RIVERBANK FILTRATION ALONG THE WABASH RIVER IN TIPPECANOE COUNTY

STREAM-AQUIFER CHARACTERIZATION
AND YIELD ESTIMATES
TEST WELL SITES 1 AND 2

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State of Indiana

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1.0 INTRODUCTION

The State of Indiana has identified the need to assess the feasibility of developing a large-scale water supply in Central Indiana. The area identified for investigation is along the Wabash River where it crosses an unconsolidated aquifer in the shallow subsurface. The analysis focuses on evaluating the potential for water production from a series of radial collector wells (collector wells) located along the Wabash River downstream of West Lafayette.

This document presents the results of exploration and testing at the first two potential collector well sites (Sites 1 and 2), conducted on a single 70-acre parcel (Parcel 1) on the south bank of the river downstream of West Lafayette (Figure 1). The exploration and testing program at Parcel 1 was conducted to characterize the hydrogeologic setting and determine critical aquifer properties used for predictive modeling. Results from the field investigation were incorporated into a previously developed regional groundwater flow model (INTERA, 2023) to estimate the potential yield by simulating collector wells located on Parcel 1.

A collector well consists of a circular central caisson sunk into the ground with horizontal screens (laterals) at the bottom of the caisson that are hydraulically jacked into the aquifer sediments. The planned collector wells along the river will be located adjacent to the river and will utilize riverbank filtration (RBF) to sustain high yields and provide quality source water. By design, an RBF well induces recharge of river water through the riverbed sediments.

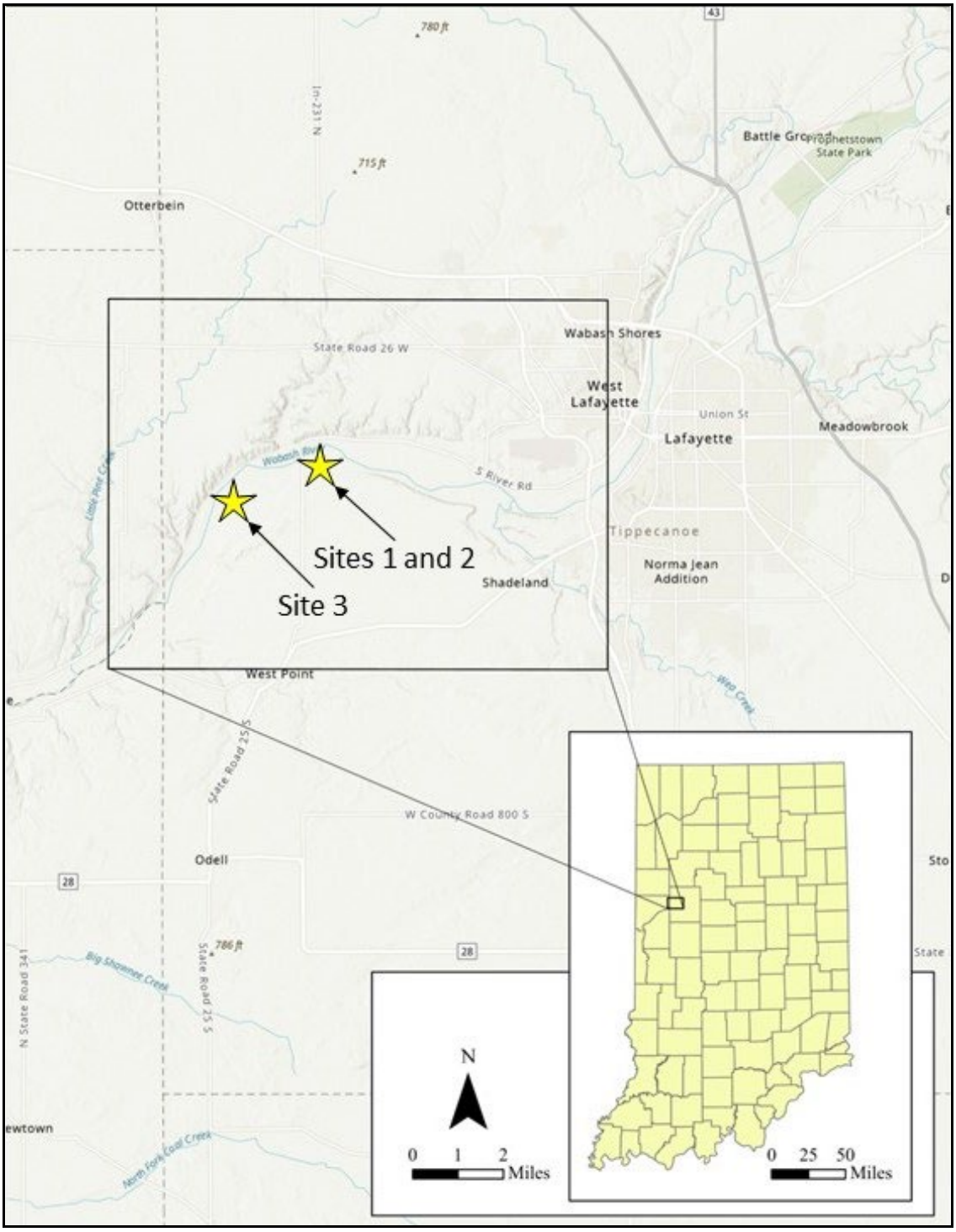

Figure 1. Location of target area and Test Well Sites 1, 2, and 3 along the Wabash River in Tippecanoe County.

2.0 PROCESS FOR PRELIMINARY DESIGN OF HORIZONTAL COLLECTOR WELLS AND YIELD ESTIMATES

Producing an estimate of the yield of a collector well prior to construction requires expert knowledge of groundwater mechanics (groundwater-surface water interactions in particular), field testing and analysis, and collector well design, construction, and operation.

The process followed for evaluating yield includes geologic exploration, aquifer testing, analysis of aquifer test data to evaluate best-fit hydraulic parameters, a conservative collector well design, seasonal yield evaluation, and a predictive uncertainty analysis. This process is illustrated in Figure 2. Details and results of each step are summarized below and expanded upon in the report.

2.1 Geologic Exploration

Extensive local and regional exploration was conducted.

- A regional, conceptual geologic model was constructed using existing geologic coverages from the Indiana Geological and Water Survey and private well logs in the region available from the Indiana Department of Natural Resources.
- At Parcel 1, seventeen borings were logged and analyzed.
- Finally, a regional AEM geophysical survey of the area was conducted (Abraham and other, 2023), and the results incorporated into the geologic model.

Conclusions from the exploration is that there is a thick regional sand and gravel aquifer adjacent to the Wabash River in the target area. Near the river, there is an 80 to 90 foot thick sand and gravel aquifer overlying bedrock or a basal clay layer. Local borings show the aquifer to be very homogeneous at each site.

2.2 Aquifer Testing

Aquifer testing was conducted to evaluate the critical hydraulic design parameters needed for the preliminary collector well design and yield analysis.

- Lithologic borings were converted to monitoring wells and equipped with pressure transducers to monitor groundwater levels. Shallow piezometers were installed near the

river and equipped with pressure transducers to measure groundwater levels near the river. Stilling basins were installed in the river and instrumented with pressure transducers to monitor river stages.

- A long record of ambient monitoring was collected prior to site testing.
- A test production well (test well) was drilled, constructed, and developed at each of the three test sites.
- 72-hour, constant rate tests were performed at three test sites. During testing at each site, water levels in multiple monitoring wells and piezometers were recorded, and river stages were recorded in stilling wells. 24 hours of recovery data was collected at the conclusion of pumping.
- A GPS survey was conducted by American Structurepoint at all three well sites to tie the test wells and monitoring points to a common horizontal and vertical datum.

Results from the testing include time series records of both water elevation and drawdown prior to pumping, during pumping, and during recovery at all monitoring wells, piezometers, and stilling wells.

2.3 Analysis of Aquifer Test Data

All test data were analyzed to evaluate the hydraulic properties of the aquifer, including the aquifer transmissivity and streambed resistance of the Wabash River.

- Initial estimates of transmissivity and streambed resistance were made using standard, approximate methods (Rorabaugh, 1956) to provide an initial range of property values.
- Transient models of the pumping tests were developed using TTim software (Bakker, 2013; Bakker, 2023). The models were calibrated to drawdown records at the monitoring wells and river. Results of the analysis include multiple combinations of transmissivity and resistance (multiple realizations) that produce similar calibration attributes.
- Additional information was incorporated into the analysis to narrow the range of potential streambed resistance values. Steady-state groundwater models were developed for each test site. The models were calibrated to: static conditions prior to

pumping, near-static conditions during pumping, and drawdown. The static site conditions, particularly the elevation of the river relative to water elevations in the monitoring wells, provides information about the resistance of the streambed. The steady-state models were used to identify the best fit set of hydraulic parameters within the multiple realizations obtained from the transient analysis.

- This stepwise approach to evaluating the hydraulic parameters was followed to minimize the uncertainty of the individual hydraulic parameters.

Conclusions of the aquifer test analysis include the best-fit hydraulic parameters at each site, and multiple realizations of parameters from the transient analysis. Water level data obtained from the monitoring wells during testing indicates a very homogeneous aquifer at all test sites, with high transmissivity and good connection to the river, which are conducive to high collector well yields. The uncertainty of the hydraulic properties was significantly reduced through the extensive testing and analysis performed.

2.4 Preliminary Collector Well Design and Yield Estimate

Steps taken to develop a conservative yield estimate for collector wells constructed at the sites are presented below.

- Conservative values were chosen to be used as design parameters based on the best-fit hydraulic parameters.

- Seasonal stage-frequency curves for the Wabash River were developed for each test site. The curves provide seasonal low flow and low stage water levels to be used as boundary conditions in the yield model.

- A standard collector well design was chosen for each site, including: a minimum 200-foot setback from the riverbank, six evenly spaced 200-foot screened laterals, and a 20-foot diameter central caisson. The laterals are placed 17 feet above the aquifer base, and minimum pumping level in the caisson is set at 15 feet above the laterals. This allows for 10 additional feet of drawdown in the caisson to increase yield if construction difficulties are encountered.

- The construction process introduces the largest parameter uncertainty associated with yield estimates. During installation of the lateral screens in the collector well, a skin

resistance develops around the screens due to the natural formation collapsing around the screen. That skin resistance is unknown prior to construction and performance testing of the well. An average and a high skin resistance were specified to provide a range of possible well yields.

- Regional flow was not included in the yield model. Within the model, the river is assumed to be the source of all groundwater discharging to the well. This is a conservative assumption for the purpose of estimating yield.

- A seasonal yield analysis was conducted using seasonal low and average river stages, and the design hydraulic parameters from the aquifer testing and analysis. The yields are evaluated using GFLOW groundwater modeling software. Winter yields estimated with GFLOW were reduced 30% to account for the higher viscosity of the cold river water entering the aquifer.

2.5 Analysis of Predictive Uncertainty

The uncertainty of the hydraulic parameters was minimized by extensive testing and analysis programs. The effects of the remaining uncertainty on the predicted yield of the collector wells were then investigated, including a worst-case lower bound that assumes the river is in direct connection with the aquifer.

