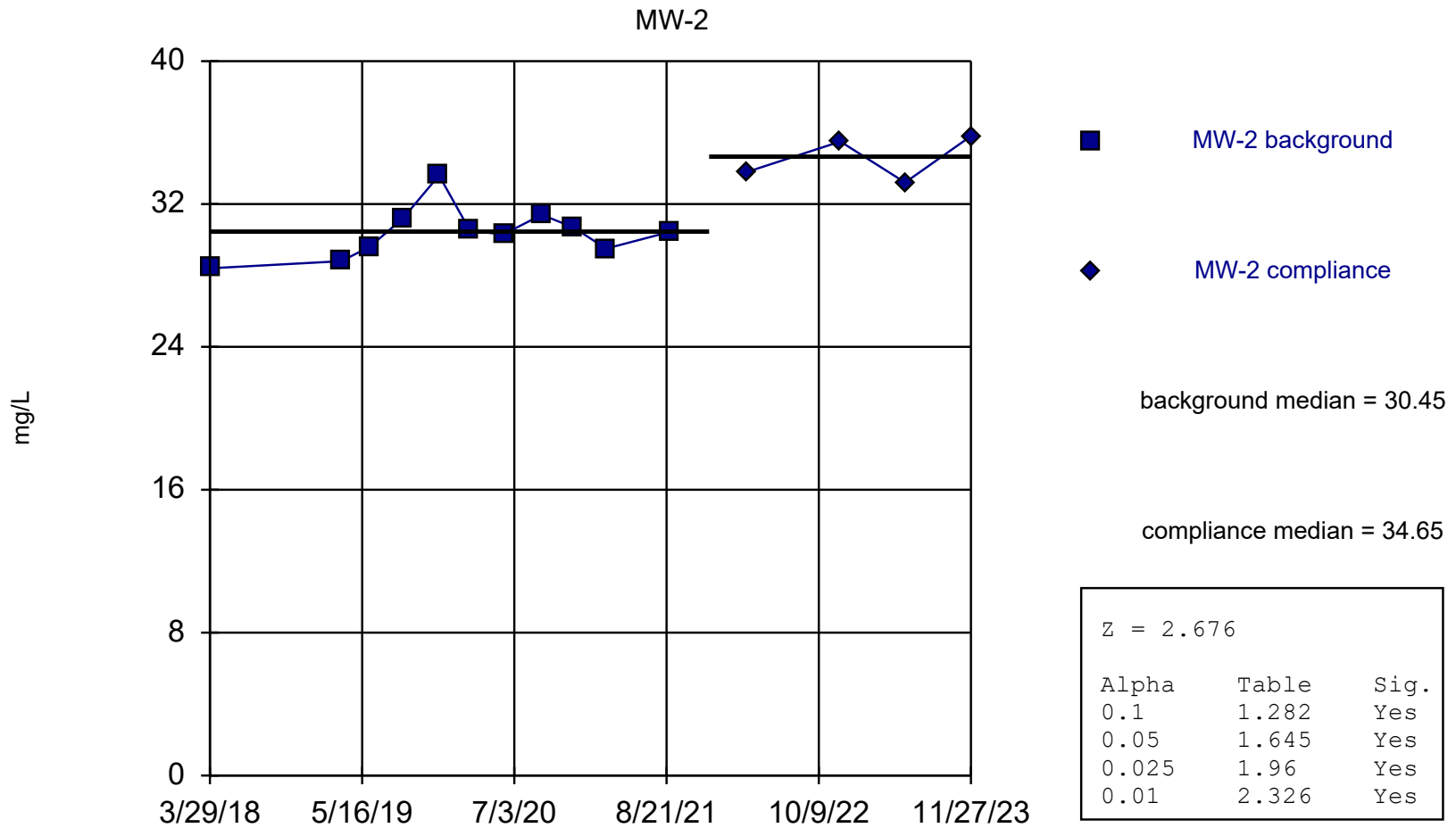
Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Barium (mg/l) Analysis Run 4/28/2024 1:53 PM View: Full UPL Run
Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-2	MW-2
3/29/2018	0.114	
9/28/2018	0.106	
3/21/2019	0.186	
6/6/2019	0.166	
9/5/2019	0.181	
12/12/2019	0.179	
3/5/2020	0.212	
6/4/2020	0.229	
9/16/2020	0.248	
12/10/2020	0.269	
3/10/2021	0.27	
9/2/2021	0.257 (D)	
3/29/2022		0.293
12/7/2022		0.288
6/1/2023		0.273
11/27/2023	0.3 (P)	
1/25/2024		0.297

Mann-Whitney (Wilcoxon Rank Sum)



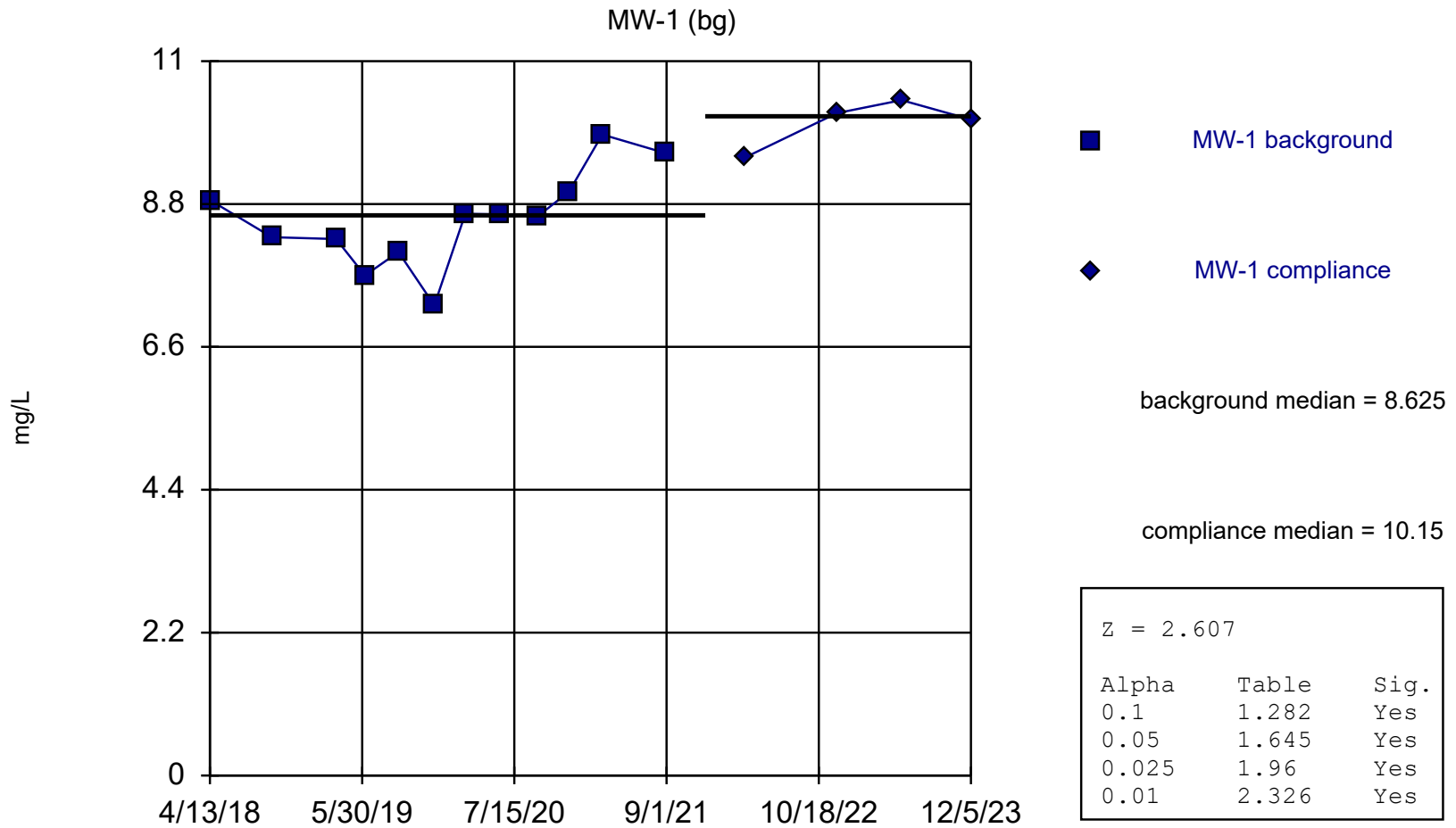
Constituent: Chloride Dissolved Analysis Run 4/28/2024 1:50 PM View: Full UPL Run
 Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Chloride Dissolved (mg/L) Analysis Run 4/28/2024 1:53 PM View: Full UPL Run
Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-2	MW-2
3/29/2018	28.4	
9/28/2018	45.1 (O)	
3/21/2019	28.8	
6/6/2019	29.6	
9/5/2019	31.2	
12/12/2019	33.6	
3/5/2020	30.5	
6/4/2020	30.3	
9/16/2020	31.4	
12/10/2020	30.7	
3/10/2021	29.5	
9/2/2021	30.45 (D)	
3/29/2022		33.8
12/7/2022		35.5
6/1/2023		33.2
11/27/2023		35.8

Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Sodium Analysis Run 4/28/2024 1:50 PM View: Full UPL Run

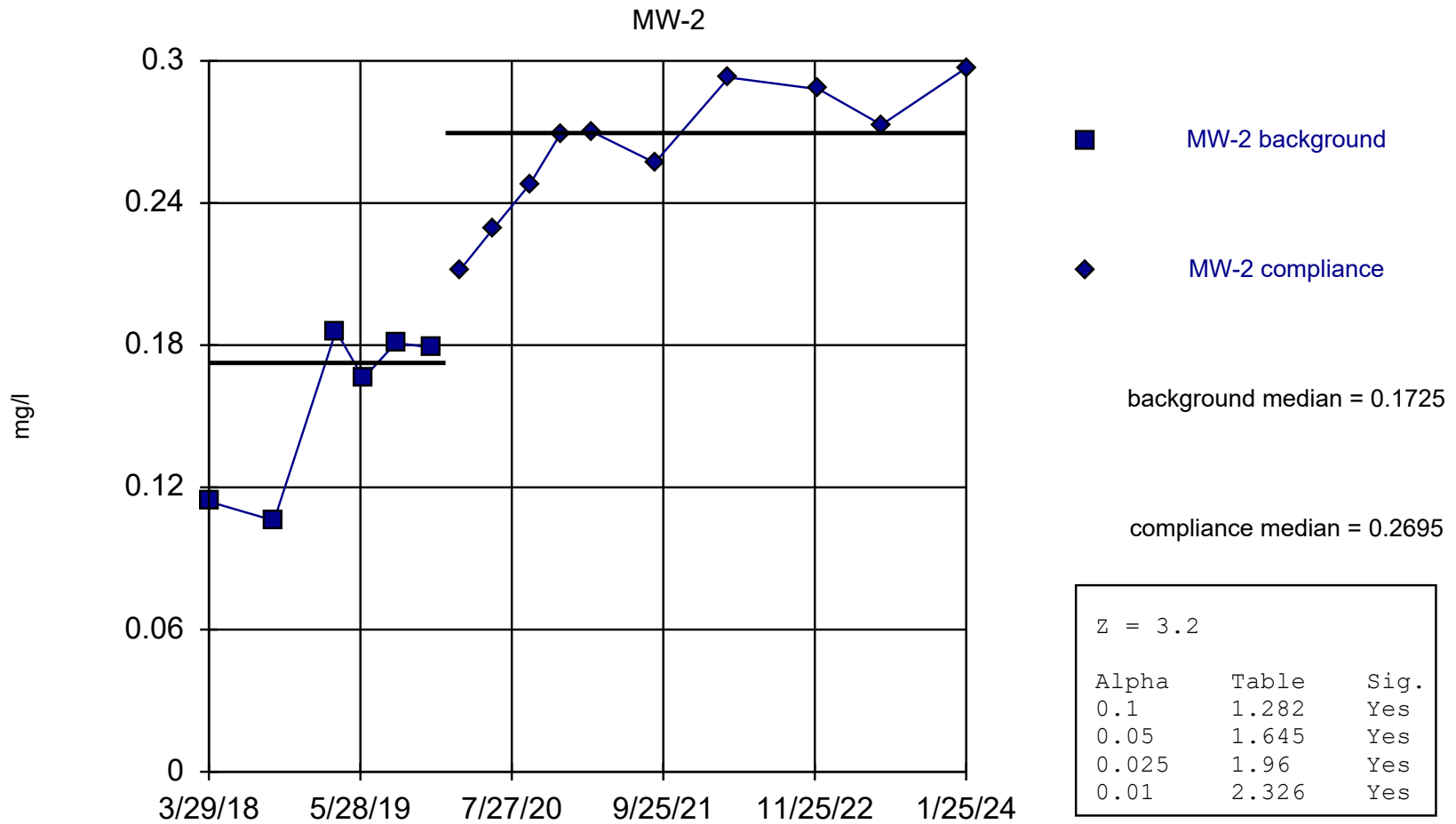
Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sodium (mg/L) Analysis Run 4/28/2024 1:53 PM View: Full UPL Run
Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-1	MW-1
4/13/2018	8.86	
9/28/2018	8.29	
3/21/2019	8.26	
6/7/2019	7.7	
9/6/2019	8.06	
12/12/2019	7.24	
3/5/2020	8.65	
6/4/2020	8.64	
9/17/2020	8.61	
12/11/2020	8.99	
3/11/2021	9.87	
9/1/2021	9.58	
3/30/2022		9.51
12/7/2022		10.2
5/31/2023		10.4
12/5/2023		10.1

Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Barium Analysis Run 4/29/2024 11:05 AM View: Full UPL Run

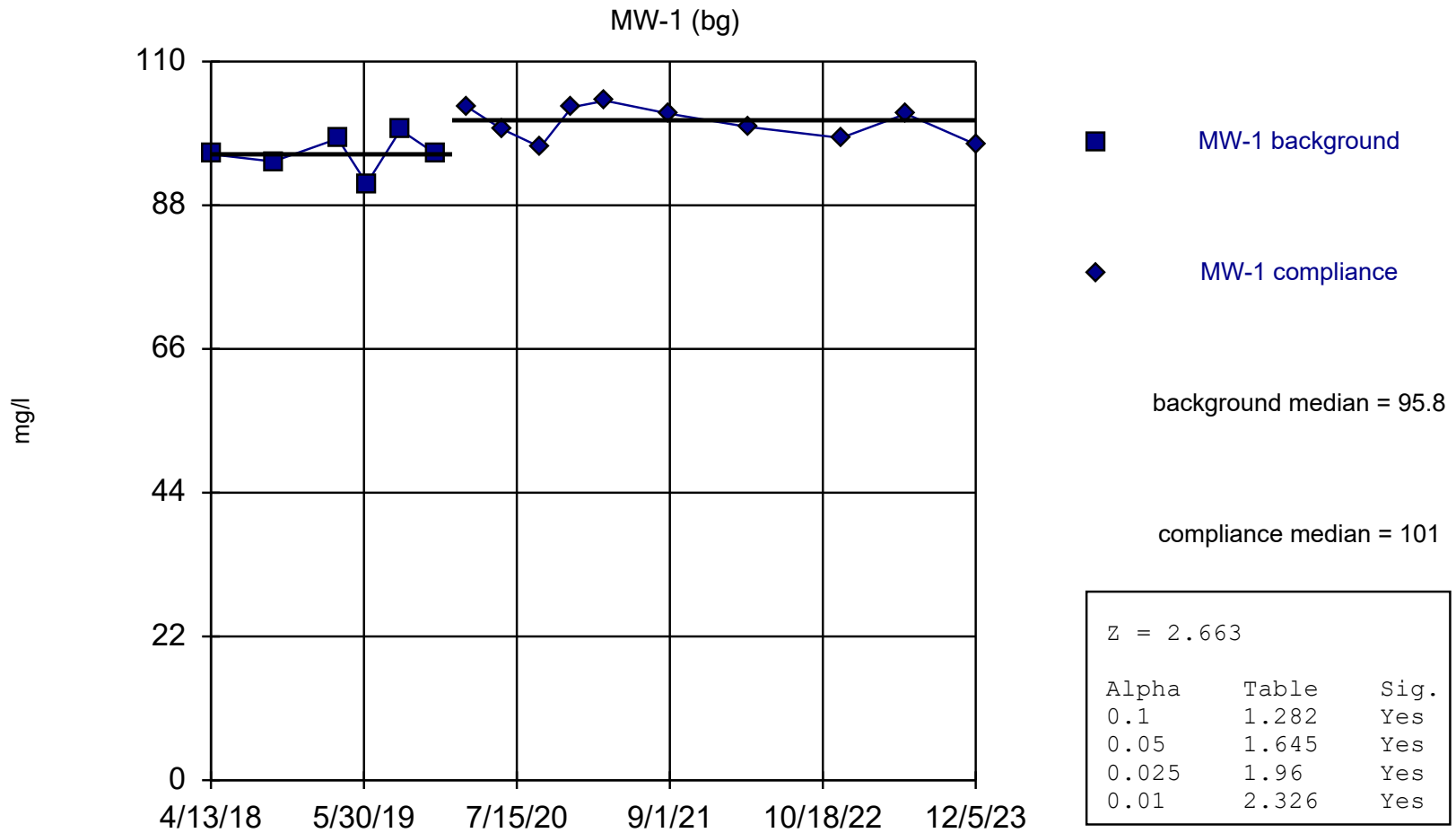
Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Barium (mg/l) Analysis Run 4/29/2024 11:07 AM View: Full UPL Run
Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-2	MW-2
3/29/2018	0.114	
9/28/2018	0.106	
3/21/2019	0.186	
6/6/2019	0.166	
9/5/2019	0.181	
12/12/2019	0.179	
3/5/2020		0.212
6/4/2020		0.229
9/16/2020		0.248
12/10/2020		0.269
3/10/2021		0.27
9/2/2021		0.257 (D)
3/29/2022		0.293
12/7/2022		0.288
6/1/2023		0.273
11/27/2023	0.3 (P)	
1/25/2024		0.297

Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Calcium Analysis Run 4/29/2024 11:05 AM View: Full UPL Run
 Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

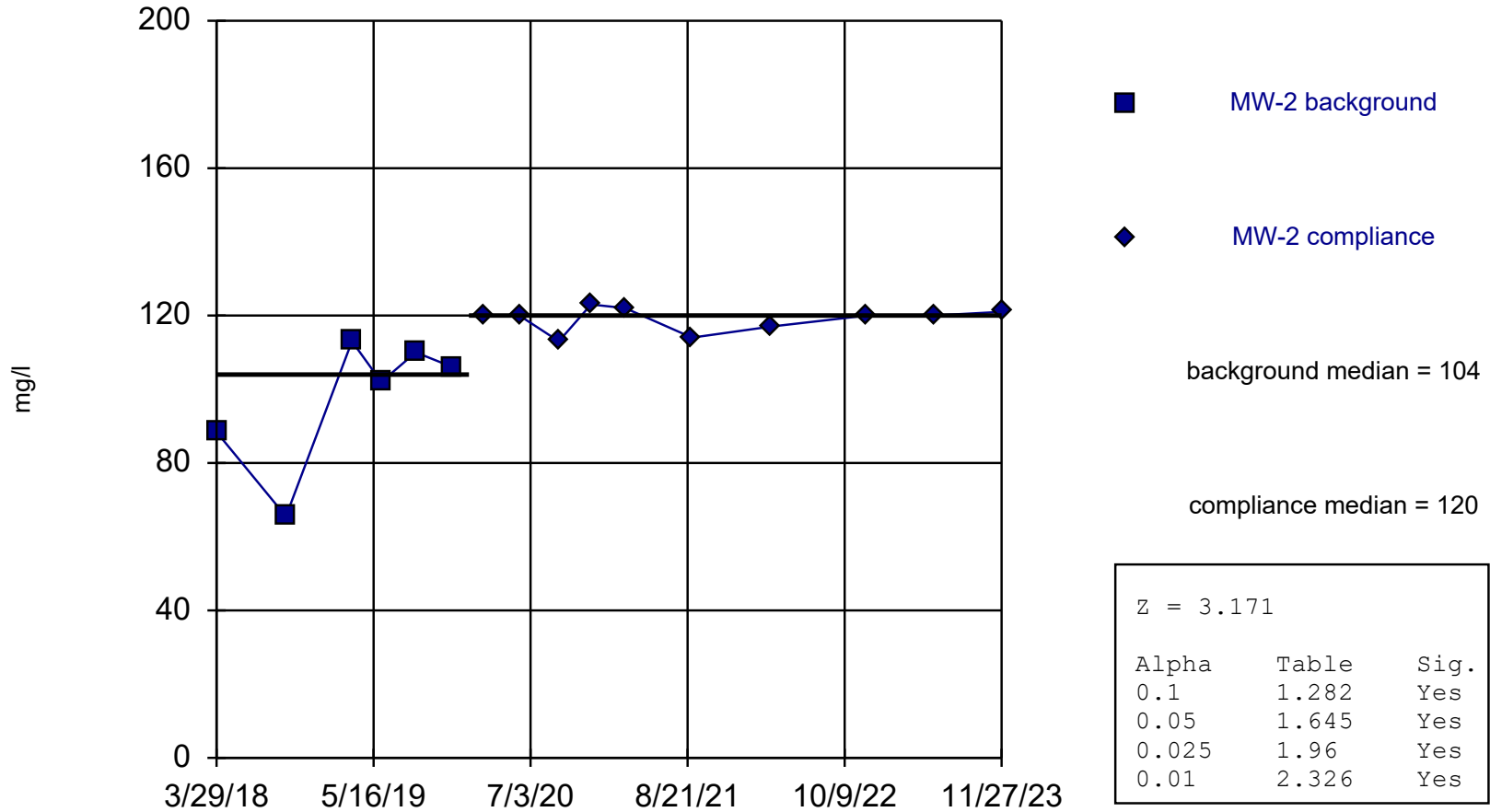
Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium (mg/l) Analysis Run 4/29/2024 11:07 AM View: Full UPL Run
Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-1	MW-1
4/13/2018	95.8	
9/28/2018	94.7	
3/21/2019	98.2	
6/7/2019	91.3	
9/6/2019	99.5	
12/12/2019	95.8	
3/5/2020		103
6/4/2020		99.7
9/17/2020		96.9
12/11/2020		103
3/11/2021		104
9/1/2021		102
3/30/2022		100
12/7/2022		98.3
5/31/2023		102
12/5/2023		97.3

Mann-Whitney (Wilcoxon Rank Sum)

MW-2



Constituent: Calcium Analysis Run 4/29/2024 11:05 AM View: Full UPL Run

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

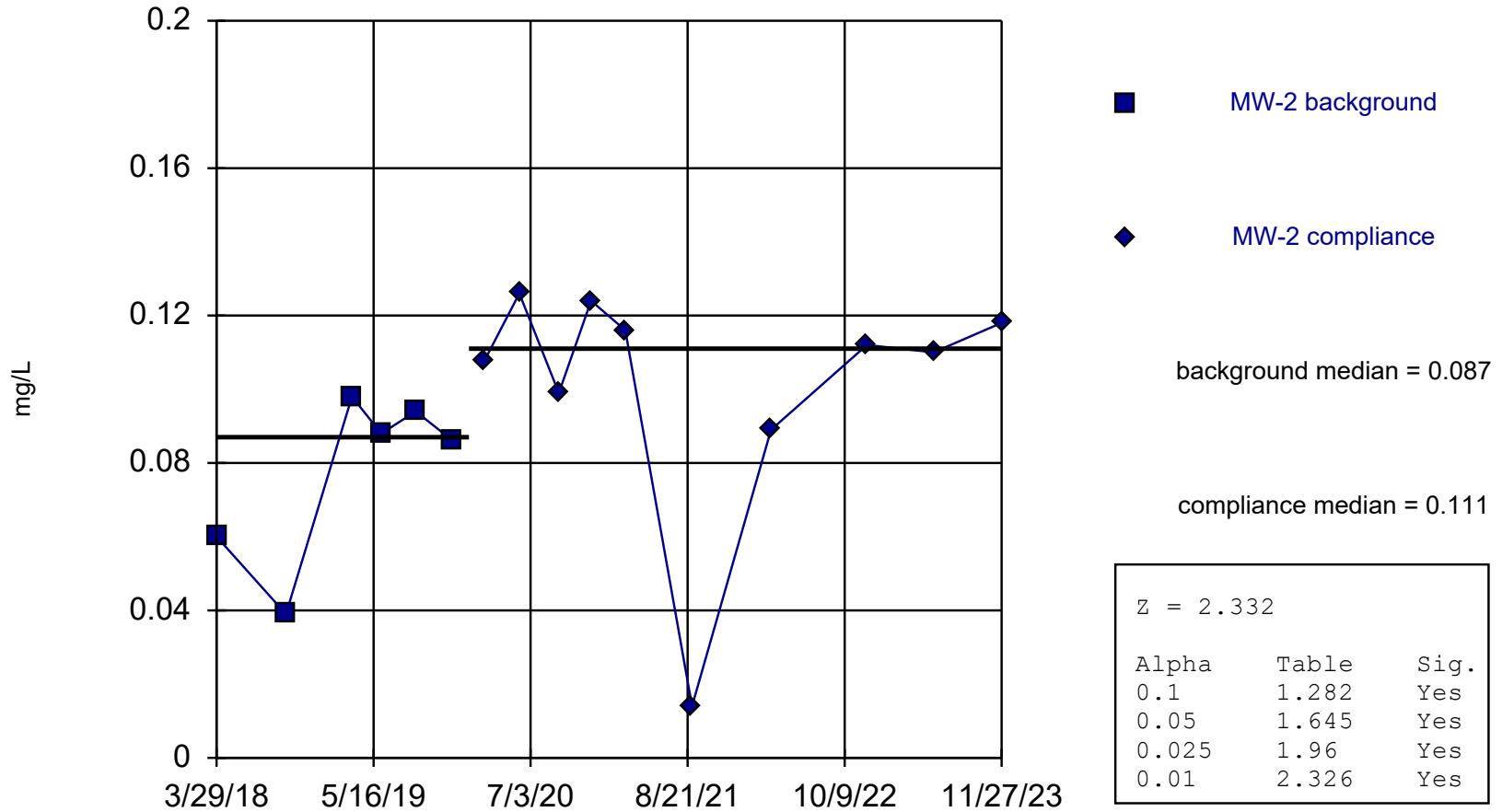
Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Calcium (mg/l) Analysis Run 4/29/2024 11:07 AM View: Full UPL Run
Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-2	MW-2
3/29/2018	88.4	
9/28/2018	65.5 (O)	
3/21/2019	113	
6/6/2019	102	
9/5/2019	110	
12/12/2019	106	
3/5/2020		120
6/4/2020		120
9/16/2020		113
12/10/2020		123
3/10/2021		122
9/2/2021		114 (D)
3/29/2022		117
12/7/2022		120
6/1/2023		120
11/27/2023		121

Mann-Whitney (Wilcoxon Rank Sum)

MW-2



Constituent: Manganese Analysis Run 4/29/2024 11:05 AM View: Full UPL Run
 Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Manganese (mg/L) Analysis Run 4/29/2024 11:07 AM View: Full UPL Run
Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-2	MW-2
3/29/2018	0.06	
9/28/2018	0.039 (O)	
3/21/2019	0.098	
6/6/2019	0.088	
9/5/2019	0.094	
12/12/2019	0.086	
3/5/2020		0.108
6/4/2020		0.126
9/16/2020		0.099
12/10/2020		0.124
3/10/2021		0.116
9/2/2021		0.014 (OD)
3/29/2022		0.089
12/7/2022		0.112
6/1/2023		0.11
11/27/2023		0.118

Welch's t-test/Mann-Whitney

Former Julietta Landfill

Client: Patriot Engineering

Data: Data Export for Alec 4.17.24

Printed 4/29/2024, 11:07 AM

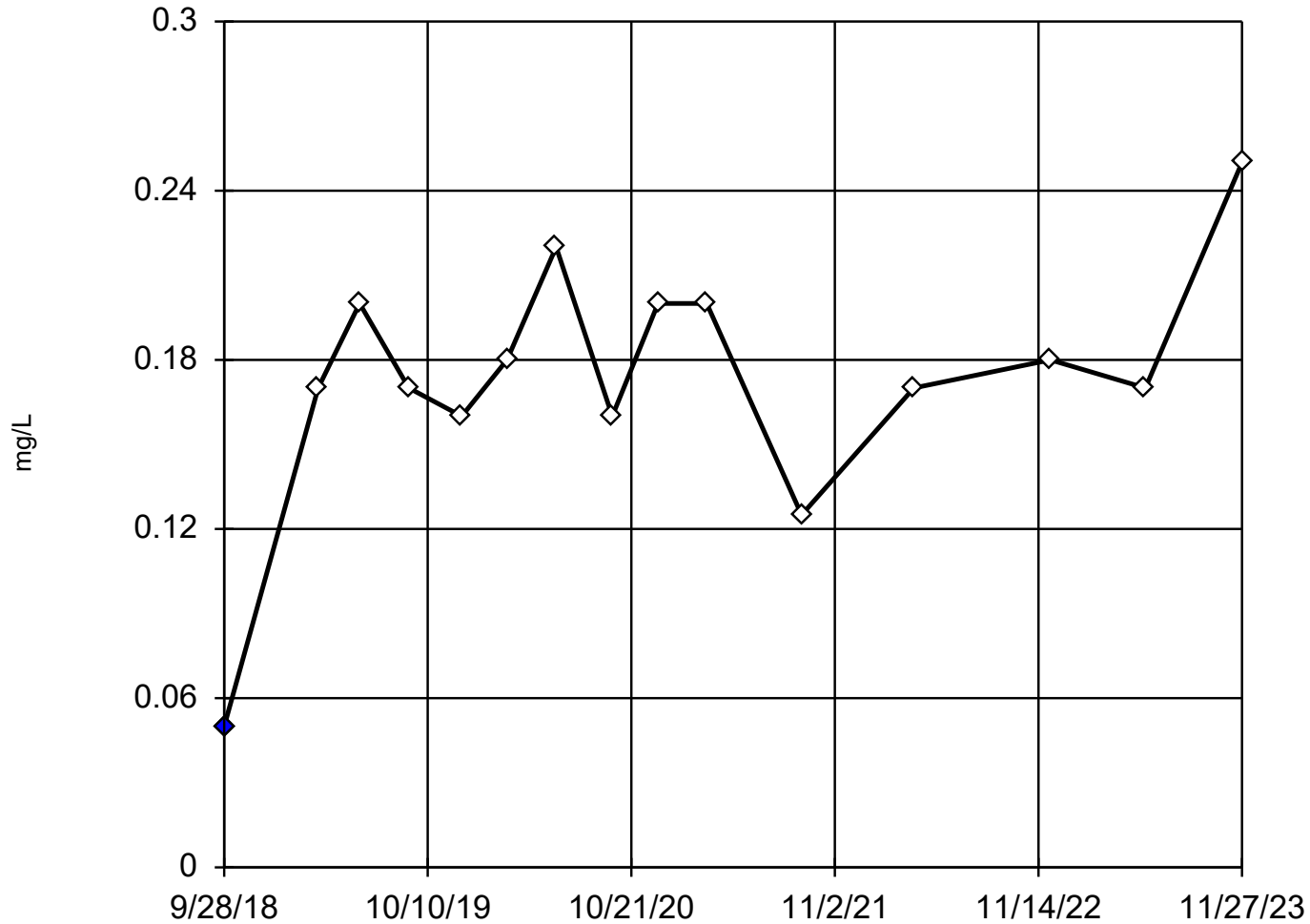
<u>Constituent</u>	<u>Well</u>	<u>Calc.</u>	<u>0.01</u>	<u>Method</u>
Barium (mg/l)	MW-2	3.2	Yes	Mann-W
Calcium (mg/l)	MW-1 (bg)	2.663	Yes	Mann-W
Calcium (mg/l)	MW-2	3.171	Yes	Mann-W
Manganese (mg/L)	MW-2	2.332	Yes	Mann-W

Attachment 2

Outlier Test Results

Dixon's Outlier Test

MW-2



n = 15

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 low outlier.
Mean = 0.1737.
Std. Dev. = 0.0449.
<0.1 (O): c = 0.7333
tab1 = 0.525.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9399
Critical = 0.895
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Ammonia Dissolved Analysis Run 4/28/2024 4:21 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Dixon's Outlier Test

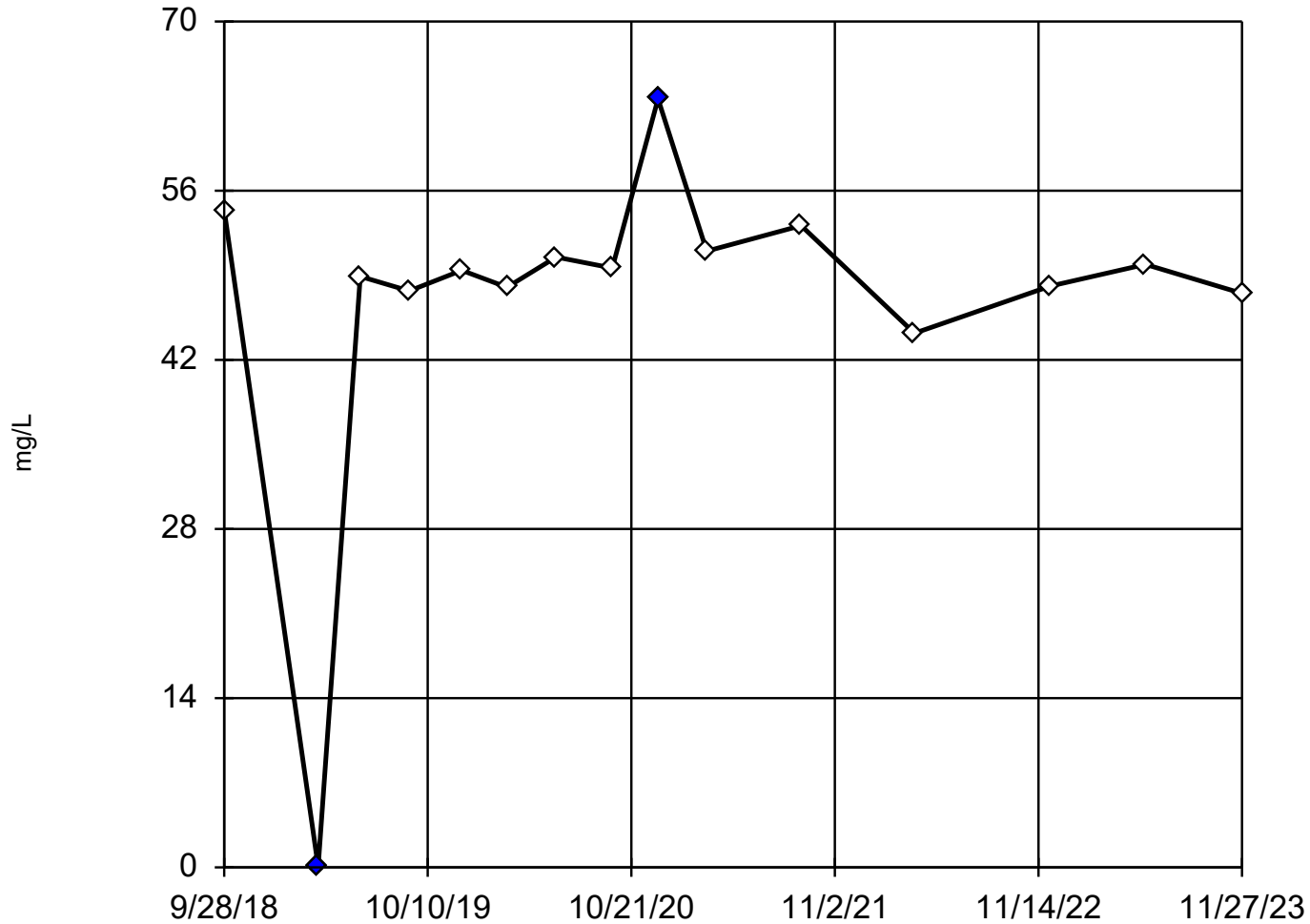
Constituent: Ammonia Dissolved (mg/L) Analysis Run 4/28/2024 4:24 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-2
9/28/2018	<0.1 (O)
3/21/2019	0.17
6/6/2019	0.2
9/5/2019	0.17
12/12/2019	0.16
3/5/2020	0.18
6/4/2020	0.22
9/16/2020	0.16
12/10/2020	0.2
3/10/2021	0.2
9/2/2021	0.125 (D)
3/29/2022	0.17
12/7/2022	0.18
6/1/2023	0.17
11/27/2023	0.25

Dixon's Outlier Test

MW-3



n = 15

Statistical outliers are drawn as solid.
2 values manually flagged as outliers.
Testing for 1 high and 1 low outliers.
Mean = 47.06.
Std. Dev. = 13.72.
63.6 (O): c = 0.6522
tabl = 0.525.
<0.1 (O): c = 0.8944
tabl = 0.525.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9627
Critical = 0.889
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Ammonia Dissolved Analysis Run 4/28/2024 4:21 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Dixon's Outlier Test

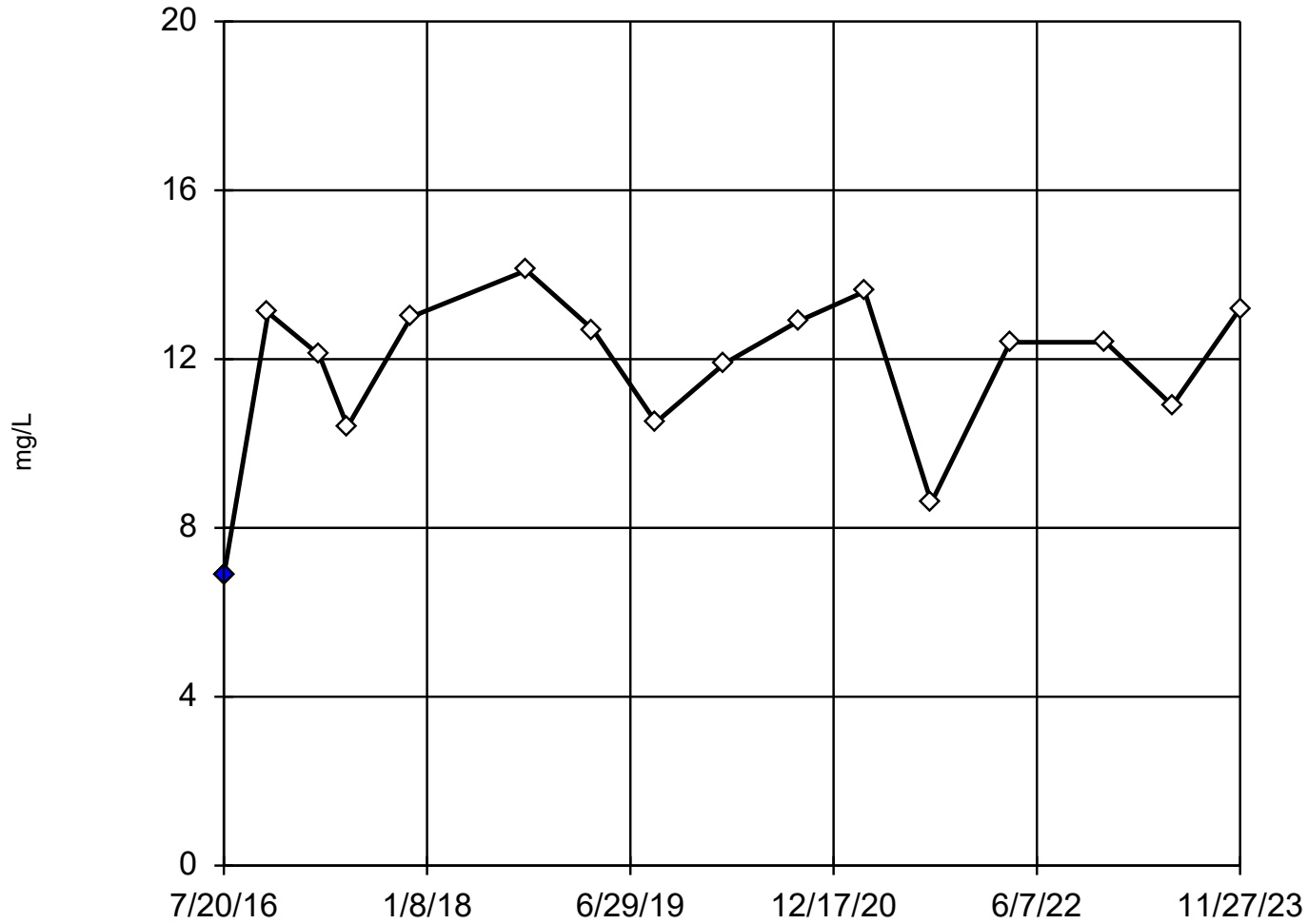
Constituent: Ammonia Dissolved (mg/L) Analysis Run 4/28/2024 4:24 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-3
9/28/2018	54.4
3/21/2019	<0.1 (O)
6/7/2019	48.9
9/6/2019	47.7
12/12/2019	49.4
3/5/2020	48
6/4/2020	50.5
9/16/2020	49.6
12/10/2020	63.6 (O)
3/10/2021	51
9/1/2021	53.1
3/30/2022	44.2
12/7/2022	48.1
6/1/2023	49.9
11/27/2023	47.5

Dixon's Outlier Test

R-1



n = 16

Statistical outlier is drawn as solid.
Testing for 2 low outliers.
Mean = 11.79.
Std. Dev. = 1.923.
8.6: c = 0.413
tab1 = 0.507.
Alpha = 0.05.
6.87: c = 0.5577
tab1 = 0.507.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9161
Critical = 0.901
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Ammonia Dissolved Analysis Run 4/28/2024 4:21 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Dixon's Outlier Test

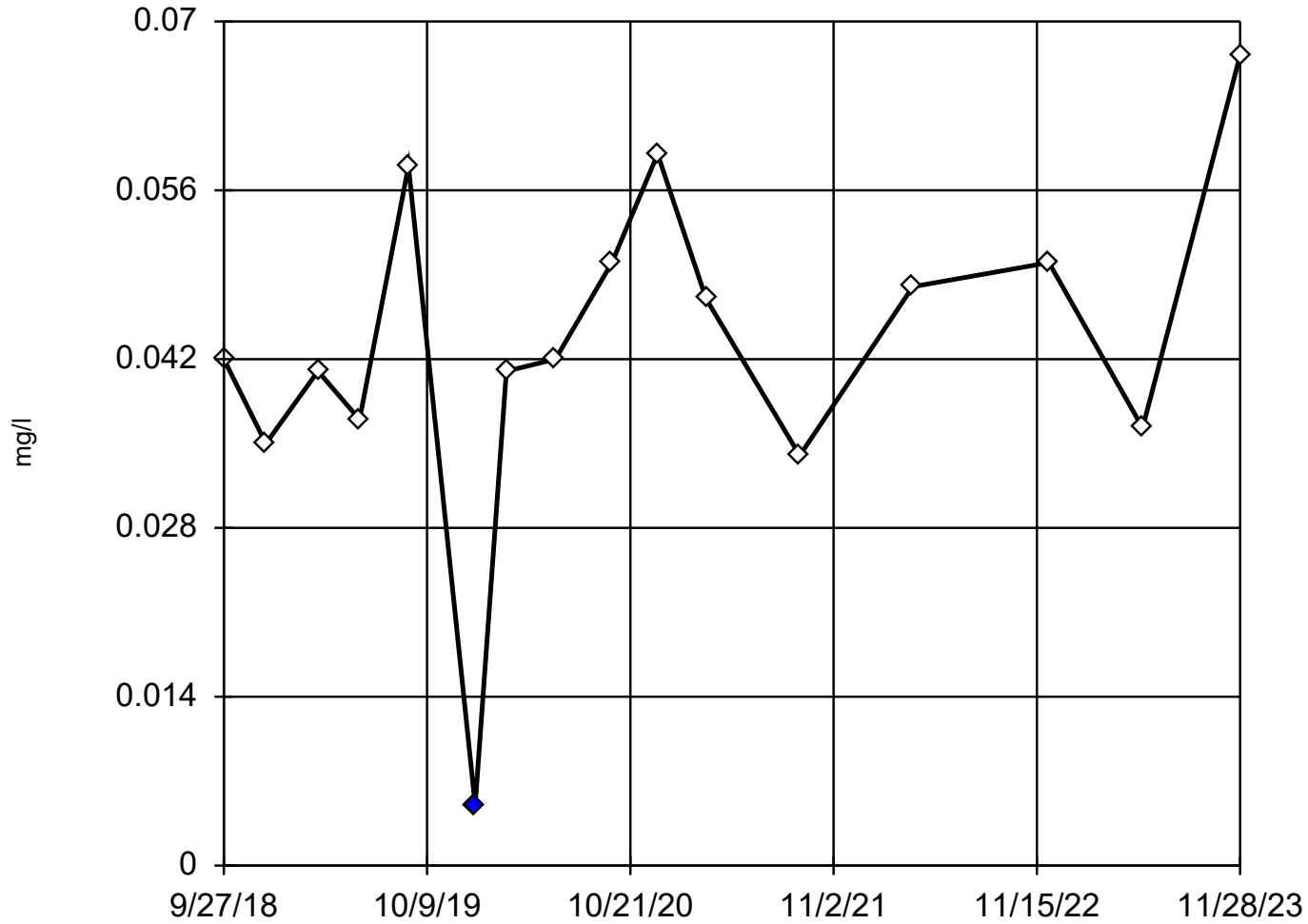
Constituent: Ammonia Dissolved (mg/L) Analysis Run 4/28/2024 4:24 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	R-1
5/20/1985	7.54 (H)
11/4/1985	4.35 (H)
2/12/1986	2.76 (H)
5/12/1986	2.51 (H)
7/20/2016	6.87 (O)
11/14/2016	13.1
3/29/2017	12.1
6/12/2017	10.4
11/27/2017	13
9/28/2018	14.1
3/22/2019	12.7
9/5/2019	10.5
3/5/2020	11.9
9/16/2020	12.9
3/10/2021	13.6
9/2/2021	8.6
3/29/2022	12.4
12/7/2022	12.4
6/1/2023	10.9
11/27/2023	13.2

Dixon's Outlier Test

EE-1



n = 16

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 0.04328.
Std. Dev. = 0.01387.
<0.01: c = 0.566
tab1 = 0.507.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.924
Critical = 0.901
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Arsenic Analysis Run 4/28/2024 4:21 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Dixon's Outlier Test

Constituent: Arsenic (mg/l) Analysis Run 4/28/2024 4:24 PM

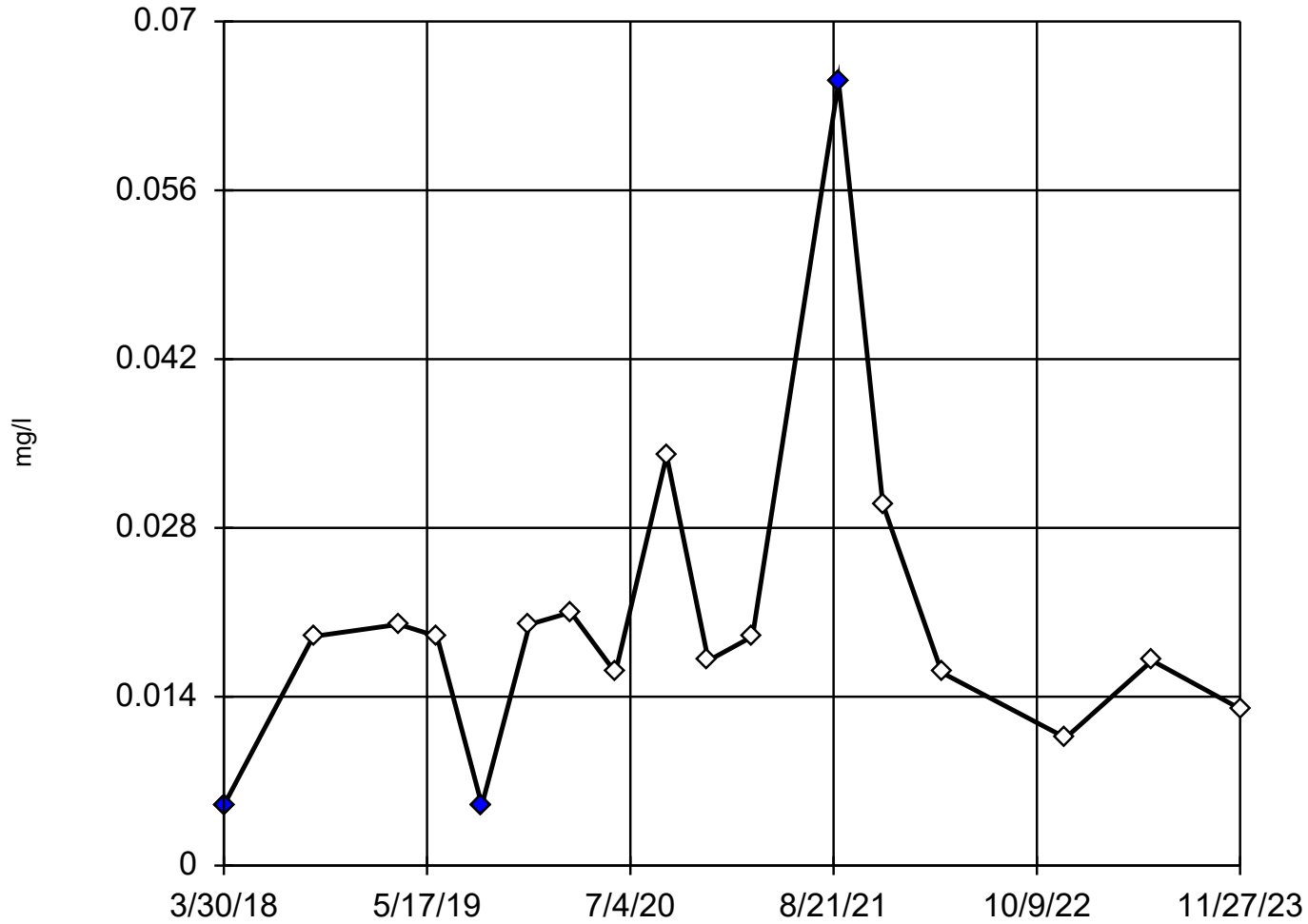
Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

EE-1

5/22/1985	0.022 (H)
8/5/1985	0.017 (H)
11/20/1985	0.028 (H)
12/24/1985	0.018 (H)
2/10/1986	0.016 (H)
5/19/1986	0.025 (H)
7/29/1993	0.0096 (H)
3/12/2015	0.033 (H)
3/29/2016	0.031 (H)
6/1/2016	0.014 (H)
7/21/2016	0.014 (H)
6/12/2017	0.011 (H)
11/27/2017	<0.01 (H)
3/30/2018	<0.01 (H)
9/27/2018	0.042
12/14/2018	0.035
3/21/2019	0.041
6/6/2019	0.037
9/5/2019	0.058
1/7/2020	<0.01 (O)
3/5/2020	0.041
6/4/2020	0.042
9/17/2020	0.05
12/11/2020	0.059
3/11/2021	0.047
9/1/2021	0.034
3/30/2022	0.048
12/8/2022	0.05
5/31/2023	0.0363
11/28/2023	0.0672

Tukey's Outlier Screening

MW-3



n = 17

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

High cutoff = 0.0588,
low cutoff = 0.005026,
based on IQR multiplier of 3.

Constituent: Arsenic Analysis Run 4/28/2024 4:21 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Tukey's Outlier Screening

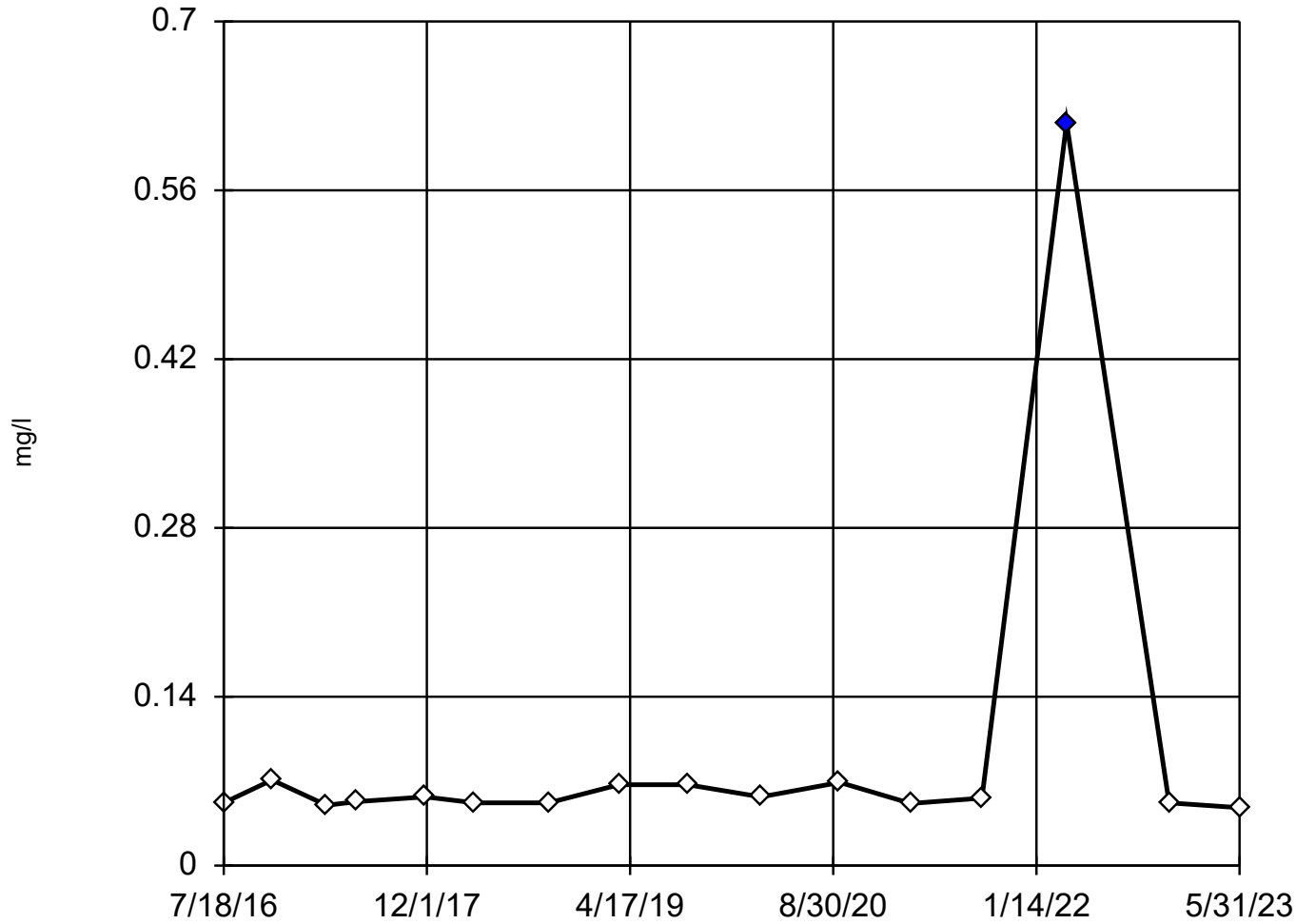
Constituent: Arsenic (mg/l) Analysis Run 4/28/2024 4:24 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-3
3/30/2018	<0.01 (O)
9/28/2018	0.019
3/21/2019	0.02
6/7/2019	0.019
9/6/2019	<0.01 (O)
12/12/2019	0.02
3/5/2020	0.021
6/4/2020	0.016
9/16/2020	0.034
12/10/2020	0.017
3/10/2021	0.019
9/1/2021	0.065 (SO)
11/30/2021	0.03 (S)
3/30/2022	0.016
12/7/2022	0.0106
6/1/2023	0.017
11/27/2023	0.013

Tukey's Outlier Screening

C-2 (bg)



n = 16

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

High cutoff = 0.1433, low cutoff = 0.02431, based on IQR multiplier of 3.

Constituent: Barium Analysis Run 4/28/2024 4:22 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Tukey's Outlier Screening

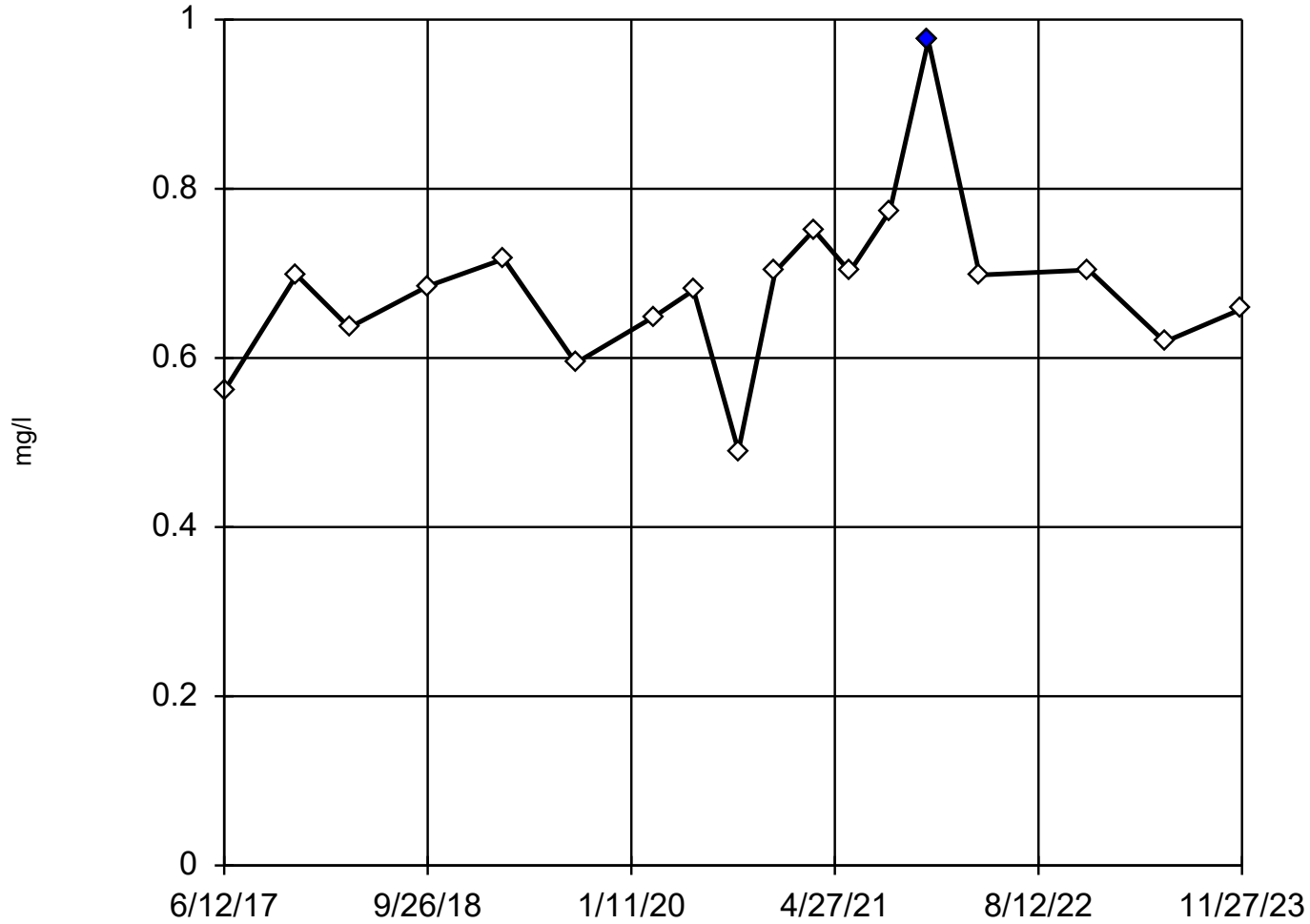
Constituent: Barium (mg/l) Analysis Run 4/28/2024 4:24 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	C-2 (bg)
3/28/2016	0.053 (H)
5/31/2016	0.053 (H)
7/18/2016	0.052
11/14/2016	0.071
3/29/2017	0.05
6/12/2017	0.053
11/27/2017	0.057
3/30/2018	0.052
9/28/2018	0.052
3/21/2019	0.067
9/6/2019	0.067
3/5/2020	0.057
9/16/2020	0.069
3/10/2021	0.0515 (D)
9/2/2021	0.056
3/30/2022	0.616 (SO)
12/8/2022	0.052
5/31/2023	0.048

Dixon's Outlier Test

R-1



n = 18

Statistical outlier is drawn as solid.
Testing for 1 high and 1 low outliers.
Mean = 0.6829.
Std. Dev. = 0.09973.
0.975 (S): c = 0.5879
tabl = 0.475.
0.49: c = 0.3985
tabl = 0.475.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9656
Critical = 0.906
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Barium Analysis Run 4/28/2024 4:22 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Dixon's Outlier Test

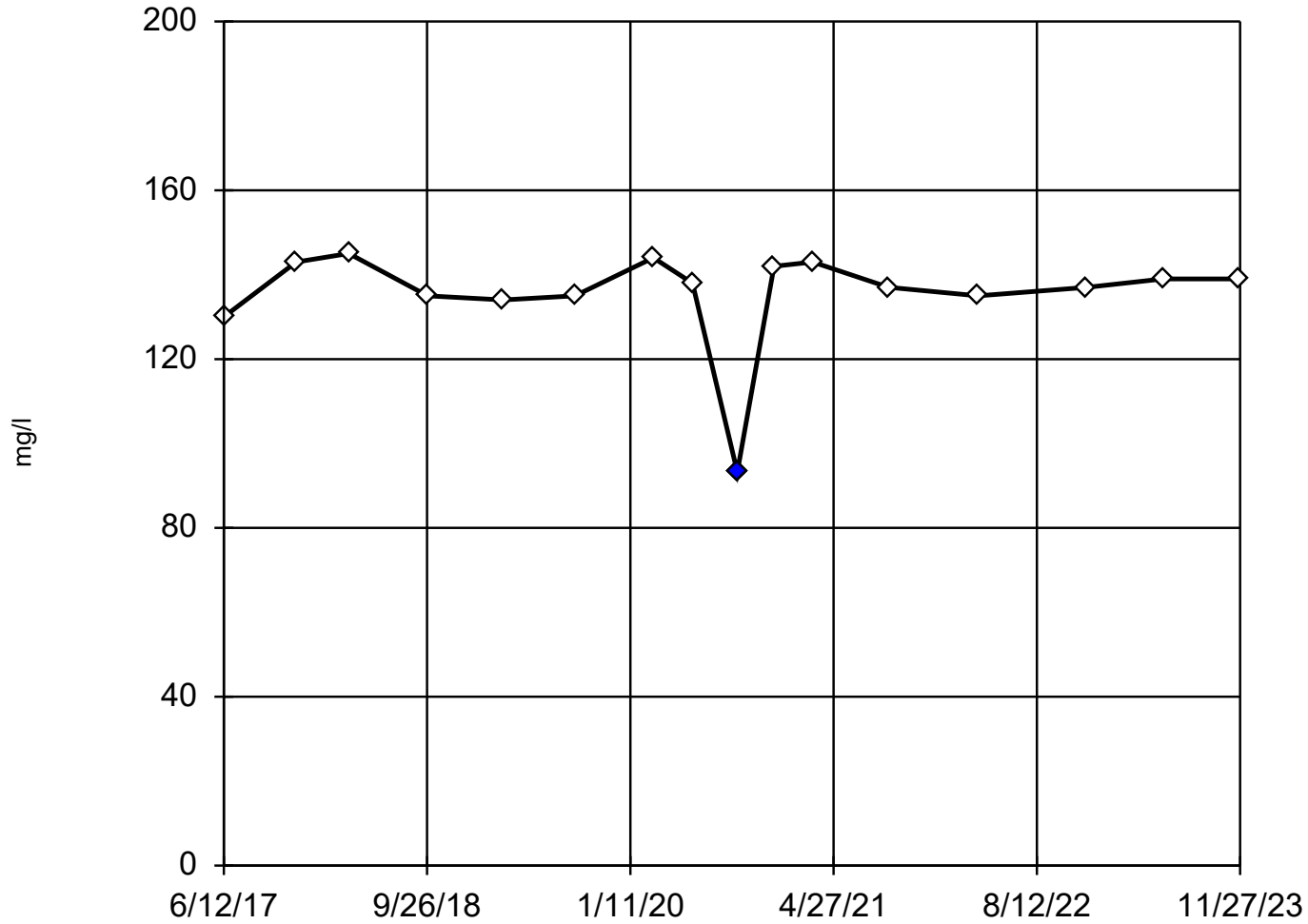
Constituent: Barium (mg/l) Analysis Run 4/28/2024 4:24 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	R-1
5/20/1985	0.18 (H)
11/4/1985	0.26 (H)
2/12/1986	0.19 (H)
5/12/1986	0.14 (H)
7/20/2016	0.085 (H)
11/14/2016	0.705 (H)
3/29/2017	0.682 (H)
6/12/2017	0.561
11/27/2017	0.698
3/29/2018	0.636
9/28/2018	0.685
3/22/2019	0.717
9/5/2019	0.594
3/5/2020	0.649
6/4/2020	0.68
9/16/2020	0.49
12/10/2020	0.702
3/10/2021	0.751
6/1/2021	0.702
9/2/2021	0.774 (S)
11/30/2021	0.975 (SO)
3/29/2022	0.698
12/7/2022	0.704
6/1/2023	0.619
11/27/2023	0.658

Dixon's Outlier Test

R-1



n = 16

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 low outlier.
Mean = 135.6.
Std. Dev. = 12.04.
93.2 (O): c = 0.8193
tab1 = 0.507.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9542
Critical = 0.901
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Calcium Analysis Run 4/28/2024 4:22 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Dixon's Outlier Test

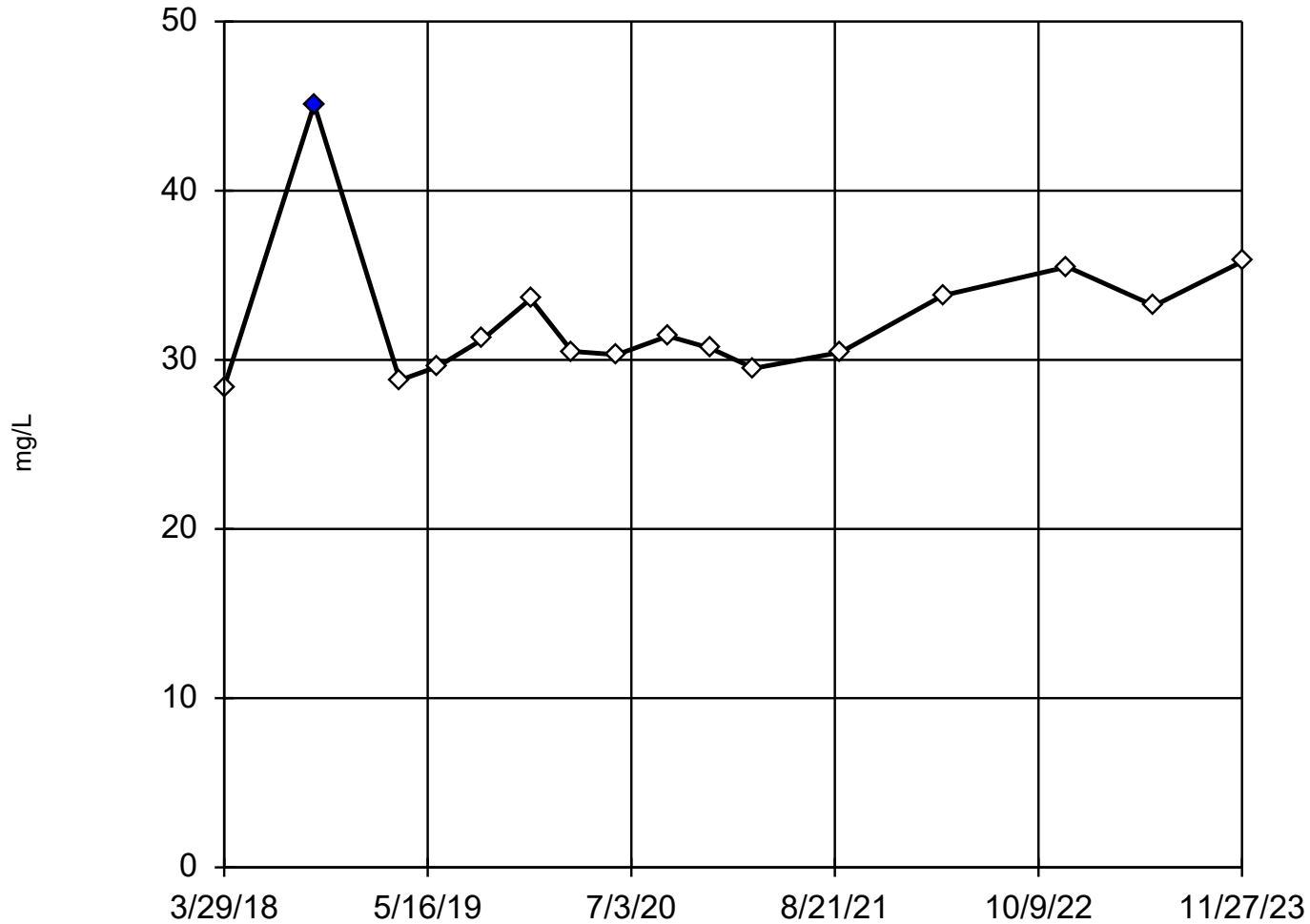
Constituent: Calcium (mg/l) Analysis Run 4/28/2024 4:24 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	R-1
5/20/1985	114 (H)
11/4/1985	121 (H)
2/12/1986	125 (H)
5/12/1986	136 (H)
11/14/2016	140 (H)
3/29/2017	137 (H)
6/12/2017	130
11/27/2017	143
3/29/2018	145
9/28/2018	135
3/22/2019	134
9/5/2019	135
3/5/2020	144
6/4/2020	138
9/16/2020	93.2 (O)
12/10/2020	142
3/10/2021	143
9/2/2021	137
3/29/2022	135
12/7/2022	137
6/1/2023	139
11/27/2023	139

Dixon's Outlier Test

MW-2



n = 16

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 32.37.
Std. Dev. = 4.073.
45.1 (O): c = 0.6154
tab1 = 0.507.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9204
Critical = 0.901
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Chloride Dissolved Analysis Run 4/28/2024 4:22 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Dixon's Outlier Test

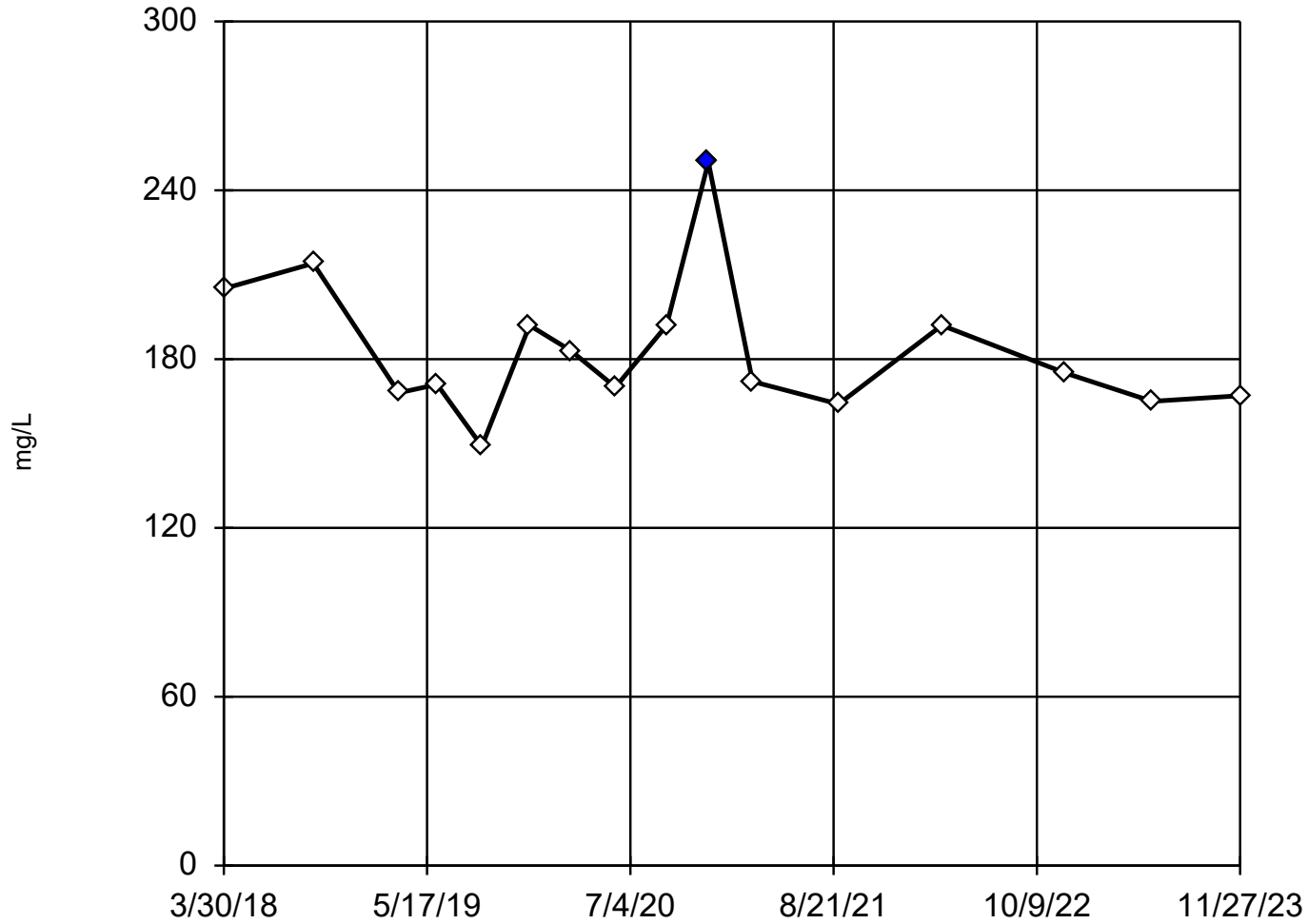
Constituent: Chloride Dissolved (mg/L) Analysis Run 4/28/2024 4:24 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-2
3/29/2018	28.4
9/28/2018	45.1 (O)
3/21/2019	28.8
6/6/2019	29.6
9/5/2019	31.2
12/12/2019	33.6
3/5/2020	30.5
6/4/2020	30.3
9/16/2020	31.4
12/10/2020	30.7
3/10/2021	29.5
9/2/2021	30.45 (D)
3/29/2022	33.8
12/7/2022	35.5
6/1/2023	33.2
11/27/2023	35.8

Dixon's Outlier Test

MW-3



Dixon's Outlier Test

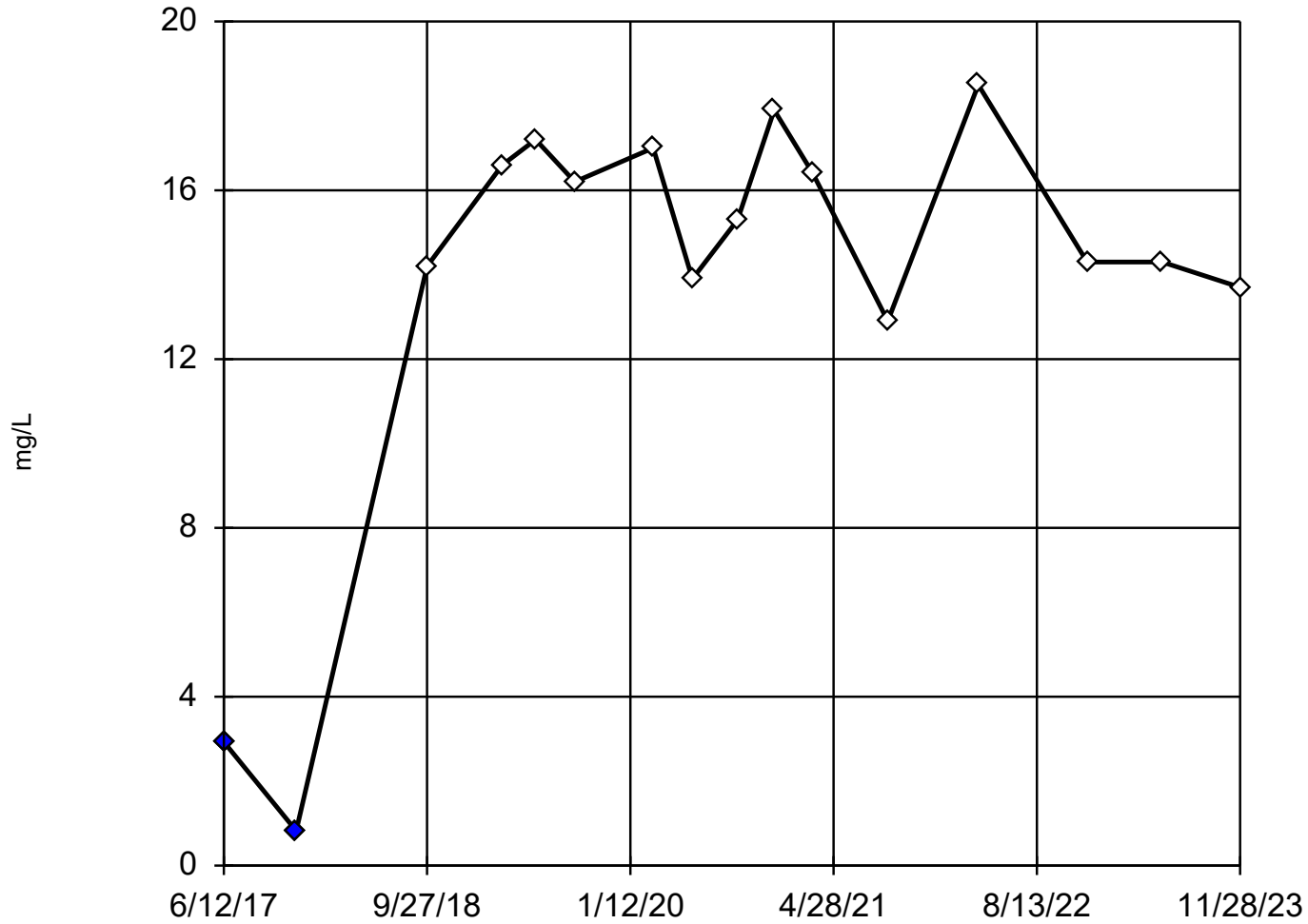
Constituent: Chloride Dissolved (mg/L) Analysis Run 4/28/2024 4:24 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-3
3/30/2018	205
9/28/2018	214
3/21/2019	168
6/7/2019	171
9/6/2019	149
12/12/2019	192
3/5/2020	183
6/4/2020	170
9/16/2020	192
12/10/2020	250 (O)
3/10/2021	172
9/1/2021	164
3/30/2022	192
12/7/2022	175
6/1/2023	165
11/27/2023	167

Dixon's Outlier Test

EE-1



n = 16

Statistical outliers are drawn as solid.
Testing for 2 low outliers.
Mean = 13.88.
Std. Dev. = 4.975.
2.93: c = 0.7547
tab1 = 0.507.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9465
Critical = 0.895
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Iron Analysis Run 4/28/2024 4:22 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Dixon's Outlier Test

Constituent: Iron (mg/L) Analysis Run 4/28/2024 4:24 PM

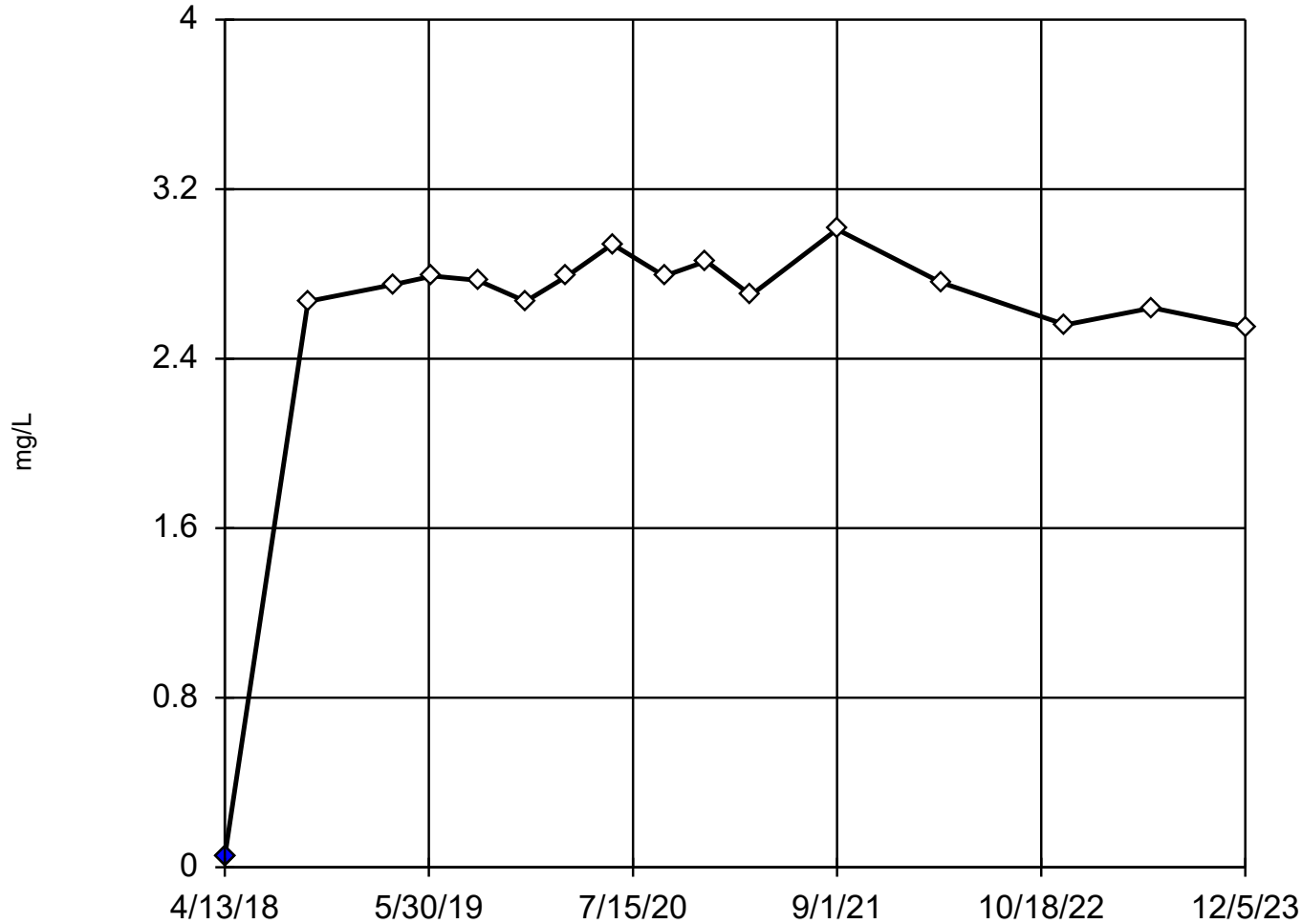
Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

EE-1

5/22/1985	10.36 (H)
8/5/1985	7.64 (H)
11/20/1985	7.7 (H)
12/24/1985	3.38 (H)
2/10/1986	8.5 (H)
5/19/1986	11.75 (H)
7/29/1993	1.7 (H)
6/12/2017	2.93 (O)
11/27/2017	0.823 (O)
9/27/2018	14.2
3/21/2019	16.6
6/6/2019	17.2
9/5/2019	16.2
3/5/2020	17
6/4/2020	13.9
9/17/2020	15.3
12/11/2020	17.9
3/11/2021	16.4
9/1/2021	12.9
3/30/2022	18.5
12/8/2022	14.3
5/31/2023	14.3
11/28/2023	13.7

Dixon's Outlier Test

MW-1 (bg)



n = 16

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 low outlier.
Mean = 2.581.
Std. Dev. = 0.686.
<0.1 (O): c = 0.8932
tab1 = 0.507.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9626
Critical = 0.901
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Iron Analysis Run 4/28/2024 4:22 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Dixon's Outlier Test

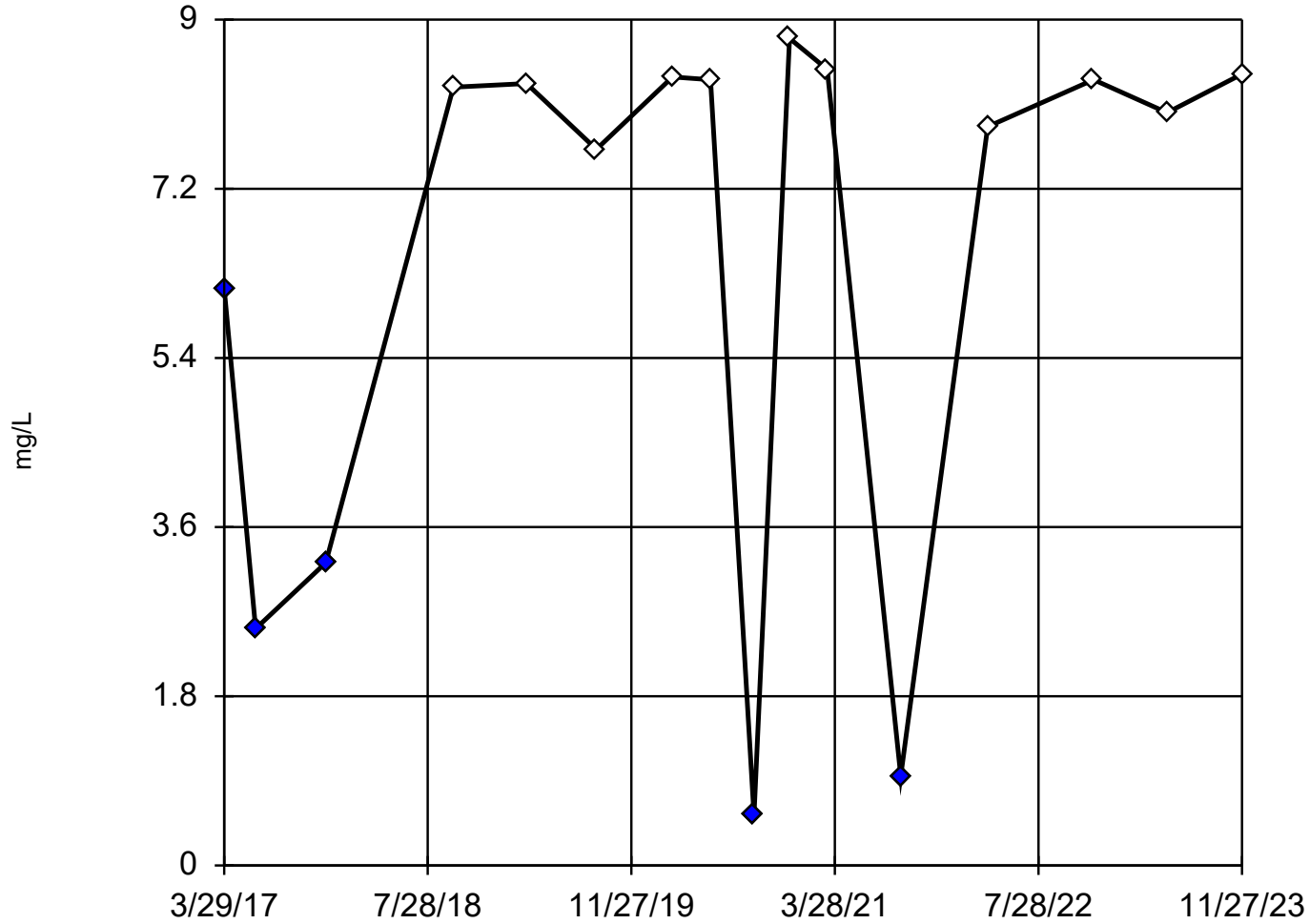
Constituent: Iron (mg/L) Analysis Run 4/28/2024 4:24 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-1 (bg)
4/13/2018	<0.1 (O)
9/28/2018	2.67
3/21/2019	2.75
6/7/2019	2.79
9/6/2019	2.77
12/12/2019	2.67
3/5/2020	2.79
6/4/2020	2.94
9/17/2020	2.79
12/11/2020	2.86
3/11/2021	2.7
9/1/2021	3.01
3/30/2022	2.76
12/7/2022	2.56
5/31/2023	2.64
12/5/2023	2.55

Dixon's Outlier Test

R-1



n = 16

Statistical outliers are drawn as solid.
5 values manually flagged as outliers.
Testing for 5 low outliers.
Mean = 6.516.
Std. Dev. = 2.926.
6.14 (O): c = 0.7544
tab1 = 0.507.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9178
Critical = 0.876
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Iron Analysis Run 4/28/2024 4:22 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Dixon's Outlier Test

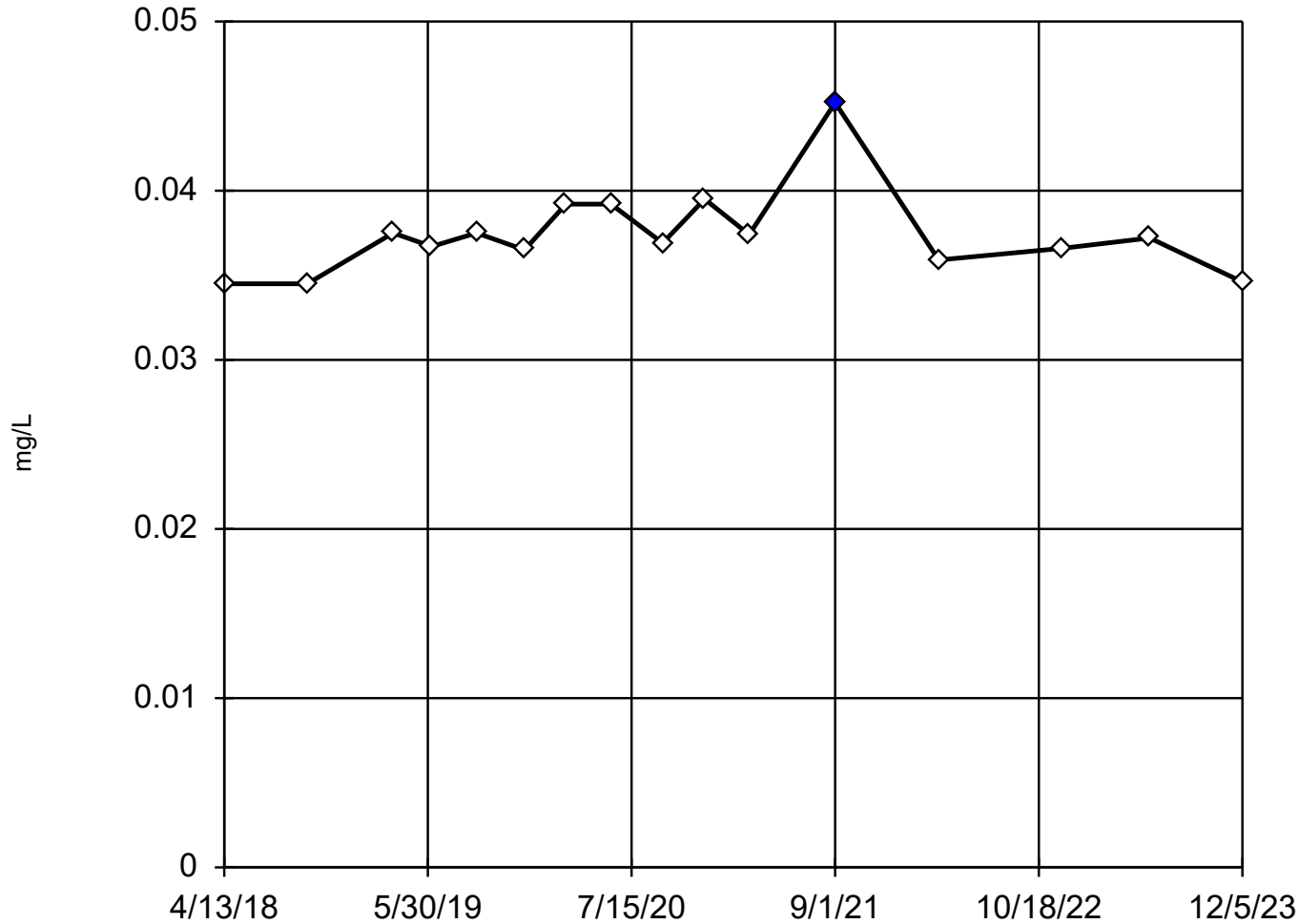
Constituent: Iron (mg/L) Analysis Run 4/28/2024 4:24 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	R-1
5/20/1985	4.92 (H)
11/4/1985	6.24 (H)
2/12/1986	5.32 (H)
5/12/1986	6.62 (H)
11/14/2016	5.35 (H)
3/29/2017	6.14 (O)
6/12/2017	2.52 (O)
11/27/2017	3.22 (O)
9/28/2018	8.28
3/22/2019	8.32
9/5/2019	7.62
3/5/2020	8.39
6/4/2020	8.36
9/16/2020	0.529 (O)
12/10/2020	8.8
3/10/2021	8.47
9/2/2021	0.951 (O)
3/29/2022	7.86
12/7/2022	8.36
6/1/2023	8.01
11/27/2023	8.42

Dixon's Outlier Test

MW-1 (bg)



n = 16

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 0.03743.
Std. Dev. = 0.002593.
0.0452 (SO): c = 0.566
tab1 = 0.507.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9231
Critical = 0.901
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Manganese Analysis Run 4/28/2024 4:22 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Dixon's Outlier Test

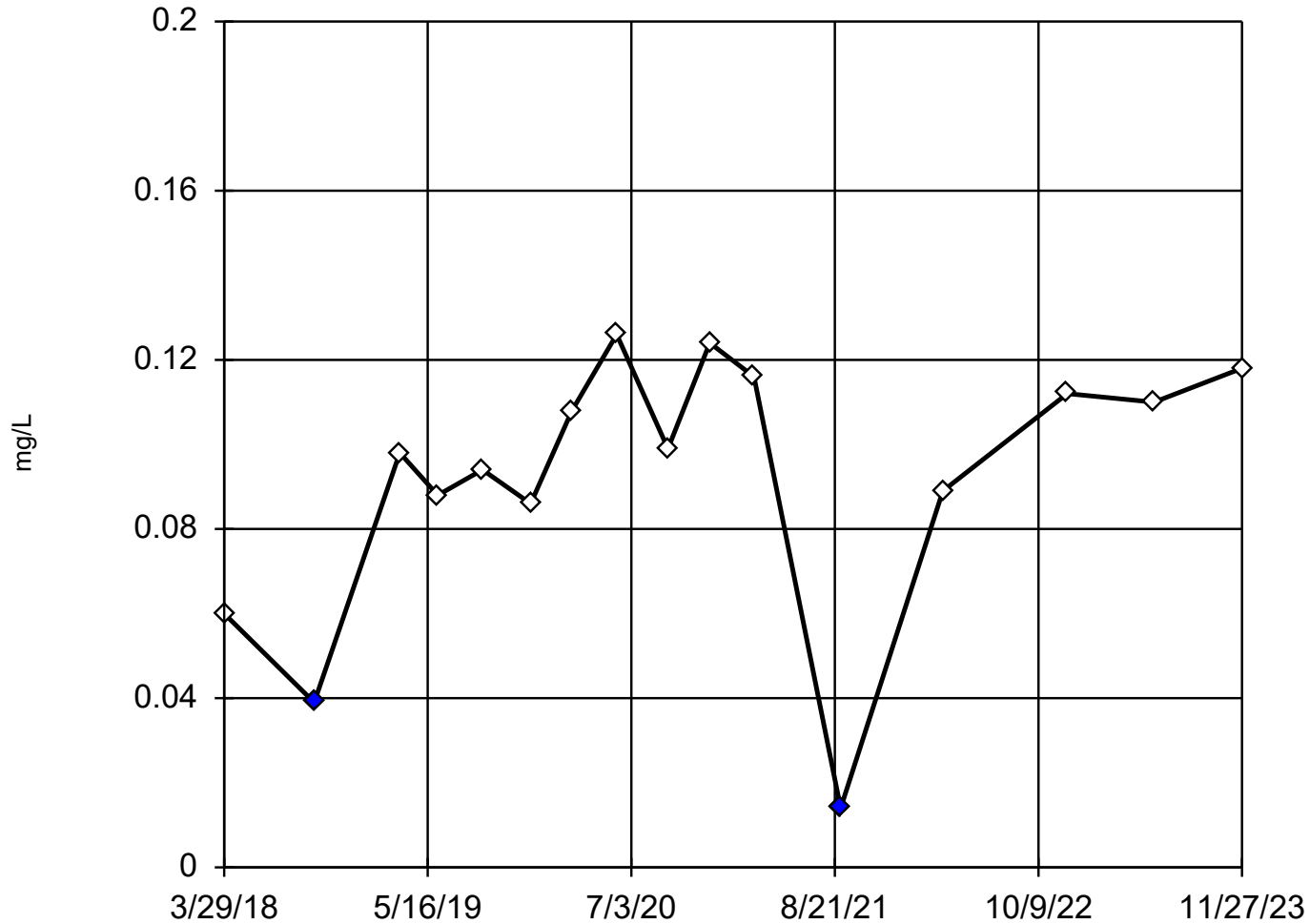
Constituent: Manganese (mg/L) Analysis Run 4/28/2024 4:24 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-1 (bg)
4/13/2018	0.0345
9/28/2018	0.0345
3/21/2019	0.0375
6/7/2019	0.0367
9/6/2019	0.0375
12/12/2019	0.0365
3/5/2020	0.0392
6/4/2020	0.0392
9/17/2020	0.0369
12/11/2020	0.0395
3/11/2021	0.0374
9/1/2021	0.0452 (SO)
3/30/2022	0.0359
12/7/2022	0.0366
5/31/2023	0.0372
12/5/2023	0.0346

Dixon's Outlier Test

MW-2



n = 16

Statistical outliers are drawn as solid.
2 values manually flagged as outliers.
Testing for 3 low outliers.
Mean = 0.09256.
Std. Dev. = 0.03106.
0.06: c = 0.4828
tab1 = 0.507.
Alpha = 0.05.
0.039 (O): c = 0.5949
tab1 = 0.507.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9431
Critical = 0.895
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Manganese Analysis Run 4/28/2024 4:22 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Dixon's Outlier Test

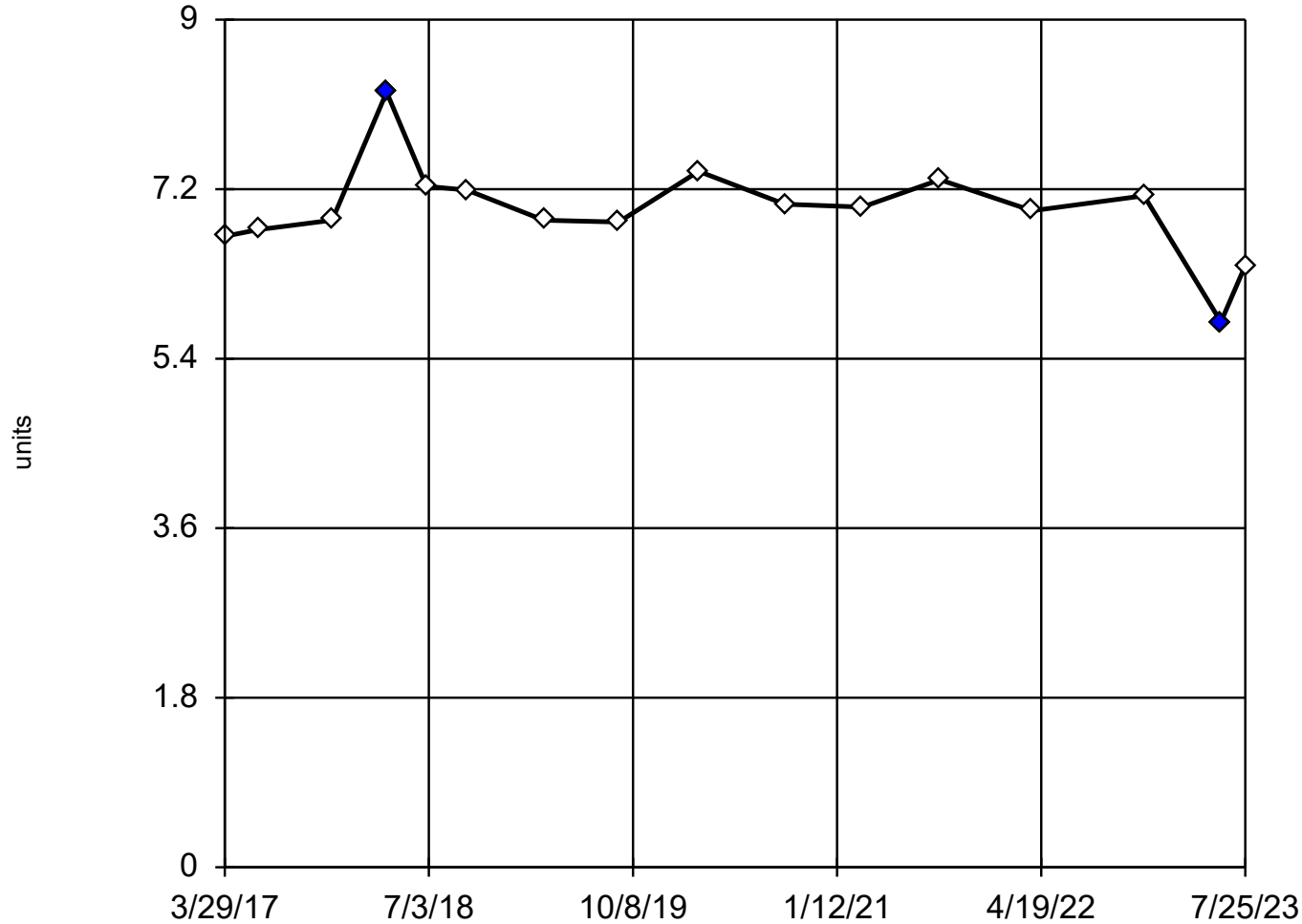
Constituent: Manganese (mg/L) Analysis Run 4/28/2024 4:24 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-2
3/29/2018	0.06
9/28/2018	0.039 (O)
3/21/2019	0.098
6/6/2019	0.088
9/5/2019	0.094
12/12/2019	0.086
3/5/2020	0.108
6/4/2020	0.126
9/16/2020	0.099
12/10/2020	0.124
3/10/2021	0.116
9/2/2021	0.014 (OD)
3/29/2022	0.089
12/7/2022	0.112
6/1/2023	0.11
11/27/2023	0.118

Dixon's Outlier Test

C-2 (bg)



n = 16

Statistical outliers are drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high and 1 low outliers.
Mean = 6.983.
Std. Dev. = 0.5095.
8.23: c = 0.6078
tabl = 0.507.
5.79 (XO): c = 0.6026
tabl = 0.507.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9733
Critical = 0.895
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: pH Analysis Run 4/28/2024 4:23 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Dixon's Outlier Test