- Results of the yield model with design parameters based on the best parameter fit to all data, with average and high lateral resistances are reported.

- Yields for alternate realizations of parameters are evaluated to show the likely range of uncertainty in the best fit yield estimate. Note that the alternate realizations are calibrated to drawdowns only – they do not include calibration to static and pumping water elevations.

- A yield model was developed for the extreme case of the river in direct connection with the aquifer and low aquifer hydraulic conductivity for the lowest feasible bound on yield. This is the lowest yield case as the collector well yield is sensitive to lateral arm resistance and low hydraulic conductivity translates to the high lateral arm resistance.

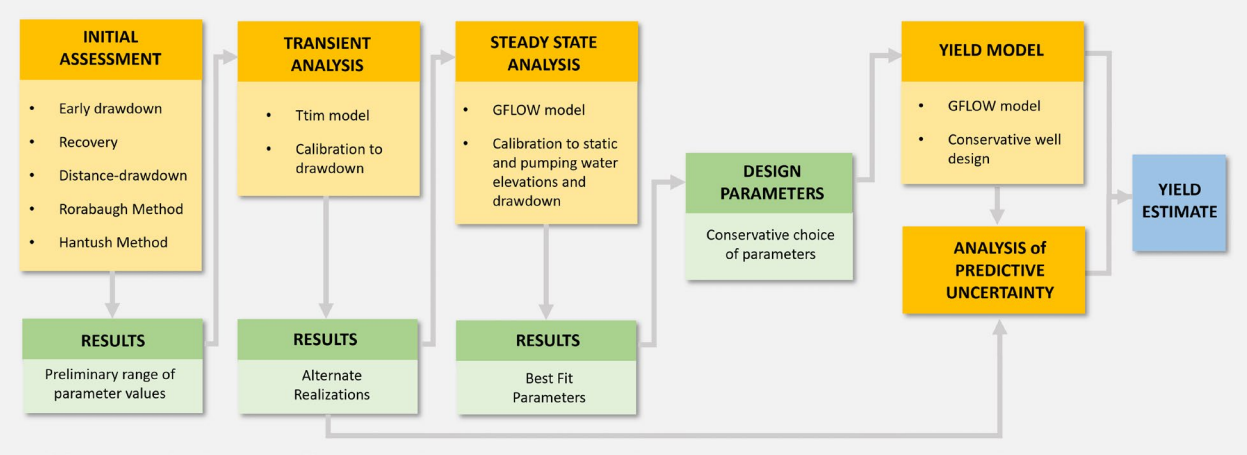

Figure 2. The process of preliminary design of a horizontal collector well: assessment of aquifer testing data through preliminary design and yield estimate.

3.0 SITE 1 AND 2 DRILLING

The field program at Parcel 1 included: drilling sonic test borings, logging geologic sediments from the borings, installation of seventeen monitoring wells, installation of two test production wells (test wells), two aquifer tests, and water-quality sampling. In addition, a geophysical survey was completed throughout the region. The survey was conducted by Aqua Geo Frameworks using an aerial electro-magnetic (AEM) method to fill in data gaps between existing well log information (Abraham and others, 2023). Results from the field program were integrated into a predictive modeling analysis (Section 6.0).

3.1 Test Borings

Seventeen exploratory test boreholes were drilled on Parcel 1 to characterize the lithology of the unconsolidated material (Figure 3). All test borings were advanced to bedrock with a sonic drill rig to depths ranging between 96 - 146 feet below ground surface (bgs). Continuous cores were collected with a 6-inch diameter core barrel. All test borings were completed as monitoring wells to support data collection during aquifer testing. Lithologic descriptions and well construction logs are included in Appendix A.

To begin the investigation, seven borings were drilled parallel to the river (MW-1 – MW-7), with an additional two on the south side (MW-8 and MW-9) and one on the west side of Parcel 1 (MW-10). The first test well (TW-1) was drilled just south of MW-5 and the second (TW-2) was drilled between MW-1 and MW-2 (Figure 3). The locations of these wells were selected based on results from the test borings which indicated the potential for Parcel 1 to support two collector wells. Additional monitoring wells were installed at the south side of the parcel (MW-11), along the river (MW-12, MW-13, and MW-14), along the eastern tree line (MW-15 and MW-16), and in the middle of the parcel (MW-17) (Figure 3). The additional monitoring wells were installed to gather more comprehensive geologic samples and to support data collection during aquifer testing.

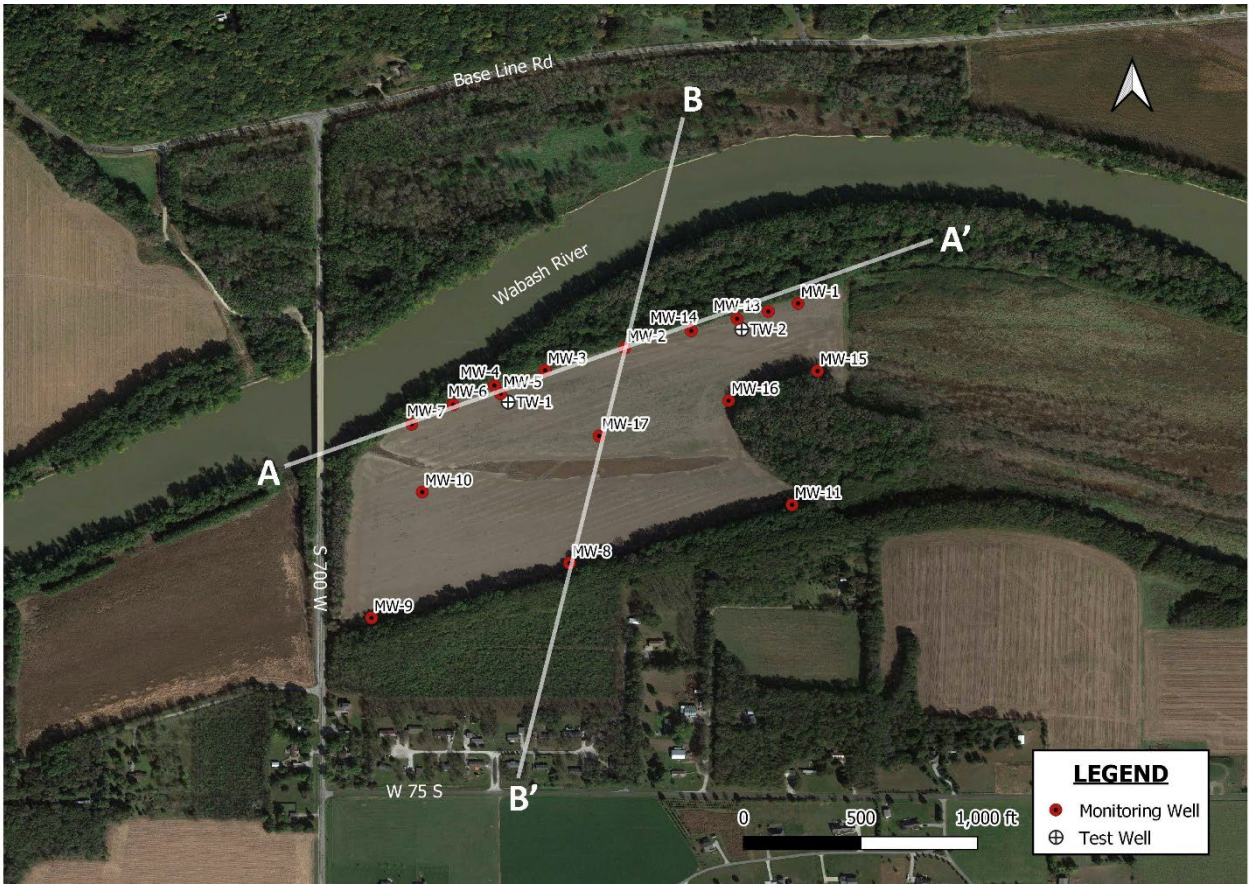

Figure 3. Location of monitoring wells (MW) and test wells (TW) installed at Sites 1 and 2. Also shown is the location of geologic cross-sections A-A' and B-B'.

3.2 Conceptual Geologic Model

The lithologic information gathered during drilling and AEM results were used to refine a three-dimensional (3D) conceptual geologic model (CGM) of the aquifer system, described in INTERA (2023). The 3D CGM illustrates the aquifer system and surrounding area and was used as input for the conceptual aquifer model.

The aquifer system in the area consists of large bodies of highly permeable unconsolidated sand and gravel which were deposited as glacial outwash or alluvial valley fill (Fenelon and Bobay, 1994). These permeable sediments fill both the recent alluvial valleys as well as the ancient valleys eroded into the bedrock by pre-glacial drainage. The bedrock topography reflects the regional, pre-glacial drainage system that converged into a trunk valley near Lafayette, called the Lafayette Bedrock Valley (historically referred to as the Teays-Mahomet Bedrock Valley) (McBeth, 1901; Bleuer, 1991; Wayne, 1956).

Glacial advances that shaped the bedrock surface also deposited sediments including clay, silt, sand, gravel, and cobbles with various sorting and layering. Unconsolidated deposits in the area range from thick sections of hydrologically unproductive glacial till with high contents of clay and silt to thick sections of outwash and alluvium consisting of highly productive sands and gravels. The physical characteristics of these sediments play a role in determining the capacity of the aquifer system.

3.3 Geologic Cross Sections

Results of the test drilling show that the underlying stratigraphy at the site is consistent with the regional setting. Transect locations for two geologic cross sections are shown on Figure 3. Cross section A-A’ includes the ten borings along the river (Exhibit A), and cross-section B-B’ runs perpendicular to the river, through the center of Parcel 1 and includes MW-2, MW-17, and MW-8 (Exhibit B).

In general, there is approximately 10 to 15 feet of clay and fine sand at the surface that overlies a laterally continuous zone of sand and gravel that has an average thickness of 90 feet (Exhibit A). The permeable zone of sand and gravel is comprised of multiple distinct layers of sands and gravels. At the top of this sand and gravel formation, there is a 20 to 30 feet thick upper sand layer which lies above about 5 feet of gravel. Beneath the gravel layer is a middle sand zone about 10 to 25 feet thick overlying 40 to 48 feet of lower sand. Within the lower sand are intermittent layers of silty sand and gravel varying in thickness from 3 to 13 feet. Underlying the

lower sand is a continuous layer of basal silt and clay approximately 20 to 35 feet thick. Shale bedrock lies beneath the silt and clay confining unit starting at 115 to 136 feet below ground surface (bgs). Borings located perpendicular to the river show similar results, with 10 – 15 feet surficial clay and soil layer that lies above a sand and gravel zone about 90 feet thick (Exhibit B).

4.0 AQUIFER TESTING

Two separate aquifer tests were conducted at Parcel 1. Each test well was pumped at a constant rate of approximately 2 million gallons per day (MGD) for a standard length of 72 hours. Each test was performed by pumping one well at a constant rate and continuously measuring the response in water levels in each monitoring well on Parcel 1. The two aquifer tests were conducted between June 25 and July 16, 2023. The primary objective of the testing was to determine the hydraulic properties of the water-bearing zone and the degree of hydraulic connection to the river.

4.1 Test Set-up

Two 12-inch diameter test wells (TW-1 and TW-2) were drilled and constructed on opposite sides of Parcel 1 (Figure 3). The test wells were drilled with a mud rotary drill rig and constructed with 30 feet of hi-flow, stainless steel, 0.050-inch slotted screen manufactured by Alloy Machine Works. An artificial gravel pack sized for the screen slot size was installed around the screen (GP#3, Southern Products and Silica Company). The test wells were developed using airlifting and pump and surge techniques. Construction logs for the two test wells are included in Appendix A.

Each monitoring well was constructed with 2-inch PVC casing with 20 or 30 feet of 0.01-inch slot screen and equipped at the surface with a protective cover. Three well points were also installed to act as piezometers in locations inaccessible to the sonic drill rig (Figure 4). The piezometers were constructed using 3 feet long, 1.25-inch diameter, stainless steel drive point well screens. The screens were attached to 1.25 stainless steel pipe and advanced into the ground using a gas-powered posthole hammer.

A stilling well (SW) was constructed to continuously track changes in the stage (water level) of the river adjacent to Parcel 1 (Figure 4). The river stage was relatively stable over the duration of the testing period, varying by approximately 4 feet (Figure 5).

The location and elevation of each measuring point was surveyed by American Structurepoint. The location and construction information for the test wells, monitoring wells, piezometers, and stilling well are presented in Table 1.

Table 1. Characteristics of measuring points.

ID	Northing	Easting	Latitude	Longitude	Total Depth [FT]	Ground Elevation [FT]	TOC Elevation [FT]	TW-1 Distance [FT]	TW-2 Distance [FT]
MW-1	1881369	2967925	40.41359347°	-87.02883806°	126	511.68	514.26	1356	280
MW-2	1881119	2967184	40.41290819°	-87.03149794°	106	509.69	512.79	583	512
MW-3	1880995	2966844	40.41256822°	-87.03271911°	106	508.7	511.94	238	872
MW-4	1880909	2966627	40.41233375°	-87.03349853°	106	509.02	512.29	110	1104
MW-5	1880862	2966654	40.41220558°	-87.03340283°	96	510.41	513.27	56	1093
MW-6	1880802	2966452	40.41203961°	-87.03412656°	126	509.92	512.66	234	1303
MW-7	1880692	2966276	40.41173783°	-87.03476058°	146	509.95	512.84	429	1506
MW-8	1879916	2966949	40.40960806°	-87.03234294°	116	512.25	515.4	938	1500
MW-9	1879610	2966104	40.40876833°	-87.03538078°	109	513.63	516.39	1339	2260
MW-10	1880314	2966320	40.41070092°	-87.03460072°	106	510.52	513.84	621	1640
MW-11	1880244	2967900	40.41050594°	-87.02893008°	126	511.29	514.23	1342	1003
MW-12	1881325	2967799	40.41347214°	-87.02928931°	110	511.91	514.76	1224	152
MW-13	1881282	2967665	40.41335642°	-87.02976925°	112	511.79	514.66	1085	61
MW-14	1881216	2967469	40.41317439°	-87.03047425°	106	510.36	513.58	879	216
MW-15	1880991	2968008	40.41255617°	-87.02854°	116	509.93	512.83	1333	398
MW-16	1880825	2967629	40.41210211°	-87.02989908°	114	512.89	516.16	944	403
MW-17	1880627	2967076	40.41155839°	-87.03188753°	106	512.17	515.44	433	853
P-1	1880983	2966590	40.41253744°	-87.03363275°	15	512.44	516.21	193	1121
P-2	1881434	2967629	40.41377192°	-87.02989864°	25	508.74	514.27	1127	217
P-3	1881564	2967631	40.41413039°	-87.02989114°	25	510.2	514.88	1205	344
TW-1	1880816	2966686	40.41207856°	-87.03328736°	86	510.97	513.55	--	1079
TW-2	1881224	2967685	40.41319656°	-87.02969894°	94	510.85	513.93	1079	--

Notes: Nothing/easting projection in State Plane Indiana West (1302) NAD83 (CORS96); TOC = top of casing; '-' = Not Applicable

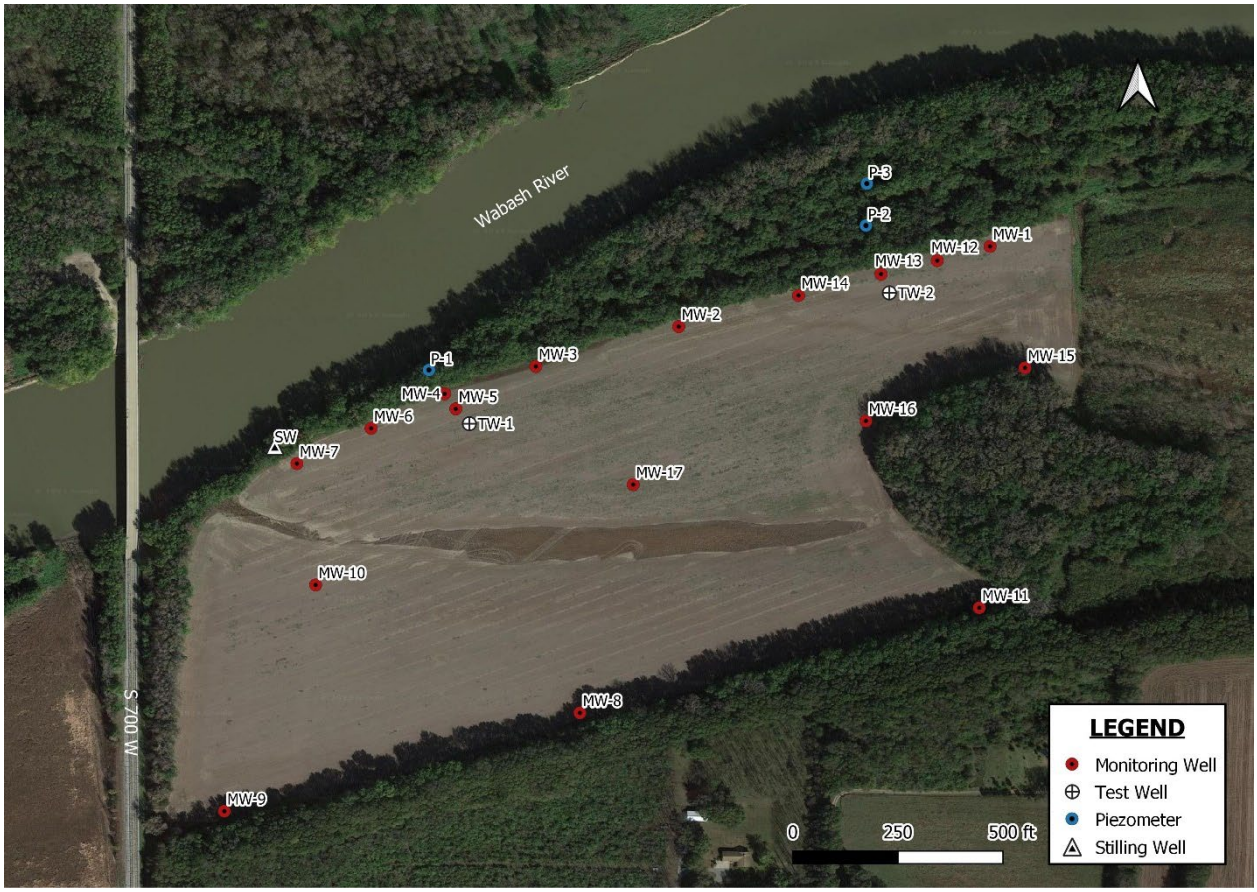

Figure 4. Layout of measuring points.

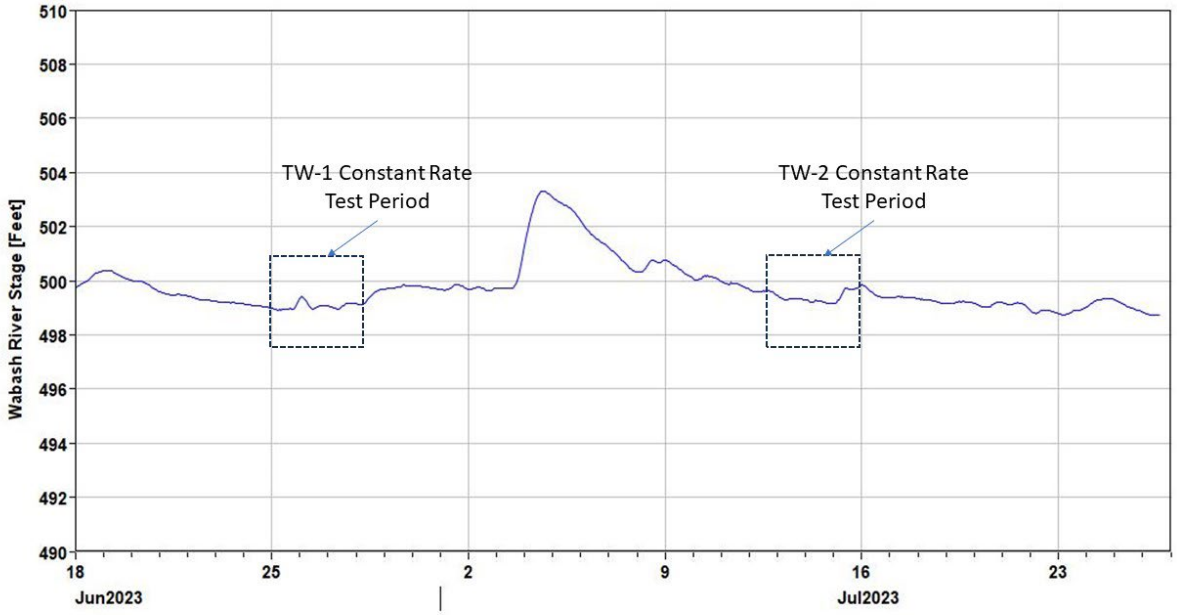

Figure 5. Wabash River stage recorded in stilling well over the testing period.

Each test well was equipped with a submersible pump connected to an 8-inch diameter temporary pipe discharging directly to the river. The pipe was equipped with an electronic flow meter to monitor the pumping rate. A step-drawdown test was completed at each test well to determine a pump rate that could be sustained for the duration of each constant-rate test.

During aquifer testing, water levels in the monitoring wells, piezometers, and stilling well were continuously monitored and recorded using remote pressure transducers designed to collect and store water level data at predetermined time intervals. Water levels were verified with manual measurements gathered using an electric water-level indicator. Water-quality samples were collected from the test wells during pumping and submitted to an independent laboratory for analysis.