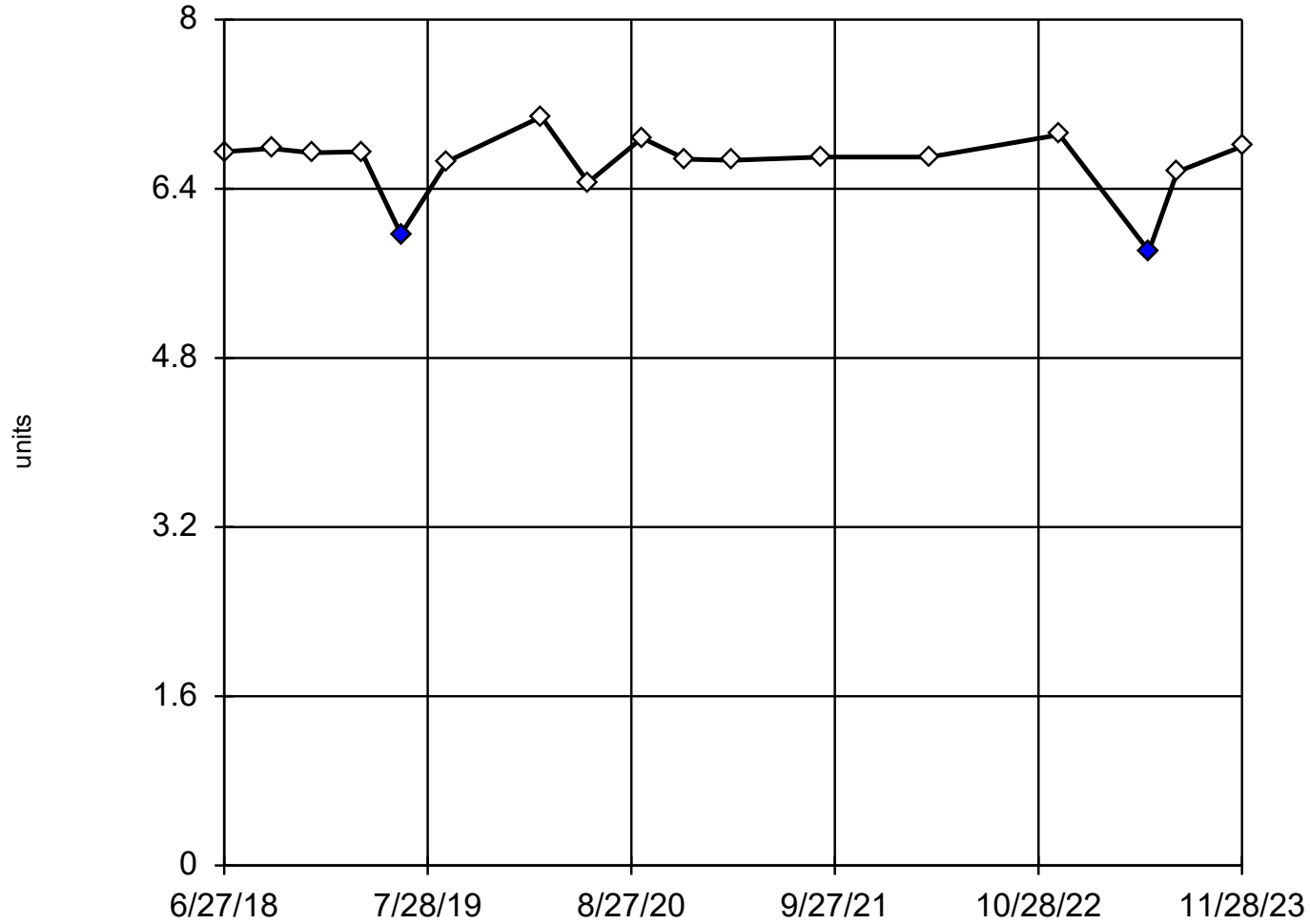
Constituent: pH Analysis Run 4/28/2024 4:24 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	C-2 (bg)
11/14/2016	6.48 (H)
3/29/2017	6.7
6/12/2017	6.77
11/27/2017	6.87
3/30/2018	8.23 (O)
6/28/2018	7.23
9/28/2018	7.19
3/21/2019	6.87
9/6/2019	6.85
3/5/2020	7.39
9/16/2020	7.04
3/10/2021	7.01 (D)
9/2/2021	7.3
3/30/2022	6.97
12/8/2022	7.13
5/31/2023	5.79 (XO)
7/25/2023	6.39

Dixon's Outlier Test

EE-1



n = 17

Statistical outliers are drawn as solid.
2 values manually flagged as outliers.
Testing for 2 low outliers.
Mean = 6.641.
Std. Dev. = 0.3153.
5.97 (O): c = 0.6484
tab1 = 0.49.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9572
Critical = 0.901
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: pH Analysis Run 4/28/2024 4:23 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Dixon's Outlier Test

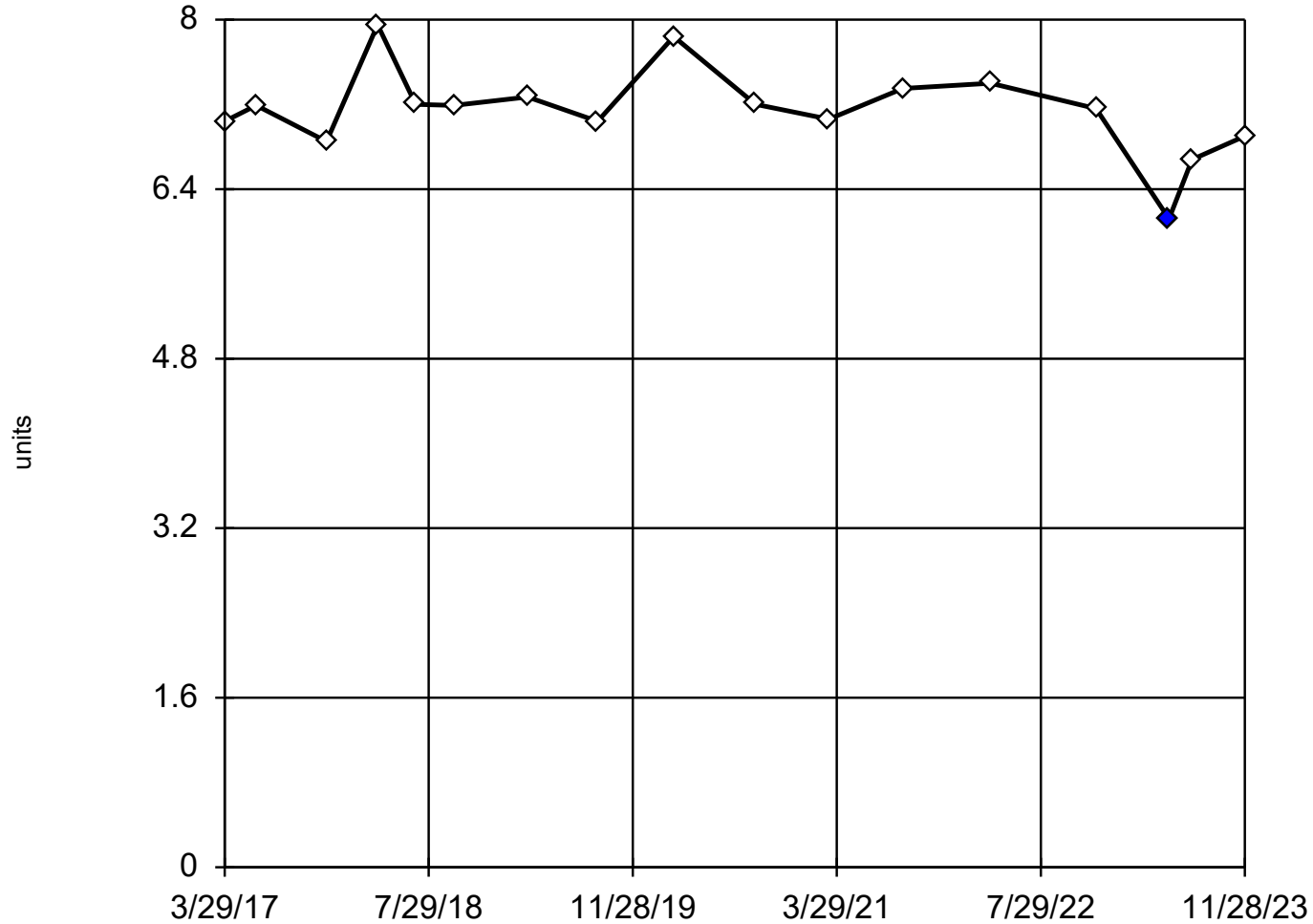
Constituent: pH Analysis Run 4/28/2024 4:24 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	EE-1
5/22/1985	6.8 (H)
8/5/1985	7 (H)
11/20/1985	6.9 (H)
2/10/1986	6.9 (H)
5/19/1986	6.9 (H)
6/12/2017	6.74 (H)
11/27/2017	6.61 (H)
3/30/2018	7.43 (H)
6/27/2018	6.75
9/27/2018	6.78
12/14/2018	6.74
3/21/2019	6.75
6/6/2019	5.97 (O)
9/5/2019	6.66
3/5/2020	7.08
6/4/2020	6.46
9/17/2020	6.88
12/11/2020	6.68
3/11/2021	6.67
9/1/2021	6.7
3/30/2022	6.7
12/8/2022	6.91
5/31/2023	5.81 (XO)
7/25/2023	6.56
11/28/2023	6.8

Dixon's Outlier Test

K-2 (bg)



n = 17

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 low outlier.
Mean = 7.144.
Std. Dev. = 0.4113.
6.12 (XO): c = 0.5703
tab1 = 0.49.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9089
Critical = 0.906
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: pH Analysis Run 4/28/2024 4:23 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Dixon's Outlier Test

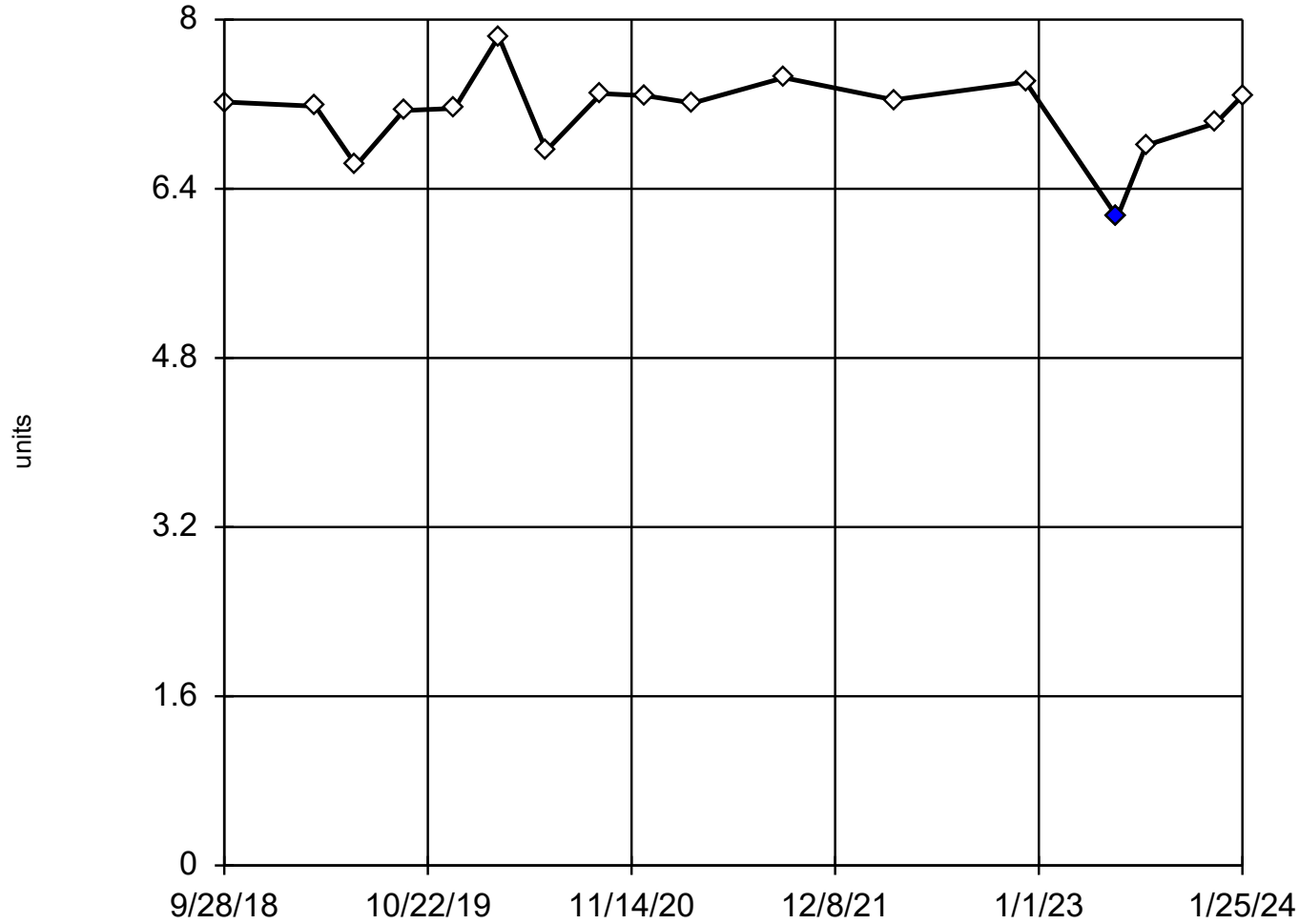
Constituent: pH Analysis Run 4/28/2024 4:24 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	K-2 (bg)
11/14/2016	6.87 (H)
3/29/2017	7.04
6/12/2017	7.19
11/27/2017	6.85
3/29/2018	7.95
6/28/2018	7.2
9/27/2018	7.19
3/22/2019	7.27
9/5/2019	7.04
3/5/2020	7.84
9/16/2020	7.2
3/10/2021	7.06
9/3/2021	7.35
3/31/2022	7.4
12/8/2022	7.16
5/31/2023	6.12 (XO)
7/25/2023	6.68
11/28/2023	6.9

Dixon's Outlier Test

MW-1 (bg)



Dixon's Outlier Test

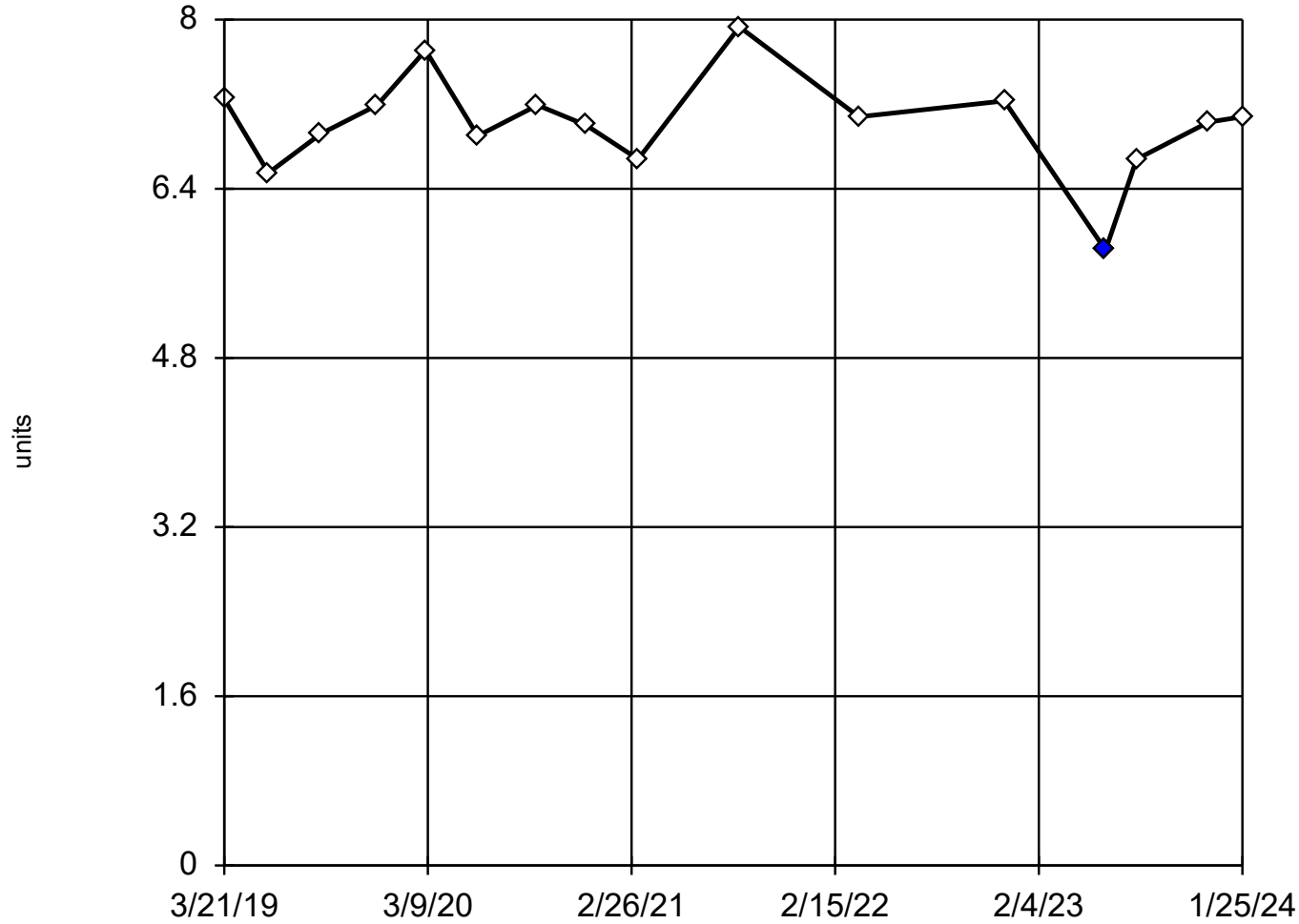
Constituent: pH Analysis Run 4/28/2024 4:24 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-1 (bg)
4/13/2018	6.73 (H)
9/28/2018	7.22
3/21/2019	7.18
6/7/2019	6.62
9/6/2019	7.14
12/12/2019	7.16
3/5/2020	7.84
6/4/2020	6.76
9/17/2020	7.3
12/11/2020	7.28
3/11/2021	7.21
9/1/2021	7.45
3/30/2022	7.24
12/7/2022	7.41
5/31/2023	6.13 (XO)
7/25/2023	6.81
12/5/2023	7.02
1/25/2024	7.28

Dixon's Outlier Test

MW-2



n = 16

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 low outlier.
Mean = 7.015.
Std. Dev. = 0.4749.
5.82 (XO): c = 0.6014
tab1 = 0.507.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.924
Critical = 0.901
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: pH Analysis Run 4/28/2024 4:23 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Dixon's Outlier Test

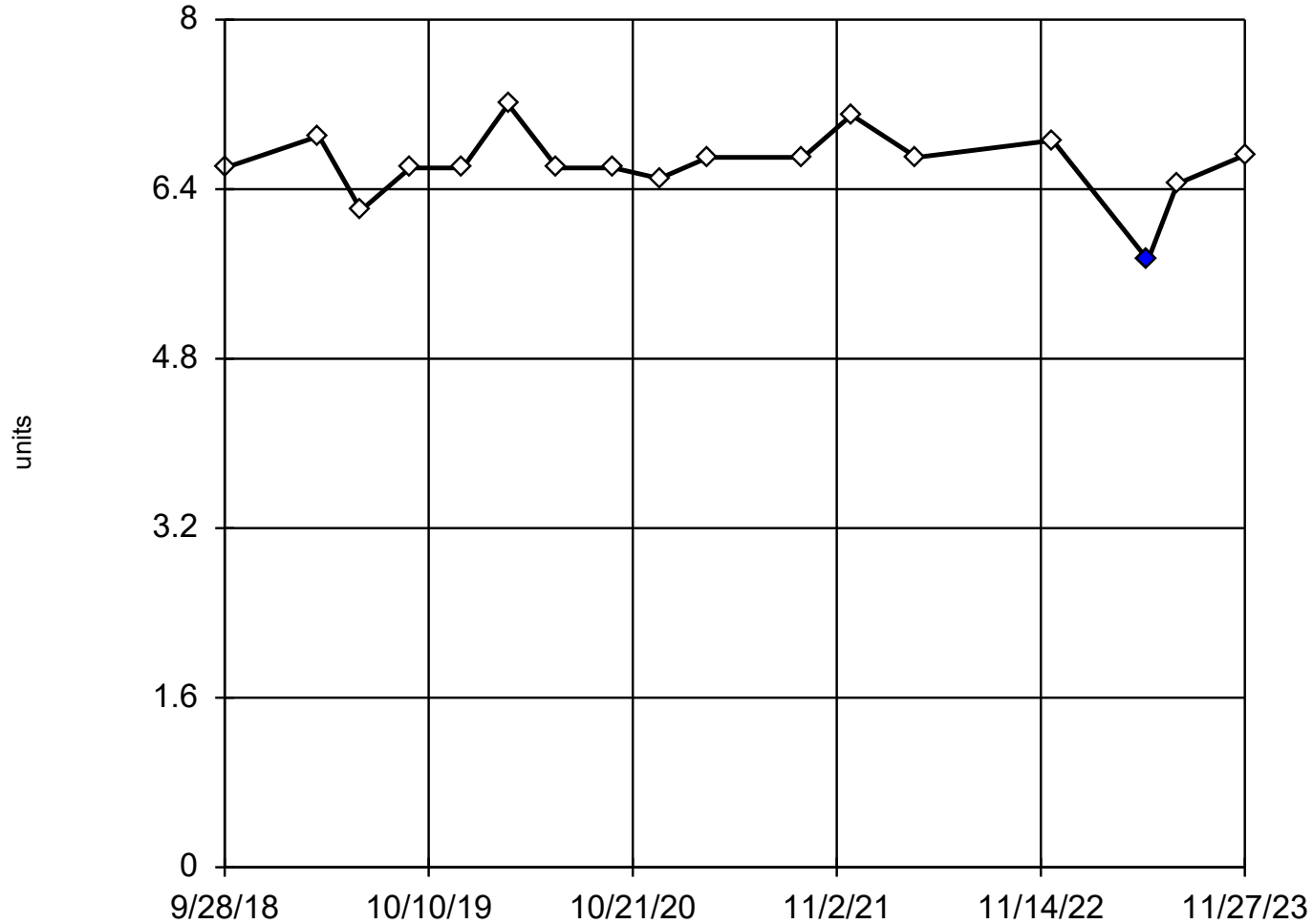
Constituent: pH Analysis Run 4/28/2024 4:24 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-2
3/29/2018	7.37 (H)
9/28/2018	7.58 (H)
3/21/2019	7.25
6/6/2019	6.55
9/5/2019	6.92
12/12/2019	7.19
3/5/2020	7.71
6/4/2020	6.9
9/16/2020	7.19
12/10/2020	7
3/10/2021	6.68
9/2/2021	7.93 (D)
3/29/2022	7.08
12/7/2022	7.23
6/1/2023	5.82 (XO)
7/25/2023	6.68
11/27/2023	7.03
1/25/2024	7.08

Dixon's Outlier Test

MW-3



n = 17

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 low outlier.
Mean = 6.633.
Std. Dev. = 0.3301.
5.73 (XO): c = 0.6154
tab1 = 0.49.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9363
Critical = 0.906
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: pH Analysis Run 4/28/2024 4:23 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Dixon's Outlier Test

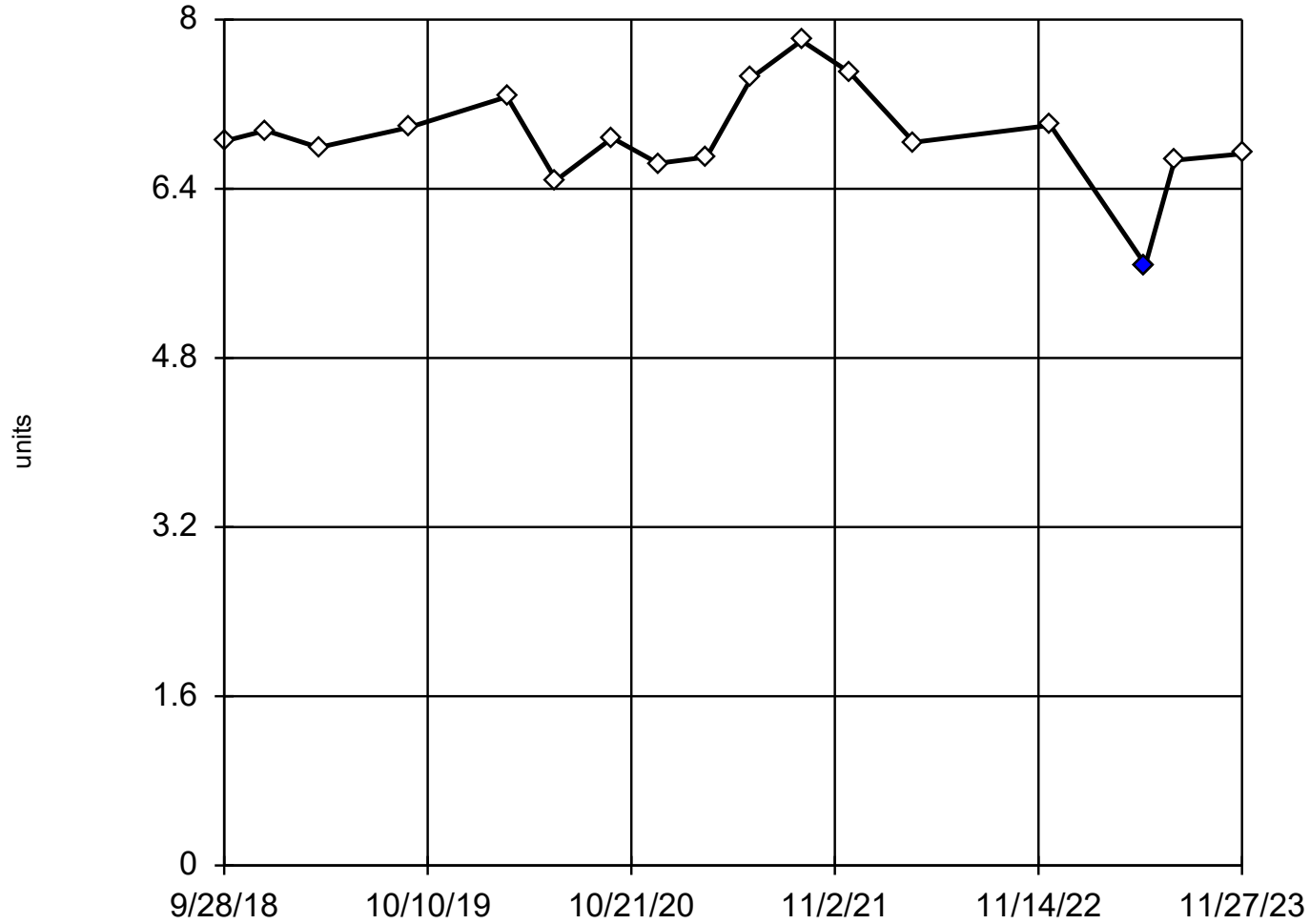
Constituent: pH Analysis Run 4/28/2024 4:24 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-3
3/30/2018	6.9 (H)
6/28/2018	6.2 (H)
9/28/2018	6.6
3/21/2019	6.9
6/7/2019	6.2
9/6/2019	6.6
12/12/2019	6.6
3/5/2020	7.2
6/4/2020	6.6
9/16/2020	6.6
12/10/2020	6.5
3/10/2021	6.7
9/1/2021	6.7
11/30/2021	7.1
3/30/2022	6.7
12/7/2022	6.86
6/1/2023	5.73 (XO)
7/25/2023	6.45
11/27/2023	6.72

Dixon's Outlier Test

R-1



n = 17

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 low outlier.
Mean = 6.895.
Std. Dev. = 0.4677.
1.737 (XO): c = 0.5757
tab1 = 0.49.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9168
Critical = 0.906 (after natural log transformation)
The distribution, after removal of suspect value, was found to be log-normal.

Constituent: pH Analysis Run 4/28/2024 4:23 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Dixon's Outlier Test

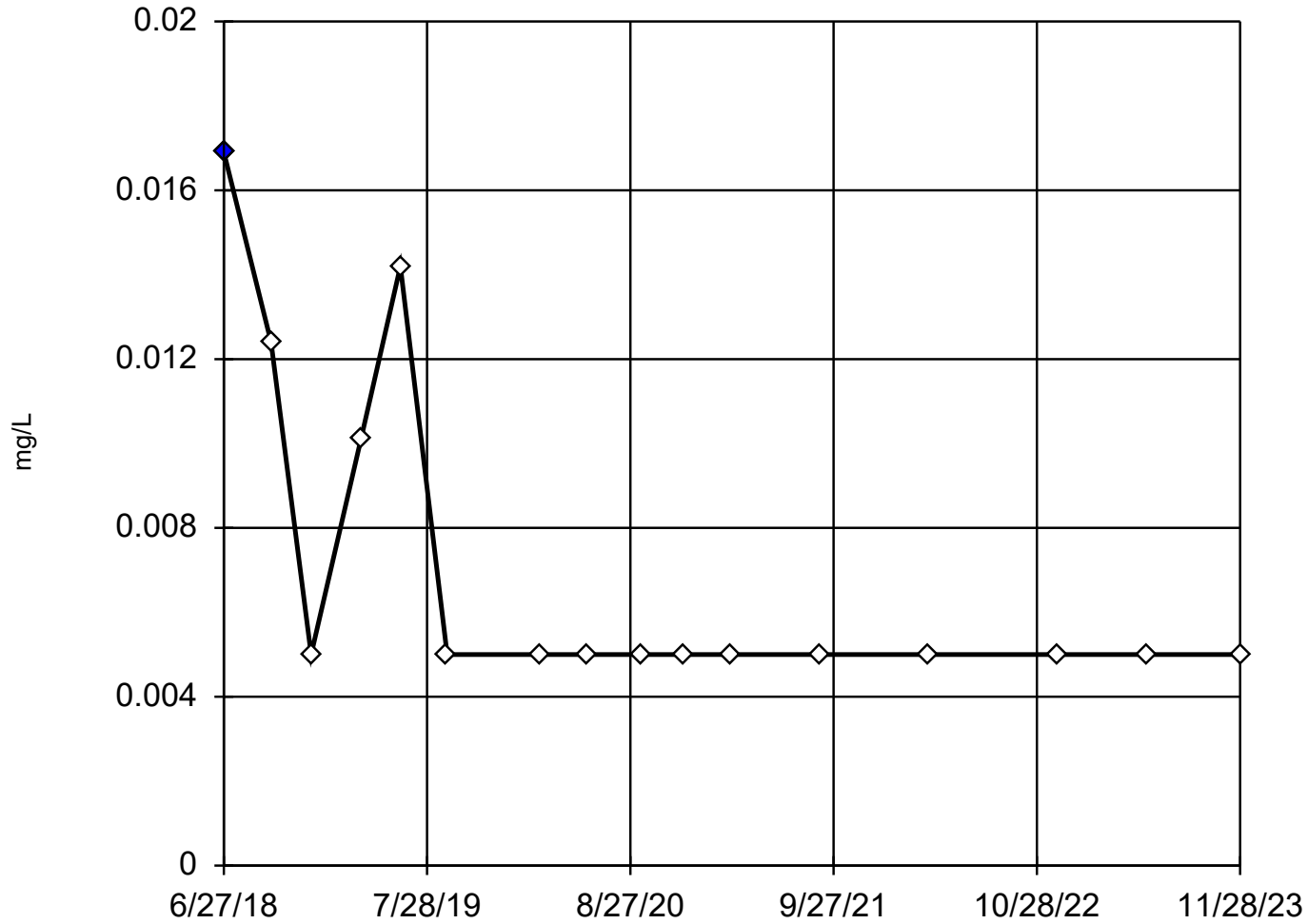
Constituent: pH Analysis Run 4/28/2024 4:24 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	R-1
5/20/1985	6.9 (H)
11/4/1985	7 (H)
2/12/1986	7 (H)
5/12/1986	7 (H)
11/14/2016	6.38 (H)
3/29/2017	6.62 (H)
6/12/2017	6.79 (H)
11/27/2017	6.73 (H)
3/29/2018	6.71 (H)
6/28/2018	6.49 (H)
9/28/2018	6.85
12/14/2018	6.95
3/22/2019	6.79
9/5/2019	6.98
3/5/2020	7.27
6/4/2020	6.48
9/16/2020	6.88
12/10/2020	6.64
3/10/2021	6.7
6/1/2021	7.45
9/2/2021	7.8
11/30/2021	7.5
3/29/2022	6.84
12/7/2022	7
6/1/2023	5.68 (XO)
7/25/2023	6.67
11/27/2023	6.73

Tukey's Outlier Screening

EE-1



n = 16

Outlier is 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.

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

High cutoff = 0.0152, low cutoff = -0.00265, based on IQR multiplier of 3.

Constituent: Selenium Analysis Run 4/28/2024 4:23 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Tukey's Outlier Screening

Constituent: Selenium (mg/L) Analysis Run 4/28/2024 4:24 PM

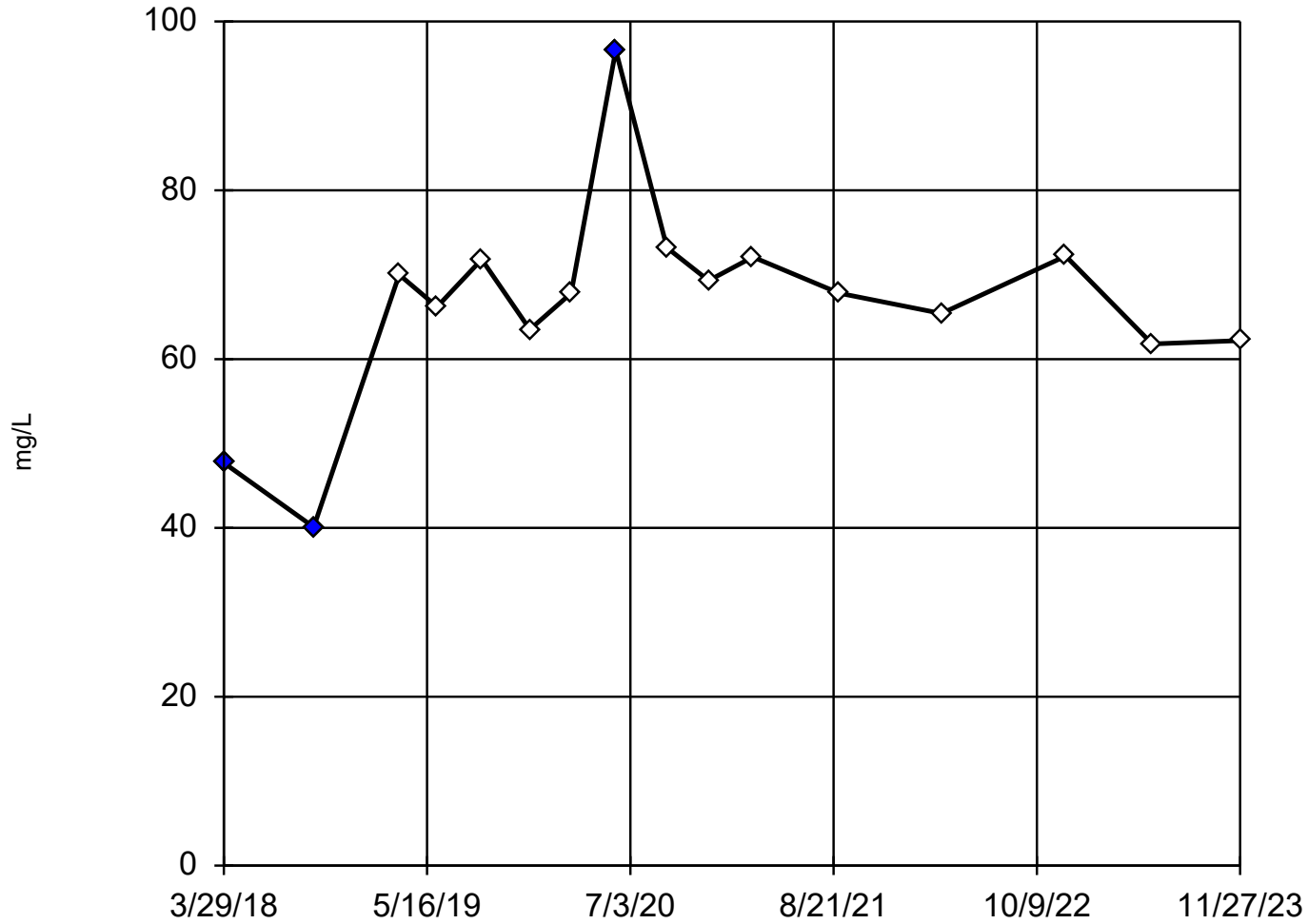
Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

EE-1

5/22/1985	<0.01 (H)
8/5/1985	<0.01 (H)
11/20/1985	<0.01 (H)
12/24/1985	<0.02 (H)
2/10/1986	<0.01 (H)
3/12/2015	<0.05 (H)
3/29/2016	<0.05 (H)
6/1/2016	<0.05 (H)
7/21/2016	<0.01 (H)
6/12/2017	<0.01 (H)
11/27/2017	<0.01 (H)
3/30/2018	0.0205 (H)
6/27/2018	0.0169 (O)
9/27/2018	0.0124
12/14/2018	<0.01
3/21/2019	0.0101
6/6/2019	0.0142
9/5/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/17/2020	<0.01
12/11/2020	<0.01
3/11/2021	<0.01
9/1/2021	<0.01
3/30/2022	<0.01
12/8/2022	<0.01
5/31/2023	<0.01
11/28/2023	<0.01

Dixon's Outlier Test

MW-2



n = 16

Statistical outliers are drawn as solid.
3 values manually flagged as outliers.
Testing for 1 high and 2 low outliers.
Mean = 66.73.
Std. Dev. = 12.02.
73.2: c = 0.7093
tabl = 0.507.
47.7 (O): c = 0.5918
tabl = 0.507.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9326
Critical = 0.889
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Sulfate Dissolved Analysis Run 4/28/2024 4:23 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Dixon's Outlier Test

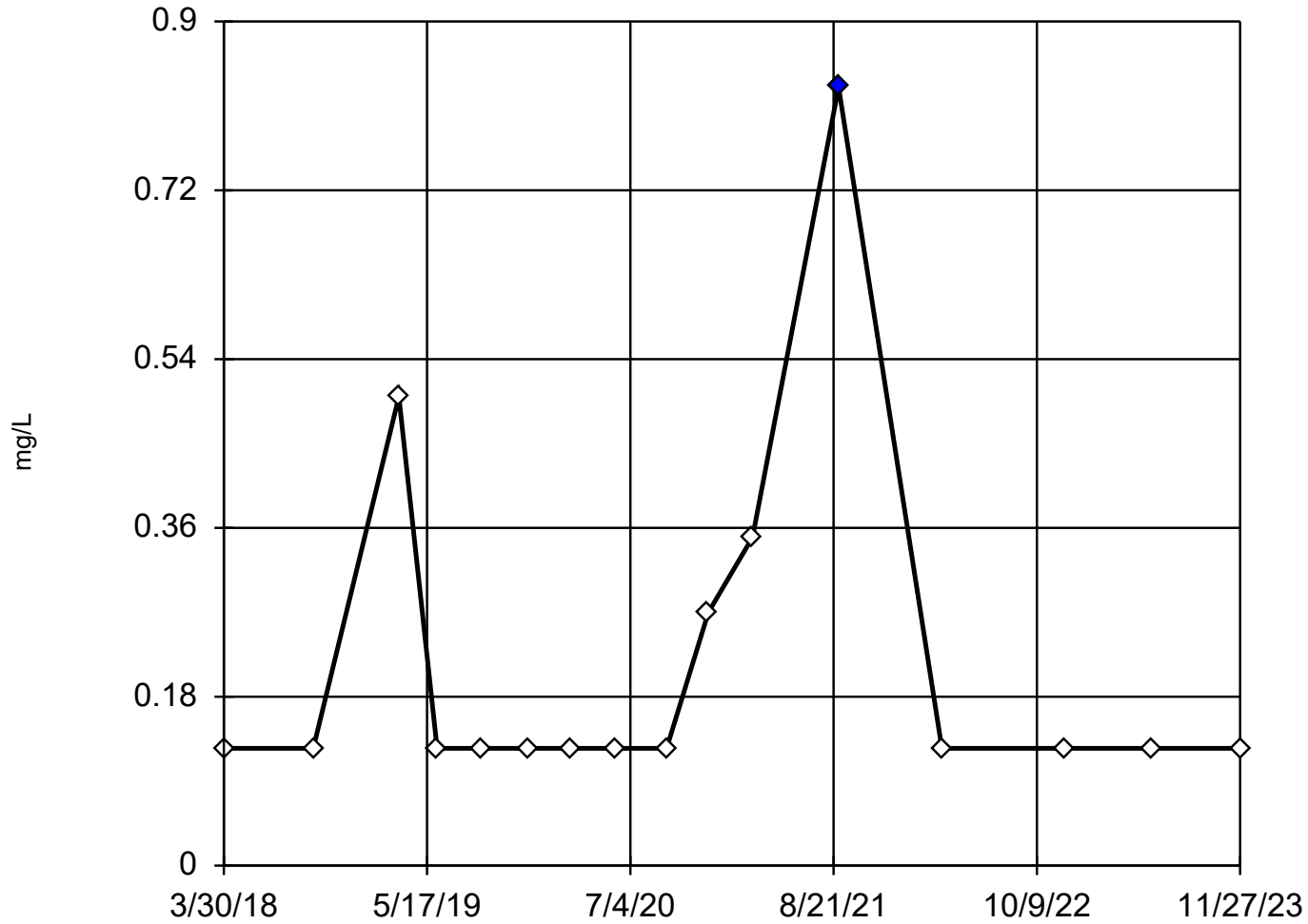
Constituent: Sulfate Dissolved (mg/L) Analysis Run 4/28/2024 4:24 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-2
3/29/2018	47.7 (O)
9/28/2018	40.1 (O)
3/21/2019	70
6/6/2019	66.2
9/5/2019	71.8
12/12/2019	63.5
3/5/2020	67.8
6/4/2020	96.6 (O)
9/16/2020	73.2
12/10/2020	69.3
3/10/2021	72.1
9/2/2021	67.8 (D)
3/29/2022	65.4
12/7/2022	72.2
6/1/2023	61.8
11/27/2023	62.2

Tukey's Outlier Screening

MW-3



n = 16

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

High cutoff = 0.5832, low cutoff = 0.03938, based on IQR multiplier of 3.

Constituent: Sulfate Dissolved Analysis Run 4/28/2024 4:23 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Tukey's Outlier Screening

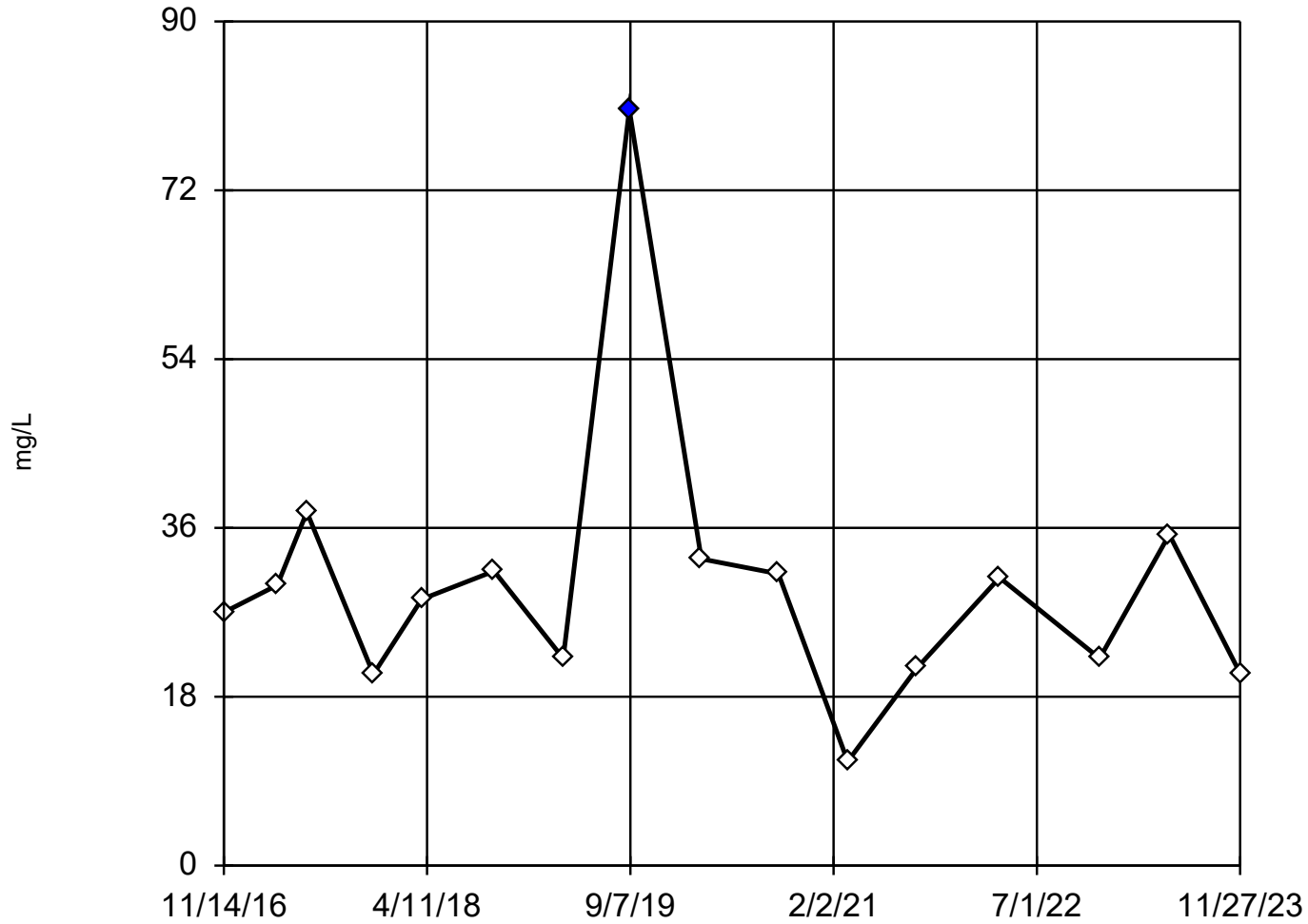
Constituent: Sulfate Dissolved (mg/L) Analysis Run 4/28/2024 4:24 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-3
3/30/2018	<0.25
9/28/2018	<0.25
3/21/2019	<1
6/7/2019	<0.25
9/6/2019	<0.25
12/12/2019	<0.25
3/5/2020	<0.25
6/4/2020	<0.25
9/16/2020	<0.25
12/10/2020	0.27 (S)
3/10/2021	0.35 (S)
9/1/2021	0.83 (SO)
3/30/2022	<0.25
12/7/2022	<0.25
6/1/2023	<0.25
11/27/2023	<0.25

Dixon's Outlier Test

R-1



n = 16

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high and 1 low outliers.
Mean = 30.13.
Std. Dev. = 15.09.
80.6 (O): c = 0.7537
tab1 = 0.507.
11.1: c = 0.3884
tab1 = 0.507.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9171
Critical = 0.895
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Sulfate Dissolved Analysis Run 4/28/2024 4:23 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Dixon's Outlier Test

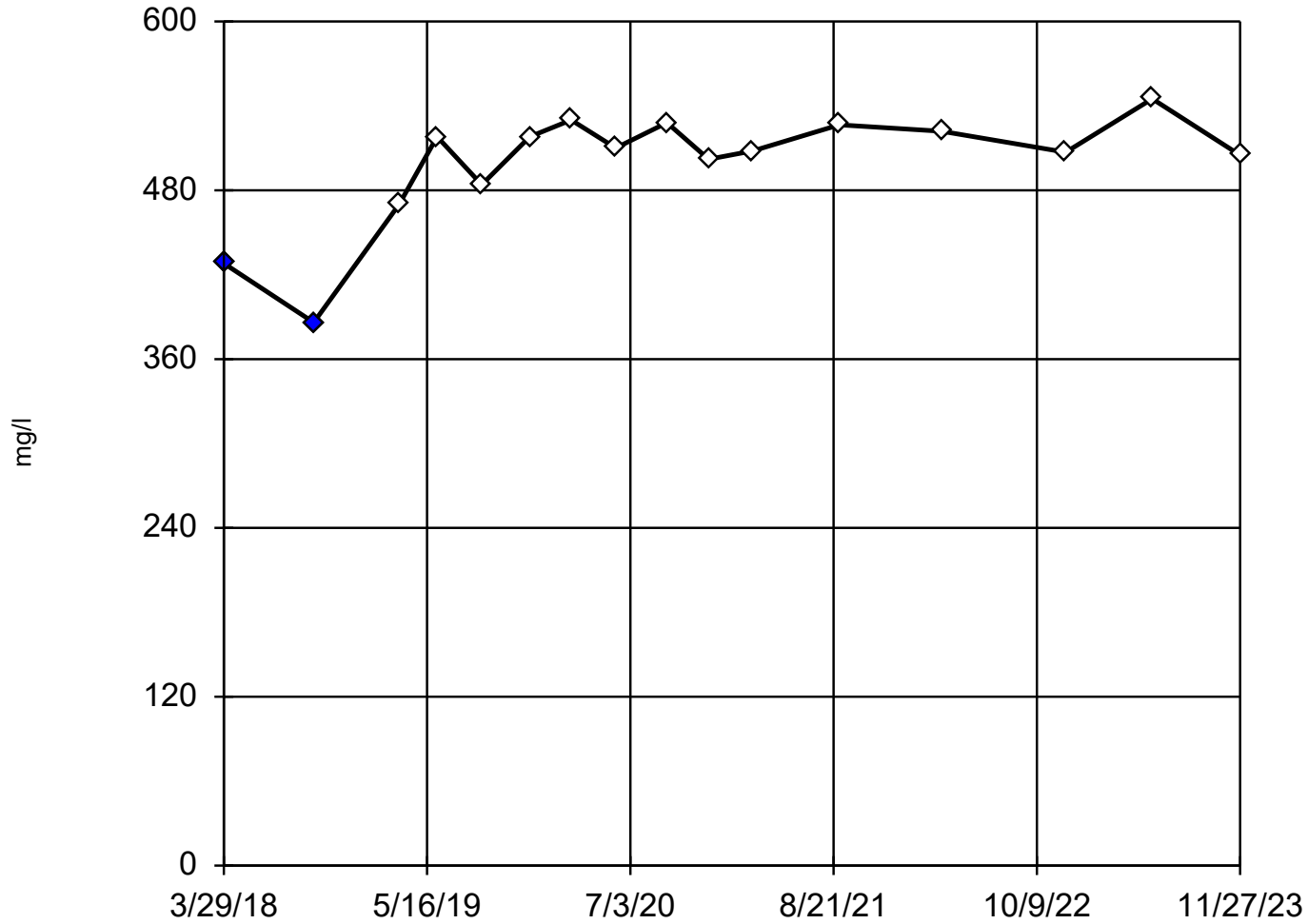
Constituent: Sulfate Dissolved (mg/L) Analysis Run 4/28/2024 4:24 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	R-1
2/12/1986	83 (H)
5/12/1986	90 (H)
11/14/2016	27
3/29/2017	29.9
6/12/2017	37.7
11/27/2017	20.4
3/29/2018	28.4
9/28/2018	31.4
3/22/2019	22.1
9/5/2019	80.6 (O)
3/5/2020	32.7
9/16/2020	31.1
3/10/2021	11.1
9/2/2021	21.1
3/29/2022	30.7
12/7/2022	22.1
6/1/2023	35.3
11/27/2023	20.5

Dixon's Outlier Test

MW-2



n = 16

Statistical outliers are drawn as solid.
2 values manually flagged as outliers.
Testing for 2 low outliers.
Mean = 499.2.
Std. Dev. = 40.92.
428 (O): c = 0.56
tab1 = 0.507.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9565
Critical = 0.895
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: TDS Analysis Run 4/28/2024 4:23 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Dixon's Outlier Test

Constituent: TDS (mg/l) Analysis Run 4/28/2024 4:24 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-2
3/29/2018	428 (O)
9/28/2018	386 (O)
3/21/2019	470
6/6/2019	518
9/5/2019	484
12/12/2019	518
3/5/2020	530
6/4/2020	510
9/16/2020	528
12/10/2020	502
3/10/2021	508
9/2/2021	526.5 (D)
3/29/2022	522
12/7/2022	507
6/1/2023	545
11/27/2023	505

Outlier Analysis

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24 Printed 4/28/2024, 4:24 PM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Ammonia Dissolved (mg/L)	C-2 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.0675	0.03941	unknown	ShapiroWilk
Ammonia Dissolved (mg/L)	EE-1	No	n/a	n/a	EPA 1989	0.05	16	41.53	8.94	normal	ShapiroWilk
Ammonia Dissolved (mg/L)	K-2 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.1469	0.336	unknown	ShapiroWilk
Ammonia Dissolved (mg/L)	MW-1 (bg)	No	n/a	n/a	EPA 1989	0.05	16	0.3388	0.01996	normal	ShapiroWilk
Ammonia Dissolved (mg/L)	MW-2	Yes	0.05	9/28/2018	Dixon`s	0.05	15	0.1737	0.0449	normal	ShapiroWilk
Ammonia Dissolved (mg/L)	MW-3	Yes	63.6,0.05	12/10/202...	Dixon`s	0.05	15	47.06	13.72	normal	ShapiroWilk
Ammonia Dissolved (mg/L)	R-1	Yes	6.87	7/20/2016	Dixon`s	0.05	16	11.79	1.923	normal	ShapiroWilk
Arsenic (mg/l)	C-2 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Arsenic (mg/l)	EE-1	Yes	0.005	1/7/2020	Dixon`s	0.05	16	0.04328	0.01387	normal	ShapiroWilk
Arsenic (mg/l)	K-2 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Arsenic (mg/l)	MW-1 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Arsenic (mg/l)	MW-2	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Arsenic (mg/l)	MW-3	Yes	0.005,0.0...	3/30/2018...	NP (nrm)	NaN	17	0.02039	0.0136	unknown	ShapiroWilk
Arsenic (mg/l)	R-1	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Barium (mg/l)	C-2 (bg)	Yes	0.616	3/30/2022	NP (nrm)	NaN	16	0.09191	0.14	unknown	ShapiroWilk
Barium (mg/l)	EE-1	No	n/a	n/a	EPA 1989	0.05	16	0.4928	0.06667	normal	ShapiroWilk
Barium (mg/l)	K-2 (bg)	No	n/a	n/a	EPA 1989	0.05	16	0.09125	0.03294	normal	ShapiroWilk
Barium (mg/l)	MW-1 (bg)	No	n/a	n/a	NP (nrm)	NaN	16	0.3519	0.0101	unknown	ShapiroWilk
Barium (mg/l)	MW-2	No	n/a	n/a	NP (nrm)	NaN	17	0.2275	0.06267	unknown	ShapiroWilk
Barium (mg/l)	MW-3	No	n/a	n/a	EPA 1989	0.05	16	0.6527	0.1029	normal	ShapiroWilk
Barium (mg/l)	R-1	Yes	0.975	11/30/2021	Dixon`s	0.05	18	0.6829	0.09973	normal	ShapiroWilk
Cadmium (mg/L)	C-2 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.002406	0.000375	unknown	ShapiroWilk
Cadmium (mg/L)	EE-1	n/a	n/a	n/a	NP (nrm)	NaN	16	0.00125	0.0005477	unknown	ShapiroWilk
Cadmium (mg/L)	K-2 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.002312	0.0005123	unknown	ShapiroWilk
Cadmium (mg/L)	MW-1 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.002312	0.0005123	unknown	ShapiroWilk
Cadmium (mg/L)	MW-2	n/a	n/a	n/a	NP (nrm)	NaN	16	0.002312	0.0005123	unknown	ShapiroWilk
Cadmium (mg/L)	MW-3	n/a	n/a	n/a	NP (nrm)	NaN	16	0.002312	0.0005123	unknown	ShapiroWilk
Cadmium (mg/L)	R-1	n/a	n/a	n/a	NP (nrm)	NaN	16	0.002312	0.0005123	unknown	ShapiroWilk
Calcium (mg/l)	C-2 (bg)	No	n/a	n/a	EPA 1989	0.05	15	95.51	13.89	normal	ShapiroWilk
Calcium (mg/l)	EE-1	No	n/a	n/a	EPA 1989	0.05	16	120	18.31	normal	ShapiroWilk
Calcium (mg/l)	K-2 (bg)	No	n/a	n/a	EPA 1989	0.05	16	95.44	23.81	normal	ShapiroWilk
Calcium (mg/l)	MW-1 (bg)	No	n/a	n/a	EPA 1989	0.05	16	98.84	3.493	normal	ShapiroWilk
Calcium (mg/l)	MW-2	No	n/a	n/a	NP (nrm)	NaN	16	110.9	15.12	unknown	ShapiroWilk
Calcium (mg/l)	MW-3	No	n/a	n/a	EPA 1989	0.05	16	101.7	13.22	normal	ShapiroWilk
Calcium (mg/l)	R-1	Yes	93.2	9/16/2020	Dixon`s	0.05	16	135.6	12.04	normal	ShapiroWilk
Chloride Dissolved (mg/L)	C-2 (bg)	No	n/a	n/a	EPA 1989	0.05	16	32.13	7.713	normal	ShapiroWilk
Chloride Dissolved (mg/L)	EE-1	No	n/a	n/a	EPA 1989	0.05	16	216.1	30.61	normal	ShapiroWilk
Chloride Dissolved (mg/L)	K-2 (bg)	No	n/a	n/a	EPA 1989	0.05	16	203.6	80.92	normal	ShapiroWilk
Chloride Dissolved (mg/L)	MW-1 (bg)	No	n/a	n/a	EPA 1989	0.05	16	25.39	3.25	normal	ShapiroWilk
Chloride Dissolved (mg/L)	MW-2	Yes	45.1	9/28/2018	Dixon`s	0.05	16	32.37	4.073	normal	ShapiroWilk
Chloride Dissolved (mg/L)	MW-3	Yes	250	12/10/2020	Dixon`s	0.05	16	183.1	24.49	normal	ShapiroWilk
Chloride Dissolved (mg/L)	R-1	No	n/a	n/a	EPA 1989	0.05	16	179.2	13.45	normal	ShapiroWilk
Chromium (mg/L)	C-2 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Chromium (mg/L)	EE-1	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Chromium (mg/L)	K-2 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Chromium (mg/L)	MW-1 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Chromium (mg/L)	MW-2	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Chromium (mg/L)	MW-3	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Chromium (mg/L)	R-1	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Cobalt (mg/L)	C-2 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.004844	0.000625	unknown	ShapiroWilk

Outlier Analysis

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24 Printed 4/28/2024, 4:24 PM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Cobalt (mg/L)	EE-1	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Cobalt (mg/L)	K-2 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Cobalt (mg/L)	MW-1 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Cobalt (mg/L)	MW-2	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Cobalt (mg/L)	MW-3	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Cobalt (mg/L)	R-1	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Iron (mg/L)	C-2 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	14	0.05586	0.02192	unknown	ShapiroWilk
Iron (mg/L)	EE-1	Yes	2.93,0.823	6/12/2017...	Dixon's	0.05	16	13.88	4.975	normal	ShapiroWilk
Iron (mg/L)	K-2 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	6	0.05	0	unknown	ShapiroWilk
Iron (mg/L)	MW-1 (bg)	Yes	0.05	4/13/2018	Dixon's	0.05	16	2.581	0.686	normal	ShapiroWilk
Iron (mg/L)	MW-2	No	n/a	n/a	Dixon's	0.05	15	2.245	1.246	normal	ShapiroWilk
Iron (mg/L)	MW-3	No	n/a	n/a	EPA 1989	0.05	15	12.23	2.72	normal	ShapiroWilk
Iron (mg/L)	R-1	Yes	6.14,0.52...	3/29/2017...	Dixon's	0.05	16	6.516	2.926	normal	ShapiroWilk
Lead (mg/L)	C-2 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.004844	0.000625	unknown	ShapiroWilk
Lead (mg/L)	EE-1	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005312	0.00125	unknown	ShapiroWilk
Lead (mg/L)	K-2 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Lead (mg/L)	MW-1 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Lead (mg/L)	MW-2	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Lead (mg/L)	MW-3	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Lead (mg/L)	R-1	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Magnesium (mg/L)	C-2 (bg)	No	n/a	n/a	EPA 1989	0.05	15	24.38	4.005	normal	ShapiroWilk
Magnesium (mg/L)	EE-1	No	n/a	n/a	EPA 1989	0.05	16	57.01	8.144	normal	ShapiroWilk
Magnesium (mg/L)	K-2 (bg)	No	n/a	n/a	EPA 1989	0.05	16	26.37	6.933	normal	ShapiroWilk
Magnesium (mg/L)	MW-1 (bg)	No	n/a	n/a	EPA 1989	0.05	17	36.78	1.16	normal	ShapiroWilk
Magnesium (mg/L)	MW-2	No	n/a	n/a	EPA 1989	0.05	16	41.18	1.235	normal	ShapiroWilk
Magnesium (mg/L)	MW-3	No	n/a	n/a	EPA 1989	0.05	16	36.43	5.946	normal	ShapiroWilk
Magnesium (mg/L)	R-1	No	n/a	n/a	EPA 1989	0.05	16	55.04	1.786	normal	ShapiroWilk
Manganese (mg/L)	C-2 (bg)	No	n/a	n/a	Dixon's	0.05	15	0.1906	0.09926	normal	ShapiroWilk
Manganese (mg/L)	EE-1	No	n/a	n/a	NP (nrm)	NaN	16	0.06476	0.01344	unknown	ShapiroWilk
Manganese (mg/L)	K-2 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.01719	0.04875	unknown	ShapiroWilk
Manganese (mg/L)	MW-1 (bg)	Yes	0.0452	9/1/2021	Dixon's	0.05	16	0.03743	0.002593	normal	ShapiroWilk
Manganese (mg/L)	MW-2	Yes	0.039,0.014	9/28/2018...	Dixon's	0.05	16	0.09256	0.03106	normal	ShapiroWilk
Manganese (mg/L)	MW-3	No	n/a	n/a	EPA 1989	0.05	16	0.03819	0.007104	normal	ShapiroWilk
Manganese (mg/L)	R-1	No	n/a	n/a	Dixon's	0.05	16	0.1714	0.05274	normal	ShapiroWilk
Mercury (mg/L)	C-2 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.001	0	unknown	ShapiroWilk
Mercury (mg/L)	EE-1	n/a	n/a	n/a	NP (nrm)	NaN	16	0.001	0	unknown	ShapiroWilk
Mercury (mg/L)	K-2 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.001	0	unknown	ShapiroWilk
Mercury (mg/L)	MW-1 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.001	0	unknown	ShapiroWilk
Mercury (mg/L)	MW-2	n/a	n/a	n/a	NP (nrm)	NaN	16	0.001	0	unknown	ShapiroWilk
Mercury (mg/L)	MW-3	n/a	n/a	n/a	NP (nrm)	NaN	16	0.001	0	unknown	ShapiroWilk
Mercury (mg/L)	R-1	n/a	n/a	n/a	NP (nrm)	NaN	16	0.001	0	unknown	ShapiroWilk
Nickel (mg/L)	C-2 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Nickel (mg/L)	EE-1	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Nickel (mg/L)	K-2 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Nickel (mg/L)	MW-1 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Nickel (mg/L)	MW-2	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Nickel (mg/L)	MW-3	No	n/a	n/a	NP (nrm)	NaN	16	0.008	0.003633	unknown	ShapiroWilk
Nickel (mg/L)	R-1	No	n/a	n/a	EPA 1989	0.05	16	0.02256	0.002257	normal	ShapiroWilk
pH (units)	C-2 (bg)	Yes	8.23,5.79	3/30/2018...	Dixon's	0.05	16	6.983	0.5095	normal	ShapiroWilk
pH (units)	EE-1	Yes	5.97,5.81	6/6/2019,...	Dixon's	0.05	17	6.641	0.3153	normal	ShapiroWilk

Outlier Analysis

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24 Printed 4/28/2024, 4:24 PM

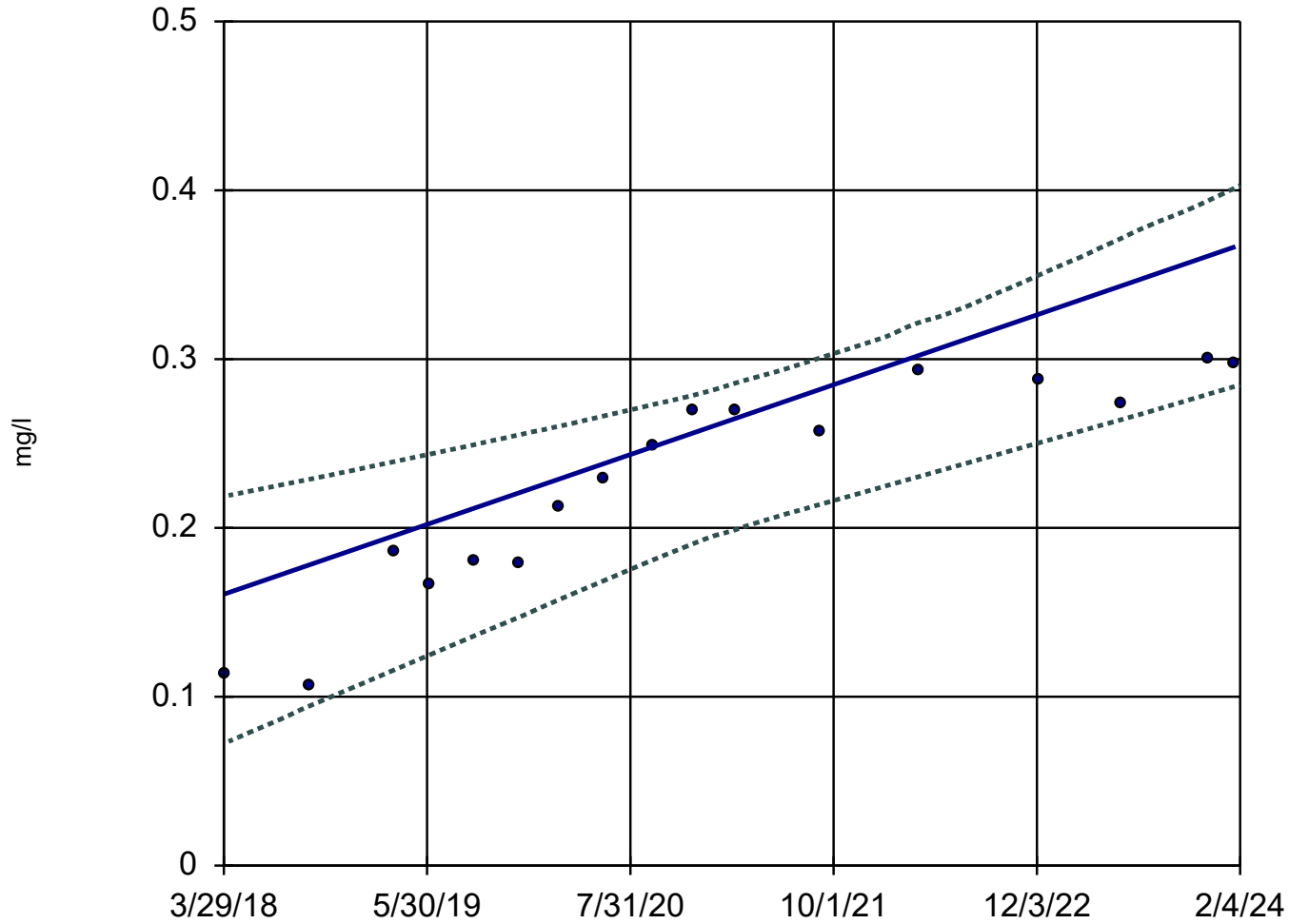
Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
pH (units)	K-2 (bg)	Yes	6.12	5/31/2023	Dixon`s	0.05	17	7.144	0.4113	normal	ShapiroWilk
pH (units)	MW-1 (bg)	Yes	6.13	5/31/2023	Dixon`s	0.05	17	7.121	0.3791	normal	ShapiroWilk
pH (units)	MW-2	Yes	5.82	6/1/2023	Dixon`s	0.05	16	7.015	0.4749	normal	ShapiroWilk
pH (units)	MW-3	Yes	5.73	6/1/2023	Dixon`s	0.05	17	6.633	0.3301	normal	ShapiroWilk
pH (units)	R-1	Yes	5.68	6/1/2023	Dixon`s	0.05	17	6.895	0.4677	ln(x)	ShapiroWilk
Selenium (mg/L)	C-2 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Selenium (mg/L)	EE-1	Yes	0.0169	6/27/2018	NP (nrm)	NaN	16	0.0071	0.00397	unknown	ShapiroWilk
Selenium (mg/L)	K-2 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Selenium (mg/L)	MW-1 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Selenium (mg/L)	MW-2	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005706	0.002825	unknown	ShapiroWilk
Selenium (mg/L)	MW-3	No	n/a	n/a	NP (nrm)	NaN	16	0.007231	0.00412	unknown	ShapiroWilk
Selenium (mg/L)	R-1	n/a	n/a	n/a	NP (nrm)	NaN	16	0.006206	0.003435	unknown	ShapiroWilk
Silver (mg/L)	C-2 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.004844	0.000625	unknown	ShapiroWilk
Silver (mg/L)	EE-1	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Silver (mg/L)	K-2 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Silver (mg/L)	MW-1 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Silver (mg/L)	MW-2	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Silver (mg/L)	MW-3	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Silver (mg/L)	R-1	n/a	n/a	n/a	NP (nrm)	NaN	16	0.005	0	unknown	ShapiroWilk
Sodium (mg/L)	C-2 (bg)	No	n/a	n/a	EPA 1989	0.05	15	22.8	2.534	normal	ShapiroWilk
Sodium (mg/L)	EE-1	No	n/a	n/a	EPA 1989	0.05	16	124.3	19.87	normal	ShapiroWilk
Sodium (mg/L)	K-2 (bg)	No	n/a	n/a	EPA 1989	0.05	16	124.3	34.85	normal	ShapiroWilk
Sodium (mg/L)	MW-1 (bg)	No	n/a	n/a	EPA 1989	0.05	16	8.935	0.9325	normal	ShapiroWilk
Sodium (mg/L)	MW-2	No	n/a	n/a	EPA 1989	0.05	16	9.284	2.241	ln(x)	ShapiroWilk
Sodium (mg/L)	MW-3	No	n/a	n/a	EPA 1989	0.05	16	113.9	13.66	normal	ShapiroWilk
Sodium (mg/L)	R-1	No	n/a	n/a	EPA 1989	0.05	16	79.38	4.983	normal	ShapiroWilk
Sulfate Dissolved (mg/L)	C-2 (bg)	No	n/a	n/a	EPA 1989	0.05	16	20.19	6.238	normal	ShapiroWilk
Sulfate Dissolved (mg/L)	EE-1	No	n/a	n/a	NP (nrm)	NaN	16	1.56	2.734	unknown	ShapiroWilk
Sulfate Dissolved (mg/L)	K-2 (bg)	No	n/a	n/a	EPA 1989	0.05	16	32.76	18.68	ln(x)	ShapiroWilk
Sulfate Dissolved (mg/L)	MW-1 (bg)	No	n/a	n/a	EPA 1989	0.05	16	59.41	5.924	normal	ShapiroWilk
Sulfate Dissolved (mg/L)	MW-2	Yes	96.6,47.7...	6/4/2020,...	Dixon`s	0.05	16	66.73	12.02	normal	ShapiroWilk
Sulfate Dissolved (mg/L)	MW-3	Yes	0.83	9/1/2021	NP (nrm)	NaN	16	0.2156	0.1963	unknown	ShapiroWilk
Sulfate Dissolved (mg/L)	R-1	Yes	80.6	9/5/2019	Dixon`s	0.05	16	30.13	15.09	normal	ShapiroWilk
TDS (mg/l)	C-2 (bg)	No	n/a	n/a	EPA 1989	0.05	16	395.7	52.63	normal	ShapiroWilk
TDS (mg/l)	EE-1	No	n/a	n/a	EPA 1989	0.05	16	898.2	126.7	normal	ShapiroWilk
TDS (mg/l)	K-2 (bg)	No	n/a	n/a	EPA 1989	0.05	16	661.8	176.9	normal	ShapiroWilk
TDS (mg/l)	MW-1 (bg)	No	n/a	n/a	EPA 1989	0.05	16	433.3	21.08	normal	ShapiroWilk
TDS (mg/l)	MW-2	Yes	428,386	3/29/2018...	Dixon`s	0.05	16	499.2	40.92	normal	ShapiroWilk
TDS (mg/l)	MW-3	No	n/a	n/a	NP (nrm)	NaN	16	764.3	93.07	unknown	ShapiroWilk
TDS (mg/l)	R-1	No	n/a	n/a	EPA 1989	0.05	16	828.3	31.44	normal	ShapiroWilk
Zinc (mg/L)	C-2 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	14	0.008929	0.002129	unknown	ShapiroWilk
Zinc (mg/L)	EE-1	n/a	n/a	n/a	NP (nrm)	NaN	16	0.01	0.003162	unknown	ShapiroWilk
Zinc (mg/L)	K-2 (bg)	No	n/a	n/a	NP (nrm)	NaN	16	0.00875	0.002236	unknown	ShapiroWilk
Zinc (mg/L)	MW-1 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	15	0.01	0	unknown	ShapiroWilk
Zinc (mg/L)	MW-2	n/a	n/a	n/a	NP (nrm)	NaN	16	0.01	0	unknown	ShapiroWilk
Zinc (mg/L)	MW-3	n/a	n/a	n/a	NP (nrm)	NaN	16	0.01	0	unknown	ShapiroWilk
Zinc (mg/L)	R-1	n/a	n/a	n/a	NP (nrm)	NaN	16	0.009375	0.001708	unknown	ShapiroWilk

Attachment 3

Trend Test Results

Sen's Slope and 95% Confidence Band

MW-2



n = 17

Slope = 0.0353
units per year.

Mann-Kendall
statistic = 114
critical = 58

Increasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Barium Analysis Run 4/28/2024 4:34 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Sen's Slope Estimator

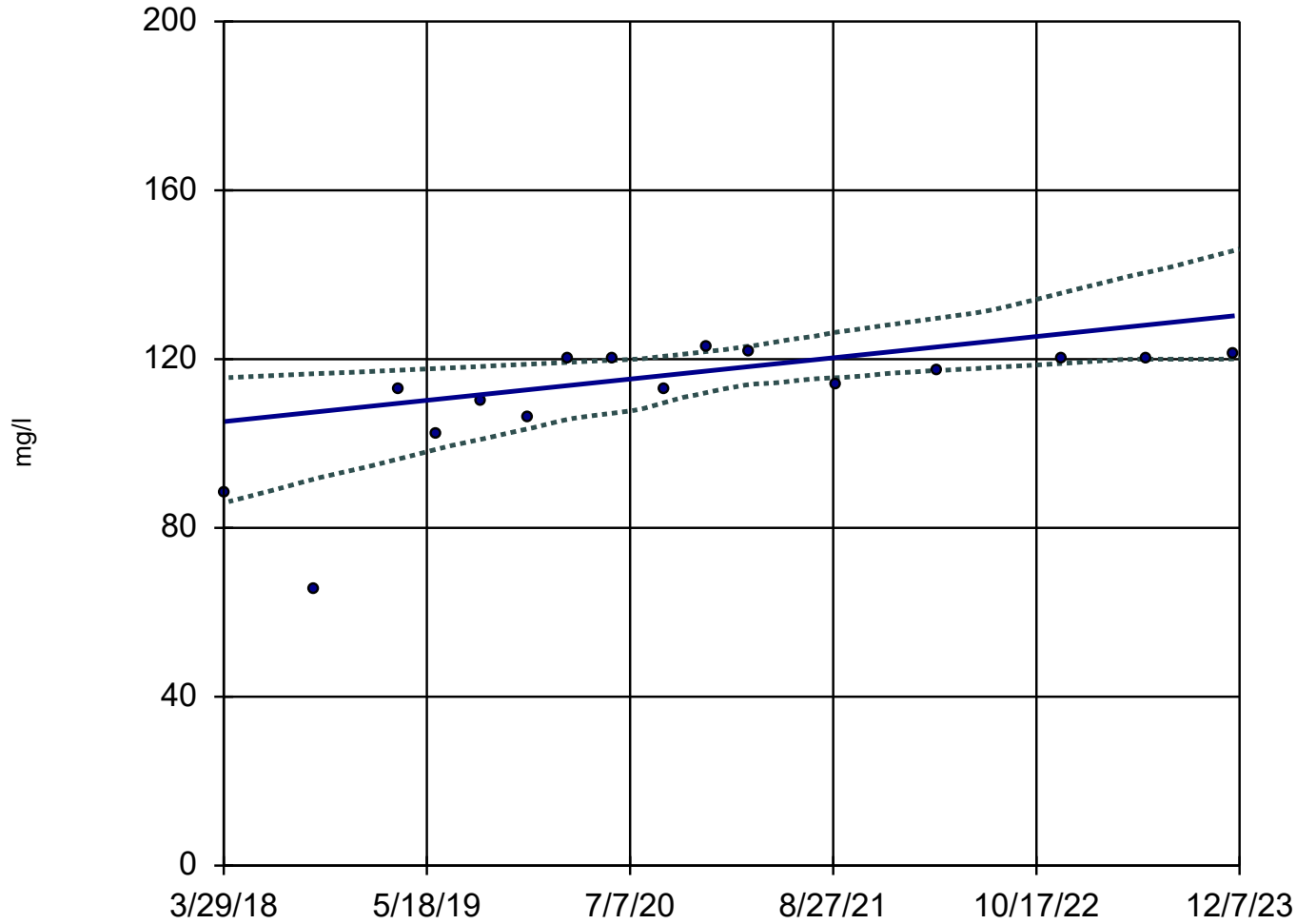
Constituent: Barium (mg/l) Analysis Run 4/28/2024 4:39 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-2	LCL	UCL
3/29/2018	0.114	0.07232	0.2187
9/28/2018	0.106	0.09491	0.229
3/21/2019	0.186	0.1157	0.2392
6/6/2019	0.166	0.125	0.2438
9/5/2019	0.181	0.1359	0.2492
12/12/2019	0.179	0.1474	0.2553
3/5/2020	0.212	0.1577	0.2603
6/4/2020	0.229	0.1686	0.2662
9/16/2020	0.248	0.181	0.273
12/10/2020	0.269	0.1906	0.2785
3/10/2021	0.27	0.199	0.2859
9/2/2021	0.257 (D)	0.2138	0.3006
3/29/2022	0.293	0.2303	0.3215
12/7/2022	0.288	0.2503	0.3497
6/1/2023	0.273	0.2643	0.3718
11/27/2023	0.3 (P)	0.279	0.3936
1/25/2024	0.297	0.2839	0.4014

Sen's Slope and 95% Confidence Band

MW-2



n = 16

Slope = 4.42
units per year.

Mann-Kendall
statistic = 69
critical = 53

Increasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Calcium Analysis Run 4/28/2024 4:34 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

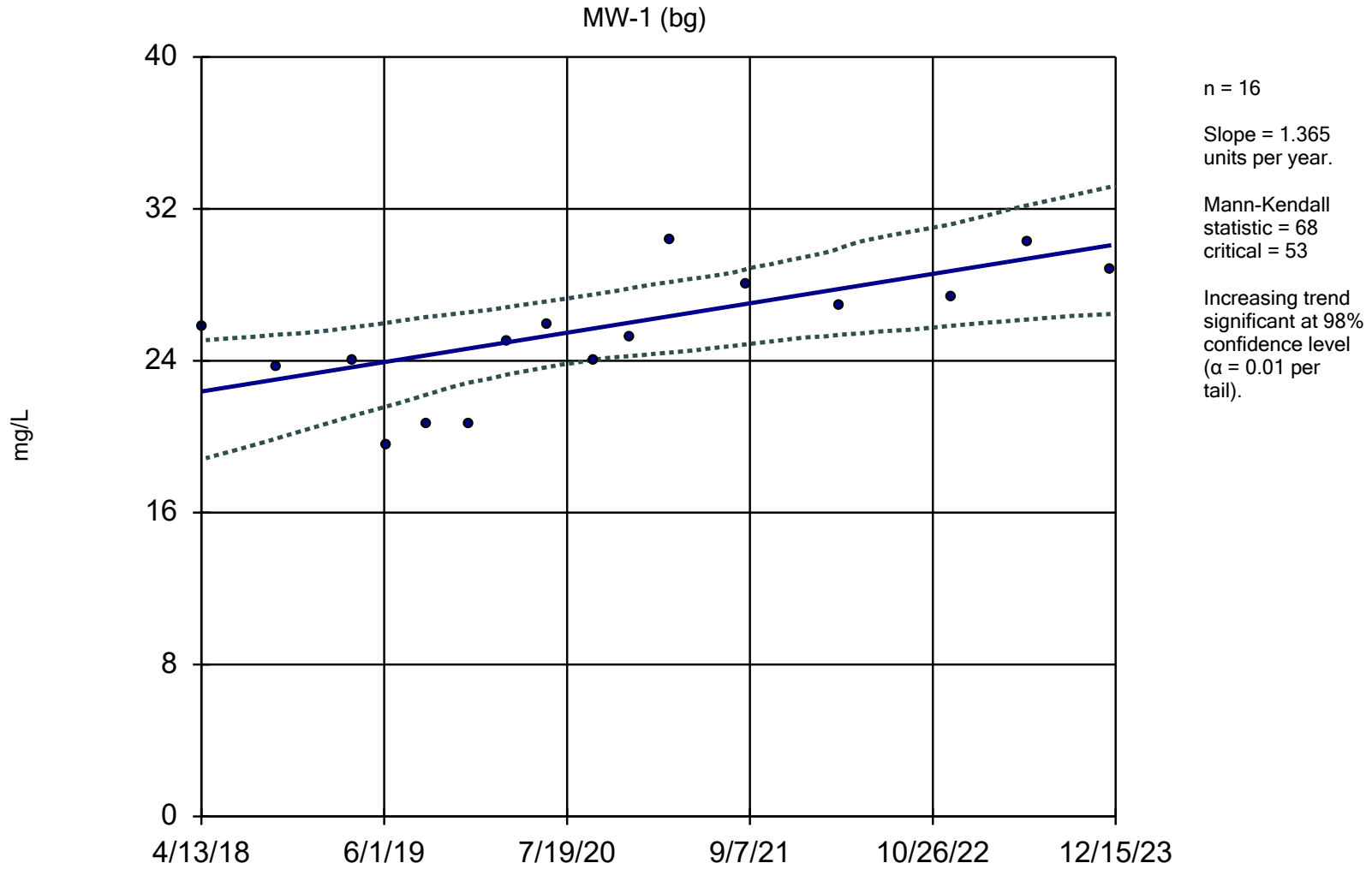
Sen's Slope Estimator

Constituent: Calcium (mg/l) Analysis Run 4/28/2024 4:39 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-2	LCL	UCL
3/29/2018	88.4	85.92	115.6
9/28/2018	65.5 (O)	91.51	116.5
3/21/2019	113	96.33	117.4
6/6/2019	102	98.58	117.8
9/5/2019	110	101	118.3
12/12/2019	106	103.5	118.8
3/5/2020	120	105.8	119.2
6/4/2020	120	107.2	119.7
9/16/2020	113	109.7	120.7
12/10/2020	123	112	121.8
3/10/2021	122	114	123.1
9/2/2021	114 (D)	115.6	126.3
3/29/2022	117	117.3	129.7
12/7/2022	120	119	135.6
6/1/2023	120	120	140.6
11/27/2023	121	120	145.7

Sen's Slope and 95% Confidence Band



Constituent: Chloride Dissolved Analysis Run 4/28/2024 4:34 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Sen's Slope Estimator

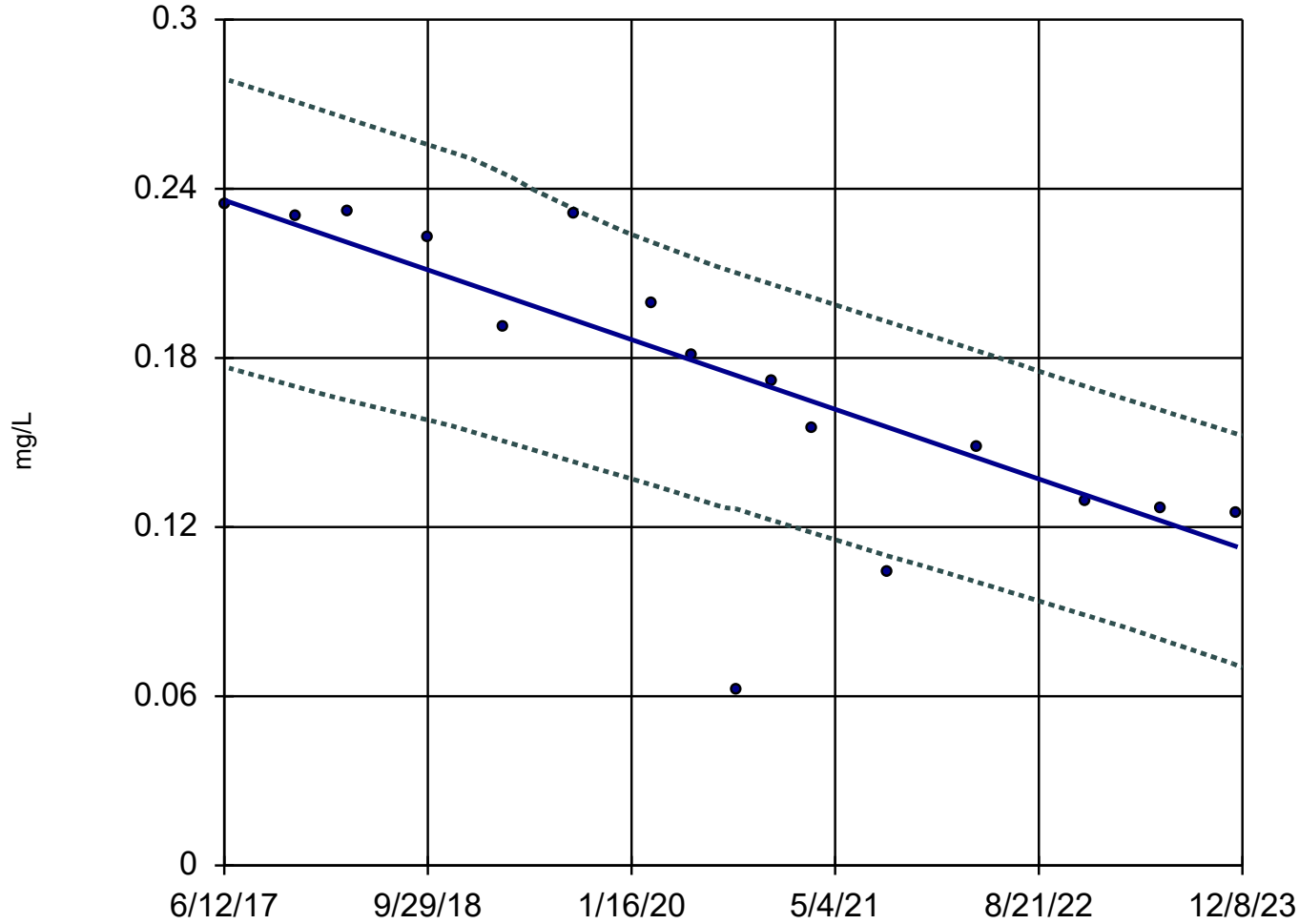
Constituent: Chloride Dissolved (mg/L) Analysis Run 4/28/2024 4:39 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-1 (bg)	LCL	UCL
4/13/2018	25.8	18.81	25.07
9/28/2018	23.7	19.89	25.37
3/21/2019	24	21.1	25.76
6/7/2019	19.6	21.59	26
9/6/2019	20.7	22.22	26.31
12/12/2019	20.7	22.86	26.56
3/5/2020	25	23.27	26.82
6/4/2020	25.9	23.66	27.13
9/17/2020	24	24.05	27.49
12/11/2020	25.2	24.25	27.82
3/11/2021	30.4	24.43	28.15
9/1/2021	28	24.87	28.84
3/30/2022	26.9	25.36	29.93
12/7/2022	27.3	25.84	31.19
5/31/2023	30.3	26.18	32.19
12/5/2023	28.8	26.46	33.17

Sen's Slope and 95% Confidence Band

R-1



n = 16

Slope = -0.01903
units per year.

Mann-Kendall
statistic = -88
critical = -53

Decreasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Manganese Analysis Run 4/28/2024 4:35 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

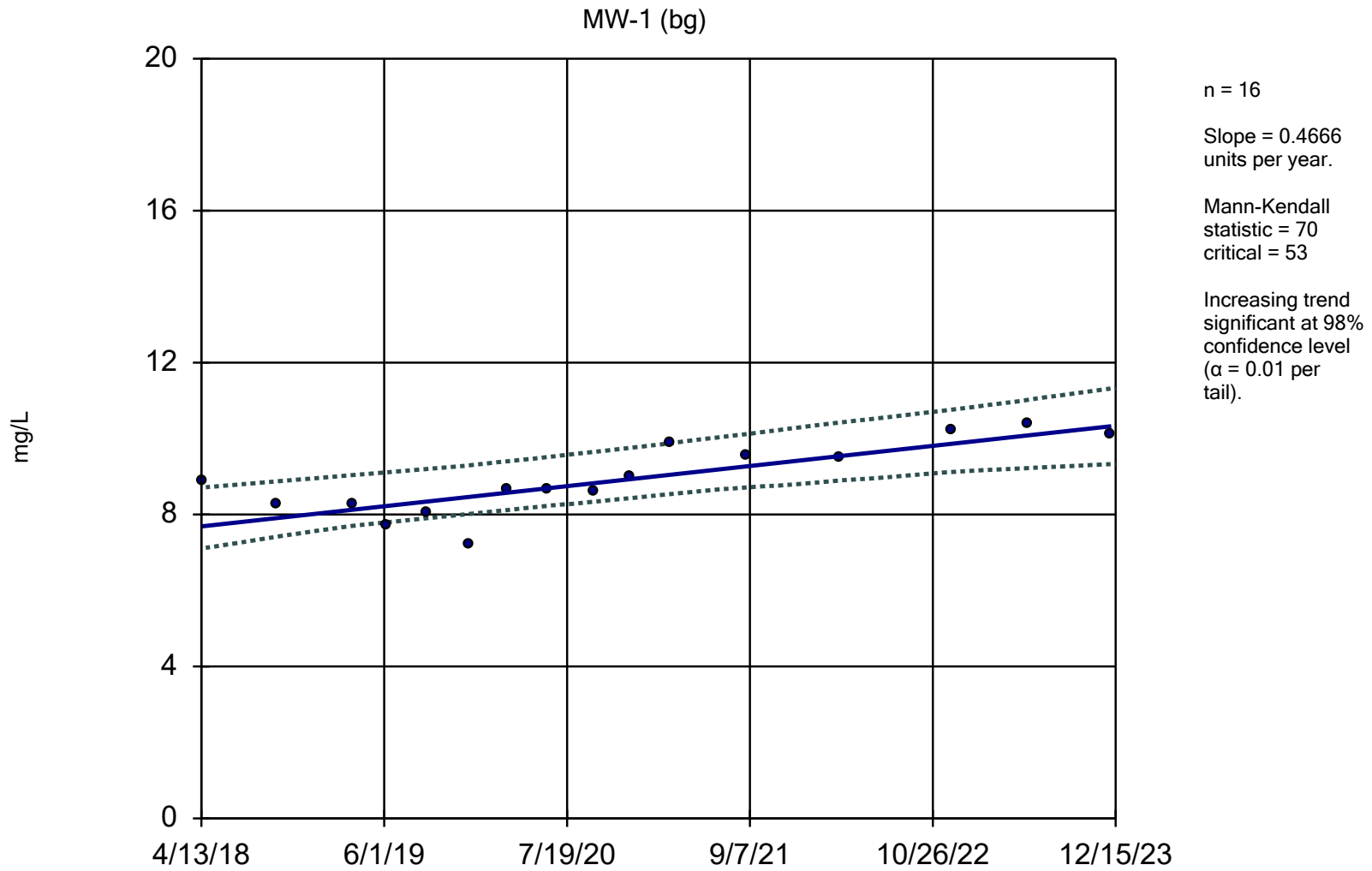
Sen's Slope Estimator

Constituent: Manganese (mg/L) Analysis Run 4/28/2024 4:39 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	R-1	LCL	UCL
5/20/1985	0.08 (H)		
11/4/1985	0.09 (H)		
2/12/1986	0.09 (H)		
5/12/1986	0.09 (H)		
11/14/2016	0.255 (H)		
3/29/2017	0.229 (H)		
6/12/2017	0.234	0.1769	0.279
11/27/2017	0.23	0.1697	0.2708
3/29/2018	0.232	0.1648	0.2647
9/28/2018	0.223	0.158	0.2557
3/22/2019	0.191	0.1506	0.2456
9/5/2019	0.231	0.1431	0.2327
3/5/2020	0.199	0.1349	0.221
6/4/2020	0.181	0.1306	0.2157
9/16/2020	0.062	0.1264	0.2102
12/10/2020	0.172	0.1223	0.206
3/10/2021	0.155	0.1181	0.2016
9/2/2021	0.104	0.1098	0.1929
3/29/2022	0.148	0.1006	0.1826
12/7/2022	0.129	0.0888	0.1699
6/1/2023	0.127	0.08021	0.1615
11/27/2023	0.125	0.07085	0.153

Sen's Slope and 95% Confidence Band



Constituent: Sodium Analysis Run 4/28/2024 4:35 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Sen's Slope Estimator

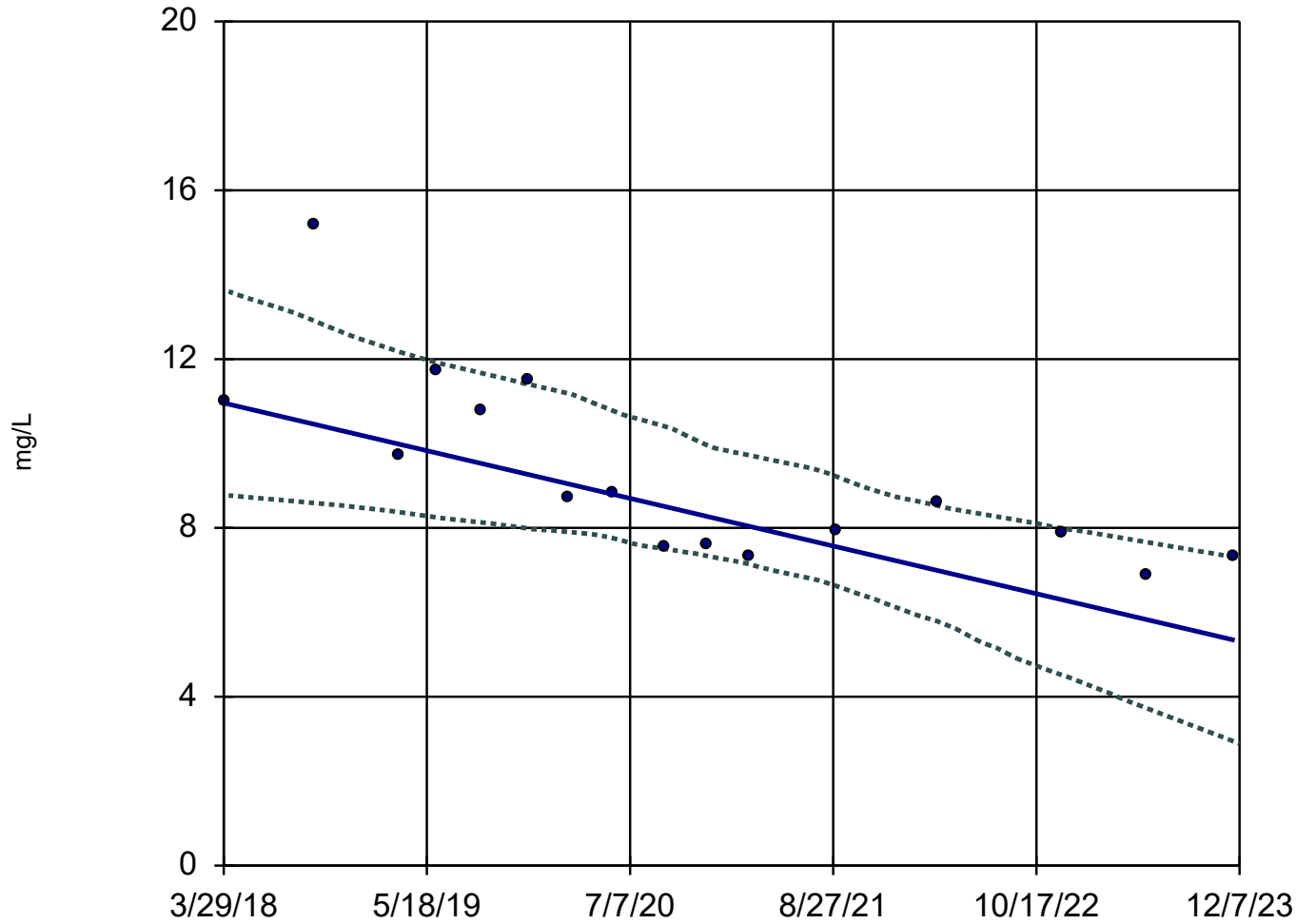
Constituent: Sodium (mg/L) Analysis Run 4/28/2024 4:39 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-1 (bg)	LCL	UCL
4/13/2018	8.86	7.108	8.709
9/28/2018	8.29	7.411	8.87
3/21/2019	8.26	7.699	9.037
6/7/2019	7.7	7.796	9.112
9/6/2019	8.06	7.902	9.199
12/12/2019	7.24	8.016	9.297
3/5/2020	8.65	8.117	9.399
6/4/2020	8.64	8.226	9.512
9/17/2020	8.61	8.335	9.646
12/11/2020	8.99	8.432	9.758
3/11/2021	9.87	8.537	9.877
9/1/2021	9.58	8.715	10.12
3/30/2022	9.51	8.896	10.42
12/7/2022	10.2	9.118	10.76
5/31/2023	10.4	9.223	11.02
12/5/2023	10.1	9.328	11.32

Sen's Slope and 95% Confidence Band

MW-2



n = 16

Slope = -0.9917
units per year.