4.2 Aquifer Tests

Two aquifer tests were conducted between June 25 and July 16, 2023. The primary objective of the testing was to determine the hydraulic properties of the water-bearing zone and the degree of hydraulic connection to the river.

4.2.1 Aquifer Testing at Test Well 1

Test Well 1 (TW-1), installed on the western side of Parcel 1 (Figure 4), was constructed with 30 feet of screen set at 54 to 84 feet bgs. A submersible pump was installed in the well with the intake location at 52 feet bgs.

A four-hour multiple rate step test was conducted on June 24, 2023 to select a pumping rate for the constant-rate test. During the step test, the well was pumped for one hour each at rates of 1040, 1330, 1430, and 1470 gpm. A rate of approximately 1430 gpm was selected for the constant-rate test based on results from the step test.

The constant-rate test was conducted between June 25 and June 28, 2023. The constant rate pumping started on June 25 at 9:30 AM and was terminated June 28 at 1:00 PM. With an average pumping rate of 1420 gpm, the total volume of water pumped during the test was approximately 6,425,780 gallons (19.72 acre-feet).

There was some precipitation in the area within 24 hours after the start of the test. The stage of the river was 498.9 feet NAVD 88 prior to the start of the test. The stage fluctuated throughout the test, varying from approximately 498.9 to 499.5 feet NAVD 88 (Figure 5).

Water samples were collected from TW-1 at 70 hours into the test. Drawdown observed in TW-1 after 72 hours of pumping was approximately 37.7 feet, indicating a specific capacity of 37.6 gpm/ft.

Water levels recorded in the measuring points responded accordingly to pumping and stage changes in the river (Figure 6). The maximum drawdown in nearby monitoring wells ranged from 0.32 feet at MW-9 to 3.2 feet at MW-5.

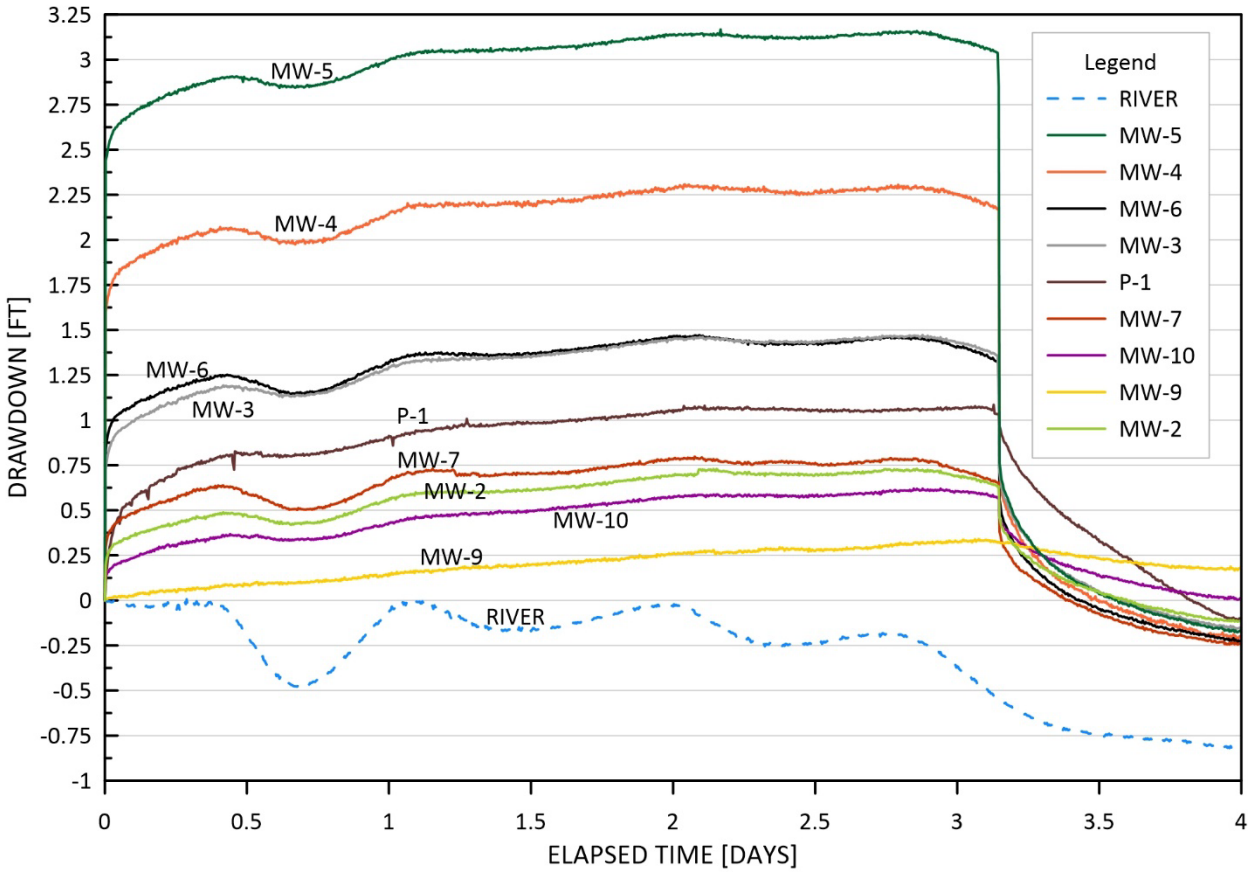

Figure 6: Drawdown results for TW-1 aquifer test.

4.2.2 Aquifer Testing at Test Well 2

Test Well (TW-2), installed on the eastern side of the parcel (Figure 4), was constructed with 30 feet of screen that was set between 63 and 93 feet bgs. A submersible pump was installed in the well with the intake located at 70 feet bgs.

A four-hour multiple rate step test was conducted at the TW-2 on July 12, 2023, to determine a specific capacity of the well and select a pump rate for the constant rate test. During the step test TW-2 was pumped for one hour each at rates of 1020, 1240, 1350, and 1380 gpm. A rate of 1350 gpm was selected for the constant-rate test based on results from the step test.

The constant-rate pumping test for TW-2 was conducted between July 13 and July 16, 2023. The test started on July 13 at 9:00 AM and was terminated July 16 at 9:12 AM. The pumping rate for the test was 1350 gpm, and the total volume of water pumped during the test was approximately 5,829,473 gallons (17.89 acre-feet). Water samples were collected from the test

well at 26 hours into the test. Drawdown observed in TW-2 after 72 hours of pumping was approximately 43.1 feet, for an observed specific capacity of 31.3 gpm/ft.

There was some precipitation in the area during the TW-2 test period, about 48 hours after the start of the test. The water elevation in the river was approximately 499.3 feet NAVD 88 prior to the start of the test. The river fluctuated throughout the test, varying between 499.1 and 499.8 feet NAVD 88 (Figure 5).

Water levels in each monitoring well responded to pumping and river stage changes (Figure 7). The final drawdown in the nearby wells ranged from 0.5 feet at MW-11 to approximately 3 feet at MW-13.

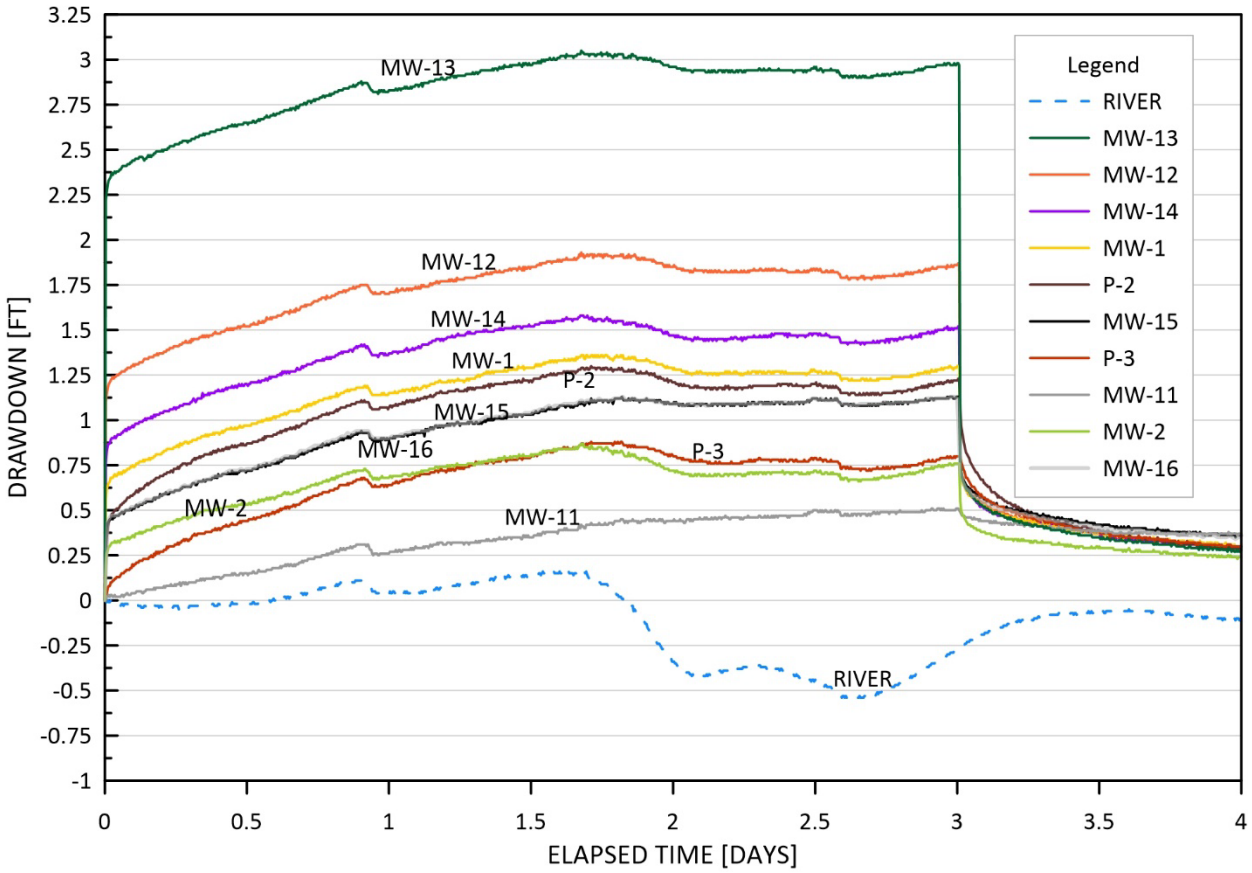

Figure 7: Drawdown results for TW-2 aquifer test.

5.0 AQUIFER TEST ANALYSIS

The aquifer test results from TW-1 and TW-2 were analyzed to estimate hydraulic conductivity of the aquifer and the hydraulic resistance between the bed of the river and the aquifer. Results from the tests were incorporated into the groundwater flow model analysis.

5.1 TTim Software

Specialized hydraulic software called TTim (version 0.5) was used to analyze the aquifer test results (Bakker, 2013; Bakker, 2023). The software, based on analytic elements, is designed for modeling transient, multi-layer flow and is better suited for analyzing RBF aquifer tests compared to traditional methods:

1. Flexibility in measuring point layout: TTim's approach eliminates the dependency on a predetermined design layout for monitoring wells. In contrast, traditional methods mandate that monitoring wells be precisely situated in lines perpendicular and parallel to the river, which can be restrictive or impractical in real-world scenarios, as was the case at TW-1 and TW-2.

2. Incorporation of river geometry: TTim empowers the user to explicitly integrate the river's actual geometry into their analysis. Traditional methods, on the other hand, often make the simplifying assumption that the river is a straight line within the section affecting an RBF system.

3. Dynamic river stage consideration: TTim enables the direct inclusion of changes in river stage in the analysis. In contrast, traditional methods necessitate data filtering based on an estimated or assumed loading efficiency for each measuring point, which can introduce needless uncertainty and complexity.

4. Hydraulic property integration: TTim's analytic element models facilitate the explicit derivation of the hydraulic property governing the connection between the river and the aquifer used in the predictive GFLOW model. This obviates the need for translating this parameter between models, as is common in traditional approaches.

In summary, TTim's use of analytic elements for RBF aquifer test analysis offers a flexible, accurate, and practical alternative to traditional methods, addressing limitations related to monitoring well layout, river geometry, river stage changes, and hydraulic property integration, ultimately leading to more robust results and a deeper understanding of the aquifer system.

5.2 Approach

The aquifer was modeled with TTim as a single, 75-foot thick layer of homogeneous, saturated material with a phreatic surface. The TTim model layout is shown in Figure 8. The river is represented by parallel sets of linesink strings as proscribed in Haitjema (2005). River stage changes observed during each test (Figure 6 and Figure 7) were incorporated as model input.

The primary objective was to optimize the performance of each test model by matching the modeled and observed response to pumping and stage changes recorded at select monitoring wells. The matching was achieved by manual adjustment of three key parameters:

- the horizontal hydraulic conductivity of the aquifer (Kh),
- the riverbed resistance to vertical flow (c),
- and the specific yield (Sy).

This iterative process aimed to achieve the best-fit representation of the aquifer's behavior and responses to various conditions based on the root mean square error (RMSE). The RMSE is an indication of average delta between predicted values from the TTim model and the observed response at select monitoring wells. For TW-1, this included the following eight monitoring wells: MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-9, and MW-10. For TW-2, this included: MW-1, MW-2, MW-11, MW-12, MW-13, MW-14, MW-15, and MW-16.

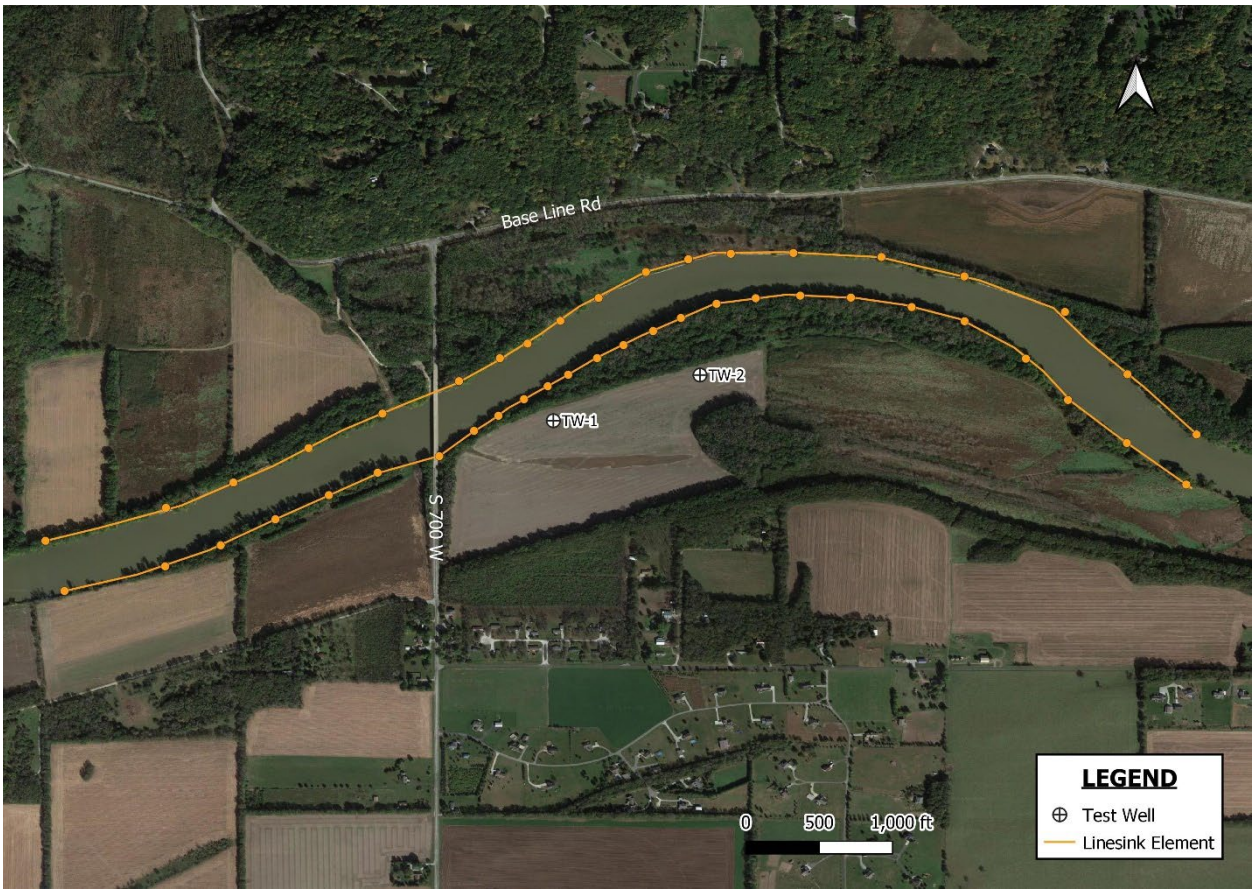

Figure 8. Layout of analytic elements used in TTim modeling analysis.

5.3 Results

Table 2 presents various best-fit parameter combinations from the TTim analysis for both TW-1 and TW-2 results. For TW-1, a specific yield of 0.04 resulted in the best fit to stage fluctuations with Kh=425-500 ft/day and c=0.75-2.5 days resulting in a good fit to water level changes. For TW-2, a specific yield of 0.08 resulted in the best fit to stage fluctuations with Kh=450-550 ft/day and c=0.1-1.5 days resulting in a good fit to water level changes.

The range of RMSE values for both tests (0.161-0210 ft) represents approximately 5-7% of the observed range of drawdown, indicating a good fit between simulated and observed drawdowns. Simulated vs observed water-level changes are presented for the model run with the lowest RMSE for each test. For TW-1, this is the model run with values of Kh=500 ft/day and c=1.5 day (Figure 9). For TW-2, this is the model run with values of Kh=500 ft/day and a c=0.5 day (Figure 10).

The range of results from the both tests suggests that the value of Kh may be slightly higher and the value of c slightly lower at the TW-2 site compared to TW-1 (Table 2). However, in general the results are very similar, suggesting that the river-aquifer system exhibits homogeneity across the parcel. This consistency aligns with the conceptual aquifer model, reinforcing the validity and reliability of the model's representation of the system's behavior.

Results derived from a traditional technique to analyze RBF tests are in general agreement with the range of parameters derived from the TTim analysis. Using the results from MW-5 and MW-4 from the TW-1 test, the river-line method prescribed by Rorabough (1956) estimates a Kh=540 ft/day and a distance to the line source (a-distance) of 460 ft, which can be translated to c value of 0.75 days. Similarly, the results from MW-13 and P-2 from the TW-2 test estimates a Kh=480 ft/day and an a-distance of 475 ft, which can be translated to c value of 0.75 days.

Table 2. TTim model results for various parameter combinations resulting in a good fit to observed data for TW-1 and TW-2 tests.

Kh [ft/day]	c [days]	Sy -	RMSE [ft]
TW-1			
425	0.75	0.04	0.193
450	1	0.04	0.169
500	1.5	0.04	0.161
500	2	0.04	0.165
500	2.5	0.04	0.210
TW-2			
450	0.1	0.08	0.170
475	0.25	0.08	0.162
500	0.5	0.08	0.161
500	0.75	0.08	0.163
550	1.5	0.08	0.174

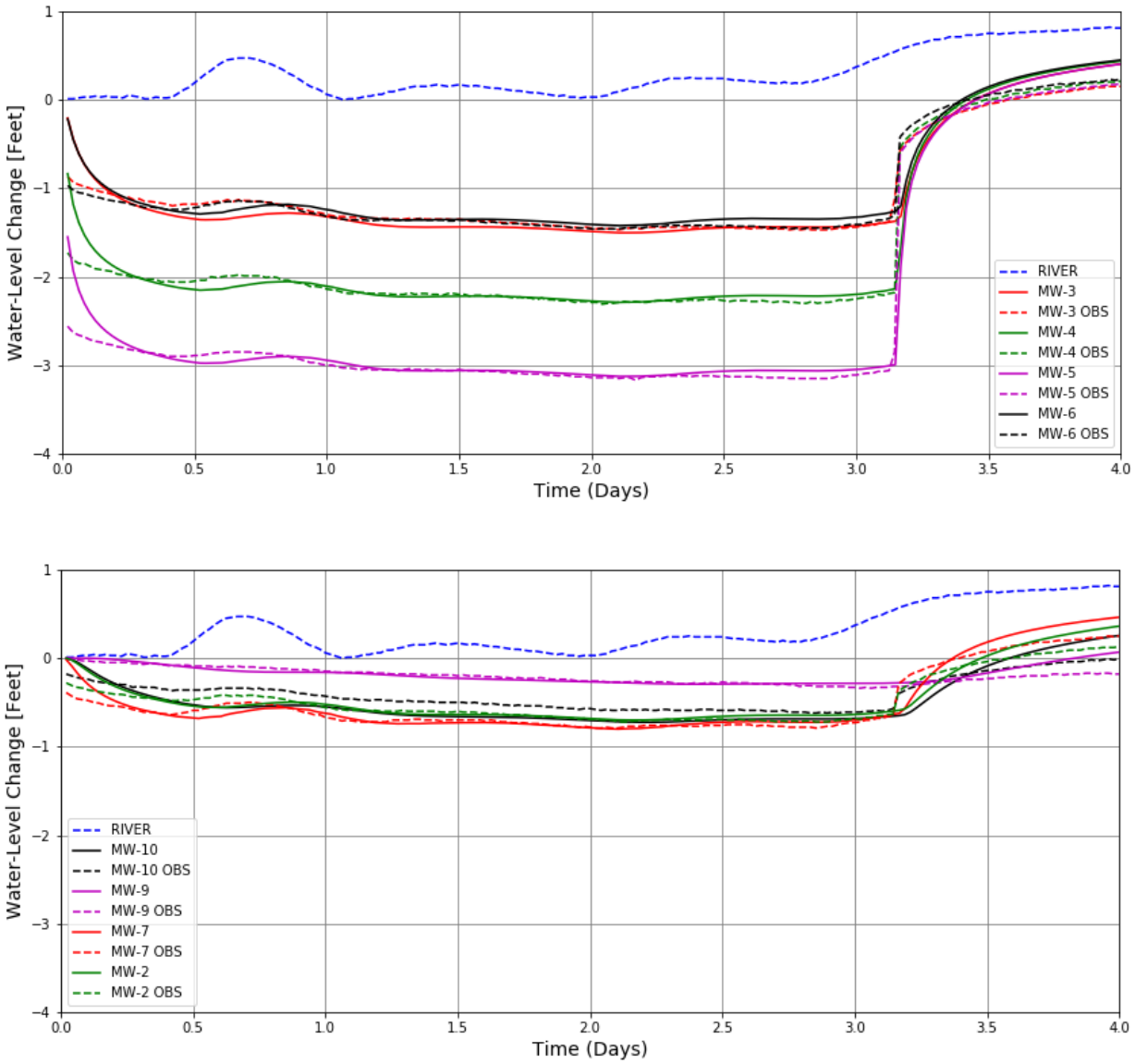

Figure 9. Simulated and observed water-level change for local monitoring wells (*top*) and other monitoring wells (*bottom*) during TW-1 test (Kh=500 ft/d, c=1.5 d, Sy=0.04).