Mann-Kendall
statistic = -79
critical = -53

Decreasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Sodium Analysis Run 4/28/2024 4:35 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

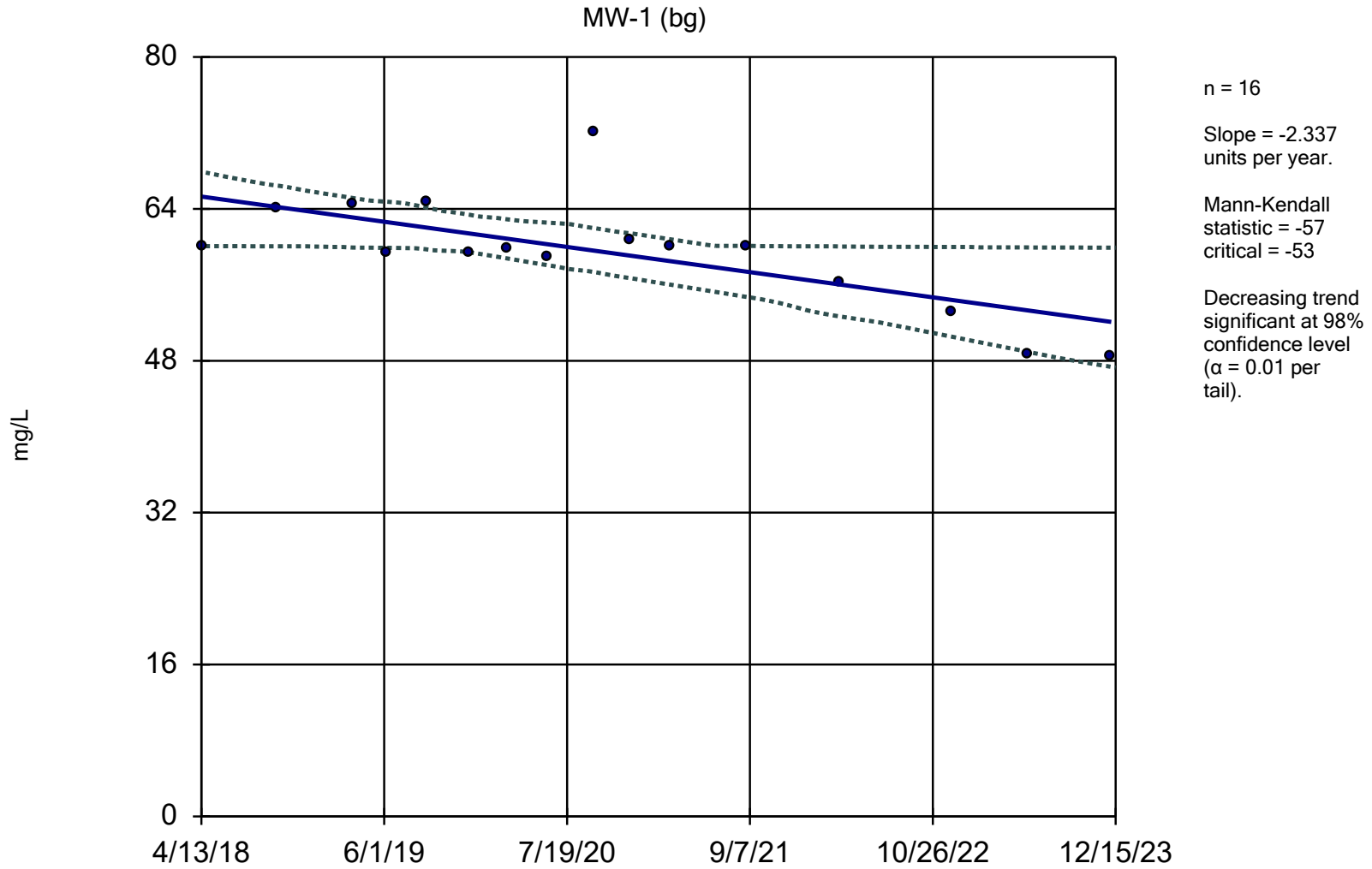
Sen's Slope Estimator

Constituent: Sodium (mg/L) Analysis Run 4/28/2024 4:39 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-2	LCL	UCL
3/29/2018	11	8.78	13.64
9/28/2018	15.2	8.593	12.91
3/21/2019	9.72	8.377	12.18
6/6/2019	11.7	8.252	11.92
9/5/2019	10.8	8.135	11.68
12/12/2019	11.5	7.985	11.4
3/5/2020	8.71	7.903	11.18
6/4/2020	8.84	7.755	10.77
9/16/2020	7.55	7.505	10.41
12/10/2020	7.59	7.343	9.968
3/10/2021	7.32	7.135	9.717
9/2/2021	7.945 (D)	6.627	9.222
3/29/2022	8.59	5.79	8.53
12/7/2022	7.9	4.523	7.979
6/1/2023	6.86	3.724	7.66
11/27/2023	7.32	2.936	7.305

Sen's Slope and 95% Confidence Band



Constituent: Sulfate Dissolved Analysis Run 4/28/2024 4:35 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Sen's Slope Estimator

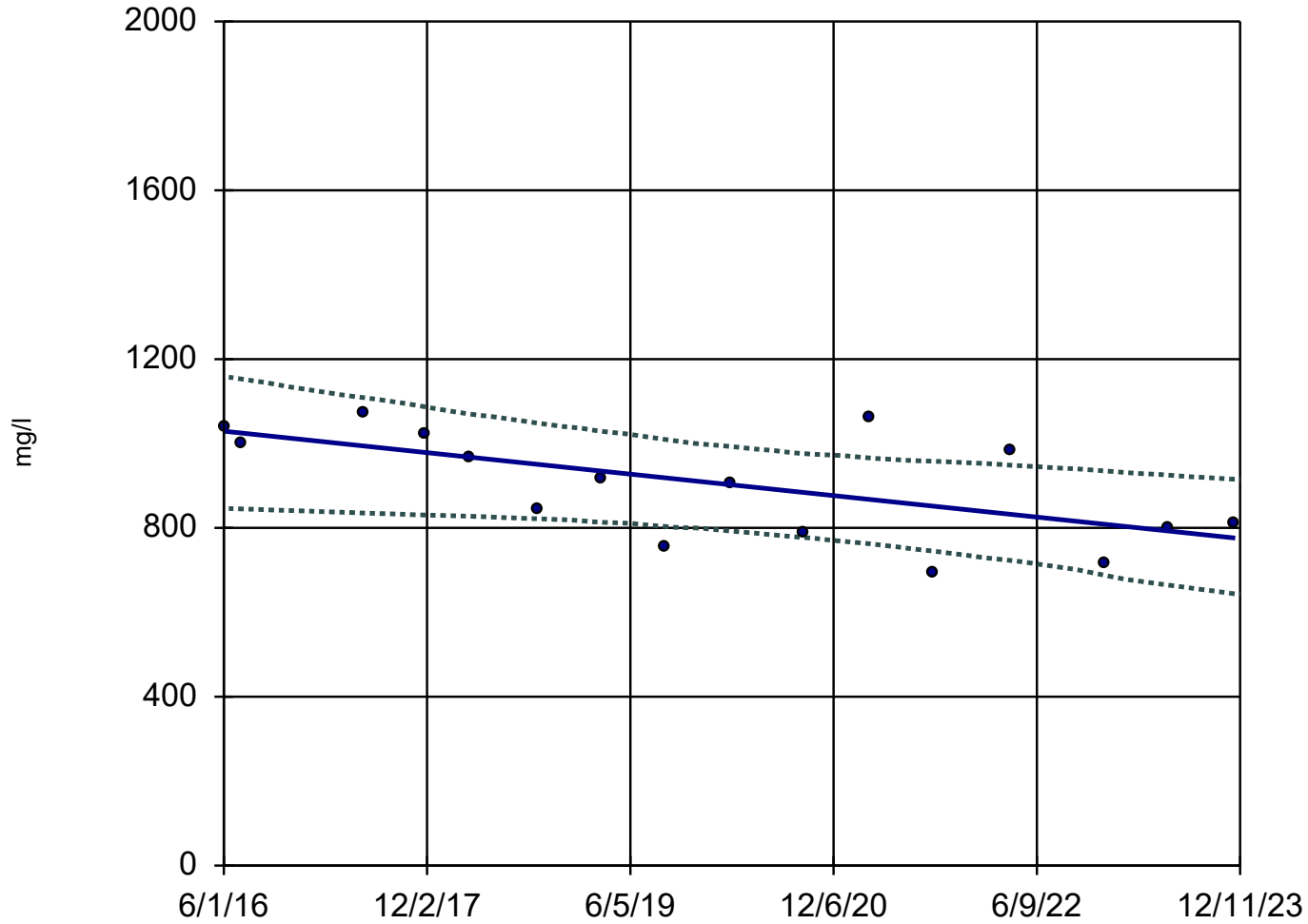
Constituent: Sulfate Dissolved (mg/L) Analysis Run 4/28/2024 4:39 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-1 (bg)	LCL	UCL
4/13/2018	60.1	60.08	67.92
9/28/2018	64	60.05	66.47
3/21/2019	64.5	59.92	65.16
6/7/2019	59.3	59.9	64.75
9/6/2019	64.7	59.7	64.13
12/12/2019	59.4	59.43	63.38
3/5/2020	59.9	58.79	62.91
6/4/2020	59	58.08	62.55
9/17/2020	72.2	57.36	61.99
12/11/2020	60.8	56.69	61.41
3/11/2021	60.1	56.02	60.79
9/1/2021	60	54.71	60.1
3/30/2022	56.3	52.67	60.04
12/7/2022	53.2	50.55	59.99
5/31/2023	48.7	48.93	59.93
12/5/2023	48.4	47.35	59.91

Sen's Slope and 95% Confidence Band

EE-1



n = 16

Slope = -33.77
units per year.

Mann-Kendall
statistic = -54
critical = -53

Decreasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: TDS Analysis Run 4/28/2024 4:35 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Sen's Slope Estimator

Constituent: TDS (mg/l) Analysis Run 4/28/2024 4:39 PM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	EE-1	LCL	UCL
5/22/1985	923 (H)		
8/5/1985	742 (H)		
11/20/1985	777 (H)		
2/10/1986	870 (H)		
5/19/1986	950 (H)		
3/12/2015	1070 (H)		
3/29/2016	1190 (H)		
6/1/2016	1040	846.4	1159
7/21/2016	999	845	1152
6/12/2017	1070	835.4	1109
11/27/2017	1020	830.6	1087
3/30/2018	969	827.8	1070
9/27/2018	846	821.7	1049
3/21/2019	915	813	1029
9/5/2019	756	803.5	1010
3/5/2020	906	792.3	992.6
9/17/2020	788	777.4	976.1
3/11/2021	1060	762.6	965.8
9/1/2021	694	745.1	958.1
3/30/2022	982	723.1	948.7
12/8/2022	714	688.1	935.2
5/31/2023	800	664.7	925.2
11/28/2023	812	643.8	915.4

Trend Test

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24 Printed 4/28/2024, 4:39 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Ammonia Dissolved (mg/L)	C-2 (bg)	0	-20	-53	No	16	81.25	n/a	n/a	0.02	NP
Ammonia Dissolved (mg/L)	EE-1	-0.279	-16	-53	No	16	0	n/a	n/a	0.02	NP
Ammonia Dissolved (mg/L)	K-2 (bg)	0	-32	-53	No	16	81.25	n/a	n/a	0.02	NP
Ammonia Dissolved (mg/L)	MW-1 (bg)	0.00213	17	53	No	16	0	n/a	n/a	0.02	NP
Ammonia Dissolved (mg/L)	MW-2	0.00653	22	48	No	15	6.667	n/a	n/a	0.02	NP
Ammonia Dissolved (mg/L)	MW-3	0.1229	5	48	No	15	6.667	n/a	n/a	0.02	NP
Ammonia Dissolved (mg/L)	R-1	0.05632	9	53	No	16	0	n/a	n/a	0.02	NP
Arsenic (mg/l)	C-2 (bg)	0	0	53	No	16	100	n/a	n/a	0.02	NP
Arsenic (mg/l)	EE-1	0.003111	33	53	No	16	6.25	n/a	n/a	0.02	NP
Arsenic (mg/l)	K-2 (bg)	0	0	53	No	16	100	n/a	n/a	0.02	NP
Arsenic (mg/l)	MW-1 (bg)	0	0	53	No	16	100	n/a	n/a	0.02	NP
Arsenic (mg/l)	MW-2	0	0	53	No	16	100	n/a	n/a	0.02	NP
Arsenic (mg/l)	MW-3	0	-1	-58	No	17	11.76	n/a	n/a	0.02	NP
Arsenic (mg/l)	R-1	0	0	53	No	16	100	n/a	n/a	0.02	NP
Barium (mg/l)	C-2 (bg)	0	0	53	No	16	0	n/a	n/a	0.02	NP
Barium (mg/l)	EE-1	-0.00...	-6	-53	No	16	0	n/a	n/a	0.02	NP
Barium (mg/l)	K-2 (bg)	0.000...	5	53	No	16	0	n/a	n/a	0.02	NP
Barium (mg/l)	MW-1 (bg)	0.002191	30	53	No	16	0	n/a	n/a	0.02	NP
Barium (mg/l)	MW-2	0.0353	114	58	Yes	17	0	n/a	n/a	0.02	NP
Barium (mg/l)	MW-3	-0.00...	0	53	No	16	0	n/a	n/a	0.02	NP
Barium (mg/l)	R-1	0.01445	37	63	No	18	0	n/a	n/a	0.02	NP
Cadmium (mg/L)	C-2 (bg)	0	-15	-53	No	16	100	n/a	n/a	0.02	NP
Cadmium (mg/L)	EE-1	0	17	53	No	16	100	n/a	n/a	0.02	NP
Cadmium (mg/L)	K-2 (bg)	0	-28	-53	No	16	100	n/a	n/a	0.02	NP
Cadmium (mg/L)	MW-1 (bg)	0	-28	-53	No	16	100	n/a	n/a	0.02	NP
Cadmium (mg/L)	MW-2	0	-28	-53	No	16	100	n/a	n/a	0.02	NP
Cadmium (mg/L)	MW-3	0	-28	-53	No	16	100	n/a	n/a	0.02	NP
Cadmium (mg/L)	R-1	0	-28	-53	No	16	100	n/a	n/a	0.02	NP
Calcium (mg/l)	C-2 (bg)	0.1191	1	48	No	15	0	n/a	n/a	0.02	NP
Calcium (mg/l)	EE-1	-2.844	-24	-53	No	16	0	n/a	n/a	0.02	NP
Calcium (mg/l)	K-2 (bg)	-0.7137	-9	-53	No	16	0	n/a	n/a	0.02	NP
Calcium (mg/l)	MW-1 (bg)	1.022	41	53	No	16	0	n/a	n/a	0.02	NP
Calcium (mg/l)	MW-2	4.42	69	53	Yes	16	0	n/a	n/a	0.02	NP
Calcium (mg/l)	MW-3	-2.743	-22	-53	No	16	0	n/a	n/a	0.02	NP
Calcium (mg/l)	R-1	0.309	8	53	No	16	0	n/a	n/a	0.02	NP
Chloride Dissolved (mg/L)	C-2 (bg)	-1.602	-34	-53	No	16	0	n/a	n/a	0.02	NP
Chloride Dissolved (mg/L)	EE-1	-6.327	-37	-53	No	16	0	n/a	n/a	0.02	NP
Chloride Dissolved (mg/L)	K-2 (bg)	-5.382	-16	-53	No	16	0	n/a	n/a	0.02	NP
Chloride Dissolved (mg/L)	MW-1 (bg)	1.365	68	53	Yes	16	0	n/a	n/a	0.02	NP
Chloride Dissolved (mg/L)	MW-2	0.9147	44	53	No	16	0	n/a	n/a	0.02	NP
Chloride Dissolved (mg/L)	MW-3	-3.013	-23	-53	No	16	0	n/a	n/a	0.02	NP
Chloride Dissolved (mg/L)	R-1	-1.77	-21	-53	No	16	0	n/a	n/a	0.02	NP
Chromium (mg/L)	C-2 (bg)	0	0	53	No	16	100	n/a	n/a	0.02	NP
Chromium (mg/L)	EE-1	0	0	53	No	16	100	n/a	n/a	0.02	NP
Chromium (mg/L)	K-2 (bg)	0	0	53	No	16	100	n/a	n/a	0.02	NP
Chromium (mg/L)	MW-1 (bg)	0	0	53	No	16	100	n/a	n/a	0.02	NP
Chromium (mg/L)	MW-2	0	0	53	No	16	100	n/a	n/a	0.02	NP
Chromium (mg/L)	MW-3	0	0	53	No	16	100	n/a	n/a	0.02	NP
Chromium (mg/L)	R-1	0	0	53	No	16	100	n/a	n/a	0.02	NP
Cobalt (mg/L)	C-2 (bg)	0	15	53	No	16	100	n/a	n/a	0.02	NP

Trend Test

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24 Printed 4/28/2024, 4:39 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Cobalt (mg/L)	EE-1	0	0	53	No	16	100	n/a	n/a	0.02	NP
Cobalt (mg/L)	K-2 (bg)	0	0	53	No	16	100	n/a	n/a	0.02	NP
Cobalt (mg/L)	MW-1 (bg)	0	0	53	No	16	100	n/a	n/a	0.02	NP
Cobalt (mg/L)	MW-2	0	0	53	No	16	100	n/a	n/a	0.02	NP
Cobalt (mg/L)	MW-3	0	0	53	No	16	100	n/a	n/a	0.02	NP
Cobalt (mg/L)	R-1	0	0	53	No	16	100	n/a	n/a	0.02	NP
Iron (mg/L)	C-2 (bg)	0	9	44	No	14	92.86	n/a	n/a	0.02	NP
Iron (mg/L)	EE-1	0.2581	11	53	No	16	0	n/a	n/a	0.02	NP
Iron (mg/L)	K-2 (bg)	0	0	13	No	6	100	n/a	n/a	0.02	NP
Iron (mg/L)	MW-1 (bg)	0	0	53	No	16	6.25	n/a	n/a	0.02	NP
Iron (mg/L)	MW-2	-0.4955	-43	-48	No	15	0	n/a	n/a	0.02	NP
Iron (mg/L)	MW-3	-0.2844	-9	-48	No	15	0	n/a	n/a	0.02	NP
Iron (mg/L)	R-1	0.116	35	53	No	16	0	n/a	n/a	0.02	NP
Lead (mg/L)	C-2 (bg)	0	15	53	No	16	100	n/a	n/a	0.02	NP
Lead (mg/L)	EE-1	0	-5	-53	No	16	100	n/a	n/a	0.02	NP
Lead (mg/L)	K-2 (bg)	0	0	53	No	16	100	n/a	n/a	0.02	NP
Lead (mg/L)	MW-1 (bg)	0	0	53	No	16	100	n/a	n/a	0.02	NP
Lead (mg/L)	MW-2	0	0	53	No	16	100	n/a	n/a	0.02	NP
Lead (mg/L)	MW-3	0	0	53	No	16	100	n/a	n/a	0.02	NP
Lead (mg/L)	R-1	0	0	53	No	16	100	n/a	n/a	0.02	NP
Magnesium (mg/L)	C-2 (bg)	-0.0781	-1	-48	No	15	0	n/a	n/a	0.02	NP
Magnesium (mg/L)	EE-1	-2.394	-46	-53	No	16	0	n/a	n/a	0.02	NP
Magnesium (mg/L)	K-2 (bg)	0.04725	1	53	No	16	0	n/a	n/a	0.02	NP
Magnesium (mg/L)	MW-1 (bg)	-0.08552	-12	-58	No	17	0	n/a	n/a	0.02	NP
Magnesium (mg/L)	MW-2	0.1331	13	53	No	16	0	n/a	n/a	0.02	NP
Magnesium (mg/L)	MW-3	-1.293	-36	-53	No	16	0	n/a	n/a	0.02	NP
Magnesium (mg/L)	R-1	0	-1	-53	No	16	0	n/a	n/a	0.02	NP
Manganese (mg/L)	C-2 (bg)	0.00316	7	48	No	15	0	n/a	n/a	0.02	NP
Manganese (mg/L)	EE-1	0.000...	8	53	No	16	0	n/a	n/a	0.02	NP
Manganese (mg/L)	K-2 (bg)	0	9	53	No	16	100	n/a	n/a	0.02	NP
Manganese (mg/L)	MW-1 (bg)	0.000...	13	53	No	16	0	n/a	n/a	0.02	NP
Manganese (mg/L)	MW-2	0.00708	44	53	No	16	0	n/a	n/a	0.02	NP
Manganese (mg/L)	MW-3	-0.00...	-20	-53	No	16	0	n/a	n/a	0.02	NP
Manganese (mg/L)	R-1	-0.01903	-88	-53	Yes	16	0	n/a	n/a	0.02	NP
Mercury (mg/L)	C-2 (bg)	0	0	53	No	16	100	n/a	n/a	0.02	NP
Mercury (mg/L)	EE-1	0	0	53	No	16	100	n/a	n/a	0.02	NP
Mercury (mg/L)	K-2 (bg)	0	0	53	No	16	100	n/a	n/a	0.02	NP
Mercury (mg/L)	MW-1 (bg)	0	0	53	No	16	100	n/a	n/a	0.02	NP
Mercury (mg/L)	MW-2	0	0	53	No	16	100	n/a	n/a	0.02	NP
Mercury (mg/L)	MW-3	0	0	53	No	16	100	n/a	n/a	0.02	NP
Mercury (mg/L)	R-1	0	0	53	No	16	100	n/a	n/a	0.02	NP
Nickel (mg/L)	C-2 (bg)	0	0	53	No	16	100	n/a	n/a	0.02	NP
Nickel (mg/L)	EE-1	0	0	53	No	16	100	n/a	n/a	0.02	NP
Nickel (mg/L)	K-2 (bg)	0	0	53	No	16	100	n/a	n/a	0.02	NP
Nickel (mg/L)	MW-1 (bg)	0	0	53	No	16	100	n/a	n/a	0.02	NP
Nickel (mg/L)	MW-2	0	0	53	No	16	100	n/a	n/a	0.02	NP
Nickel (mg/L)	MW-3	-0.00...	-42	-53	No	16	62.5	n/a	n/a	0.02	NP
Nickel (mg/L)	R-1	-0.00...	-10	-53	No	16	0	n/a	n/a	0.02	NP
pH (units)	C-2 (bg)	-0.0302	-7	-53	No	16	0	n/a	n/a	0.02	NP
pH (units)	EE-1	-0.01845	-12	-58	No	17	0	n/a	n/a	0.02	NP

Trend Test

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24 Printed 4/28/2024, 4:39 PM

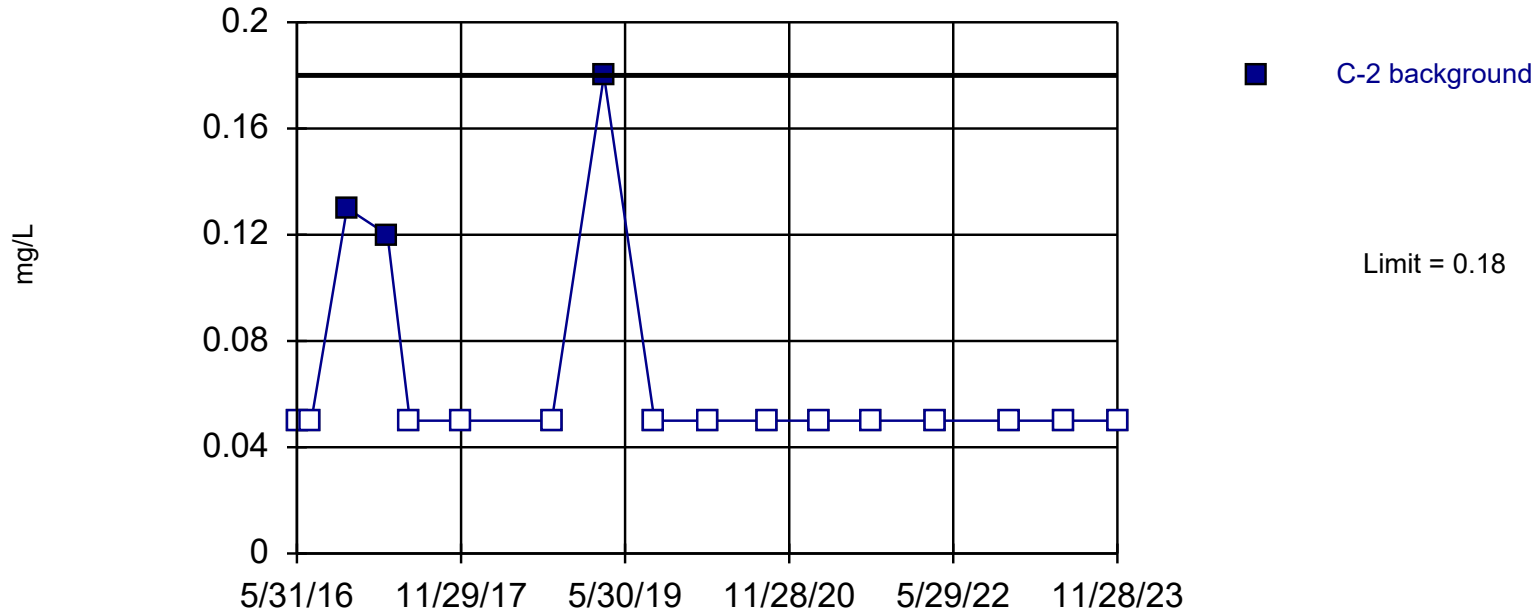
<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
pH (units)	K-2 (bg)	-0.03389	-19	-58	No	17	0	n/a	n/a	0.02	NP
pH (units)	MW-1 (bg)	0.01322	5	58	No	17	0	n/a	n/a	0.02	NP
pH (units)	MW-2	-0.02838	-9	-53	No	16	0	n/a	n/a	0.02	NP
pH (units)	MW-3	0	9	58	No	17	0	n/a	n/a	0.02	NP
pH (units)	R-1	-0.02467	-8	-58	No	17	0	n/a	n/a	0.02	NP
Selenium (mg/L)	C-2 (bg)	0	0	53	No	16	100	n/a	n/a	0.02	NP
Selenium (mg/L)	EE-1	0	-46	-53	No	16	75	n/a	n/a	0.02	NP
Selenium (mg/L)	K-2 (bg)	0	0	53	No	16	100	n/a	n/a	0.02	NP
Selenium (mg/L)	MW-1 (bg)	0	0	53	No	16	100	n/a	n/a	0.02	NP
Selenium (mg/L)	MW-2	0	-13	-53	No	16	93.75	n/a	n/a	0.02	NP
Selenium (mg/L)	MW-3	0	-30	-53	No	16	75	n/a	n/a	0.02	NP
Selenium (mg/L)	R-1	0	-25	-53	No	16	87.5	n/a	n/a	0.02	NP
Silver (mg/L)	C-2 (bg)	0	15	53	No	16	100	n/a	n/a	0.02	NP
Silver (mg/L)	EE-1	0	0	53	No	16	100	n/a	n/a	0.02	NP
Silver (mg/L)	K-2 (bg)	0	0	53	No	16	100	n/a	n/a	0.02	NP
Silver (mg/L)	MW-1 (bg)	0	0	53	No	16	100	n/a	n/a	0.02	NP
Silver (mg/L)	MW-2	0	0	53	No	16	100	n/a	n/a	0.02	NP
Silver (mg/L)	MW-3	0	0	53	No	16	100	n/a	n/a	0.02	NP
Silver (mg/L)	R-1	0	0	53	No	16	100	n/a	n/a	0.02	NP
Sodium (mg/L)	C-2 (bg)	-0.7175	-37	-48	No	15	0	n/a	n/a	0.02	NP
Sodium (mg/L)	EE-1	-6.252	-50	-53	No	16	0	n/a	n/a	0.02	NP
Sodium (mg/L)	K-2 (bg)	-4.949	-26	-53	No	16	0	n/a	n/a	0.02	NP
Sodium (mg/L)	MW-1 (bg)	0.4666	70	53	Yes	16	0	n/a	n/a	0.02	NP
Sodium (mg/L)	MW-2	-0.9917	-79	-53	Yes	16	0	n/a	n/a	0.02	NP
Sodium (mg/L)	MW-3	-3.675	-35	-53	No	16	0	n/a	n/a	0.02	NP
Sodium (mg/L)	R-1	-1.201	-27	-53	No	16	0	n/a	n/a	0.02	NP
Sulfate Dissolved (mg/L)	C-2 (bg)	-0.7756	-21	-53	No	16	0	n/a	n/a	0.02	NP
Sulfate Dissolved (mg/L)	EE-1	-0.01734	-26	-53	No	16	75	n/a	n/a	0.02	NP
Sulfate Dissolved (mg/L)	K-2 (bg)	-0.7025	-13	-53	No	16	0	n/a	n/a	0.02	NP
Sulfate Dissolved (mg/L)	MW-1 (bg)	-2.337	-57	-53	Yes	16	0	n/a	n/a	0.02	NP
Sulfate Dissolved (mg/L)	MW-2	0.6524	9	53	No	16	0	n/a	n/a	0.02	NP
Sulfate Dissolved (mg/L)	MW-3	0	6	53	No	16	81.25	n/a	n/a	0.02	NP
Sulfate Dissolved (mg/L)	R-1	-0.3716	-11	-53	No	16	0	n/a	n/a	0.02	NP
TDS (mg/l)	C-2 (bg)	-0.6176	-1	-53	No	16	0	n/a	n/a	0.02	NP
TDS (mg/l)	EE-1	-33.77	-54	-53	Yes	16	0	n/a	n/a	0.02	NP
TDS (mg/l)	K-2 (bg)	-17.38	-6	-53	No	16	0	n/a	n/a	0.02	NP
TDS (mg/l)	MW-1 (bg)	5.312	30	53	No	16	0	n/a	n/a	0.02	NP
TDS (mg/l)	MW-2	13.27	41	53	No	16	0	n/a	n/a	0.02	NP
TDS (mg/l)	MW-3	-17.07	-42	-53	No	16	0	n/a	n/a	0.02	NP
TDS (mg/l)	R-1	-2.843	-15	-53	No	16	0	n/a	n/a	0.02	NP
Zinc (mg/L)	C-2 (bg)	0	33	44	No	14	100	n/a	n/a	0.02	NP
Zinc (mg/L)	EE-1	0	21	53	No	16	100	n/a	n/a	0.02	NP
Zinc (mg/L)	K-2 (bg)	0	48	53	No	16	100	n/a	n/a	0.02	NP
Zinc (mg/L)	MW-1 (bg)	0	0	48	No	15	100	n/a	n/a	0.02	NP
Zinc (mg/L)	MW-2	0	0	53	No	16	100	n/a	n/a	0.02	NP
Zinc (mg/L)	MW-3	0	0	53	No	16	100	n/a	n/a	0.02	NP
Zinc (mg/L)	R-1	0	28	53	No	16	100	n/a	n/a	0.02	NP

Attachment 4

Recalculated 2024 UPLs

Prediction Limit

Intrawell Non-parametric, C-2 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 82.35% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Ammonia, Dissolved Analysis Run 5/22/2024 4:54 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

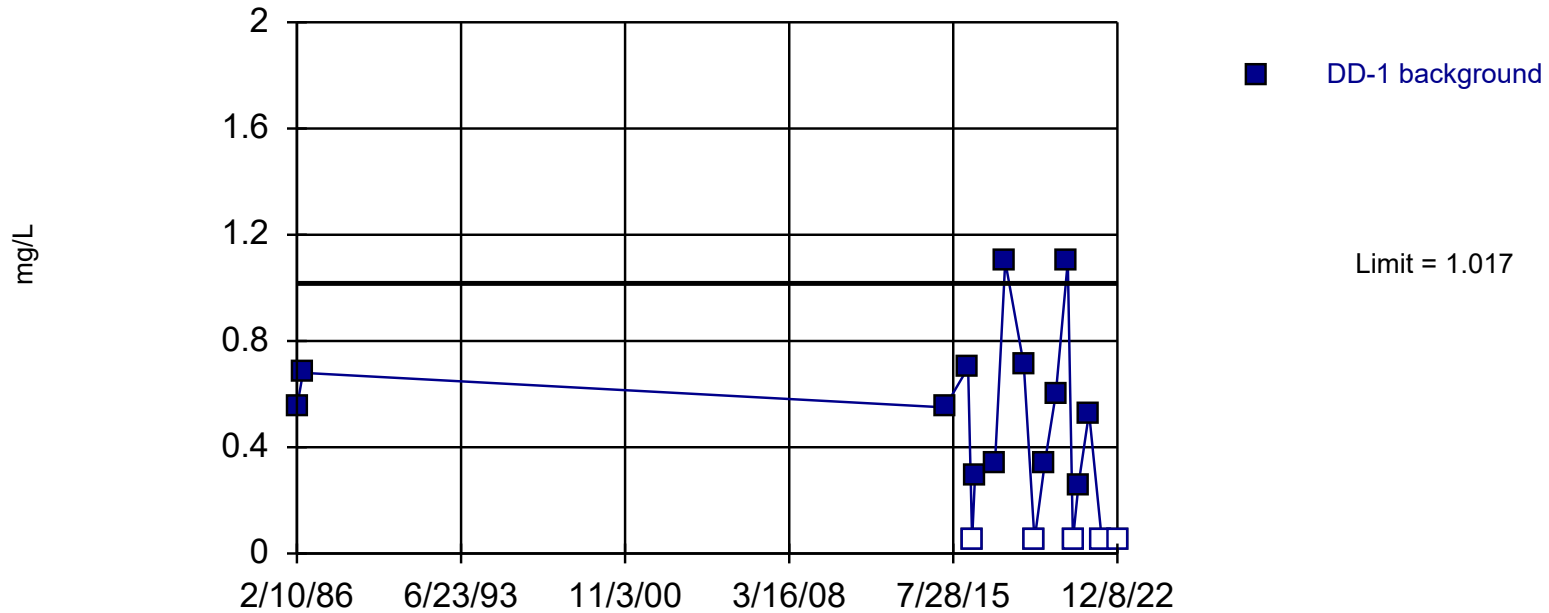
Prediction Limit

Constituent: Ammonia, Dissolved (mg/L) Analysis Run 5/22/2024 5:01 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	C-2
3/28/2016	<0.1 (H)
5/31/2016	<0.1
7/18/2016	<0.1
11/14/2016	0.13
3/29/2017	0.12
6/12/2017	<0.1
11/27/2017	<0.1
9/28/2018	<0.1
3/21/2019	0.18
9/6/2019	<0.1
3/5/2020	<0.1
9/16/2020	<0.1
3/10/2021	<0.1 (D)
9/2/2021	<0.1
3/30/2022	<0.1
12/8/2022	<0.1
5/31/2023	<0.1
11/28/2023	<0.1

Prediction Limit

Intrawell Parametric, DD-1



Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.3868, Std. Dev.=0.2888, n=18, 27.78% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9026, critical = 0.858. Kappa = 2.182 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Ammonia, Dissolved Analysis Run 5/22/2024 4:54 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

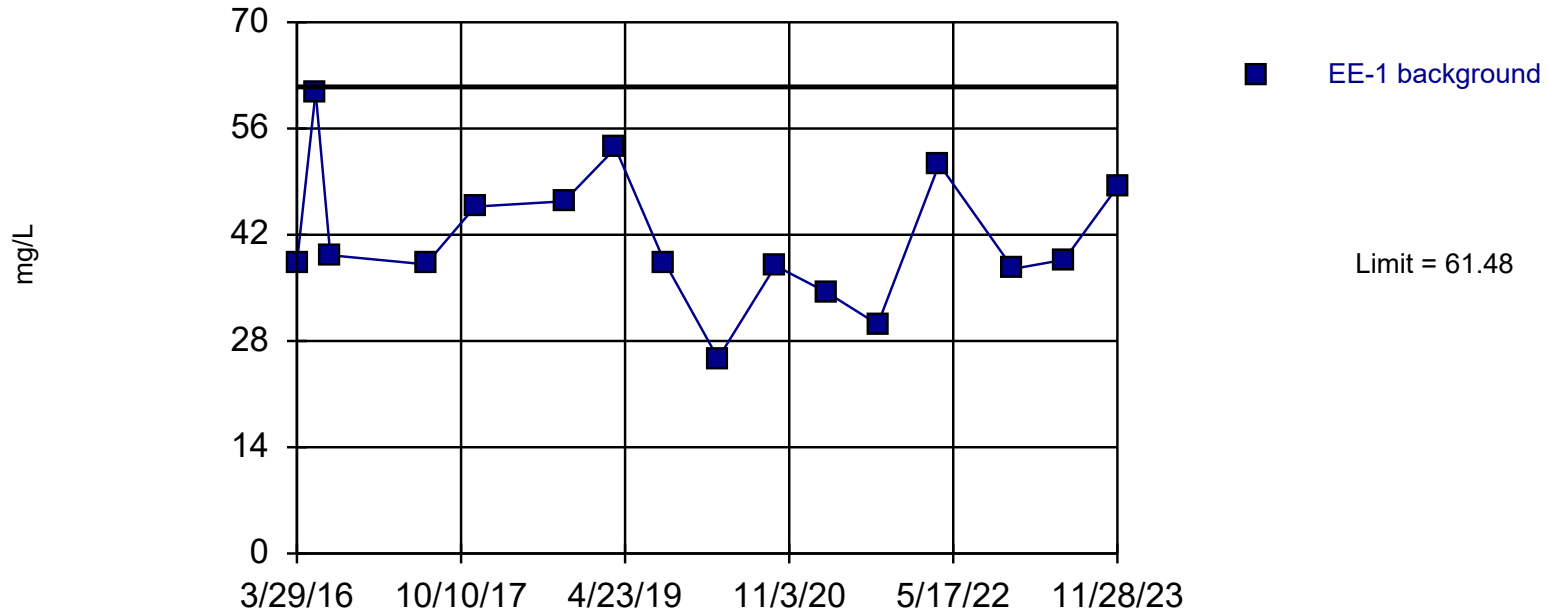
Prediction Limit

Constituent: Ammonia, Dissolved (mg/L) Analysis Run 5/22/2024 5:01 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	DD-1
5/22/1985	0.36 (H)
8/5/1985	0.34 (H)
11/20/1985	0.72 (H)
2/10/1986	0.55
5/19/1986	0.68
3/11/2015	0.55
3/29/2016	0.7
6/1/2016	<0.1
7/19/2016	0.29
6/12/2017	0.34
11/27/2017	1.1
9/27/2018	0.71
3/22/2019	<0.1
9/5/2019	0.34
3/3/2020	0.6
9/17/2020	1.1
12/11/2020	<0.1
3/11/2021	0.26
9/1/2021	0.53
3/30/2022	<0.1
12/8/2022	<0.1

Prediction Limit

Intrawell Parametric, EE-1



Background Data Summary: Mean=41.53, Std. Dev.=8.94, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9526, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Ammonia, Dissolved Analysis Run 5/22/2024 4:54 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

Prediction Limit

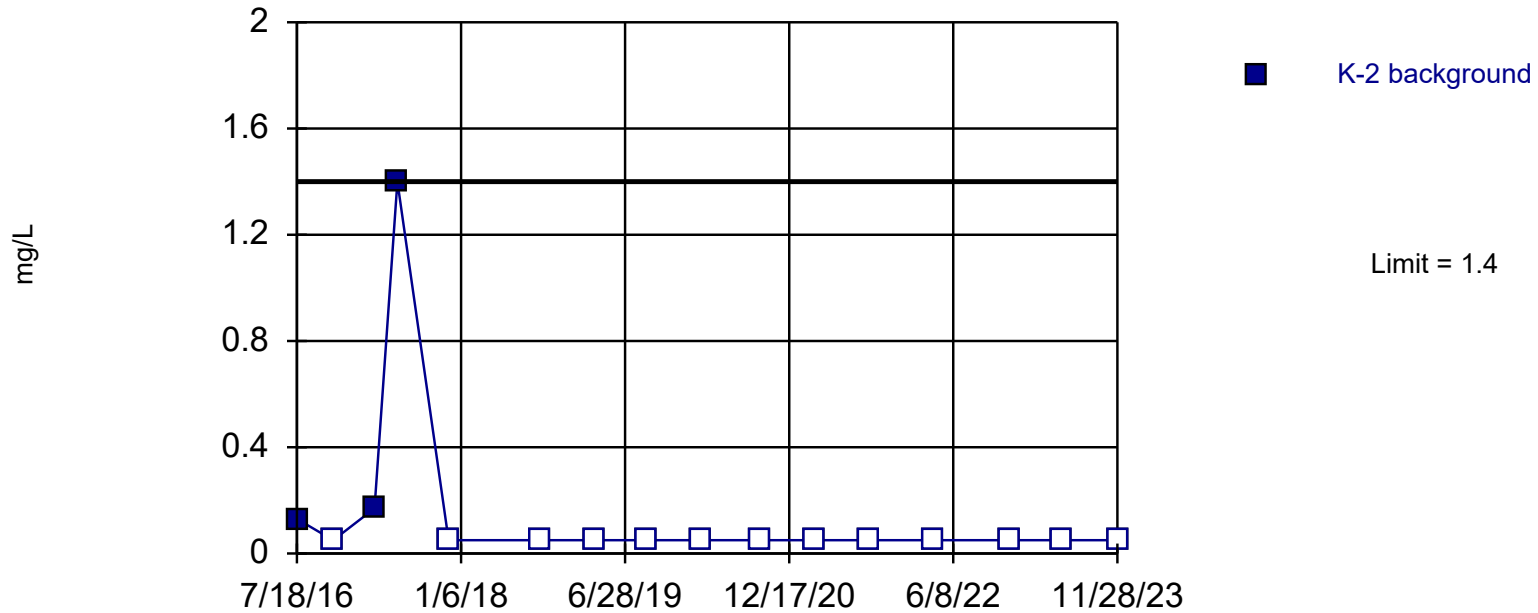
Constituent: Ammonia, Dissolved (mg/L) Analysis Run 5/22/2024 5:01 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	EE-1
5/22/1985	28.8 (H)
8/5/1985	25.4 (H)
11/20/1985	25.4 (H)
2/10/1986	32.3 (H)
5/19/1986	38 (H)
3/12/2015	39.3 (H)
3/29/2016	38.3
6/1/2016	60.8
7/21/2016	39.3
6/12/2017	38.1
11/27/2017	45.7
9/27/2018	46.4
3/21/2019	53.4
9/5/2019	38.4
3/5/2020	25.7
9/17/2020	37.9
3/11/2021	34.4
9/1/2021	30.2
3/30/2022	51.3
12/8/2022	37.5
5/31/2023	38.7
11/28/2023	48.3

Prediction Limit

Intrawell Non-parametric, K-2 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 81.25% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Ammonia, Dissolved Analysis Run 5/22/2024 4:54 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

Prediction Limit

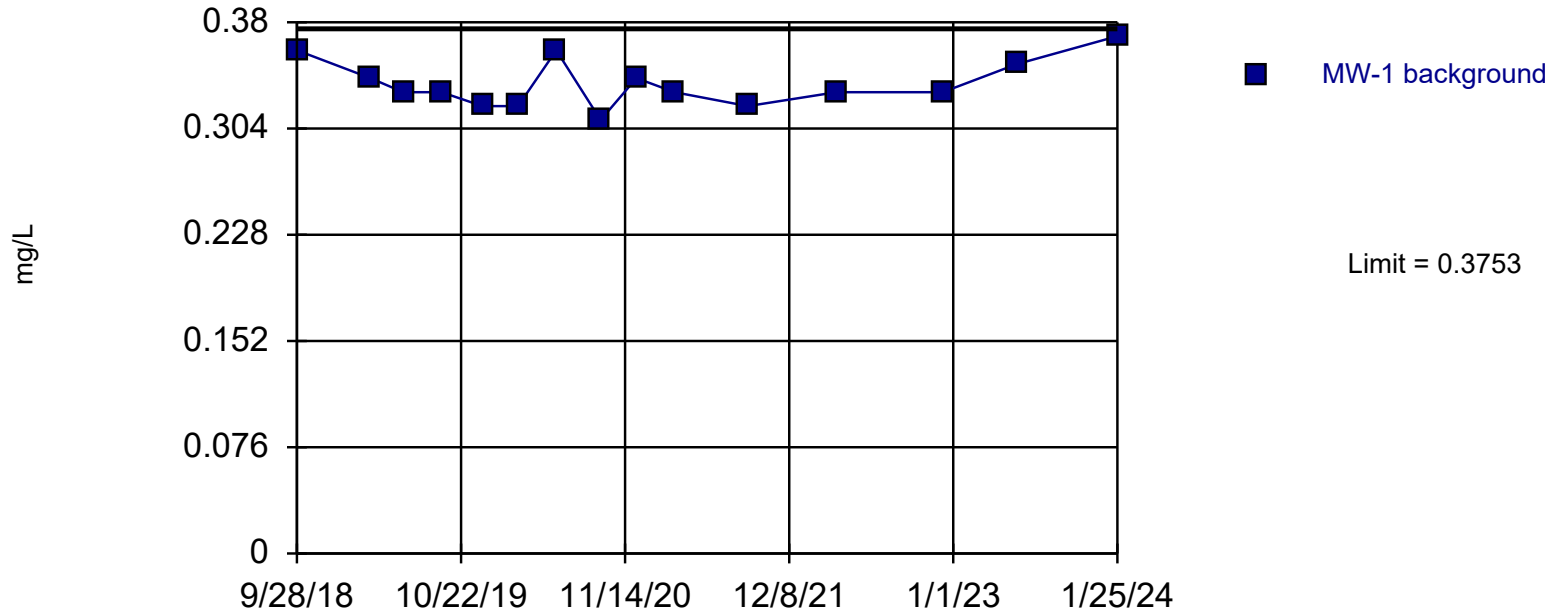
Constituent: Ammonia, Dissolved (mg/L) Analysis Run 5/22/2024 5:01 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	K-2
3/9/2015	0.32 (H)
3/28/2016	<0.1 (H)
5/31/2016	0.27 (H)
7/18/2016	0.13
11/14/2016	<0.1
3/29/2017	0.17
6/12/2017	1.4
11/27/2017	<0.1
9/27/2018	<0.1
3/22/2019	<0.1
9/5/2019	<0.1
3/5/2020	<0.1
9/16/2020	<0.1
3/10/2021	<0.1
9/3/2021	<0.1
3/31/2022	<0.1
12/8/2022	<0.1
5/31/2023	<0.1
11/28/2023	<0.1

Prediction Limit

Intrawell Parametric, MW-1 (bg)



Background Data Summary: Mean=0.336, Std. Dev.=0.01724, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9232, critical = 0.835. Kappa = 2.278 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Ammonia, Dissolved Analysis Run 5/22/2024 4:54 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

Prediction Limit

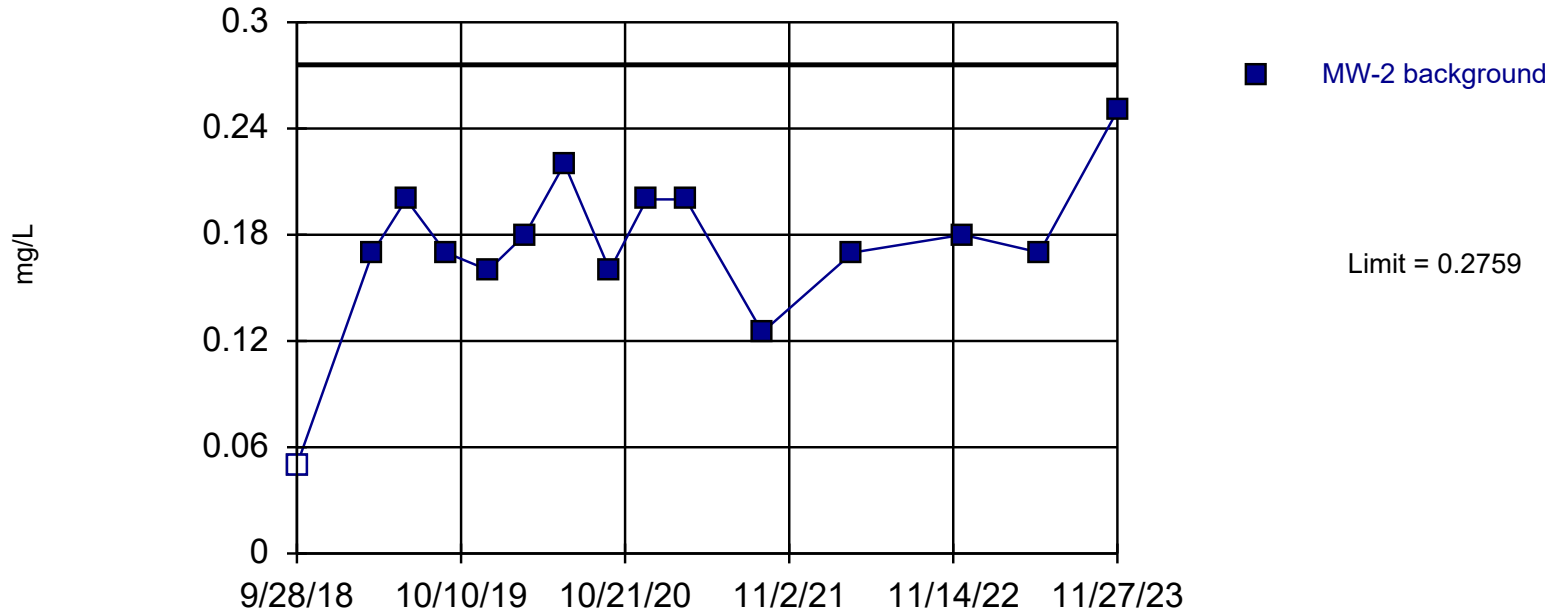
Constituent: Ammonia, Dissolved (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-1
9/28/2018	0.36
3/21/2019	0.34
6/7/2019	0.33
9/6/2019	0.33
12/12/2019	0.32
3/5/2020	0.32
6/4/2020	0.36
9/17/2020	0.31
12/11/2020	0.34
3/11/2021	0.33
9/1/2021	0.32
3/30/2022	0.33
12/7/2022	0.33
5/31/2023	0.35
12/5/2023	0.38 (P)
1/25/2024	0.37

Prediction Limit

Intrawell Parametric, MW-2



Background Data Summary: Mean=0.1737, Std. Dev.=0.0449, n=15, 6.667% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8764, critical = 0.835. Kappa = 2.278 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Ammonia, Dissolved Analysis Run 5/22/2024 4:54 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

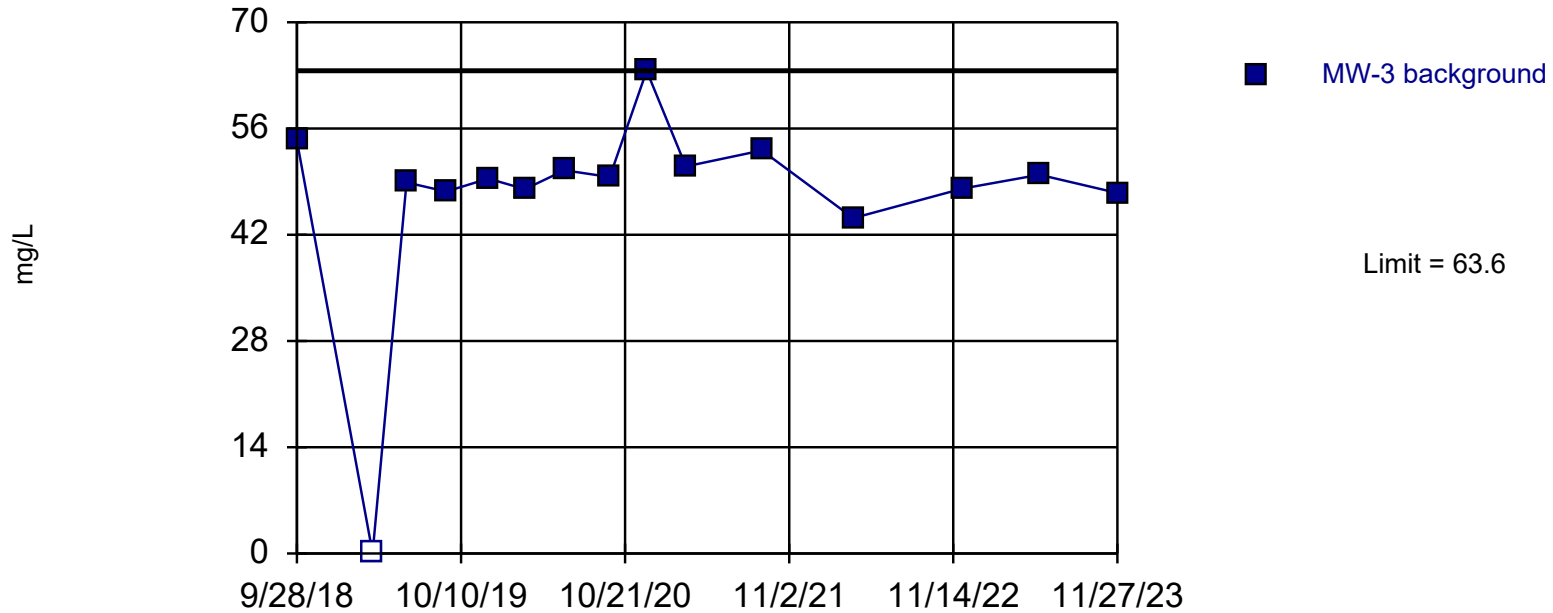
Prediction Limit

Constituent: Ammonia, Dissolved (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-2
9/28/2018	<0.1 (O)
3/21/2019	0.17
6/6/2019	0.2
9/5/2019	0.17
12/12/2019	0.16
3/5/2020	0.18
6/4/2020	0.22
9/16/2020	0.16
12/10/2020	0.2
3/10/2021	0.2
9/2/2021	0.125 (D)
3/29/2022	0.17
12/7/2022	0.18
6/1/2023	0.17
11/27/2023	0.25

Prediction Limit

Intrawell Non-parametric, MW-3



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 15 background values. 6.667% NDs. Well-constituent pair annual alpha = 0.01501. Individual comparison alpha = 0.007533 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Ammonia, Dissolved Analysis Run 5/22/2024 4:54 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

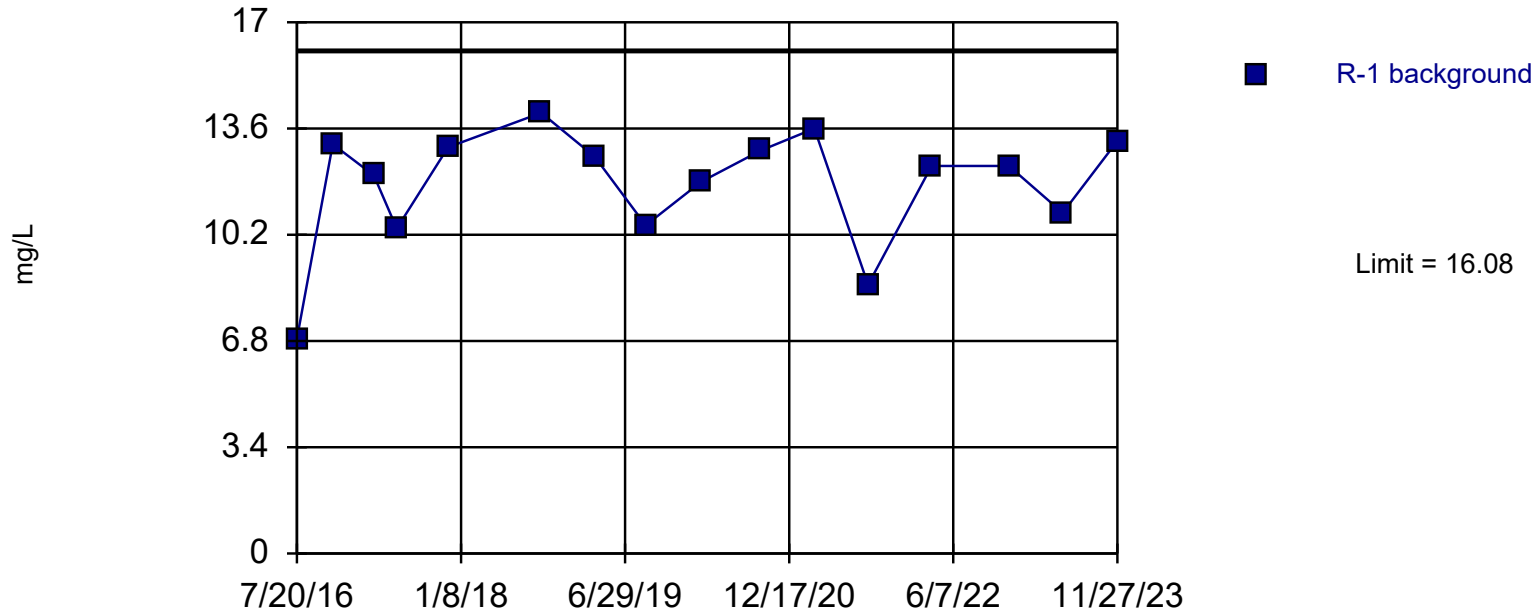
Prediction Limit

Constituent: Ammonia, Dissolved (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-3
9/28/2018	54.4
3/21/2019	<0.1 (O)
6/7/2019	48.9
9/6/2019	47.7
12/12/2019	49.4
3/5/2020	48
6/4/2020	50.5
9/16/2020	49.6
12/10/2020	63.6 (O)
3/10/2021	51
9/1/2021	53.1
3/30/2022	44.2
12/7/2022	48.1
6/1/2023	49.9
11/27/2023	47.5

Prediction Limit

Intrawell Parametric, R-1



Background Data Summary: Mean=11.79, Std. Dev.=1.923, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.871, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Ammonia, Dissolved Analysis Run 5/22/2024 4:54 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

Prediction Limit

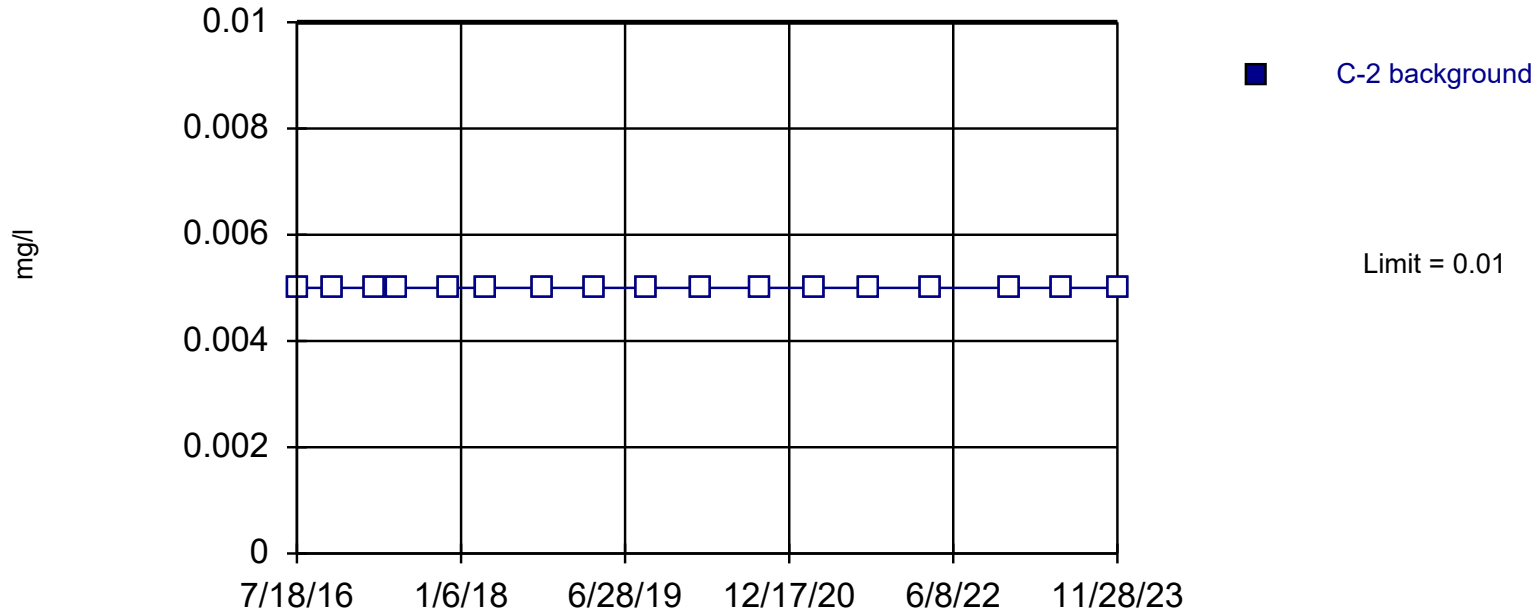
Constituent: Ammonia, Dissolved (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	R-1
5/20/1985	7.54 (H)
11/4/1985	4.35 (H)
2/12/1986	2.76 (H)
5/12/1986	2.51 (H)
7/20/2016	6.87
11/14/2016	13.1
3/29/2017	12.1
6/12/2017	10.4
11/27/2017	13
9/28/2018	14.1
3/22/2019	12.7
9/5/2019	10.5
3/5/2020	11.9
9/16/2020	12.9
3/10/2021	13.6
9/2/2021	8.6
3/29/2022	12.4
12/7/2022	12.4
6/1/2023	10.9
11/27/2023	13.2

Prediction Limit

Intrawell Non-parametric, C-2 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 17$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Arsenic Analysis Run 5/22/2024 4:54 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

Prediction Limit

Constituent: Arsenic (mg/l) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	C-2
3/28/2016	<0.01 (H)
5/31/2016	<0.01 (H)
7/18/2016	<0.01
11/14/2016	<0.01
3/29/2017	<0.01
6/12/2017	<0.01
11/27/2017	<0.01
3/30/2018	<0.01
9/28/2018	<0.01
3/21/2019	<0.01
9/6/2019	<0.01
3/5/2020	<0.01
9/16/2020	<0.01
3/10/2021	<0.01 (D)
9/2/2021	<0.01
3/30/2022	<0.01
12/8/2022	<0.01
5/31/2023	<0.01
11/28/2023	<0.01

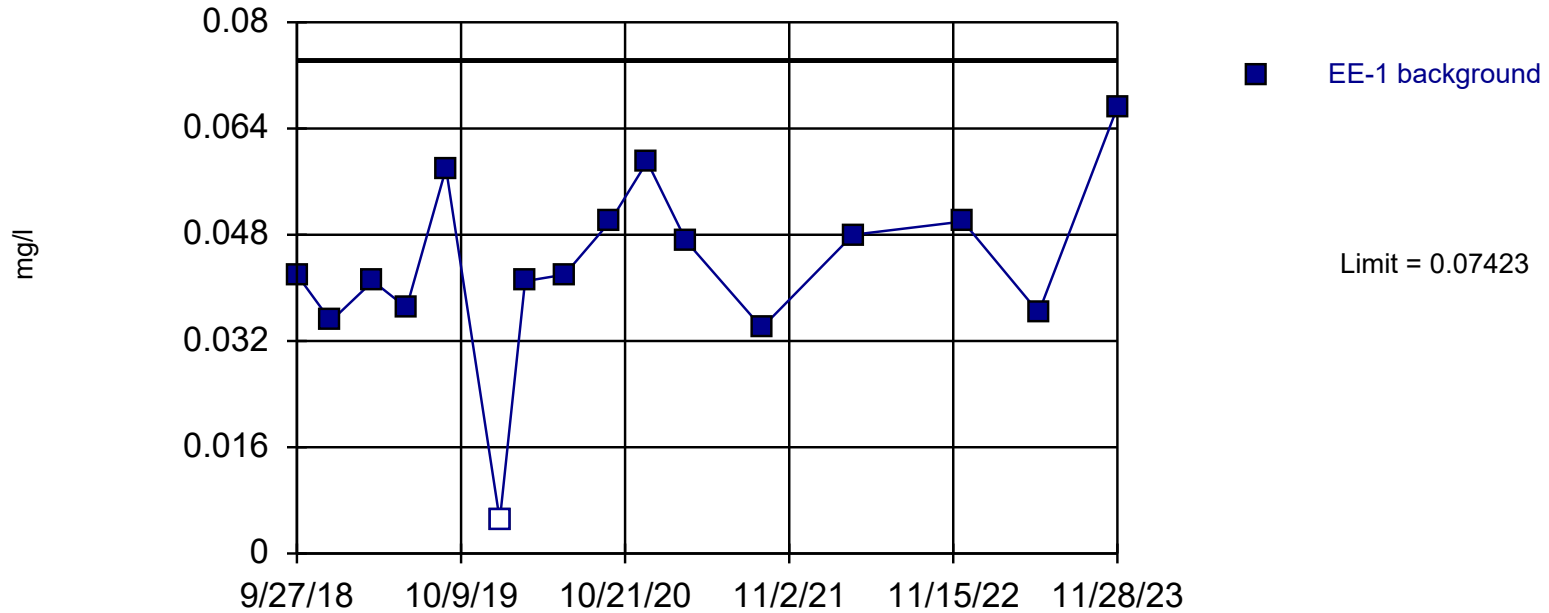
Prediction Limit

Constituent: Arsenic (mg/l) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	DD-1
5/22/1985	0.008 (H)
8/5/1985	0.005 (H)
11/20/1985	0.016 (H)
12/24/1985	<0.01 (H)
2/10/1986	0.015
5/19/1986	0.018
3/11/2015	<0.01
3/29/2016	<0.01
6/1/2016	<0.01
7/19/2016	<0.01
6/12/2017	<0.01
11/27/2017	<0.01
3/30/2018	<0.01
9/27/2018	0.01
3/22/2019	<0.01
9/5/2019	<0.01
3/3/2020	<0.01
9/17/2020	<0.01
3/11/2021	<0.01
9/1/2021	<0.01
3/30/2022	<0.01
12/8/2022	<0.01

Prediction Limit

Intrawell Parametric, EE-1



Background Data Summary: Mean=0.04328, Std. Dev.=0.01387, n=16, 6.25% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9042, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Arsenic Analysis Run 5/22/2024 4:54 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

Prediction Limit

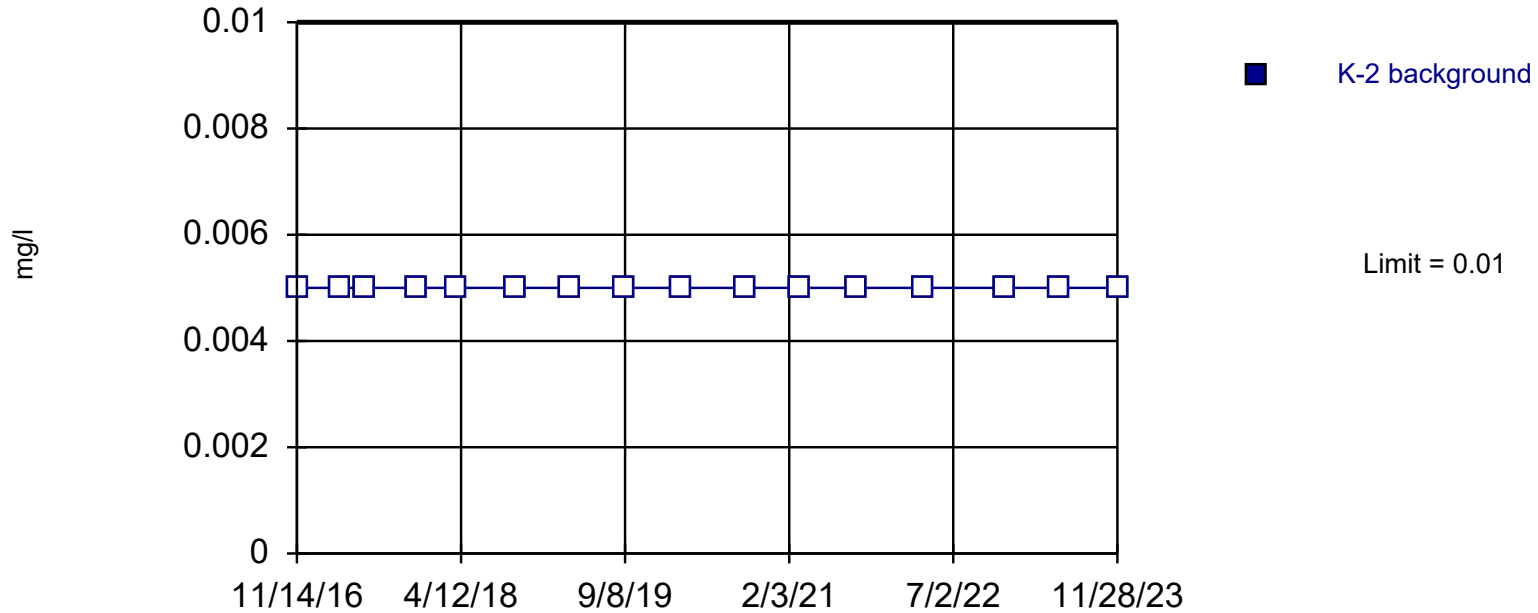
Constituent: Arsenic (mg/l) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

EE-1

5/22/1985	0.022 (H)
8/5/1985	0.017 (H)
11/20/1985	0.028 (H)
12/24/1985	0.018 (H)
2/10/1986	0.016 (H)
5/19/1986	0.025 (H)
7/29/1993	0.0096 (H)
3/12/2015	0.033 (H)
3/29/2016	0.031 (H)
6/1/2016	0.014 (H)
7/21/2016	0.014 (H)
6/12/2017	0.011 (H)
11/27/2017	<0.01 (H)
3/30/2018	<0.01 (H)
9/27/2018	0.042
12/14/2018	0.035
3/21/2019	0.041
6/6/2019	0.037
9/5/2019	0.058
1/7/2020	<0.01
3/5/2020	0.041
6/4/2020	0.042
9/17/2020	0.05
12/11/2020	0.059
3/11/2021	0.047
9/1/2021	0.034
3/30/2022	0.048
12/8/2022	0.05
5/31/2023	0.0363
11/28/2023	0.0672

Prediction Limit

Intrawell Non-parametric, K-2 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Arsenic Analysis Run 5/22/2024 4:54 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

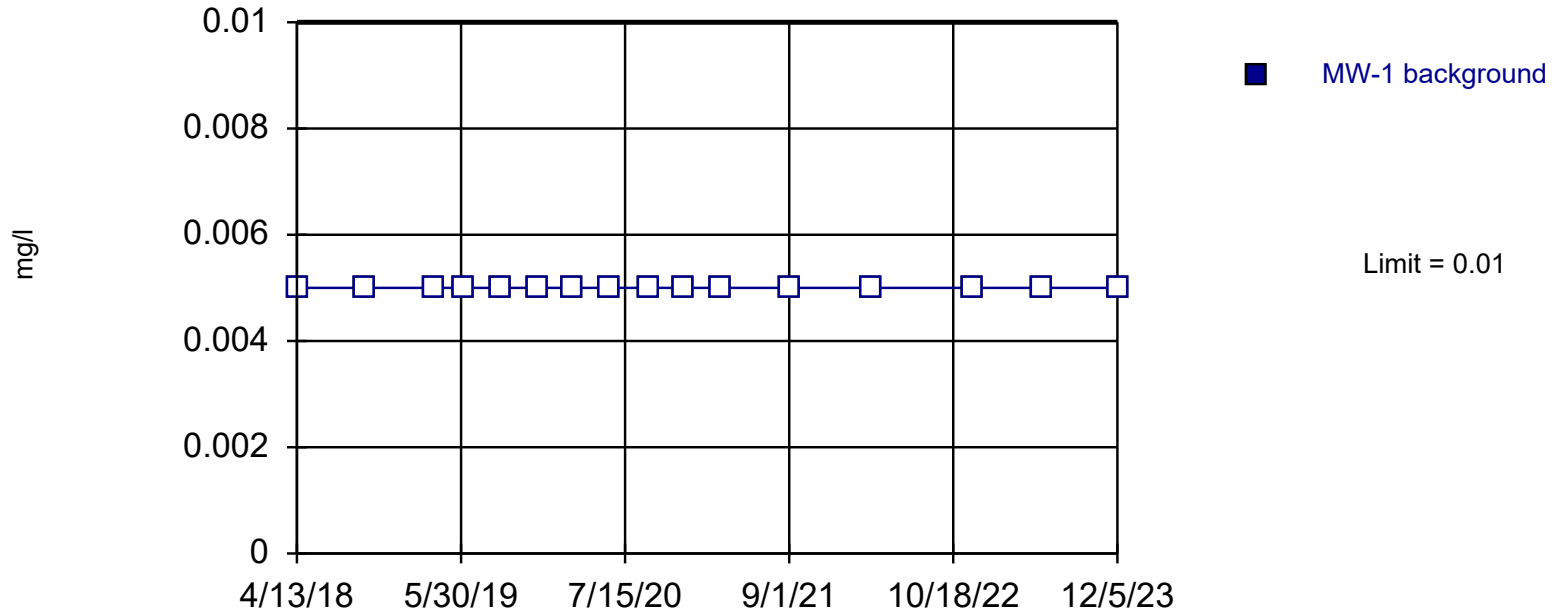
Prediction Limit

Constituent: Arsenic (mg/l) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	K-2
3/9/2015	<0.01 (H)
3/28/2016	<0.01 (H)
5/31/2016	<0.01 (H)
7/18/2016	<0.01 (H)
11/14/2016	<0.01
3/29/2017	<0.01
6/12/2017	<0.01
11/27/2017	<0.01
3/29/2018	<0.01
9/27/2018	<0.01
3/22/2019	<0.01
9/5/2019	<0.01
3/5/2020	<0.01
9/16/2020	<0.01
3/10/2021	<0.01
9/3/2021	<0.01
3/31/2022	<0.01
12/8/2022	<0.01
5/31/2023	<0.01
11/28/2023	<0.01

Prediction Limit

Intrawell Non-parametric, MW-1 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Arsenic Analysis Run 5/22/2024 4:54 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

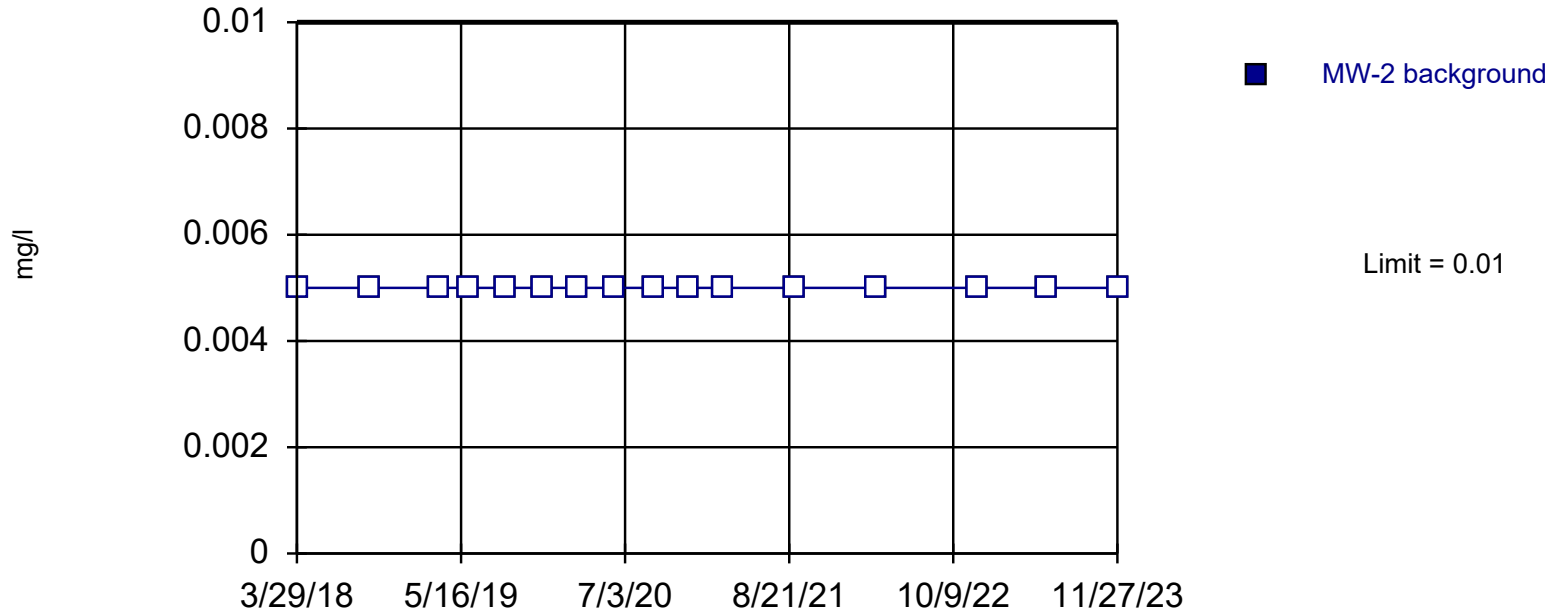
Prediction Limit

Constituent: Arsenic (mg/l) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-1
4/13/2018	<0.01
9/28/2018	<0.01
3/21/2019	<0.01
6/7/2019	<0.01
9/6/2019	<0.01
12/12/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/17/2020	<0.01
12/11/2020	<0.01
3/11/2021	<0.01
9/1/2021	<0.01
3/30/2022	<0.01
12/7/2022	<0.01
5/31/2023	<0.01
12/5/2023	<0.01

Prediction Limit

Intrawell Non-parametric, MW-2



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Arsenic Analysis Run 5/22/2024 4:54 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

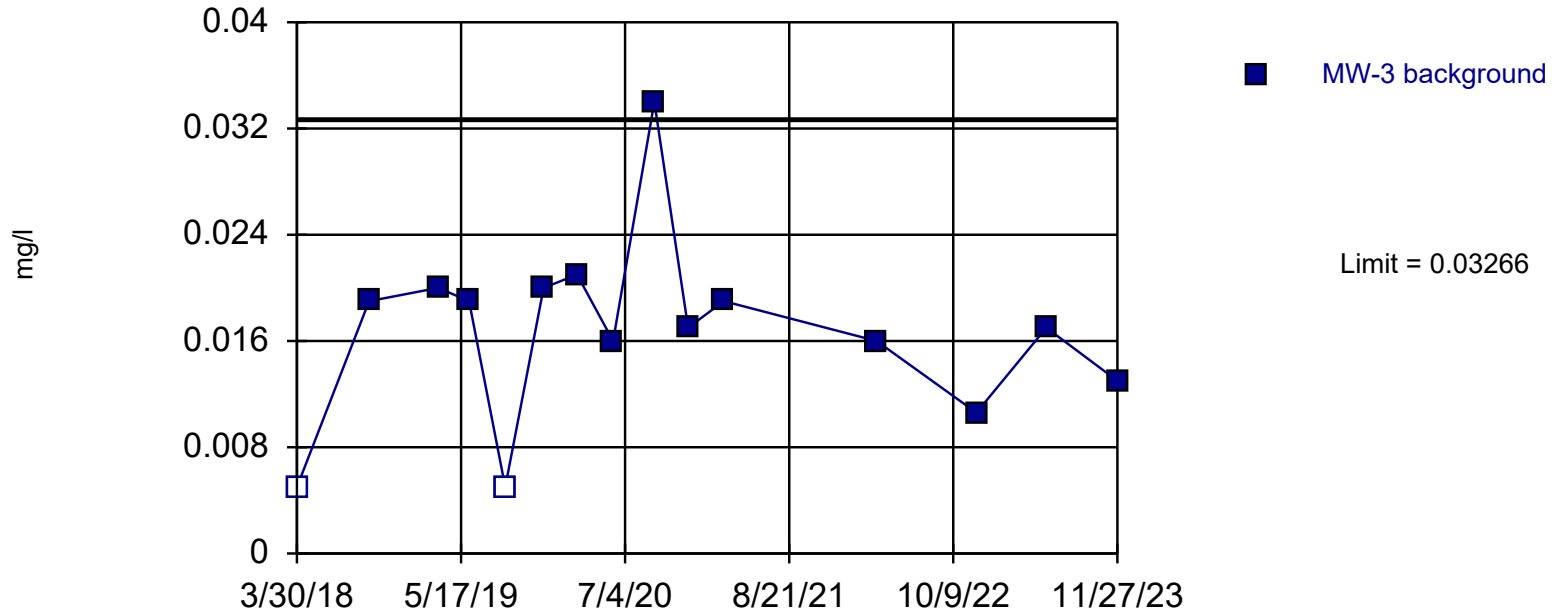
Prediction Limit

Constituent: Arsenic (mg/l) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-2
3/29/2018	<0.01
9/28/2018	<0.01
3/21/2019	<0.01
6/6/2019	<0.01
9/5/2019	<0.01
12/12/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/16/2020	<0.01
12/10/2020	<0.01
3/10/2021	<0.01
9/2/2021	<0.01 (D)
3/29/2022	<0.01
12/7/2022	<0.01
6/1/2023	<0.01
11/27/2023	<0.01

Prediction Limit

Intrawell Parametric, MW-3



Background Data Summary: Mean=0.01677, Std. Dev.=0.006975, n=15, 13.33% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8914, critical = 0.835. Kappa = 2.278 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Arsenic Analysis Run 5/22/2024 4:54 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

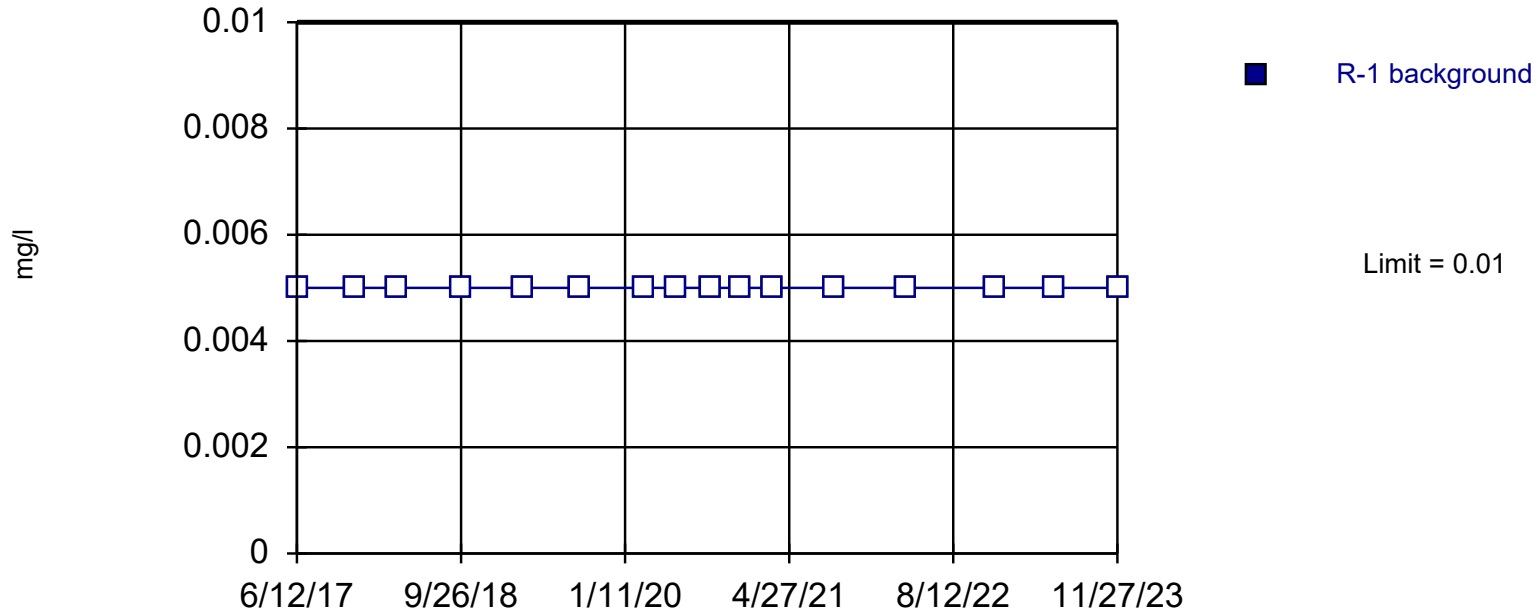
Prediction Limit

Constituent: Arsenic (mg/l) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-3
3/30/2018	<0.01
9/28/2018	0.019
3/21/2019	0.02
6/7/2019	0.019
9/6/2019	<0.01
12/12/2019	0.02
3/5/2020	0.021
6/4/2020	0.016
9/16/2020	0.034
12/10/2020	0.017
3/10/2021	0.019
9/1/2021	0.065 (S)
11/30/2021	0.03 (S)
3/30/2022	0.016
12/7/2022	0.0106
6/1/2023	0.017
11/27/2023	0.013

Prediction Limit

Intrawell Non-parametric, R-1



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Arsenic Analysis Run 5/22/2024 4:54 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

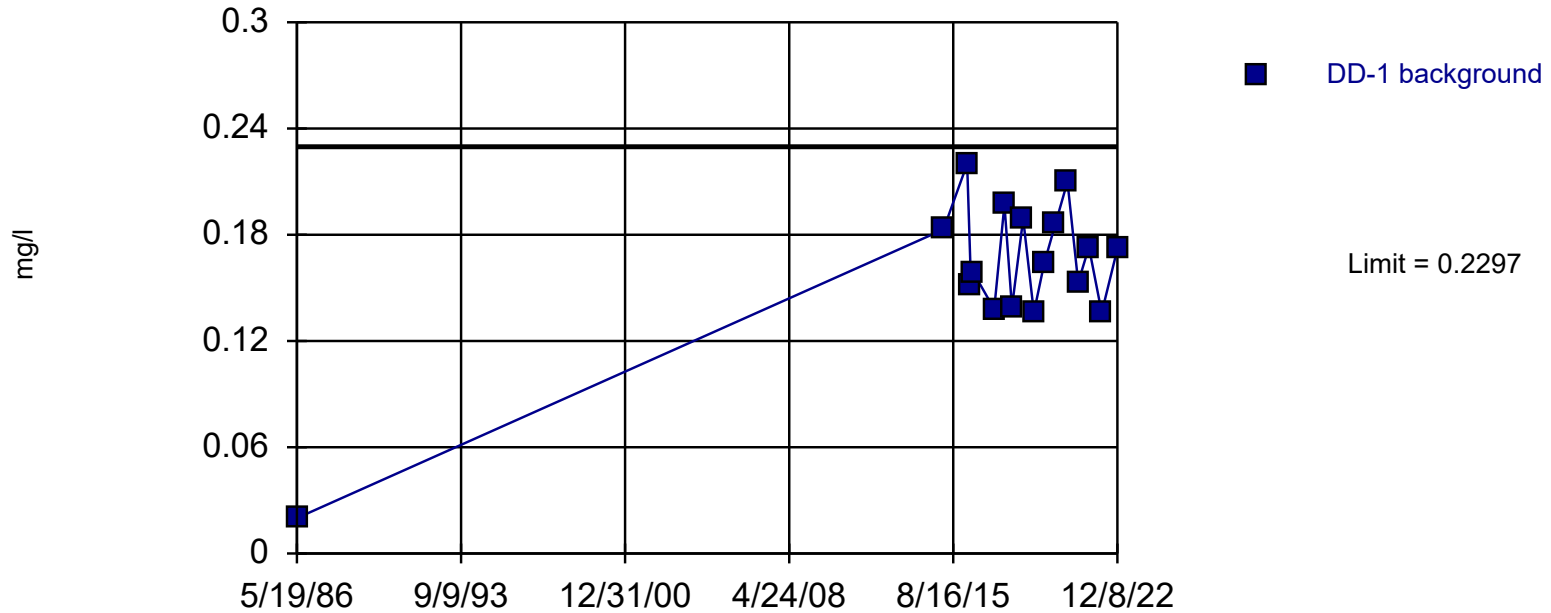
Prediction Limit

Constituent: Arsenic (mg/l) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	R-1
5/20/1985	0.005 (H)
11/4/1985	0.002 (H)
2/12/1986	0.002 (H)
5/12/1986	0.003 (H)
7/20/2016	<0.01 (H)
11/14/2016	<0.01 (H)
3/29/2017	<0.01 (H)
6/12/2017	<0.01
11/27/2017	<0.01
3/29/2018	<0.01
9/28/2018	<0.01
3/22/2019	<0.01
9/5/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/16/2020	<0.01
12/10/2020	<0.01
3/10/2021	<0.01
9/2/2021	<0.01
3/29/2022	<0.01
12/7/2022	<0.01
6/1/2023	<0.01
11/27/2023	<0.01

Prediction Limit

Intrawell Parametric, DD-1



Background Data Summary (based on square transformation): Mean=0.02757, Std. Dev.=0.01141, n=17. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9648, critical = 0.851. Kappa = 2.207 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Barium Analysis Run 5/22/2024 4:54 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

Prediction Limit

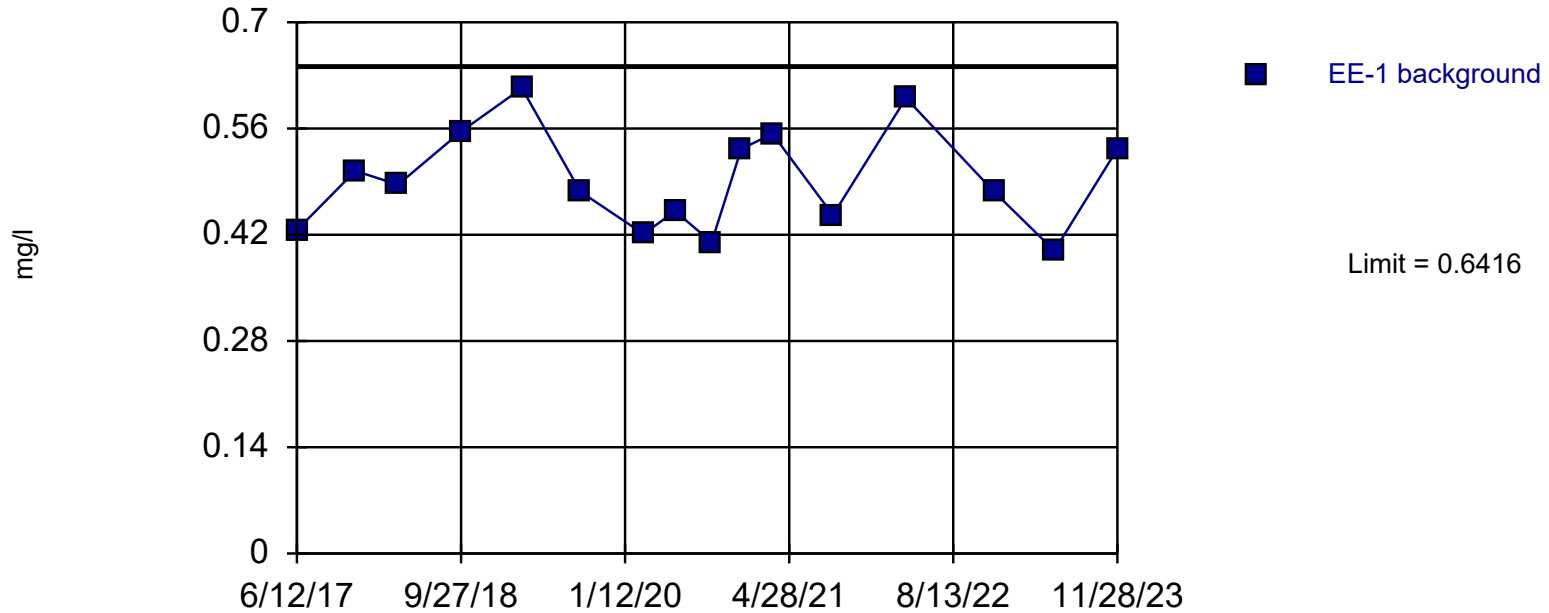
Constituent: Barium (mg/l) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

DD-1

5/22/1985	1.6 (H)
8/5/1985	1.6 (H)
11/20/1985	1.5 (H)
12/24/1985	<117 (H)
2/10/1986	1.8 (XO)
5/19/1986	0.02 (O)
3/11/2015	0.183
3/29/2016	0.22
6/1/2016	0.152
7/19/2016	0.158
6/12/2017	0.138
11/27/2017	0.197
3/30/2018	0.139
9/27/2018	0.189
3/22/2019	0.136
9/5/2019	0.164
3/3/2020	0.186
9/17/2020	0.21
3/11/2021	0.153
9/1/2021	0.173
3/30/2022	0.136
12/8/2022	0.172

Prediction Limit

Intrawell Parametric, EE-1



Background Data Summary: Mean=0.4928, Std. Dev.=0.06667, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9523, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Barium Analysis Run 5/22/2024 4:54 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

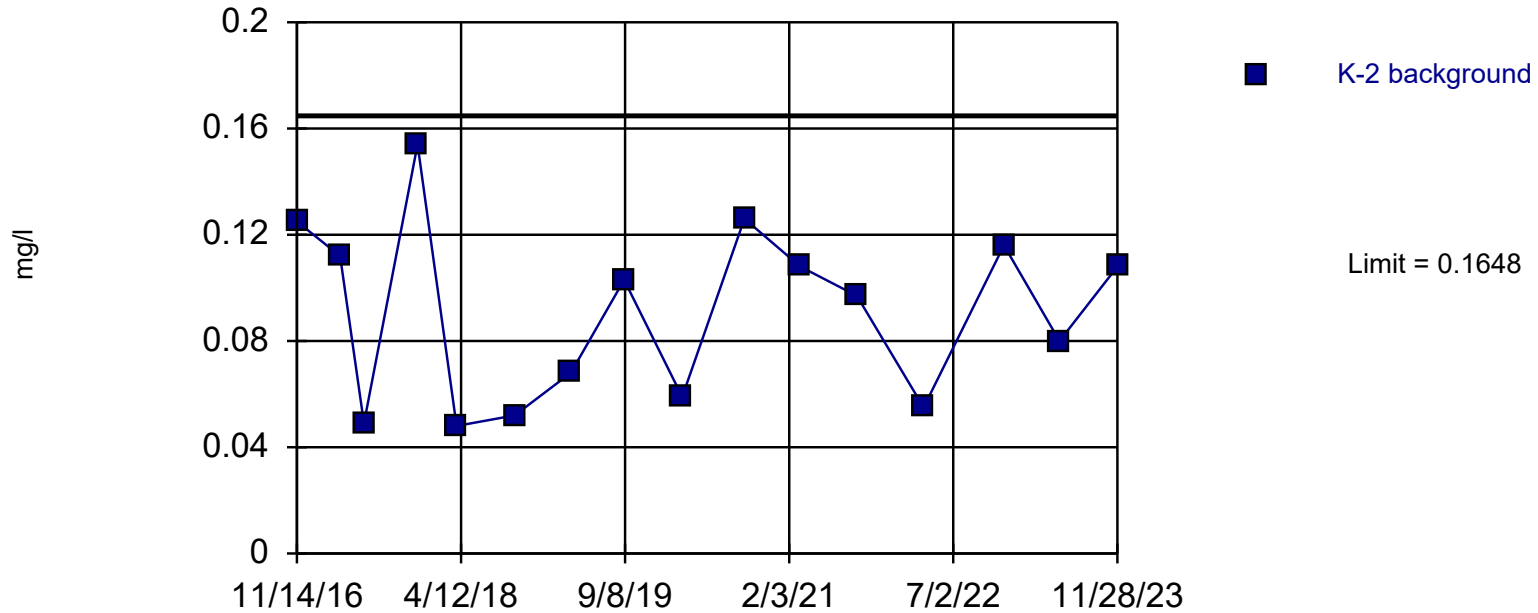
Prediction Limit

Constituent: Barium (mg/l) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	EE-1
5/22/1985	0.4 (H)
8/5/1985	0.23 (H)
11/20/1985	0.4 (H)
12/24/1985	0.31 (H)
2/10/1986	0.48 (H)
5/19/1986	0.32 (H)
7/29/1993	0.16 (H)
3/12/2015	0.626 (H)
3/29/2016	0.605 (H)
6/1/2016	0.498 (H)
7/21/2016	0.368 (H)
6/12/2017	0.426
11/27/2017	0.504
3/30/2018	0.486
9/27/2018	0.556
3/21/2019	0.613
9/5/2019	0.477
3/5/2020	0.421
6/4/2020	0.451
9/17/2020	0.41
12/11/2020	0.533
3/11/2021	0.553
9/1/2021	0.446
3/30/2022	0.6
12/8/2022	0.477
5/31/2023	0.399
11/28/2023	0.533

Prediction Limit

Intrawell Parametric, K-2 (bg)



Background Data Summary: Mean=0.09125, Std. Dev.=0.03294, n=16. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9238, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Barium Analysis Run 5/22/2024 4:54 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

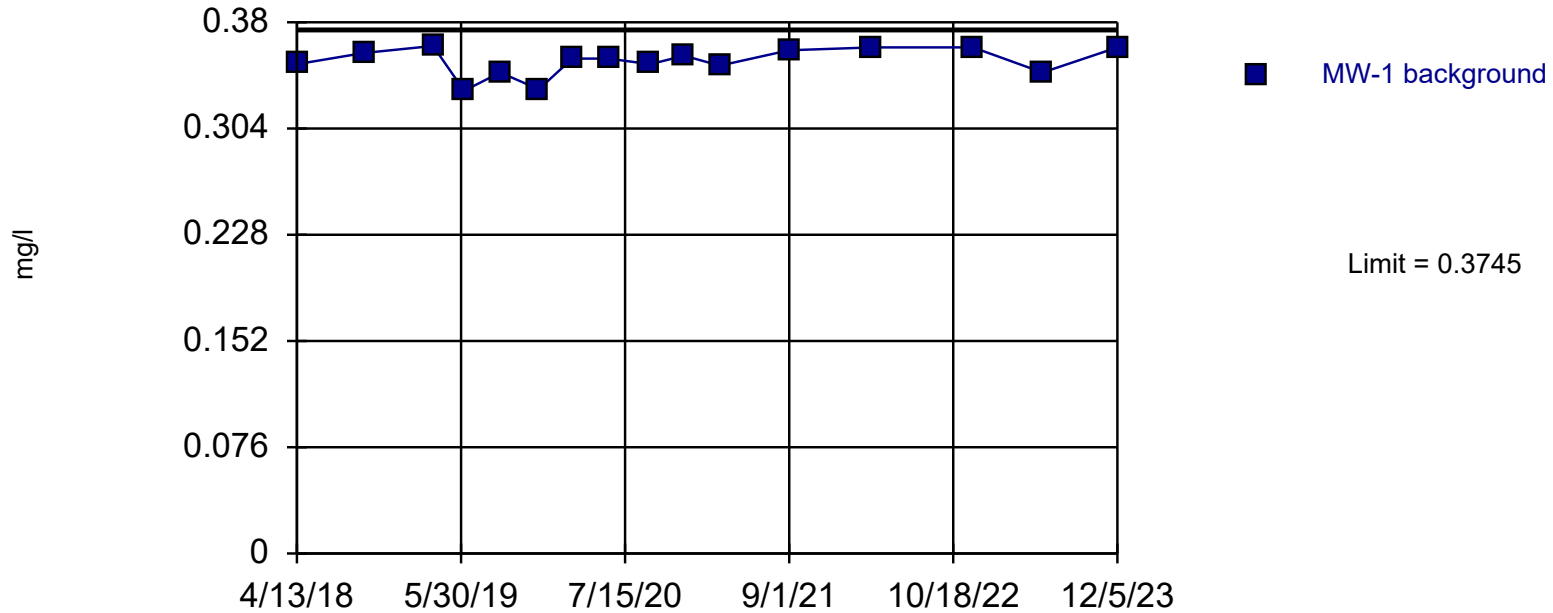
Prediction Limit

Constituent: Barium (mg/l) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	K-2
3/9/2015	0.396 (H)
3/28/2016	0.289 (H)
5/31/2016	0.378 (H)
7/18/2016	0.404 (H)
11/14/2016	0.125
3/29/2017	0.112
6/12/2017	0.049
11/27/2017	0.154
3/29/2018	0.048
9/27/2018	0.052
3/22/2019	0.068
9/5/2019	0.103
3/5/2020	0.059
9/16/2020	0.126
3/10/2021	0.108
9/3/2021	0.097
3/31/2022	0.055
12/8/2022	0.116
5/31/2023	0.08
11/28/2023	0.108

Prediction Limit

Intrawell Parametric, MW-1 (bg)



Background Data Summary: Mean=0.3519, Std. Dev.=0.0101, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.886, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Barium Analysis Run 5/22/2024 4:54 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

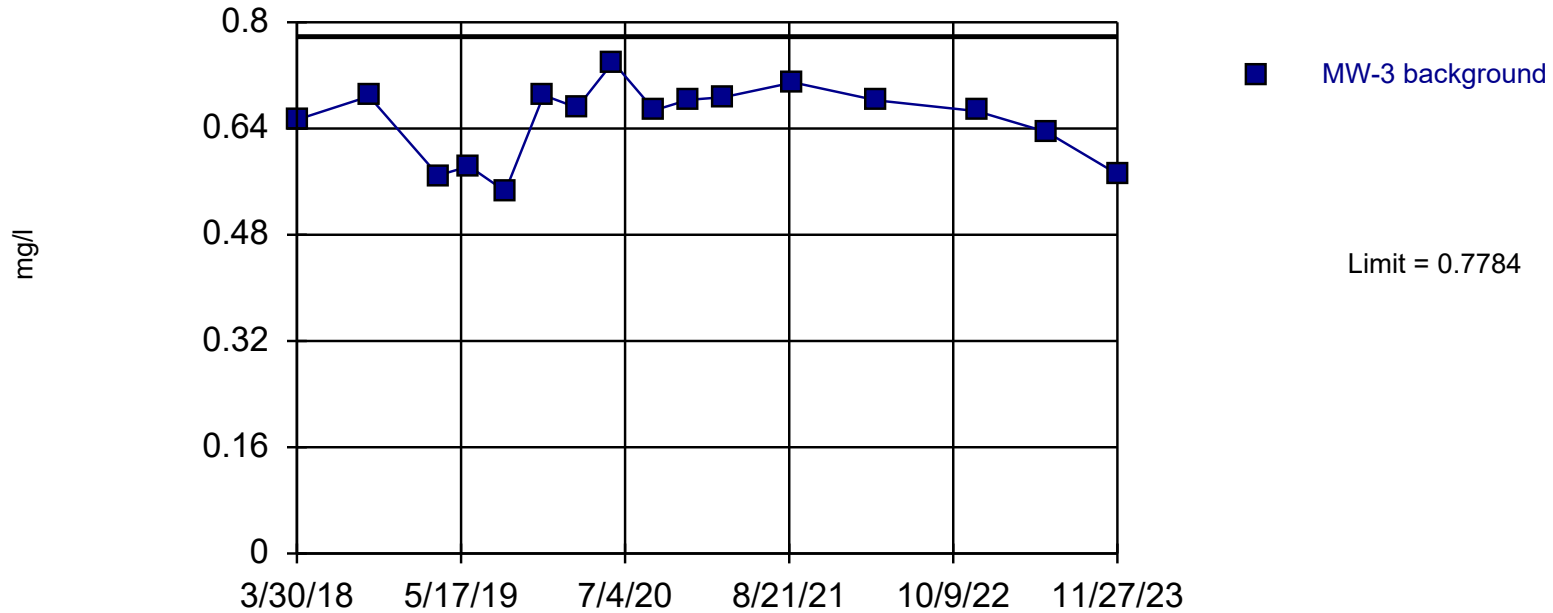
Prediction Limit

Constituent: Barium (mg/l) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-1
4/13/2018	0.35
9/28/2018	0.358
3/21/2019	0.363
6/7/2019	0.331
9/6/2019	0.344
12/12/2019	0.332
3/5/2020	0.354
6/4/2020	0.354
9/17/2020	0.35
12/11/2020	0.356
3/11/2021	0.349
9/1/2021	0.36
3/30/2022	0.362
12/7/2022	0.362
5/31/2023	0.344
12/5/2023	0.362

Prediction Limit

Intrawell Parametric, MW-3



Background Data Summary: Mean=0.6527, Std. Dev.=0.0563, n=16. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8971, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Barium Analysis Run 5/22/2024 4:54 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

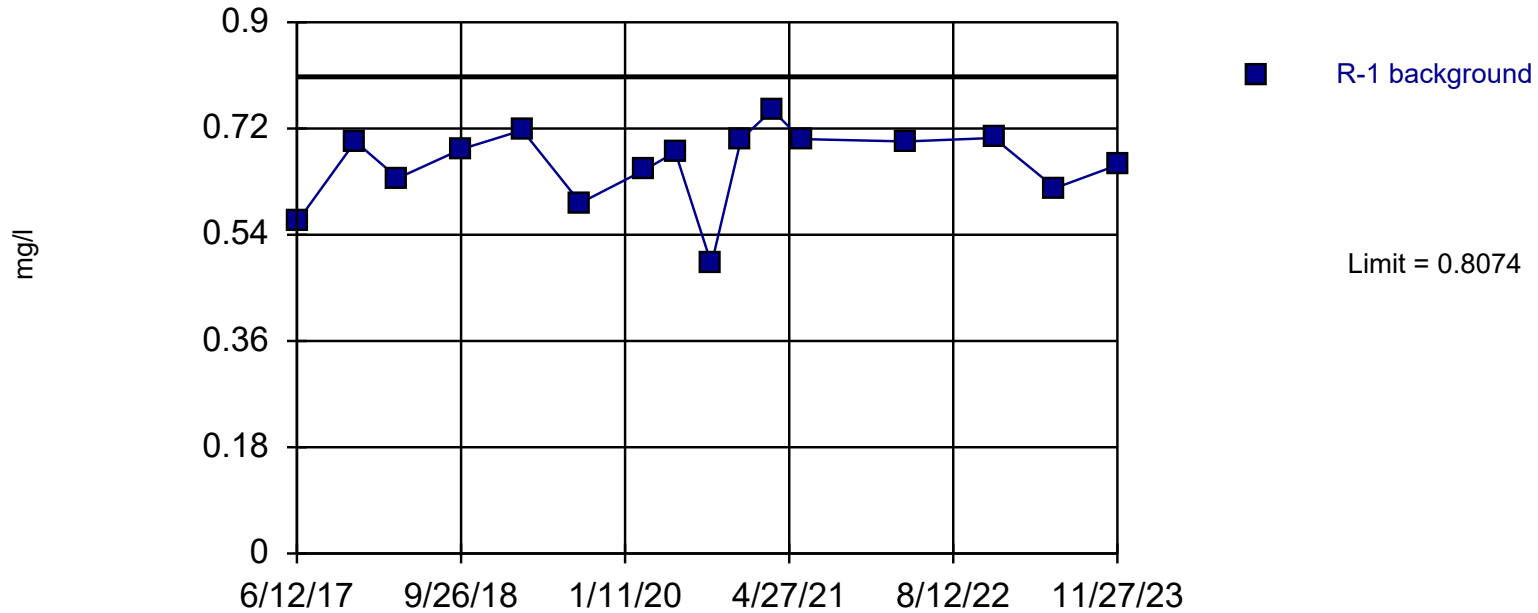
Prediction Limit

Constituent: Barium (mg/l) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-3
3/30/2018	0.592
9/28/2018	0.819
3/21/2019	0.508
6/7/2019	0.494
9/6/2019	0.676
12/12/2019	0.703
3/5/2020	0.61
6/4/2020	0.651
9/16/2020	0.798
12/10/2020	0.696
3/10/2021	0.626
9/1/2021	0.84
3/30/2022	0.621
12/7/2022	0.679
6/1/2023	0.546
11/27/2023	0.584

Prediction Limit

Intrawell Parametric, R-1



Background Data Summary: Mean=0.659, Std. Dev.=0.0665, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.898, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Barium Analysis Run 5/22/2024 4:54 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

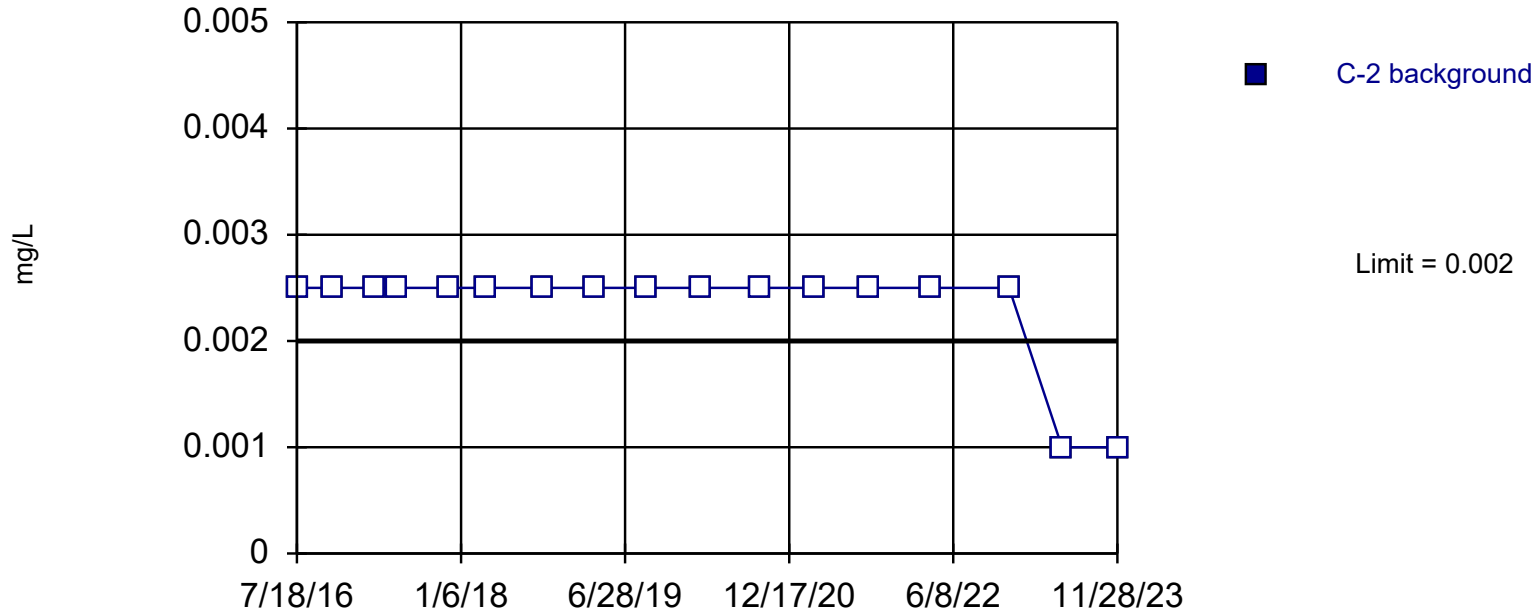
Prediction Limit

Constituent: Barium (mg/l) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	R-1
5/20/1985	0.18 (H)
11/4/1985	0.26 (H)
2/12/1986	0.19 (H)
5/12/1986	0.14 (H)
7/20/2016	0.085 (H)
11/14/2016	0.705 (H)
3/29/2017	0.682 (H)
6/12/2017	0.561
11/27/2017	0.698
3/29/2018	0.636
9/28/2018	0.685
3/22/2019	0.717
9/5/2019	0.594
3/5/2020	0.649
6/4/2020	0.68
9/16/2020	0.49
12/10/2020	0.702
3/10/2021	0.751
6/1/2021	0.702
9/2/2021	0.774 (S)
11/30/2021	0.975 (S)
3/29/2022	0.698
12/7/2022	0.704
6/1/2023	0.619
11/27/2023	0.658

Prediction Limit

Intrawell Non-parametric, C-2 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 17$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Cadmium Analysis Run 5/22/2024 4:55 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

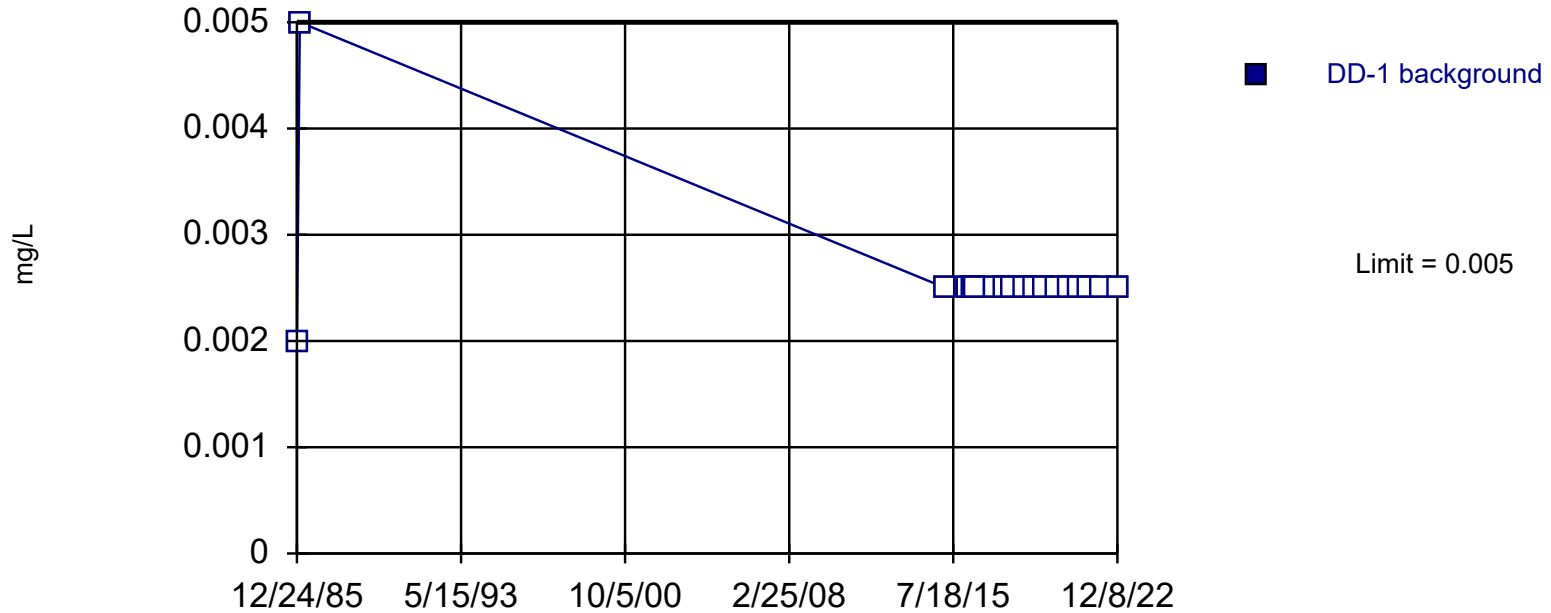
Prediction Limit

Constituent: Cadmium (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	C-2
3/28/2016	<0.005 (H)
5/31/2016	<0.005 (H)
7/18/2016	<0.005
11/14/2016	<0.005
3/29/2017	<0.005
6/12/2017	<0.005
11/27/2017	<0.005
3/30/2018	<0.005
9/28/2018	<0.005
3/21/2019	<0.005
9/6/2019	<0.005
3/5/2020	<0.005
9/16/2020	<0.005
3/10/2021	<0.005 (D)
9/2/2021	<0.005
3/30/2022	<0.005
12/8/2022	<0.005
5/31/2023	<0.002
11/28/2023	<0.002

Prediction Limit

Intrawell Non-parametric, DD-1



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 18$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01072. Individual comparison alpha = 0.005373 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Cadmium Analysis Run 5/22/2024 4:55 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

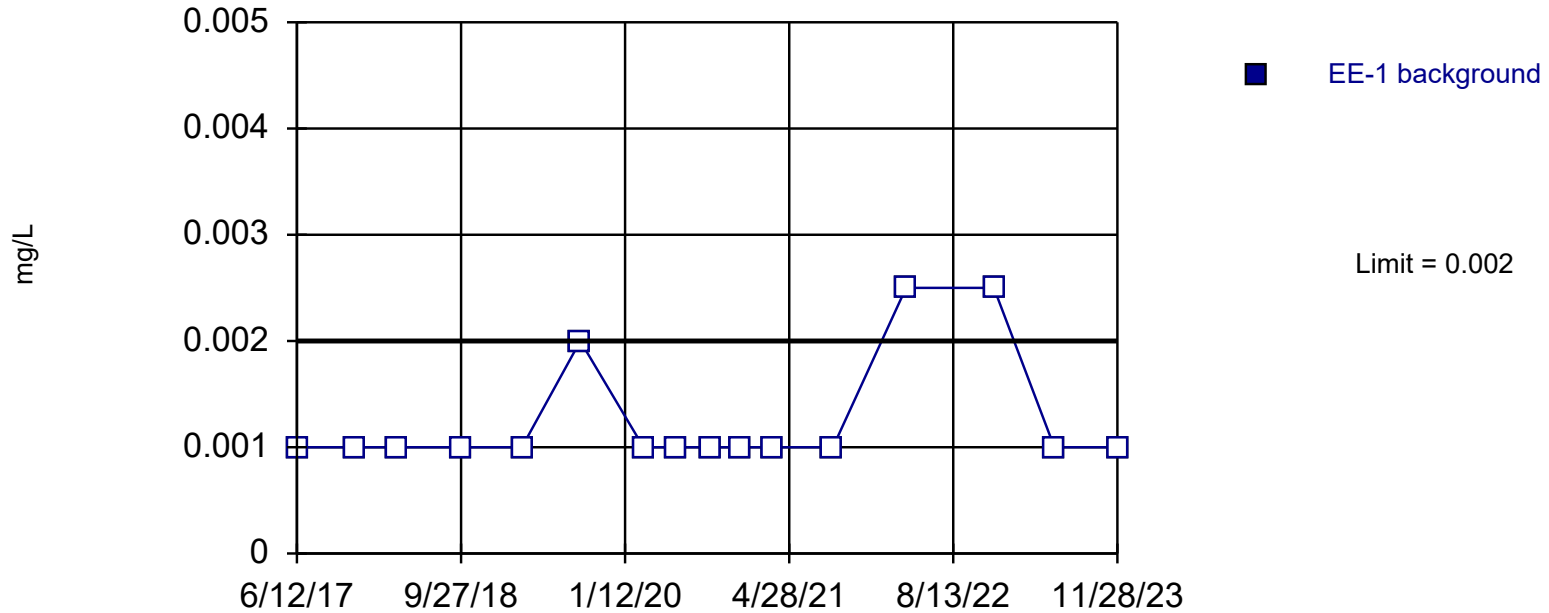
Prediction Limit

Constituent: Cadmium (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	DD-1
5/22/1985	<0.01 (H)
8/5/1985	<0.01 (H)
11/20/1985	<0.01 (H)
12/24/1985	<0.004
2/10/1986	<0.01
3/11/2015	<0.005
3/29/2016	<0.005
6/1/2016	<0.005
7/19/2016	<0.005
6/12/2017	<0.005
11/27/2017	<0.005
3/30/2018	<0.005
9/27/2018	<0.005
3/22/2019	<0.005
9/5/2019	<0.005
3/3/2020	<0.005
9/17/2020	<0.005
3/11/2021	<0.005
9/1/2021	<0.005
3/30/2022	<0.005
12/8/2022	<0.005

Prediction Limit

Intrawell Non-parametric, EE-1



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Cadmium Analysis Run 5/22/2024 4:55 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

Prediction Limit

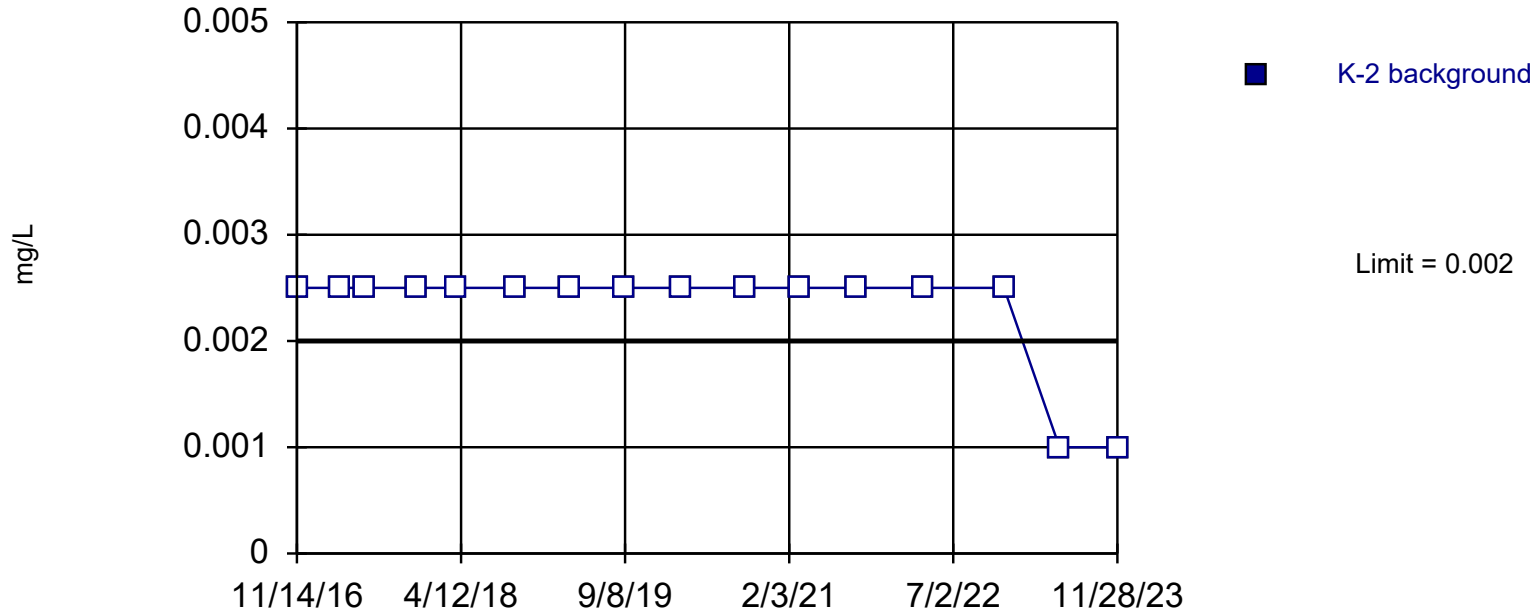
Constituent: Cadmium (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

EE-1

5/22/1985	<0.01 (H)
8/5/1985	<0.01 (H)
11/20/1985	<0.01 (H)
12/24/1985	<0.04 (H)
2/10/1986	<0.01 (H)
3/12/2015	<0.005 (H)
3/29/2016	<0.005 (H)
6/1/2016	<0.005 (H)
7/21/2016	<0.005 (H)
6/12/2017	<0.002
11/27/2017	<0.002
3/30/2018	<0.002
9/27/2018	<0.002
3/21/2019	<0.002
9/5/2019	<0.004
3/5/2020	<0.002
6/4/2020	<0.002
9/17/2020	<0.002
12/11/2020	<0.002
3/11/2021	<0.002
9/1/2021	<0.002
3/30/2022	<0.005
12/8/2022	<0.005
5/31/2023	<0.002
11/28/2023	<0.002

Prediction Limit

Intrawell Non-parametric, K-2 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Cadmium Analysis Run 5/22/2024 4:55 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

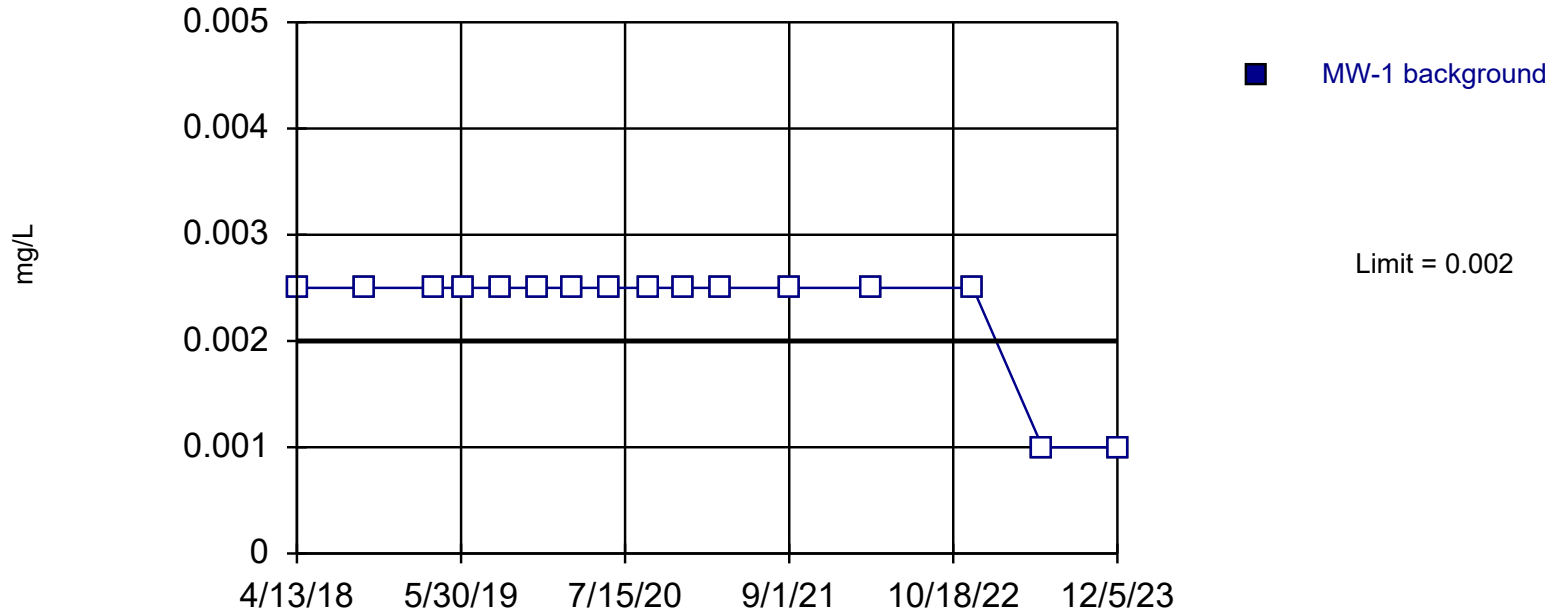
Prediction Limit

Constituent: Cadmium (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	K-2
3/9/2015	0.005 (H)
3/28/2016	<0.005 (H)
5/31/2016	<0.005 (H)
7/18/2016	<0.005 (H)
11/14/2016	<0.005
3/29/2017	<0.005
6/12/2017	<0.005
11/27/2017	<0.005
3/29/2018	<0.005
9/27/2018	<0.005
3/22/2019	<0.005
9/5/2019	<0.005
3/5/2020	<0.005
9/16/2020	<0.005
3/10/2021	<0.005
9/3/2021	<0.005
3/31/2022	<0.005
12/8/2022	<0.005
5/31/2023	<0.002
11/28/2023	<0.002

Prediction Limit

Intrawell Non-parametric, MW-1 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Cadmium Analysis Run 5/22/2024 4:55 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

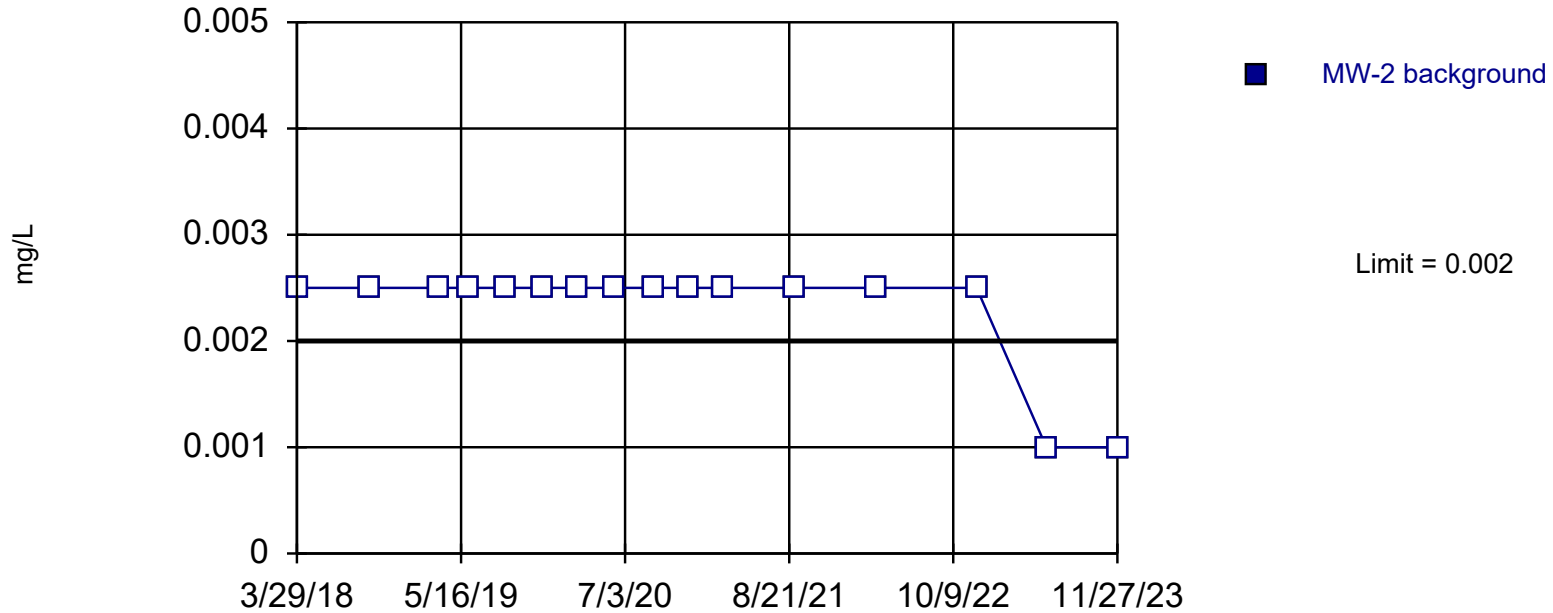
Prediction Limit

Constituent: Cadmium (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-1
4/13/2018	<0.005
9/28/2018	<0.005
3/21/2019	<0.005
6/7/2019	<0.005
9/6/2019	<0.005
12/12/2019	<0.005
3/5/2020	<0.005
6/4/2020	<0.005
9/17/2020	<0.005
12/11/2020	<0.005
3/11/2021	<0.005
9/1/2021	<0.005
3/30/2022	<0.005
12/7/2022	<0.005
5/31/2023	<0.002
12/5/2023	<0.002

Prediction Limit

Intrawell Non-parametric, MW-2



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Cadmium Analysis Run 5/22/2024 4:55 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

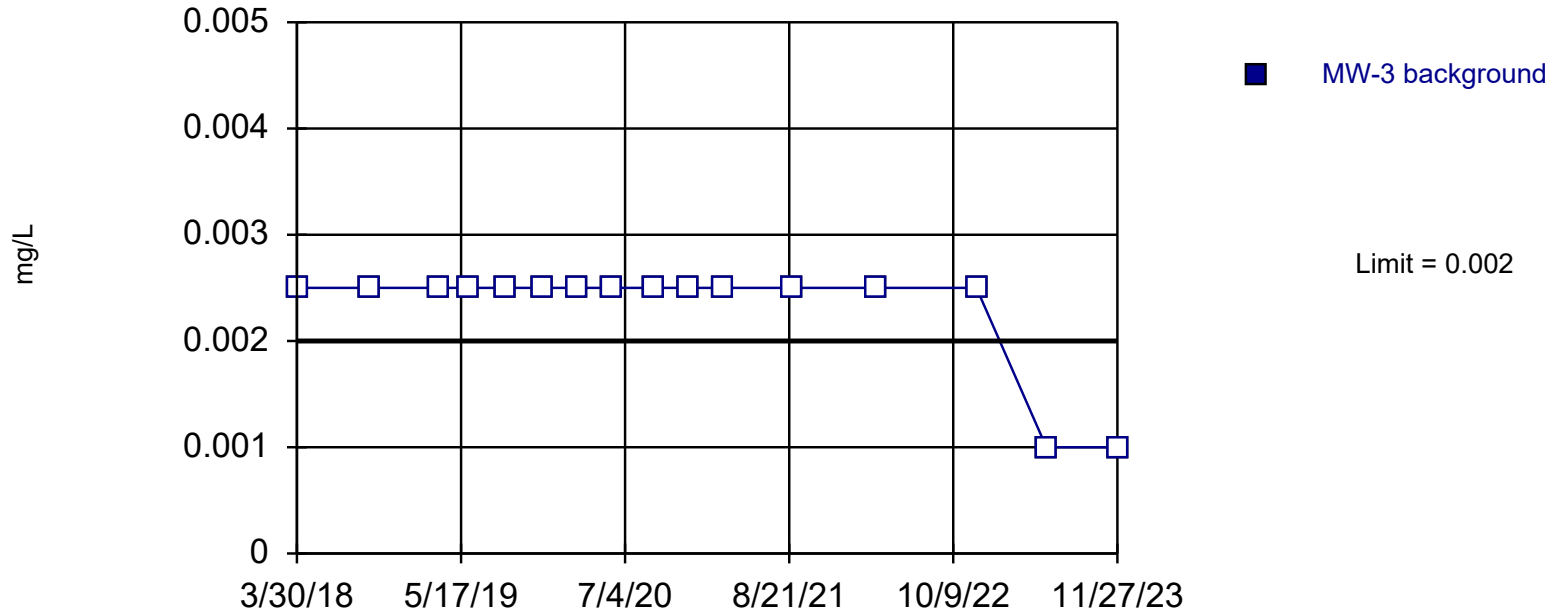
Prediction Limit

Constituent: Cadmium (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-2
3/29/2018	<0.005
9/28/2018	<0.005
3/21/2019	<0.005
6/6/2019	<0.005
9/5/2019	<0.005
12/12/2019	<0.005
3/5/2020	<0.005
6/4/2020	<0.005
9/16/2020	<0.005
12/10/2020	<0.005
3/10/2021	<0.005
9/2/2021	<0.005 (D)
3/29/2022	<0.005
12/7/2022	<0.005
6/1/2023	<0.002
11/27/2023	<0.002

Prediction Limit

Intrawell Non-parametric, MW-3



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Cadmium Analysis Run 5/22/2024 4:55 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

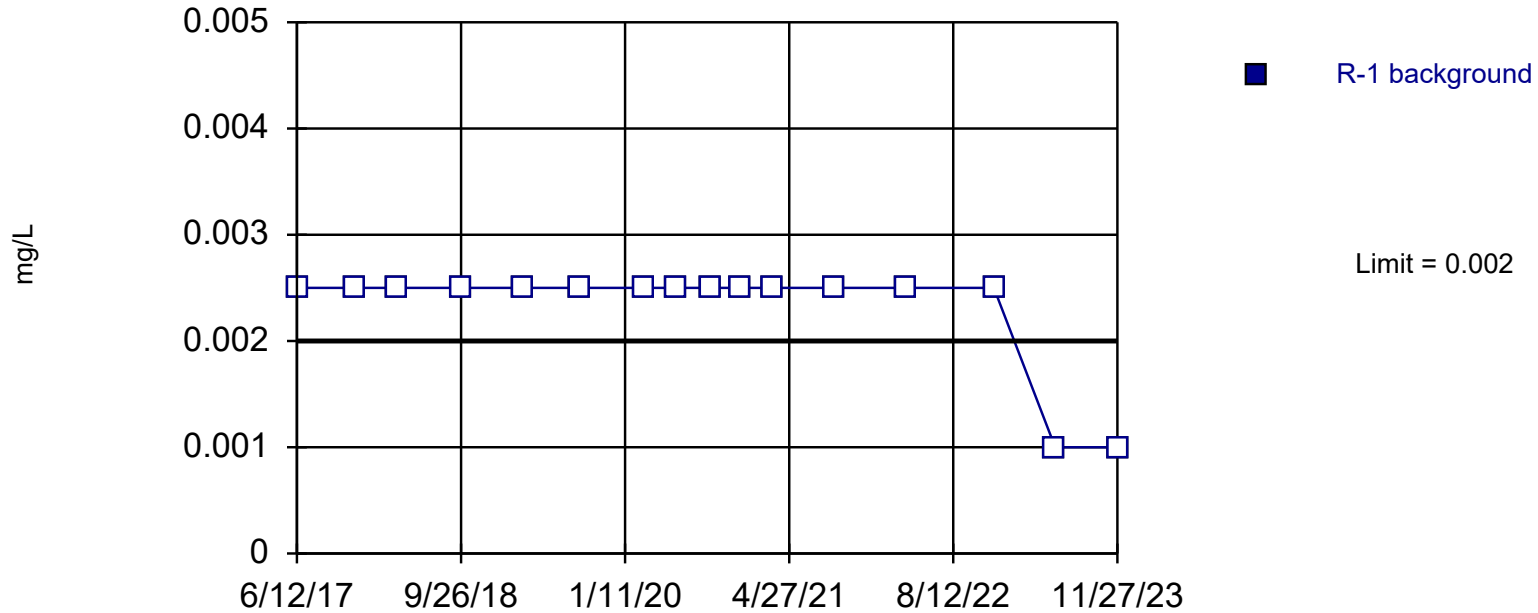
Prediction Limit

Constituent: Cadmium (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-3
3/30/2018	<0.005
9/28/2018	<0.005
3/21/2019	<0.005
6/7/2019	<0.005
9/6/2019	<0.005
12/12/2019	<0.005
3/5/2020	<0.005
6/4/2020	<0.005
9/16/2020	<0.005
12/10/2020	<0.005
3/10/2021	<0.005
9/1/2021	<0.005
3/30/2022	<0.005
12/7/2022	<0.005
6/1/2023	<0.002
11/27/2023	<0.002

Prediction Limit

Intrawell Non-parametric, R-1



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Cadmium Analysis Run 5/22/2024 4:55 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

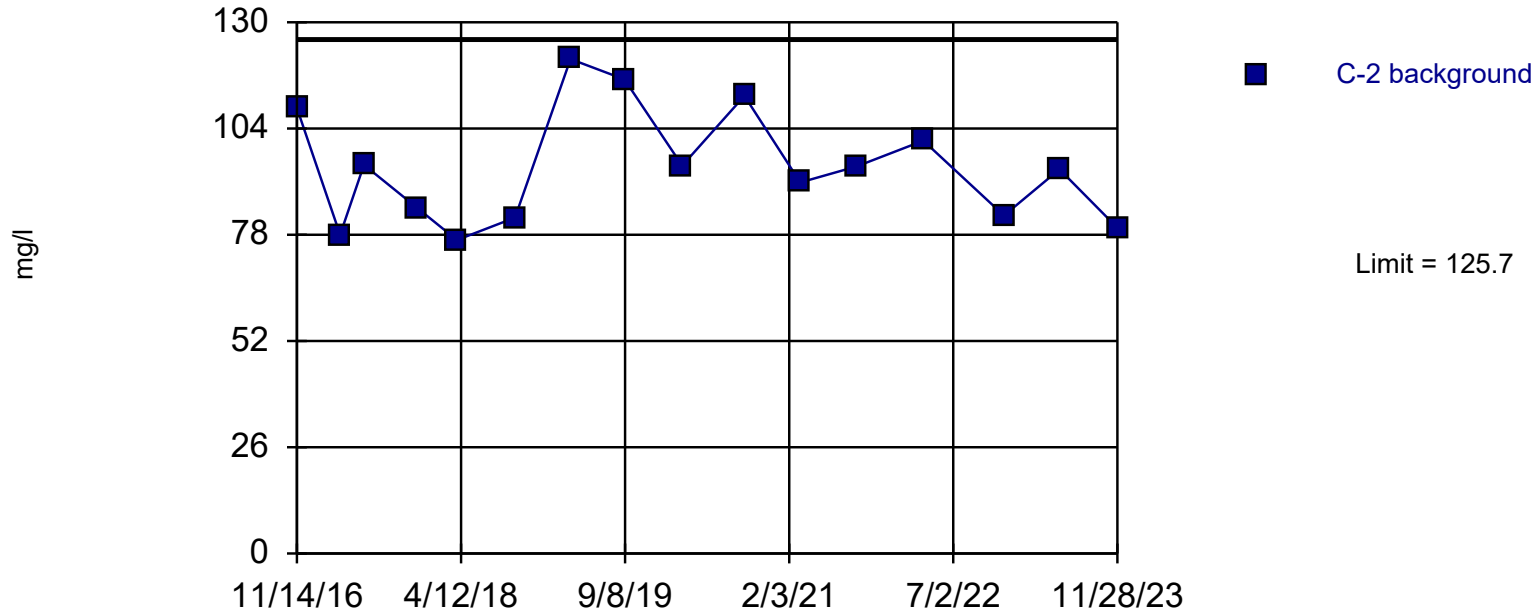
Prediction Limit

Constituent: Cadmium (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	R-1
5/20/1985	<0.01 (H)
11/4/1985	<0.01 (H)
2/12/1986	<0.01 (H)
7/20/2016	<0.005 (H)
11/14/2016	<0.005 (H)
3/29/2017	<0.005 (H)
6/12/2017	<0.005
11/27/2017	<0.005
3/29/2018	<0.005
9/28/2018	<0.005
3/22/2019	<0.005
9/5/2019	<0.005
3/5/2020	<0.005
6/4/2020	<0.005
9/16/2020	<0.005
12/10/2020	<0.005
3/10/2021	<0.005
9/2/2021	<0.005
3/29/2022	<0.005
12/7/2022	<0.005
6/1/2023	<0.002
11/27/2023	<0.002

Prediction Limit

Intrawell Parametric, C-2 (bg)



Background Data Summary: Mean=94.52, Std. Dev.=13.99, n=16. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9283, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Calcium Analysis Run 5/22/2024 4:55 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

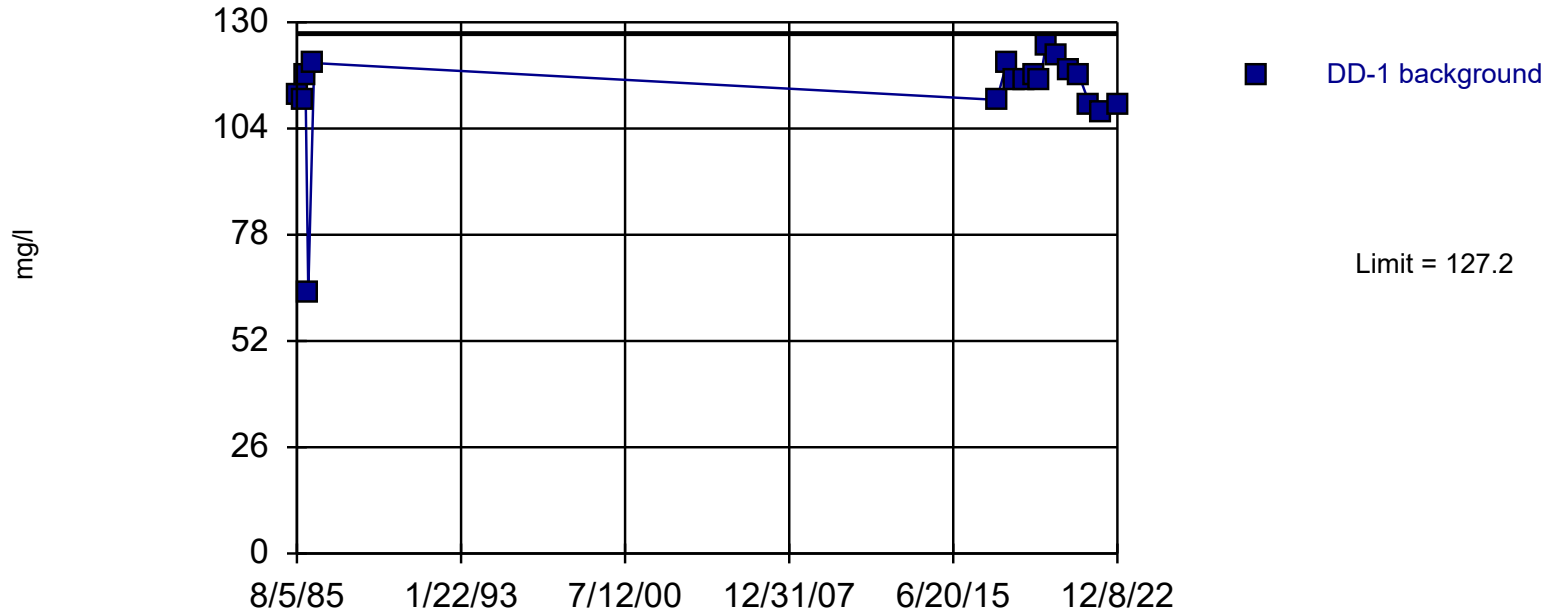
Prediction Limit

Constituent: Calcium (mg/l) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	C-2
11/14/2016	109
3/29/2017	78
6/12/2017	95.1
11/27/2017	84.5
3/30/2018	76.7
9/28/2018	82.2
3/21/2019	121
9/6/2019	116
3/5/2020	94.9
9/16/2020	112
3/10/2021	90.8 (D)
9/2/2021	94.7
3/30/2022	101
12/8/2022	82.7
5/31/2023	94
11/28/2023	79.7

Prediction Limit

Intrawell Parametric, DD-1



Background Data Summary (based on x^5 transformation): Mean= $2.0e10$, Std. Dev.= $6.2e9$, $n=18$. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @ $\alpha = 0.01$, calculated = 0.8742, critical = 0.858. Kappa = 2.182 ($c=43$, $w=1$, 1 of 2, event $\alpha = 0.05132$). Report $\alpha = 0.001224$. Assumes 1 future value.

Constituent: Calcium Analysis Run 5/22/2024 4:55 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

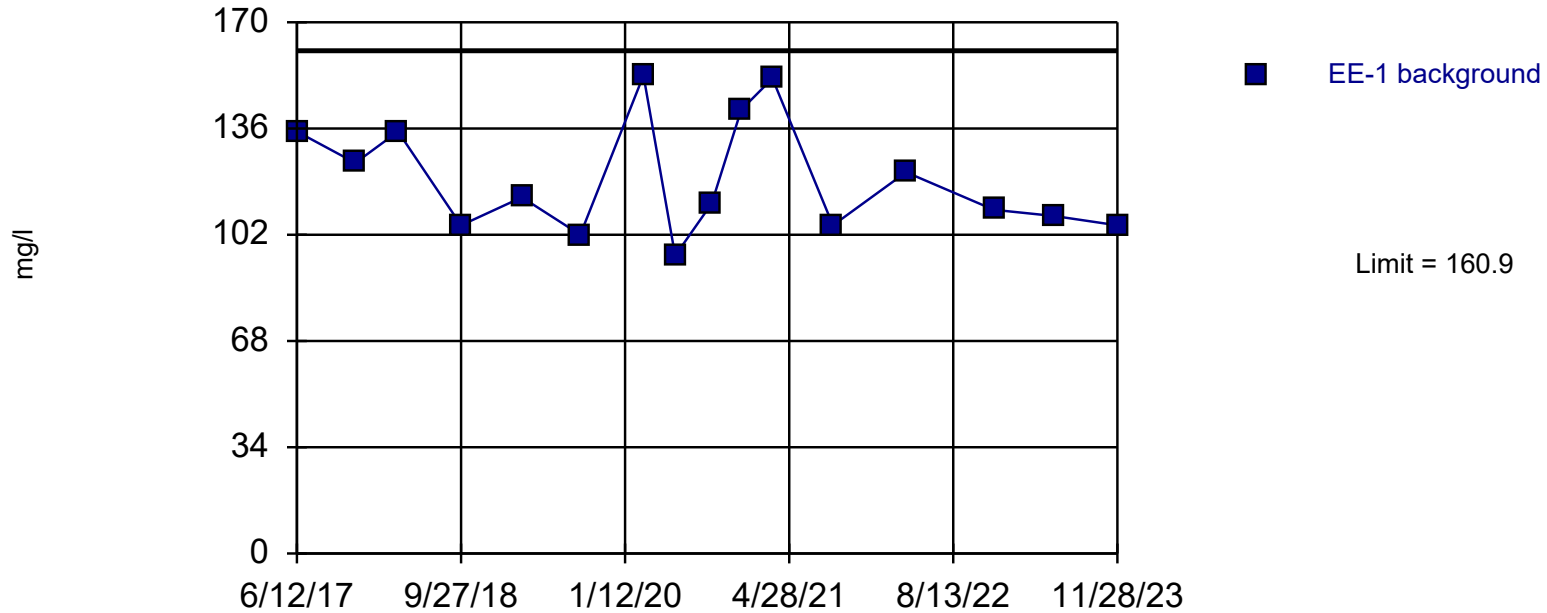
Prediction Limit

Constituent: Calcium (mg/l) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	DD-1
5/22/1985	115 (H)
8/5/1985	112
11/20/1985	111
12/24/1985	117
2/10/1986	64 (O)
5/19/1986	120
6/12/2017	111
11/27/2017	120
3/30/2018	116
9/27/2018	116
3/22/2019	117
6/6/2019	116
9/5/2019	124
3/3/2020	122
9/17/2020	118
3/11/2021	117
9/1/2021	110
3/30/2022	108
12/8/2022	110

Prediction Limit

Intrawell Parametric, EE-1



Background Data Summary: Mean=120, Std. Dev.=18.31, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9078, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Calcium Analysis Run 5/22/2024 4:55 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

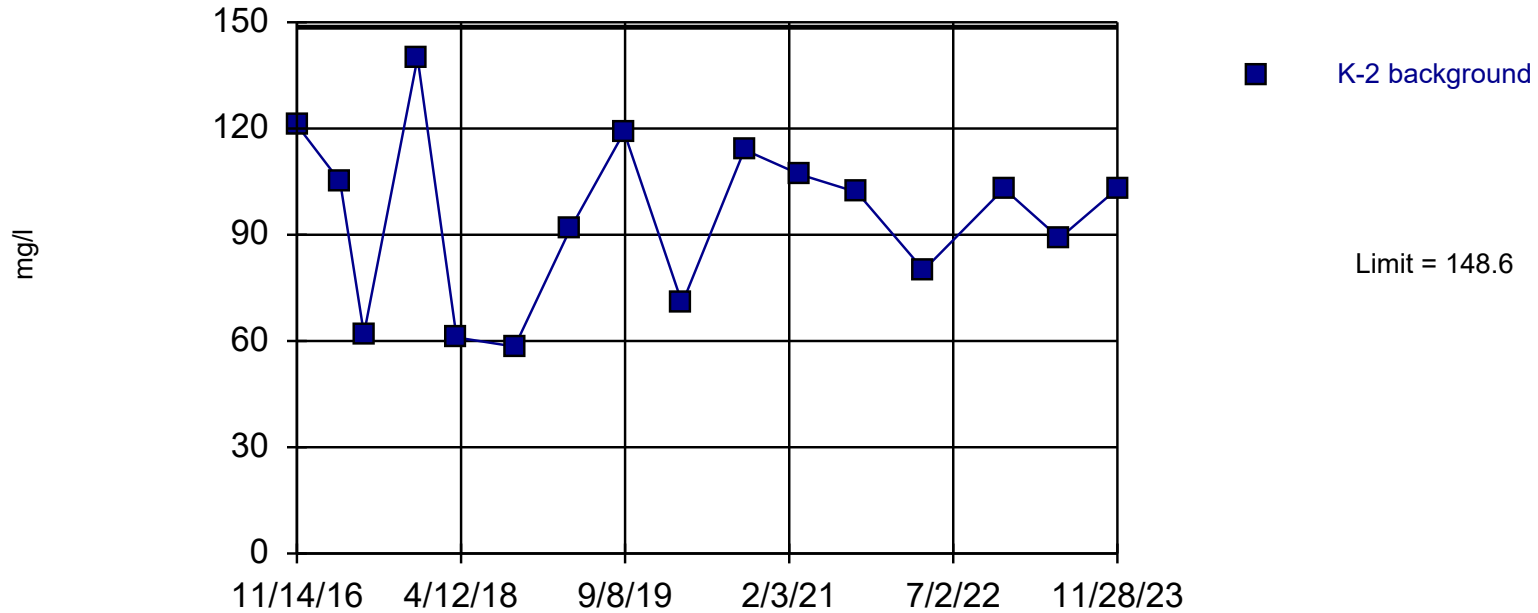
Prediction Limit

Constituent: Calcium (mg/l) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	EE-1
5/22/1985	76 (H)
8/5/1985	89 (H)
11/20/1985	84.2 (H)
12/24/1985	103 (H)
2/10/1986	111 (H)
5/19/1986	98 (H)
6/12/2017	135
11/27/2017	125
3/30/2018	135
9/27/2018	105
3/21/2019	114
9/5/2019	102
3/5/2020	153
6/4/2020	95.3
9/17/2020	112
12/11/2020	142
3/11/2021	152
9/1/2021	105
3/30/2022	122
12/8/2022	110
5/31/2023	108
11/28/2023	105

Prediction Limit

Intrawell Parametric, K-2 (bg)



Background Data Summary: Mean=95.44, Std. Dev.=23.81, n=16. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9516, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Calcium Analysis Run 5/22/2024 4:55 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

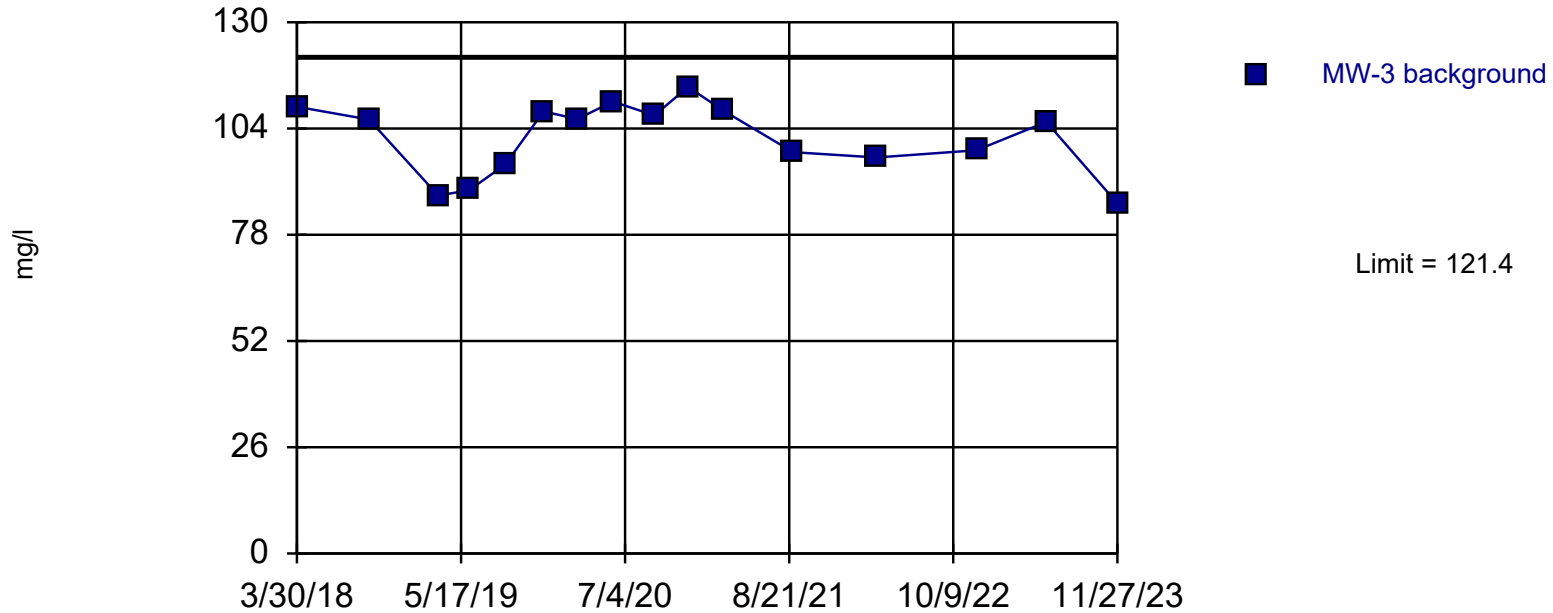
Prediction Limit

Constituent: Calcium (mg/l) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	K-2
11/14/2016	121
3/29/2017	105
6/12/2017	62
11/27/2017	140
3/29/2018	61
9/27/2018	58.4
3/22/2019	92
9/5/2019	119
3/5/2020	70.6
9/16/2020	114
3/10/2021	107
9/3/2021	102
3/31/2022	80
12/8/2022	103
5/31/2023	89
11/28/2023	103

Prediction Limit

Intrawell Parametric, MW-3



Background Data Summary: Mean=101.7, Std. Dev.=8.836, n=16. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.911, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Calcium Analysis Run 5/22/2024 4:55 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

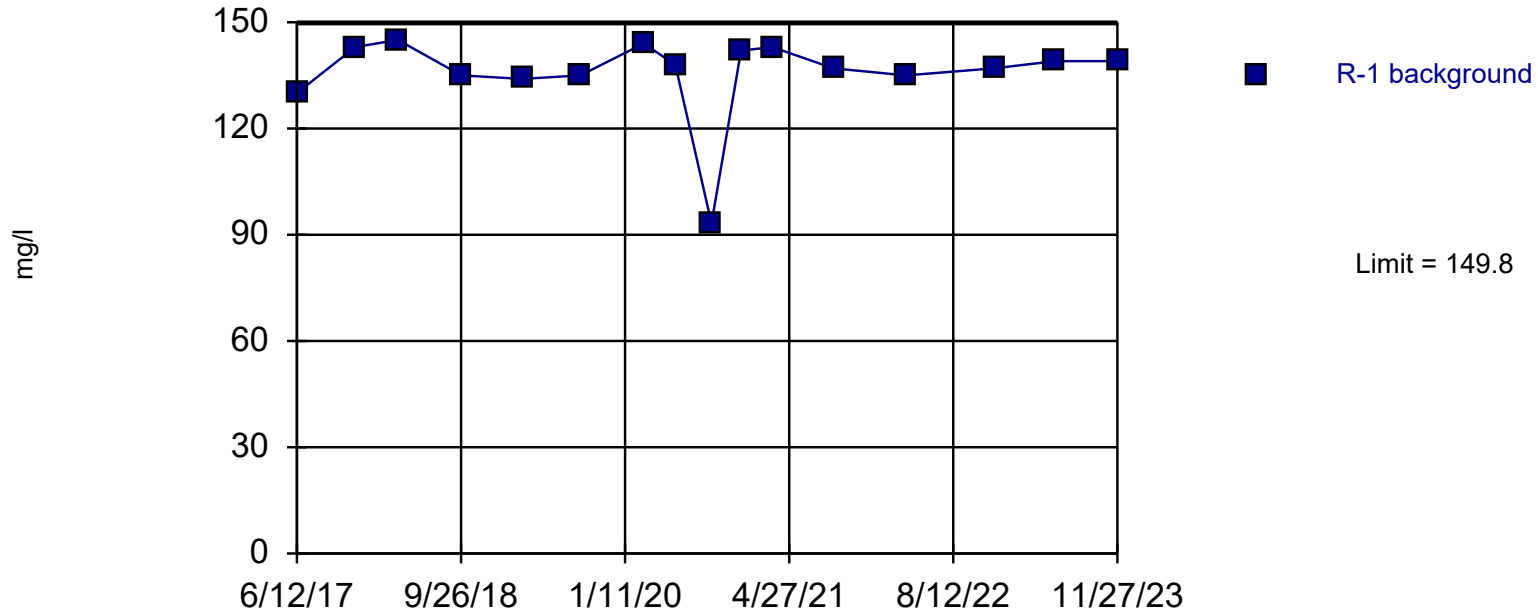
Prediction Limit

Constituent: Calcium (mg/l) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-3
3/30/2018	104
9/28/2018	121
3/21/2019	82.3
6/7/2019	76.9
9/6/2019	110
12/12/2019	109
3/5/2020	101
6/4/2020	98.6
9/16/2020	122
12/10/2020	115
3/10/2021	103
9/1/2021	113
3/30/2022	91.6
12/7/2022	99.5
6/1/2023	93.6
11/27/2023	86.5

Prediction Limit

Intrawell Parametric, R-1



Background Data Summary (based on x^6 transformation): Mean=6.7e12, Std. Dev.=2.1e12, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8542, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Calcium Analysis Run 5/22/2024 4:55 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

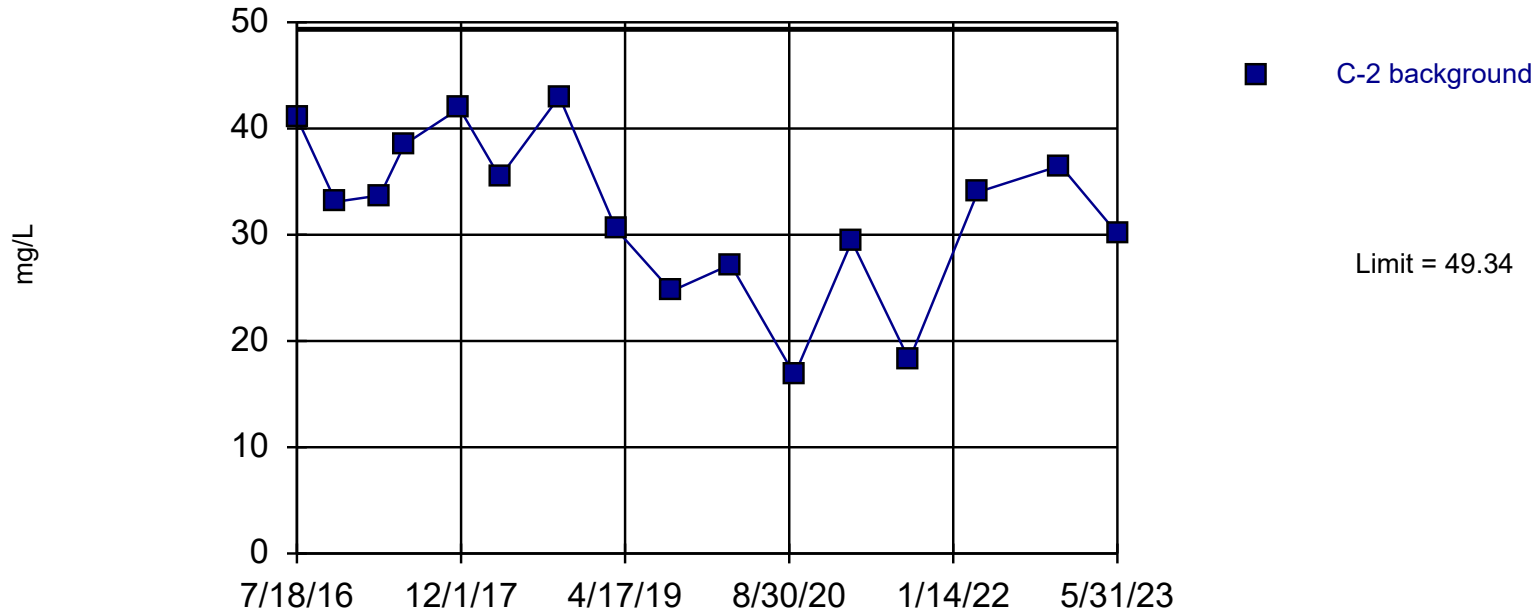
Prediction Limit

Constituent: Calcium (mg/l) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	R-1
5/20/1985	114 (H)
11/4/1985	121 (H)
2/12/1986	125 (H)
5/12/1986	136 (H)
11/14/2016	140 (H)
3/29/2017	137 (H)
6/12/2017	130
11/27/2017	143
3/29/2018	145
9/28/2018	135
3/22/2019	134
9/5/2019	135
3/5/2020	144
6/4/2020	138
9/16/2020	93.2 (O)
12/10/2020	142
3/10/2021	143
9/2/2021	137
3/29/2022	135
12/7/2022	137
6/1/2023	139
11/27/2023	139

Prediction Limit

Intrawell Parametric, C-2 (bg)



Background Data Summary: Mean=32.13, Std. Dev.=7.713, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9505, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Chloride Dissolved Analysis Run 5/22/2024 4:55 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

Prediction Limit

Constituent: Chloride Dissolved (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	C-2
3/28/2016	34 (H)
5/31/2016	36 (H)
7/18/2016	41
11/14/2016	33.1
3/29/2017	33.7
6/12/2017	38.5
11/27/2017	41.9
3/30/2018	35.4
9/28/2018	43
3/21/2019	30.5
9/6/2019	24.7
3/5/2020	27.2
9/16/2020	16.8
3/10/2021	29.4 (D)
9/2/2021	18.2
3/30/2022	34
12/8/2022	36.5
5/31/2023	30.1

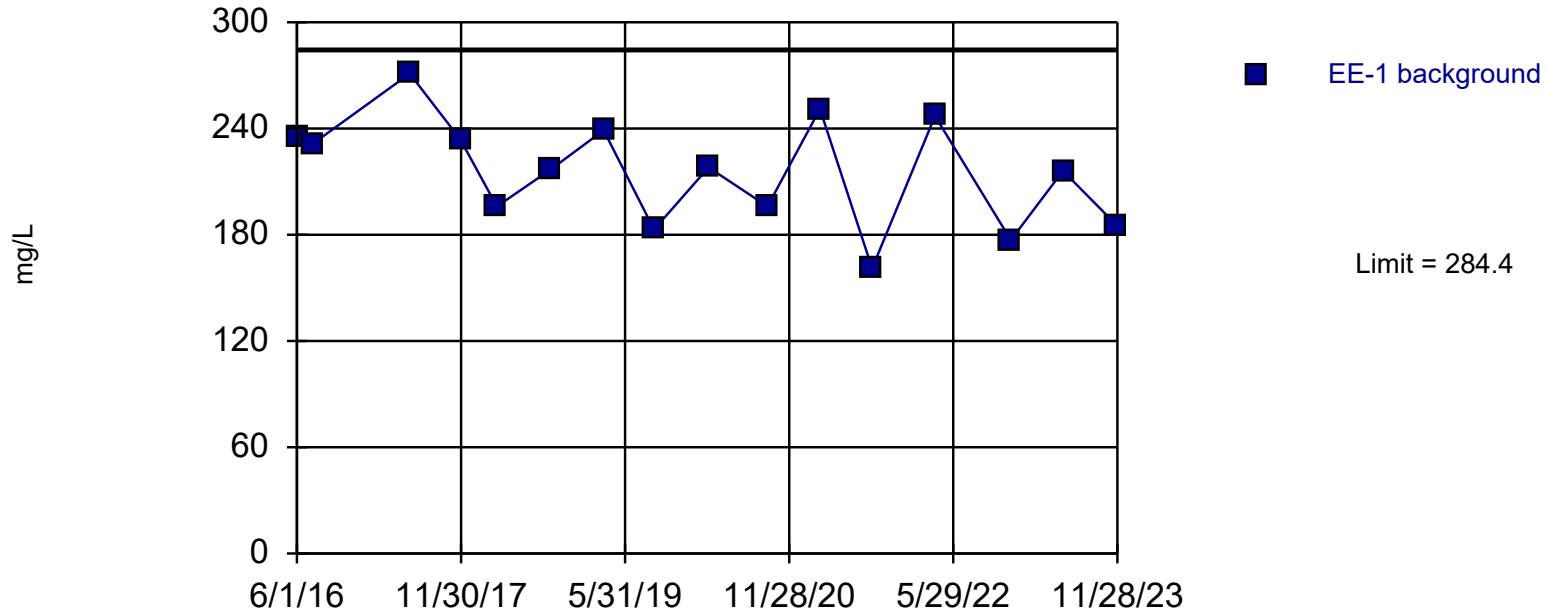
Prediction Limit

Constituent: Chloride Dissolved (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	DD-1
5/22/1985	34 (H)
8/5/1985	32 (H)
11/20/1985	42 (H)
2/10/1986	52
5/19/1986	63
3/11/2015	69
3/29/2016	88
6/1/2016	90
7/19/2016	90
6/12/2017	92.5
11/27/2017	64.6
3/30/2018	60
9/27/2018	69.7
3/22/2019	79
9/5/2019	107
3/3/2020	68
9/17/2020	76.4
3/11/2021	63.8
9/1/2021	66
3/30/2022	71
12/8/2022	77.8

Prediction Limit

Intrawell Parametric, EE-1



Background Data Summary: Mean=216.1, Std. Dev.=30.61, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9732, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Chloride Dissolved Analysis Run 5/22/2024 4:55 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

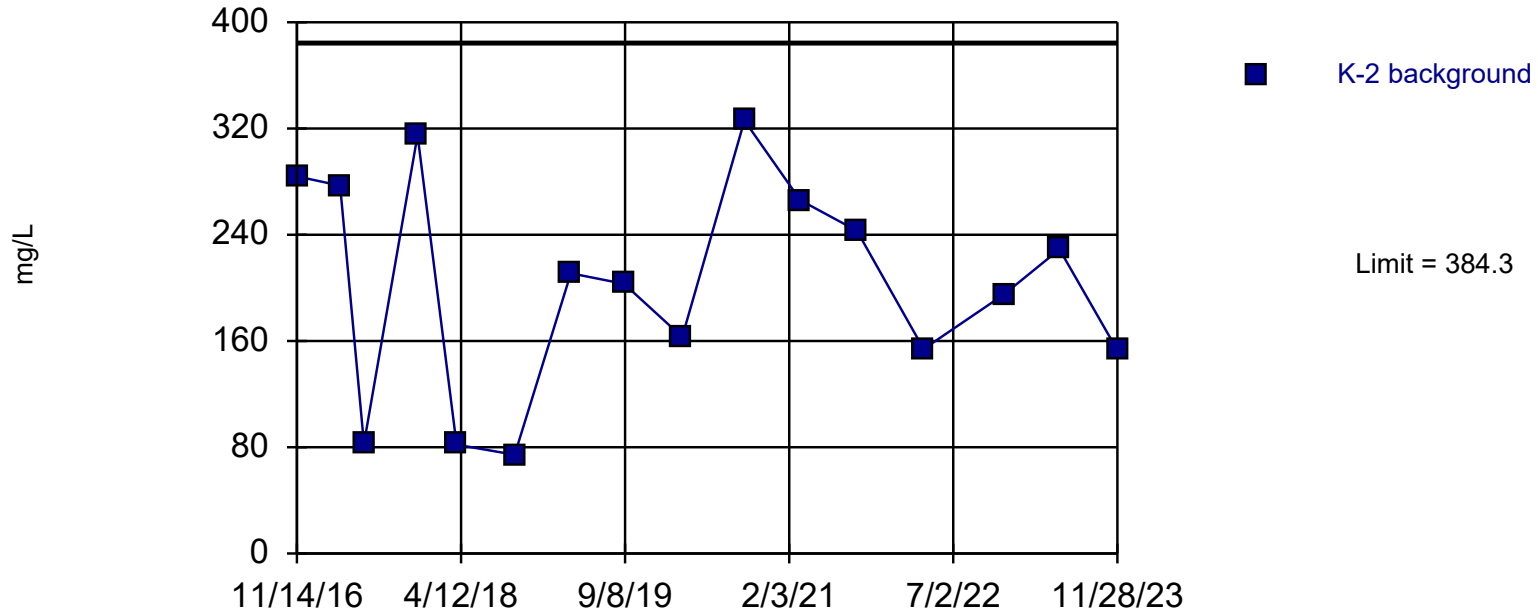
Prediction Limit

Constituent: Chloride Dissolved (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	EE-1
5/22/1985	189 (H)
8/5/1985	126 (H)
11/20/1985	160 (H)
2/10/1986	190 (H)
5/19/1986	162 (H)
3/12/2015	257 (H)
3/29/2016	213 (H)
6/1/2016	235
7/21/2016	231
6/12/2017	271
11/27/2017	234
3/30/2018	196
9/27/2018	217
3/21/2019	239
9/5/2019	183
3/5/2020	218
9/17/2020	196
3/11/2021	251
9/1/2021	161
3/30/2022	247
12/8/2022	177
5/31/2023	216
11/28/2023	185

Prediction Limit

Intrawell Parametric, K-2 (bg)



Background Data Summary: Mean=203.6, Std. Dev.=80.92, n=16. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9475, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Chloride Dissolved Analysis Run 5/22/2024 4:55 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

Prediction Limit

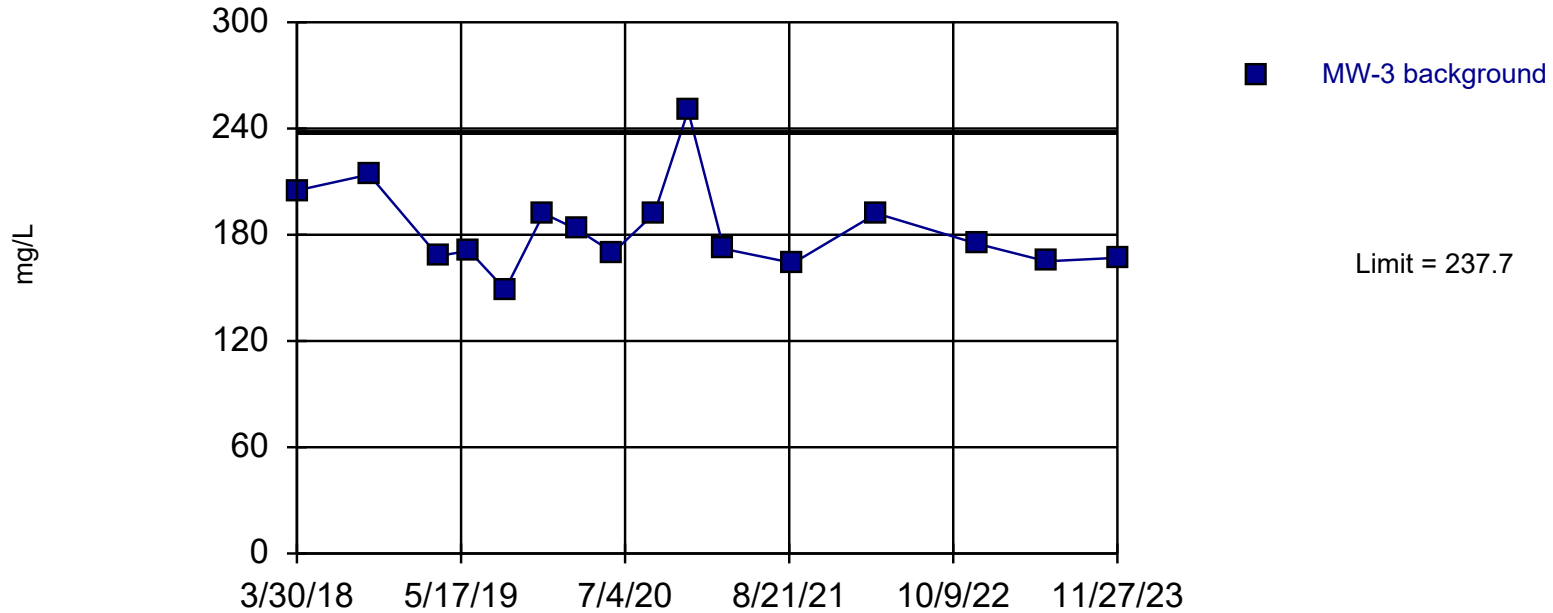
Constituent: Chloride Dissolved (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	K-2
3/9/2015	70 (H)
3/28/2016	78 (H)
5/31/2016	124 (H)
7/18/2016	111 (H)
11/14/2016	284
3/29/2017	277
6/12/2017	82.7
11/27/2017	315
3/29/2018	82
9/27/2018	74.4
3/22/2019	211
9/5/2019	203
3/5/2020	163
9/16/2020	326
3/10/2021	266
9/3/2021	243
3/31/2022	154
12/8/2022	195
5/31/2023	229
11/28/2023	153

Prediction Limit

Intrawell Parametric, MW-3



Background Data Summary: Mean=183.1, Std. Dev.=24.49, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8785, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Chloride Dissolved Analysis Run 5/22/2024 4:55 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

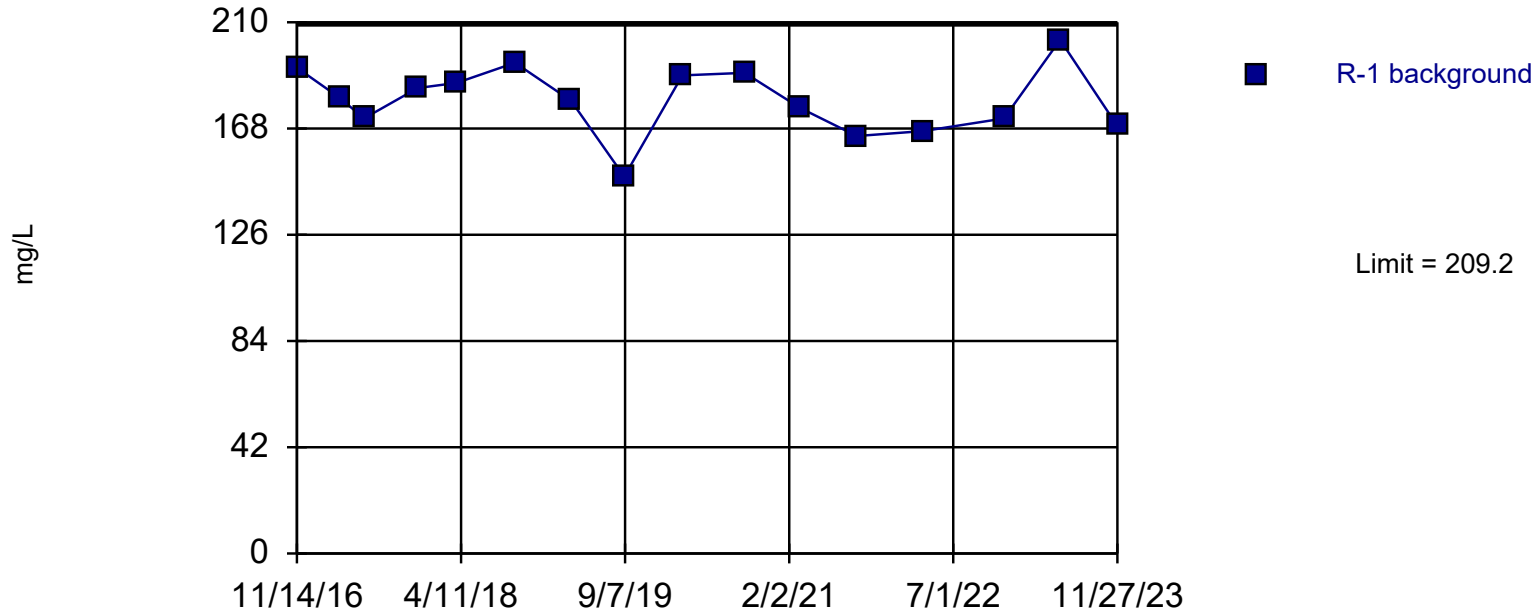
Prediction Limit

Constituent: Chloride Dissolved (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-3
3/30/2018	205
9/28/2018	214
3/21/2019	168
6/7/2019	171
9/6/2019	149
12/12/2019	192
3/5/2020	183
6/4/2020	170
9/16/2020	192
12/10/2020	250
3/10/2021	172
9/1/2021	164
3/30/2022	192
12/7/2022	175
6/1/2023	165
11/27/2023	167

Prediction Limit

Intrawell Parametric, R-1



Background Data Summary: Mean=179.2, Std. Dev.=13.45, n=16. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9808, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Chloride Dissolved Analysis Run 5/22/2024 4:55 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

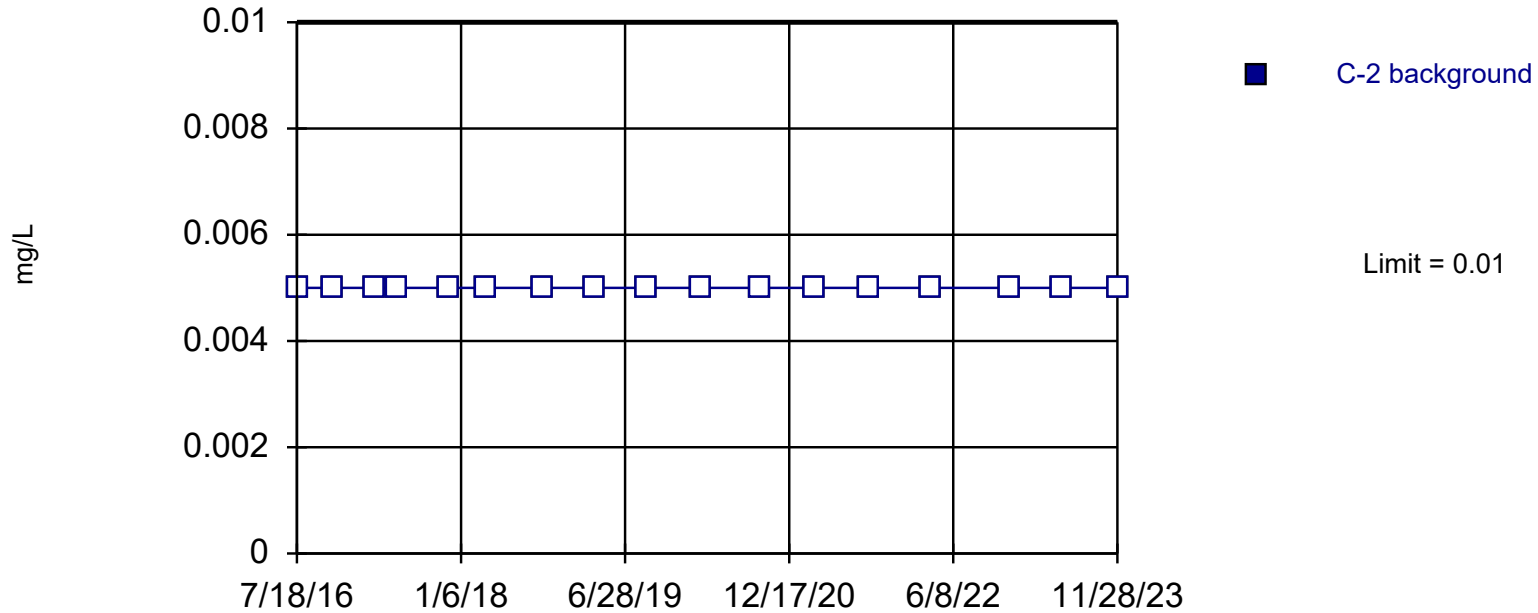
Prediction Limit

Constituent: Chloride Dissolved (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	R-1
5/20/1985	80 (H)
11/4/1985	123 (H)
2/12/1986	116 (H)
5/12/1986	109 (H)
7/20/2016	75 (H)
11/14/2016	192
3/29/2017	180
6/12/2017	172
11/27/2017	184
3/29/2018	186
9/28/2018	194
3/22/2019	179
9/5/2019	149
3/5/2020	189
9/16/2020	190
3/10/2021	176
9/2/2021	165
3/29/2022	167
12/7/2022	172
6/1/2023	203
11/27/2023	169

Prediction Limit

Intrawell Non-parametric, C-2 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 17$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Chromium Analysis Run 5/22/2024 4:55 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

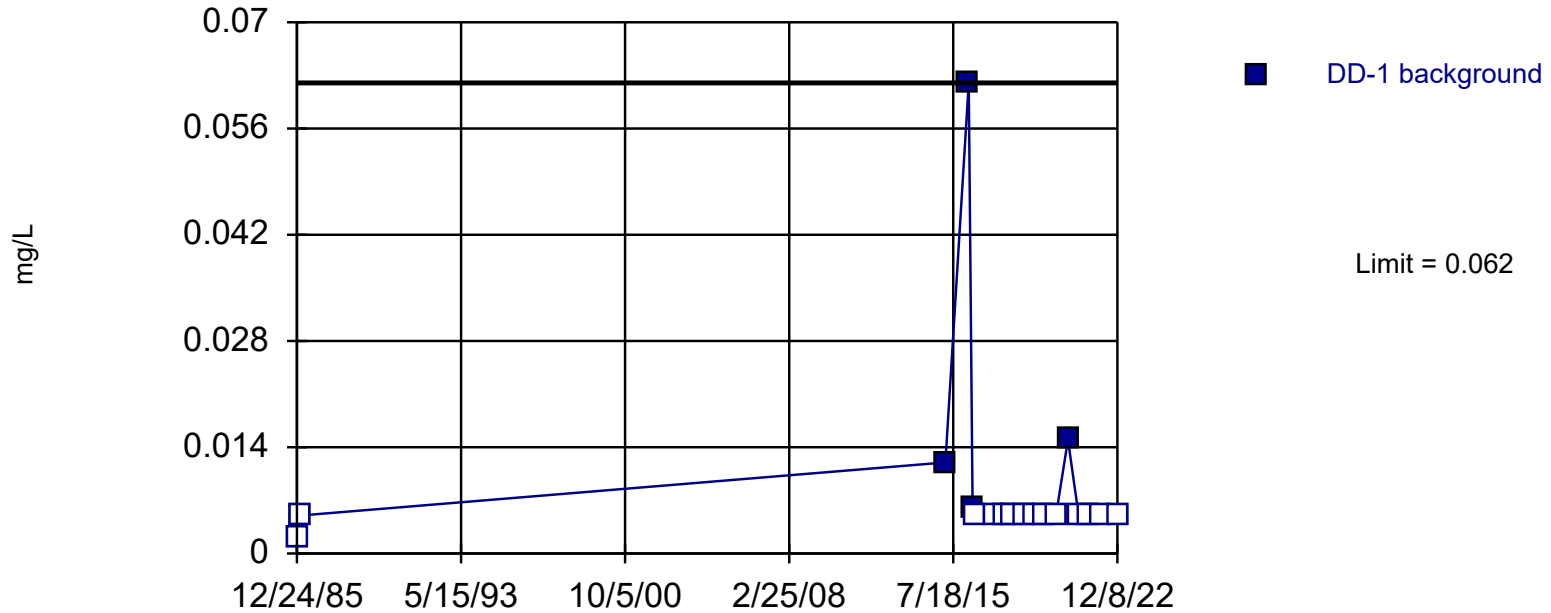
Prediction Limit

Constituent: Chromium (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	C-2
3/28/2016	<0.01 (H)
5/31/2016	<0.01 (H)
7/18/2016	<0.01
11/14/2016	<0.01
3/29/2017	<0.01
6/12/2017	<0.01
11/27/2017	<0.01
3/30/2018	<0.01
9/28/2018	<0.01
3/21/2019	<0.01
9/6/2019	<0.01
3/5/2020	<0.01
9/16/2020	<0.01
3/10/2021	<0.01 (D)
9/2/2021	<0.01
3/30/2022	<0.01
12/8/2022	<0.01
5/31/2023	<0.01
11/28/2023	<0.01

Prediction Limit

Intrawell Non-parametric, DD-1



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 18 background values. 77.78% NDs. Well-constituent pair annual alpha = 0.01072. Individual comparison alpha = 0.005373 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Chromium Analysis Run 5/22/2024 4:55 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

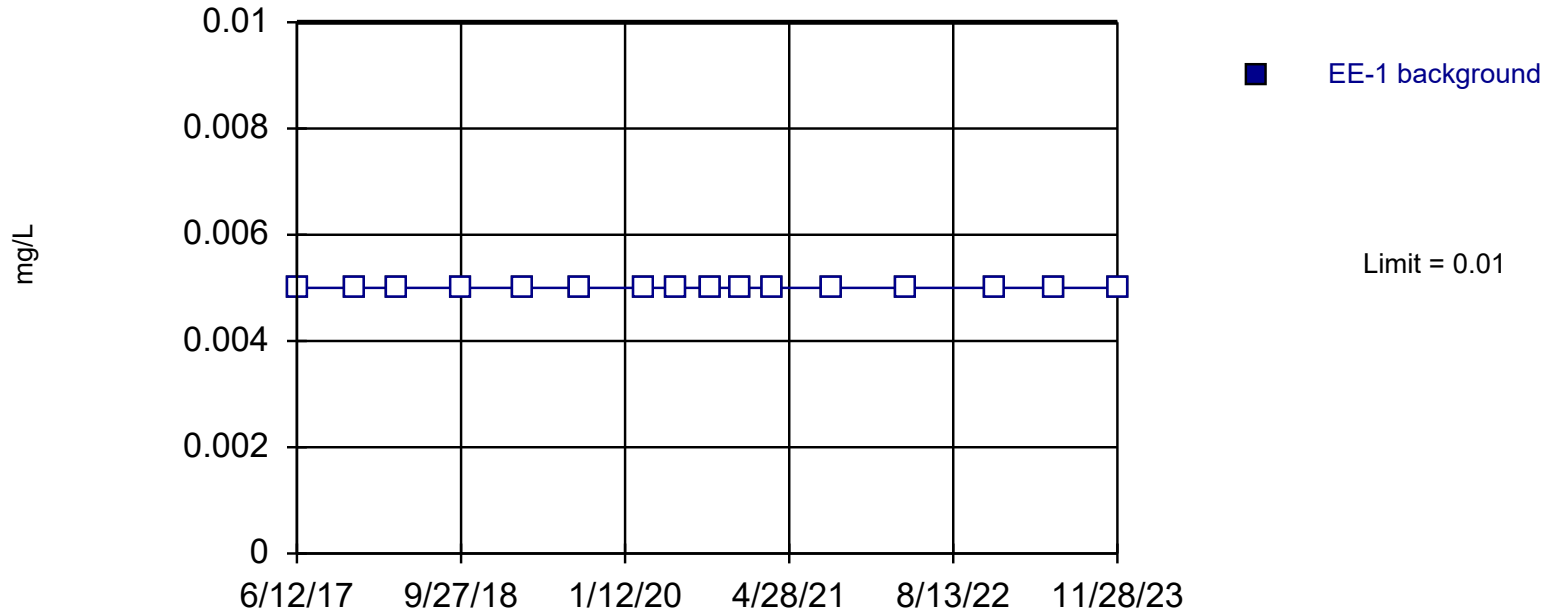
Prediction Limit

Constituent: Chromium (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	DD-1
5/22/1985	<0.01 (H)
8/5/1985	<0.01 (H)
11/20/1985	<0.01 (H)
12/24/1985	<0.004
2/10/1986	<0.01
3/11/2015	0.012
3/29/2016	0.062
6/1/2016	0.006
7/19/2016	<0.01
6/12/2017	<0.01
11/27/2017	<0.01
3/30/2018	<0.01
9/27/2018	<0.01
3/22/2019	<0.01
9/5/2019	<0.01
3/3/2020	<0.01
9/17/2020	0.015
3/11/2021	<0.01
9/1/2021	<0.01
3/30/2022	<0.01
12/8/2022	<0.01

Prediction Limit

Intrawell Non-parametric, EE-1



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Chromium Analysis Run 5/22/2024 4:55 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

Prediction Limit

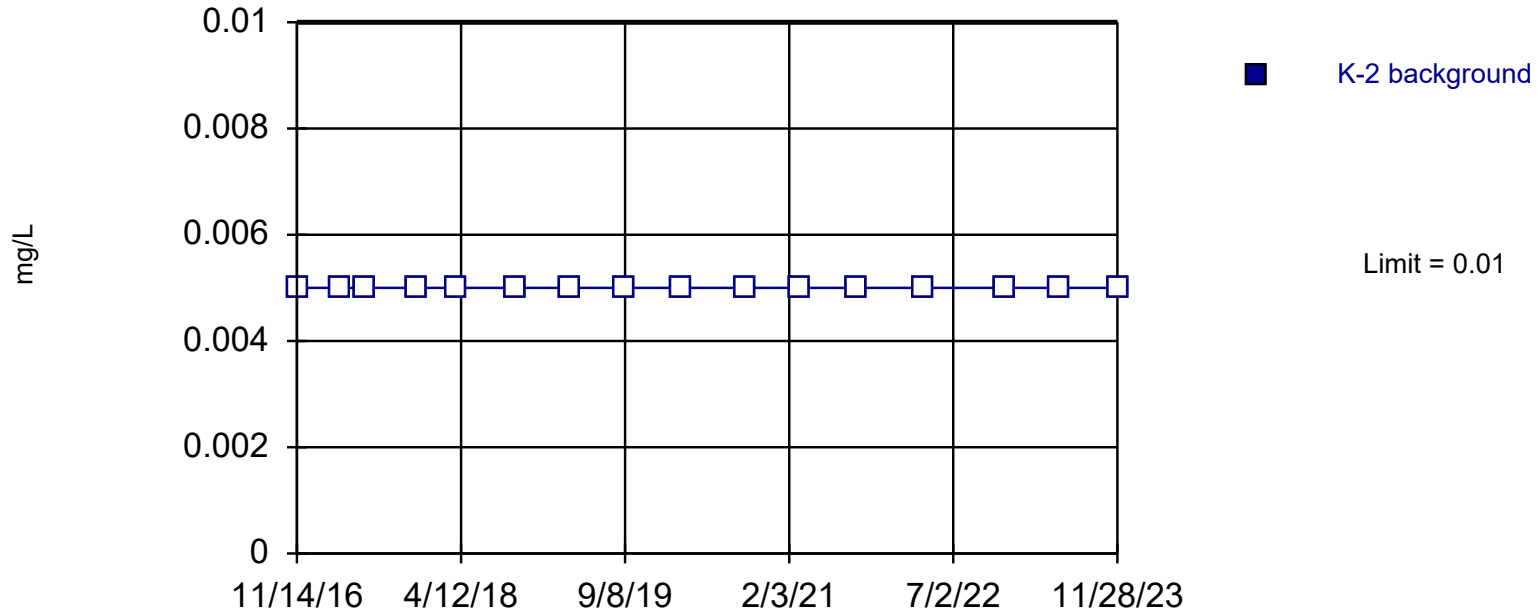
Constituent: Chromium (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

EE-1

5/22/1985	<0.01 (H)
8/5/1985	<0.01 (H)
11/20/1985	<0.01 (H)
12/24/1985	<0.004 (H)
2/10/1986	<0.01 (H)
3/12/2015	<0.01 (H)
3/29/2016	<0.01 (H)
6/1/2016	<0.01 (H)
7/21/2016	<0.01 (H)
6/12/2017	<0.01
11/27/2017	<0.01
3/30/2018	<0.01
9/27/2018	<0.01
3/21/2019	<0.01
9/5/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/17/2020	<0.01
12/11/2020	<0.01
3/11/2021	<0.01
9/1/2021	<0.01
3/30/2022	<0.01
12/8/2022	<0.01
5/31/2023	<0.01
11/28/2023	<0.01

Prediction Limit

Intrawell Non-parametric, K-2 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Chromium Analysis Run 5/22/2024 4:55 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

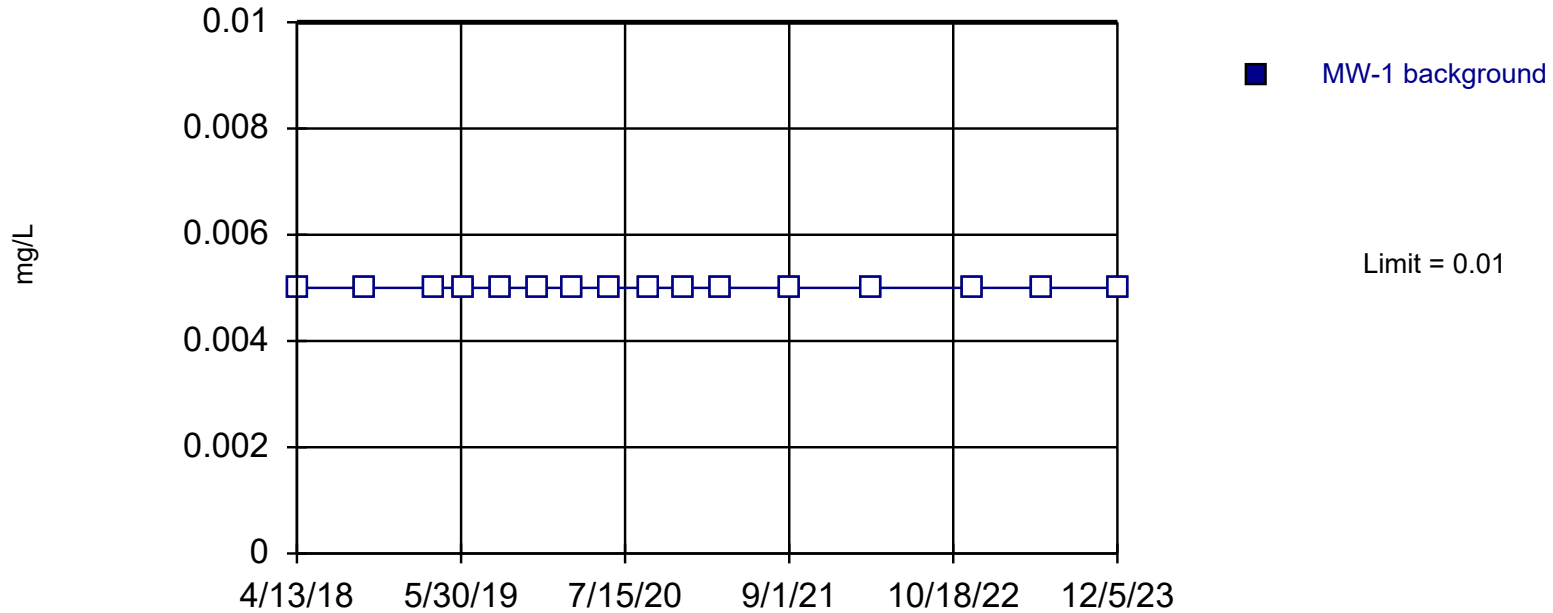
Prediction Limit

Constituent: Chromium (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	K-2
3/9/2015	<0.01 (H)
3/28/2016	<0.01 (H)
5/31/2016	<0.01 (H)
7/18/2016	<0.01 (H)
11/14/2016	<0.01
3/29/2017	<0.01
6/12/2017	<0.01
11/27/2017	<0.01
3/29/2018	<0.01
9/27/2018	<0.01
3/22/2019	<0.01
9/5/2019	<0.01
3/5/2020	<0.01
9/16/2020	<0.01
3/10/2021	<0.01
9/3/2021	<0.01
3/31/2022	<0.01
12/8/2022	<0.01
5/31/2023	<0.01
11/28/2023	<0.01

Prediction Limit

Intrawell Non-parametric, MW-1 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Chromium Analysis Run 5/22/2024 4:55 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

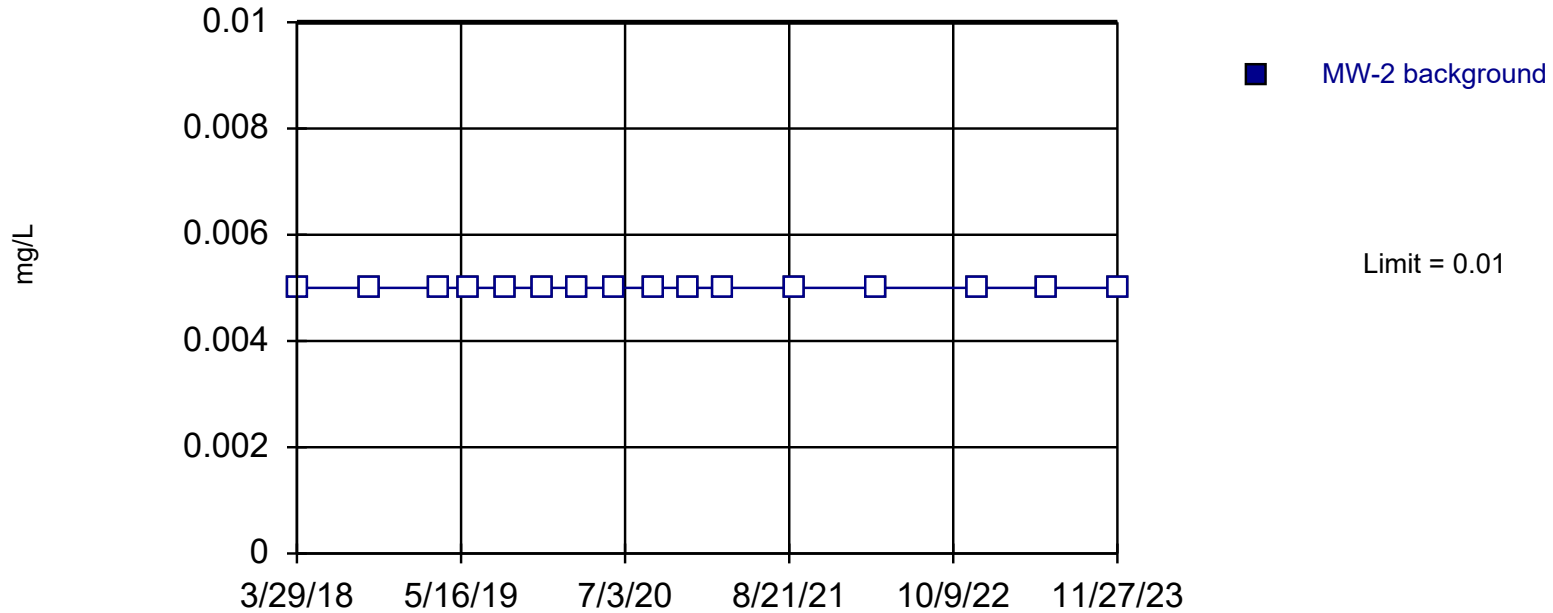
Prediction Limit

Constituent: Chromium (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-1
4/13/2018	<0.01
9/28/2018	<0.01
3/21/2019	<0.01
6/7/2019	<0.01
9/6/2019	<0.01
12/12/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/17/2020	<0.01
12/11/2020	<0.01
3/11/2021	<0.01
9/1/2021	<0.01
3/30/2022	<0.01
12/7/2022	<0.01
5/31/2023	<0.01
12/5/2023	<0.01

Prediction Limit

Intrawell Non-parametric, MW-2



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Chromium Analysis Run 5/22/2024 4:55 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

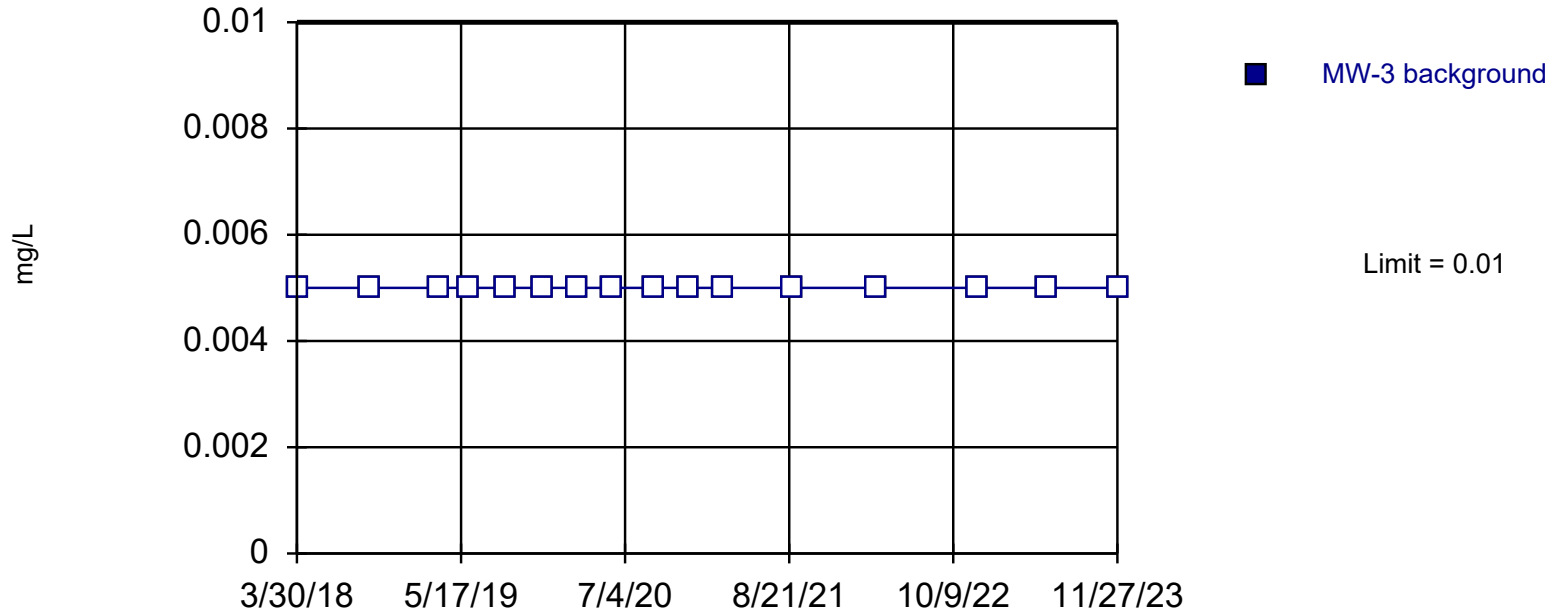
Prediction Limit

Constituent: Chromium (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-2
3/29/2018	<0.01
9/28/2018	<0.01
3/21/2019	<0.01
6/6/2019	<0.01
9/5/2019	<0.01
12/12/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/16/2020	<0.01
12/10/2020	<0.01
3/10/2021	<0.01
9/2/2021	<0.01 (D)
3/29/2022	<0.01
12/7/2022	<0.01
6/1/2023	<0.01
11/27/2023	<0.01

Prediction Limit

Intrawell Non-parametric, MW-3



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Chromium Analysis Run 5/22/2024 4:55 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

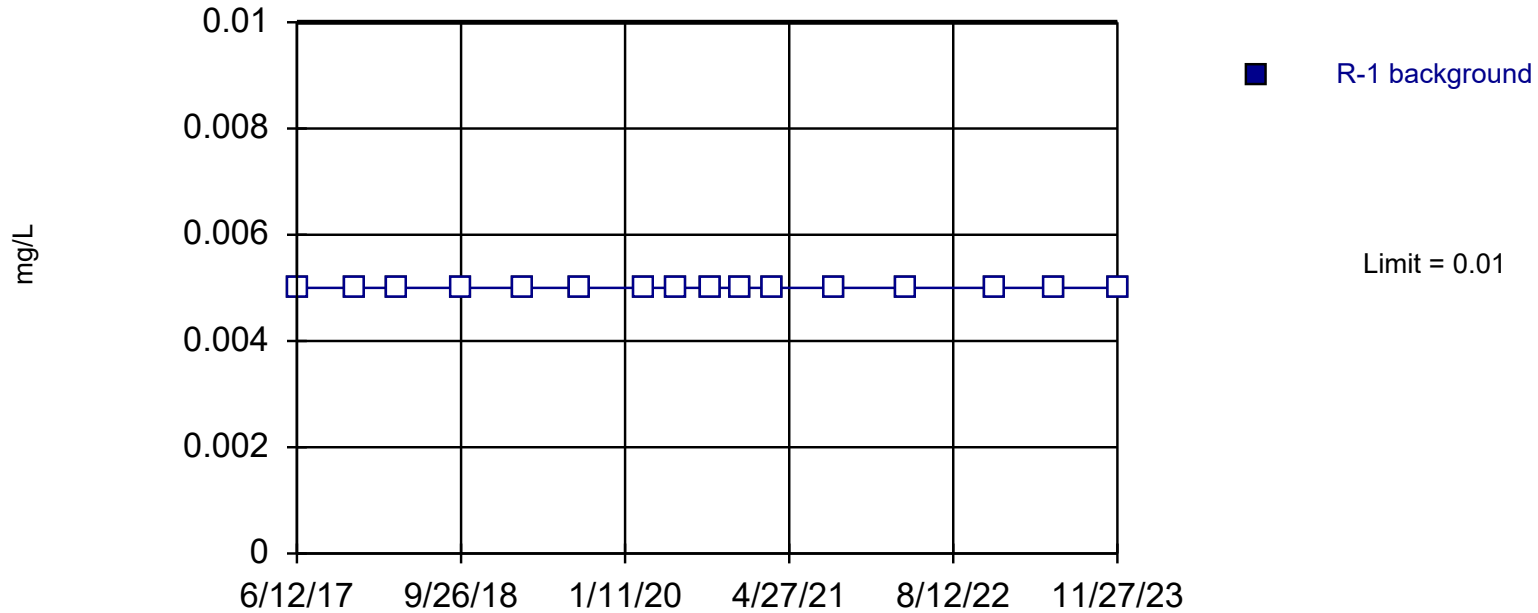
Prediction Limit

Constituent: Chromium (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-3
3/30/2018	<0.01
9/28/2018	<0.01
3/21/2019	<0.01
6/7/2019	<0.01
9/6/2019	<0.01
12/12/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/16/2020	<0.01
12/10/2020	<0.01
3/10/2021	<0.01
9/1/2021	<0.01
3/30/2022	<0.01
12/7/2022	<0.01
6/1/2023	<0.01
11/27/2023	<0.01

Prediction Limit

Intrawell Non-parametric, R-1



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Chromium Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

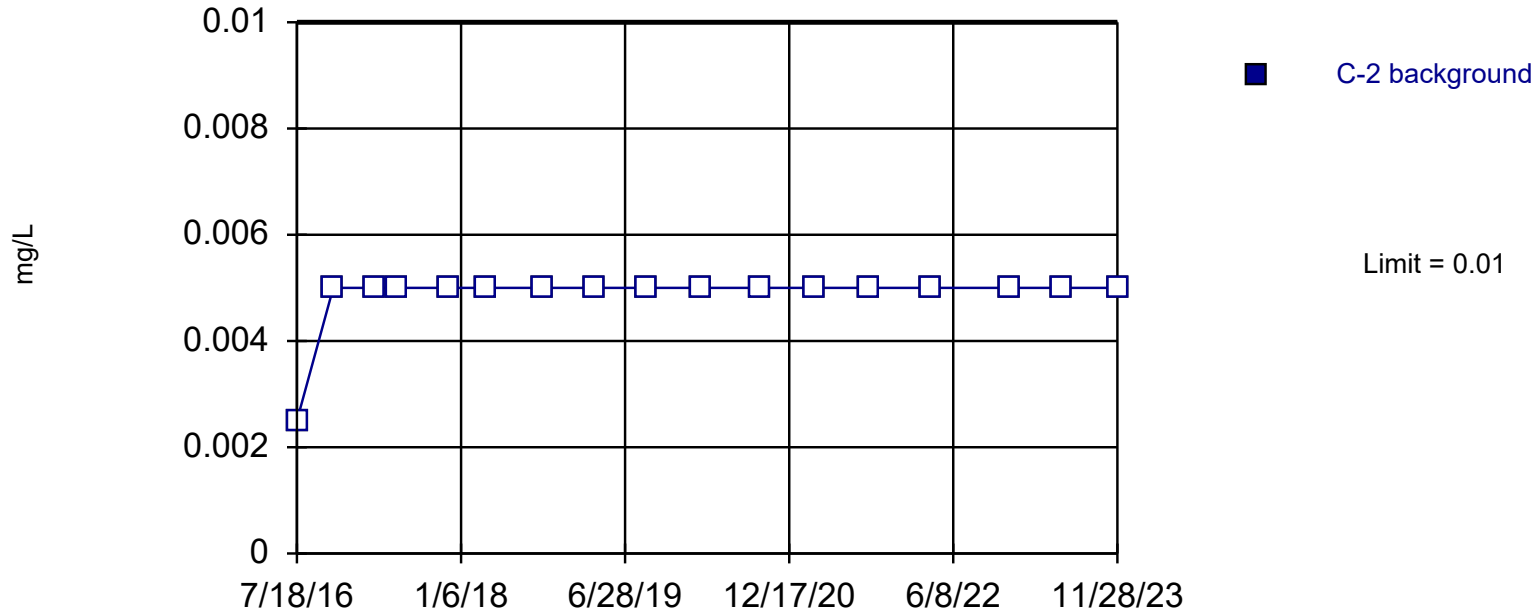
Prediction Limit

Constituent: Chromium (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	R-1
5/20/1985	<0.01 (H)
11/4/1985	<0.01 (H)
2/12/1986	<0.01 (H)
7/20/2016	<0.01 (H)
11/14/2016	<0.01 (H)
3/29/2017	<0.01 (H)
6/12/2017	<0.01
11/27/2017	<0.01
3/29/2018	<0.01
9/28/2018	<0.01
3/22/2019	<0.01
9/5/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/16/2020	<0.01
12/10/2020	<0.01
3/10/2021	<0.01
9/2/2021	<0.01
3/29/2022	<0.01
12/7/2022	<0.01
6/1/2023	<0.01
11/27/2023	<0.01