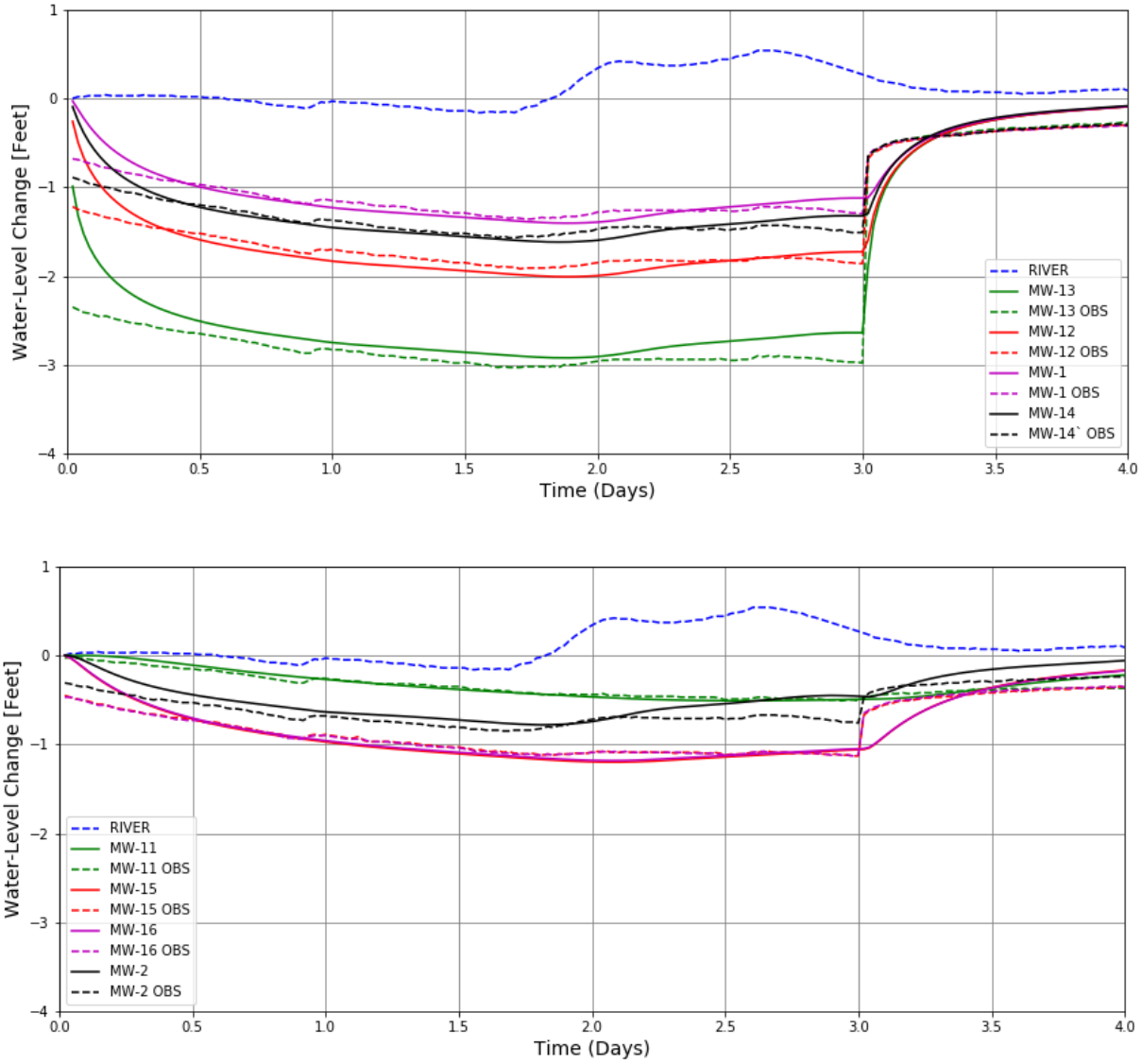

Figure 10. Simulated and observed water-level change for local monitoring wells (*top*) and other monitoring wells (*bottom*) during TW-2 test (Kh=500 ft/d, c=0.5 d, Sy=0.08).

6.0 PREDICTIVE MODELING ANALYSIS

Estimating the yield of a collector well requires knowledge of the hydraulic properties of the aquifer and river, regional groundwater flow conditions, and historic records of river stage and discharge. This information was obtained with high certainty by an extensive analysis of aquifer monitoring and testing data, as well as records of the daily stage and discharge of the Wabash River maintained by the USGS.

The properties of the collector well—which cannot be evaluated by field testing until the well is constructed—are as important as the aquifer and river properties in estimating the potential yield. These properties are greatly affected by construction methods and conditions encountered during construction, which may require design modifications to the well. These properties include the caisson depth and the elevation of the laterals (which can limit the drawdown in the caisson and can directly impact yield) and the length and alignment of the laterals which are often dictated by conditions encountered during construction. Finally, a skin resistance can form around the lateral screens caused both by hydraulically jacking pipes into the formation, and after inserting the screen, pulling the piping back out which causes the formation to collapse around the screen. These parameters related to the collector well are highly uncertain prior to well construction.

To deal with the uncertainty of the collector well properties, we used engineering judgement based on experience designing and constructing collector wells in similar settings, and by conservatively setting both well elevations and lateral lengths in the yield analysis. The skin resistance is based on post-construction well testing at hydrologically similar sites, followed by post-testing calibration of a yield model. This provides a range of potential lateral skin resistances that can be analyzed based on measured values at multiple sites. Note that these calibrated skin resistances include the effects of anisotropy that may be present at the collector well sites. Overall, during preliminary design, the objective was to provide a conservative, lower bound on the yield of each collector well design.

6.1 Approach

The previously developed regional GFLOW model was used to develop a collector well yield model. First, the model boundaries were refined based on the AEM survey (Abraham and other, 2023) and the 3D geologic model. Results from the two pumping tests were used to calibrate a steady-state model to match both observed static and pumping water levels in the aquifer, and

drawdown at monitoring wells. This calibration was done to provide a final check on the results of the transient aquifer test analysis conducted with TTim software. In particular, the elevation of the groundwater relative to the river elevation provides additional information about the resistance of the streambed, not used in the transient analysis of drawdowns.

Then, a typical collector well design is represented in the model to assess potential yields. A range of collector well properties was investigated within the model including pumping levels in the caisson, seasonal water levels in the river, and the potential skin resistance along the laterals created by the collapse of the formation over the screens during construction.

Geometric parameters related to the aquifer and the river that are fixed in the model are summarized in Table 3 along with a description of the source of the data. The lateral extent of the model is defined by a combination of impermeable boundaries where the bedrock rises above the water table, and linesinks of specified discharge which provide the regional flow. Regional flow was calibrated based on matching the observed groundwater gradient across the site.

Table 3. Fixed geometric features specified in the yield model.

Feature	Units	Value	Source
Aquifer base elevation	ft, NAVD 88	410	Site borings
Aquifer top elevation	ft, NAVD 88	505	Site borings
Riverbed elevation	ft, NAVD 88	493	FIS river profile

6.2 Model Calibration with Aquifer Test Data

River stage and elevation, and groundwater levels at many monitoring wells at the site were monitored prior to, during, and after aquifer testing. A summary of the observed conditions prior to testing and conditions late in the aquifer testing are summarized in Table 4. These data were used as calibration points for the yield model. The model was calibrated to all three sets of observations (static, pumping, and drawdown) for both aquifer tests.

Table 4. Calibration data set for static and pumping elevations (feet, NAVD88) and drawdown (feet) for both aquifer tests.

	Static		Pumping		Drawdown	
Label	**Test 1**	**Test 2**	**Test 1**	**Test 2**	**Test 1**	**Test 2**
MW-1	500.73	501.06	500.51	499.71	0.22	1.35
MW-2	500.84	501.12	500.14	500.4	0.70	0.72
MW-3	500.67	500.99	499.22	500.61	1.45	0.38
MW-4	500.55	500.88	498.29	500.67	2.26	0.21
MW-5	500.52	500.84	497.37	500.59	3.15	0.25
MW-6	500.38	500.70	498.94	500.55	1.44	0.15
MW-7	500.47	500.78	499.69	500.7	0.78	0.08
MW-9	502.22	502.34	501.96	502.12	0.26	0.22
MW-10	501.28	501.51	500.70	501.3	0.58	0.21
MW-11	502.30	502.48	502.01	501.95	0.29	0.53
MW-12	500.91	501.23	500.64	500.21	0.27	1.02
MW-13	501.14	501.46	500.86	498.44	0.28	3.02
MW-14	500.78	501.1	500.39	499.53	0.39	1.57
MW-16	501.16	501.44	500.71	500.26	0.45	1.18
TW-1	--	500.91	--	500.60	--	0.31
TW-2	500.83	--	500.53	--	0.30	--

The best-fit parameters obtained by model calibration are presented in Table 5, with a calibrated value for hydraulic conductivity of 500 ft/day for Test 1 and 550 ft/day for Test 2. A riverbed resistance of 2 days was obtained for both aquifer tests. Regional flow was estimated to be 200 to 300 ft^2/day; the value was evaluated by matching the observed static water levels across the parcel. These parameter values match closely the ranges obtained from the transient analysis of the test data. Values of 500 ft/day conductivity and 2 days riverbed resistance were chosen to represent aquifer and river conditions in the collector well yield model.

Table 5. Calibrated values of hydraulic parameters for aquifer tests 1 and 2.