Prediction Limit

Intrawell Non-parametric, C-2 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 17$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Cobalt Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

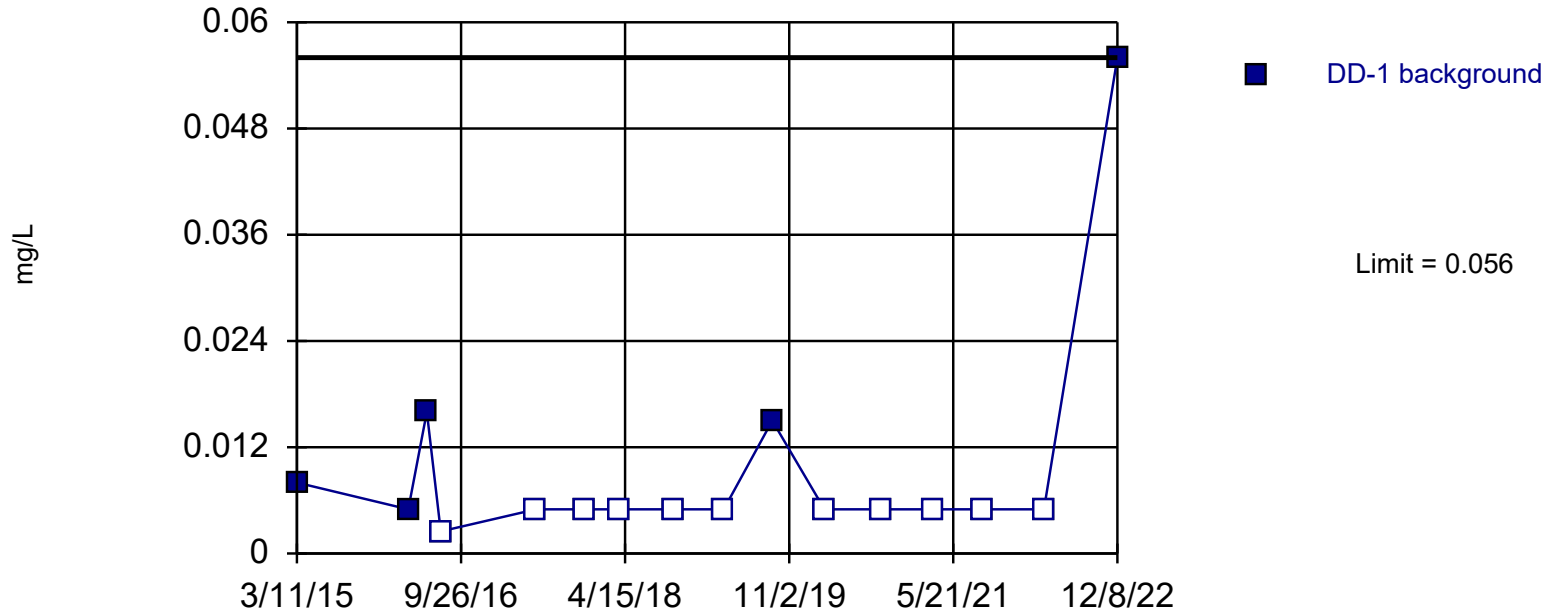
Prediction Limit

Constituent: Cobalt (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	C-2
3/28/2016	<0.005 (H)
5/31/2016	<0.005 (H)
7/18/2016	<0.005
11/14/2016	<0.01
3/29/2017	<0.01
6/12/2017	<0.01
11/27/2017	<0.01
3/30/2018	<0.01
9/28/2018	<0.01
3/21/2019	<0.01
9/6/2019	<0.01
3/5/2020	<0.01
9/16/2020	<0.01
3/10/2021	<0.01 (D)
9/2/2021	<0.01
3/30/2022	<0.01
12/8/2022	<0.01
5/31/2023	<0.01
11/28/2023	<0.01

Prediction Limit

Intrawell Non-parametric, DD-1



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 68.75% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Cobalt Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

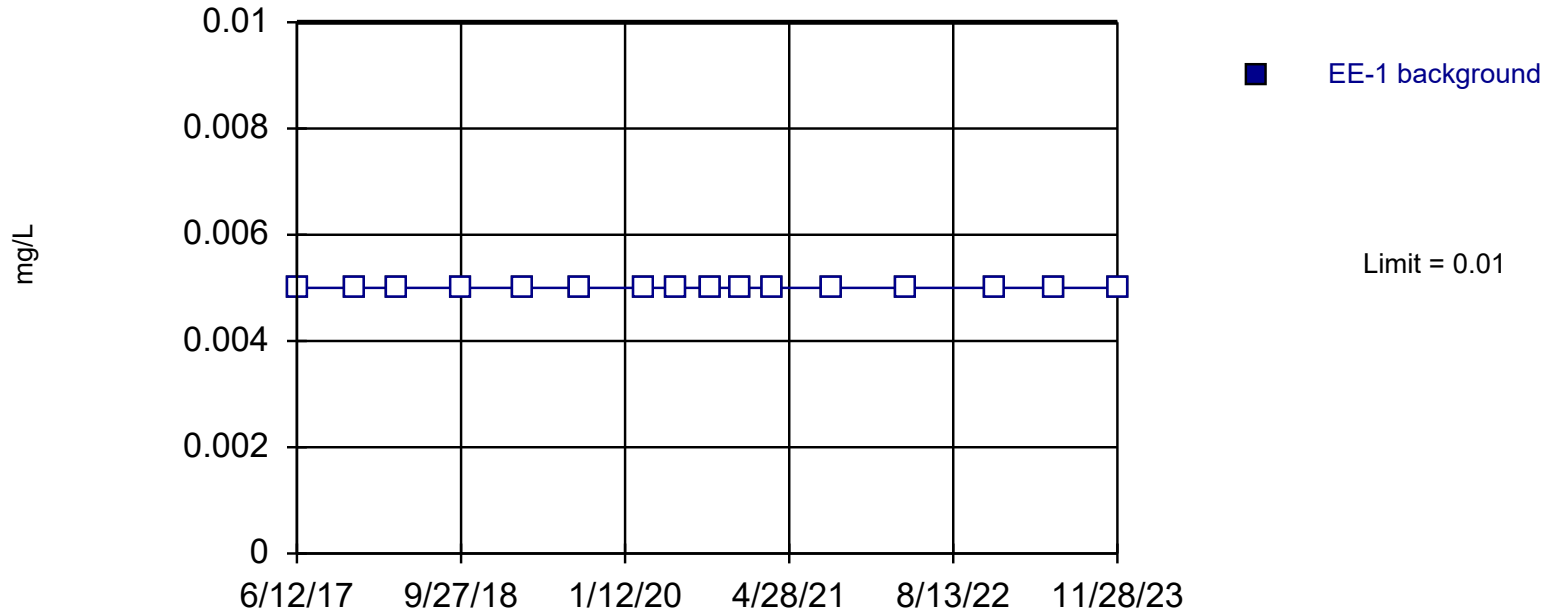
Prediction Limit

Constituent: Cobalt (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	DD-1
3/11/2015	0.008
3/29/2016	0.005
6/1/2016	0.016
7/19/2016	<0.005
6/12/2017	<0.01
11/27/2017	<0.01
3/30/2018	<0.01
9/27/2018	<0.01
3/22/2019	<0.01
9/5/2019	0.015
3/3/2020	<0.01
9/17/2020	<0.01
3/11/2021	<0.01
9/1/2021	<0.01
3/30/2022	<0.01
12/8/2022	0.056

Prediction Limit

Intrawell Non-parametric, EE-1



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Cobalt Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

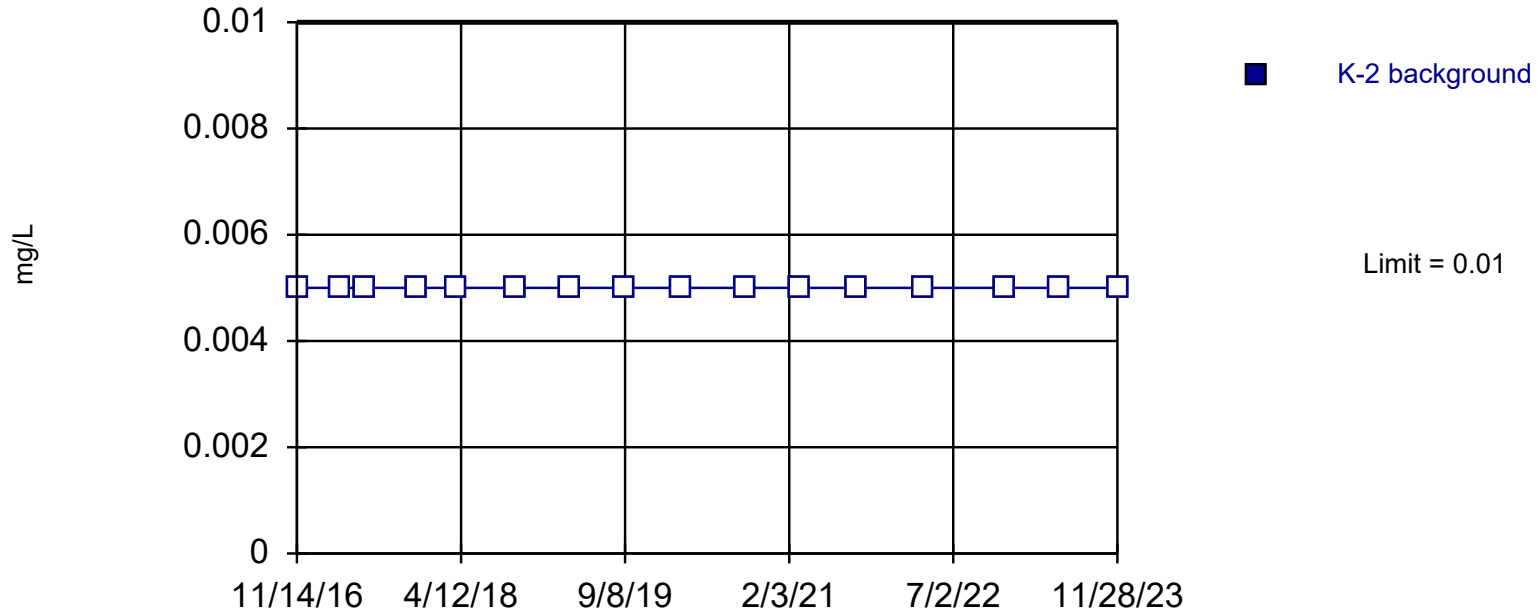
Prediction Limit

Constituent: Cobalt (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	EE-1
3/12/2015	<0.01 (H)
3/29/2016	<0.005 (H)
6/1/2016	<0.005 (H)
7/21/2016	<0.005 (H)
6/12/2017	<0.01
11/27/2017	<0.01
3/30/2018	<0.01
9/27/2018	<0.01
3/21/2019	<0.01
9/5/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/17/2020	<0.01
12/11/2020	<0.01
3/11/2021	<0.01
9/1/2021	<0.01
3/30/2022	<0.01
12/8/2022	<0.01
5/31/2023	<0.01
11/28/2023	<0.01

Prediction Limit

Intrawell Non-parametric, K-2 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Cobalt Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

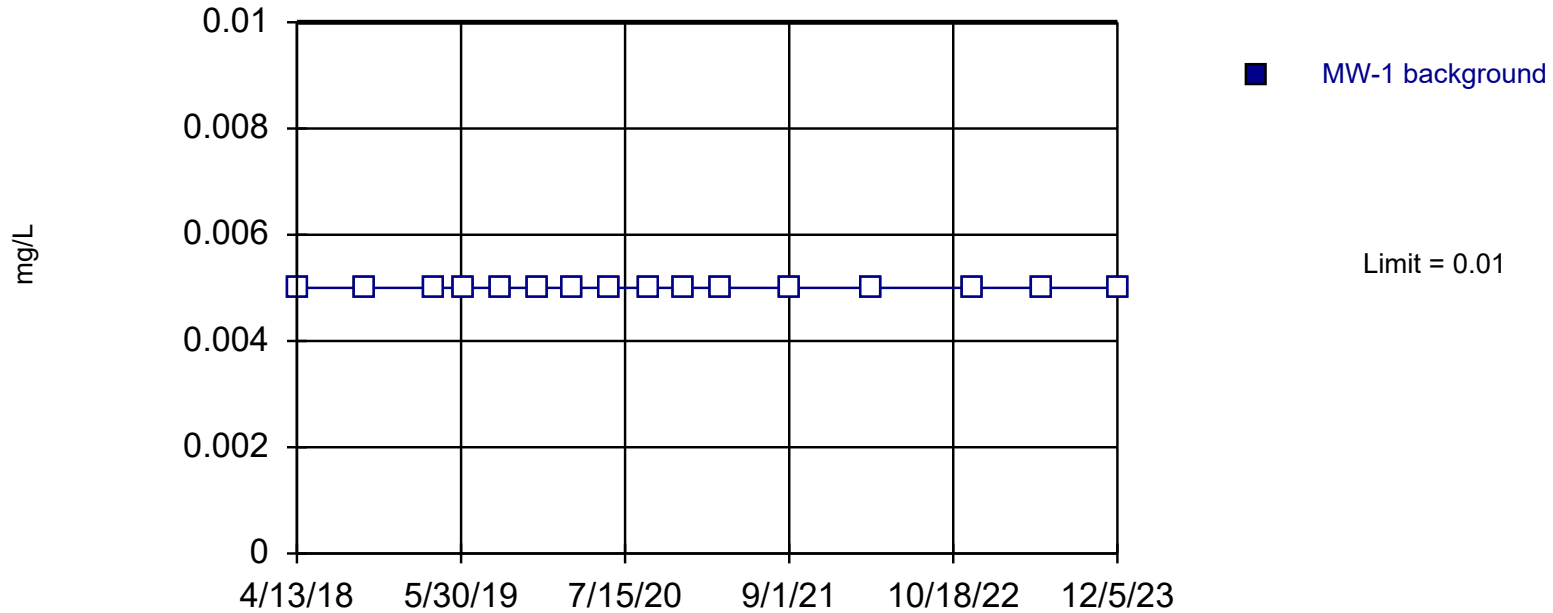
Prediction Limit

Constituent: Cobalt (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	K-2
3/9/2015	<0.01 (H)
3/28/2016	<0.005 (H)
5/31/2016	<0.005 (H)
7/18/2016	<0.005 (H)
11/14/2016	<0.01
3/29/2017	<0.01
6/12/2017	<0.01
11/27/2017	<0.01
3/29/2018	<0.01
9/27/2018	<0.01
3/22/2019	<0.01
9/5/2019	<0.01
3/5/2020	<0.01
9/16/2020	<0.01
3/10/2021	<0.01
9/3/2021	<0.01
3/31/2022	<0.01
12/8/2022	<0.01
5/31/2023	<0.01
11/28/2023	<0.01

Prediction Limit

Intrawell Non-parametric, MW-1 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Cobalt Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

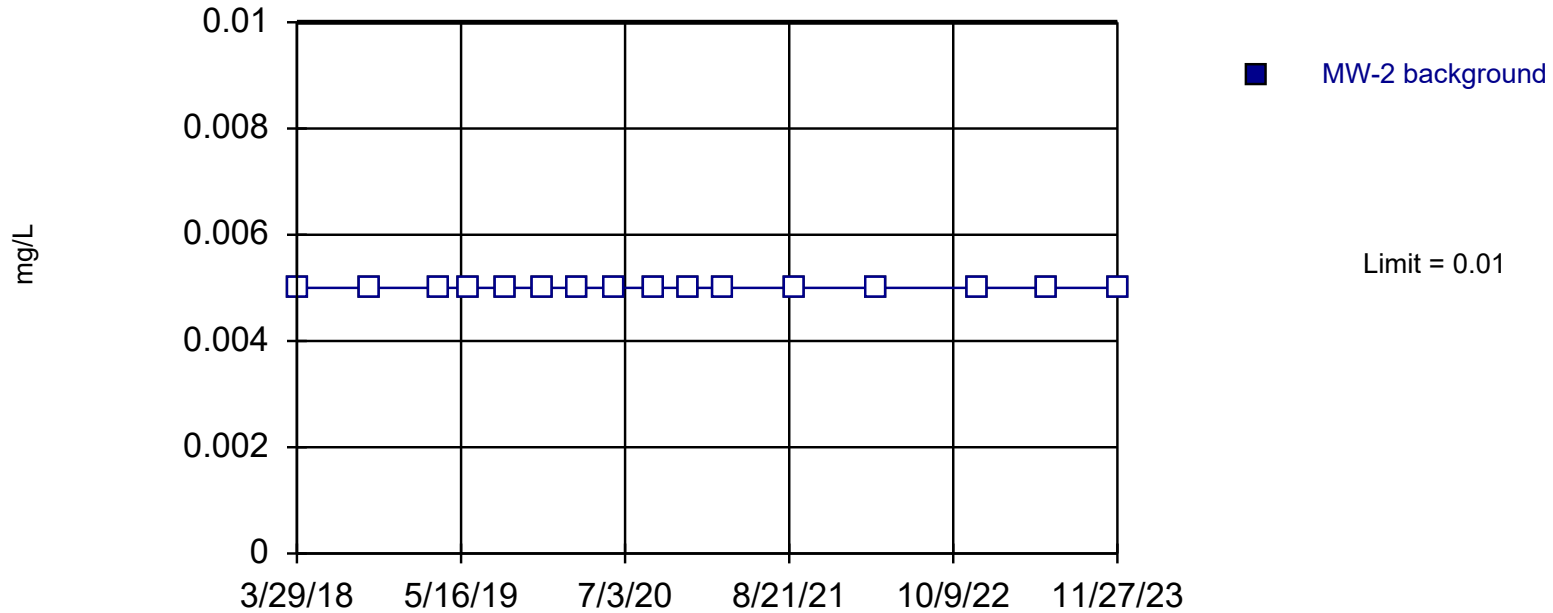
Prediction Limit

Constituent: Cobalt (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-1
4/13/2018	<0.01
9/28/2018	<0.01
3/21/2019	<0.01
6/7/2019	<0.01
9/6/2019	<0.01
12/12/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/17/2020	<0.01
12/11/2020	<0.01
3/11/2021	<0.01
9/1/2021	<0.01
3/30/2022	<0.01
12/7/2022	<0.01
5/31/2023	<0.01
12/5/2023	<0.01

Prediction Limit

Intrawell Non-parametric, MW-2



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Cobalt Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

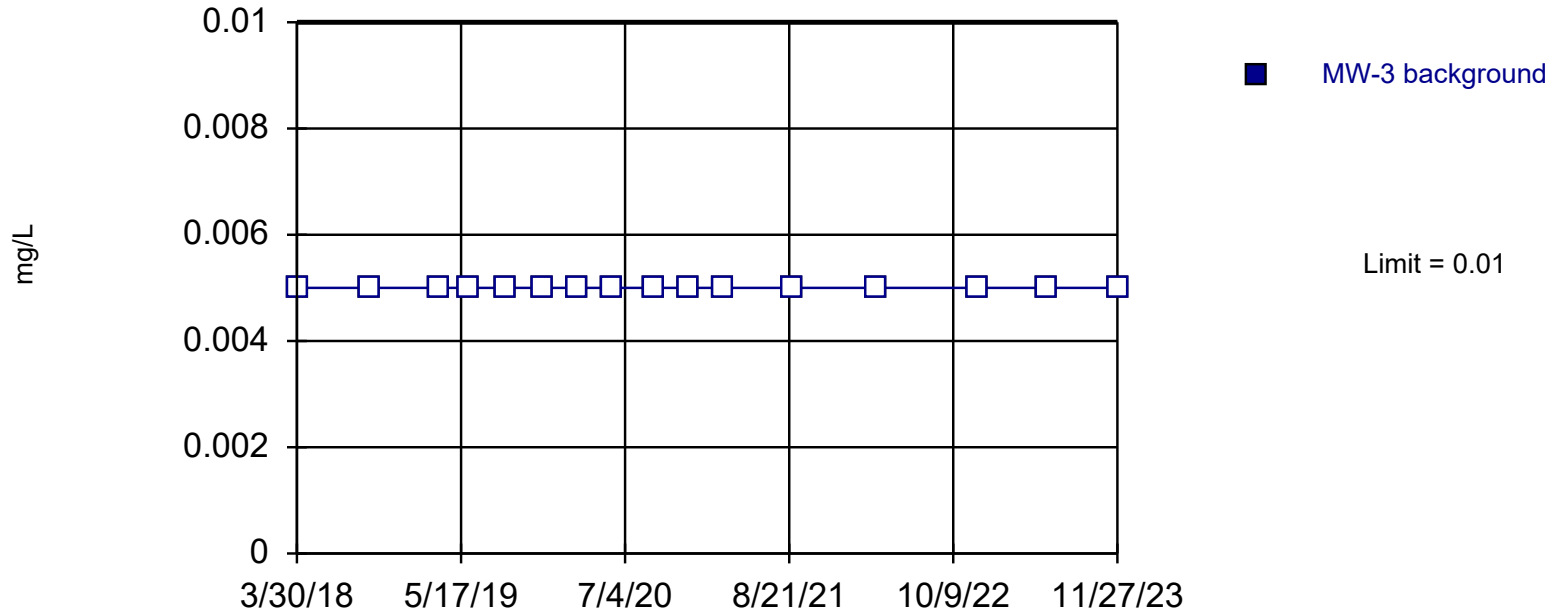
Prediction Limit

Constituent: Cobalt (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-2
3/29/2018	<0.01
9/28/2018	<0.01
3/21/2019	<0.01
6/6/2019	<0.01
9/5/2019	<0.01
12/12/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/16/2020	<0.01
12/10/2020	<0.01
3/10/2021	<0.01
9/2/2021	<0.01 (D)
3/29/2022	<0.01
12/7/2022	<0.01
6/1/2023	<0.01
11/27/2023	<0.01

Prediction Limit

Intrawell Non-parametric, MW-3



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Cobalt Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

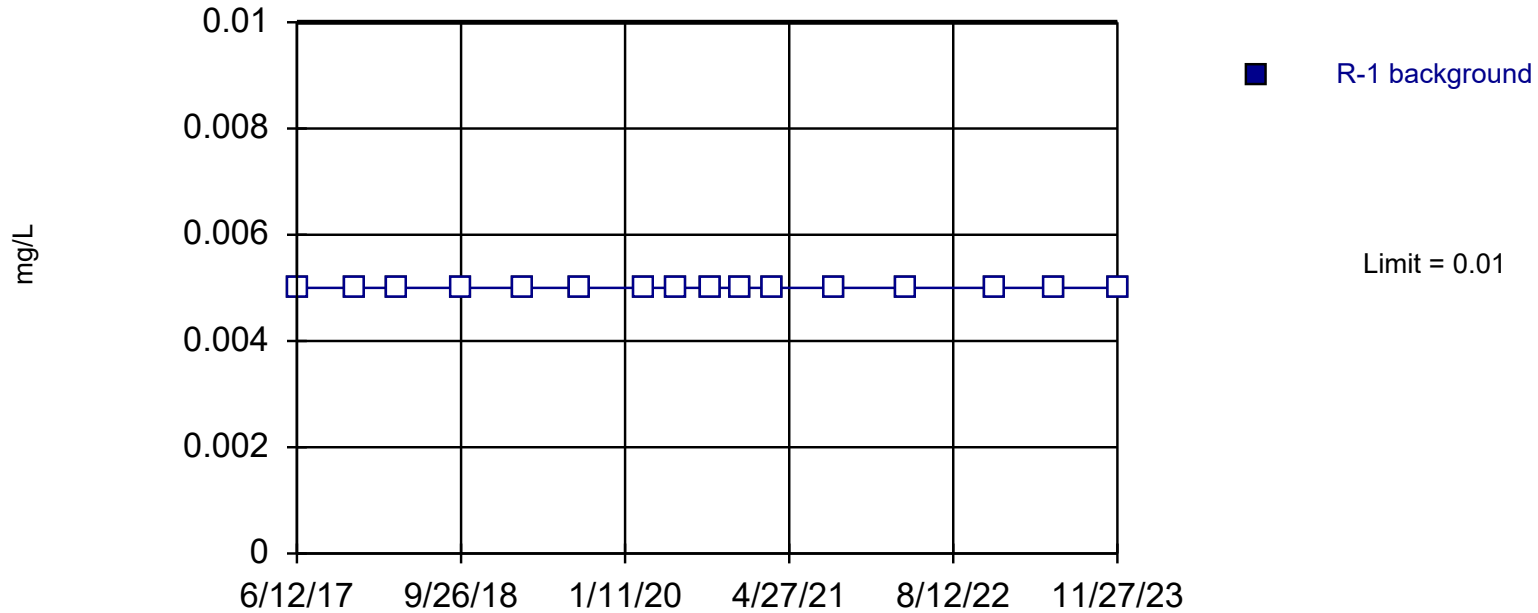
Prediction Limit

Constituent: Cobalt (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-3
3/30/2018	<0.01
9/28/2018	<0.01
3/21/2019	<0.01
6/7/2019	<0.01
9/6/2019	<0.01
12/12/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/16/2020	<0.01
12/10/2020	<0.01
3/10/2021	<0.01
9/1/2021	<0.01
3/30/2022	<0.01
12/7/2022	<0.01
6/1/2023	<0.01
11/27/2023	<0.01

Prediction Limit

Intrawell Non-parametric, R-1



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Cobalt Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

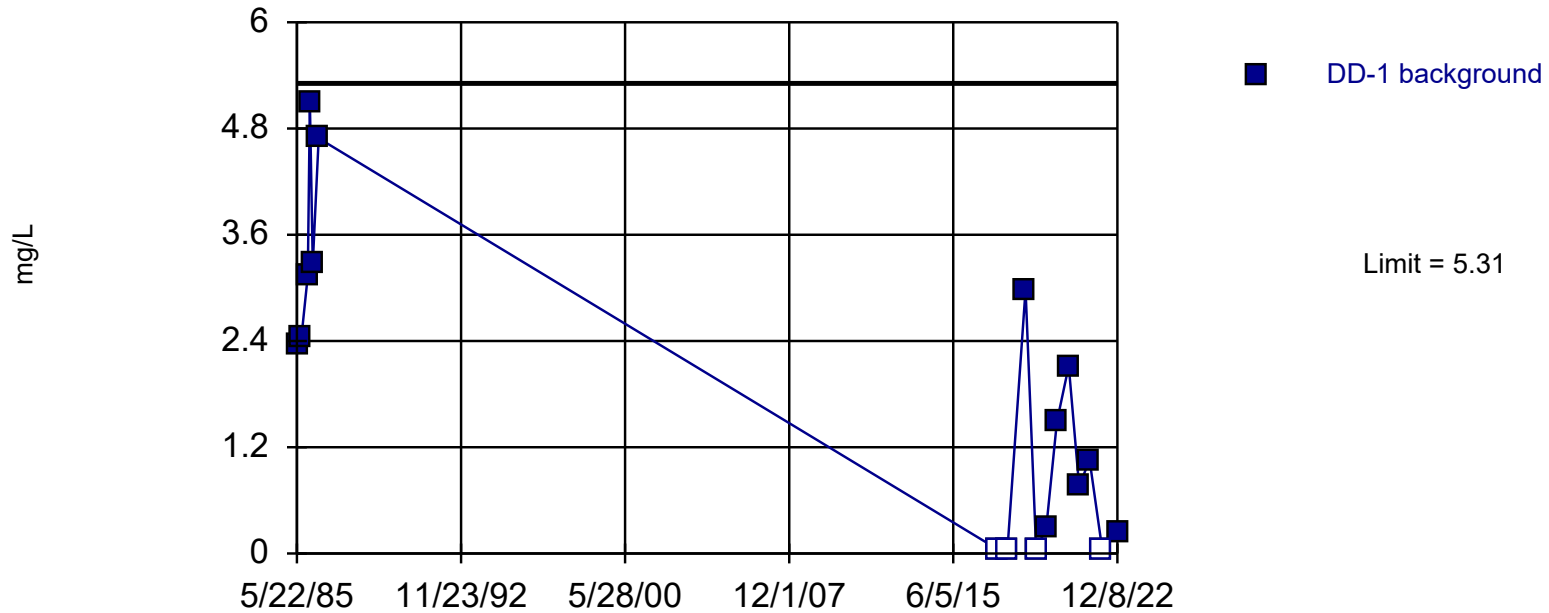
Prediction Limit

Constituent: Cobalt (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	R-1
7/20/2016	<0.005 (H)
11/14/2016	<0.01 (H)
3/29/2017	<0.01 (H)
6/12/2017	<0.01
11/27/2017	<0.01
3/29/2018	<0.01
9/28/2018	<0.01
3/22/2019	<0.01
9/5/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/16/2020	<0.01
12/10/2020	<0.01
3/10/2021	<0.01
9/2/2021	<0.01
3/29/2022	<0.01
12/7/2022	<0.01
6/1/2023	<0.01
11/27/2023	<0.01

Prediction Limit

Intrawell Parametric, DD-1



Background Data Summary (after Kaplan-Meier Adjustment): Mean=1.784, Std. Dev.=1.598, n=17, 23.53% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8914, critical = 0.851. Kappa = 2.207 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Iron Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

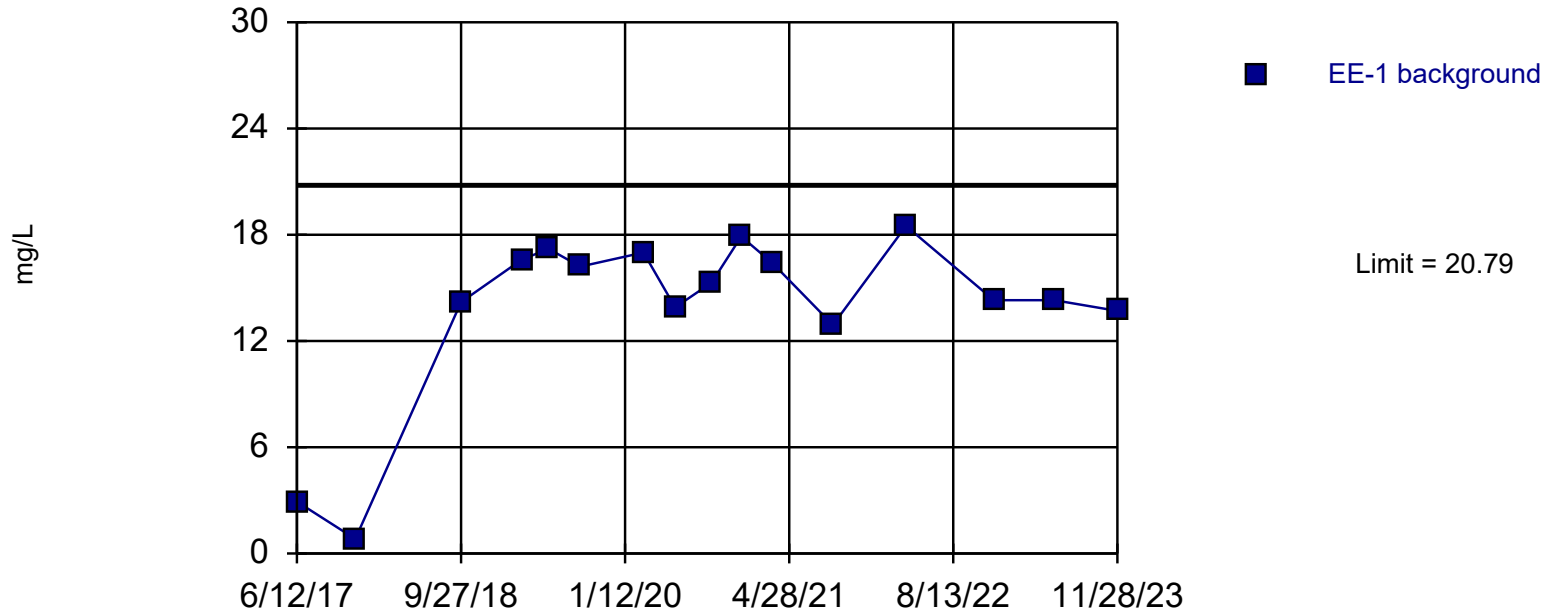
Prediction Limit

Constituent: Iron (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	DD-1
5/22/1985	2.35
8/5/1985	2.44
11/20/1985	3.14
12/24/1985	5.1
2/10/1986	3.27
5/19/1986	4.69
6/12/2017	<0.1
11/27/2017	<0.1
9/27/2018	2.98
3/22/2019	<0.1
9/5/2019	0.283
3/3/2020	1.49
9/17/2020	2.12
3/11/2021	0.757
9/1/2021	1.06
3/30/2022	<0.1
12/8/2022	0.246

Prediction Limit

Intrawell Parametric, EE-1



Background Data Summary (based on square transformation): Mean=216, Std. Dev.=96.96, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.87, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Iron Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

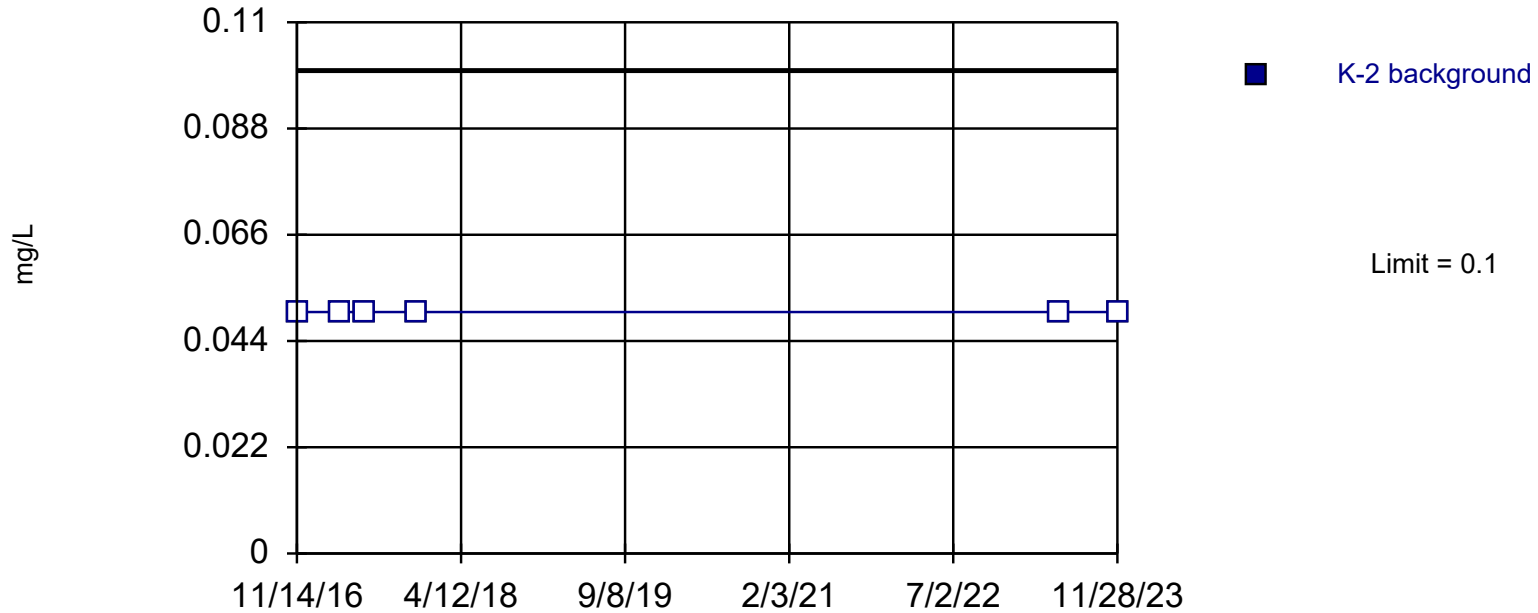
Prediction Limit

Constituent: Iron (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	EE-1
5/22/1985	10.36 (H)
8/5/1985	7.64 (H)
11/20/1985	7.7 (H)
12/24/1985	3.38 (H)
2/10/1986	8.5 (H)
5/19/1986	11.75 (H)
7/29/1993	1.7 (H)
6/12/2017	2.93
11/27/2017	0.823
9/27/2018	14.2
3/21/2019	16.6
6/6/2019	17.2
9/5/2019	16.2
3/5/2020	17
6/4/2020	13.9
9/17/2020	15.3
12/11/2020	17.9
3/11/2021	16.4
9/1/2021	12.9
3/30/2022	18.5
12/8/2022	14.3
5/31/2023	14.3
11/28/2023	13.7

Prediction Limit

Intrawell Non-parametric, K-2 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 6$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.06667. Individual comparison alpha = 0.03391 (1 of 2). Assumes 1 future value. Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Iron Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

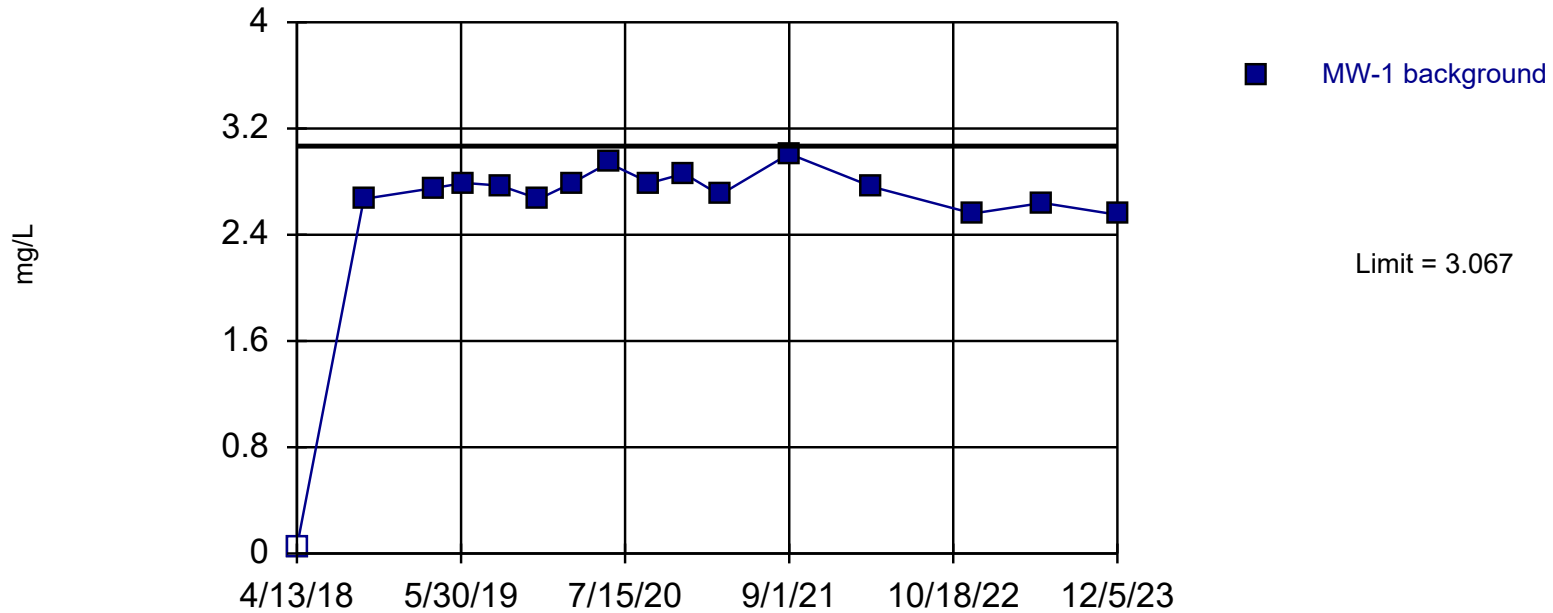
Prediction Limit

Constituent: Iron (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	K-2
11/14/2016	<0.1
3/29/2017	<0.1
6/12/2017	<0.1
11/27/2017	<0.1
5/31/2023	<0.1
11/28/2023	<0.1

Prediction Limit

Intrawell Parametric, MW-1 (bg)



Background Data Summary (based on x^5 transformation): Mean=150.4, Std. Dev.=54.29, n=16, 6.25% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9007, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Iron Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

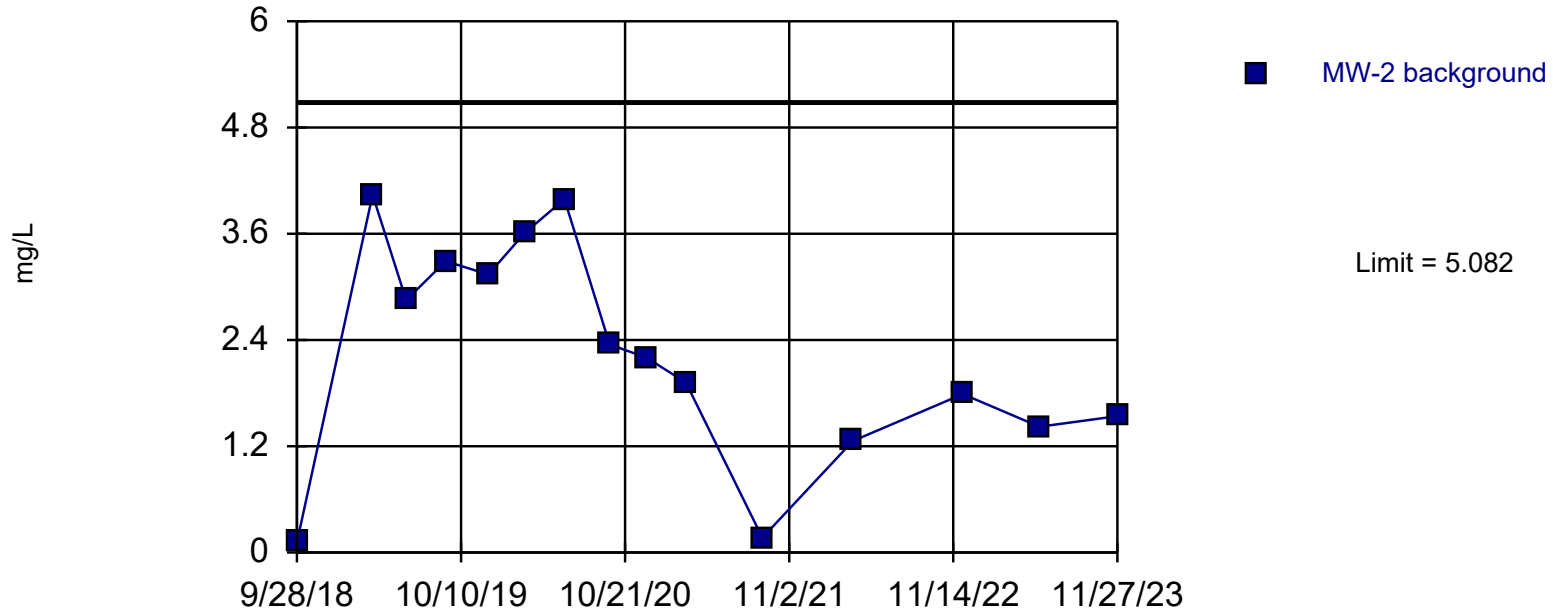
Prediction Limit

Constituent: Iron (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-1
4/13/2018	<0.1 (O)
9/28/2018	2.67
3/21/2019	2.75
6/7/2019	2.79
9/6/2019	2.77
12/12/2019	2.67
3/5/2020	2.79
6/4/2020	2.94
9/17/2020	2.79
12/11/2020	2.86
3/11/2021	2.7
9/1/2021	3.01
3/30/2022	2.76
12/7/2022	2.56
5/31/2023	2.64
12/5/2023	2.55

Prediction Limit

Intrawell Parametric, MW-2



Background Data Summary: Mean=2.245, Std. Dev.=1.246, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9537, critical = 0.835. Kappa = 2.278 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Iron Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

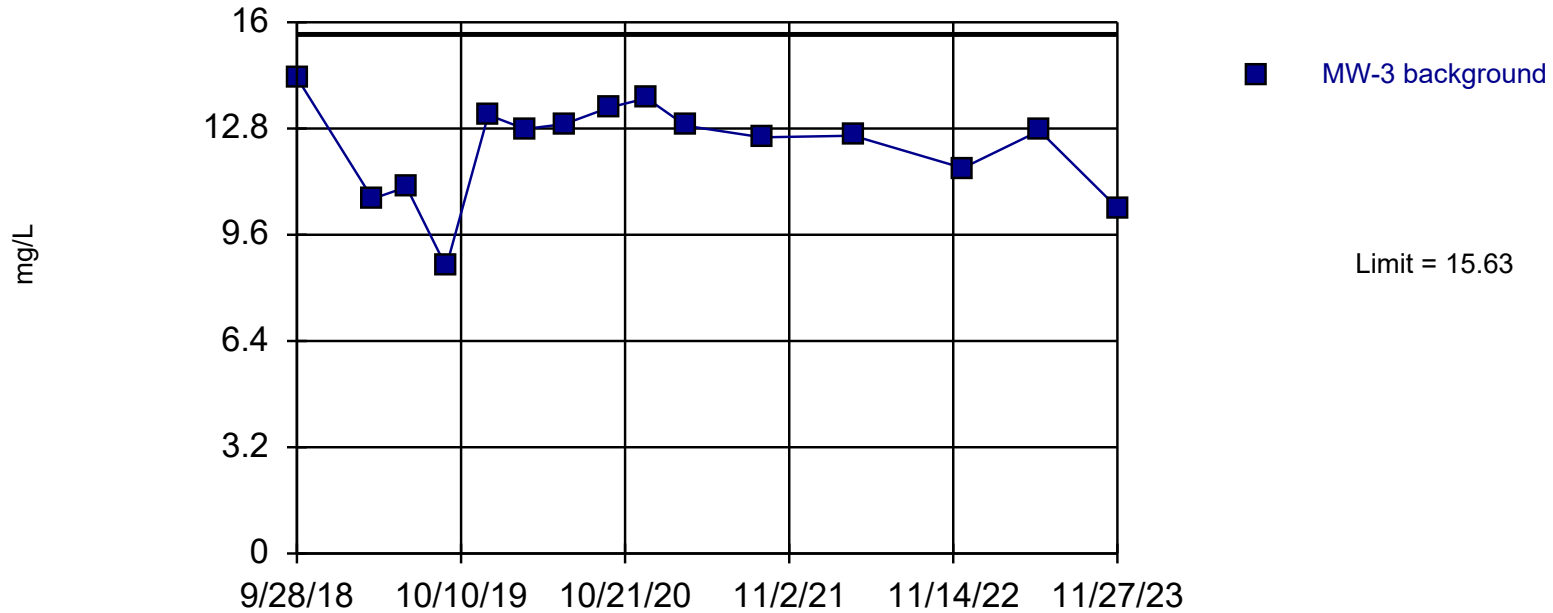
Prediction Limit

Constituent: Iron (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-2
9/28/2018	0.115
3/21/2019	4.04
6/6/2019	2.85
9/5/2019	3.29
12/12/2019	3.14
3/5/2020	3.61
6/4/2020	3.99
9/16/2020	2.35
12/10/2020	2.2
3/10/2021	1.92
9/2/2021	0.1665 (D)
3/29/2022	1.26
12/7/2022	1.79
6/1/2023	1.42
11/27/2023	1.54

Prediction Limit

Intrawell Parametric, MW-3



Background Data Summary: Mean=12.23, Std. Dev.=1.492, n=15. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9146, critical = 0.835. Kappa = 2.278 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Iron Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

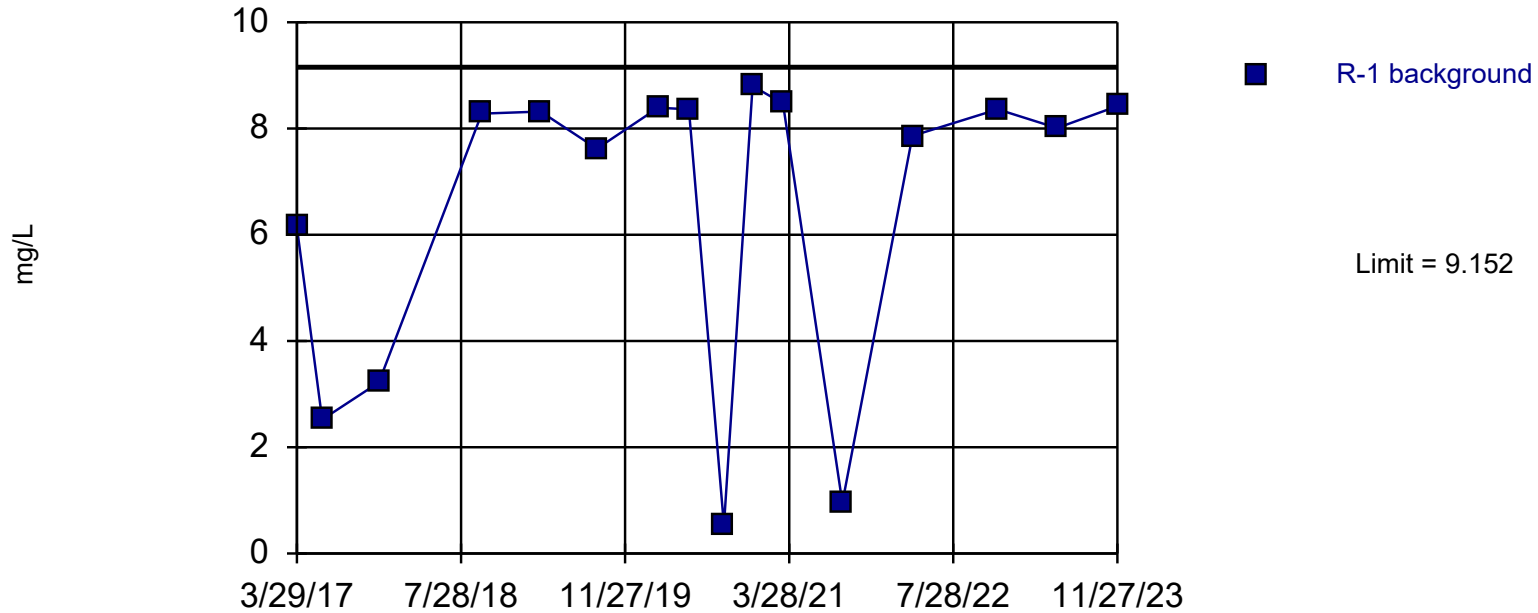
Prediction Limit

Constituent: Iron (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-3
9/28/2018	17.6
3/21/2019	9.2
6/7/2019	8.4
9/6/2019	11.9
12/12/2019	13.4
3/5/2020	11.3
6/4/2020	10.3
9/16/2020	16.7
12/10/2020	13.9
3/10/2021	11.4
9/1/2021	15.8
3/30/2022	11.1
12/7/2022	11.8
6/1/2023	10.1
11/27/2023	10.6

Prediction Limit

Intrawell Parametric, R-1



Background Data Summary (based on x^6 transformation): Mean=226631, Std. Dev.=161730, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8473, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Iron Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

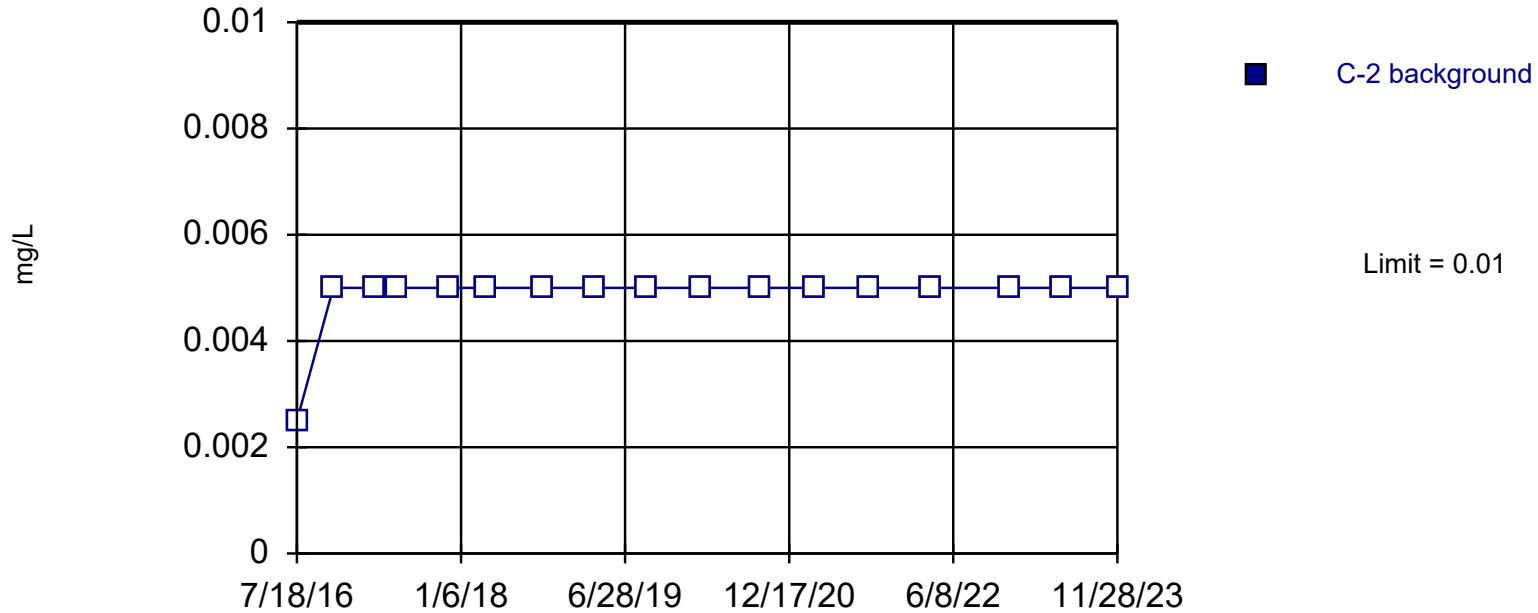
Prediction Limit

Constituent: Iron (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	R-1
5/20/1985	4.92 (H)
11/4/1985	6.24 (H)
2/12/1986	5.32 (H)
5/12/1986	6.62 (H)
11/14/2016	5.35 (H)
3/29/2017	6.14 (O)
6/12/2017	2.52 (O)
11/27/2017	3.22 (O)
9/28/2018	8.28
3/22/2019	8.32
9/5/2019	7.62
3/5/2020	8.39
6/4/2020	8.36
9/16/2020	0.529 (O)
12/10/2020	8.8
3/10/2021	8.47
9/2/2021	0.951 (O)
3/29/2022	7.86
12/7/2022	8.36
6/1/2023	8.01
11/27/2023	8.42

Prediction Limit

Intrawell Non-parametric, C-2 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 17$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Lead Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

Prediction Limit

Constituent: Lead (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	C-2
3/28/2016	<0.005 (H)
5/31/2016	<0.005 (H)
7/18/2016	<0.005
11/14/2016	<0.01
3/29/2017	<0.01
6/12/2017	<0.01
11/27/2017	<0.01
3/30/2018	<0.01
9/28/2018	<0.01
3/21/2019	<0.01
9/6/2019	<0.01
3/5/2020	<0.01
9/16/2020	<0.01
3/10/2021	<0.01 (D)
9/2/2021	<0.01
3/30/2022	<0.01
12/8/2022	<0.01
5/31/2023	<0.01
11/28/2023	<0.01

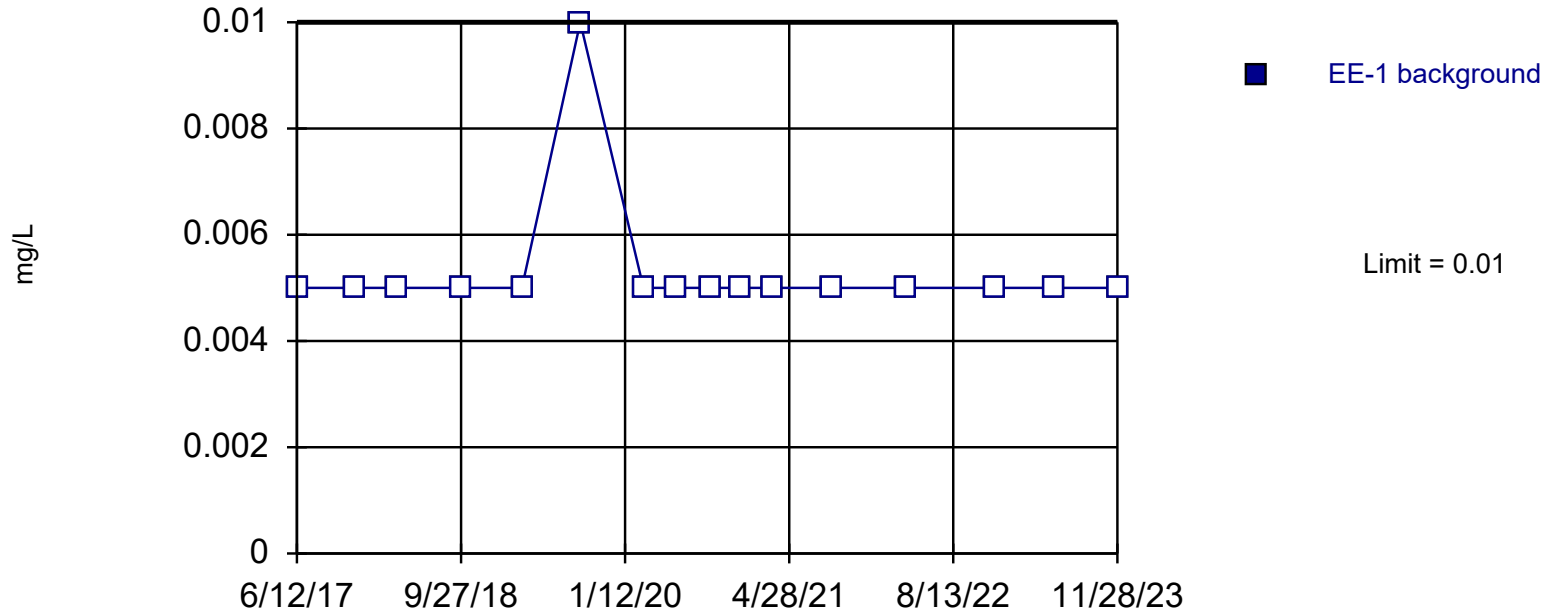
Prediction Limit

Constituent: Lead (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	DD-1
5/22/1985	<0.01 (H)
8/5/1985	<0.01 (H)
11/20/1985	<0.01 (H)
12/24/1985	<0.002
2/10/1986	<0.01
3/11/2015	<0.005
3/29/2016	<0.005
6/1/2016	<0.005
7/19/2016	<0.005
6/12/2017	<0.01
11/27/2017	<0.01
3/30/2018	<0.01
9/27/2018	<0.01
3/22/2019	<0.01
9/5/2019	<0.01
3/3/2020	<0.01
9/17/2020	<0.01
3/11/2021	<0.01
9/1/2021	<0.01
3/30/2022	<0.01
12/8/2022	<0.01

Prediction Limit

Intrawell Non-parametric, EE-1



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Lead Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

Prediction Limit

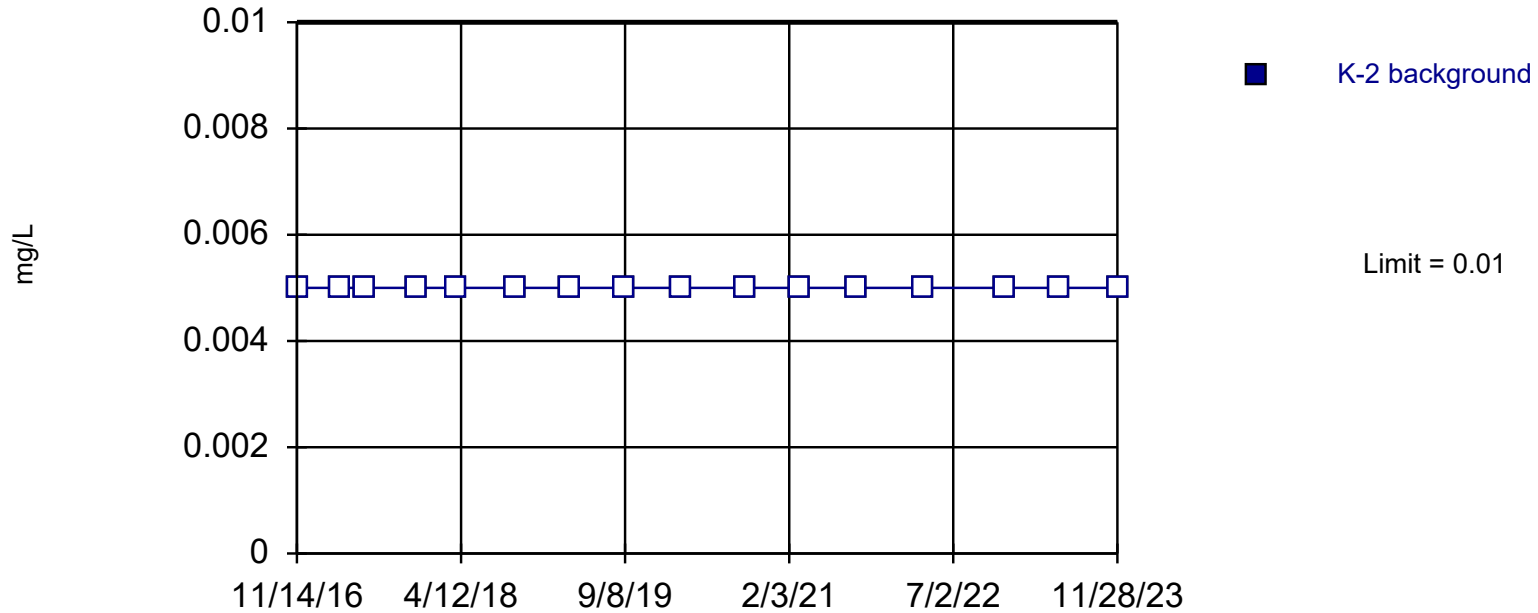
Constituent: Lead (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

EE-1

5/22/1985	<0.01 (H)
8/5/1985	<0.01 (H)
11/20/1985	<0.01 (H)
12/24/1985	<0.002 (H)
2/10/1986	<0.01 (H)
3/12/2015	<0.005 (H)
3/29/2016	<0.005 (H)
6/1/2016	<0.005 (H)
7/21/2016	<0.005 (H)
6/12/2017	<0.01
11/27/2017	<0.01
3/30/2018	<0.01
9/27/2018	<0.01
3/21/2019	<0.01
9/5/2019	<0.02
3/5/2020	<0.01
6/4/2020	<0.01
9/17/2020	<0.01
12/11/2020	<0.01
3/11/2021	<0.01
9/1/2021	<0.01
3/30/2022	<0.01
12/8/2022	<0.01
5/31/2023	<0.01
11/28/2023	<0.01

Prediction Limit

Intrawell Non-parametric, K-2 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Lead Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

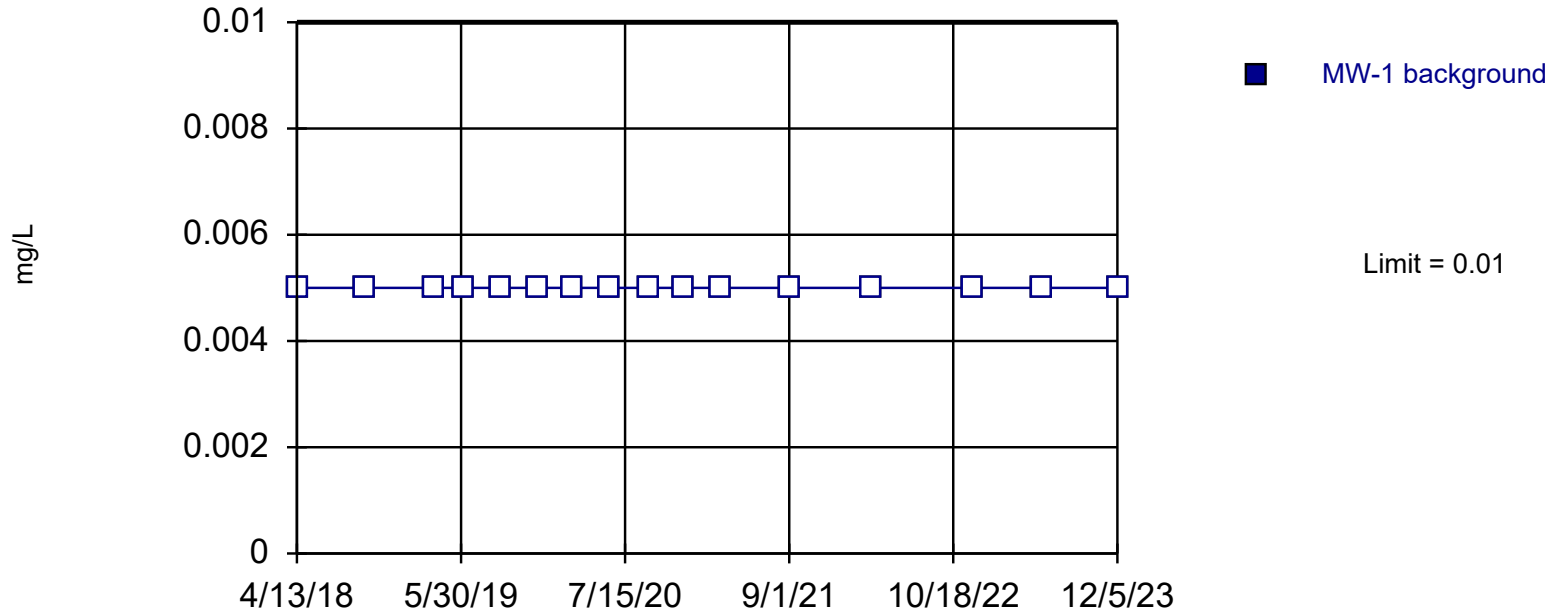
Prediction Limit

Constituent: Lead (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	K-2
3/9/2015	<0.005 (H)
3/28/2016	<0.005 (H)
5/31/2016	0.866 (H)
7/18/2016	<0.005 (H)
11/14/2016	<0.01
3/29/2017	<0.01
6/12/2017	<0.01
11/27/2017	<0.01
3/29/2018	<0.01
9/27/2018	<0.01
3/22/2019	<0.01
9/5/2019	<0.01
3/5/2020	<0.01
9/16/2020	<0.01
3/10/2021	<0.01
9/3/2021	<0.01
3/31/2022	<0.01
12/8/2022	<0.01
5/31/2023	<0.01
11/28/2023	<0.01

Prediction Limit

Intrawell Non-parametric, MW-1 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Lead Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

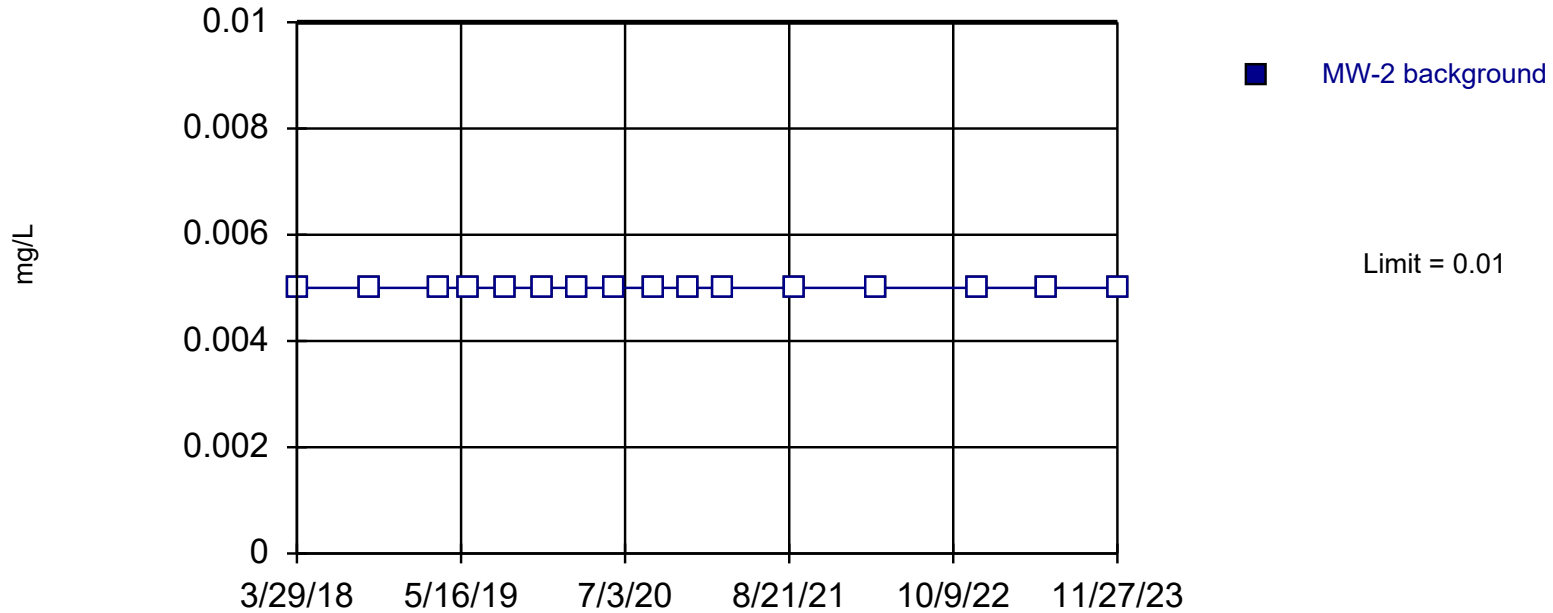
Prediction Limit

Constituent: Lead (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-1
4/13/2018	<0.01
9/28/2018	<0.01
3/21/2019	<0.01
6/7/2019	<0.01
9/6/2019	<0.01
12/12/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/17/2020	<0.01
12/11/2020	<0.01
3/11/2021	<0.01
9/1/2021	<0.01
3/30/2022	<0.01
12/7/2022	<0.01
5/31/2023	<0.01
12/5/2023	<0.01

Prediction Limit

Intrawell Non-parametric, MW-2



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Lead Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

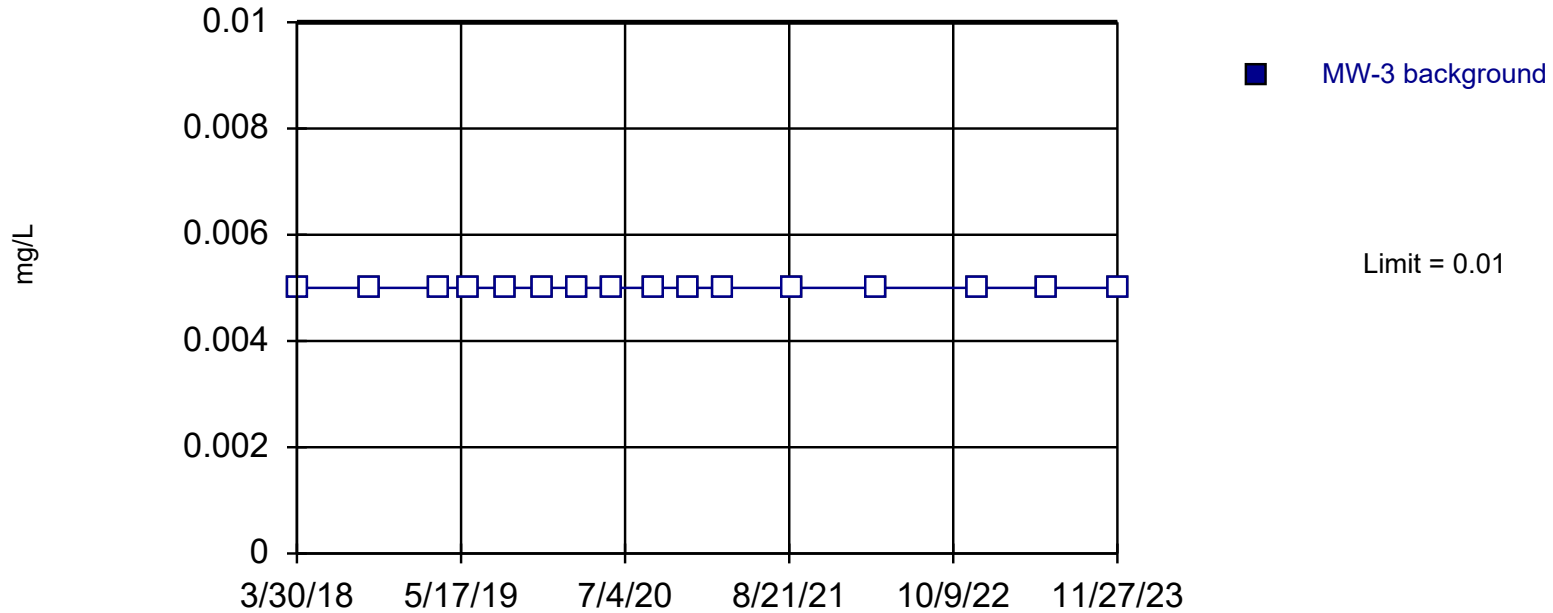
Prediction Limit

Constituent: Lead (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-2
3/29/2018	<0.01
9/28/2018	<0.01
3/21/2019	<0.01
6/6/2019	<0.01
9/5/2019	<0.01
12/12/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/16/2020	<0.01
12/10/2020	<0.01
3/10/2021	<0.01
9/2/2021	<0.01 (D)
3/29/2022	<0.01
12/7/2022	<0.01
6/1/2023	<0.01
11/27/2023	<0.01

Prediction Limit

Intrawell Non-parametric, MW-3



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Lead Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

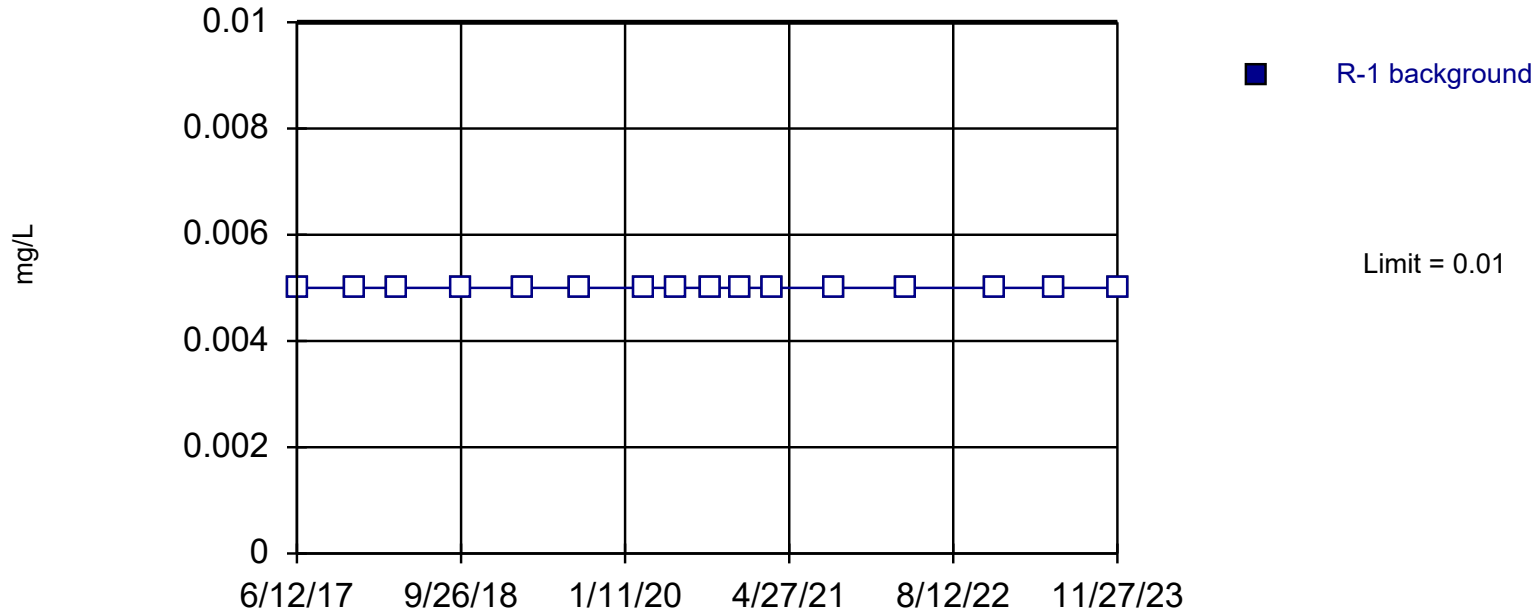
Prediction Limit

Constituent: Lead (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-3
3/30/2018	<0.01
9/28/2018	<0.01
3/21/2019	<0.01
6/7/2019	<0.01
9/6/2019	<0.01
12/12/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/16/2020	<0.01
12/10/2020	<0.01
3/10/2021	<0.01
9/1/2021	<0.01
3/30/2022	<0.01
12/7/2022	<0.01
6/1/2023	<0.01
11/27/2023	<0.01

Prediction Limit

Intrawell Non-parametric, R-1



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Lead Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

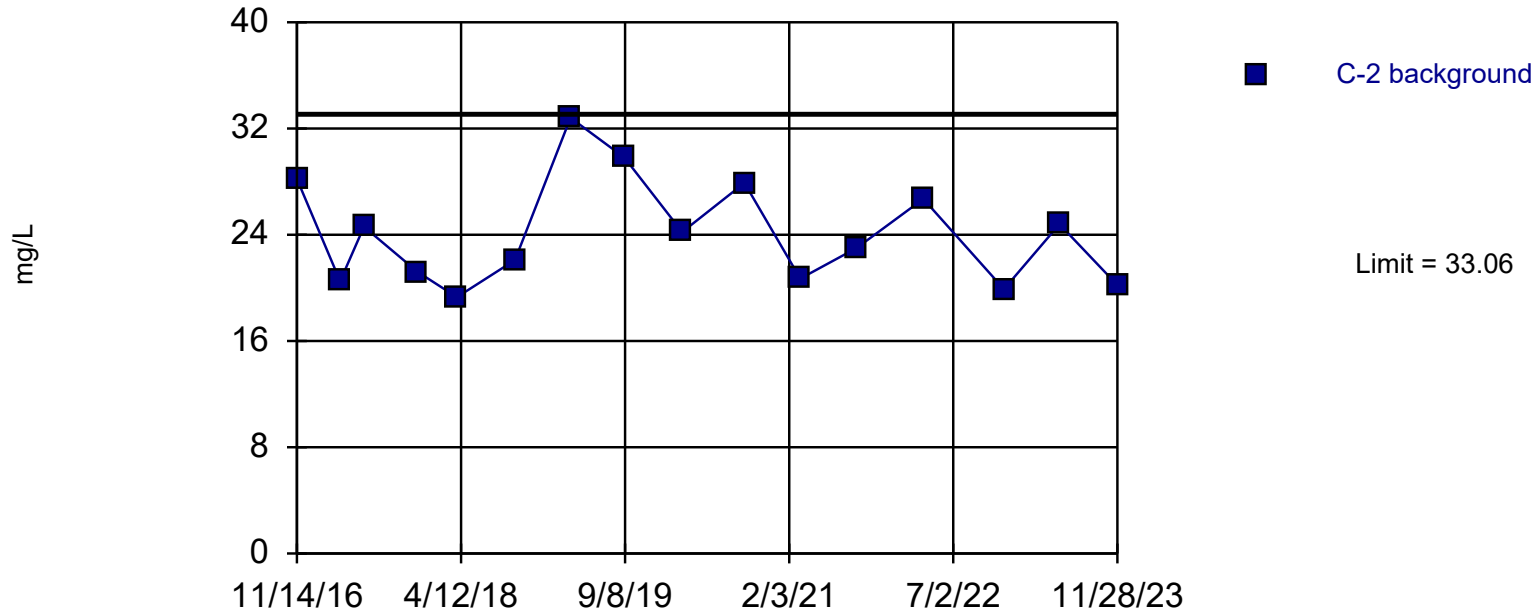
Prediction Limit

Constituent: Lead (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	R-1
5/20/1985	<0.01 (H)
11/4/1985	<0.01 (H)
2/12/1986	<0.01 (H)
5/12/1986	<0.01 (H)
7/20/2016	<0.005 (H)
11/14/2016	<0.01 (H)
3/29/2017	<0.01 (H)
6/12/2017	<0.01
11/27/2017	<0.01
3/29/2018	<0.01
9/28/2018	<0.01
3/22/2019	<0.01
9/5/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/16/2020	<0.01
12/10/2020	<0.01
3/10/2021	<0.01
9/2/2021	<0.01
3/29/2022	<0.01
12/7/2022	<0.01
6/1/2023	<0.01
11/27/2023	<0.01

Prediction Limit

Intrawell Parametric, C-2 (bg)



Background Data Summary: Mean=24.12, Std. Dev.=4.008, n=16. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9258, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Magnesium Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

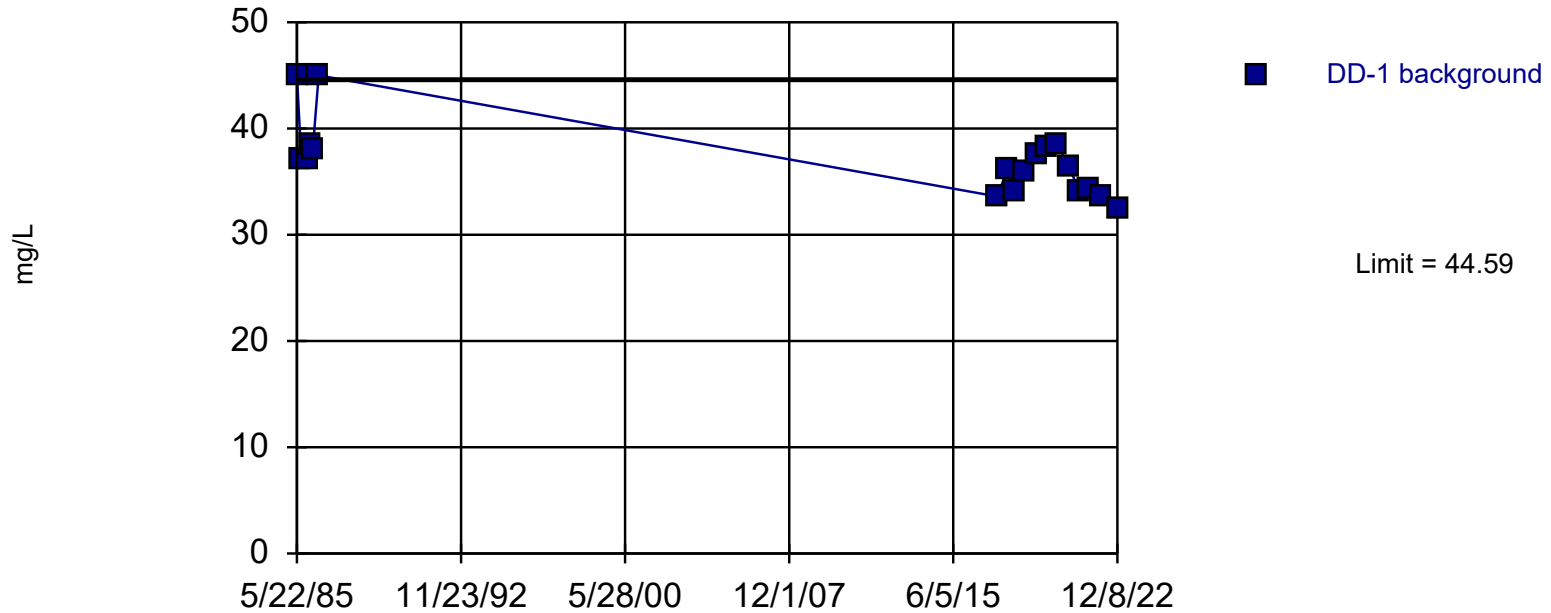
Prediction Limit

Constituent: Magnesium (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	C-2
11/14/2016	28.2
3/29/2017	20.5
6/12/2017	24.6
11/27/2017	21.2
3/30/2018	19.3
9/28/2018	22.1
3/21/2019	32.8
9/6/2019	29.8
3/5/2020	24.2
9/16/2020	27.9
3/10/2021	20.7 (D)
9/2/2021	23
3/30/2022	26.7
12/8/2022	19.9
5/31/2023	24.8
11/28/2023	20.2

Prediction Limit

Intrawell Parametric, DD-1



Background Data Summary: Mean=36.99, Std. Dev.=3.483, n=18. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8614, critical = 0.858. Kappa = 2.182 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Magnesium Analysis Run 5/22/2024 4:56 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

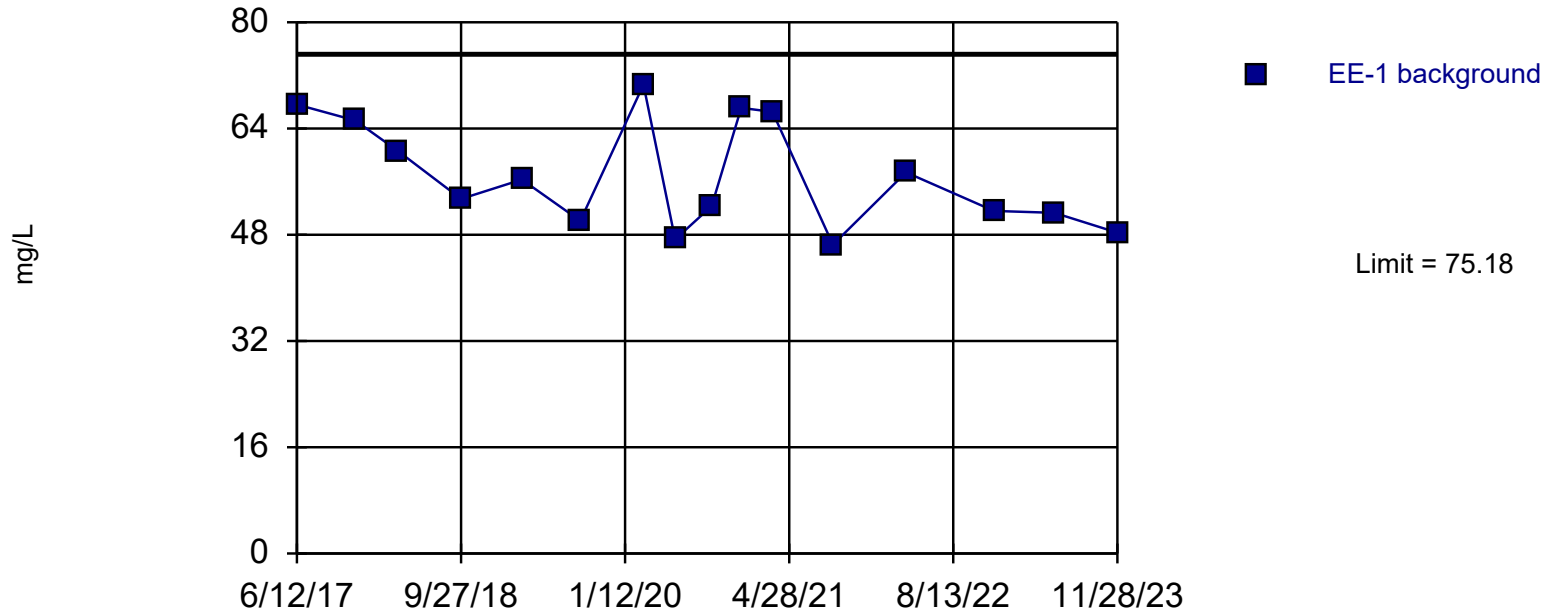
Prediction Limit

Constituent: Magnesium (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	DD-1
5/22/1985	45
8/5/1985	37
11/20/1985	37
12/24/1985	38.6
2/10/1986	38
5/19/1986	45
6/12/2017	33.6
11/27/2017	36.2
3/30/2018	34.1
9/27/2018	36
3/22/2019	37.6
9/5/2019	38.3
3/3/2020	38.6
9/17/2020	36.5
3/11/2021	34.1
9/1/2021	34.3
3/30/2022	33.5
12/8/2022	32.5

Prediction Limit

Intrawell Parametric, EE-1



Background Data Summary: Mean=57.01, Std. Dev.=8.144, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9082, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Magnesium Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

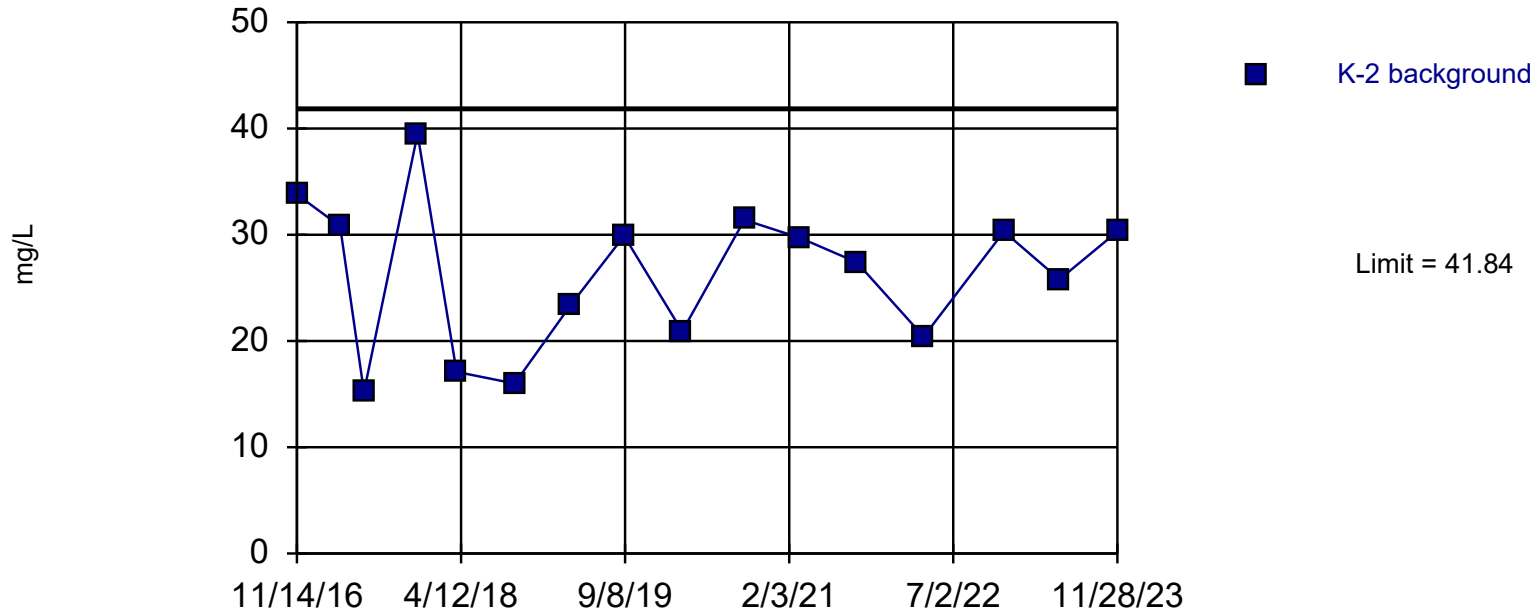
Prediction Limit

Constituent: Magnesium (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	EE-1
5/22/1985	61 (H)
8/5/1985	43 (H)
11/20/1985	54 (H)
12/24/1985	52.8 (H)
2/10/1986	58 (H)
5/19/1986	64 (H)
6/12/2017	67.6
11/27/2017	65.2
3/30/2018	60.6
9/27/2018	53.4
3/21/2019	56.3
9/5/2019	50.1
3/5/2020	70.6
6/4/2020	47.3
9/17/2020	52.3
12/11/2020	67.1
3/11/2021	66.5
9/1/2021	46.5
3/30/2022	57.4
12/8/2022	51.6
5/31/2023	51.3
11/28/2023	48.3

Prediction Limit

Intrawell Parametric, K-2 (bg)



Background Data Summary: Mean=26.37, Std. Dev.=6.933, n=16. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9453, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Magnesium Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

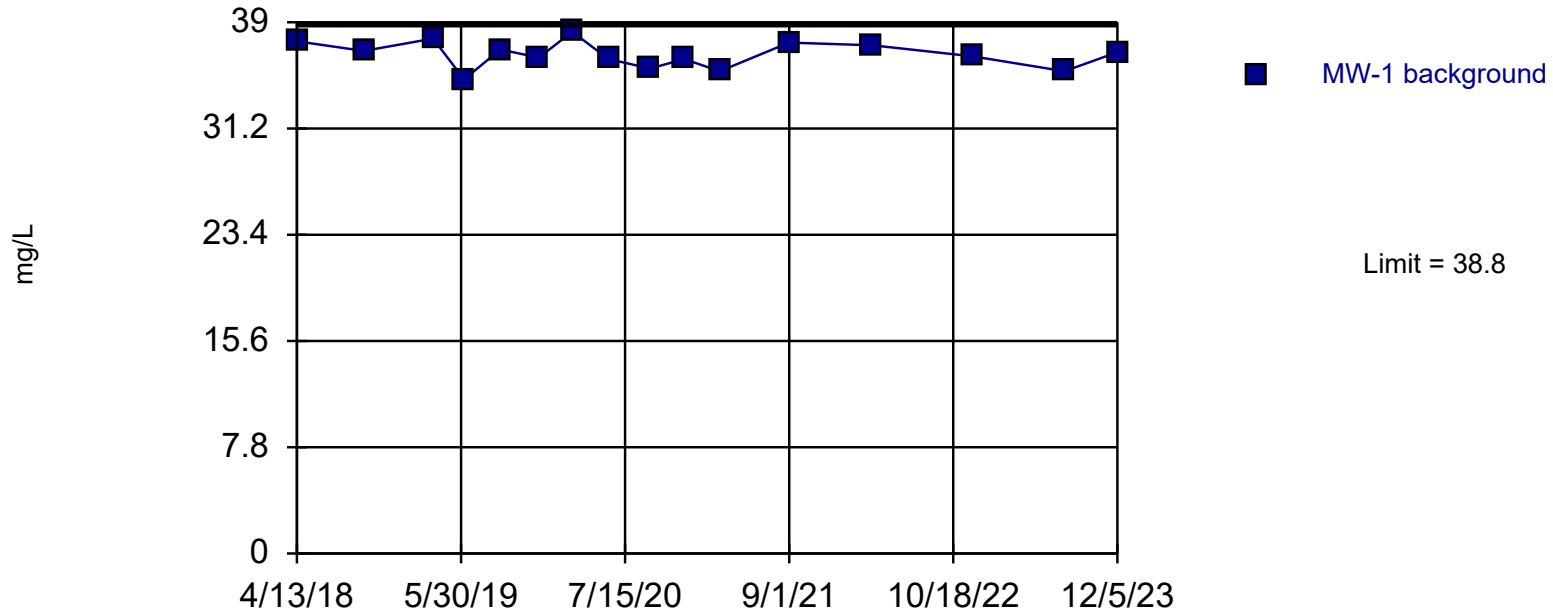
Prediction Limit

Constituent: Magnesium (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	K-2
11/14/2016	33.8
3/29/2017	30.8
6/12/2017	15.2
11/27/2017	39.5
3/29/2018	17.1
9/27/2018	16
3/22/2019	23.4
9/5/2019	29.9
3/5/2020	20.9
9/16/2020	31.4
3/10/2021	29.7
9/3/2021	27.4
3/31/2022	20.4
12/8/2022	30.3
5/31/2023	25.8
11/28/2023	30.3

Prediction Limit

Intrawell Parametric, MW-1 (bg)



Background Data Summary: Mean=36.62, Std. Dev.=0.9752, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9768, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Magnesium Analysis Run 5/22/2024 4:56 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

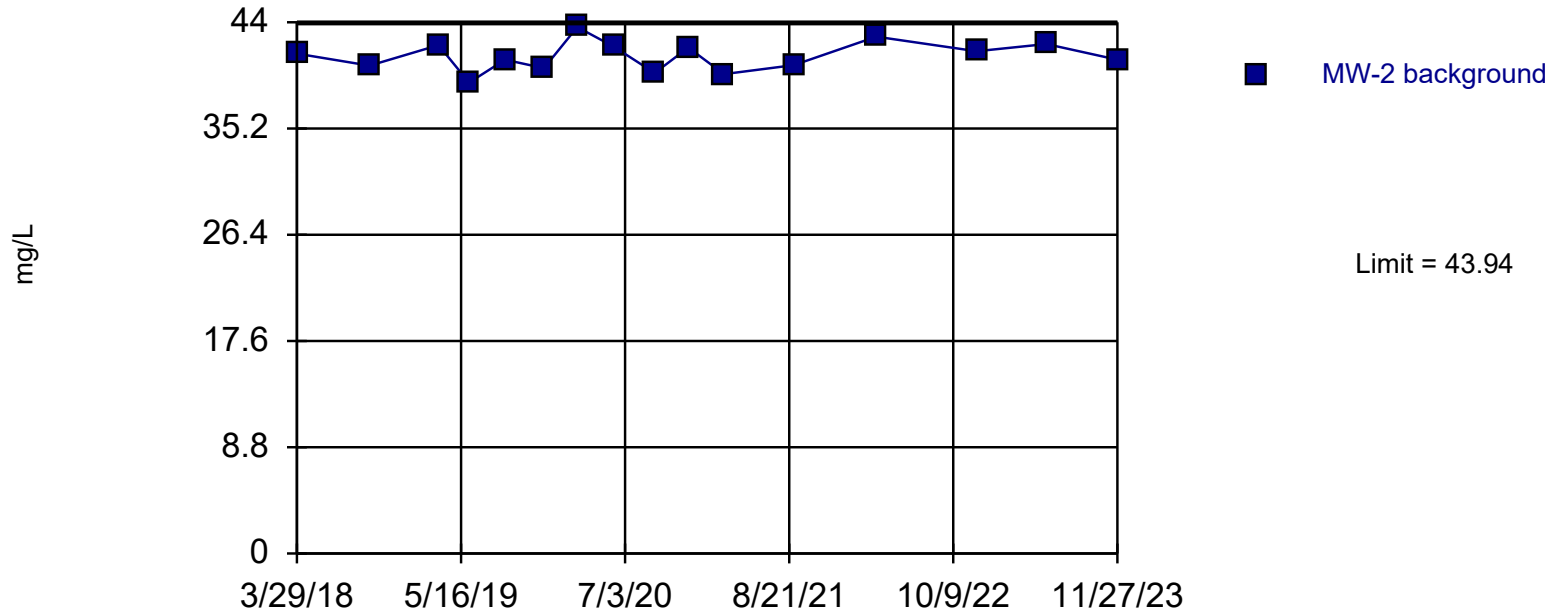
Prediction Limit

Constituent: Magnesium (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-1
4/13/2018	37.6
9/28/2018	36.9
3/21/2019	37.8
6/7/2019	34.8
9/6/2019	37
12/12/2019	36.4
3/5/2020	38.3
6/4/2020	36.3
9/17/2020	35.6
12/11/2020	36.3
3/11/2021	35.4
9/1/2021	37.5
3/30/2022	37.3
12/7/2022	36.5
5/31/2023	39.4 (P)
7/25/2023	35.4
12/5/2023	36.8

Prediction Limit

Intrawell Parametric, MW-2



Background Data Summary: Mean=41.18, Std. Dev.=1.235, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9848, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Magnesium Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

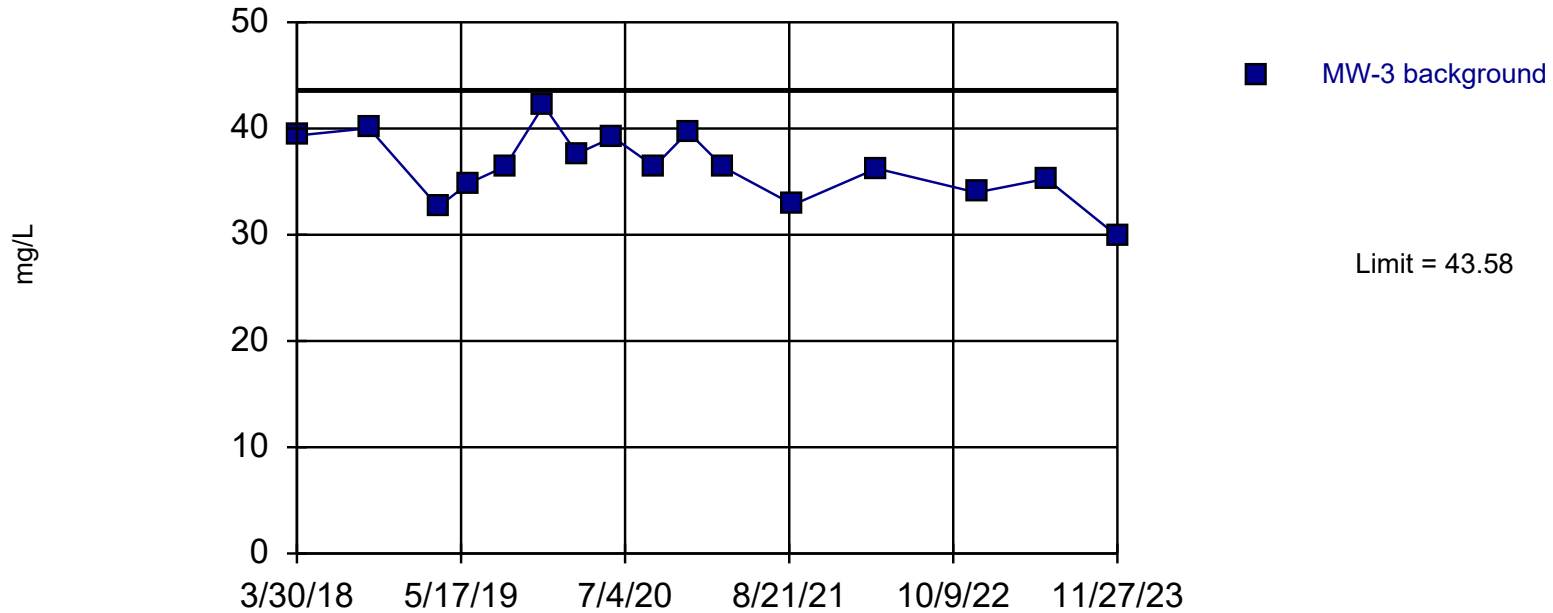
Prediction Limit

Constituent: Magnesium (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-2
3/29/2018	41.4
9/28/2018	40.4
3/21/2019	42.1
6/6/2019	39
9/5/2019	40.9
12/12/2019	40.2
3/5/2020	43.6
6/4/2020	42
9/16/2020	39.8
12/10/2020	41.9
3/10/2021	39.7
9/2/2021	40.45 (D)
3/29/2022	42.8
12/7/2022	41.6
6/1/2023	42.2
11/27/2023	40.9