Test	Property	Units	Calibrated Values
1	Aquifer hydraulic conductivity	ft/day	500
	Riverbed resistance	days	2
2	Aquifer hydraulic conductivity	ft/day	550
	Riverbed resistance	days	2
1, 2	Regional flow	ft^2/day	200-300

A cross plot of the observed and modeled water levels representing static and pumping conditions for both aquifer tests is shown in Figure 11. Figure 12 shows a cross plot for the aquifer drawdown. The RMSE for the residuals in Figure 11 is 0.22, which is 4.3% of the total observed range in water levels, indicating a good fit between observations and model results. The root mean square error of the drawdown residuals is 0.24, which is 7.9% of the observed range of drawdowns. In general, the model over-predicts the drawdown in the aquifer indicating the calibrated parameters will provide a conservative estimate of the aquifer yield.

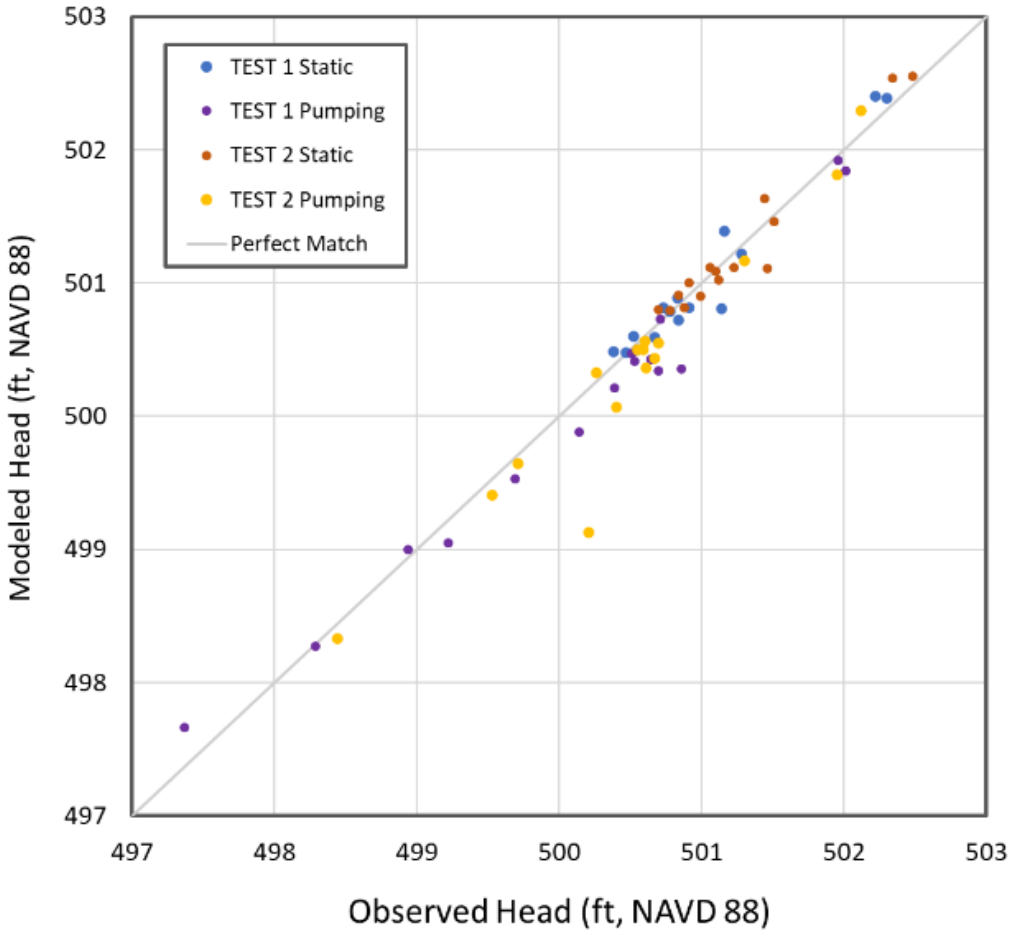

Figure 11. Cross plots of observed and modeled pumping and static water levels during TW-1 and TW-2 aquifer tests.

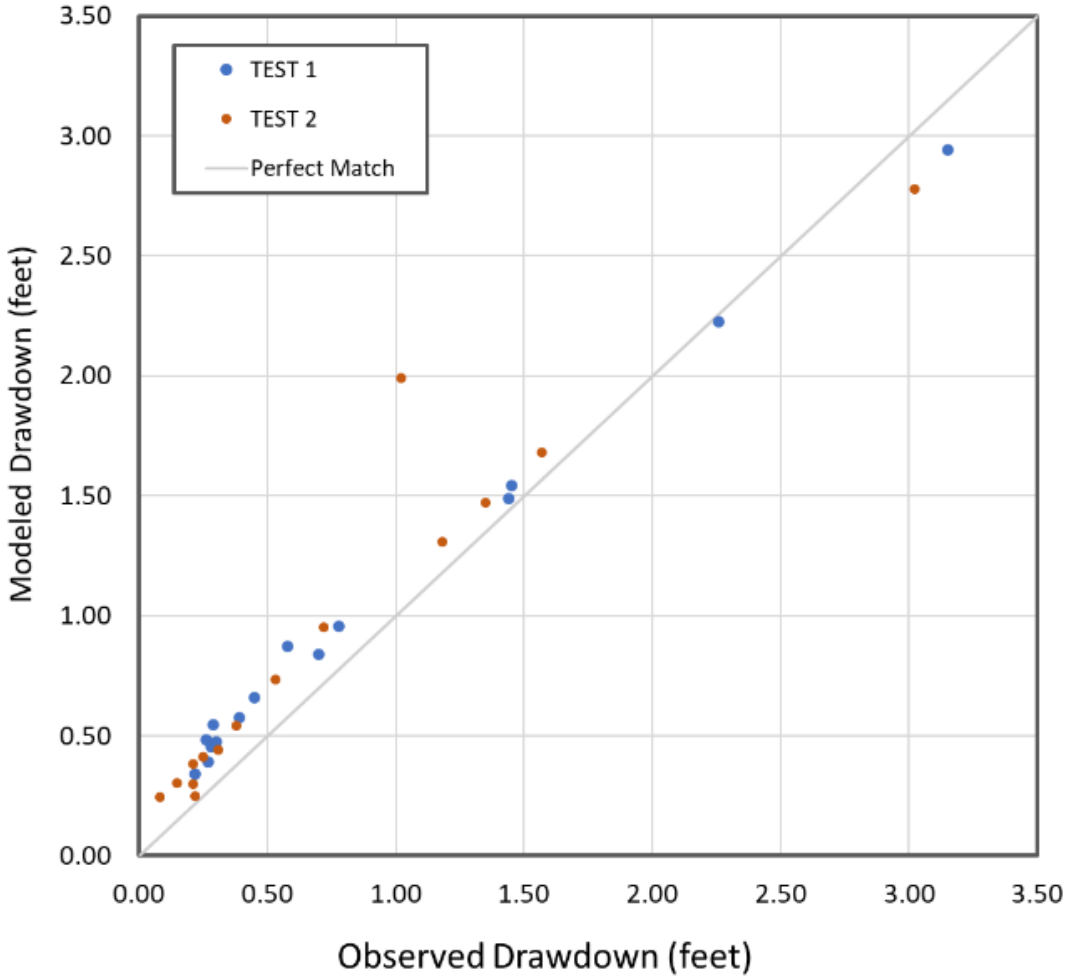

Figure 12. Cross plot of observed and modeled drawdown at monitoring wells for TW-1 and TW-2 aquifer tests.

6.3 Preliminary Collector Well Design and Model Parameters

A typical collector well design consisting of a 20-foot diameter caisson with 6 evenly spaced laterals, each with 10 feet of blank casing adjacent to the caisson and 200 feet of screen is represented in the model to assess potential yields. The lateral closest to the bank of the river was maintained at a minimum distance of 200 feet from the river.

Pertinent elevations are illustrated on Figure 13, including the centerline of laterals at 427 feet, and the minimum allowable water level in the caisson at an elevation of 442 feet. This provides a minimum of 15 feet of head over the laterals at maximum pumping rate, which is conservative, where collector wells often operate with as little as 5 feet of head on the laterals. This minimum water level allows for flexibility during construction if, for example, the caisson cannot be sunk to the full depth and the laterals elevations must be increased. Alternatively, it also allows for a second tier of laterals at centerline elevation of 434 feet if formation gradations require small screen openings resulting in high entry velocities.

The skin resistance of the laterals is specified to range from 0.01 days/foot to 0.02 days per foot. This range is based on post construction yield modeling of collector wells in similar geologic settings; the low value represents a typical average value for an individual lateral and the high value represents a low efficiency lateral for formations with hydraulic conductivity of 500 ft/day.

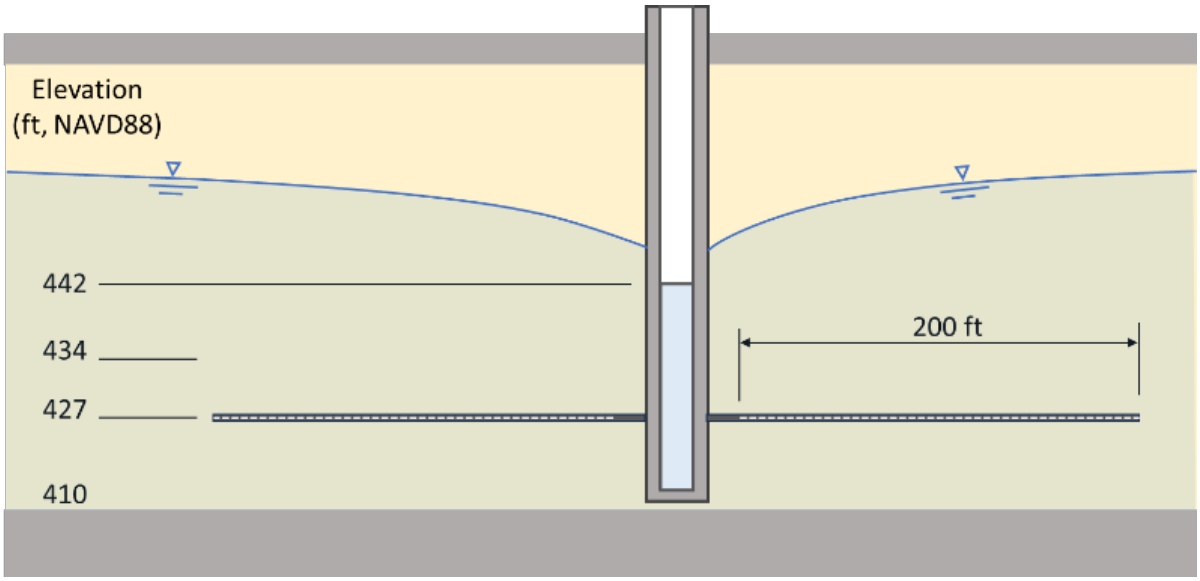

Figure 13. Conceptual design of the collector well showing the minimum allowable water level in the caisson.