Prediction Limit

Intrawell Parametric, MW-3



Background Data Summary: Mean=36.43, Std. Dev.=3.205, n=16. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9806, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Magnesium Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

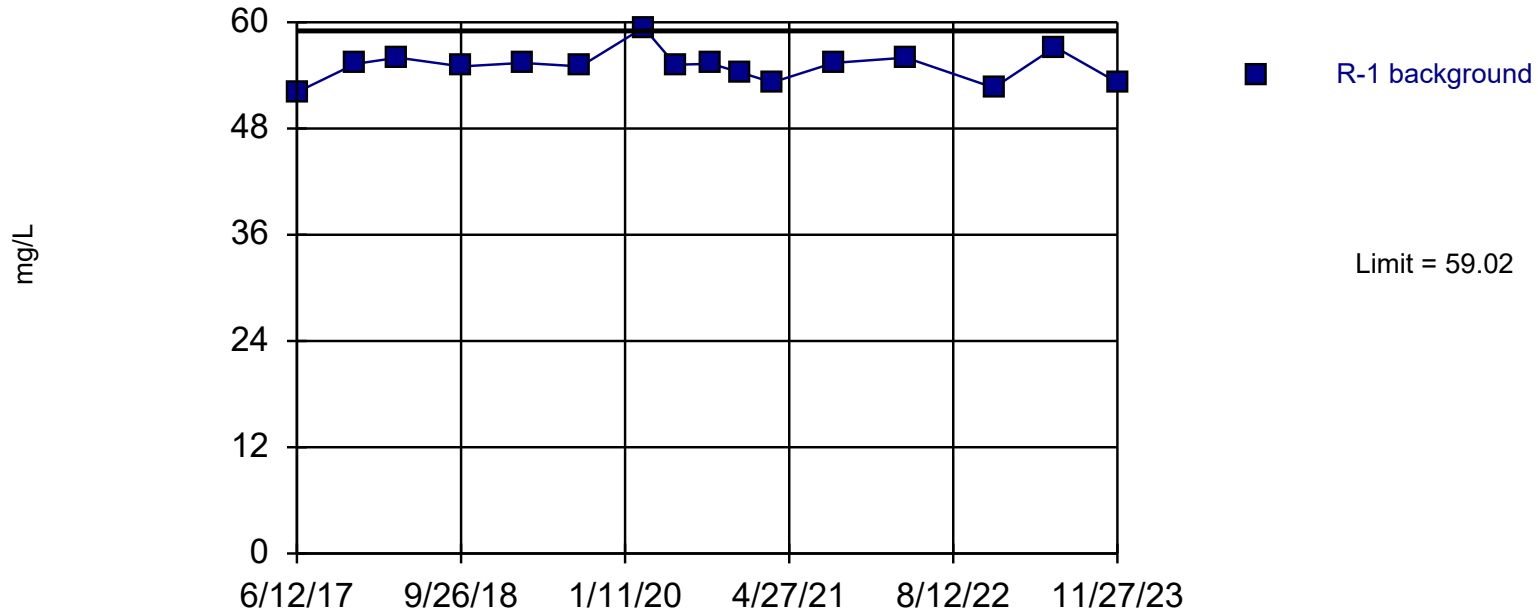
Prediction Limit

Constituent: Magnesium (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-3
3/30/2018	35.7
9/28/2018	48.2
3/21/2019	29
6/7/2019	31.2
9/6/2019	44.6
12/12/2019	41.3
3/5/2020	34
6/4/2020	35.5
9/16/2020	44.6
12/10/2020	38.8
3/10/2021	32.7
9/1/2021	41
3/30/2022	32.6
12/7/2022	33.1
6/1/2023	31.6
11/27/2023	29

Prediction Limit

Intrawell Parametric, R-1



Background Data Summary: Mean=55.04, Std. Dev.=1.786, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9302, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Magnesium Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

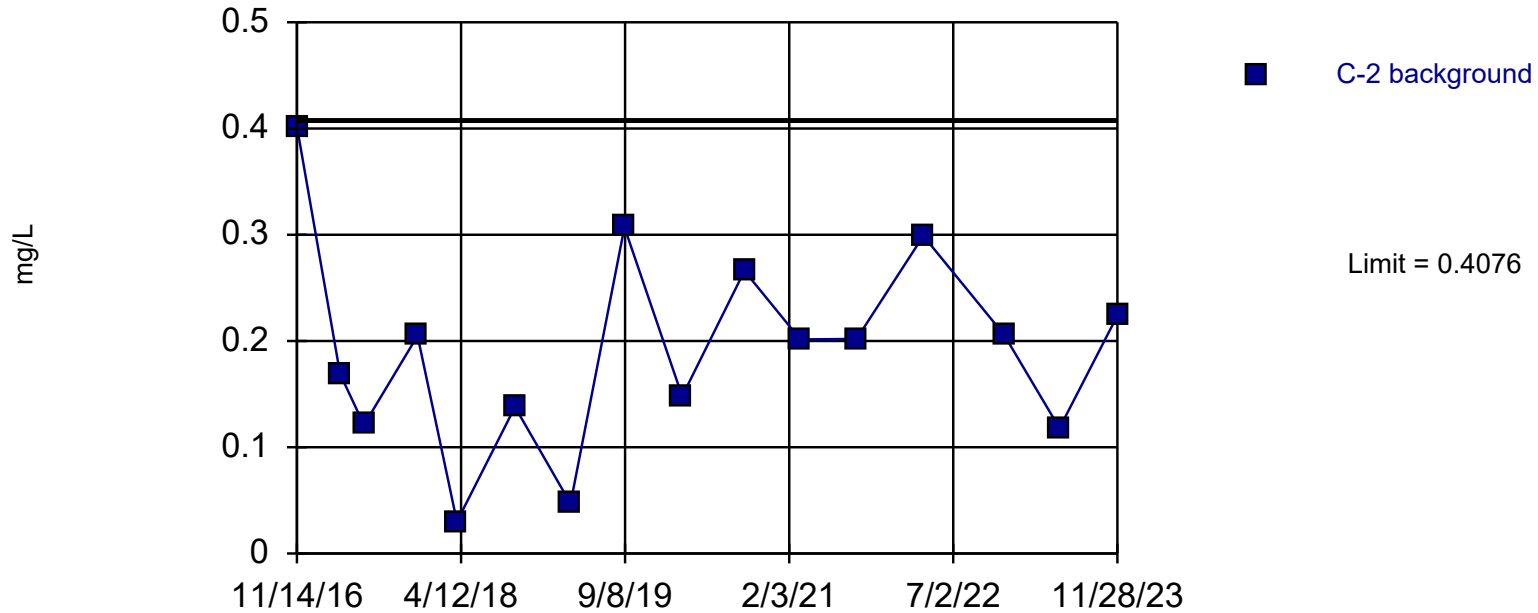
Prediction Limit

Constituent: Magnesium (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	R-1
5/20/1985	42 (H)
11/4/1985	42 (H)
2/12/1986	45 (H)
5/12/1986	46 (H)
11/14/2016	56.9 (H)
3/29/2017	56.1 (H)
6/12/2017	52.1 (O)
11/27/2017	55.3
3/29/2018	56
9/28/2018	55
3/22/2019	55.4
9/5/2019	55
3/5/2020	59.4 (O)
6/4/2020	55.2
9/16/2020	55.3
12/10/2020	54.3
3/10/2021	53.2
9/2/2021	55.4
3/29/2022	56
12/7/2022	52.6
6/1/2023	57.2
11/27/2023	53.2

Prediction Limit

Intrawell Parametric, C-2 (bg)



Background Data Summary: Mean=0.1927, Std. Dev.=0.09626, n=16. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9732, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Manganese Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

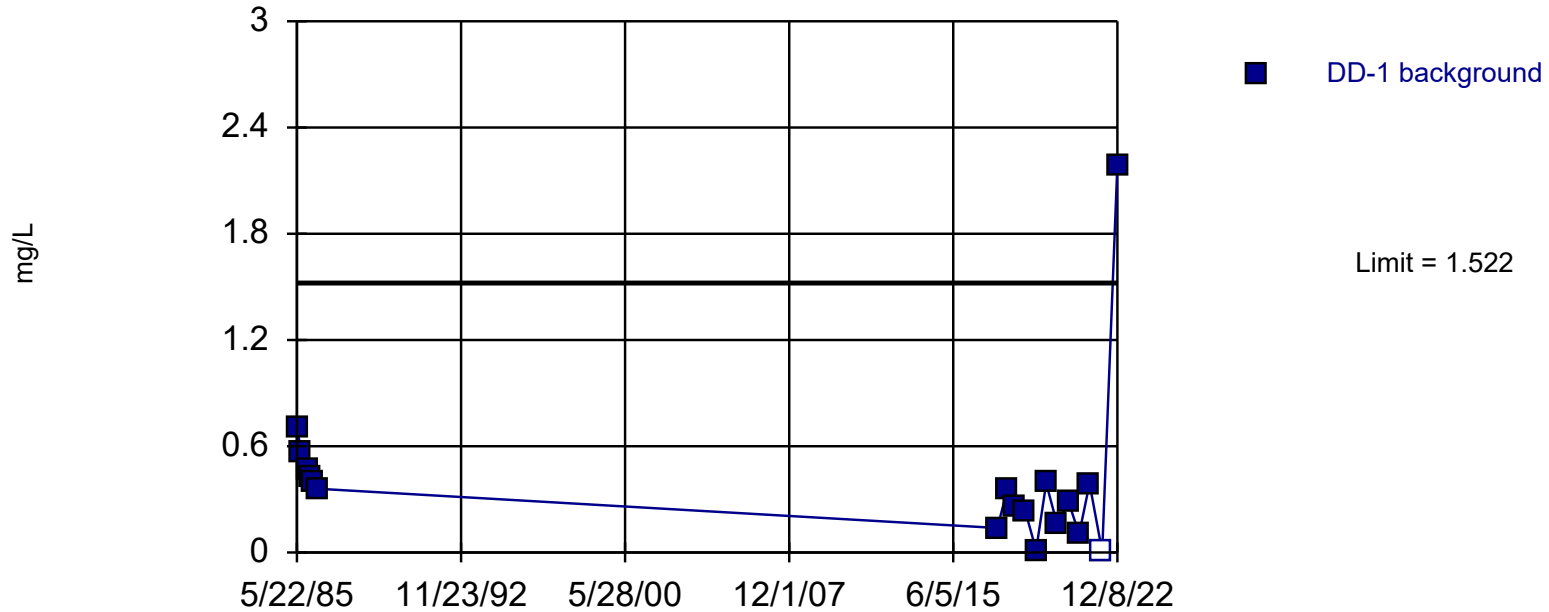
Prediction Limit

Constituent: Manganese (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	C-2
11/14/2016	0.402
3/29/2017	0.169
6/12/2017	0.121
11/27/2017	0.205
3/30/2018	0.03
9/28/2018	0.138
3/21/2019	0.047
9/6/2019	0.307
3/5/2020	0.148
9/16/2020	0.266
3/10/2021	0.2015 (D)
9/2/2021	0.202
3/30/2022	0.299
12/8/2022	0.206
5/31/2023	0.118
11/28/2023	0.224

Prediction Limit

Intrawell Parametric, DD-1



Background Data Summary (based on square root transformation): Mean=0.572, Std. Dev.=0.3033, n=18, 5.556% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8757, critical = 0.858. Kappa = 2.182 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Manganese Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

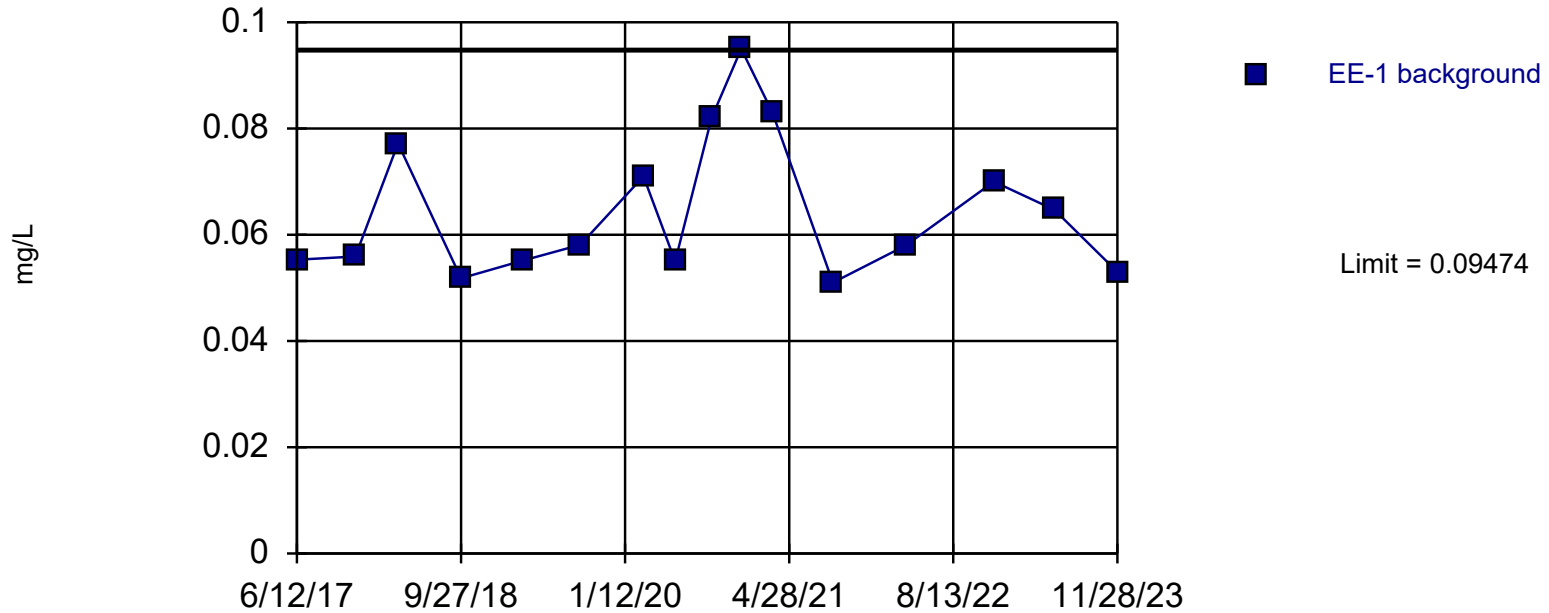
Prediction Limit

Constituent: Manganese (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	DD-1
5/22/1985	0.7
8/5/1985	0.57
11/20/1985	0.47
12/24/1985	0.43
2/10/1986	0.4
5/19/1986	0.36
6/12/2017	0.138
11/27/2017	0.36
3/30/2018	0.256
9/27/2018	0.229
3/22/2019	0.0132
9/5/2019	0.391
3/3/2020	0.164
9/17/2020	0.282
3/11/2021	0.104
9/1/2021	0.39
3/30/2022	<0.01
12/8/2022	2.19

Prediction Limit

Intrawell Parametric, EE-1



Background Data Summary: Mean=0.06476, Std. Dev.=0.01344, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8662, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Manganese Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

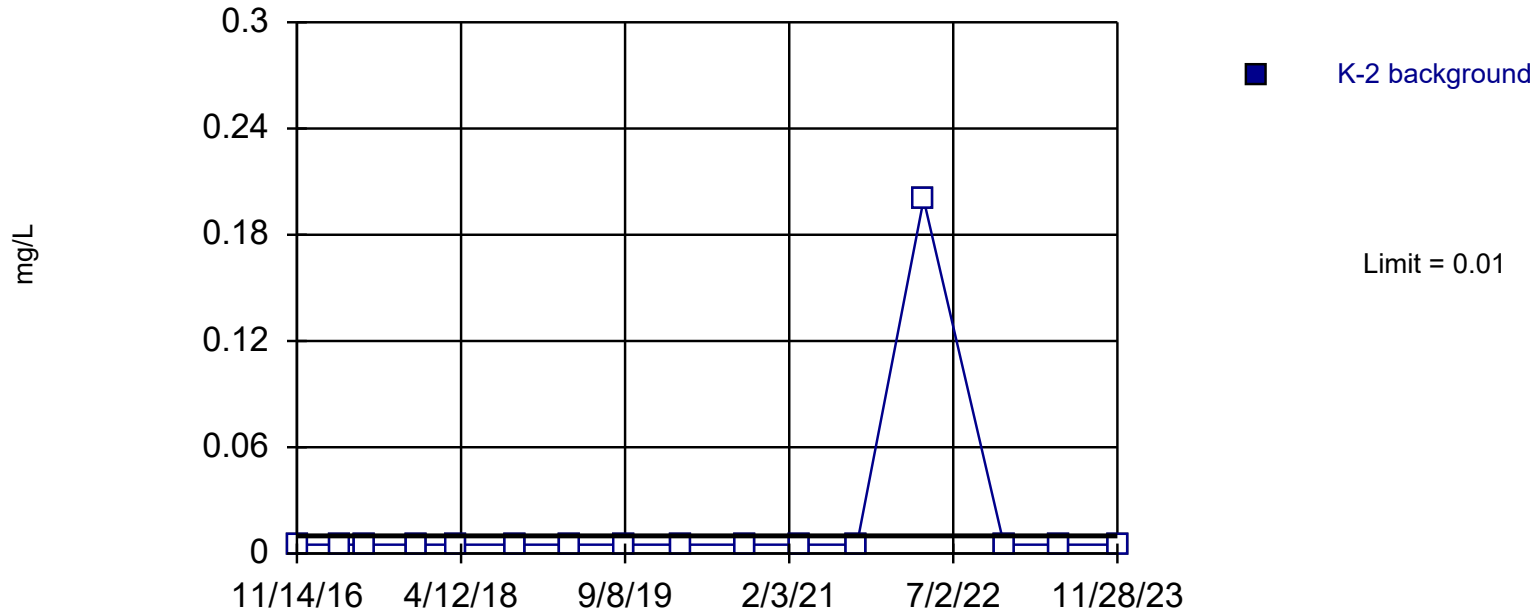
Prediction Limit

Constituent: Manganese (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	EE-1
5/22/1985	0.1 (H)
8/5/1985	0.06 (H)
11/20/1985	0.07 (H)
12/24/1985	0.065 (H)
2/10/1986	0.05 (H)
5/19/1986	0.08 (H)
7/29/1993	0.72 (OH)
6/12/2017	0.0553
11/27/2017	0.0559
3/30/2018	0.0772
9/27/2018	0.0518
3/21/2019	0.0551
9/5/2019	0.0581
3/5/2020	0.071
6/4/2020	0.055
9/17/2020	0.082
12/11/2020	0.095
3/11/2021	0.083
9/1/2021	0.051
3/30/2022	0.058
12/8/2022	0.07
5/31/2023	0.0647
11/28/2023	0.053

Prediction Limit

Intrawell Non-parametric, K-2 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Manganese Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

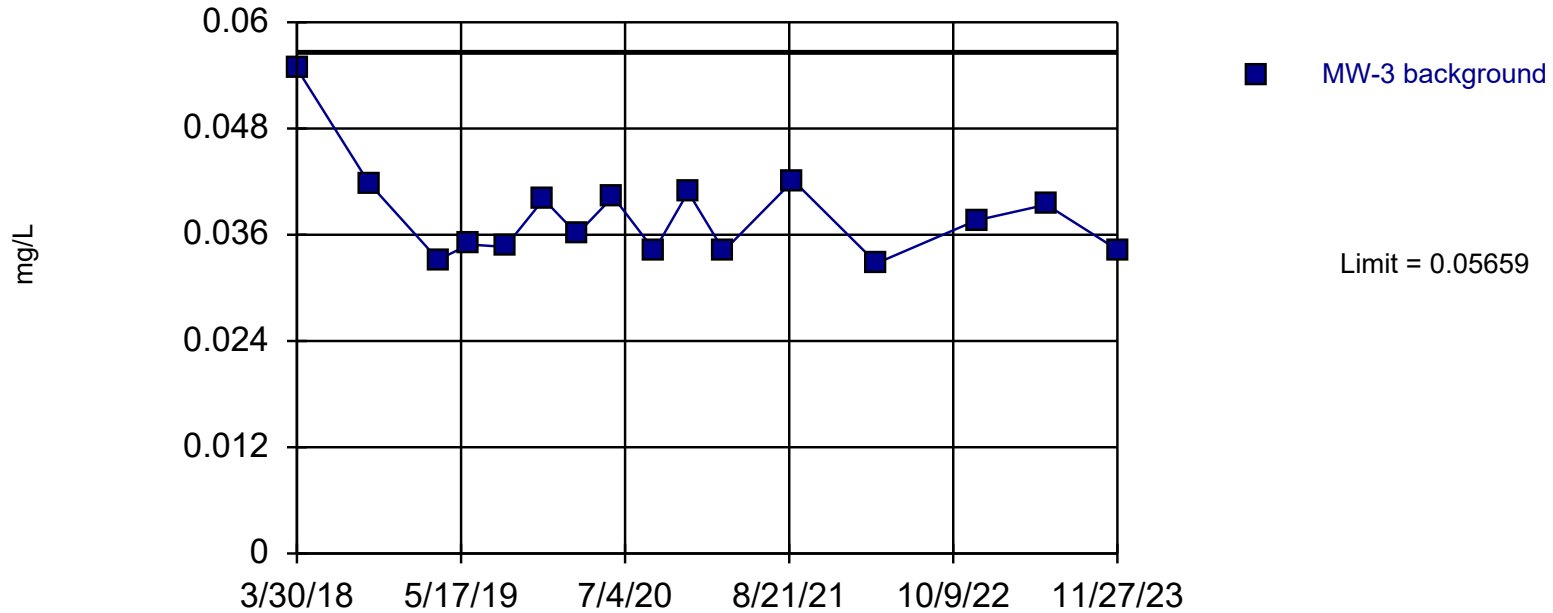
Prediction Limit

Constituent: Manganese (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	K-2
11/14/2016	<0.01
3/29/2017	<0.01
6/12/2017	<0.01
11/27/2017	<0.01
3/29/2018	<0.01
9/27/2018	<0.01
3/22/2019	<0.01
9/5/2019	<0.01
3/5/2020	<0.01
9/16/2020	<0.01
3/10/2021	<0.01
9/3/2021	<0.01
3/31/2022	<0.4
12/8/2022	<0.01
5/31/2023	<0.01
11/28/2023	<0.01

Prediction Limit

Intrawell Parametric, MW-3



Background Data Summary (based on natural log transformation): Mean=-3.281, Std. Dev.=0.1833, n=16. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8546, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Manganese Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

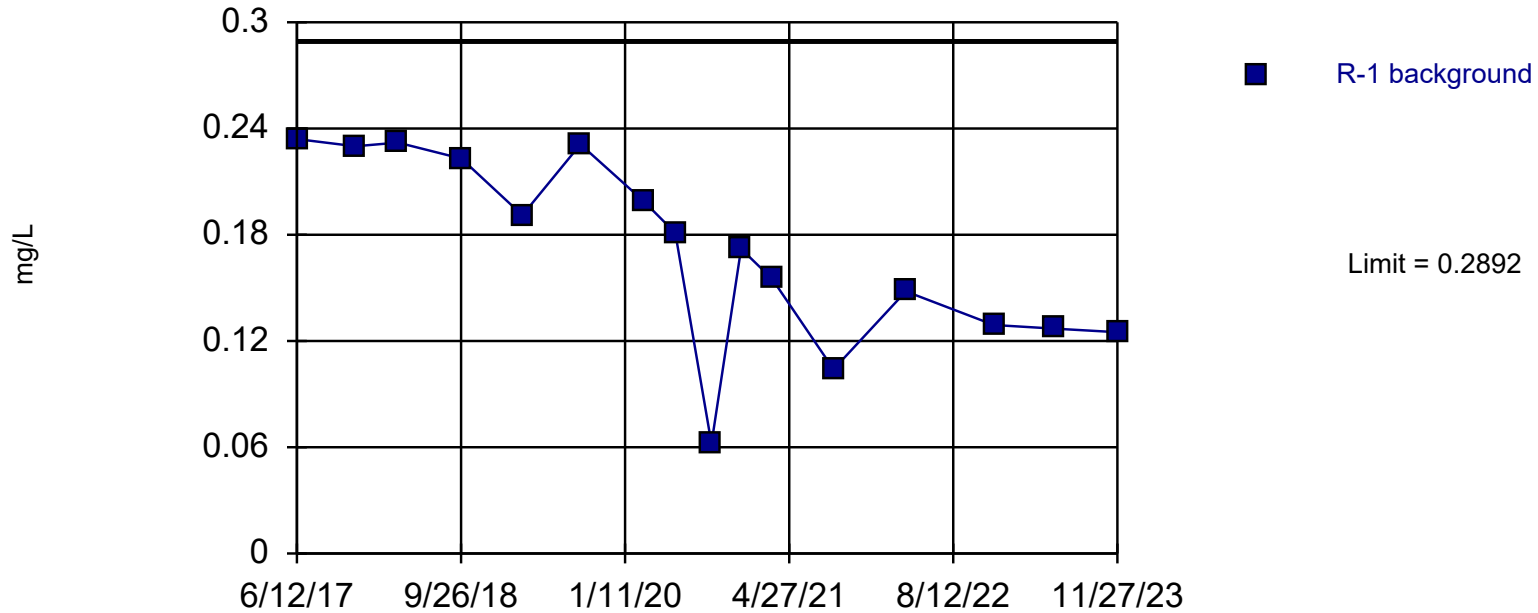
Prediction Limit

Constituent: Manganese (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-3
3/30/2018	0.0544
9/28/2018	0.0459
3/21/2019	0.0328
6/7/2019	0.0265
9/6/2019	0.0387
12/12/2019	0.0427
3/5/2020	0.0357
6/4/2020	0.0319
9/16/2020	0.0383
12/10/2020	0.0435
3/10/2021	0.0338
9/1/2021	0.0462
3/30/2022	0.0324
12/7/2022	0.0403
6/1/2023	0.031
11/27/2023	0.037

Prediction Limit

Intrawell Parametric, R-1



Background Data Summary: Mean=0.1714, Std. Dev.=0.05274, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9282, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Manganese Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

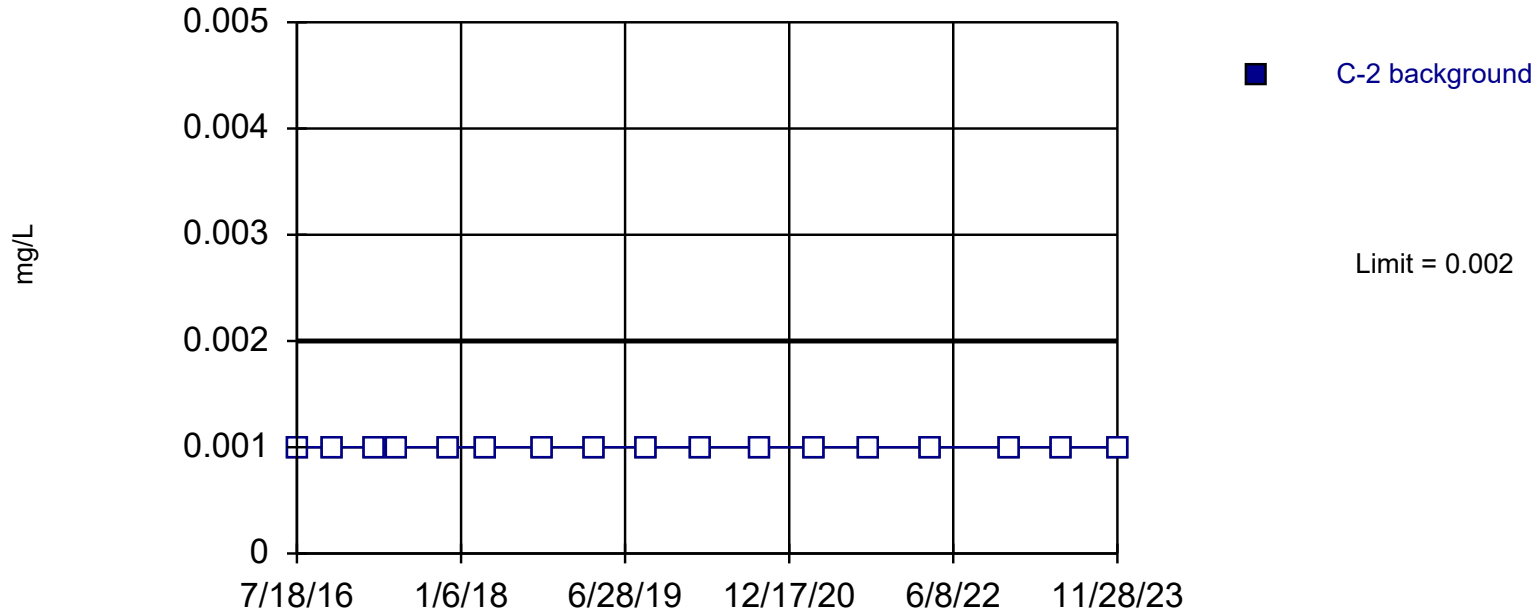
Prediction Limit

Constituent: Manganese (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	R-1
5/20/1985	0.08 (H)
11/4/1985	0.09 (H)
2/12/1986	0.09 (H)
5/12/1986	0.09 (H)
11/14/2016	0.255 (H)
3/29/2017	0.229 (H)
6/12/2017	0.234
11/27/2017	0.23
3/29/2018	0.232
9/28/2018	0.223
3/22/2019	0.191
9/5/2019	0.231
3/5/2020	0.199
6/4/2020	0.181
9/16/2020	0.062
12/10/2020	0.172
3/10/2021	0.155
9/2/2021	0.104
3/29/2022	0.148
12/7/2022	0.129
6/1/2023	0.127
11/27/2023	0.125

Prediction Limit

Intrawell Non-parametric, C-2 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 17$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Mercury Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

Prediction Limit

Constituent: Mercury (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	C-2
3/28/2016	<0.002 (H)
5/31/2016	<0.002 (H)
7/18/2016	<0.002
11/14/2016	<0.002
3/29/2017	<0.002
6/12/2017	<0.002
11/27/2017	<0.002
3/30/2018	<0.002
9/28/2018	<0.002
3/21/2019	<0.002
9/6/2019	<0.002
3/5/2020	<0.002
9/16/2020	<0.002
3/10/2021	<0.002 (D)
9/2/2021	<0.002
3/30/2022	<0.002
12/8/2022	<0.002
5/31/2023	<0.002
11/28/2023	<0.002

Prediction Limit

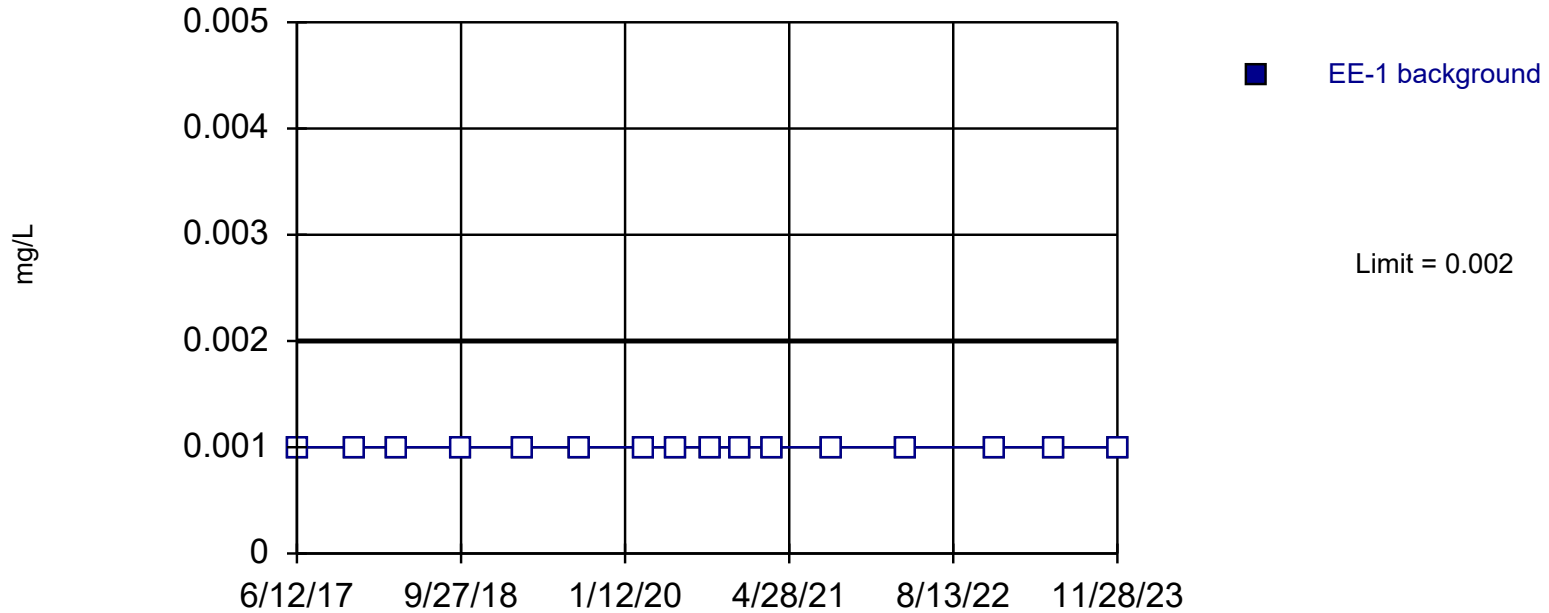
Constituent: Mercury (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

DD-1

5/22/1985	<0.002 (H)
8/5/1985	<0.002 (H)
11/20/1985	<0.002 (H)
12/24/1985	<0.001
2/10/1986	<0.002
3/11/2015	<0.002
3/29/2016	<0.002
6/1/2016	<0.002
7/19/2016	<0.002
6/12/2017	<0.002
11/27/2017	<0.002
3/30/2018	<0.002
9/27/2018	<0.002
3/22/2019	<0.002
9/5/2019	<0.002
3/3/2020	<0.002
9/17/2020	<0.002
3/11/2021	<0.002
9/1/2021	<0.002
3/30/2022	<0.002
12/8/2022	<0.002

Prediction Limit

Intrawell Non-parametric, EE-1



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Mercury Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

Prediction Limit

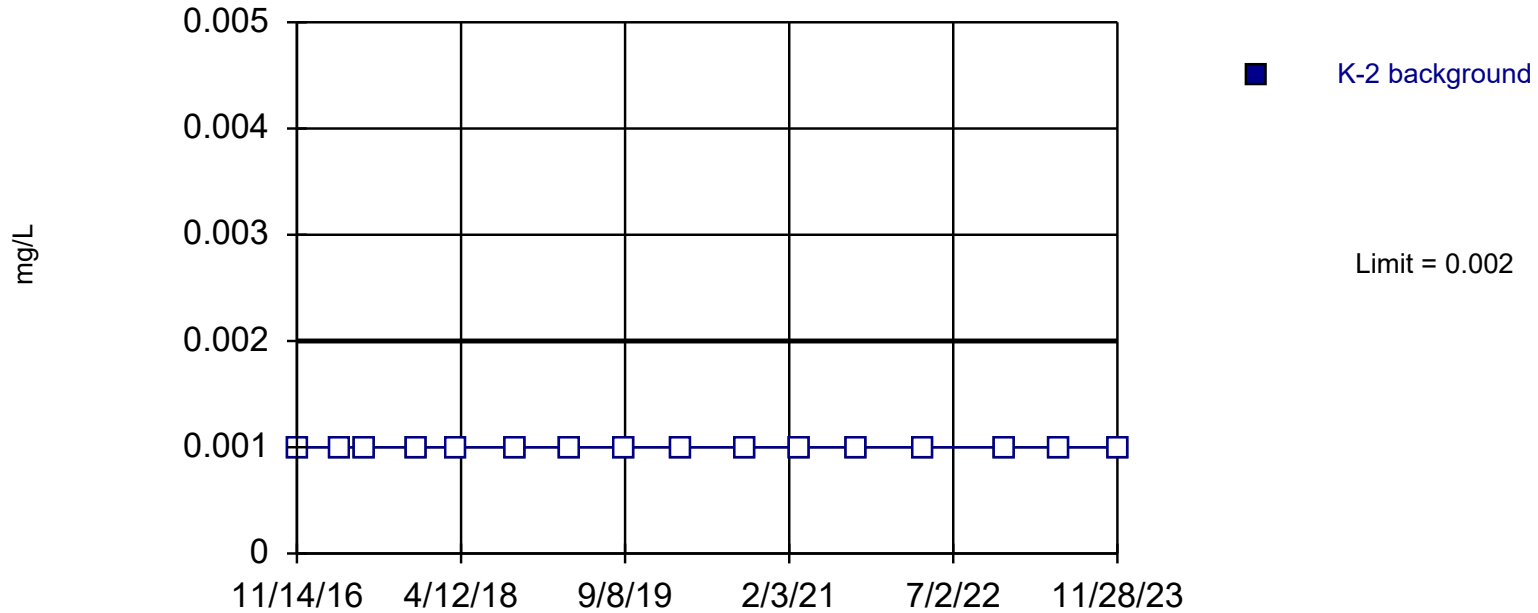
Constituent: Mercury (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

EE-1

5/22/1985	<0.002 (H)
8/5/1985	<0.002 (H)
11/20/1985	<0.002 (H)
12/24/1985	<0.001 (H)
2/10/1986	<0.002 (H)
3/12/2015	<0.002 (H)
3/29/2016	<0.002 (H)
6/1/2016	<0.002 (H)
7/21/2016	<0.002 (H)
6/12/2017	<0.002
11/27/2017	<0.002
3/30/2018	<0.002
9/27/2018	<0.002
3/21/2019	<0.002
9/5/2019	<0.002
3/5/2020	<0.002
6/4/2020	<0.002
9/17/2020	<0.002
12/11/2020	<0.002
3/11/2021	<0.002
9/1/2021	<0.002
3/30/2022	<0.002
12/8/2022	<0.002
5/31/2023	<0.002
11/28/2023	<0.002

Prediction Limit

Intrawell Non-parametric, K-2 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Mercury Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

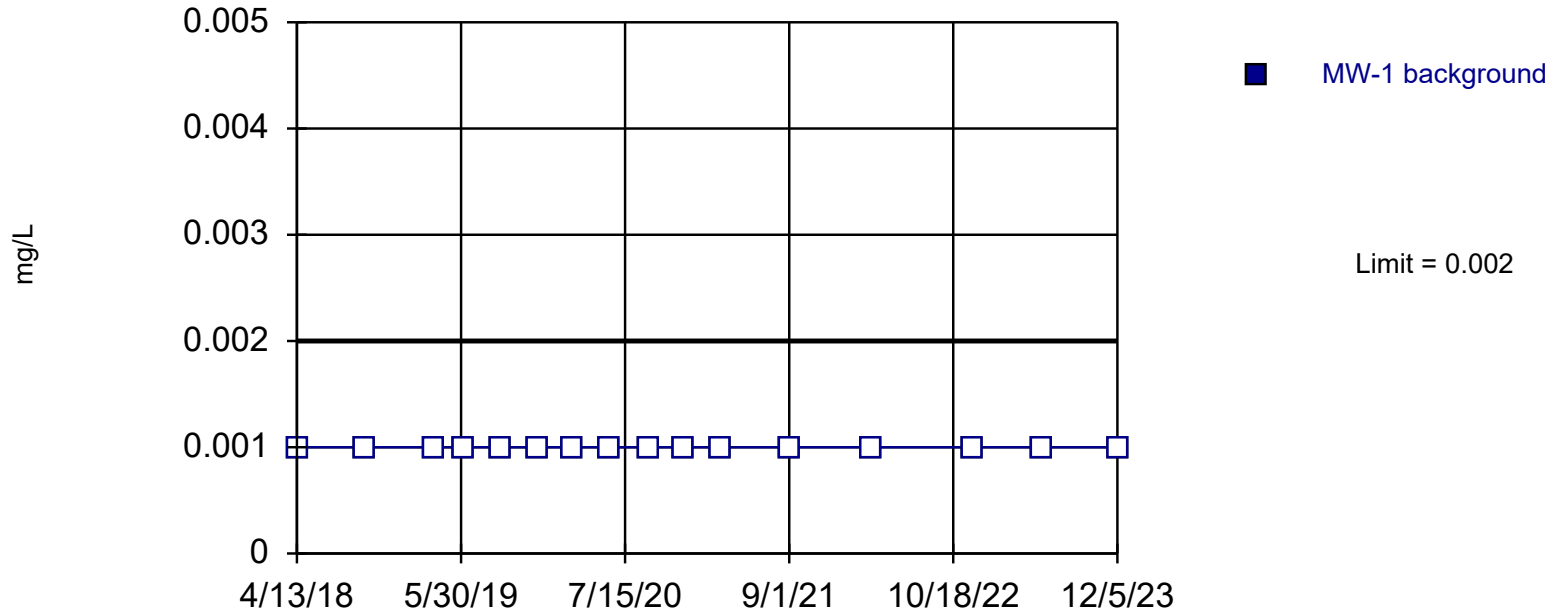
Prediction Limit

Constituent: Mercury (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	K-2
3/9/2015	<0.002 (H)
3/28/2016	<0.002 (H)
5/31/2016	<0.002 (H)
7/18/2016	<0.002 (H)
11/14/2016	<0.002
3/29/2017	<0.002
6/12/2017	<0.002
11/27/2017	<0.002
3/29/2018	<0.002
9/27/2018	<0.002
3/22/2019	<0.002
9/5/2019	<0.002
3/5/2020	<0.002
9/16/2020	<0.002
3/10/2021	<0.002
9/3/2021	<0.002
3/31/2022	<0.002
12/8/2022	<0.002
5/31/2023	<0.002
11/28/2023	<0.002

Prediction Limit

Intrawell Non-parametric, MW-1 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Mercury Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

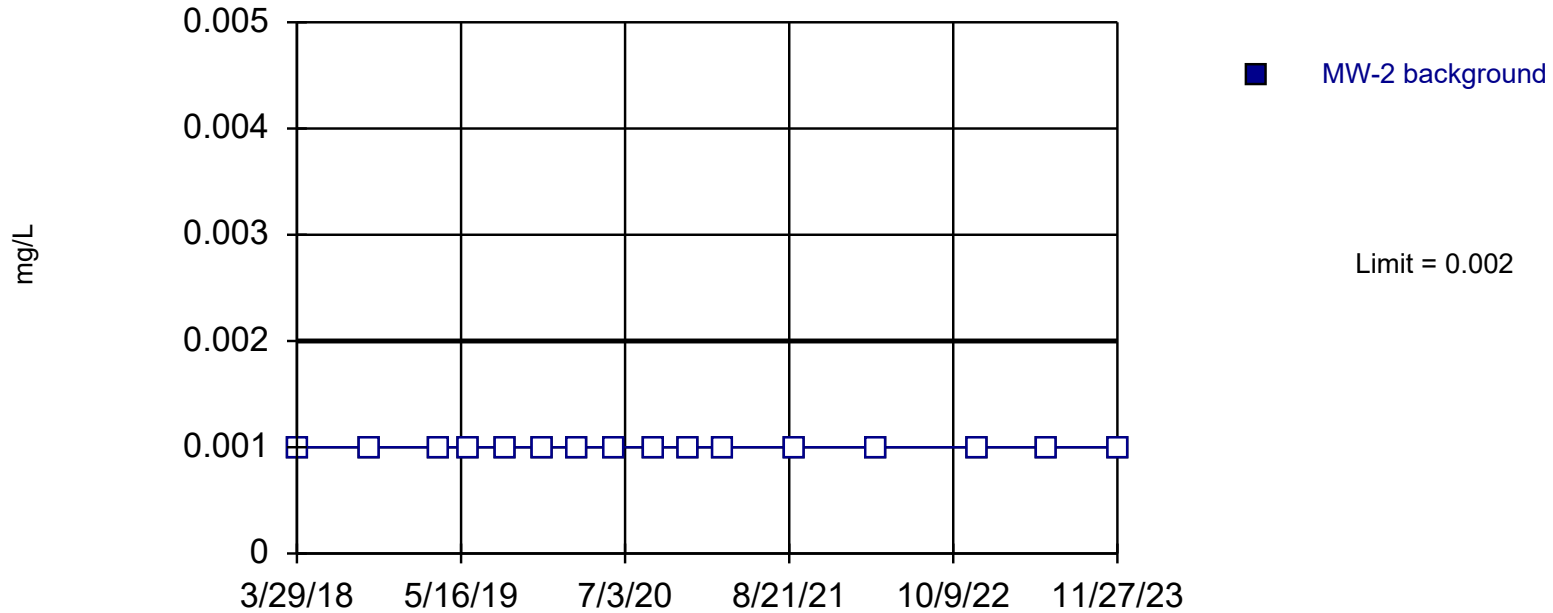
Prediction Limit

Constituent: Mercury (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-1
4/13/2018	<0.002
9/28/2018	<0.002
3/21/2019	<0.002
6/7/2019	<0.002
9/6/2019	<0.002
12/12/2019	<0.002
3/5/2020	<0.002
6/4/2020	<0.002
9/17/2020	<0.002
12/11/2020	<0.002
3/11/2021	<0.002
9/1/2021	<0.002
3/30/2022	<0.002
12/7/2022	<0.002
5/31/2023	<0.002
12/5/2023	<0.002

Prediction Limit

Intrawell Non-parametric, MW-2



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Mercury Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

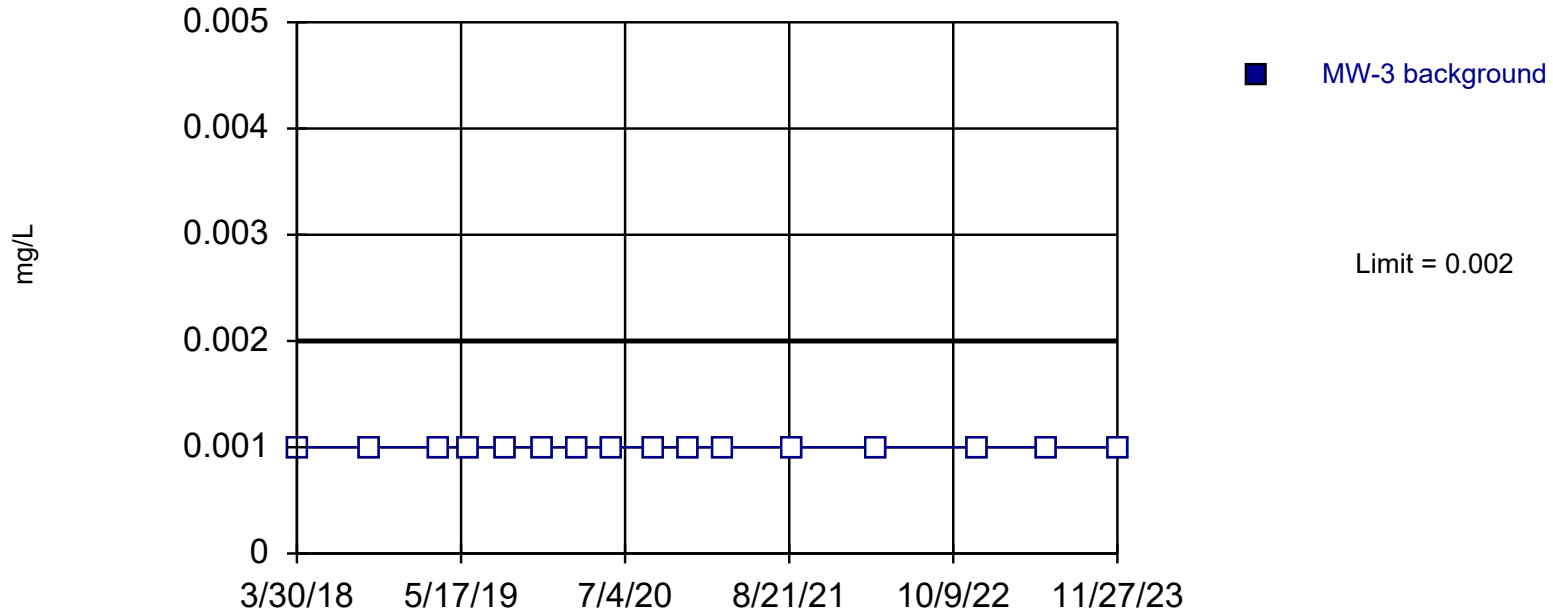
Prediction Limit

Constituent: Mercury (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-2
3/29/2018	<0.002
9/28/2018	<0.002
3/21/2019	<0.002
6/6/2019	<0.002
9/5/2019	<0.002
12/12/2019	<0.002
3/5/2020	<0.002
6/4/2020	<0.002
9/16/2020	<0.002
12/10/2020	<0.002
3/10/2021	<0.002
9/2/2021	<0.002 (D)
3/29/2022	<0.002
12/7/2022	<0.002
6/1/2023	<0.002
11/27/2023	<0.002

Prediction Limit

Intrawell Non-parametric, MW-3



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Mercury Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

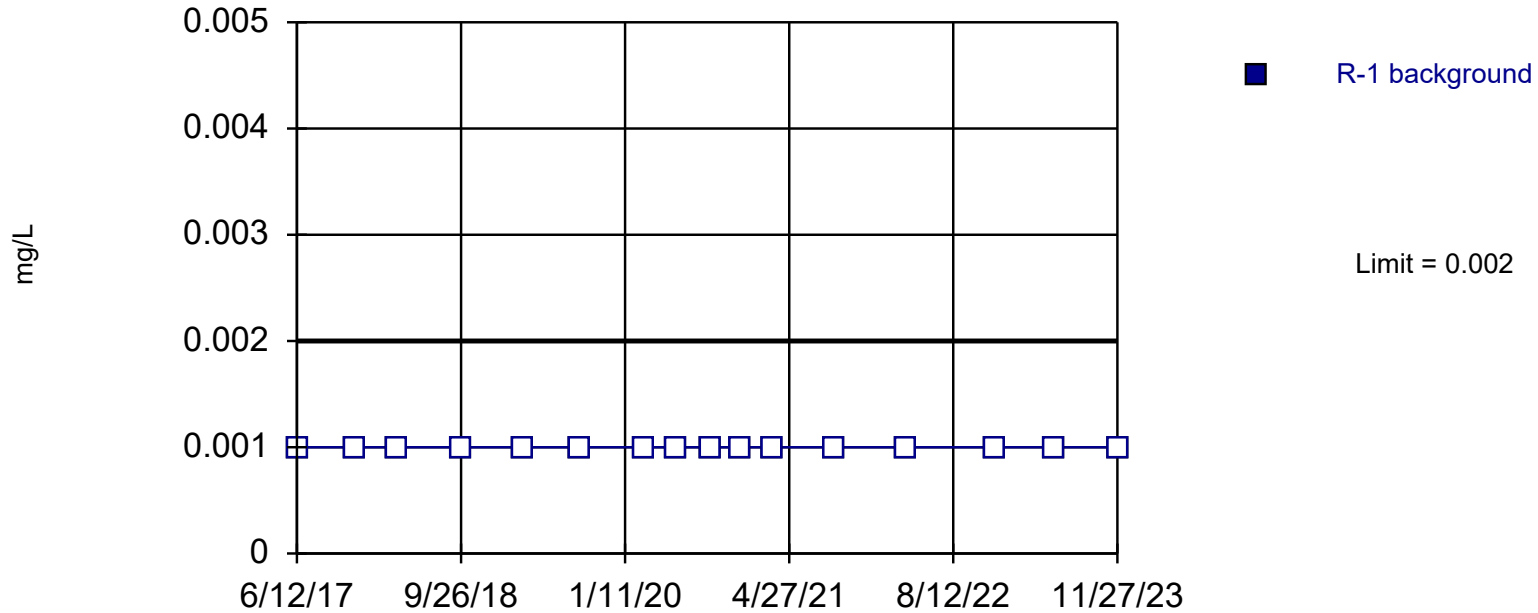
Prediction Limit

Constituent: Mercury (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-3
3/30/2018	<0.002
9/28/2018	<0.002
3/21/2019	<0.002
6/7/2019	<0.002
9/6/2019	<0.002
12/12/2019	<0.002
3/5/2020	<0.002
6/4/2020	<0.002
9/16/2020	<0.002
12/10/2020	<0.002
3/10/2021	<0.002
9/1/2021	<0.002
3/30/2022	<0.002
12/7/2022	<0.002
6/1/2023	<0.002
11/27/2023	<0.002

Prediction Limit

Intrawell Non-parametric, R-1



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Mercury Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

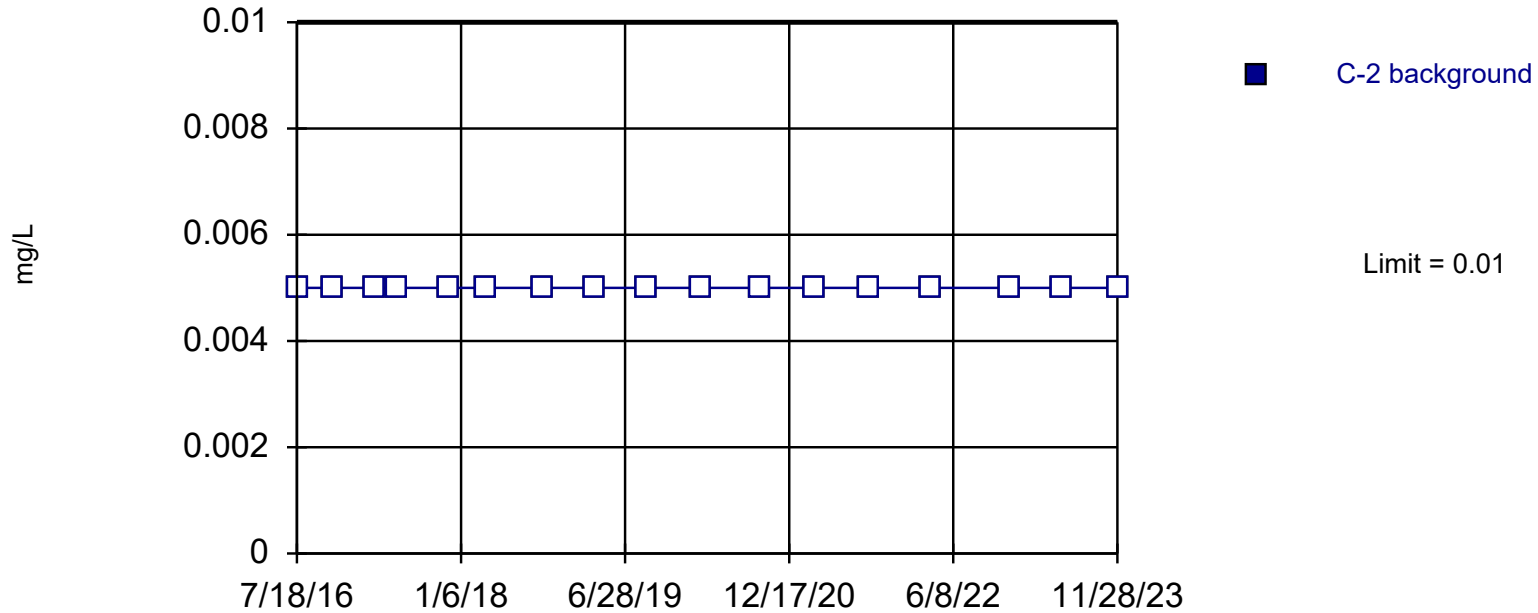
Prediction Limit

Constituent: Mercury (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	R-1
5/20/1985	<0.002 (H)
11/4/1985	<0.002 (H)
2/12/1986	<0.002 (H)
7/20/2016	<0.002 (H)
11/14/2016	<0.002 (H)
3/29/2017	<0.002 (H)
6/12/2017	<0.002
11/27/2017	<0.002
3/29/2018	<0.002
9/28/2018	<0.002
3/22/2019	<0.002
9/5/2019	<0.002
3/5/2020	<0.002
6/4/2020	<0.002
9/16/2020	<0.002
12/10/2020	<0.002
3/10/2021	<0.002
9/2/2021	<0.002
3/29/2022	<0.002
12/7/2022	<0.002
6/1/2023	<0.002
11/27/2023	<0.002

Prediction Limit

Intrawell Non-parametric, C-2 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 17$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Nickel Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

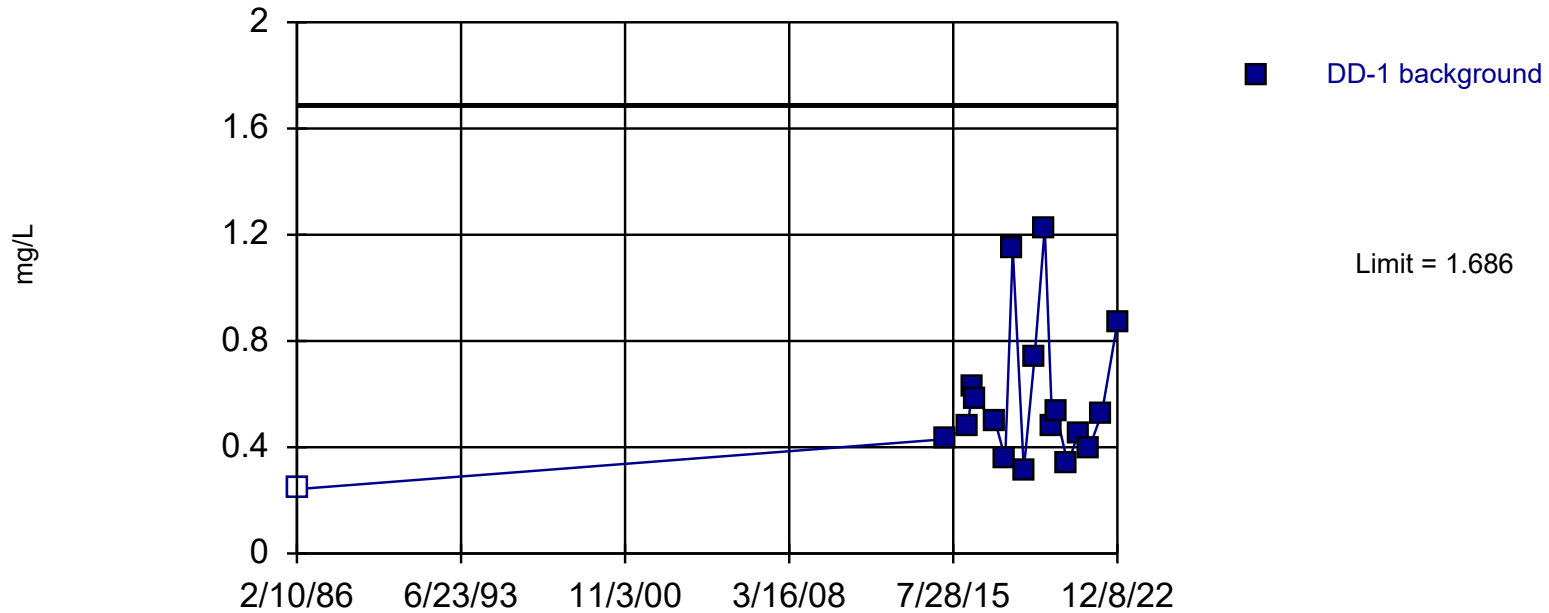
Prediction Limit

Constituent: Nickel (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	C-2
3/28/2016	<0.01 (H)
5/31/2016	<0.01 (H)
7/18/2016	<0.01
11/14/2016	<0.01
3/29/2017	<0.01
6/12/2017	<0.01
11/27/2017	<0.01
3/30/2018	<0.01
9/28/2018	<0.01
3/21/2019	<0.01
9/6/2019	<0.01
3/5/2020	<0.01
9/16/2020	<0.01
3/10/2021	<0.01 (D)
9/2/2021	<0.01
3/30/2022	<0.01
12/8/2022	<0.01
5/31/2023	<0.01
11/28/2023	<0.01

Prediction Limit

Intrawell Parametric, DD-1



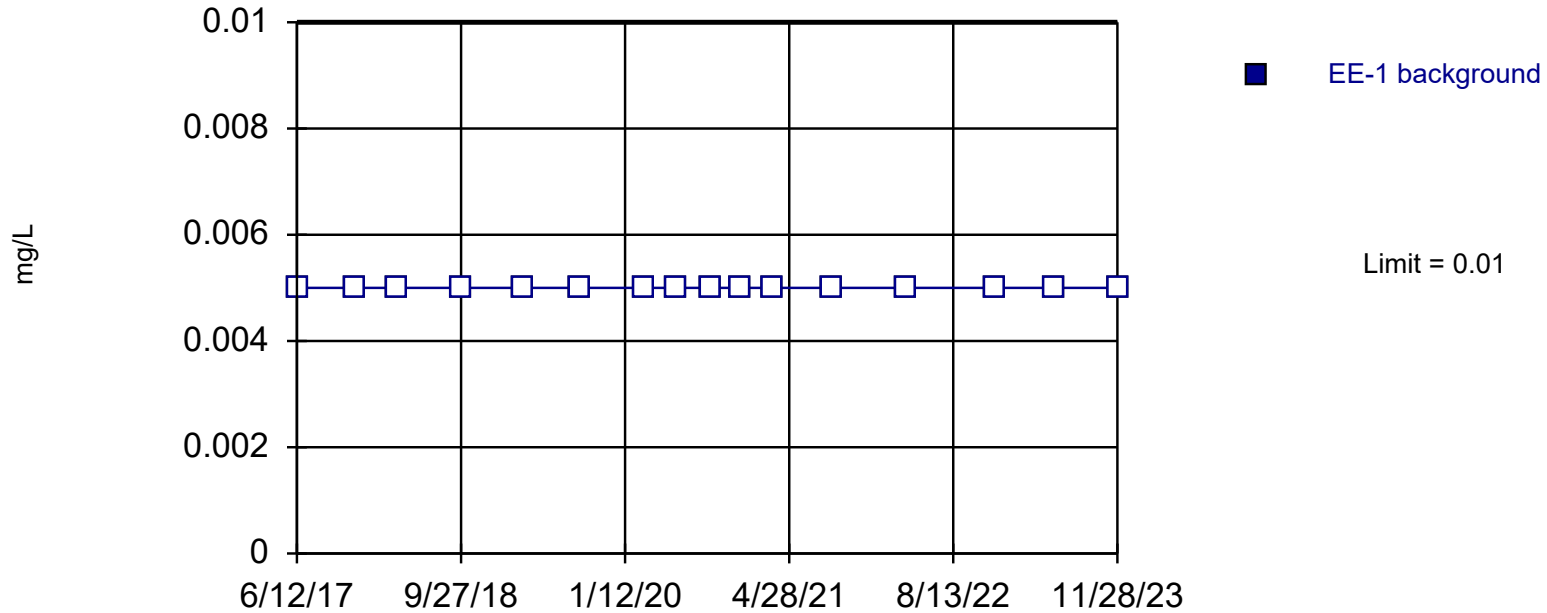
Prediction Limit

Constituent: Nickel (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	DD-1
5/22/1985	<0.01 (H)
8/5/1985	<0.01 (H)
11/20/1985	<0.01 (H)
12/24/1985	<0.007 (H)
2/10/1986	<0.01
3/11/2015	0.193
3/29/2016	0.242
6/1/2016	1.01
7/19/2016	0.96
6/12/2017	0.88
11/27/2017	0.59
3/30/2018	0.91
9/27/2018	0.33
3/22/2019	0.5
9/5/2019	1.24
1/7/2020	0.71
3/3/2020	0.295
9/17/2020	0.353
3/11/2021	0.216
9/1/2021	0.41
3/30/2022	0.292
12/8/2022	1.1

Prediction Limit

Intrawell Non-parametric, EE-1



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Nickel Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

Prediction Limit

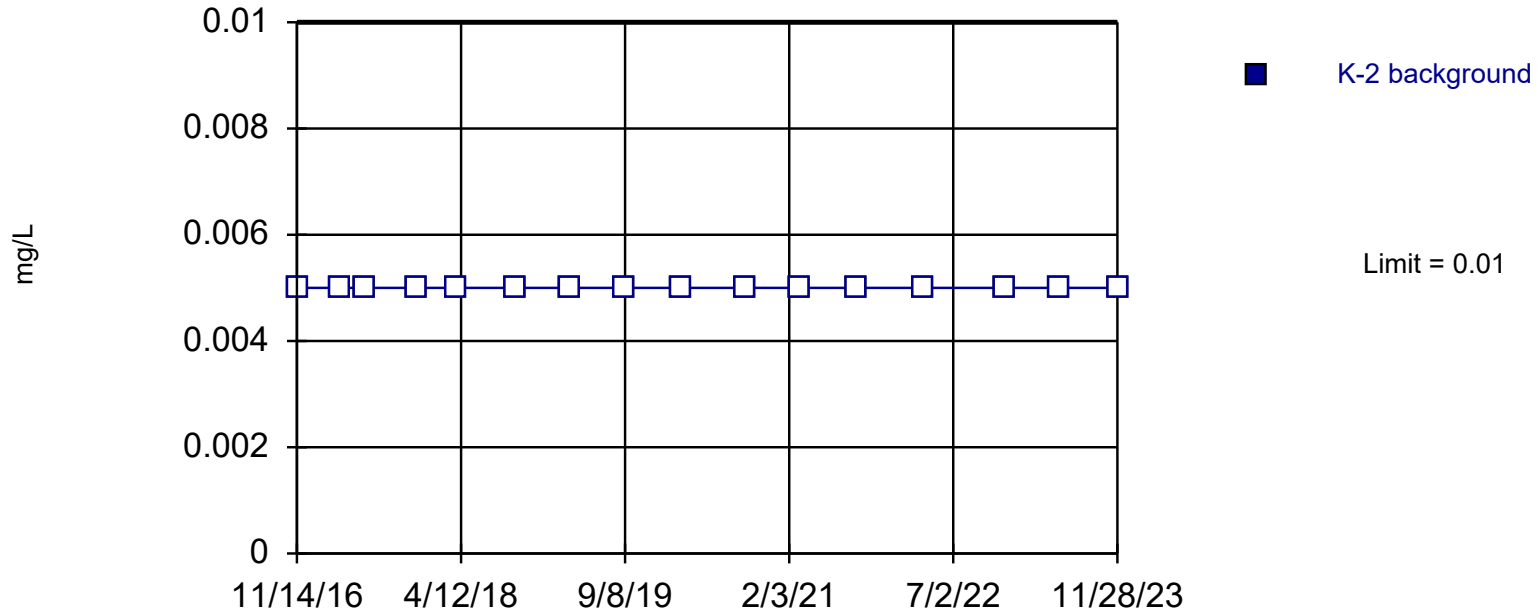
Constituent: Nickel (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

EE-1

5/22/1985	<10 (H)
8/5/1985	<10 (H)
11/20/1985	<10 (H)
12/24/1985	<23 (H)
2/10/1986	<10 (H)
7/29/1993	160 (H)
3/12/2015	<0.008 (H)
3/29/2016	<0.008 (H)
6/1/2016	<0.008 (H)
7/21/2016	<0.005 (H)
6/12/2017	<0.01
11/27/2017	<0.01
3/30/2018	<0.01
9/27/2018	<0.01
3/21/2019	<0.01
9/5/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/17/2020	<0.01
12/11/2020	<0.01
3/11/2021	<0.01
9/1/2021	<0.01
3/30/2022	<0.01
12/8/2022	<0.01
5/31/2023	<0.01
11/28/2023	<0.01

Prediction Limit

Intrawell Non-parametric, K-2 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Nickel Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

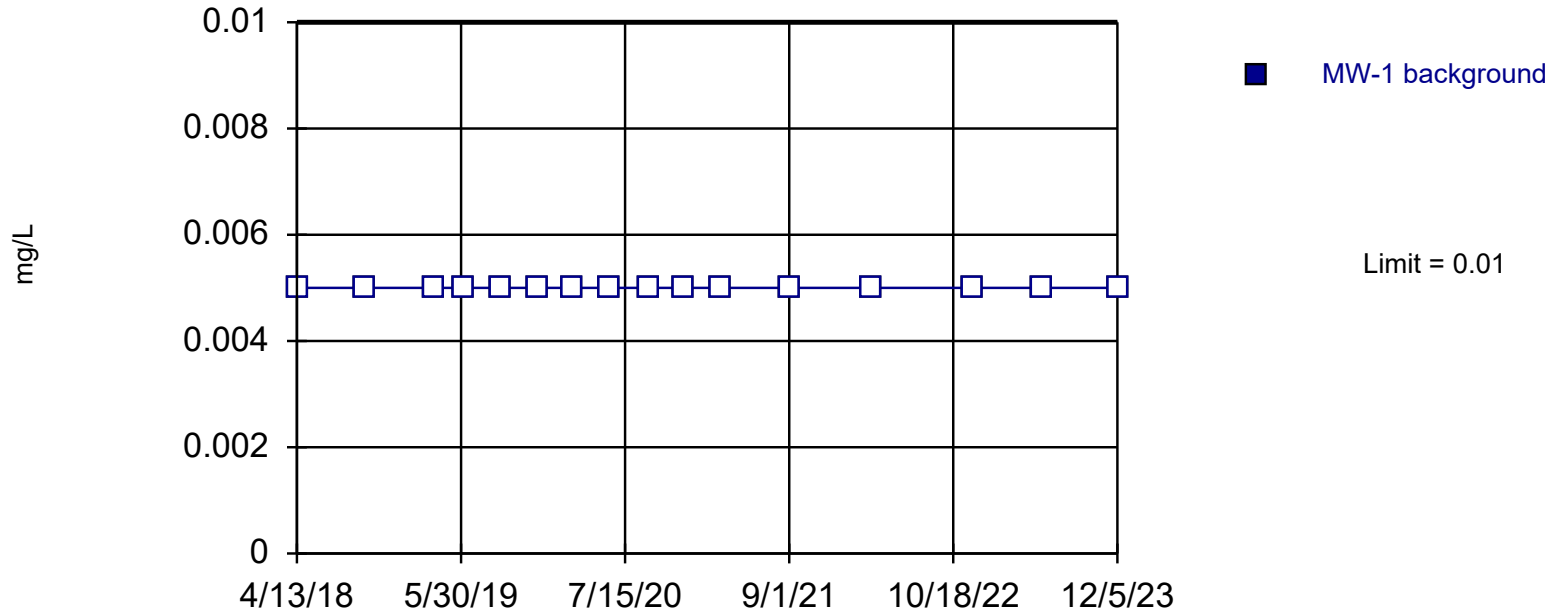
Prediction Limit

Constituent: Nickel (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	K-2
3/9/2015	<0.01 (H)
3/28/2016	<0.01 (H)
5/31/2016	<0.01 (H)
7/18/2016	<0.01 (H)
11/14/2016	<0.01
3/29/2017	<0.01
6/12/2017	<0.01
11/27/2017	<0.01
3/29/2018	<0.01
9/27/2018	<0.01
3/22/2019	<0.01
9/5/2019	<0.01
3/5/2020	<0.01
9/16/2020	<0.01
3/10/2021	<0.01
9/3/2021	<0.01
3/31/2022	<0.01
12/8/2022	<0.01
5/31/2023	<0.01
11/28/2023	<0.01

Prediction Limit

Intrawell Non-parametric, MW-1 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Nickel Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

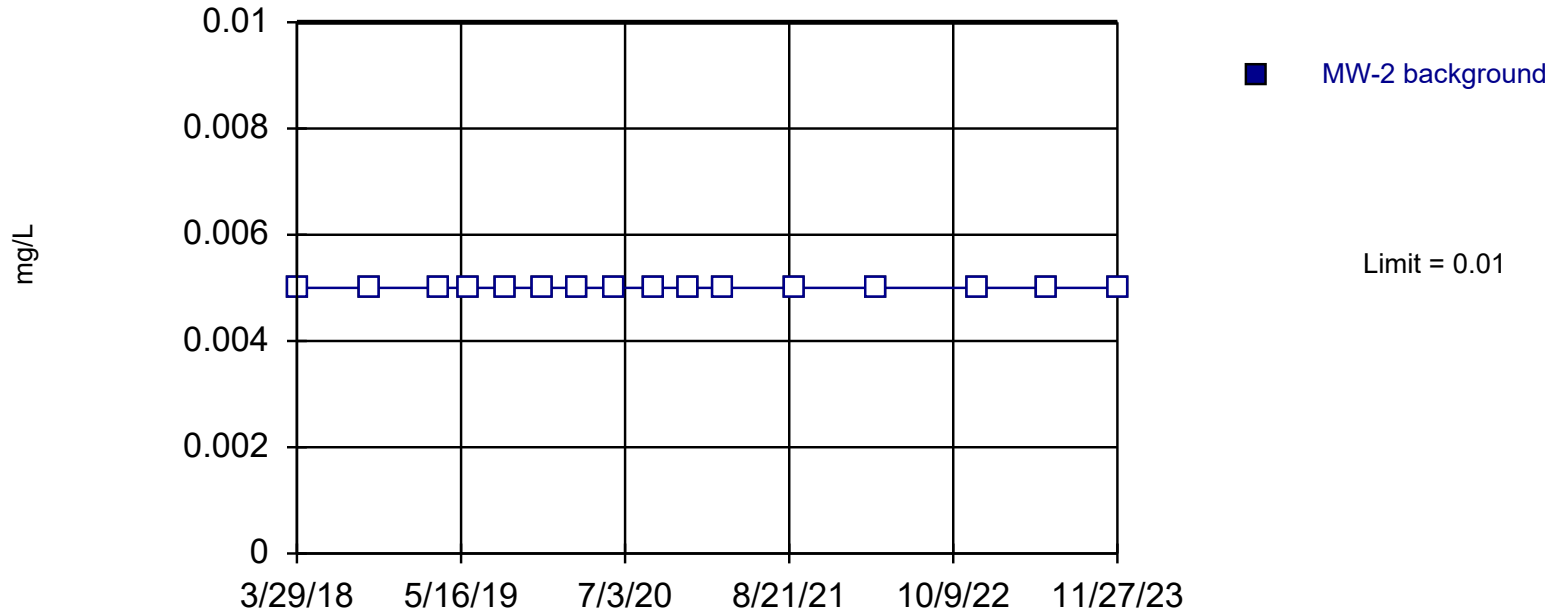
Prediction Limit

Constituent: Nickel (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-1
4/13/2018	<0.01
9/28/2018	<0.01
3/21/2019	<0.01
6/7/2019	<0.01
9/6/2019	<0.01
12/12/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/17/2020	<0.01
12/11/2020	<0.01
3/11/2021	<0.01
9/1/2021	<0.01
3/30/2022	<0.01
12/7/2022	<0.01
5/31/2023	<0.01
12/5/2023	<0.01

Prediction Limit

Intrawell Non-parametric, MW-2



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Nickel Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

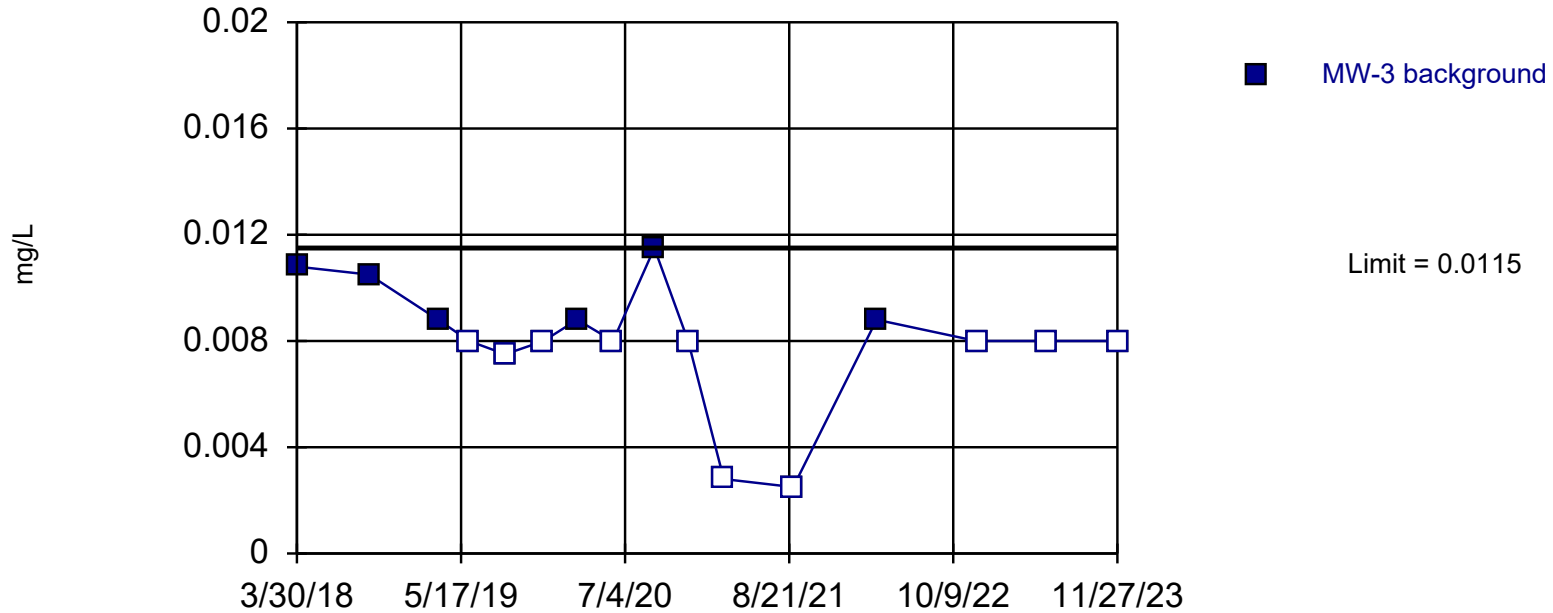
Prediction Limit

Constituent: Nickel (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-2
3/29/2018	<0.01
9/28/2018	<0.01
3/21/2019	<0.01
6/6/2019	<0.01
9/5/2019	<0.01
12/12/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/16/2020	<0.01
12/10/2020	<0.01
3/10/2021	<0.01
9/2/2021	<0.01 (D)
3/29/2022	<0.01
12/7/2022	<0.01
6/1/2023	<0.01
11/27/2023	<0.01

Prediction Limit

Intrawell Non-parametric, MW-3



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 62.5% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Data were deseasonalized.

Constituent: Nickel Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

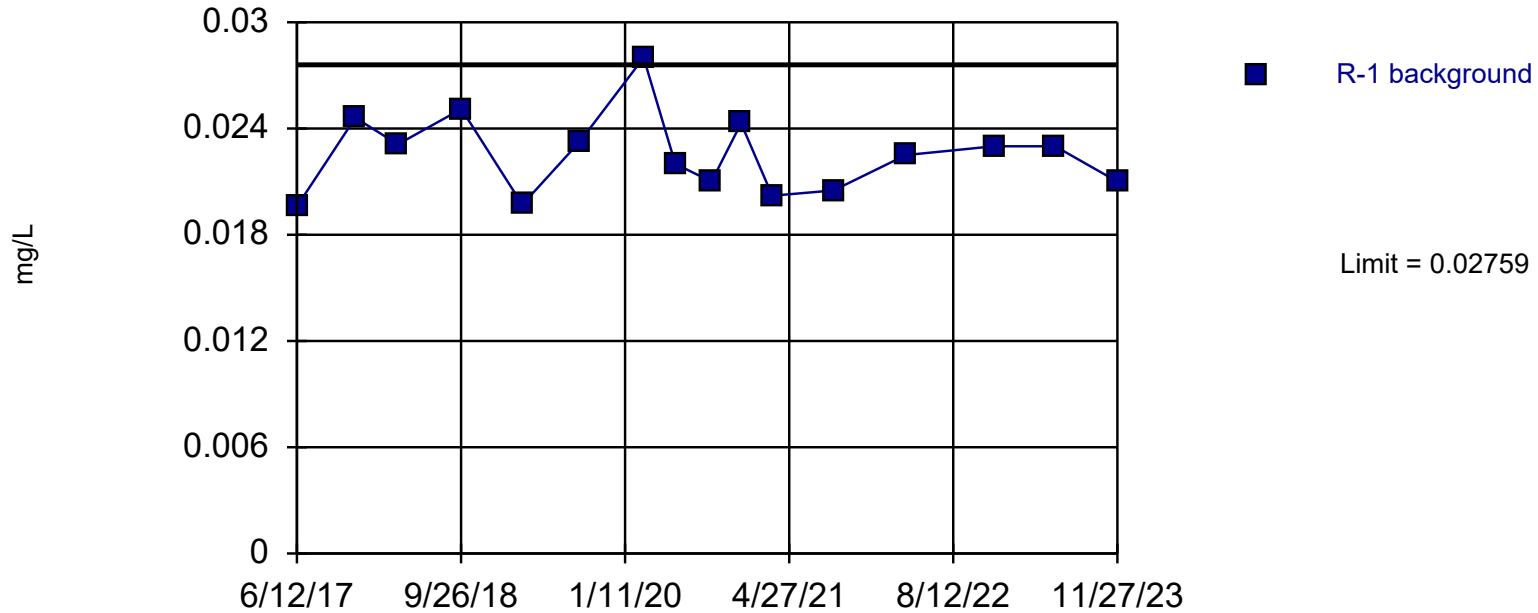
Prediction Limit

Constituent: Nickel (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-3
3/30/2018	0.0108
9/28/2018	0.0105
3/21/2019	0.0088
6/7/2019	0.008
9/6/2019	0.0075
12/12/2019	0.008
3/5/2020	0.0088
6/4/2020	0.008
9/16/2020	0.0115
12/10/2020	0.008
3/10/2021	0.0028
9/1/2021	0.0025
3/30/2022	0.0088
12/7/2022	0.008
6/1/2023	0.008
11/27/2023	0.008

Prediction Limit

Intrawell Parametric, R-1



Background Data Summary: Mean=0.02256, Std. Dev.=0.002257, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9418, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Nickel Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

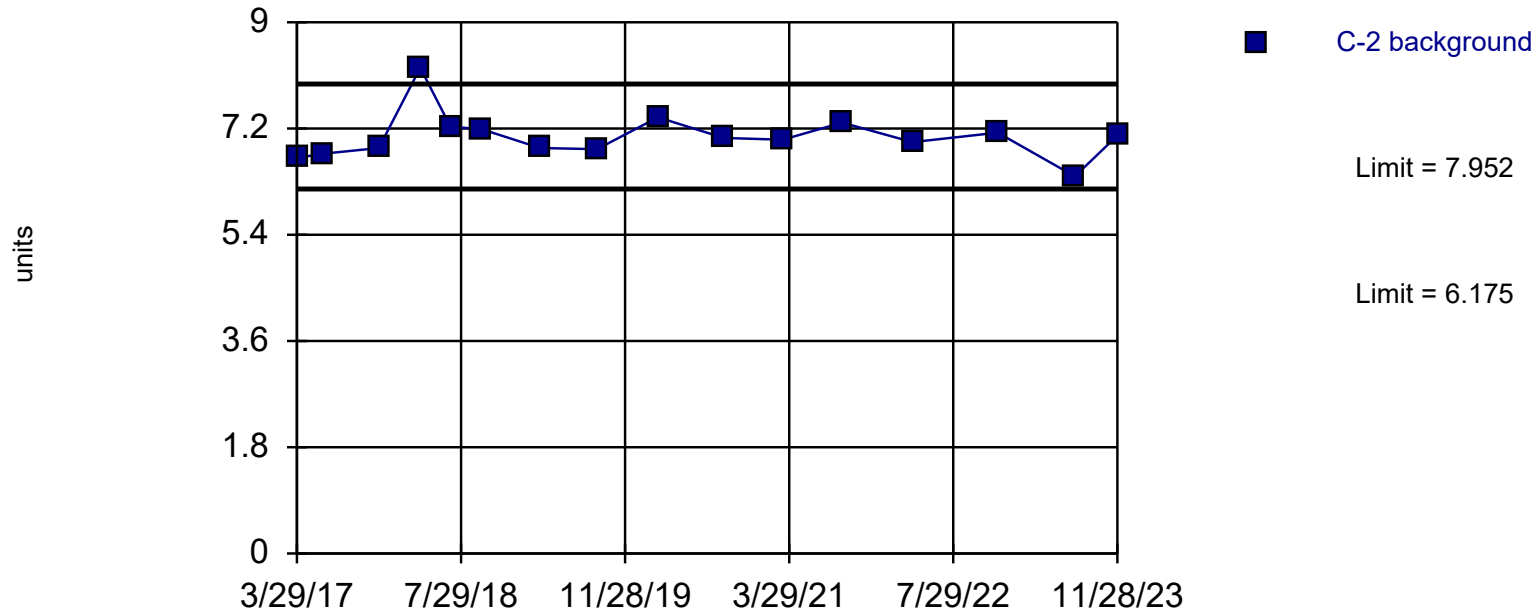
Prediction Limit

Constituent: Nickel (mg/L) Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	R-1
5/20/1985	0.03 (H)
11/4/1985	0.02 (H)
2/12/1986	<0.01 (OH)
7/20/2016	0.012 (OH)
11/14/2016	0.0232 (H)
3/29/2017	0.0225 (H)
6/12/2017	0.0196
11/27/2017	0.0246
3/29/2018	0.0231
9/28/2018	0.0251
3/22/2019	0.0197
9/5/2019	0.0233
3/5/2020	0.028
6/4/2020	0.022
9/16/2020	0.021
12/10/2020	0.0243
3/10/2021	0.0202
9/2/2021	0.0205
3/29/2022	0.0225
12/7/2022	0.023
6/1/2023	0.023
11/27/2023	0.021

Prediction Limit

Intrawell Parametric, C-2 (bg)



Background Data Summary: Mean=7.064, Std. Dev.=0.398, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8777, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: pH Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

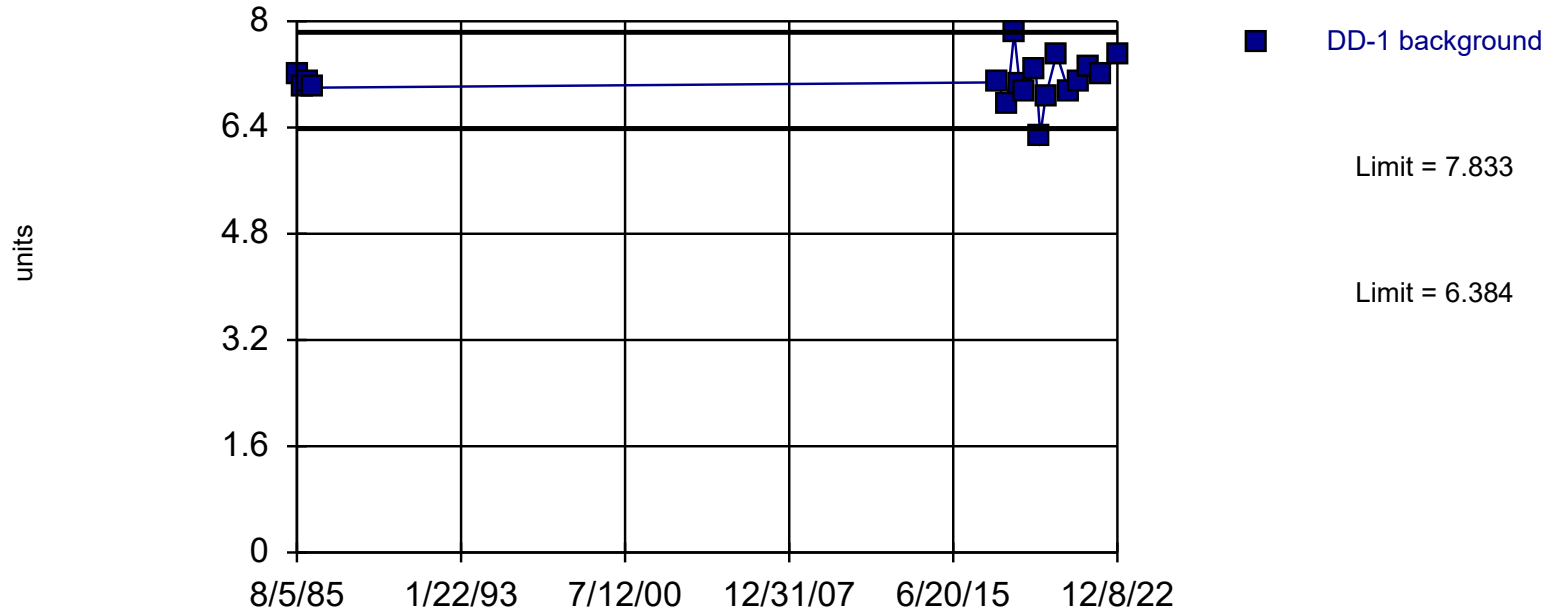
Prediction Limit

Constituent: pH Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	C-2
11/14/2016	6.48 (H)
3/29/2017	6.7
6/12/2017	6.77
11/27/2017	6.87
3/30/2018	8.23
6/28/2018	7.23
9/28/2018	7.19
3/21/2019	6.87
9/6/2019	6.85
3/5/2020	7.39
9/16/2020	7.04
3/10/2021	7.01 (D)
9/2/2021	7.3
3/30/2022	6.97
12/8/2022	7.13
5/31/2023	5.79 (XO)
7/25/2023	6.39
11/28/2023	7.08

Prediction Limit

Intrawell Parametric, DD-1



Background Data Summary: Mean=7.108, Std. Dev.=0.3321, n=18. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9519, critical = 0.858. Kappa = 2.182 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: pH Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

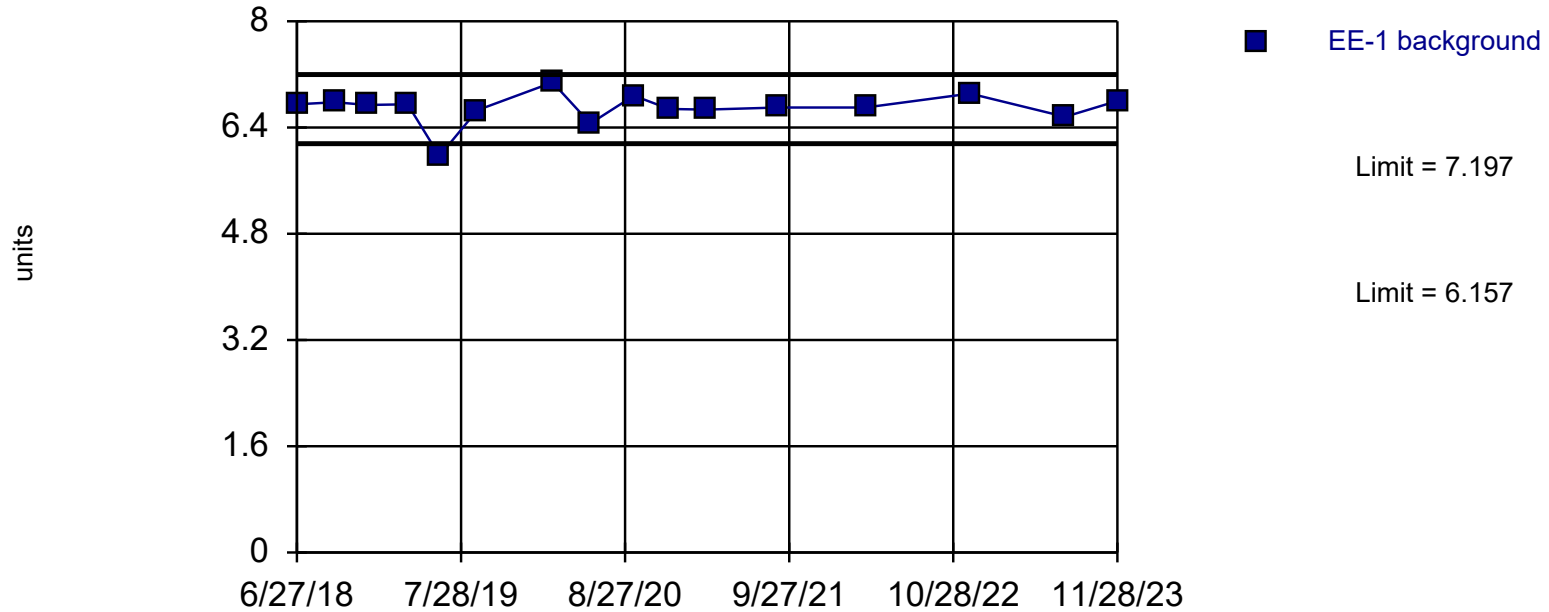
Prediction Limit

Constituent: pH Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	DD-1
5/22/1985	6.8 (H)
8/5/1985	7.2
11/20/1985	7
2/10/1986	7.1
5/19/1986	7
6/12/2017	7.08
11/27/2017	6.75
3/30/2018	7.83 (O)
6/27/2018	7.05
9/27/2018	6.94
3/22/2019	7.29
6/6/2019	6.28 (O)
9/5/2019	6.87
3/3/2020	7.51
9/17/2020	6.95
3/11/2021	7.1
9/1/2021	7.3
3/30/2022	7.2
12/8/2022	7.5

Prediction Limit

Intrawell Parametric, EE-1



Background Data Summary (based on square transformation): Mean=44.85, Std. Dev.=3.111, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8503, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: pH Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

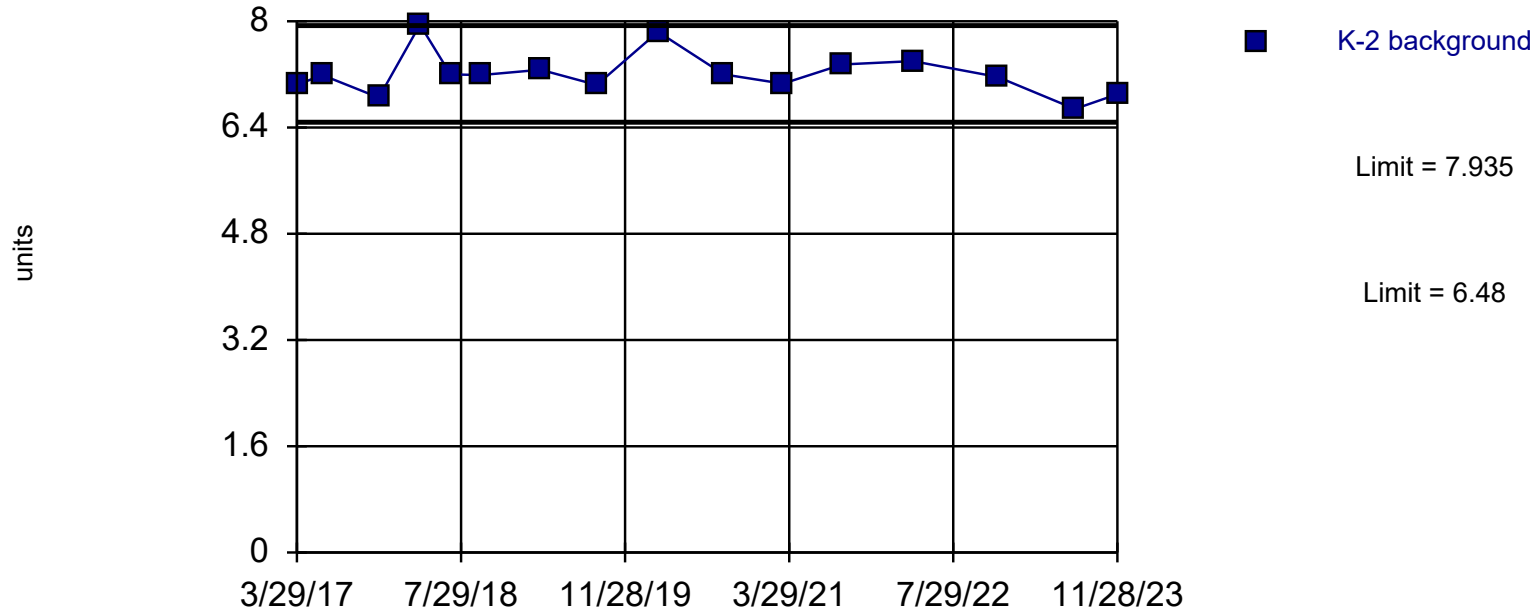
Prediction Limit

Constituent: pH Analysis Run 5/22/2024 5:02 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	EE-1
5/22/1985	6.8 (H)
8/5/1985	7 (H)
11/20/1985	6.9 (H)
2/10/1986	6.9 (H)
5/19/1986	6.9 (H)
6/12/2017	6.74 (H)
11/27/2017	6.61 (H)
3/30/2018	7.43 (H)
6/27/2018	6.75
9/27/2018	6.78
12/14/2018	6.74
3/21/2019	6.75
6/6/2019	5.97 (O)
9/5/2019	6.66
3/5/2020	7.08
6/4/2020	6.46
9/17/2020	6.88
12/11/2020	6.68
3/11/2021	6.67
9/1/2021	6.7
3/30/2022	6.7
12/8/2022	6.91
5/31/2023	5.81 (XO)
7/25/2023	6.56
11/28/2023	6.8

Prediction Limit

Intrawell Parametric, K-2 (bg)



Background Data Summary: Mean=7.208, Std. Dev.=0.326, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9089, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: pH Analysis Run 5/22/2024 4:57 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

Prediction Limit

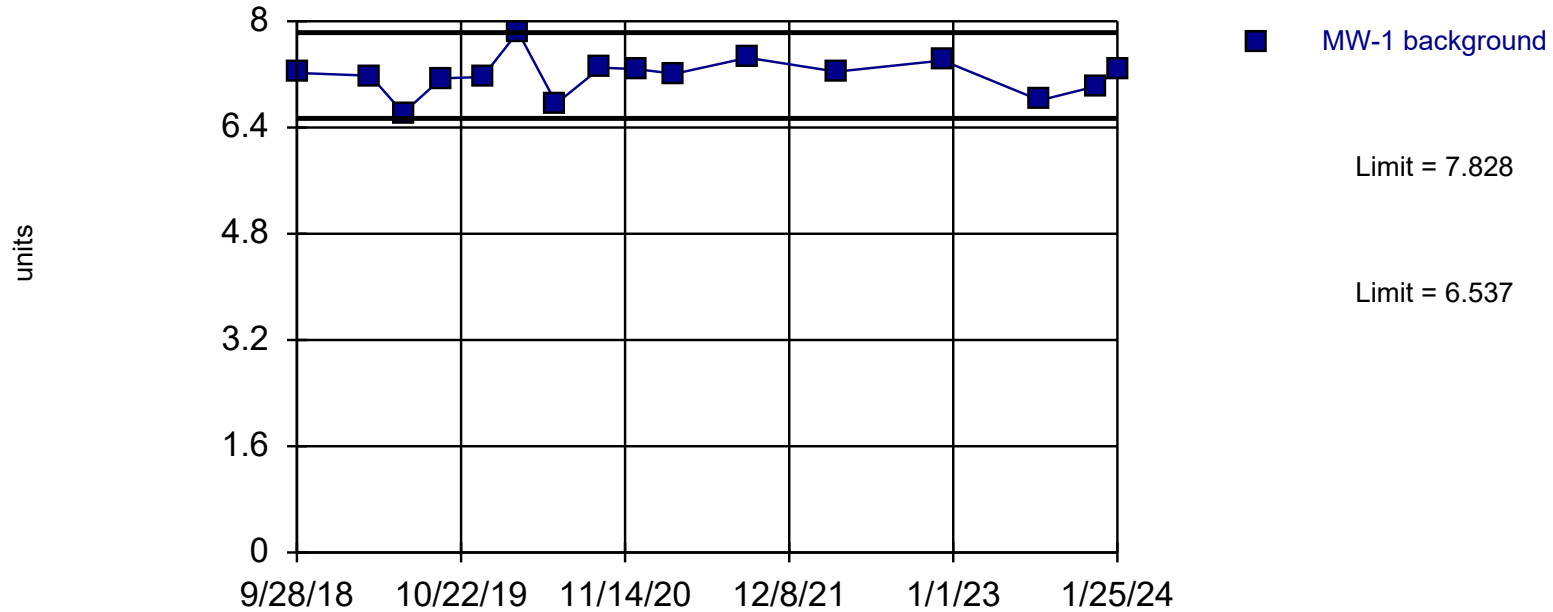
Constituent: pH Analysis Run 5/22/2024 5:03 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	K-2
11/14/2016	6.87 (H)
3/29/2017	7.04
6/12/2017	7.19
11/27/2017	6.85
3/29/2018	7.95
6/28/2018	7.2
9/27/2018	7.19
3/22/2019	7.27
9/5/2019	7.04
3/5/2020	7.84
9/16/2020	7.2
3/10/2021	7.06
9/3/2021	7.35
3/31/2022	7.4
12/8/2022	7.16
5/31/2023	6.12 (XO)
7/25/2023	6.68
11/28/2023	6.9

Prediction Limit

Intrawell Parametric, MW-1 (bg)



Background Data Summary: Mean=7.183, Std. Dev.=0.2894, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9379, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: pH Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

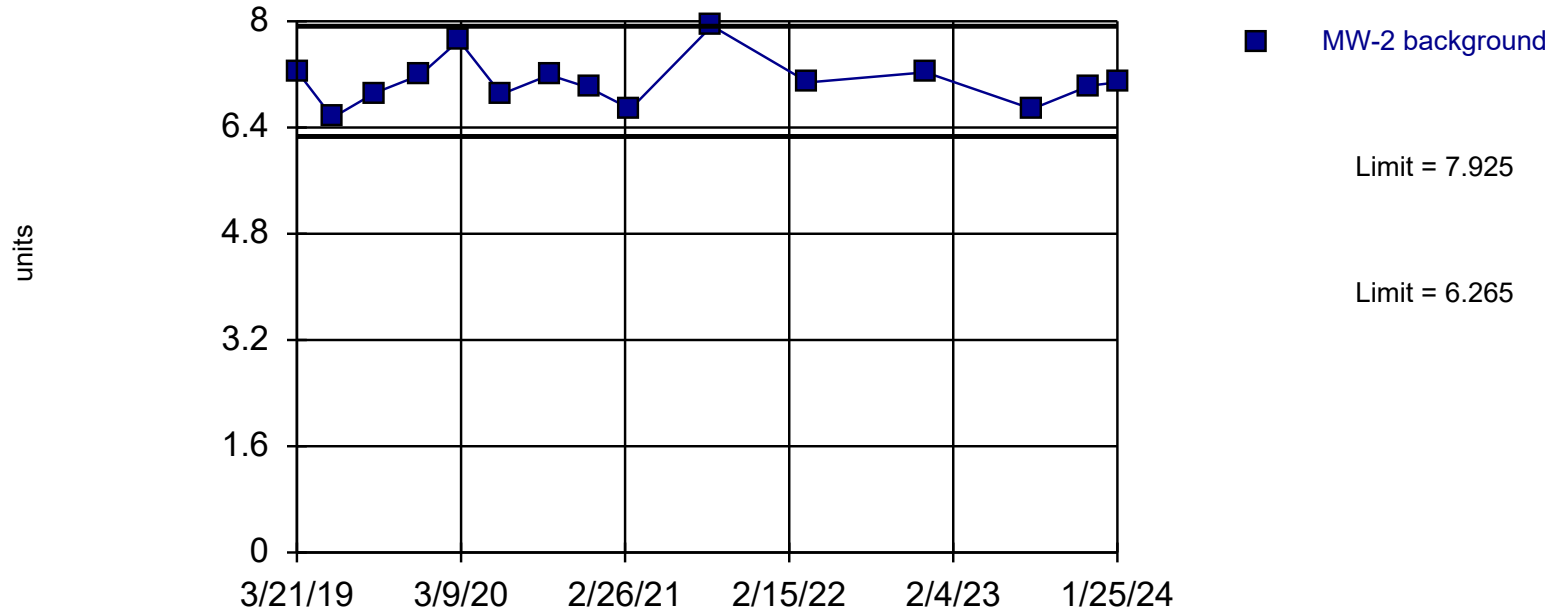
Prediction Limit

Constituent: pH Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-1
4/13/2018	6.73 (H)
9/28/2018	7.22
3/21/2019	7.18
6/7/2019	6.62
9/6/2019	7.14
12/12/2019	7.16
3/5/2020	7.84
6/4/2020	6.76
9/17/2020	7.3
12/11/2020	7.28
3/11/2021	7.21
9/1/2021	7.45
3/30/2022	7.24
12/7/2022	7.41
5/31/2023	6.13 (XO)
7/25/2023	6.81
12/5/2023	7.02
1/25/2024	7.28

Prediction Limit

Intrawell Parametric, MW-2



Background Data Summary: Mean=7.095, Std. Dev.=0.3645, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.924, critical = 0.835. Kappa = 2.278 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: pH Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

Prediction Limit

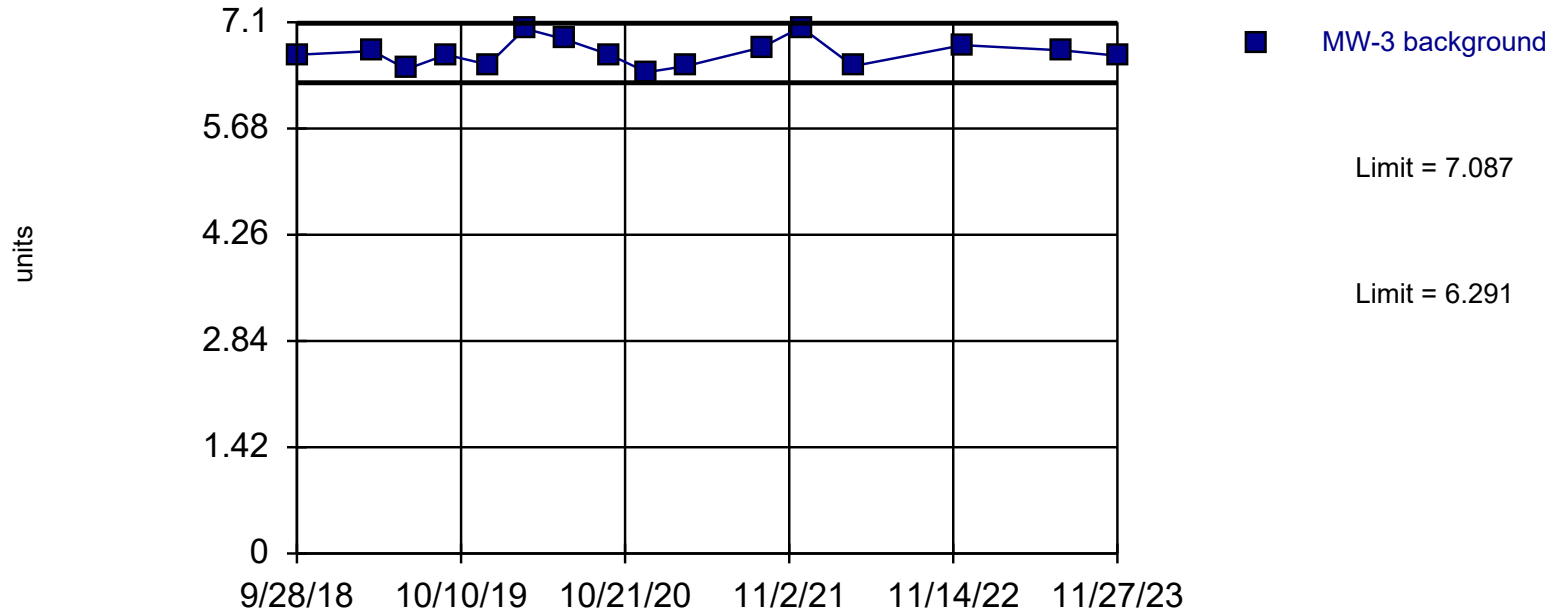
Constituent: pH Analysis Run 5/22/2024 5:03 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-2
3/29/2018	7.37 (H)
9/28/2018	7.58 (H)
3/21/2019	7.25
6/6/2019	6.55
9/5/2019	6.92
12/12/2019	7.19
3/5/2020	7.71
6/4/2020	6.9
9/16/2020	7.19
12/10/2020	7
3/10/2021	6.68
9/2/2021	7.93 (D)
3/29/2022	7.08
12/7/2022	7.23
6/1/2023	5.82 (XO)
7/25/2023	6.68
11/27/2023	7.03
1/25/2024	7.08

Prediction Limit

Intrawell Parametric, MW-3



Background Data Summary: Mean=6.689, Std. Dev.=0.1783, n=16. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9393, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: pH Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

Prediction Limit

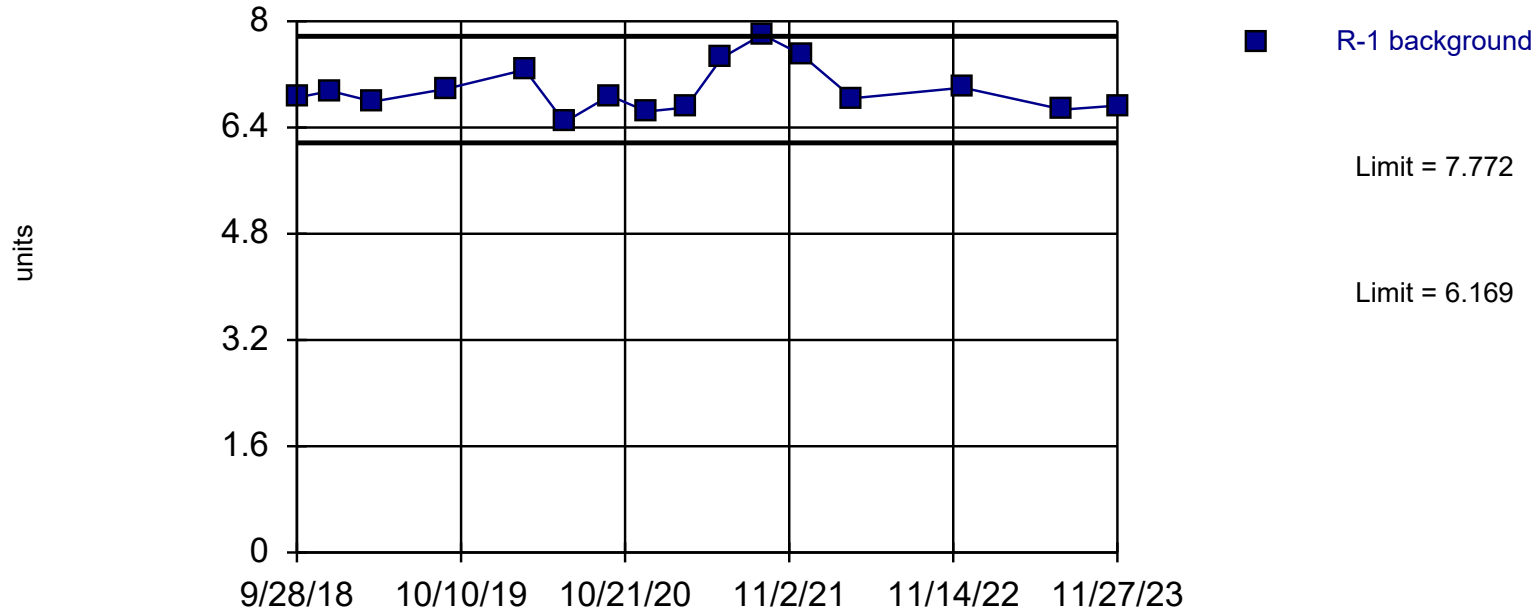
Constituent: pH Analysis Run 5/22/2024 5:03 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-3
3/30/2018	6.9 (H)
6/28/2018	6.2 (H)
9/28/2018	6.6
3/21/2019	6.9
6/7/2019	6.2
9/6/2019	6.6
12/12/2019	6.6
3/5/2020	7.2
6/4/2020	6.6
9/16/2020	6.6
12/10/2020	6.5
3/10/2021	6.7
9/1/2021	6.7
11/30/2021	7.1
3/30/2022	6.7
12/7/2022	6.86
6/1/2023	5.73 (XO)
7/25/2023	6.45
11/27/2023	6.72

Prediction Limit

Intrawell Parametric, R-1



Background Data Summary: Mean=6.971, Std. Dev.=0.359, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9052, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: pH Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

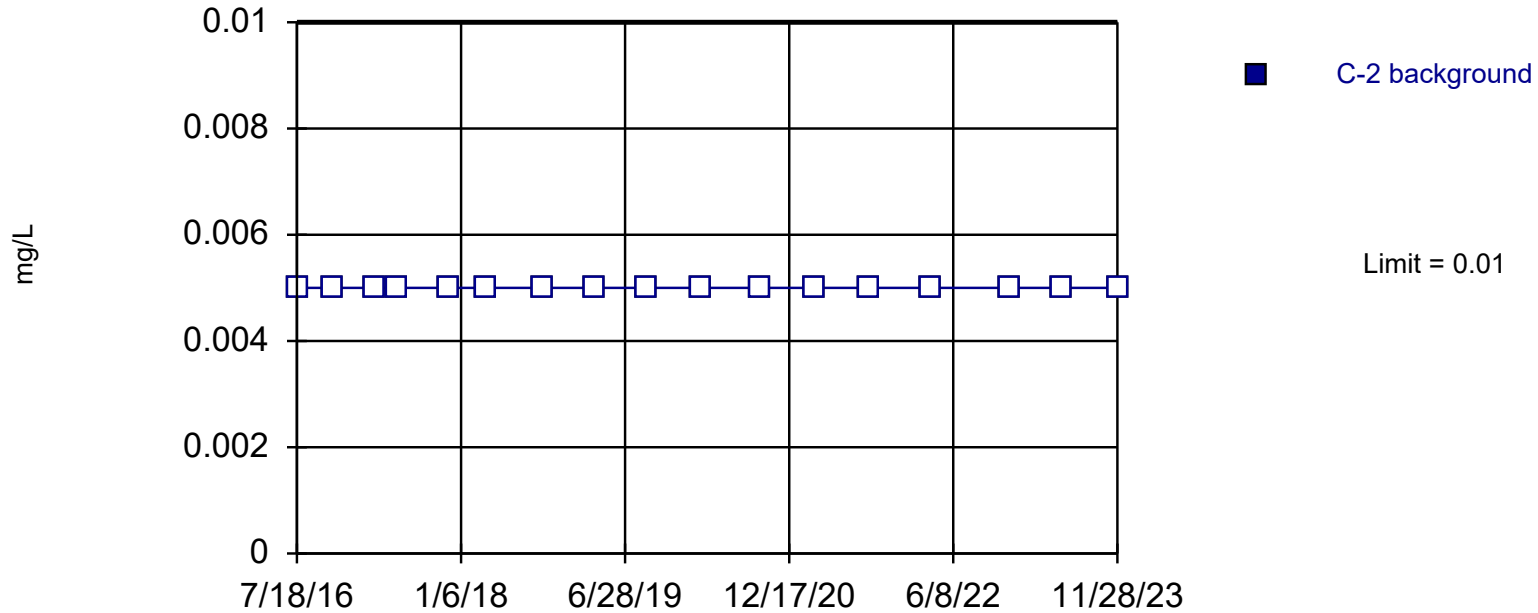
Prediction Limit

Constituent: pH Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	R-1
5/20/1985	6.9 (H)
11/4/1985	7 (H)
2/12/1986	7 (H)
5/12/1986	7 (H)
11/14/2016	6.38 (H)
3/29/2017	6.62 (H)
6/12/2017	6.79 (H)
11/27/2017	6.73 (H)
3/29/2018	6.71 (H)
6/28/2018	6.49 (H)
9/28/2018	6.85
12/14/2018	6.95
3/22/2019	6.79
9/5/2019	6.98
3/5/2020	7.27
6/4/2020	6.48
9/16/2020	6.88
12/10/2020	6.64
3/10/2021	6.7
6/1/2021	7.45
9/2/2021	7.8
11/30/2021	7.5
3/29/2022	6.84
12/7/2022	7
6/1/2023	5.68 (XO)
7/25/2023	6.67
11/27/2023	6.73

Prediction Limit

Intrawell Non-parametric, C-2 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 17$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Selenium Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	C-2
3/28/2016	<0.01 (H)
5/31/2016	<0.01 (H)
7/18/2016	<0.01
11/14/2016	<0.01
3/29/2017	<0.01
6/12/2017	<0.01
11/27/2017	<0.01
3/30/2018	<0.01
9/28/2018	<0.01
3/21/2019	<0.01
9/6/2019	<0.01
3/5/2020	<0.01
9/16/2020	<0.01
3/10/2021	<0.01 (D)
9/2/2021	<0.01
3/30/2022	<0.01
12/8/2022	<0.01
5/31/2023	<0.01
11/28/2023	<0.01

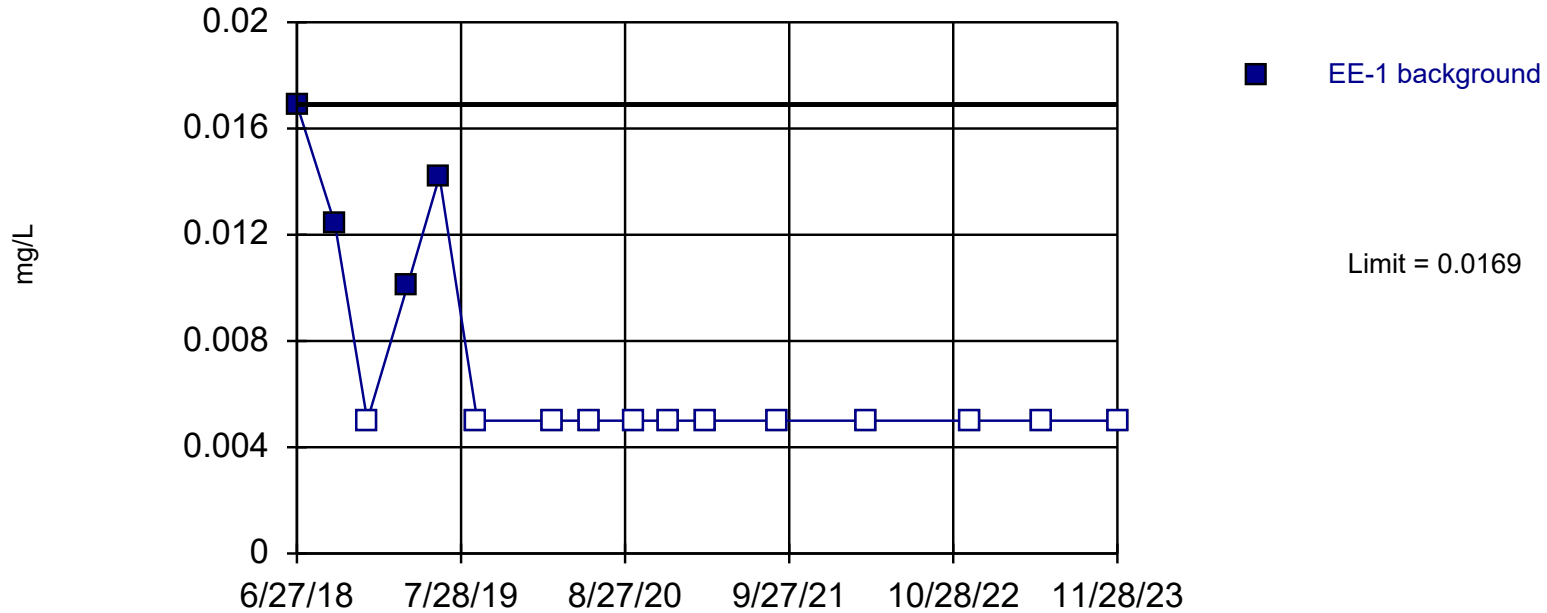
Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	DD-1
5/22/1985	<0.01 (H)
8/5/1985	<0.01 (H)
11/20/1985	<0.01 (H)
12/24/1985	<0.005
2/10/1986	<0.01
3/11/2015	<0.01
3/29/2016	<0.01
6/1/2016	<0.01
7/19/2016	<0.01
6/12/2017	<0.01
11/27/2017	<0.01
3/30/2018	<0.01
9/27/2018	0.0111
3/22/2019	<0.01
9/5/2019	<0.01
3/3/2020	<0.01
9/17/2020	<0.01
3/11/2021	<0.01
9/1/2021	<0.01
3/30/2022	<0.01
12/8/2022	<0.01

Prediction Limit

Intrawell Non-parametric, EE-1



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 75% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Selenium Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

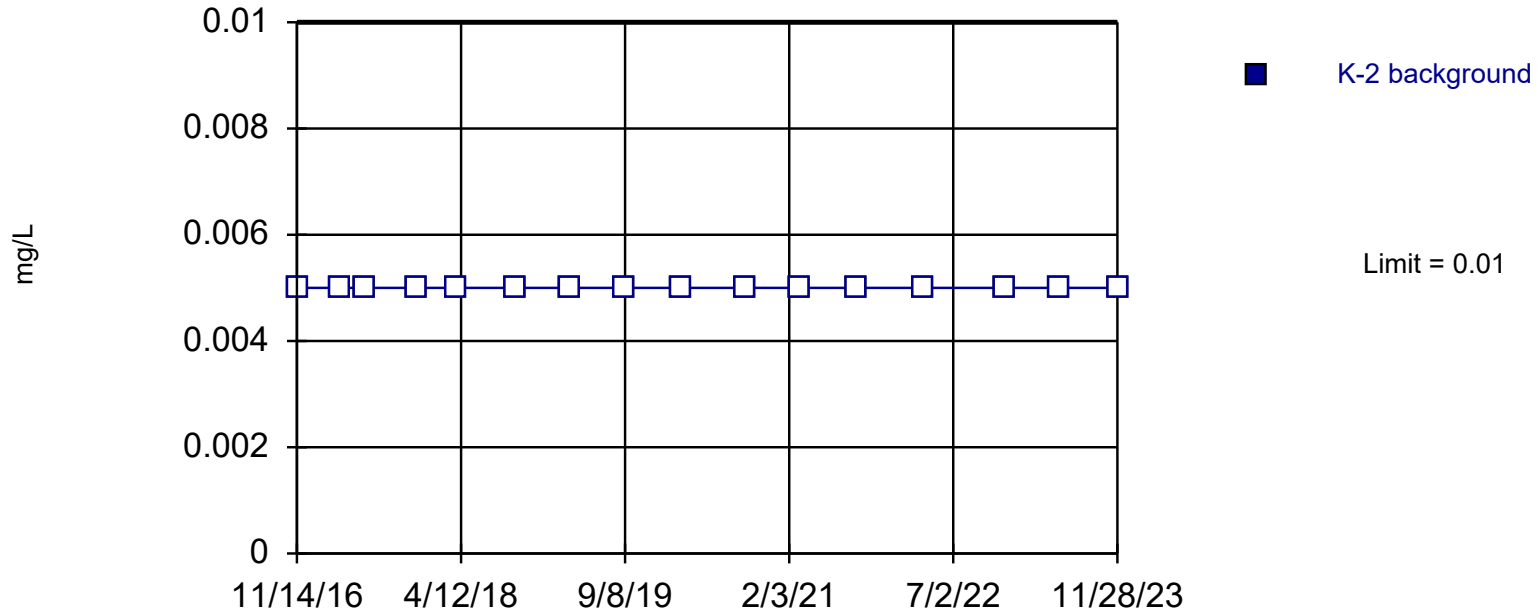
Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	EE-1
5/22/1985	<0.01 (H)
8/5/1985	<0.01 (H)
11/20/1985	<0.01 (H)
12/24/1985	<0.02 (H)
2/10/1986	<0.01 (H)
3/12/2015	<0.05 (H)
3/29/2016	<0.05 (H)
6/1/2016	<0.05 (H)
7/21/2016	<0.01 (H)
6/12/2017	<0.01 (H)
11/27/2017	<0.01 (H)
3/30/2018	0.0205 (H)
6/27/2018	0.0169
9/27/2018	0.0124
12/14/2018	<0.01
3/21/2019	0.0101
6/6/2019	0.0142
9/5/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/17/2020	<0.01
12/11/2020	<0.01
3/11/2021	<0.01
9/1/2021	<0.01
3/30/2022	<0.01
12/8/2022	<0.01
5/31/2023	<0.01
11/28/2023	<0.01

Prediction Limit

Intrawell Non-parametric, K-2 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Selenium Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

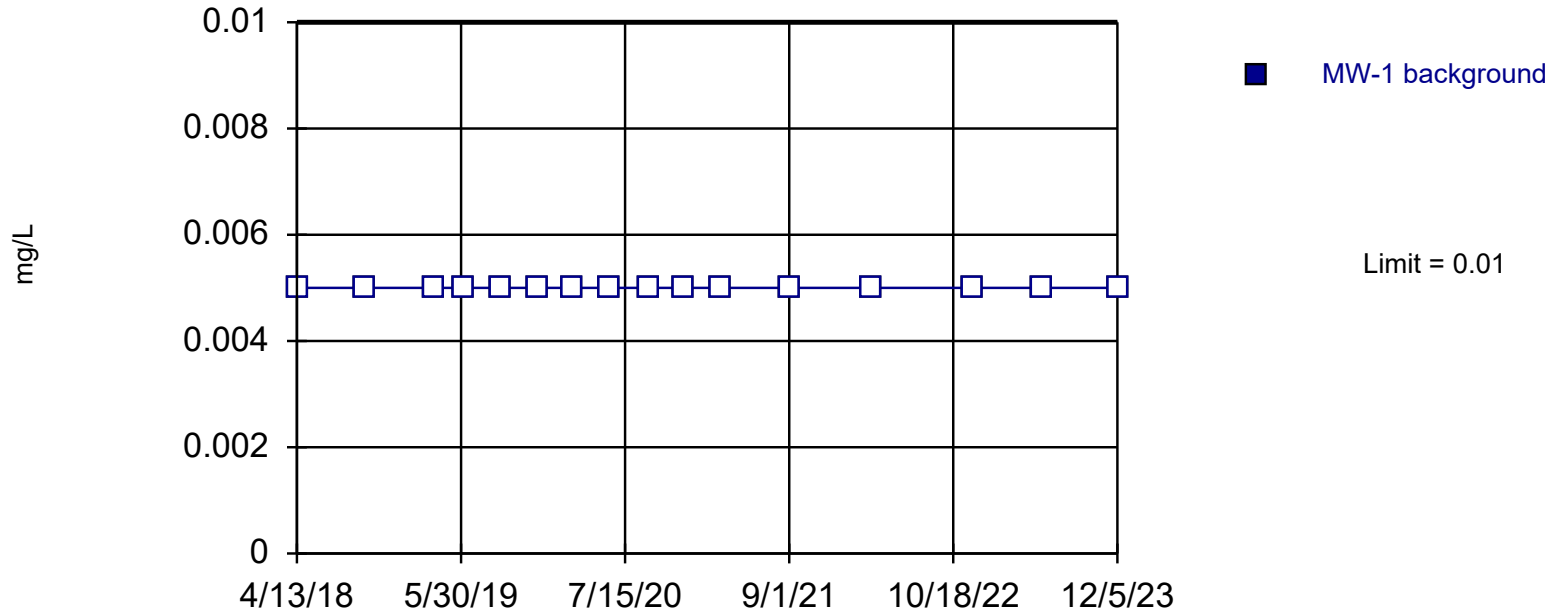
Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	K-2
3/9/2015	<0.01 (H)
3/28/2016	<0.01 (H)
5/31/2016	<0.01 (H)
7/18/2016	<0.01 (H)
11/14/2016	<0.01
3/29/2017	<0.01
6/12/2017	<0.01
11/27/2017	<0.01
3/29/2018	<0.01
9/27/2018	<0.01
3/22/2019	<0.01
9/5/2019	<0.01
3/5/2020	<0.01
9/16/2020	<0.01
3/10/2021	<0.01
9/3/2021	<0.01
3/31/2022	<0.01
12/8/2022	<0.01
5/31/2023	<0.01
11/28/2023	<0.01

Prediction Limit

Intrawell Non-parametric, MW-1 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Selenium Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

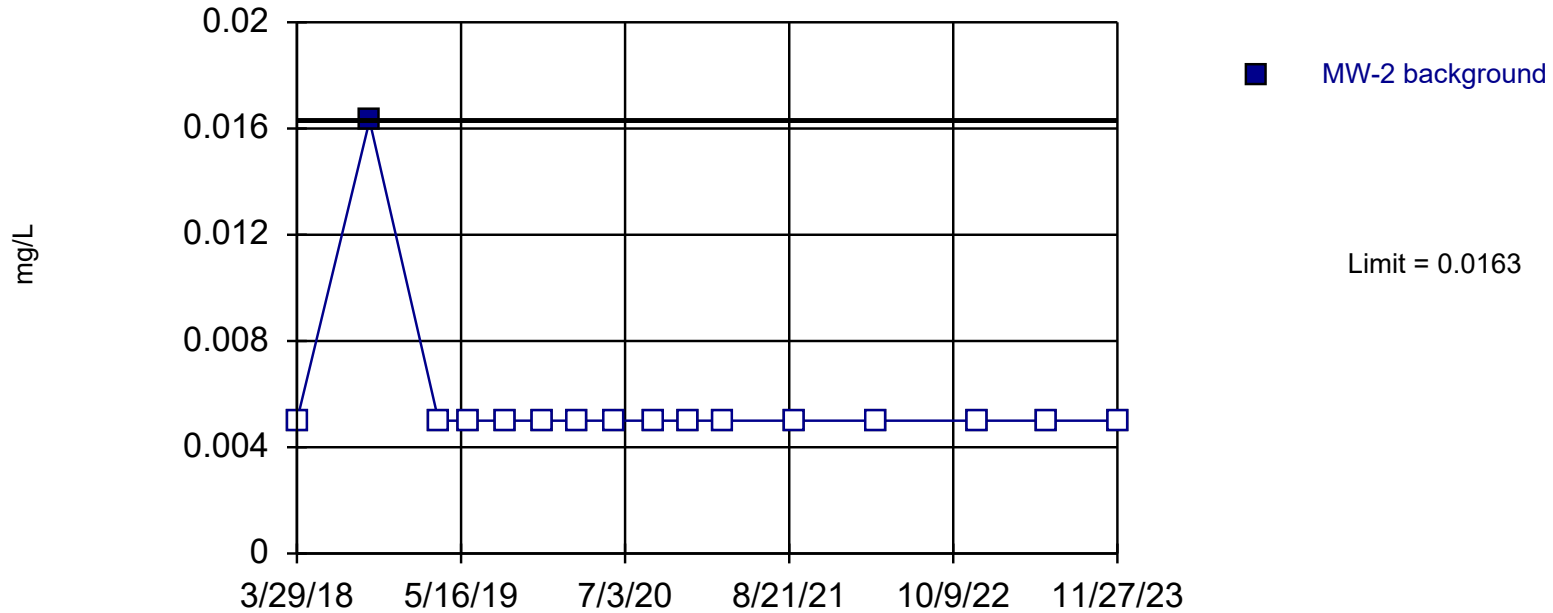
Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-1
4/13/2018	<0.01
9/28/2018	<0.01
3/21/2019	<0.01
6/7/2019	<0.01
9/6/2019	<0.01
12/12/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/17/2020	<0.01
12/11/2020	<0.01
3/11/2021	<0.01
9/1/2021	<0.01
3/30/2022	<0.01
12/7/2022	<0.01
5/31/2023	<0.01
12/5/2023	<0.01

Prediction Limit

Intrawell Non-parametric, MW-2



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 93.75% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Selenium Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

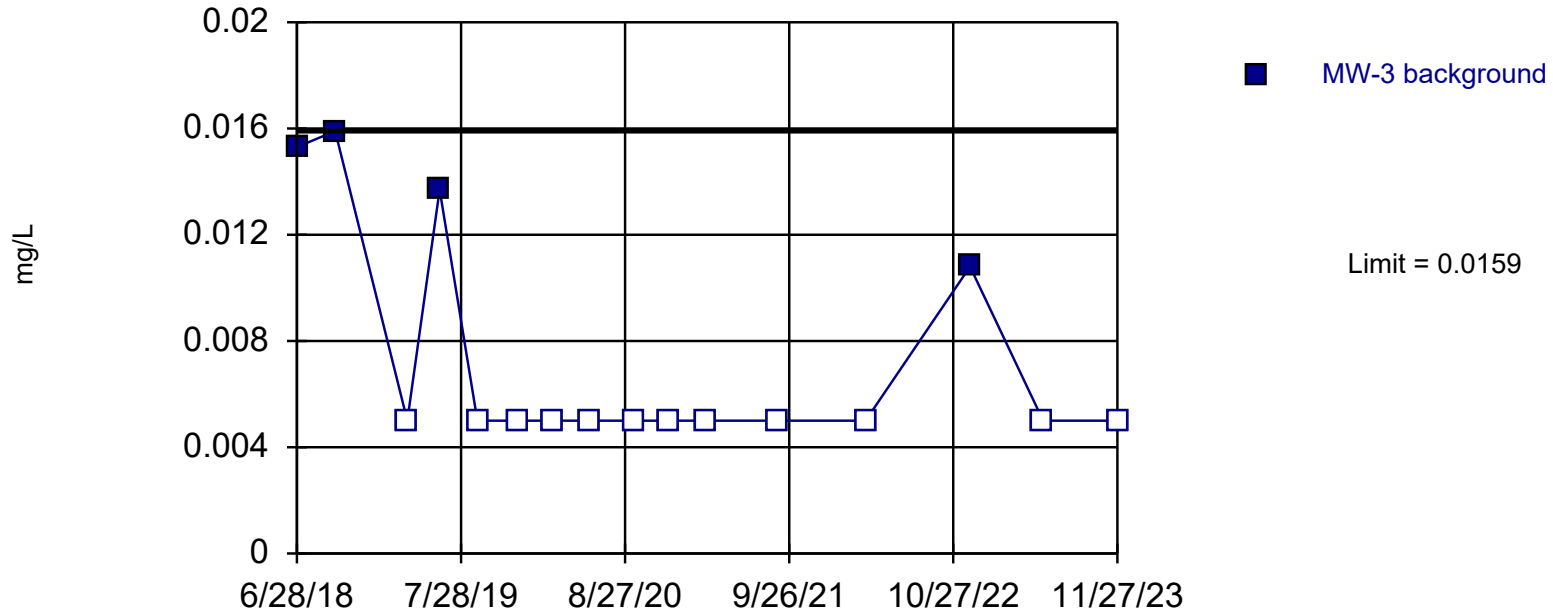
Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-2
3/29/2018	<0.01
9/28/2018	0.0163
3/21/2019	<0.01
6/6/2019	<0.01
9/5/2019	<0.01
12/12/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/16/2020	<0.01
12/10/2020	<0.01
3/10/2021	<0.01
9/2/2021	<0.01 (D)
3/29/2022	<0.01
12/7/2022	<0.01
6/1/2023	<0.01
11/27/2023	<0.01

Prediction Limit

Intrawell Non-parametric, MW-3



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 75% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Selenium Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

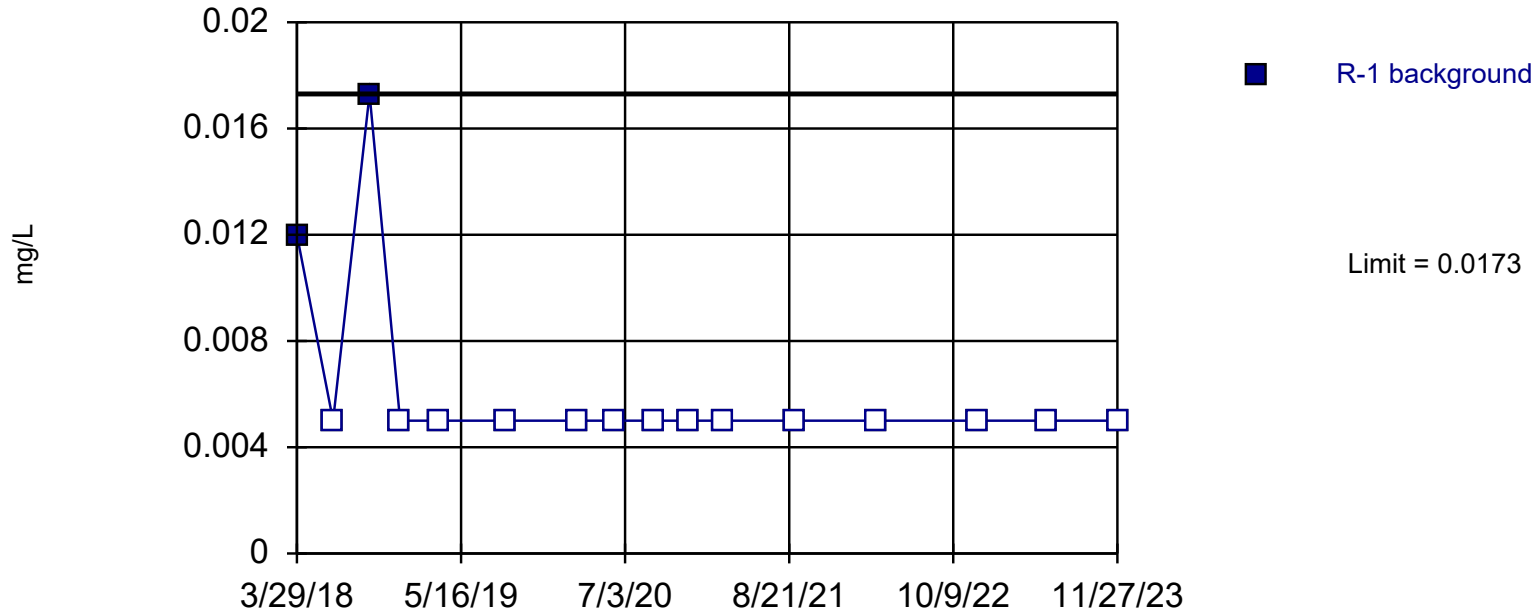
Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-3
3/30/2018	0.0133 (H)
6/28/2018	0.0153
9/28/2018	0.0159
3/21/2019	<0.01
6/7/2019	0.0137
9/6/2019	<0.01
12/12/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/16/2020	<0.01
12/10/2020	<0.01
3/10/2021	<0.01
9/1/2021	<0.01
3/30/2022	<0.01
12/7/2022	0.0108
6/1/2023	<0.01
11/27/2023	<0.01

Prediction Limit

Intrawell Non-parametric, R-1



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 87.5% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Selenium Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

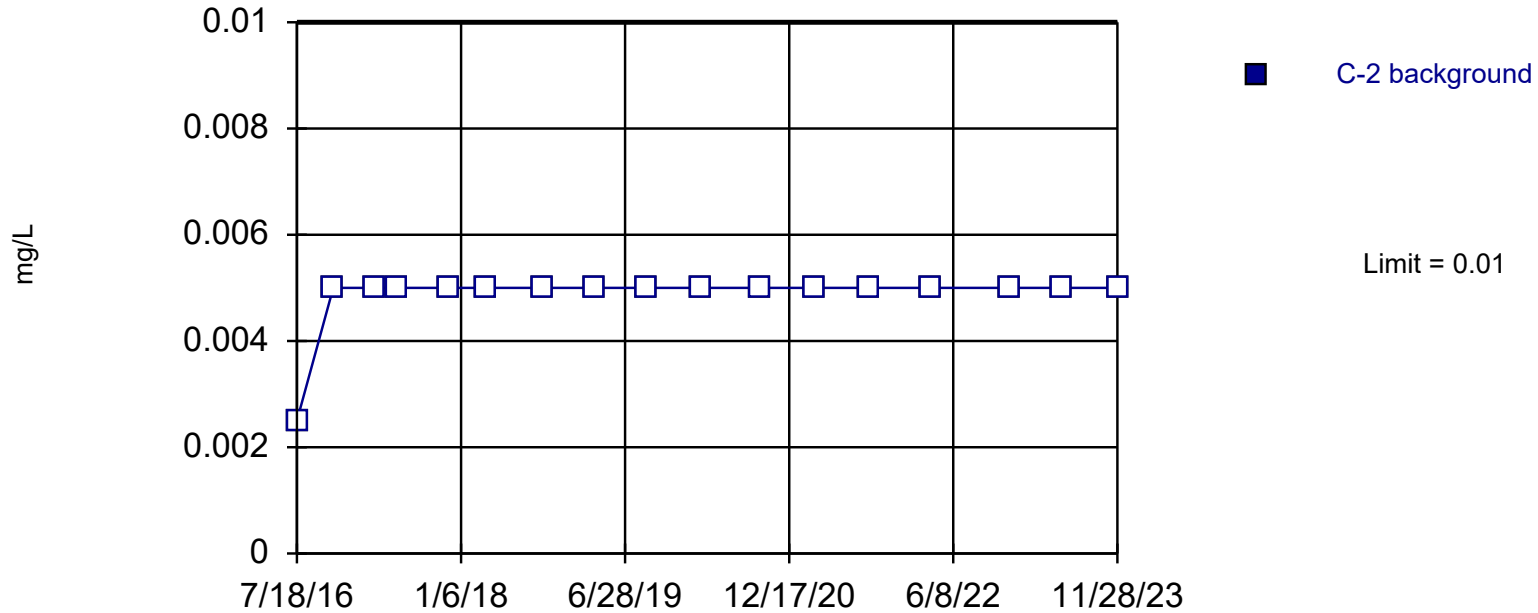
Prediction Limit

Constituent: Selenium (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	R-1
5/20/1985	<0.01 (H)
11/4/1985	<0.01 (H)
2/12/1986	<0.01 (H)
7/20/2016	<0.01 (H)
11/14/2016	<0.01 (H)
3/29/2017	<0.01 (H)
6/12/2017	<0.01 (H)
11/27/2017	<0.01 (H)
3/29/2018	0.012
6/28/2018	<0.01
9/28/2018	0.0173
12/14/2018	<0.01
3/22/2019	<0.01
9/5/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/16/2020	<0.01
12/10/2020	<0.01
3/10/2021	<0.01
9/2/2021	<0.01
3/29/2022	<0.01
12/7/2022	<0.01
6/1/2023	<0.01
11/27/2023	<0.01

Prediction Limit

Intrawell Non-parametric, C-2 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 17$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Silver Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

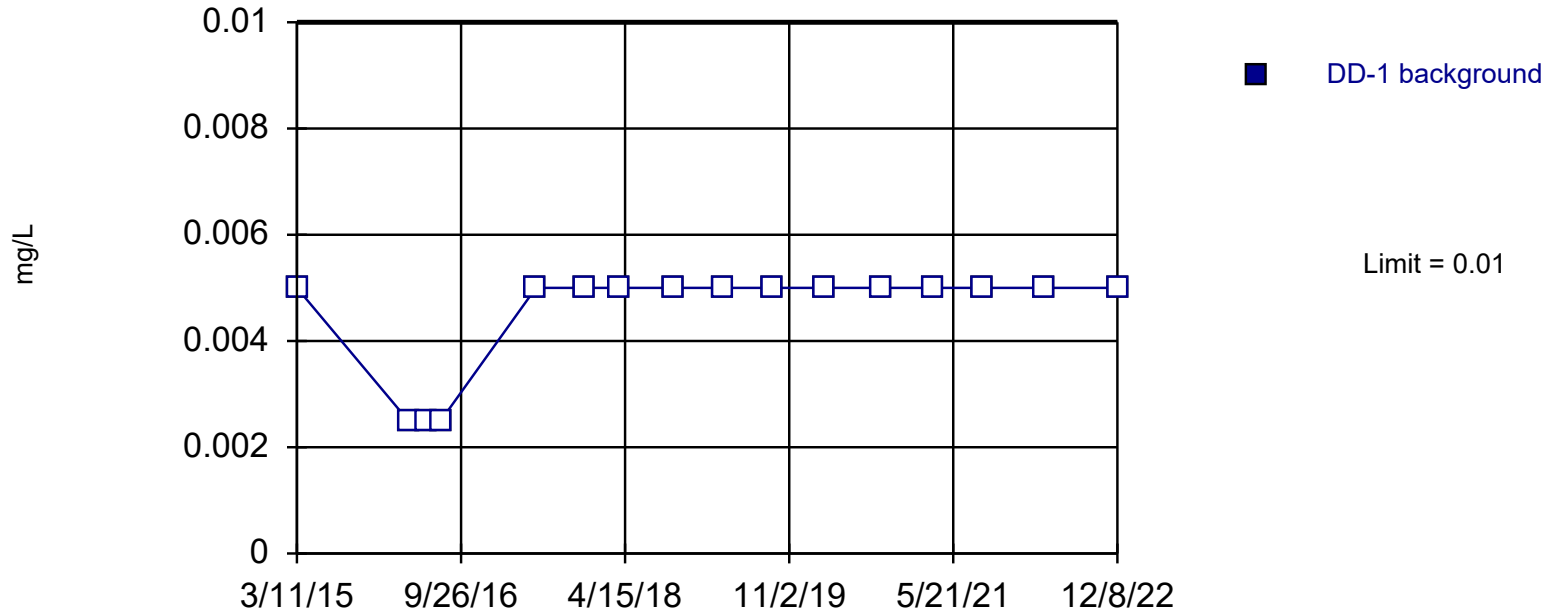
Prediction Limit

Constituent: Silver (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	C-2
3/28/2016	<0.005 (H)
5/31/2016	<0.005 (H)
7/18/2016	<0.005
11/14/2016	<0.01
3/29/2017	<0.01
6/12/2017	<0.01
11/27/2017	<0.01
3/30/2018	<0.01
9/28/2018	<0.01
3/21/2019	<0.01
9/6/2019	<0.01
3/5/2020	<0.01
9/16/2020	<0.01
3/10/2021	<0.01 (D)
9/2/2021	<0.01
3/30/2022	<0.01
12/8/2022	<0.01
5/31/2023	<0.01
11/28/2023	<0.01

Prediction Limit

Intrawell Non-parametric, DD-1



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Silver Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

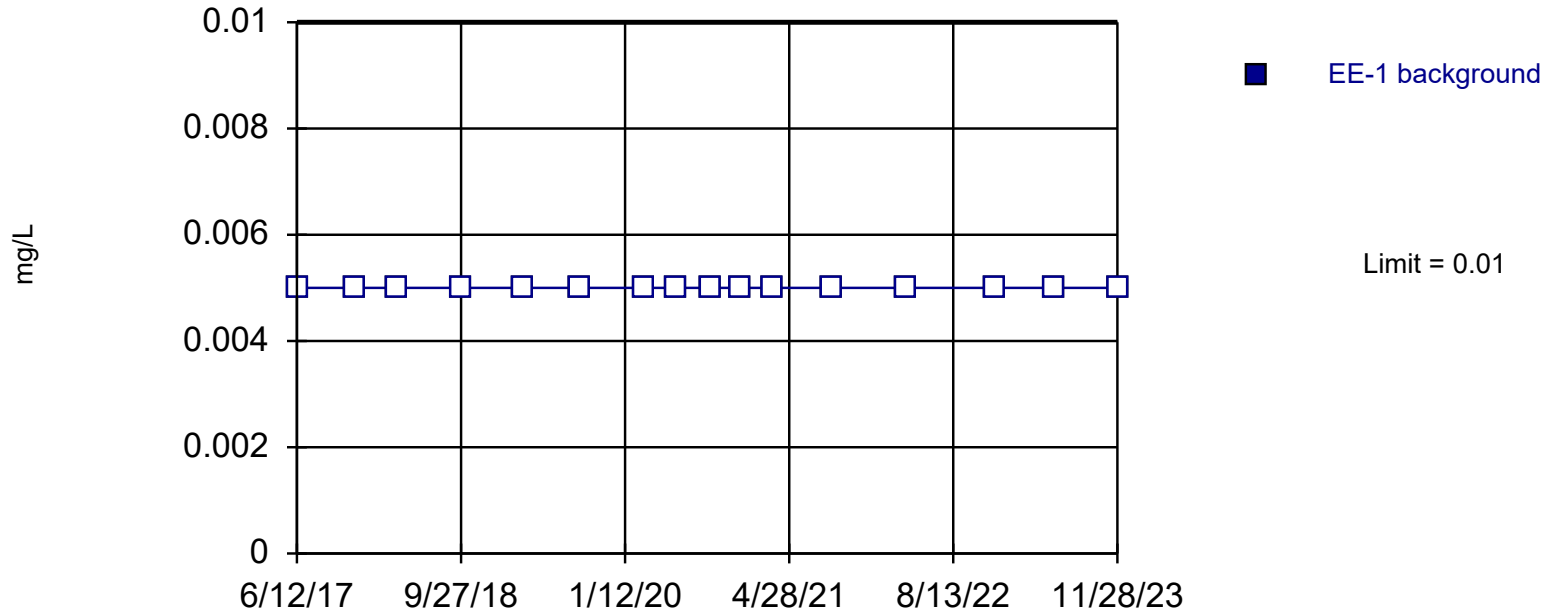
Prediction Limit

Constituent: Silver (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	DD-1
3/11/2015	<0.01
3/29/2016	<0.005
6/1/2016	<0.005
7/19/2016	<0.005
6/12/2017	<0.01
11/27/2017	<0.01
3/30/2018	<0.01
9/27/2018	<0.01
3/22/2019	<0.01
9/5/2019	<0.01
3/3/2020	<0.01
9/17/2020	<0.01
3/11/2021	<0.01
9/1/2021	<0.01
3/30/2022	<0.01
12/8/2022	<0.01

Prediction Limit

Intrawell Non-parametric, EE-1



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Silver Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

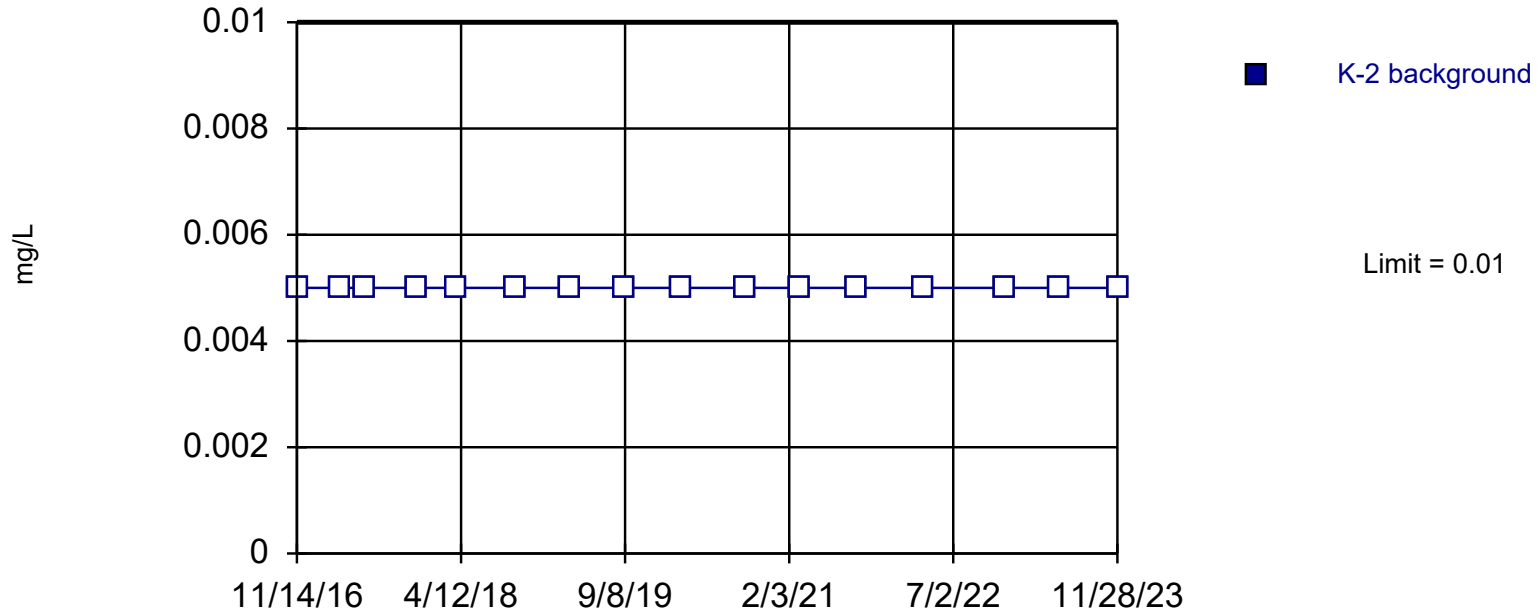
Prediction Limit

Constituent: Silver (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	EE-1
3/12/2015	<0.01 (H)
3/29/2016	<0.005 (H)
6/1/2016	<0.005 (H)
7/21/2016	<0.005 (H)
6/12/2017	<0.01
11/27/2017	<0.01
3/30/2018	<0.01
9/27/2018	<0.01
3/21/2019	<0.01
9/5/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/17/2020	<0.01
12/11/2020	<0.01
3/11/2021	<0.01
9/1/2021	<0.01
3/30/2022	<0.01
12/8/2022	<0.01
5/31/2023	<0.01
11/28/2023	<0.01

Prediction Limit

Intrawell Non-parametric, K-2 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Silver Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

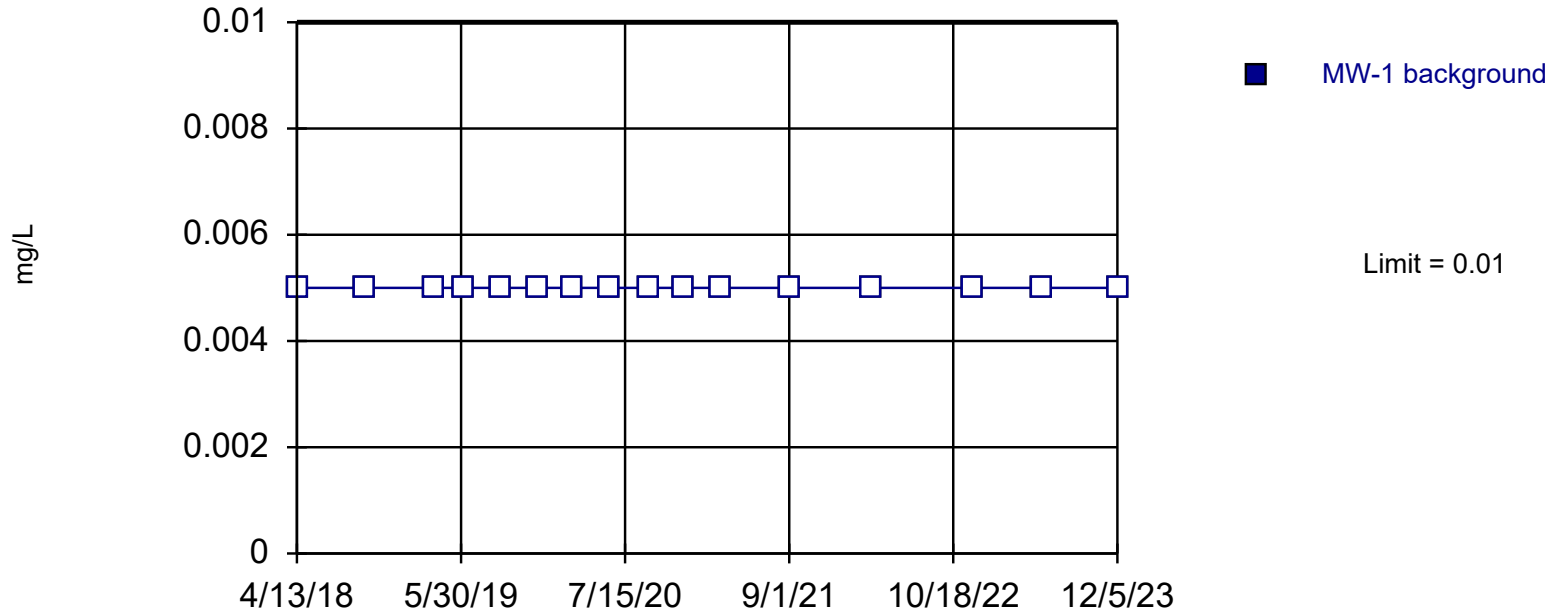
Prediction Limit

Constituent: Silver (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	K-2
3/9/2015	<0.01 (H)
3/28/2016	<0.005 (H)
5/31/2016	<0.005 (H)
7/18/2016	<0.005 (H)
11/14/2016	<0.01
3/29/2017	<0.01
6/12/2017	<0.01
11/27/2017	<0.01
3/29/2018	<0.01
9/27/2018	<0.01
3/22/2019	<0.01
9/5/2019	<0.01
3/5/2020	<0.01
9/16/2020	<0.01
3/10/2021	<0.01
9/3/2021	<0.01
3/31/2022	<0.01
12/8/2022	<0.01
5/31/2023	<0.01
11/28/2023	<0.01

Prediction Limit

Intrawell Non-parametric, MW-1 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Silver Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

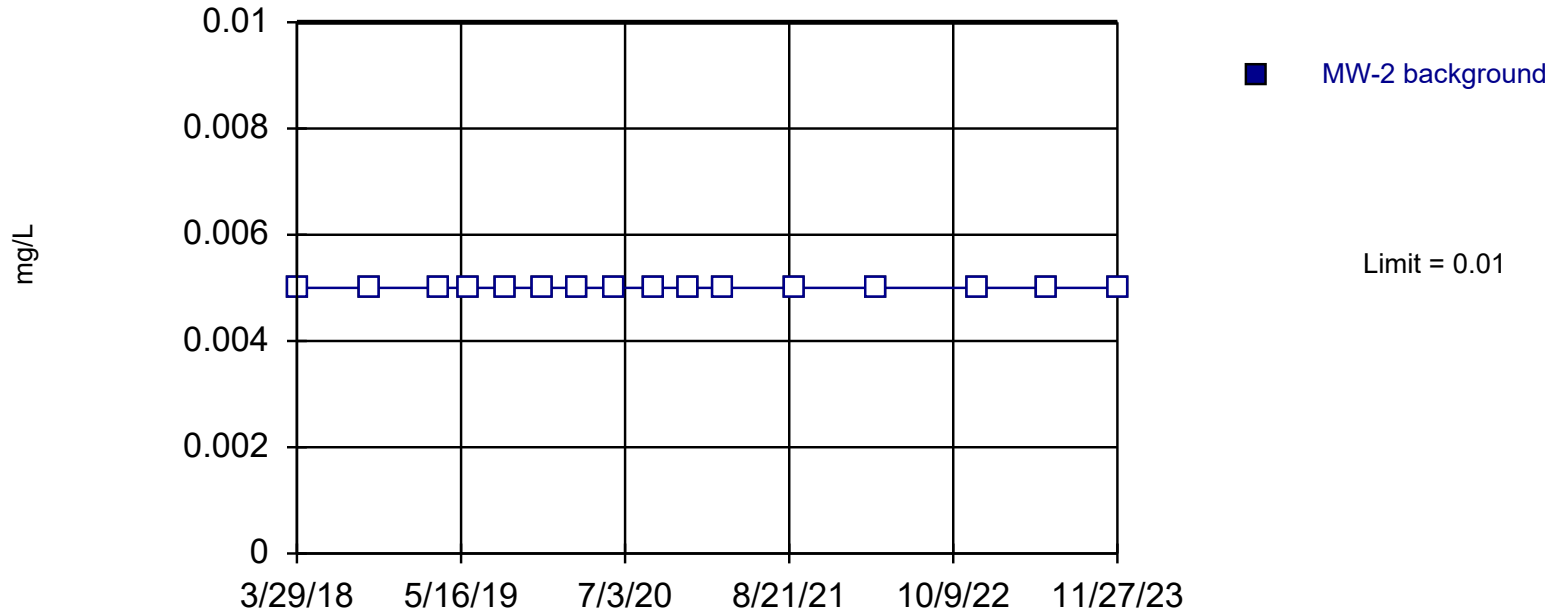
Prediction Limit

Constituent: Silver (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-1
4/13/2018	<0.01
9/28/2018	<0.01
3/21/2019	<0.01
6/7/2019	<0.01
9/6/2019	<0.01
12/12/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/17/2020	<0.01
12/11/2020	<0.01
3/11/2021	<0.01
9/1/2021	<0.01
3/30/2022	<0.01
12/7/2022	<0.01
5/31/2023	<0.01
12/5/2023	<0.01

Prediction Limit

Intrawell Non-parametric, MW-2



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Silver Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

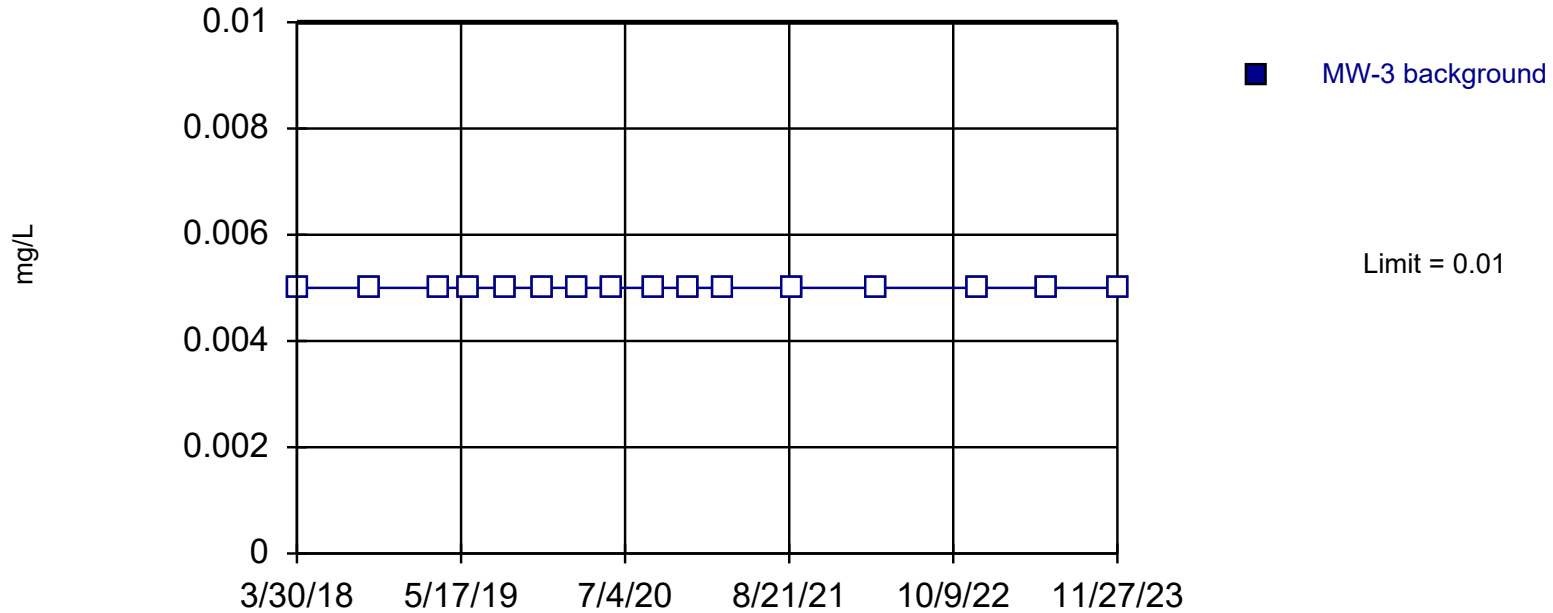
Prediction Limit

Constituent: Silver (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-2
3/29/2018	<0.01
9/28/2018	<0.01
3/21/2019	<0.01
6/6/2019	<0.01
9/5/2019	<0.01
12/12/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/16/2020	<0.01
12/10/2020	<0.01
3/10/2021	<0.01
9/2/2021	<0.01 (D)
3/29/2022	<0.01
12/7/2022	<0.01
6/1/2023	<0.01
11/27/2023	<0.01

Prediction Limit

Intrawell Non-parametric, MW-3



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Silver Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

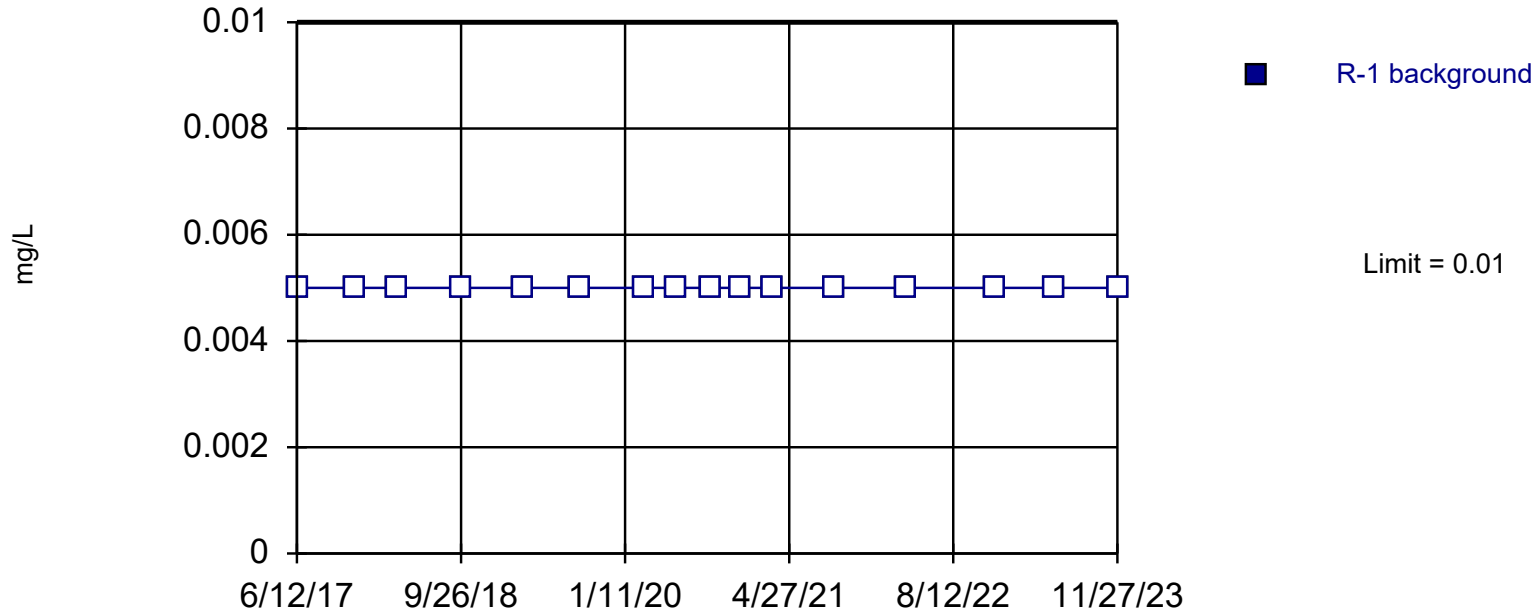
Prediction Limit

Constituent: Silver (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-3
3/30/2018	<0.01
9/28/2018	<0.01
3/21/2019	<0.01
6/7/2019	<0.01
9/6/2019	<0.01
12/12/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/16/2020	<0.01
12/10/2020	<0.01
3/10/2021	<0.01
9/1/2021	<0.01
3/30/2022	<0.01
12/7/2022	<0.01
6/1/2023	<0.01
11/27/2023	<0.01

Prediction Limit

Intrawell Non-parametric, R-1



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Silver Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

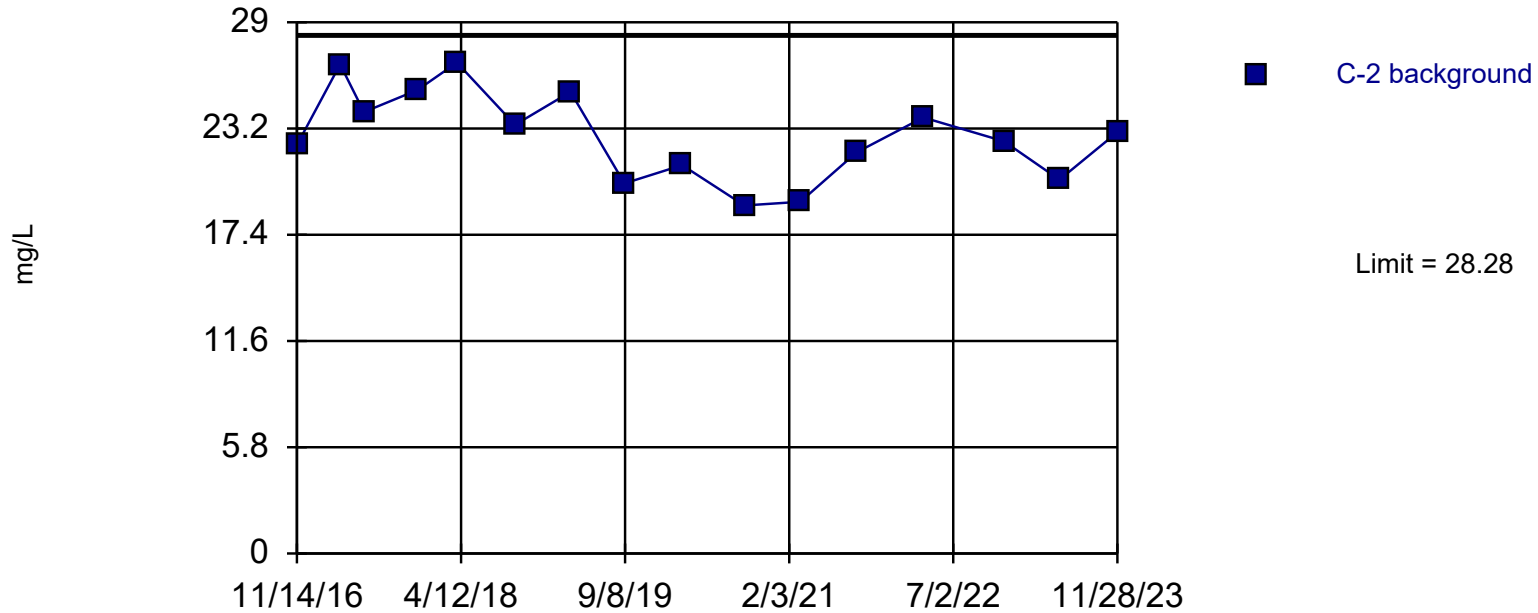
Prediction Limit

Constituent: Silver (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	R-1
7/20/2016	<0.005 (H)
11/14/2016	<0.01 (H)
3/29/2017	<0.01 (H)
6/12/2017	<0.01
11/27/2017	<0.01
3/29/2018	<0.01
9/28/2018	<0.01
3/22/2019	<0.01
9/5/2019	<0.01
3/5/2020	<0.01
6/4/2020	<0.01
9/16/2020	<0.01
12/10/2020	<0.01
3/10/2021	<0.01
9/2/2021	<0.01
3/29/2022	<0.01
12/7/2022	<0.01
6/1/2023	<0.01
11/27/2023	<0.01

Prediction Limit

Intrawell Parametric, C-2 (bg)



Background Data Summary: Mean=22.81, Std. Dev.=2.449, n=16. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9644, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Sodium Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

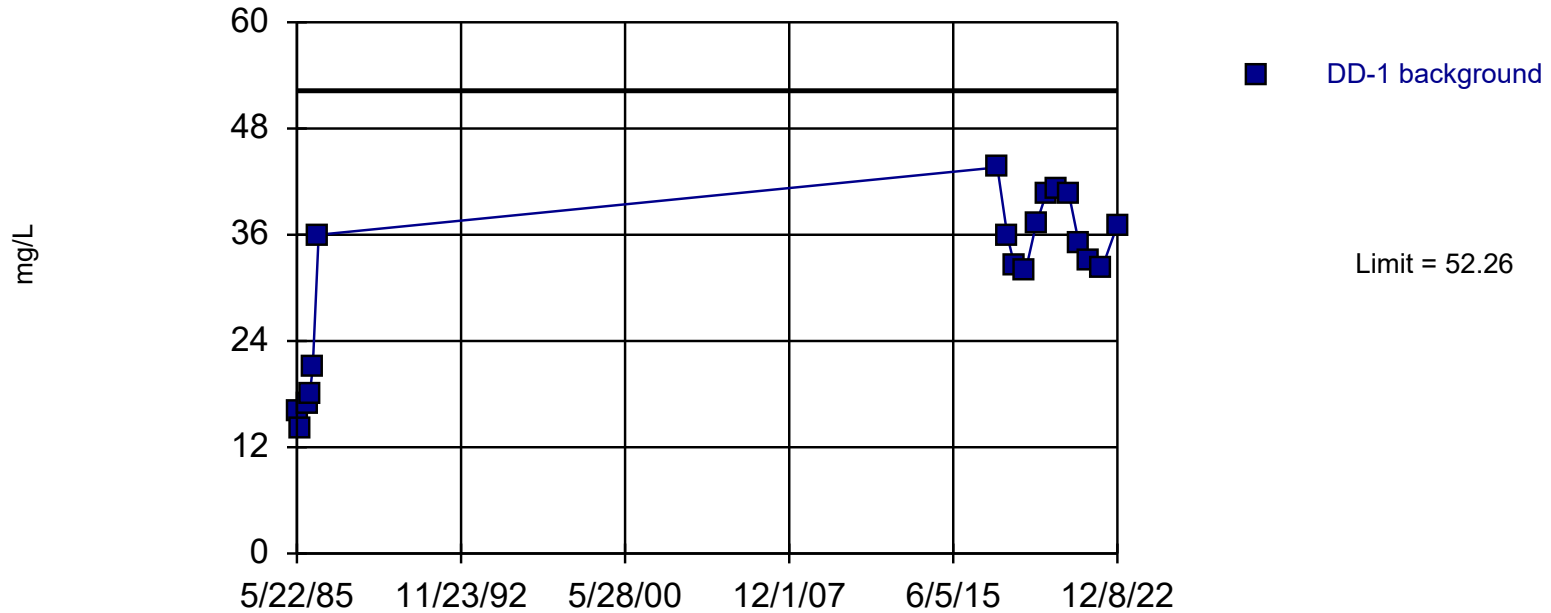
Prediction Limit

Constituent: Sodium (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	C-2
11/14/2016	22.3
3/29/2017	26.7
6/12/2017	24.1
11/27/2017	25.3
3/30/2018	26.8
9/28/2018	23.4
3/21/2019	25.2
9/6/2019	20.2
3/5/2020	21.2
9/16/2020	19
3/10/2021	19.2 (D)
9/2/2021	21.9
3/30/2022	23.8
12/8/2022	22.5
5/31/2023	20.4
11/28/2023	23

Prediction Limit

Intrawell Parametric, DD-1



Background Data Summary: Mean=31.28, Std. Dev.=9.617, n=18. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8693, critical = 0.858. Kappa = 2.182 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Sodium Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

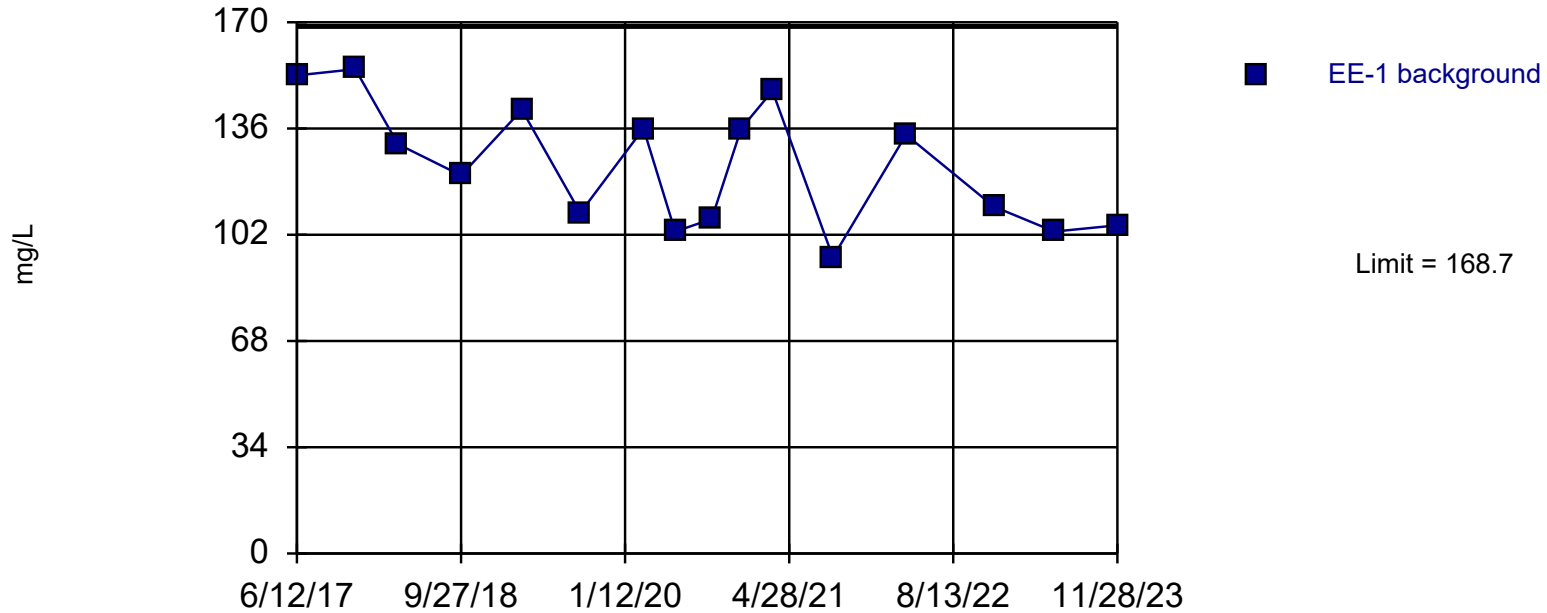
Prediction Limit

Constituent: Sodium (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	DD-1
5/22/1985	16
8/5/1985	14
11/20/1985	17
12/24/1985	18.1
2/10/1986	21
5/19/1986	36
6/12/2017	43.6
11/27/2017	35.8
3/30/2018	32.4
9/27/2018	31.9
3/22/2019	37.2
9/5/2019	40.6
3/3/2020	41.2
9/17/2020	40.7
3/11/2021	34.9
9/1/2021	33.2
3/30/2022	32.3
12/8/2022	37.1

Prediction Limit

Intrawell Parametric, EE-1



Background Data Summary: Mean=124.3, Std. Dev.=19.87, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9211, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Sodium Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

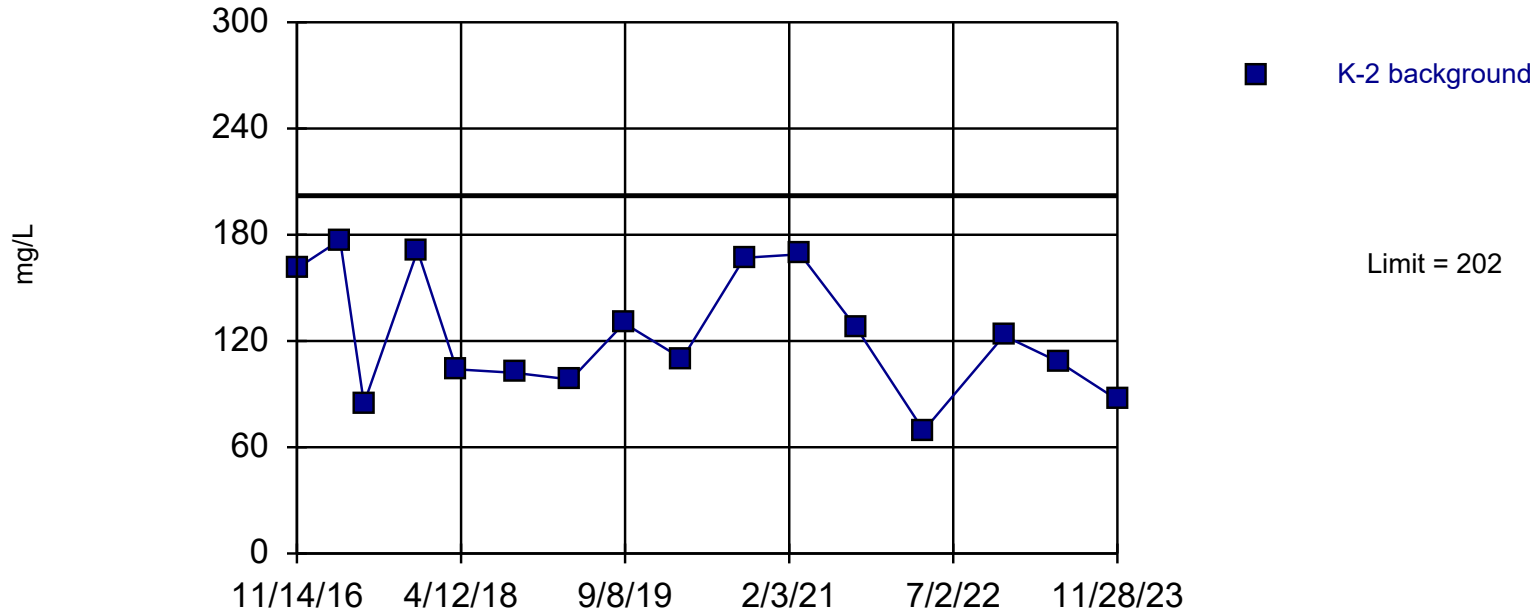
Prediction Limit

Constituent: Sodium (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	EE-1
5/22/1985	106 (H)
8/5/1985	98 (H)
11/20/1985	91 (H)
12/24/1985	89.7 (H)
2/10/1986	104 (H)
5/19/1986	125 (H)
6/12/2017	153
11/27/2017	155
3/30/2018	131
9/27/2018	121
3/21/2019	142
9/5/2019	109
3/5/2020	136
6/4/2020	103
9/17/2020	107
12/11/2020	136
3/11/2021	148
9/1/2021	94.8
3/30/2022	134
12/8/2022	111
5/31/2023	103
11/28/2023	105

Prediction Limit

Intrawell Parametric, K-2 (bg)



Background Data Summary: Mean=124.3, Std. Dev.=34.85, n=16. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.919, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Sodium Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

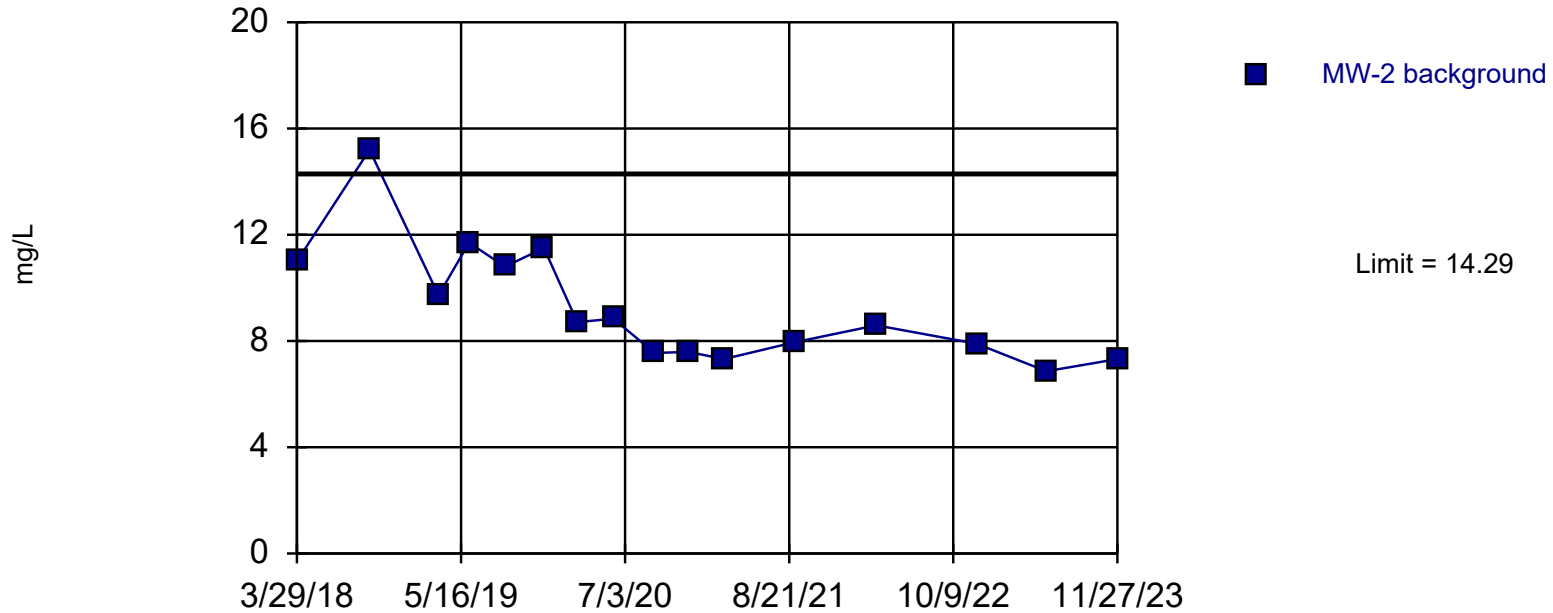
Prediction Limit

Constituent: Sodium (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	K-2
11/14/2016	161
3/29/2017	177
6/12/2017	84.7
11/27/2017	171
3/29/2018	104
9/27/2018	102
3/22/2019	98.2
9/5/2019	130
3/5/2020	110
9/16/2020	167
3/10/2021	169
9/3/2021	127
3/31/2022	69.4
12/8/2022	123
5/31/2023	108
11/28/2023	86.8

Prediction Limit

Intrawell Parametric, MW-2



Background Data Summary: Mean=9.284, Std. Dev.=2.241, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.867, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Sodium Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

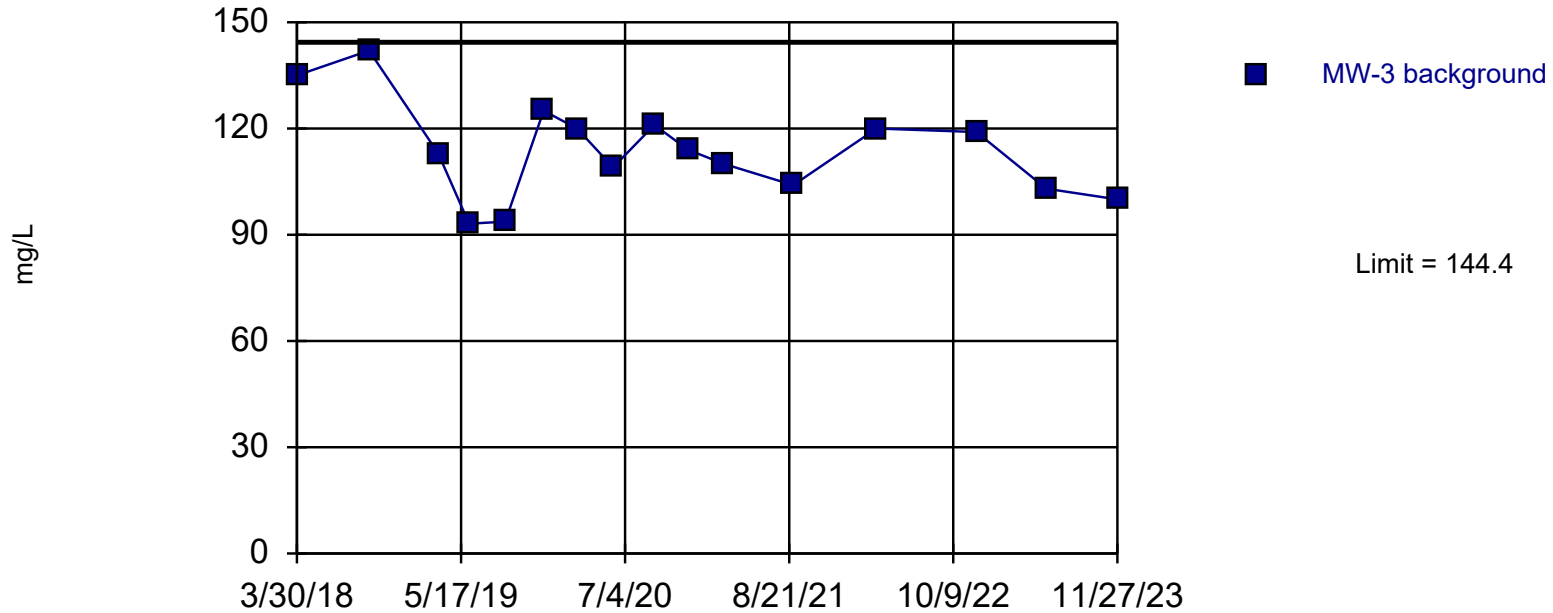
Prediction Limit

Constituent: Sodium (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-2
3/29/2018	11
9/28/2018	15.2
3/21/2019	9.72
6/6/2019	11.7
9/5/2019	10.8
12/12/2019	11.5
3/5/2020	8.71
6/4/2020	8.84
9/16/2020	7.55
12/10/2020	7.59
3/10/2021	7.32
9/2/2021	7.945 (D)
3/29/2022	8.59
12/7/2022	7.9
6/1/2023	6.86
11/27/2023	7.32

Prediction Limit

Intrawell Parametric, MW-3



Background Data Summary: Mean=113.9, Std. Dev.=13.66, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9688, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Sodium Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

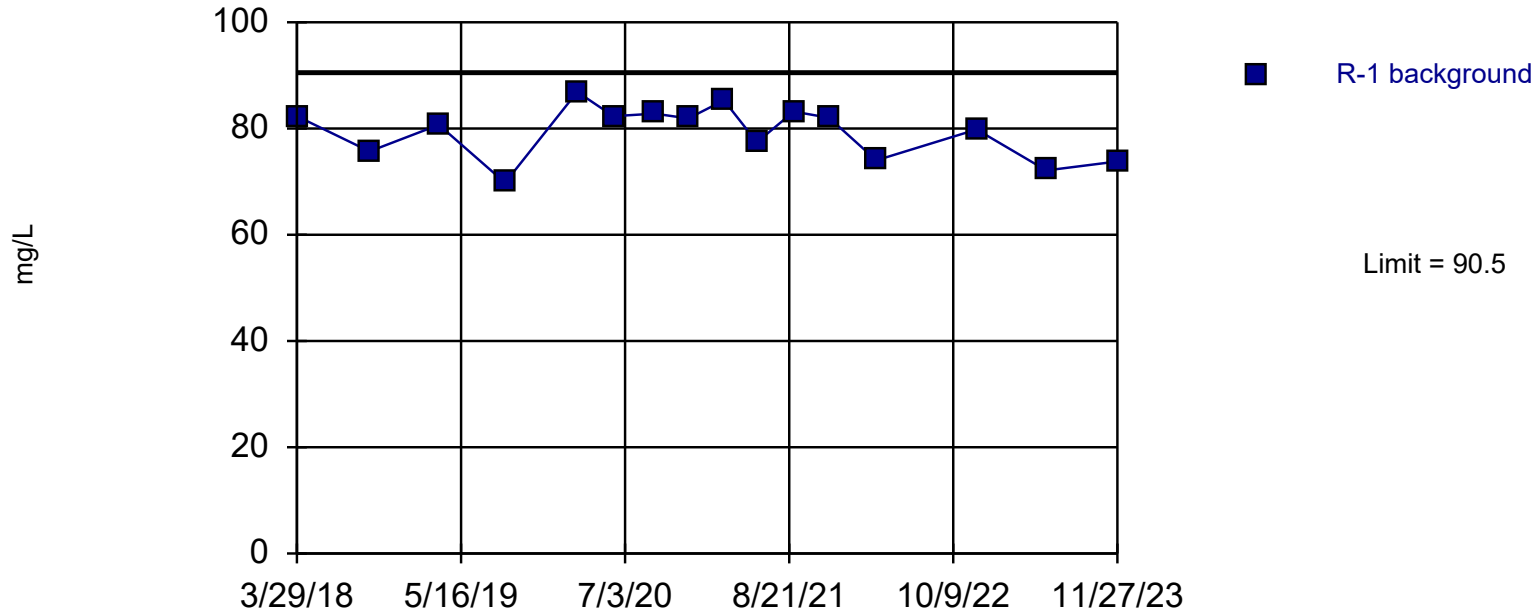
Prediction Limit

Constituent: Sodium (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-3
3/30/2018	135
9/28/2018	142
3/21/2019	113
6/7/2019	93.1
9/6/2019	93.7
12/12/2019	125
3/5/2020	120
6/4/2020	109
9/16/2020	121
12/10/2020	114
3/10/2021	110
9/1/2021	104
3/30/2022	120
12/7/2022	119
6/1/2023	103
11/27/2023	100

Prediction Limit

Intrawell Parametric, R-1



Background Data Summary: Mean=79.38, Std. Dev.=4.983, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9356, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Sodium Analysis Run 5/22/2024 4:58 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

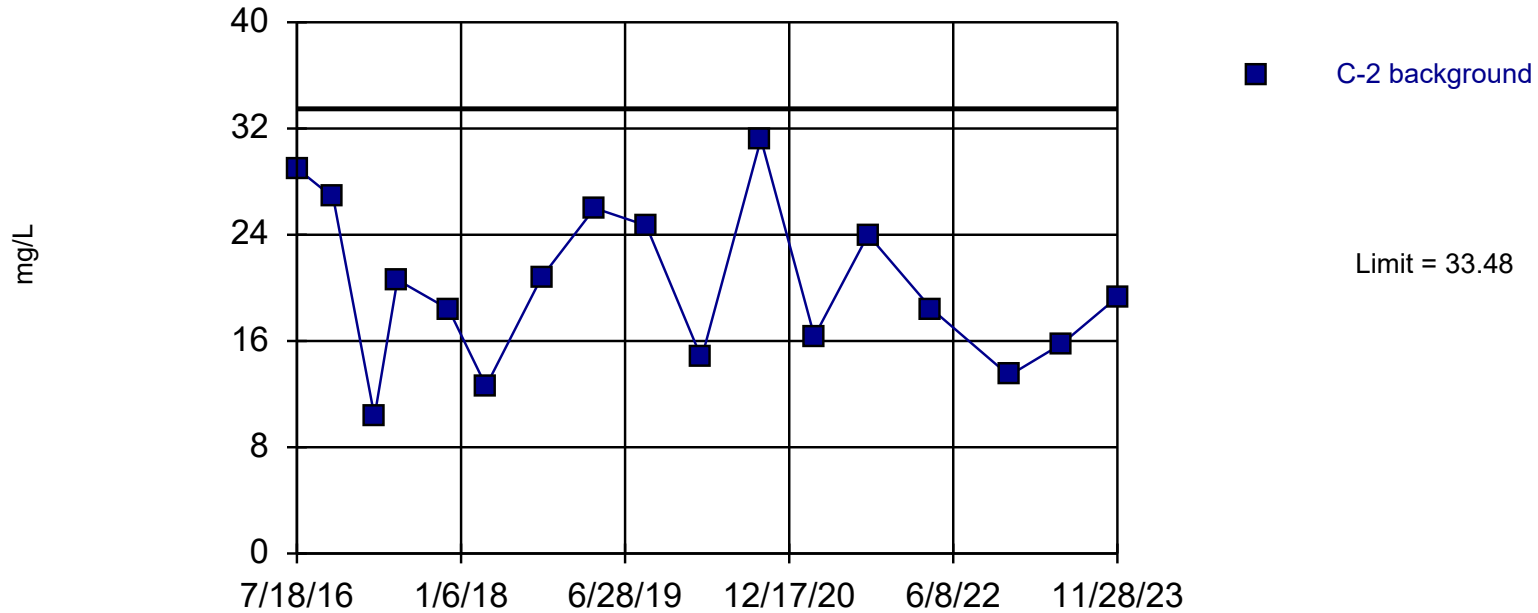
Prediction Limit

Constituent: Sodium (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	R-1
5/20/1985	44 (H)
11/4/1985	46 (H)
2/12/1986	42 (H)
5/12/1986	52 (H)
11/14/2016	76.8 (H)
3/29/2017	79.4 (H)
6/12/2017	72 (H)
11/27/2017	82.5 (H)
3/29/2018	82.3
9/28/2018	75.7
3/22/2019	80.7
9/5/2019	69.8
3/5/2020	86.9
6/4/2020	82.3
9/16/2020	82.8
12/10/2020	81.9
3/10/2021	85.3
6/1/2021	77.4
9/2/2021	83.2
11/30/2021	82
3/29/2022	74
12/7/2022	79.8
6/1/2023	72.1
11/27/2023	73.8

Prediction Limit

Intrawell Parametric, C-2 (bg)



Background Data Summary: Mean=20.14, Std. Dev.=6.044, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9739, critical = 0.851. Kappa = 2.207 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Sulfate, Dissolved Analysis Run 5/22/2024 4:58 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

Prediction Limit

Constituent: Sulfate, Dissolved (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	C-2
3/28/2016	19 (H)
5/31/2016	37 (H)
7/18/2016	29
11/14/2016	26.8
3/29/2017	10.3
6/12/2017	20.6
11/27/2017	18.4
3/30/2018	12.6
9/28/2018	20.8
3/21/2019	26
9/6/2019	24.7
3/5/2020	14.7
9/16/2020	31.2
3/10/2021	16.35 (D)
9/2/2021	24
3/30/2022	18.4
12/8/2022	13.4
5/31/2023	15.8
11/28/2023	19.3

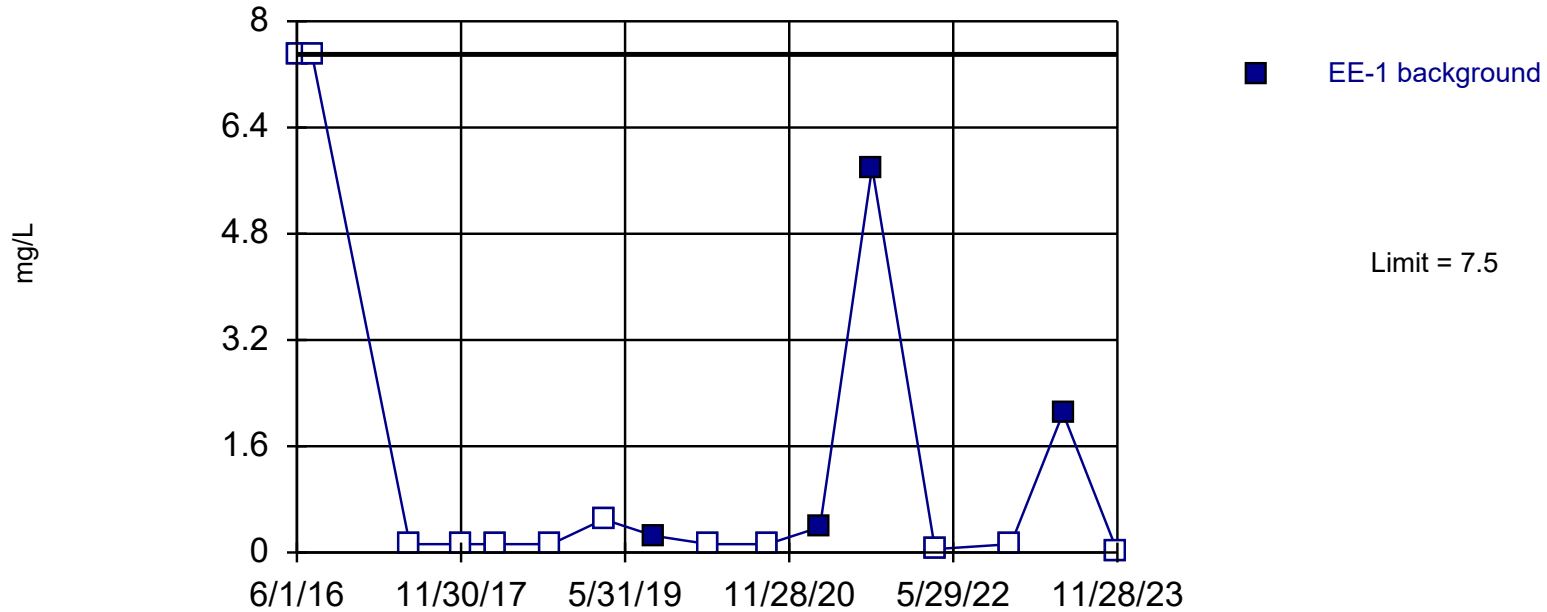
Prediction Limit

Constituent: Sulfate, Dissolved (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	DD-1
8/5/1985	73 (H)
2/10/1986	73
5/19/1986	63
3/11/2015	57
3/29/2016	48
6/1/2016	55
7/19/2016	49
6/12/2017	51
11/27/2017	54.6
3/30/2018	65.2
9/27/2018	44.9
3/22/2019	50.6
9/5/2019	45.7
3/3/2020	44.8
9/17/2020	35.9
3/11/2021	42.2
9/1/2021	38.5
3/30/2022	41.3
12/8/2022	37.9

Prediction Limit

Intrawell Non-parametric, EE-1



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 75% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Sulfate, Dissolved Analysis Run 5/22/2024 4:59 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

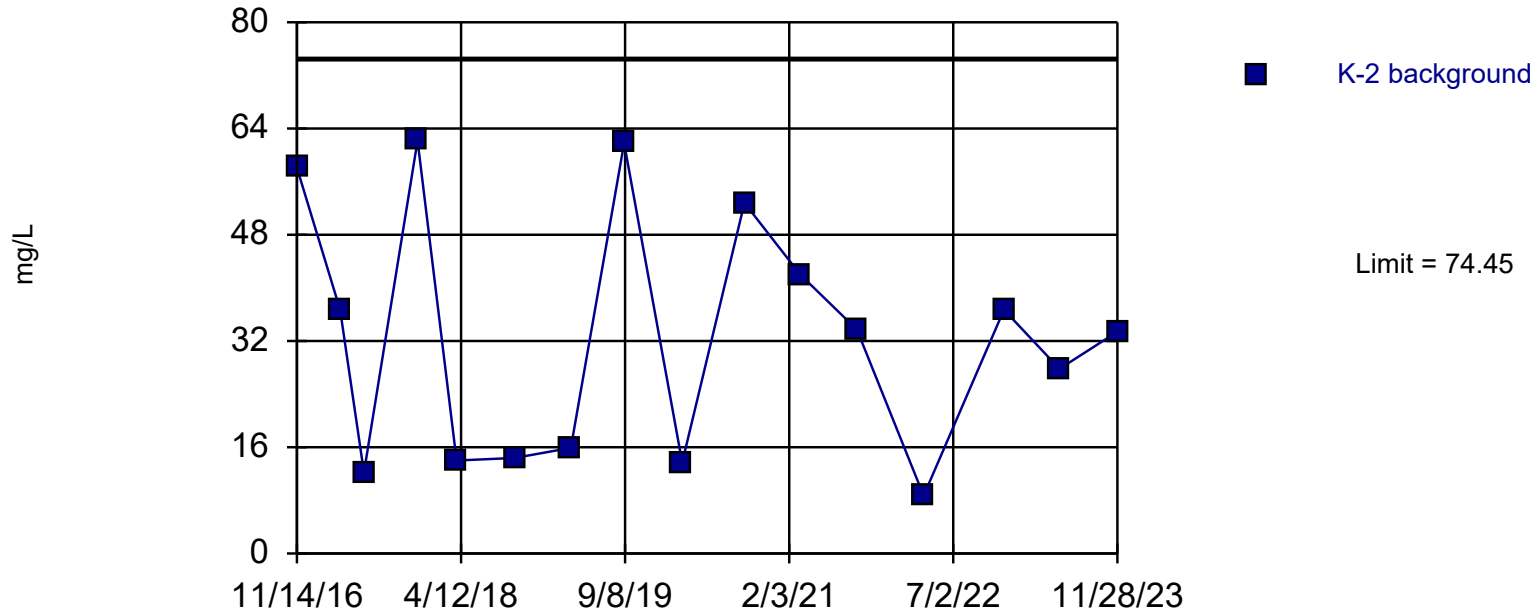
Prediction Limit

Constituent: Sulfate, Dissolved (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	EE-1
8/5/1985	8 (H)
2/10/1986	6 (H)
5/19/1986	<1 (H)
3/12/2015	<15 (H)
3/29/2016	<15 (H)
6/1/2016	<15
7/21/2016	<15
6/12/2017	<0.25
11/27/2017	<0.25
3/30/2018	<0.25
9/27/2018	<0.25
3/21/2019	<1
9/5/2019	0.25
3/5/2020	<0.25
9/17/2020	<0.25
3/11/2021	0.38
9/1/2021	5.8
3/30/2022	<0.1
12/8/2022	<0.25
5/31/2023	2.1
11/28/2023	<0.025

Prediction Limit

Intrawell Parametric, K-2 (bg)



Background Data Summary: Mean=32.76, Std. Dev.=18.68, n=16. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9018, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Sulfate, Dissolved Analysis Run 5/22/2024 4:59 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

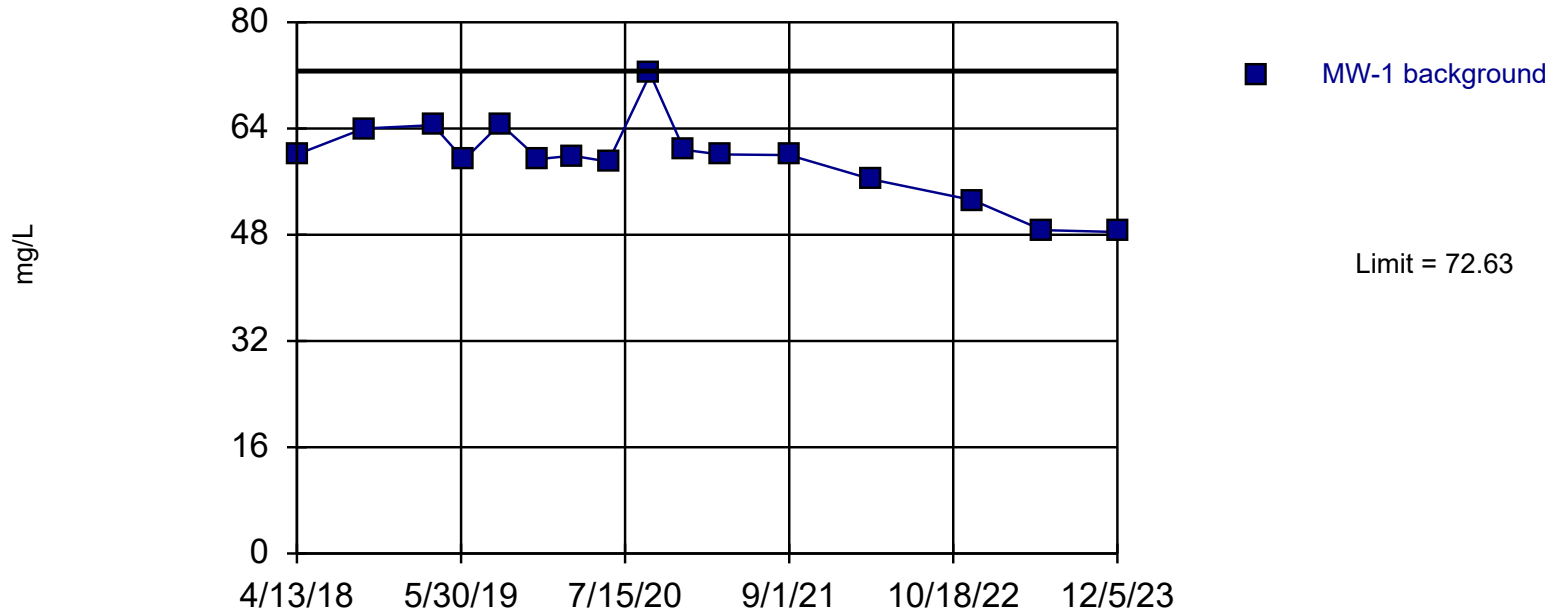
Prediction Limit

Constituent: Sulfate, Dissolved (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	K-2
3/9/2015	64 (H)
5/31/2016	63 (H)
7/18/2016	63 (H)
11/14/2016	58.1
3/29/2017	36.7
6/12/2017	12.2
11/27/2017	62.2
3/29/2018	14
9/27/2018	14.4
3/22/2019	15.9
9/5/2019	61.8
3/5/2020	13.7
9/16/2020	52.8
3/10/2021	42
9/3/2021	33.7
3/31/2022	8.7
12/8/2022	36.7
5/31/2023	27.8
11/28/2023	33.4

Prediction Limit

Intrawell Parametric, MW-1 (bg)



Background Data Summary: Mean=59.41, Std. Dev.=5.924, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9215, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Sulfate, Dissolved Analysis Run 5/22/2024 4:59 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

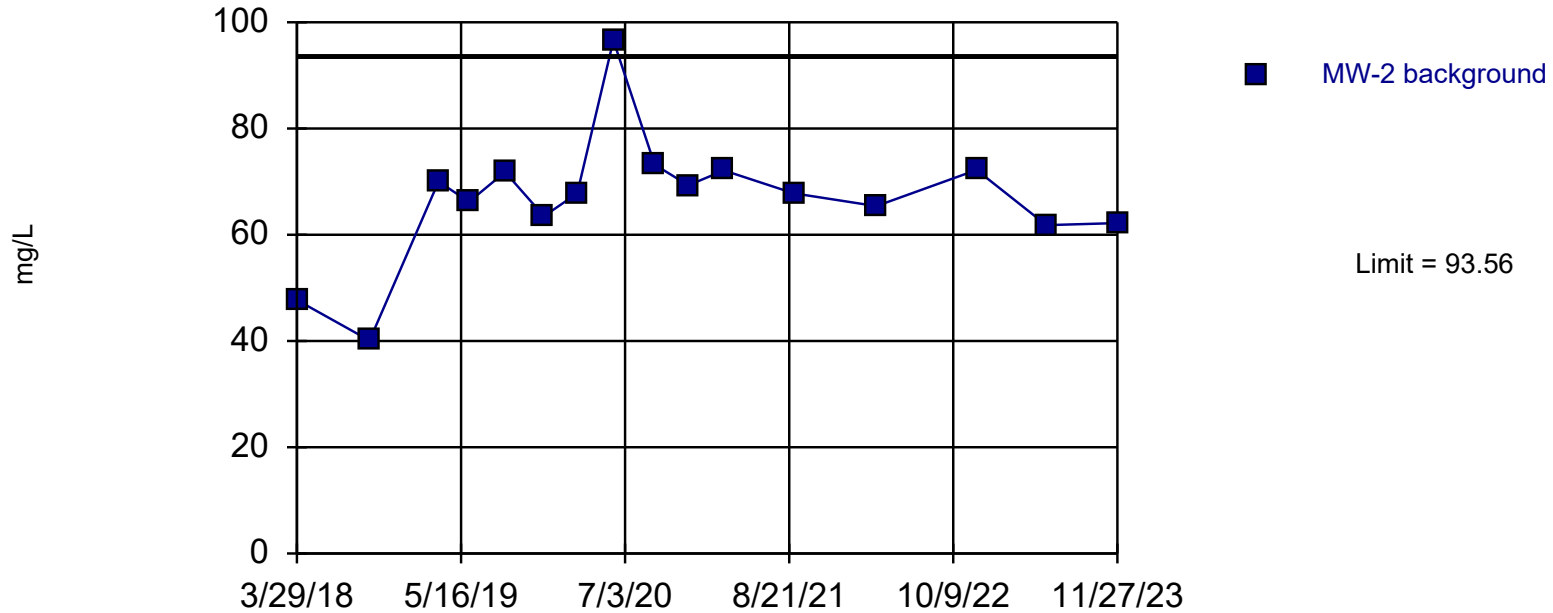
Prediction Limit

Constituent: Sulfate, Dissolved (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-1
4/13/2018	60.1
9/28/2018	64
3/21/2019	64.5
6/7/2019	59.3
9/6/2019	64.7
12/12/2019	59.4
3/5/2020	59.9
6/4/2020	59
9/17/2020	72.2
12/11/2020	60.8
3/11/2021	60.1
9/1/2021	60
3/30/2022	56.3
12/7/2022	53.2
5/31/2023	48.7
12/5/2023	48.4

Prediction Limit

Intrawell Parametric, MW-2



Background Data Summary: Mean=66.73, Std. Dev.=12.02, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8671, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Sulfate, Dissolved Analysis Run 5/22/2024 4:59 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

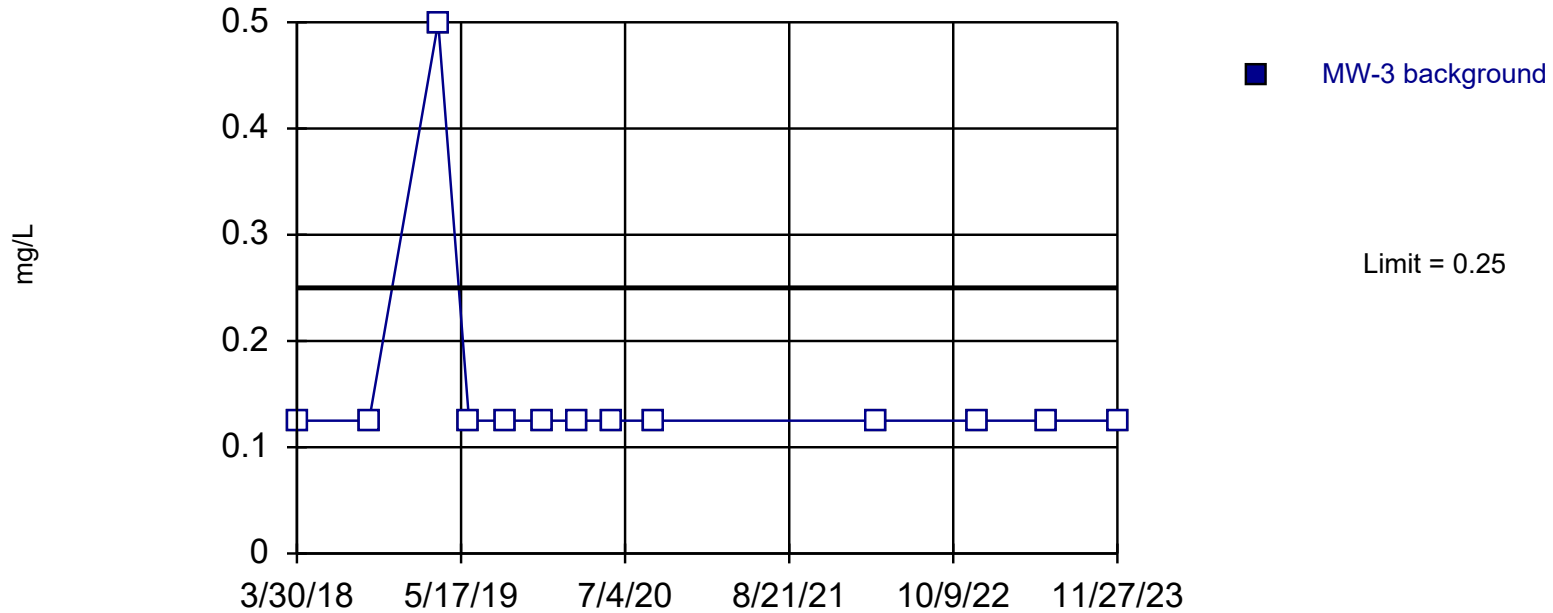
Prediction Limit

Constituent: Sulfate, Dissolved (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-2
3/29/2018	47.7 (O)
9/28/2018	40.1 (O)
3/21/2019	70
6/6/2019	66.2
9/5/2019	71.8
12/12/2019	63.5
3/5/2020	67.8
6/4/2020	96.6 (O)
9/16/2020	73.2
12/10/2020	69.3
3/10/2021	72.1
9/2/2021	67.8 (D)
3/29/2022	65.4
12/7/2022	72.2
6/1/2023	61.8
11/27/2023	62.2

Prediction Limit

Intrawell Non-parametric, MW-3



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 13$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01929. Individual comparison alpha = 0.009692 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Sulfate, Dissolved Analysis Run 5/22/2024 4:59 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

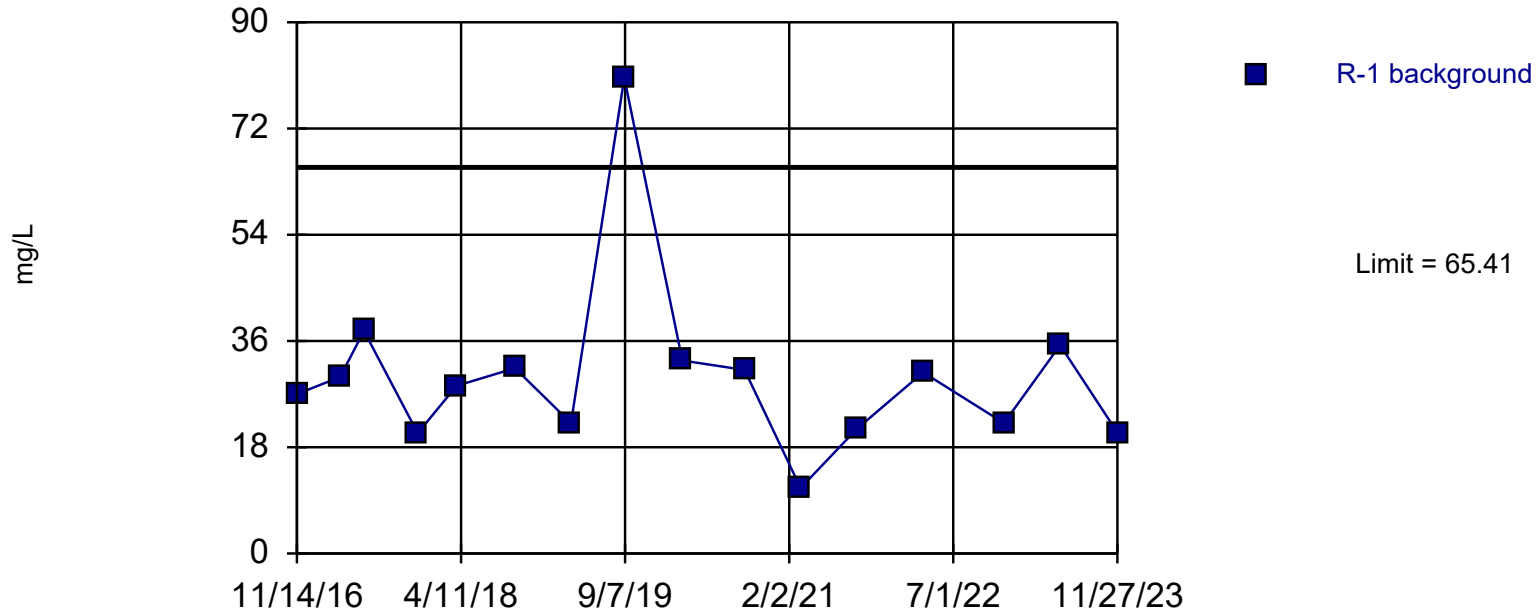
Prediction Limit

Constituent: Sulfate, Dissolved (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-3
3/30/2018	<0.25
9/28/2018	<0.25
3/21/2019	<1
6/7/2019	<0.25
9/6/2019	<0.25
12/12/2019	<0.25
3/5/2020	<0.25
6/4/2020	<0.25
9/16/2020	<0.25
12/10/2020	0.27 (S)
3/10/2021	0.35 (S)
9/1/2021	0.83 (SO)
3/30/2022	<0.25
12/7/2022	<0.25
6/1/2023	<0.25
11/27/2023	<0.25

Prediction Limit

Intrawell Parametric, R-1



Background Data Summary (based on cube root transformation): Mean=3.051, Std. Dev.=0.4383, n=16. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8607, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Sulfate, Dissolved Analysis Run 5/22/2024 4:59 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

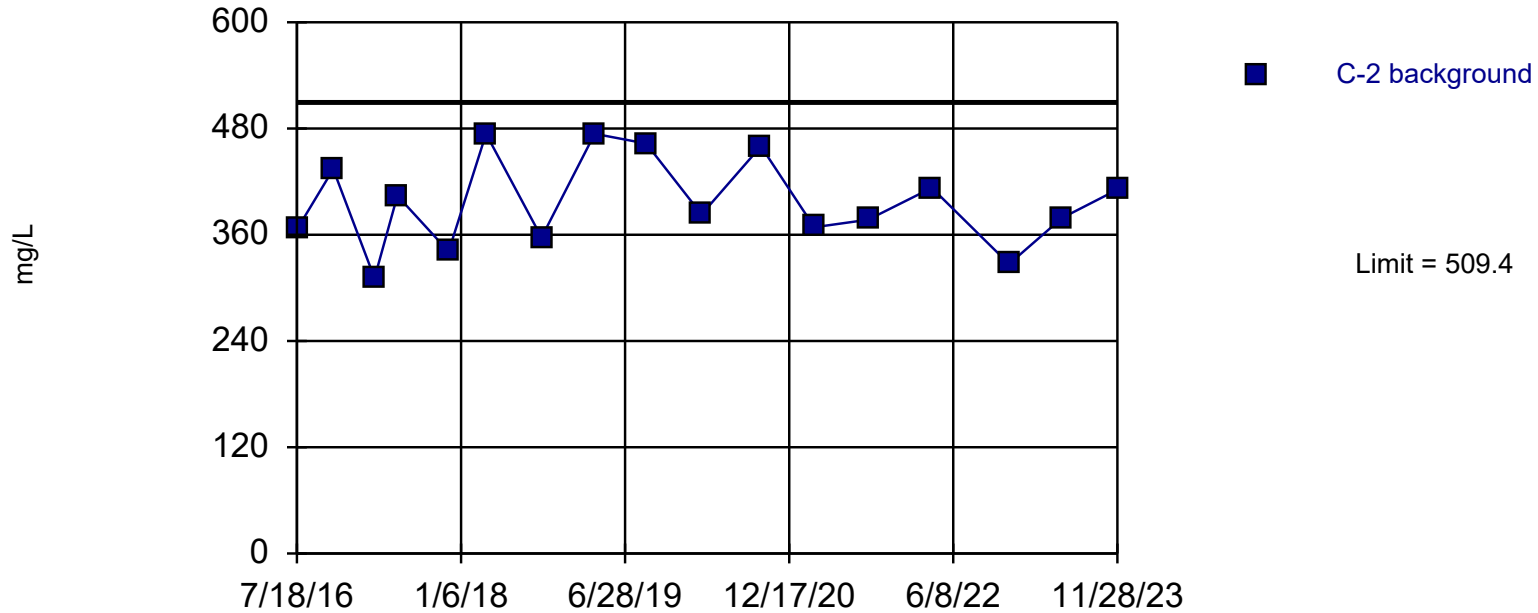
Prediction Limit

Constituent: Sulfate, Dissolved (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	R-1
2/12/1986	83 (H)
5/12/1986	90 (H)
11/14/2016	27
3/29/2017	29.9
6/12/2017	37.7
11/27/2017	20.4
3/29/2018	28.4
9/28/2018	31.4
3/22/2019	22.1
9/5/2019	80.6 (O)
3/5/2020	32.7
9/16/2020	31.1
3/10/2021	11.1
9/2/2021	21.1
3/29/2022	30.7
12/7/2022	22.1
6/1/2023	35.3
11/27/2023	20.5

Prediction Limit

Intrawell Parametric, C-2 (bg)



Background Data Summary: Mean=396.6, Std. Dev.=51.1, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.95, critical = 0.851. Kappa = 2.207 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Total Dissolved Solids Analysis Run 5/22/2024 4:59 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

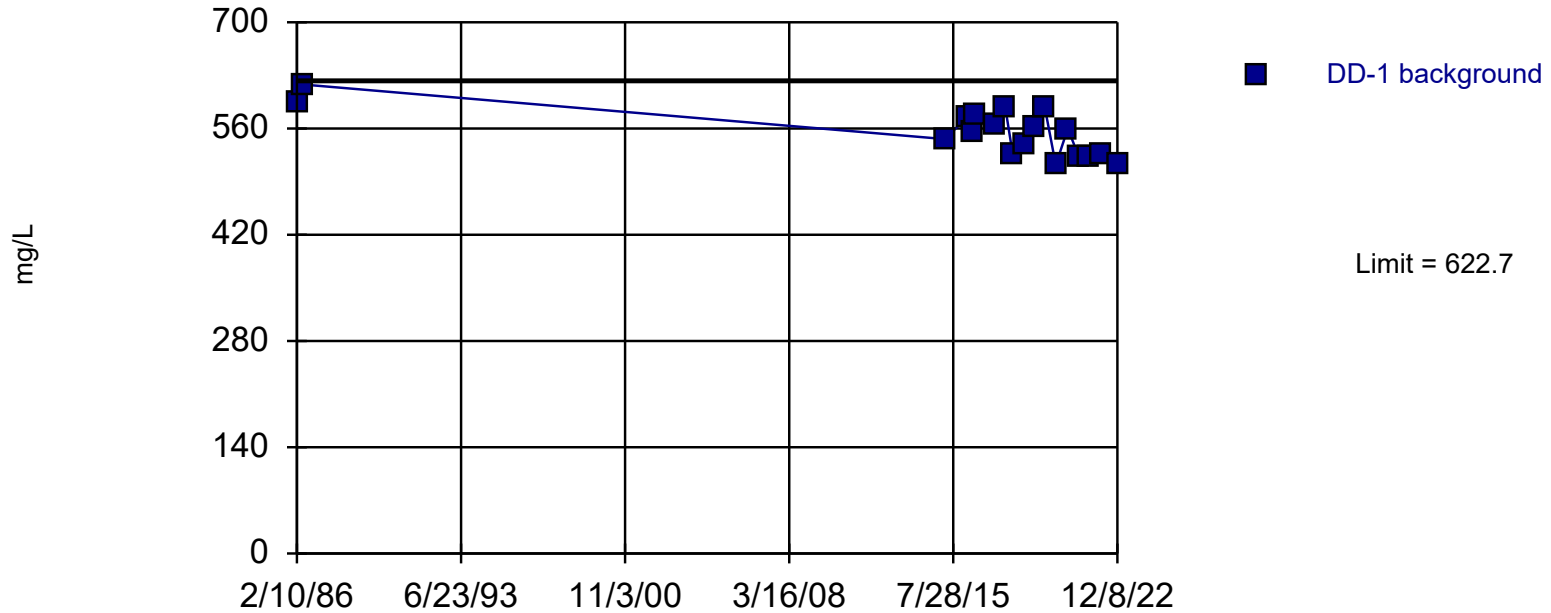
Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	C-2
3/28/2016	486 (H)
5/31/2016	406 (H)
7/18/2016	366
11/14/2016	434
3/29/2017	311
6/12/2017	404
11/27/2017	341
3/30/2018	474
9/28/2018	357
3/21/2019	474
9/6/2019	463
3/5/2020	383
9/16/2020	460
3/10/2021	368.5 (D)
9/2/2021	377
3/30/2022	413
12/8/2022	327
5/31/2023	379
11/28/2023	411

Prediction Limit

Intrawell Parametric, DD-1



Background Data Summary: Mean=555.1, Std. Dev.=31.03, n=18. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9499, critical = 0.858. Kappa = 2.182 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Total Dissolved Solids Analysis Run 5/22/2024 4:59 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

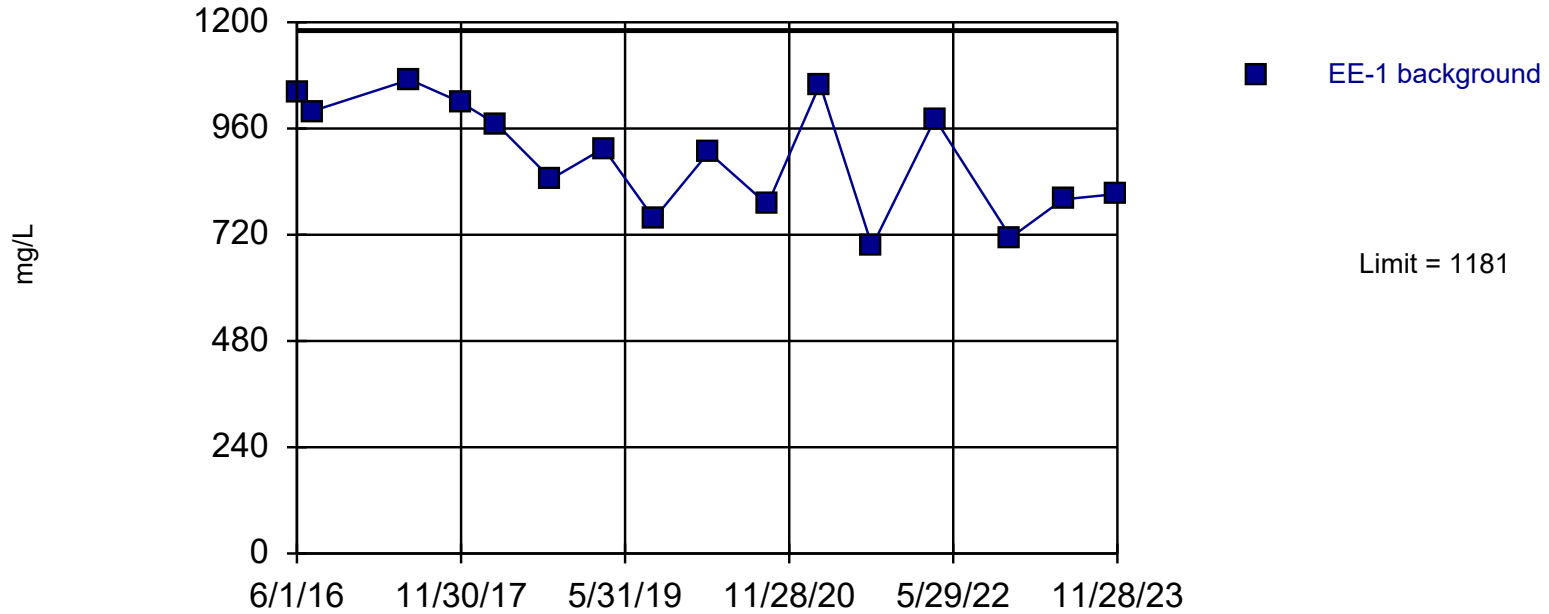
Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	DD-1
5/22/1985	638 (H)
8/5/1985	607 (H)
11/20/1985	591 (H)
2/10/1986	593
5/19/1986	618
3/11/2015	546
3/29/2016	576
6/1/2016	555
7/19/2016	578
6/12/2017	565
11/27/2017	588
3/30/2018	526
9/27/2018	538
3/22/2019	562
9/5/2019	588
3/3/2020	512
9/17/2020	560
3/11/2021	524
9/1/2021	522
3/30/2022	526
12/8/2022	514

Prediction Limit

Intrawell Parametric, EE-1



Background Data Summary: Mean=898.2, Std. Dev.=126.7, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9319, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Total Dissolved Solids Analysis Run 5/22/2024 4:59 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

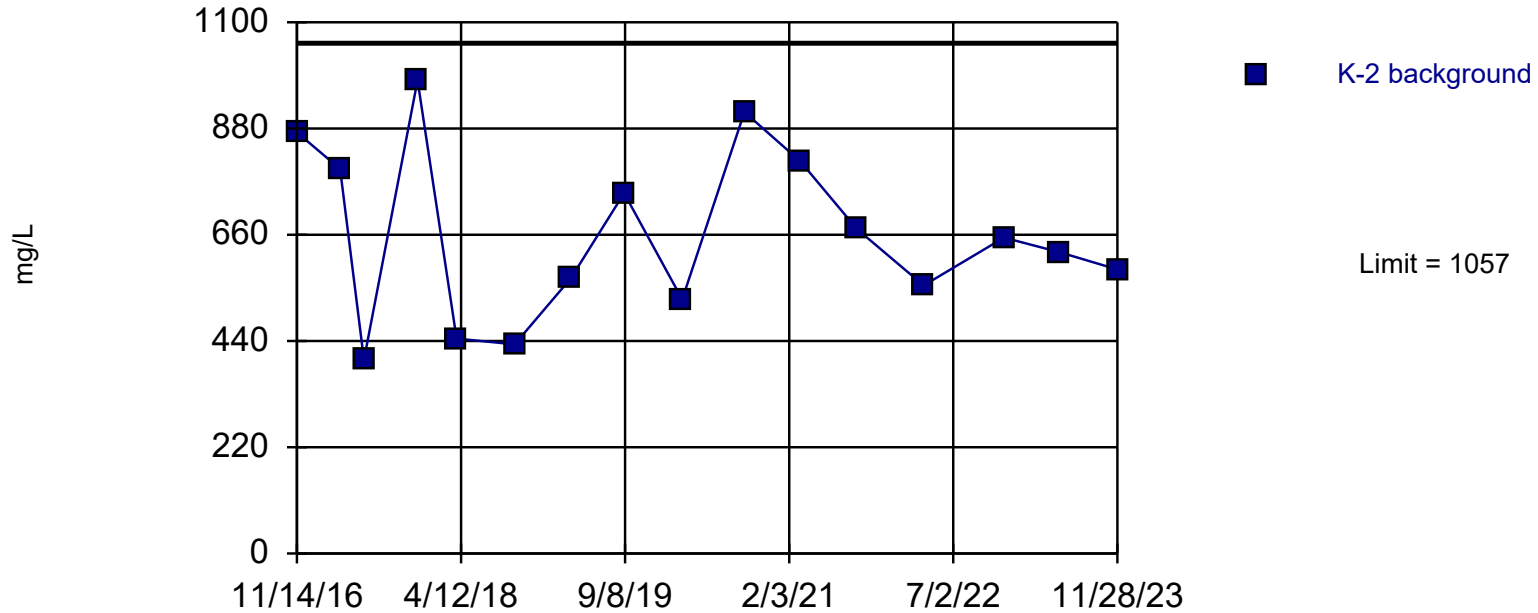
Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	EE-1
5/22/1985	923 (H)
8/5/1985	742 (H)
11/20/1985	777 (H)
2/10/1986	870 (H)
5/19/1986	950 (H)
3/12/2015	1070 (H)
3/29/2016	1190 (H)
6/1/2016	1040
7/21/2016	999
6/12/2017	1070
11/27/2017	1020
3/30/2018	969
9/27/2018	846
3/21/2019	915
9/5/2019	756
3/5/2020	906
9/17/2020	788
3/11/2021	1060
9/1/2021	694
3/30/2022	982
12/8/2022	714
5/31/2023	800
11/28/2023	812

Prediction Limit

Intrawell Parametric, K-2 (bg)



Background Data Summary: Mean=661.8, Std. Dev.=176.9, n=16. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9627, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Total Dissolved Solids Analysis Run 5/22/2024 4:59 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

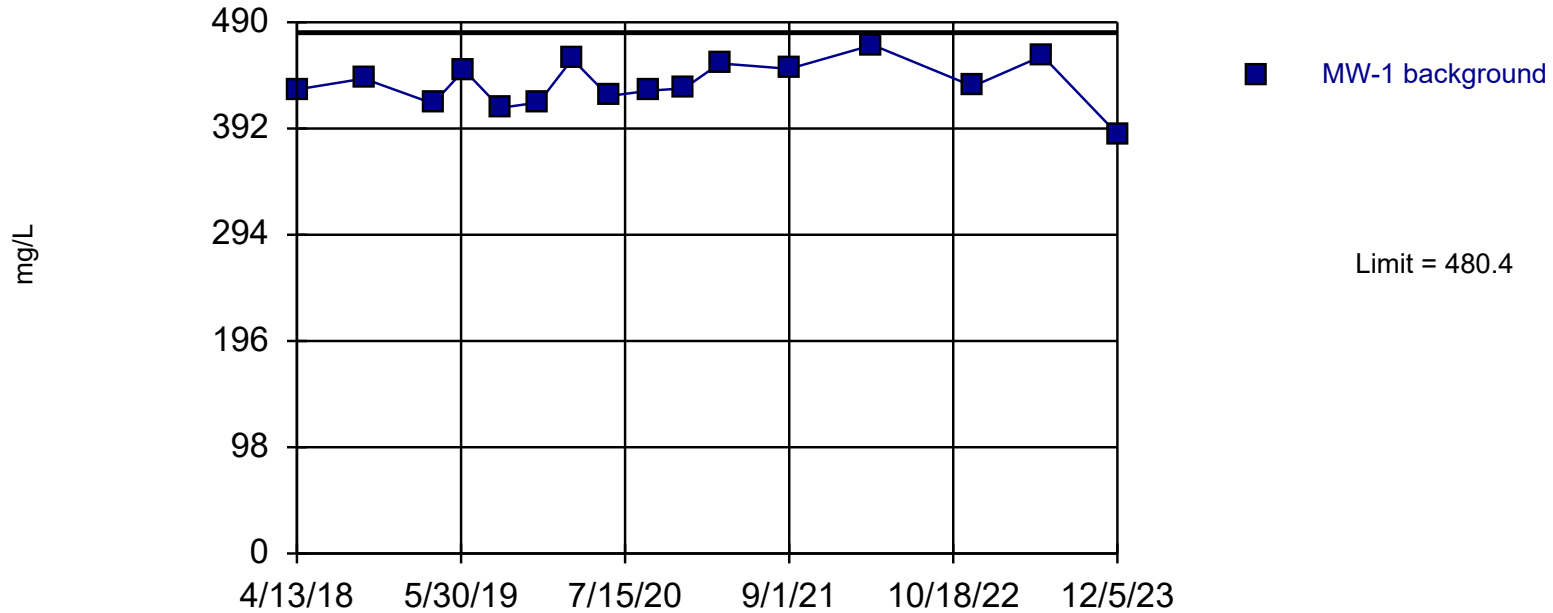
Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	K-2
3/9/2015	545 (H)
3/28/2016	481 (H)
5/31/2016	621 (H)
7/18/2016	625 (H)
11/14/2016	872
3/29/2017	796
6/12/2017	401
11/27/2017	980
3/29/2018	445
9/27/2018	433
3/22/2019	570
9/5/2019	746
3/5/2020	526
9/16/2020	914
3/10/2021	812
9/3/2021	672
3/31/2022	555
12/8/2022	654
5/31/2023	624
11/28/2023	588

Prediction Limit

Intrawell Parametric, MW-1 (bg)



Background Data Summary: Mean=433.3, Std. Dev.=21.08, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9777, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Total Dissolved Solids Analysis Run 5/22/2024 4:59 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

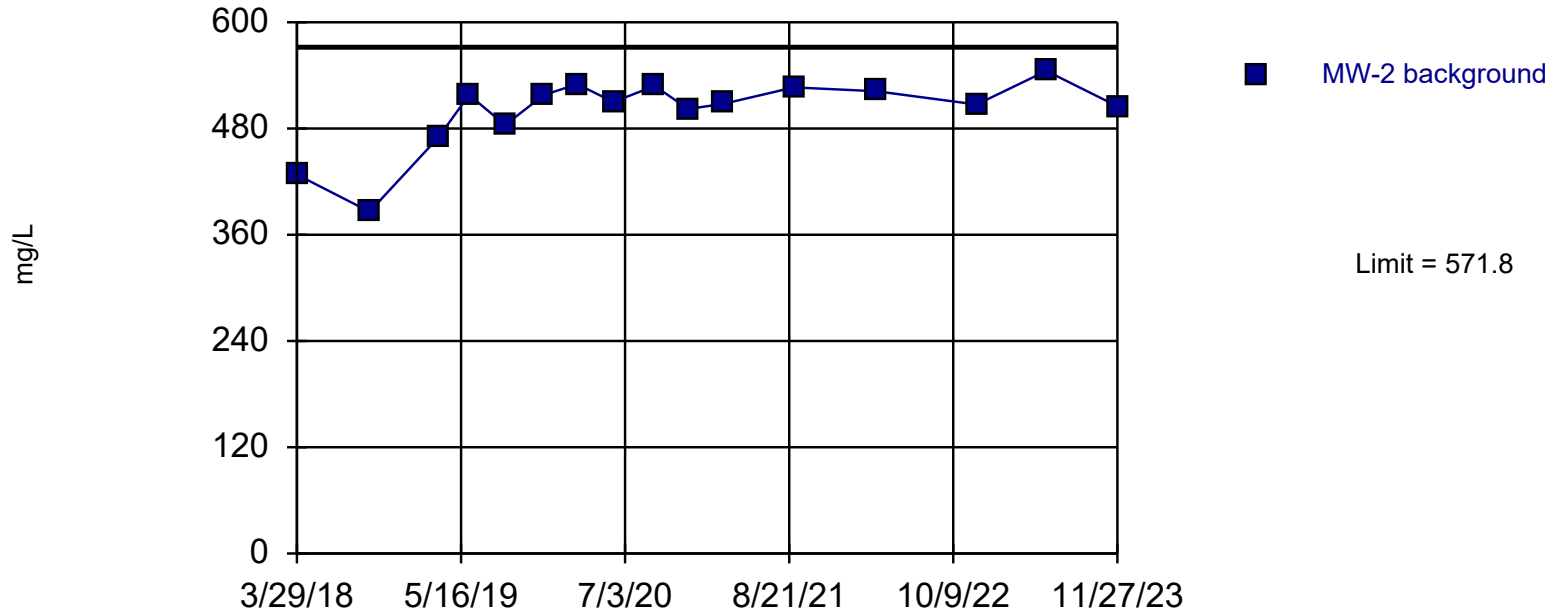
Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-1
4/13/2018	428
9/28/2018	438
3/21/2019	415
6/7/2019	446
9/6/2019	411
12/12/2019	416
3/5/2020	456
6/4/2020	422
9/17/2020	427
12/11/2020	429
3/11/2021	452
9/1/2021	447
3/30/2022	469
12/7/2022	431
5/31/2023	459
12/5/2023	387

Prediction Limit

Intrawell Parametric, MW-2



Background Data Summary (based on cube transformation): Mean=1.3e8, Std. Dev.=2.7e7, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8597, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Total Dissolved Solids Analysis Run 5/22/2024 4:59 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

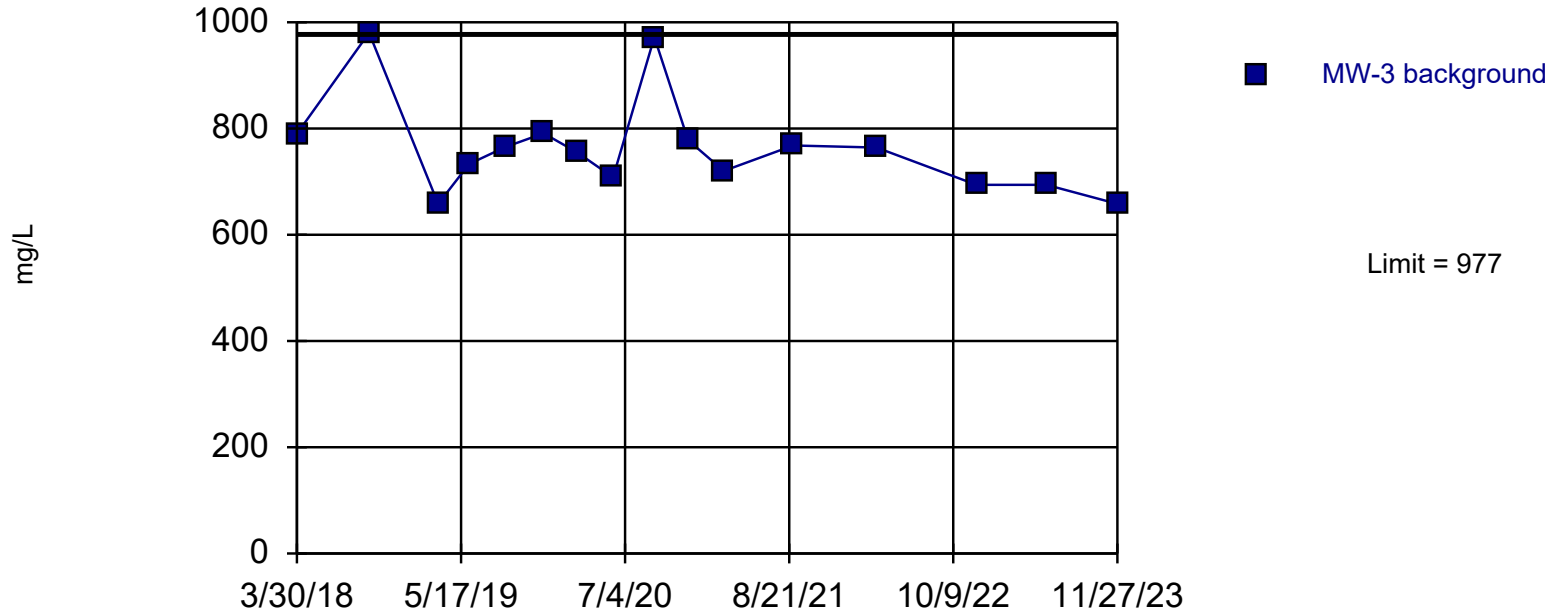
Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-2
3/29/2018	428 (O)
9/28/2018	386 (O)
3/21/2019	470
6/6/2019	518
9/5/2019	484
12/12/2019	518
3/5/2020	530
6/4/2020	510
9/16/2020	528
12/10/2020	502
3/10/2021	508
9/2/2021	526.5 (D)
3/29/2022	522
12/7/2022	507
6/1/2023	545
11/27/2023	505

Prediction Limit

Intrawell Parametric, MW-3



Background Data Summary (based on cube root transformation): Mean=9.13, Std. Dev.=0.3554, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8465, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Total Dissolved Solids Analysis Run 5/22/2024 4:59 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

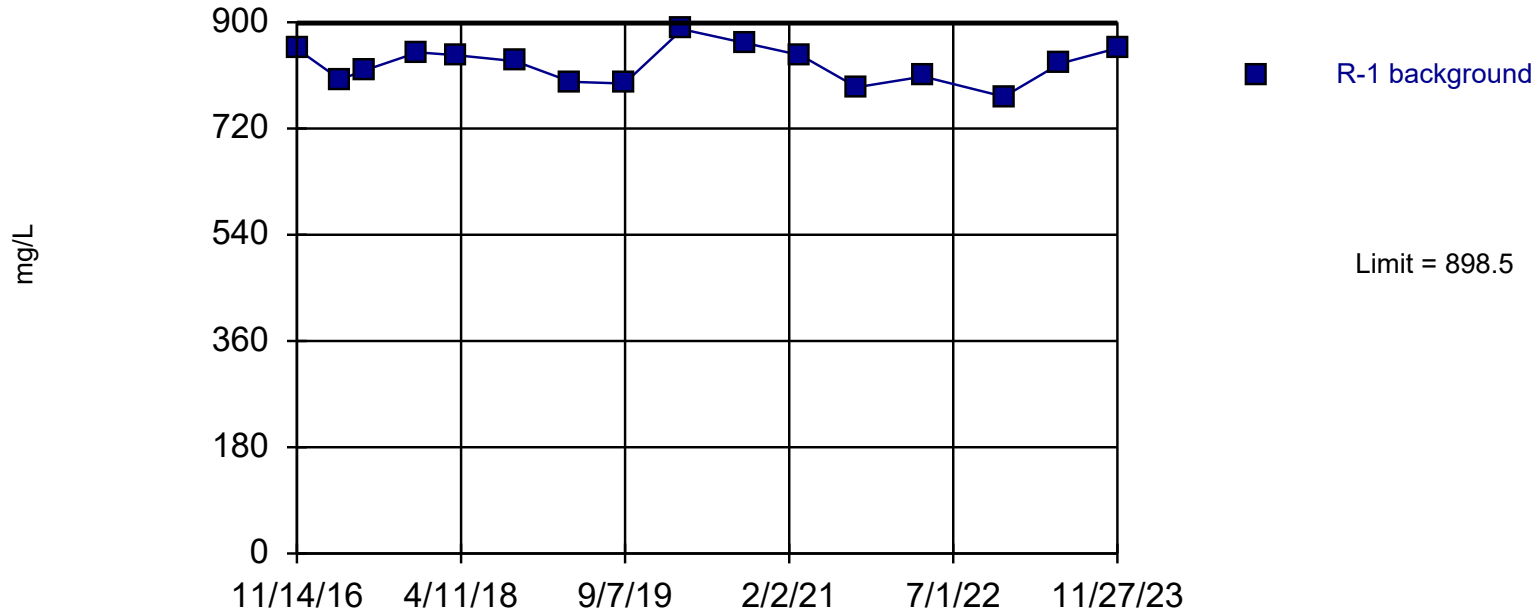
Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-3
3/30/2018	790
9/28/2018	980
3/21/2019	658
6/7/2019	733
9/6/2019	765
12/12/2019	791
3/5/2020	755
6/4/2020	708
9/16/2020	972
12/10/2020	778
3/10/2021	720
9/1/2021	768
3/30/2022	764
12/7/2022	694
6/1/2023	694
11/27/2023	658

Prediction Limit

Intrawell Parametric, R-1



Background Data Summary: Mean=828.3, Std. Dev.=31.44, n=16. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9745, critical = 0.844. Kappa = 2.232 (c=43, w=1, 1 of 2, event alpha = 0.05132). Report alpha = 0.001224. Assumes 1 future value.

Constituent: Total Dissolved Solids Analysis Run 5/22/2024 4:59 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

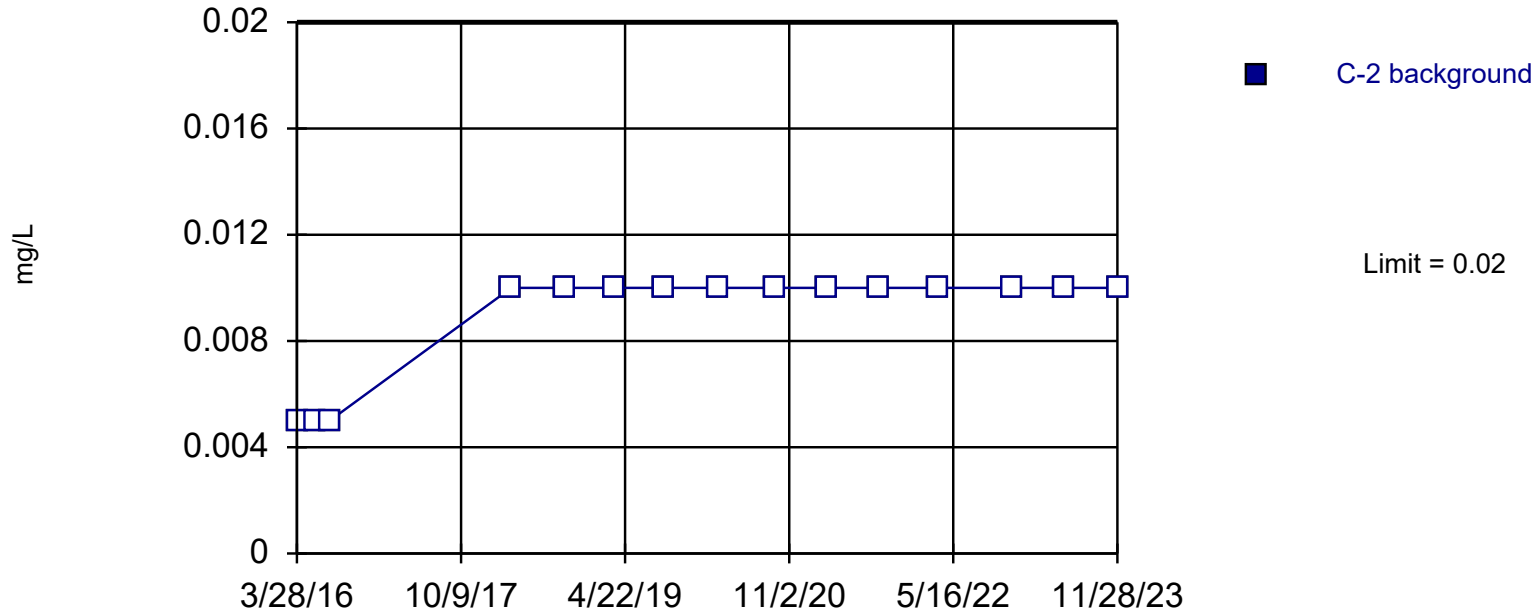
Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	R-1
5/20/1985	702 (HO)
11/4/1985	794 (H)
2/12/1986	733 (H)
5/12/1986	806 (H)
7/20/2016	613 (OH)
11/14/2016	855
3/29/2017	803
6/12/2017	818
11/27/2017	849
3/29/2018	844
9/28/2018	834
3/22/2019	799
9/5/2019	796
3/5/2020	888
9/16/2020	865
3/10/2021	844
9/2/2021	790
3/29/2022	808
12/7/2022	774
6/1/2023	830
11/27/2023	856

Prediction Limit

Intrawell Non-parametric, C-2 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 15$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01501. Individual comparison alpha = 0.007533 (1 of 2). Assumes 1 future value. Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Zinc Analysis Run 5/22/2024 4:59 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

Prediction Limit

Constituent: Zinc (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	C-2
3/28/2016	<0.01
5/31/2016	<0.01
7/18/2016	<0.01
3/30/2018	<0.02
9/28/2018	<0.02
3/21/2019	<0.02
9/6/2019	<0.02
3/5/2020	<0.02
9/16/2020	<0.02
3/10/2021	<0.02 (D)
9/2/2021	<0.02
3/30/2022	<0.02
12/8/2022	<0.02
5/31/2023	<0.02
11/28/2023	<0.02

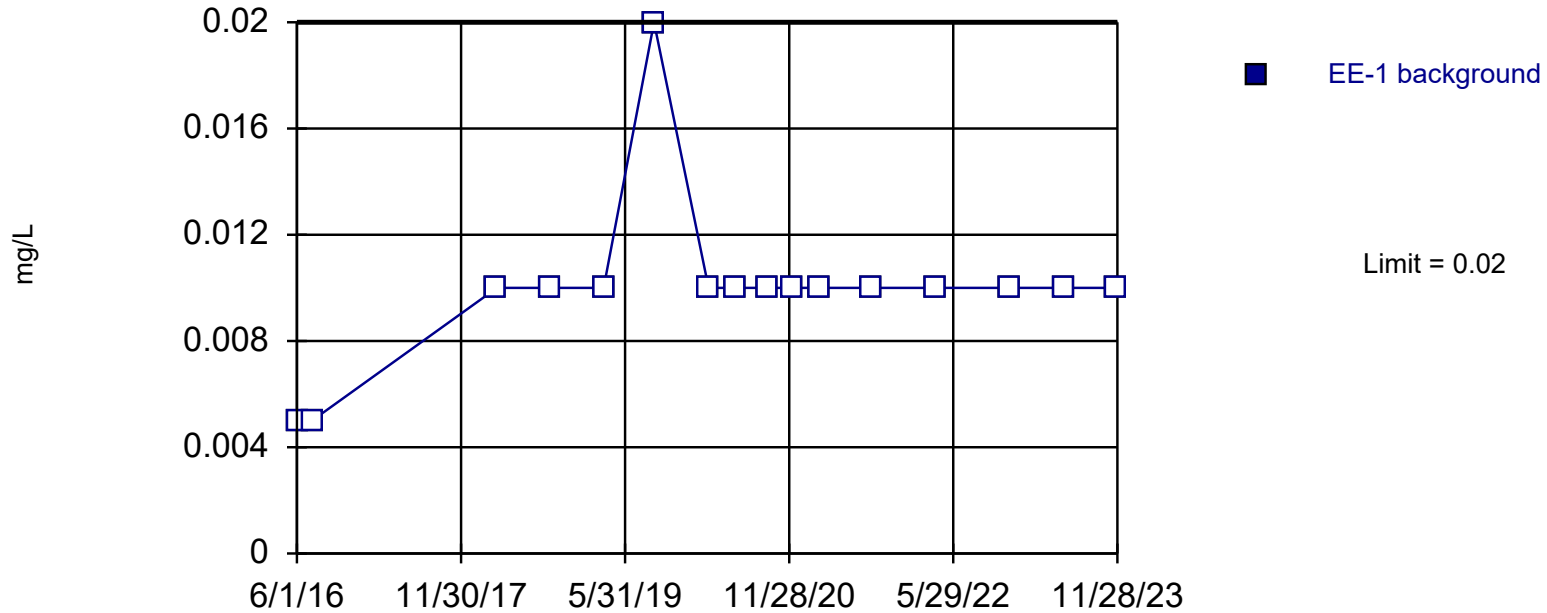
Prediction Limit

Constituent: Zinc (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	DD-1
5/22/1985	0.02 (H)
8/5/1985	0.02 (H)
11/20/1985	<0.01 (H)
12/24/1985	0.039
2/10/1986	<0.01
3/11/2015	<0.01
3/29/2016	<0.01
6/1/2016	<0.01
7/19/2016	<0.01
3/30/2018	<0.02
9/27/2018	<0.02
3/22/2019	<0.02
9/5/2019	<0.02
3/3/2020	<0.02
9/17/2020	<0.02
3/11/2021	<0.02
9/1/2021	<0.02
3/30/2022	<0.002
12/8/2022	<0.02

Prediction Limit

Intrawell Non-parametric, EE-1



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Zinc Analysis Run 5/22/2024 4:59 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

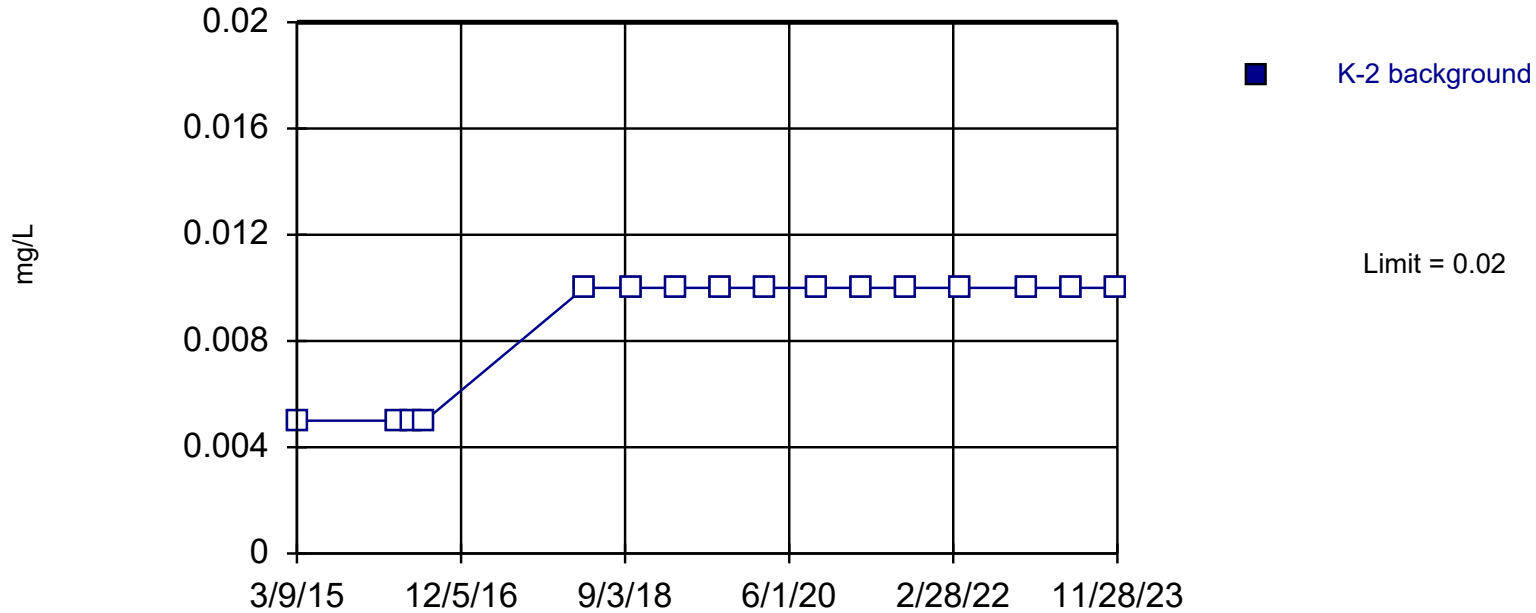
Prediction Limit

Constituent: Zinc (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	EE-1
5/22/1985	0.02 (H)
8/5/1985	<0.01 (H)
11/20/1985	<0.01 (H)
12/24/1985	<0.016 (H)
2/10/1986	<0.01 (H)
3/12/2015	0.019 (H)
3/29/2016	<0.01 (H)
6/1/2016	<0.01
7/21/2016	<0.01
3/30/2018	<0.02
9/27/2018	<0.02
3/21/2019	<0.02
9/5/2019	<0.04
3/5/2020	<0.02
6/4/2020	<0.02
9/17/2020	<0.02
12/11/2020	<0.02
3/11/2021	<0.02
9/1/2021	<0.02
3/30/2022	<0.02
12/8/2022	<0.02
5/31/2023	<0.02
11/28/2023	<0.02

Prediction Limit

Intrawell Non-parametric, K-2 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Zinc Analysis Run 5/22/2024 4:59 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

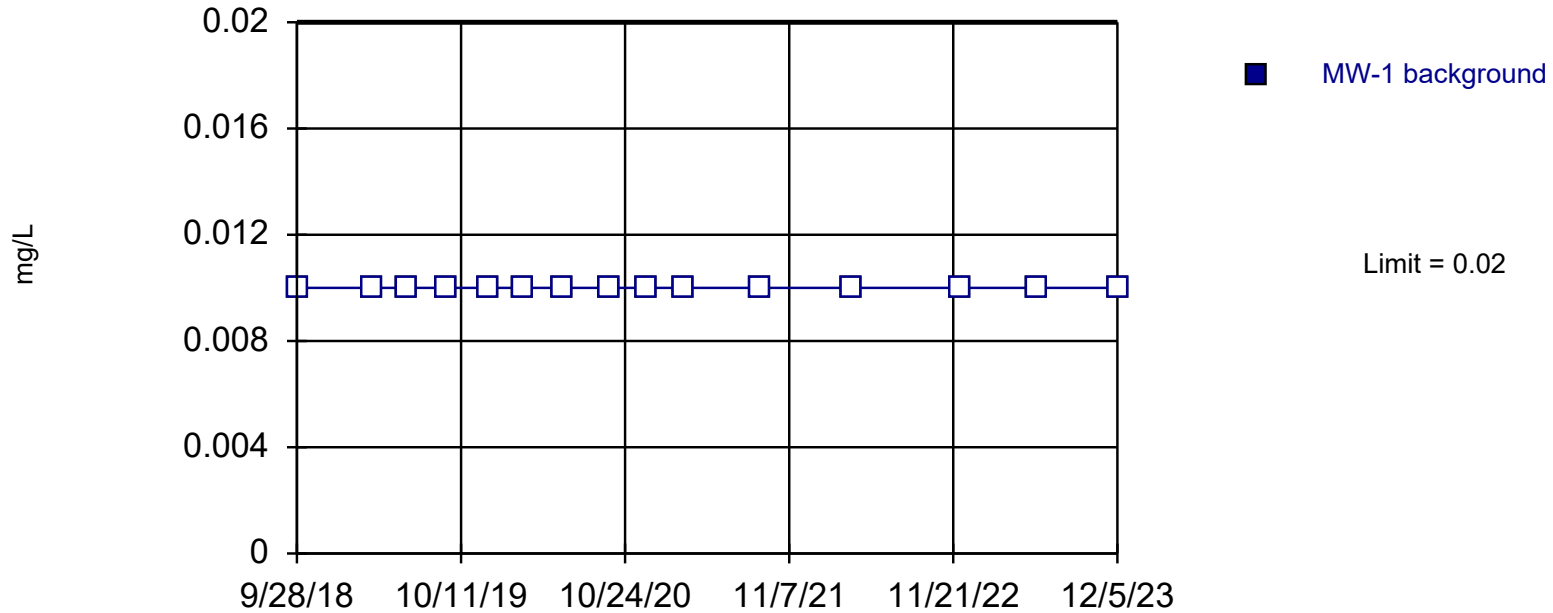
Prediction Limit

Constituent: Zinc (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	K-2
3/9/2015	<0.01
3/28/2016	<0.01
5/31/2016	<0.01
7/18/2016	<0.01
3/29/2018	<0.02
9/27/2018	<0.02
3/22/2019	<0.02
9/5/2019	<0.02
3/5/2020	<0.02
9/16/2020	<0.02
3/10/2021	<0.02
9/3/2021	<0.02
3/31/2022	<0.02
12/8/2022	<0.02
5/31/2023	<0.02
11/28/2023	<0.02

Prediction Limit

Intrawell Non-parametric, MW-1 (bg)



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 15$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01501. Individual comparison alpha = 0.007533 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Zinc Analysis Run 5/22/2024 4:59 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

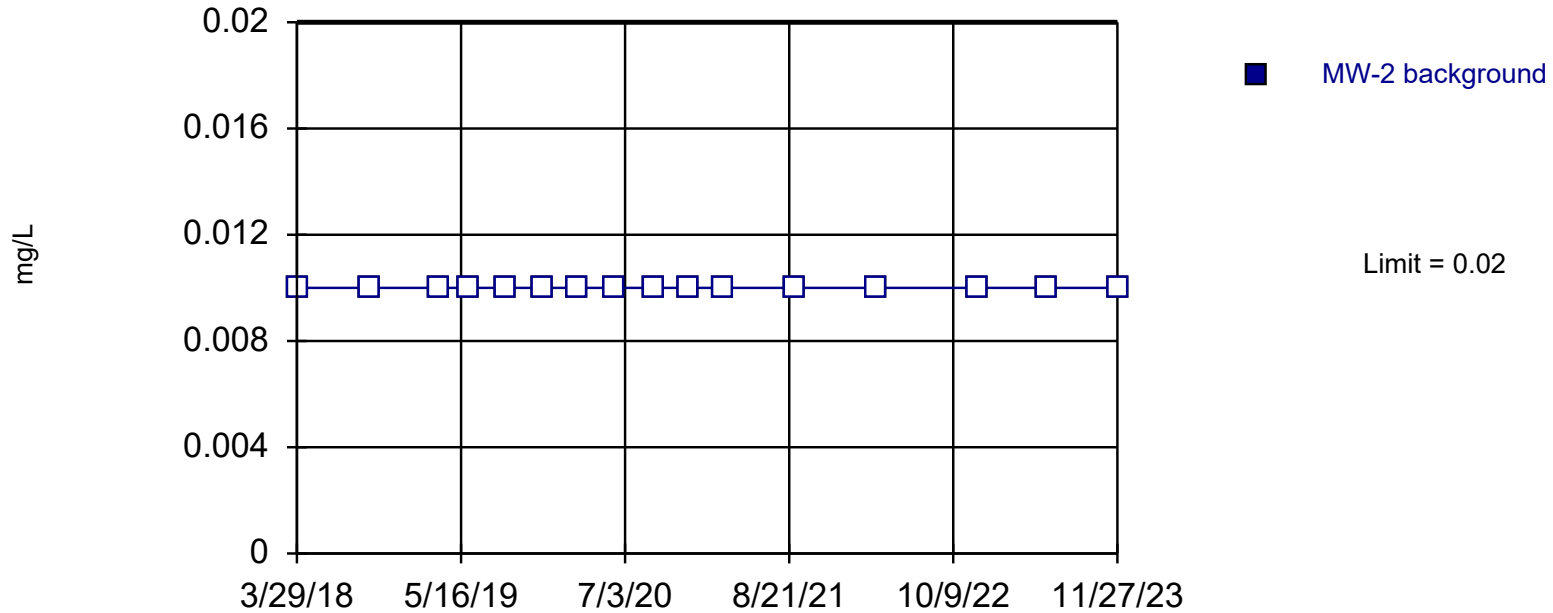
Prediction Limit

Constituent: Zinc (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-1
9/28/2018	<0.02
3/21/2019	<0.02
6/7/2019	<0.02
9/6/2019	<0.02
12/12/2019	<0.02
3/5/2020	<0.02
6/4/2020	<0.02
9/17/2020	<0.02
12/11/2020	<0.02
3/11/2021	<0.02
9/1/2021	<0.02
3/30/2022	<0.02
12/7/2022	<0.02
5/31/2023	<0.02
12/5/2023	<0.02

Prediction Limit

Intrawell Non-parametric, MW-2



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Zinc Analysis Run 5/22/2024 4:59 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

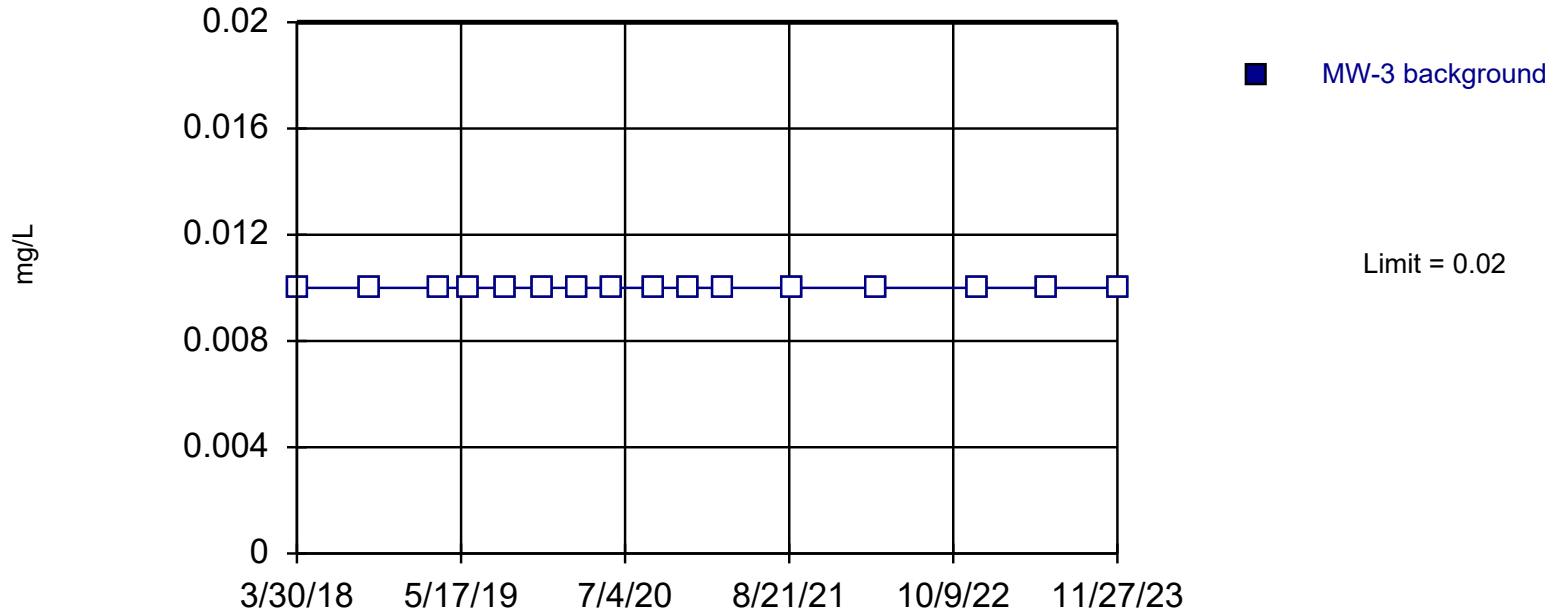
Prediction Limit

Constituent: Zinc (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-2
3/29/2018	<0.02
9/28/2018	<0.02
3/21/2019	<0.02
6/6/2019	<0.02
9/5/2019	<0.02
12/12/2019	<0.02
3/5/2020	<0.02
6/4/2020	<0.02
9/16/2020	<0.02
12/10/2020	<0.02
3/10/2021	<0.02
9/2/2021	<0.02 (D)
3/29/2022	<0.02
12/7/2022	<0.02
6/1/2023	<0.02
11/27/2023	<0.02

Prediction Limit

Intrawell Non-parametric, MW-3



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Zinc Analysis Run 5/22/2024 4:59 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

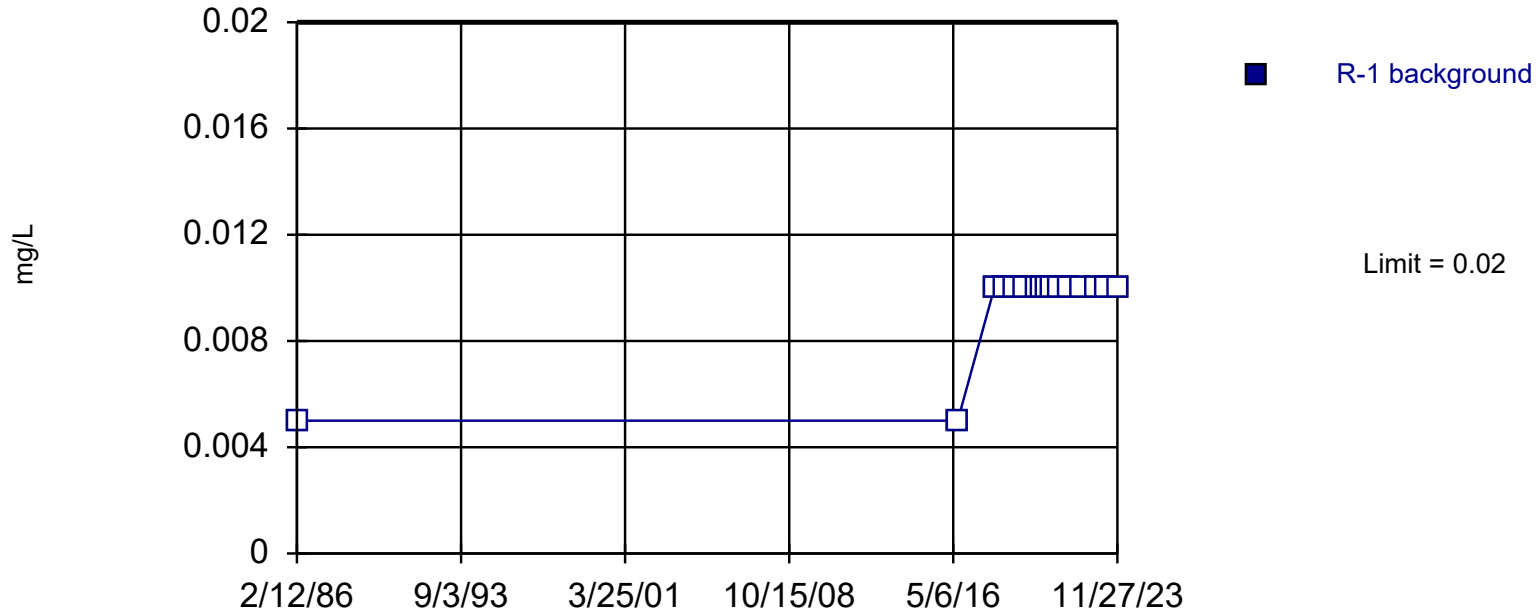
Prediction Limit

Constituent: Zinc (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	MW-3
3/30/2018	<0.02
9/28/2018	<0.02
3/21/2019	<0.02
6/7/2019	<0.02
9/6/2019	<0.02
12/12/2019	<0.02
3/5/2020	<0.02
6/4/2020	<0.02
9/16/2020	<0.02
12/10/2020	<0.02
3/10/2021	<0.02
9/1/2021	<0.02
3/30/2022	<0.02
12/7/2022	<0.02
6/1/2023	<0.02
11/27/2023	<0.02

Prediction Limit

Intrawell Non-parametric, R-1



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values ($n = 16$) were censored; limit is most recent reporting limit. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Zinc Analysis Run 5/22/2024 4:59 PM View: UPLs

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

Prediction Limit

Constituent: Zinc (mg/L) Analysis Run 5/22/2024 5:03 PM View: UPLs
Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File

	R-1
5/20/1985	<0.01 (H)
11/4/1985	<0.01 (H)
2/12/1986	<0.01
7/20/2016	<0.01
3/29/2018	<0.02
9/28/2018	<0.02
3/22/2019	<0.02
9/5/2019	<0.02
3/5/2020	<0.02
6/4/2020	<0.02
9/16/2020	<0.02
12/10/2020	<0.02
3/10/2021	<0.02
9/2/2021	<0.02
3/29/2022	<0.02
12/7/2022	<0.02
6/1/2023	<0.02
11/27/2023	<0.02

Prediction Limit

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File Printed 5/22/2024, 5:03 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Ammonia, Dissolved (mg/L)	C-2	0.18	n/a	n/a	1 future	n/a	17	82.35	n/a	0.005914	NP Intra (NDs) 1 of 2
Ammonia, Dissolved (mg/L)	DD-1	1.017	n/a	n/a	1 future	n/a	18	27.78	No	0.001224	Param Intra 1 of 2
Ammonia, Dissolved (mg/L)	EE-1	61.48	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Ammonia, Dissolved (mg/L)	K-2	1.4	n/a	n/a	1 future	n/a	16	81.25	n/a	0.006456	NP Intra (NDs) 1 of 2
Ammonia, Dissolved (mg/L)	MW-1	0.3753	n/a	n/a	1 future	n/a	15	0	No	0.001224	Param Intra 1 of 2
Ammonia, Dissolved (mg/L)	MW-2	0.2759	n/a	n/a	1 future	n/a	15	6.667	No	0.001224	Param Intra 1 of 2
Ammonia, Dissolved (mg/L)	MW-3	63.6	n/a	n/a	1 future	n/a	15	6.667	n/a	0.007533	NP Intra (normality) ...
Ammonia, Dissolved (mg/L)	R-1	16.08	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Arsenic (mg/l)	C-2	0.01	n/a	n/a	1 future	n/a	17	100	n/a	0.005914	NP Intra (NDs) 1 of 2
Arsenic (mg/l)	DD-1	0.018	n/a	n/a	1 future	n/a	18	83.33	n/a	0.005373	NP Intra (NDs) 1 of 2
Arsenic (mg/l)	EE-1	0.07423	n/a	n/a	1 future	n/a	16	6.25	No	0.001224	Param Intra 1 of 2
Arsenic (mg/l)	K-2	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Arsenic (mg/l)	MW-1	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Arsenic (mg/l)	MW-2	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Arsenic (mg/l)	MW-3	0.03266	n/a	n/a	1 future	n/a	15	13.33	No	0.001224	Param Intra 1 of 2
Arsenic (mg/l)	R-1	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Barium (mg/l)	DD-1	0.2297	n/a	n/a	1 future	n/a	17	0	x^2	0.001224	Param Intra 1 of 2
Barium (mg/l)	EE-1	0.6416	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Barium (mg/l)	K-2	0.1648	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Barium (mg/l)	MW-1	0.3745	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Barium (mg/l)	MW-3	0.7784	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2 De...
Barium (mg/l)	R-1	0.8074	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Cadmium (mg/L)	C-2	0.002	n/a	n/a	1 future	n/a	17	100	n/a	0.005914	NP Intra (NDs) 1 of 2
Cadmium (mg/L)	DD-1	0.005	n/a	n/a	1 future	n/a	18	100	n/a	0.005373	NP Intra (NDs) 1 of 2
Cadmium (mg/L)	EE-1	0.002	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Cadmium (mg/L)	K-2	0.002	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Cadmium (mg/L)	MW-1	0.002	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Cadmium (mg/L)	MW-2	0.002	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Cadmium (mg/L)	MW-3	0.002	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Cadmium (mg/L)	R-1	0.002	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Calcium (mg/l)	C-2	125.7	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Calcium (mg/l)	DD-1	127.2	n/a	n/a	1 future	n/a	18	0	x^5	0.001224	Param Intra 1 of 2
Calcium (mg/l)	EE-1	160.9	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Calcium (mg/l)	K-2	148.6	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Calcium (mg/l)	MW-3	121.4	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2 De...
Calcium (mg/l)	R-1	149.8	n/a	n/a	1 future	n/a	16	0	x^6	0.001224	Param Intra 1 of 2
Chloride Dissolved (mg/L)	C-2	49.34	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Chloride Dissolved (mg/L)	DD-1	105.3	n/a	n/a	1 future	n/a	18	0	No	0.001224	Param Intra 1 of 2
Chloride Dissolved (mg/L)	EE-1	284.4	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Chloride Dissolved (mg/L)	K-2	384.3	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Chloride Dissolved (mg/L)	MW-3	237.7	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Chloride Dissolved (mg/L)	R-1	209.2	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Chromium (mg/L)	C-2	0.01	n/a	n/a	1 future	n/a	17	100	n/a	0.005914	NP Intra (NDs) 1 of 2
Chromium (mg/L)	DD-1	0.062	n/a	n/a	1 future	n/a	18	77.78	n/a	0.005373	NP Intra (NDs) 1 of 2
Chromium (mg/L)	EE-1	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Chromium (mg/L)	K-2	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Chromium (mg/L)	MW-1	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Chromium (mg/L)	MW-2	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Chromium (mg/L)	MW-3	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Chromium (mg/L)	R-1	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2

Prediction Limit

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File Printed 5/22/2024, 5:03 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Cobalt (mg/L)	C-2	0.01	n/a	n/a	1 future	n/a	17	100	n/a	0.005914	NP Intra (NDs) 1 of 2
Cobalt (mg/L)	DD-1	0.056	n/a	n/a	1 future	n/a	16	68.75	n/a	0.006456	NP Intra (NDs) 1 of 2
Cobalt (mg/L)	EE-1	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Cobalt (mg/L)	K-2	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Cobalt (mg/L)	MW-1	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Cobalt (mg/L)	MW-2	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Cobalt (mg/L)	MW-3	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Cobalt (mg/L)	R-1	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Iron (mg/L)	DD-1	5.31	n/a	n/a	1 future	n/a	17	23.53	No	0.001224	Param Intra 1 of 2
Iron (mg/L)	EE-1	20.79	n/a	n/a	1 future	n/a	16	0	x^2	0.001224	Param Intra 1 of 2
Iron (mg/L)	K-2	0.1	n/a	n/a	1 future	n/a	6	100	n/a	0.03391	NP Intra (NDs) 1 of 2
Iron (mg/L)	MW-1	3.067	n/a	n/a	1 future	n/a	16	6.25	x^5	0.001224	Param Intra 1 of 2
Iron (mg/L)	MW-2	5.082	n/a	n/a	1 future	n/a	15	0	No	0.001224	Param Intra 1 of 2
Iron (mg/L)	MW-3	15.63	n/a	n/a	1 future	n/a	15	0	No	0.001224	Param Intra 1 of 2 De...
Iron (mg/L)	R-1	9.152	n/a	n/a	1 future	n/a	16	0	x^6	0.001224	Param Intra 1 of 2
Lead (mg/L)	C-2	0.01	n/a	n/a	1 future	n/a	17	100	n/a	0.005914	NP Intra (NDs) 1 of 2
Lead (mg/L)	DD-1	0.01	n/a	n/a	1 future	n/a	18	100	n/a	0.005373	NP Intra (NDs) 1 of 2
Lead (mg/L)	EE-1	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Lead (mg/L)	K-2	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Lead (mg/L)	MW-1	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Lead (mg/L)	MW-2	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Lead (mg/L)	MW-3	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Lead (mg/L)	R-1	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Magnesium (mg/L)	C-2	33.06	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Magnesium (mg/L)	DD-1	44.59	n/a	n/a	1 future	n/a	18	0	No	0.001224	Param Intra 1 of 2
Magnesium (mg/L)	EE-1	75.18	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Magnesium (mg/L)	K-2	41.84	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Magnesium (mg/L)	MW-1	38.8	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Magnesium (mg/L)	MW-2	43.94	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Magnesium (mg/L)	MW-3	43.58	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2 De...
Magnesium (mg/L)	R-1	59.02	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Manganese (mg/L)	C-2	0.4076	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Manganese (mg/L)	DD-1	1.522	n/a	n/a	1 future	n/a	18	5.556	sqrt(x)	0.001224	Param Intra 1 of 2
Manganese (mg/L)	EE-1	0.09474	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Manganese (mg/L)	K-2	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Manganese (mg/L)	MW-3	0.05659	n/a	n/a	1 future	n/a	16	0	ln(x)	0.001224	Param Intra 1 of 2 De...
Manganese (mg/L)	R-1	0.2892	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Mercury (mg/L)	C-2	0.002	n/a	n/a	1 future	n/a	17	100	n/a	0.005914	NP Intra (NDs) 1 of 2
Mercury (mg/L)	DD-1	0.002	n/a	n/a	1 future	n/a	18	100	n/a	0.005373	NP Intra (NDs) 1 of 2
Mercury (mg/L)	EE-1	0.002	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Mercury (mg/L)	K-2	0.002	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Mercury (mg/L)	MW-1	0.002	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Mercury (mg/L)	MW-2	0.002	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Mercury (mg/L)	MW-3	0.002	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Mercury (mg/L)	R-1	0.002	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Nickel (mg/L)	C-2	0.01	n/a	n/a	1 future	n/a	17	100	n/a	0.005914	NP Intra (NDs) 1 of 2
Nickel (mg/L)	DD-1	1.686	n/a	n/a	1 future	n/a	18	5.556	sqrt(x)	0.001224	Param Intra 1 of 2 De...
Nickel (mg/L)	EE-1	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Nickel (mg/L)	K-2	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Nickel (mg/L)	MW-1	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2

Prediction Limit

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File Printed 5/22/2024, 5:03 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Nickel (mg/L)	MW-2	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Nickel (mg/L)	MW-3	0.0115	n/a	n/a	1 future	n/a	16	62.5	n/a	0.006456	NP Intra (NDs) 1 of ...
Nickel (mg/L)	R-1	0.02759	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
pH (units)	C-2	7.952	6.175	n/a	1 future	n/a	16	0	No	0.000...	Param Intra 1 of 2
pH (units)	DD-1	7.833	6.384	n/a	1 future	n/a	18	0	No	0.000...	Param Intra 1 of 2
pH (units)	EE-1	7.197	6.157	n/a	1 future	n/a	16	0	x^2	0.000...	Param Intra 1 of 2
pH (units)	K-2	7.935	6.48	n/a	1 future	n/a	16	0	No	0.000...	Param Intra 1 of 2
pH (units)	MW-1	7.828	6.537	n/a	1 future	n/a	16	0	No	0.000...	Param Intra 1 of 2
pH (units)	MW-2	7.925	6.265	n/a	1 future	n/a	15	0	No	0.000...	Param Intra 1 of 2
pH (units)	MW-3	7.087	6.291	n/a	1 future	n/a	16	0	No	0.000...	Param Intra 1 of 2 De...
pH (units)	R-1	7.772	6.169	n/a	1 future	n/a	16	0	No	0.000...	Param Intra 1 of 2
Selenium (mg/L)	C-2	0.01	n/a	n/a	1 future	n/a	17	100	n/a	0.005914	NP Intra (NDs) 1 of 2
Selenium (mg/L)	DD-1	0.0111	n/a	n/a	1 future	n/a	18	94.44	n/a	0.005373	NP Intra (NDs) 1 of 2
Selenium (mg/L)	EE-1	0.0169	n/a	n/a	1 future	n/a	16	75	n/a	0.006456	NP Intra (NDs) 1 of 2
Selenium (mg/L)	K-2	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Selenium (mg/L)	MW-1	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Selenium (mg/L)	MW-2	0.0163	n/a	n/a	1 future	n/a	16	93.75	n/a	0.006456	NP Intra (NDs) 1 of 2
Selenium (mg/L)	MW-3	0.0159	n/a	n/a	1 future	n/a	16	75	n/a	0.006456	NP Intra (NDs) 1 of 2
Selenium (mg/L)	R-1	0.0173	n/a	n/a	1 future	n/a	16	87.5	n/a	0.006456	NP Intra (NDs) 1 of 2
Silver (mg/L)	C-2	0.01	n/a	n/a	1 future	n/a	17	100	n/a	0.005914	NP Intra (NDs) 1 of 2
Silver (mg/L)	DD-1	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Silver (mg/L)	EE-1	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Silver (mg/L)	K-2	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Silver (mg/L)	MW-1	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Silver (mg/L)	MW-2	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Silver (mg/L)	MW-3	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Silver (mg/L)	R-1	0.01	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Sodium (mg/L)	C-2	28.28	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Sodium (mg/L)	DD-1	52.26	n/a	n/a	1 future	n/a	18	0	No	0.001224	Param Intra 1 of 2
Sodium (mg/L)	EE-1	168.7	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Sodium (mg/L)	K-2	202	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Sodium (mg/L)	MW-2	14.29	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Sodium (mg/L)	MW-3	144.4	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Sodium (mg/L)	R-1	90.5	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Sulfate, Dissolved (mg/L)	C-2	33.48	n/a	n/a	1 future	n/a	17	0	No	0.001224	Param Intra 1 of 2
Sulfate, Dissolved (mg/L)	DD-1	71.78	n/a	n/a	1 future	n/a	18	0	No	0.001224	Param Intra 1 of 2
Sulfate, Dissolved (mg/L)	EE-1	7.5	n/a	n/a	1 future	n/a	16	75	n/a	0.006456	NP Intra (NDs) 1 of 2
Sulfate, Dissolved (mg/L)	K-2	74.45	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Sulfate, Dissolved (mg/L)	MW-1	72.63	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Sulfate, Dissolved (mg/L)	MW-2	93.56	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Sulfate, Dissolved (mg/L)	MW-3	0.25	n/a	n/a	1 future	n/a	13	100	n/a	0.009692	NP Intra (NDs) 1 of 2
Sulfate, Dissolved (mg/L)	R-1	65.41	n/a	n/a	1 future	n/a	16	0	x^(1/3)	0.001224	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	C-2	509.4	n/a	n/a	1 future	n/a	17	0	No	0.001224	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	DD-1	622.7	n/a	n/a	1 future	n/a	18	0	No	0.001224	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	EE-1	1181	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	K-2	1057	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-1	480.4	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-2	571.8	n/a	n/a	1 future	n/a	16	0	x^3	0.001224	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	MW-3	977	n/a	n/a	1 future	n/a	16	0	x^(1/3)	0.001224	Param Intra 1 of 2
Total Dissolved Solids (mg/L)	R-1	898.5	n/a	n/a	1 future	n/a	16	0	No	0.001224	Param Intra 1 of 2

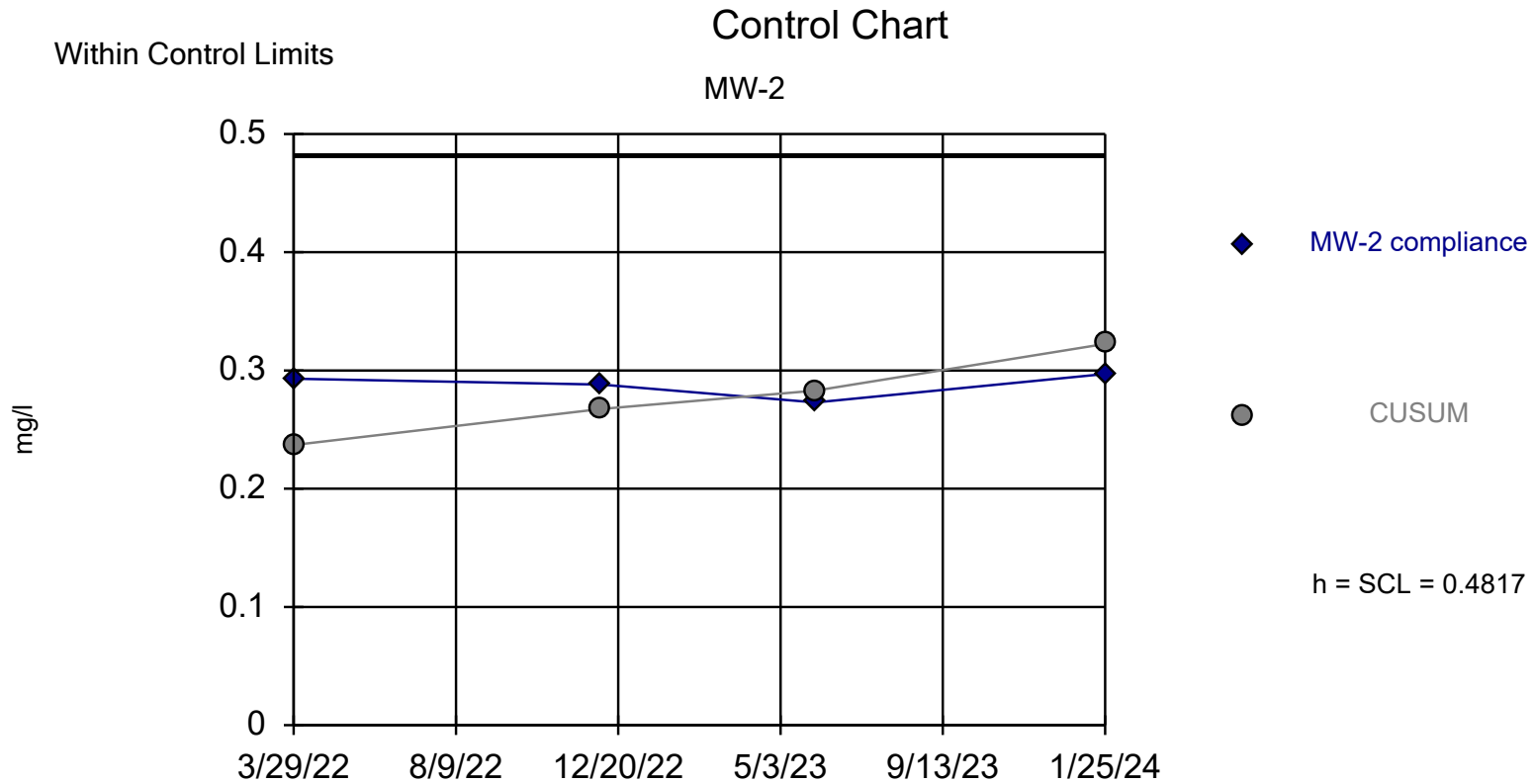
Prediction Limit

Former Julietta Landfill Client: Patriot Engineering Data: Julietta Landfill Flat File Printed 5/22/2024, 5:03 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Zinc (mg/L)	C-2	0.02	n/a	n/a	1 future	n/a	15	100	n/a	0.007533	NP Intra (NDs) 1 of 2
Zinc (mg/L)	DD-1	0.039	n/a	n/a	1 future	n/a	16	93.75	n/a	0.006456	NP Intra (NDs) 1 of 2
Zinc (mg/L)	EE-1	0.02	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Zinc (mg/L)	K-2	0.02	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Zinc (mg/L)	MW-1	0.02	n/a	n/a	1 future	n/a	15	100	n/a	0.007533	NP Intra (NDs) 1 of 2
Zinc (mg/L)	MW-2	0.02	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Zinc (mg/L)	MW-3	0.02	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2
Zinc (mg/L)	R-1	0.02	n/a	n/a	1 future	n/a	16	100	n/a	0.006456	NP Intra (NDs) 1 of 2

Attachment 5

Shewhart CUSUM Results



Background Data Summary: Mean=0.2014, Std. Dev.=0.05605, n=12. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9255, critical = 0.859. Report alpha = 0.001374. Dates ending 9/2/2021 used for control stats. Standardized h=5, SCL=5.

Constituent: Barium Analysis Run 4/29/2024 10:02 AM

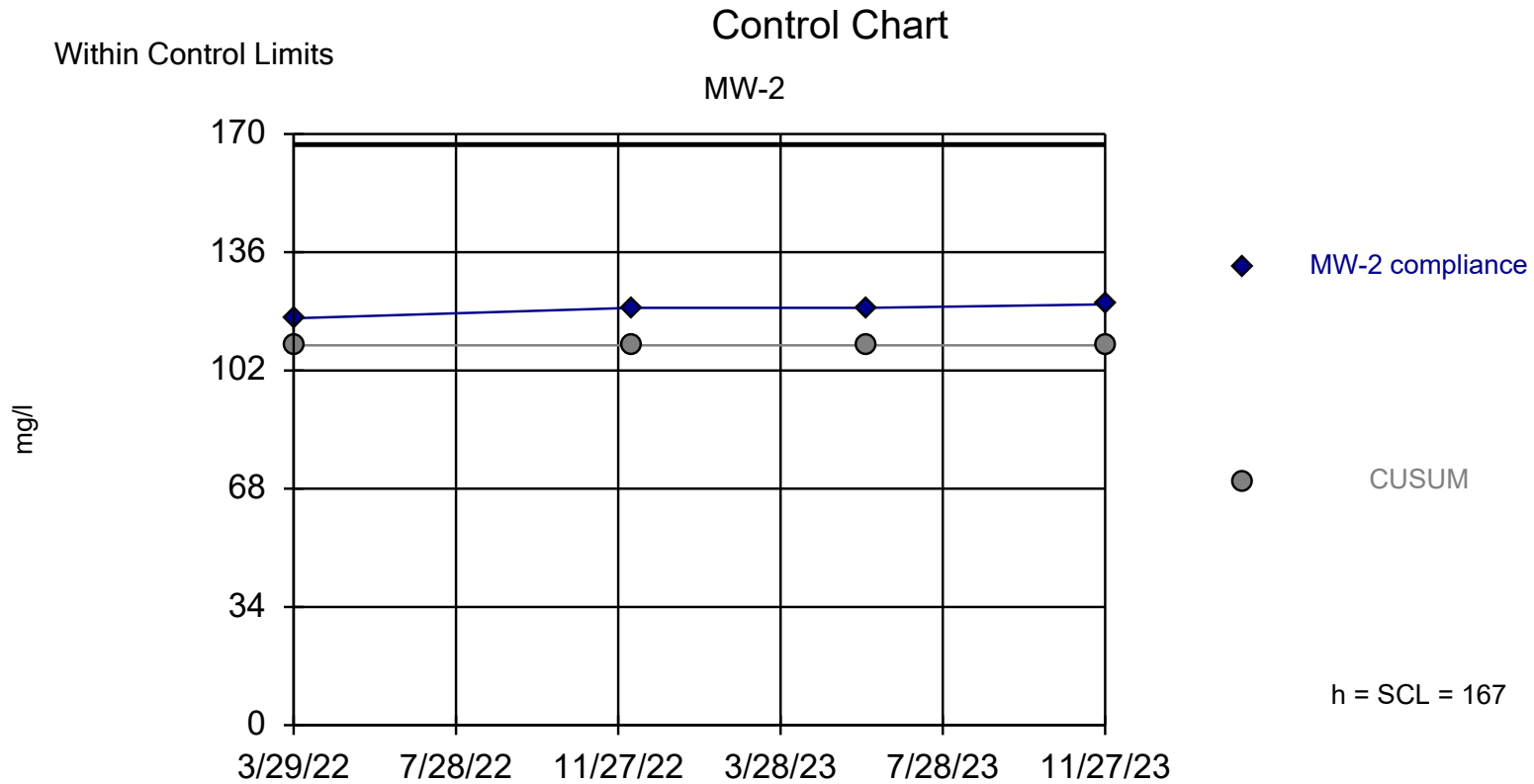
Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Control Chart

Constituent: Barium (mg/l) Analysis Run 4/29/2024 10:02 AM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-2	MW-2	Std. Mean	CUSUM
3/29/2018	0.114			
9/28/2018	0.106			
3/21/2019	0.186			
6/6/2019	0.166			
9/5/2019	0.181			
12/12/2019	0.179			
3/5/2020	0.212			
6/4/2020	0.229			
9/16/2020	0.248			
12/10/2020	0.269			
3/10/2021	0.27			
9/2/2021	0.257 (D)			
3/29/2022		0.293	1.634	0.2369
12/7/2022		0.288	1.545	0.2675
6/1/2023		0.273	1.277	0.283
11/27/2023	0.3 (P)			
1/25/2024		0.297	1.705	0.3225



Background Data Summary (based on square transformation): Mean=11933, Std. Dev.=3189, n=12. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8599, critical = 0.859. Report alpha = 0.001374. Dates ending 9/2/2021 used for control stats. Standardized h=5, SCL=5.

Constituent: Calcium Analysis Run 4/29/2024 10:02 AM

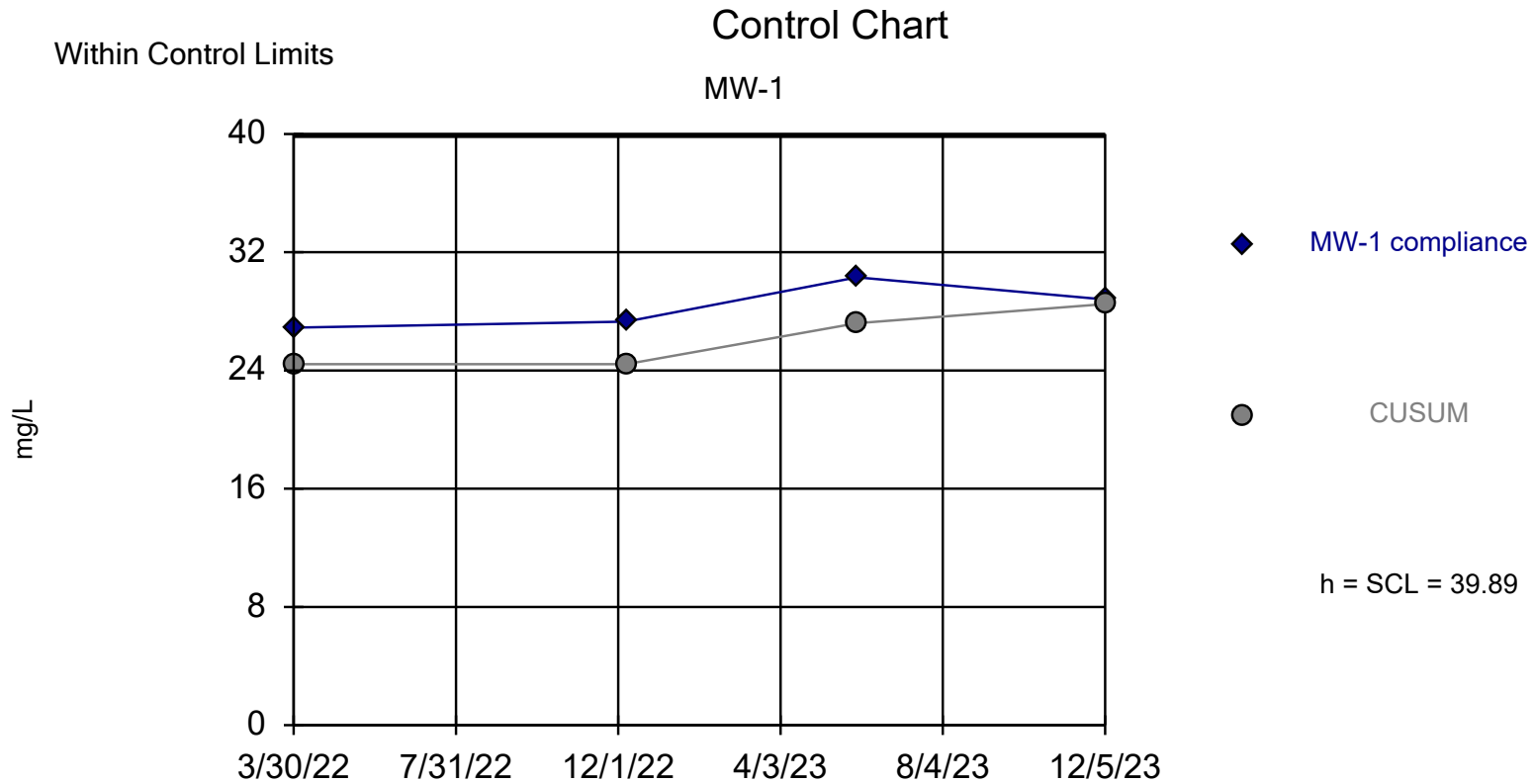
Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Control Chart

Constituent: Calcium (mg/l) Analysis Run 4/29/2024 10:03 AM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-2	MW-2	Square	Std. Mean	CUSUM
3/29/2018	88.4		7814.56		
9/28/2018	65.5 (O)		4290.25		
3/21/2019	113		12769		
6/6/2019	102		10404		
9/5/2019	110		12100		
12/12/2019	106		11236		
3/5/2020	120		14400		
6/4/2020	120		14400		
9/16/2020	113		12769		
12/10/2020	123		15129		
3/10/2021	122		14884		
9/2/2021	114 (D)		12996		
3/29/2022		117	13689	0.5508	109.2
12/7/2022		120	14400	0.7738	109.2
6/1/2023		120	14400	0.7738	109.2
11/27/2023		121	14641	0.8494	109.2



Background Data Summary: Mean=24.42, Std. Dev.=3.095, n=12. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9554, critical = 0.859. Report alpha = 0.001374. Dates ending 9/1/2021 used for control stats. Standardized h=5, SCL=5.

Constituent: Chloride Dissolved Analysis Run 4/29/2024 10:02 AM

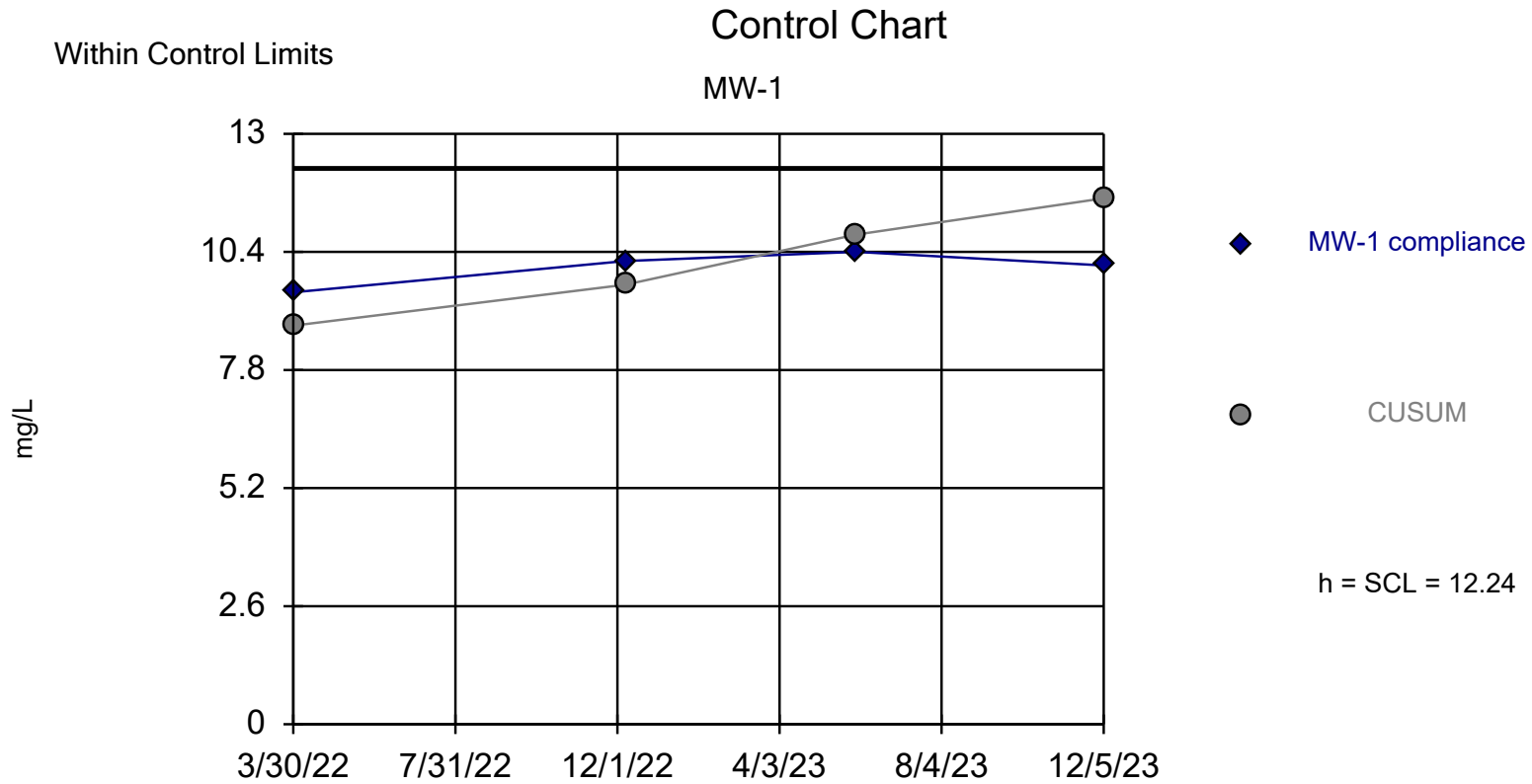
Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Control Chart

Constituent: Chloride Dissolved (mg/L) Analysis Run 4/29/2024 10:03 AM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-1	MW-1	Std. Mean	CUSUM
4/13/2018	25.8			
9/28/2018	23.7			
3/21/2019	24			
6/7/2019	19.6			
9/6/2019	20.7			
12/12/2019	20.7			
3/5/2020	25			
6/4/2020	25.9			
9/17/2020	24			
12/11/2020	25.2			
3/11/2021	30.4			
9/1/2021	28			
3/30/2022		26.9	0.8023	24.42
12/7/2022		27.3	0.9315	24.42
5/31/2023		30.3	1.901	27.2
12/5/2023		28.8	1.416	28.49



Background Data Summary: Mean=8.563, Std. Dev.=0.735, n=12. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9793, critical = 0.859. Report alpha = 0.001374. Dates ending 9/1/2021 used for control stats. Standardized h=5, SCL=5.

Constituent: Sodium Analysis Run 4/29/2024 10:02 AM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

Control Chart

Constituent: Sodium (mg/L) Analysis Run 4/29/2024 10:03 AM

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24

	MW-1	MW-1	Std. Mean	CUSUM
4/13/2018	8.86			
9/28/2018	8.29			
3/21/2019	8.26			
6/7/2019	7.7			
9/6/2019	8.06			
12/12/2019	7.24			
3/5/2020	8.65			
6/4/2020	8.64			
9/17/2020	8.61			
12/11/2020	8.99			
3/11/2021	9.87			
9/1/2021	9.58			
3/30/2022		9.51	1.289	8.775
12/7/2022		10.2	2.228	9.678
5/31/2023		10.4	2.5	10.78
12/5/2023		10.1	2.092	11.58

Shewhart-Cusum Control Chart / Rank Sum

Former Julietta Landfill Client: Patriot Engineering Data: Data Export for Alec 4.17.24 Printed 4/29/2024, 10:03 AM

<u>Constituent</u>	<u>Well</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Method</u>
Barium (mg/l)	MW-2	No	12	0	No	Param Intra
Calcium (mg/l)	MW-2	No	12	0	x^2	Param Intra
Chloride Dissolved (mg/L)	MW-1 (bg)	No	12	0	No	Param Intra
Sodium (mg/L)	MW-1 (bg)	No	12	0	No	Param Intra