6.4 Seasonal Variation in River Levels and Bed Resistance

Water levels in the Wabash River at the project site were monitored for several months and tied to NAVD88 elevation. The water elevations in the river ranged from 498.9 feet to 503.3 feet during monitoring. Daily river stage and elevation records are maintained by the USGS upstream at Station 03335500, Wabash River at Lafayette, with records beginning in 2007. That data was correlated with the site data to produce a river elevation record at the project site for the period 2007 to current. The correlation is only valid for river stages encountered on site while monitoring. The results are used to produce an approximate low- flow elevation duration curve for the Wabash River at Parcel 1.

The results are presented in Figure 14, which includes both an annual curve and seasonal curves. A summary of seasonal river elevations used in the yield model is provided in Table 6.

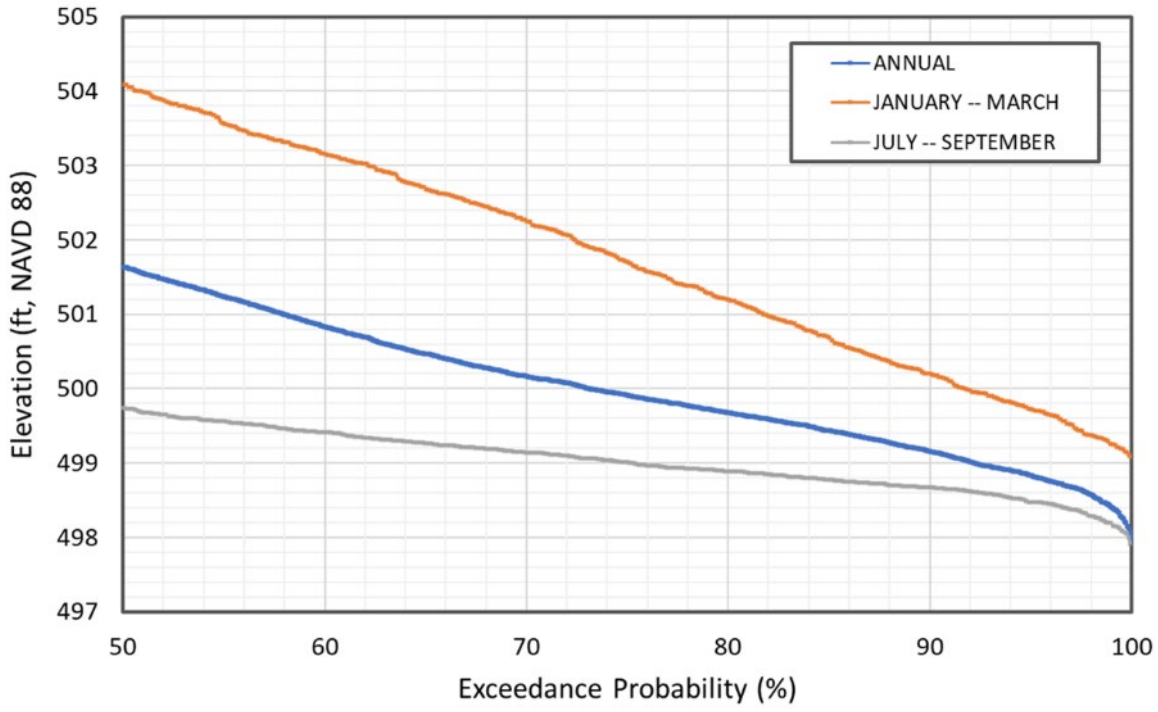

Figure 14. Approximate, low-flow elevation-duration curve for the Wabash River at the Parcel 1.

Table 6. Summary of seasonal river stages used in the yield scenarios.

Season	Condition	Elevation (ft, NAVD88)
Summer	Low Stage	498.0
	Median Stage	499.8
Winter	Low Stage	499.0
	Median Stage	504.0
Annual	Median Stage	501.6

6.5 Yield Scenarios and Results

Several scenarios were investigated to test the potential yield of one and two collector wells on Parcel 1 under a range of conditions. The scenarios include differing river stages, and both low and high skin resistance values on the lateral screens. A summary of results is presented in Table 7.

The winter yields of collector wells are often lower than summer yields due to the increase in viscosity of cold water compared to warm water. The increased viscosity also increases the resistance of the riverbed and potentially decrease the hydraulic conductivity of the aquifer adjacent to the river. The potential reduction in yield depends on several factors, including the percentage of groundwater captured by the well that originates from the river with a travel time less than 3 months, versus the percent of water captured from regional flow that will have a higher ambient temperature than the river water. Based on observations of the winter operation of collector wells by the Kansas City BPU (personal communication with Jeff Henson, Black and Veatch), the winter yield predicted with the model were reduced by 30% to account for the cold-water conditions.

Table 7. Summary of scenarios and yield results.

	Property	Units	Summer		Winter*	
			Low Stage	Median Stage	Low Stage	Median Stage
River Properties	Elevation	ft, NAVD88	498.0	499.8	499.0	504.0
	Depth	feet	5	7	6	11
	Bed resistance	days	2.0	2.0	2.0	2.0
Aquifer Properties	Hydraulic conductivity	ft/day	500	500	500	500
	Regional flow	ft^2/day	0	0	0	0
Collector Well Properties	Caisson water level	ft, NAVD88	442	442	442	442
	Arm resistance/width	days/ft	0.02-0.01	0.02-0.01	0.02-0.01	0.02-0.01
	Yield, 1 well	**MGD**	**15-21**	**16-23**	**11-15***	**12-17***
	Yield, 2 well	**MGD**	**29-39**	**31-42**	**20-27***	**23-31***

*Note: Winter yields reduced by 30% to account for the decreased viscosity of water at 32 degrees F.

Based on the modeling scenarios, a lower bound on the yield of a single collector well was set at 11 MGD, and two collector wells at 20 MGD. These estimates are conservative and based on low river-stage conditions, high skin resistance along the lateral screens, no contribution to yield from regional flow, and a 30% reduction in yield for cold-water conditions.

6.6 Analysis of Predictive Uncertainty

To assess the effects of parameter uncertainty on the collector well yield, the yield model was used with alternate realizations of hydraulic conductivity and streambed resistance identified during the transient pumping test analysis. The analysis used the model of summer low flow conditions, streambed resistances adjusted for summer viscosity, and the range of lateral resistance as defined by the dimensionless relationship,

$$5 \leq ck/w \leq 10$$

where c/w s the resistance per width of the lateral, and k is the hydraulic conductivity of the aquifer. The alternate realizations of parameters are summarized in Table 8.

The results of the analysis are presented in Figure 15. The x-axis is the hydraulic conductivity, with the associated streambed resistance noted above the axis, and the y-axis is the total yield in million gallons per day for collector wells at Sites 1 and 2. The lowest value of the hydraulic

conductivity presented is 350 ft/day, which represents the alternate realization when the river is in direct contact with the aquifer; this represents the lowest possible hydraulic conductivity of the aquifer. The upper value of 600 feet per day represents the limit where higher values can no longer be well calibrated to drawdown data.

A comparison of yields for the alternate realizations of parameters with the design yield of the collector wells shows that the upper bound of the design yield is conservative in all cases with hydraulic conductivity greater than 475 ft/day. For the limiting case of 350 ft/day, the upper and lower bounds are about 7 MGD below the design yield.

Note that the alternate realizations of parameters are obtained by calibration to observed drawdown only; the river and groundwater elevations are not considered, and therefore the best-fit parameters presented earlier make use of additional information not considered in the alternate realizations. The water level conditions at Test Sites 1 and 2 suggest a high streambed resistance of 2 days. This is illustrated in Figure 16 and Figure 17 which show cross plots of simulated and observed heads for the best fit parameters at Site 1, and the bounding alternate realization, k=350 ft/day and c=0.05 days. Both cases fit the observed site gradients, but without a higher streambed resistance the case of low hydraulic conductivity cannot accurately represent the observed heads.

Table 8. Alternate realizations of parameters used in the predictive uncertainty analysis. Realization 1 represents the streambed in direct connection with the top of the aquifer.

Realization	Hydraulic Conductivity (ft/day)	Riverbed Resistance (days)
1	350	0.05
2	400	0.5
2	450	1.0
3	500	1.5
4	550	2.0
5	600	3.0

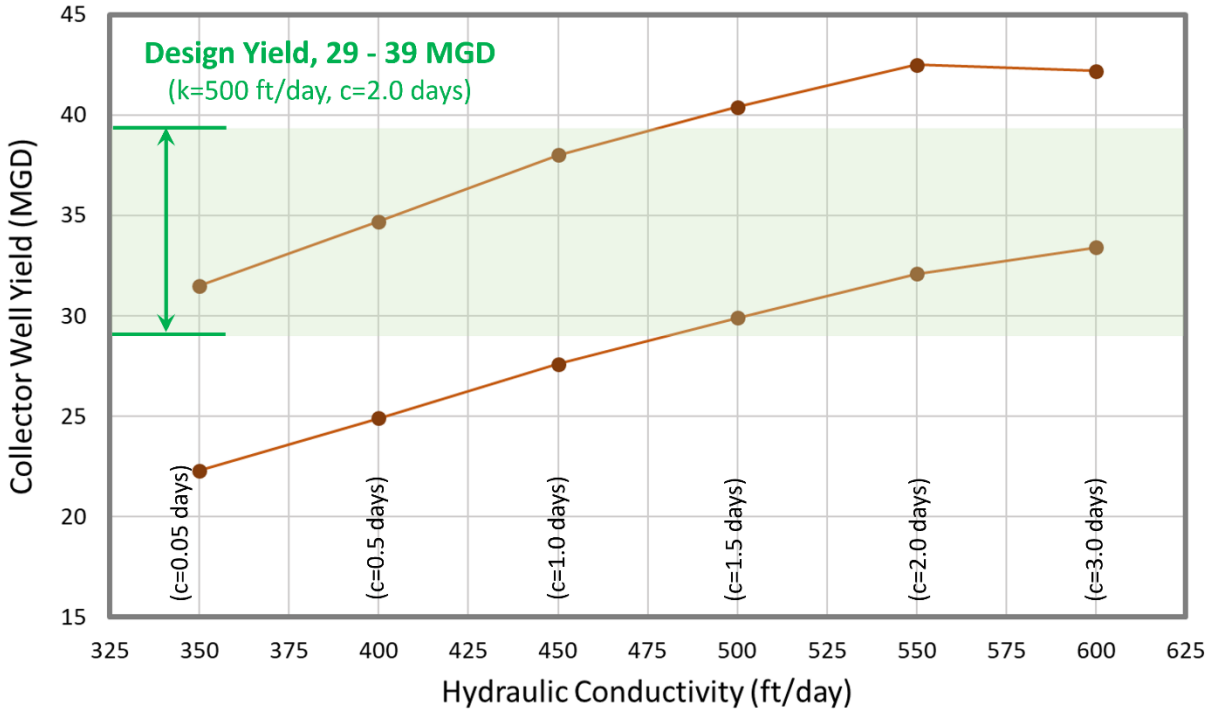

Figure 15. Results from the Predictive Uncertainty Analysis. The design yield range is highlighted in green. Yields based on alternate realizations of hydraulic conductivity and riverbed resistance are indicated by the brown lines.

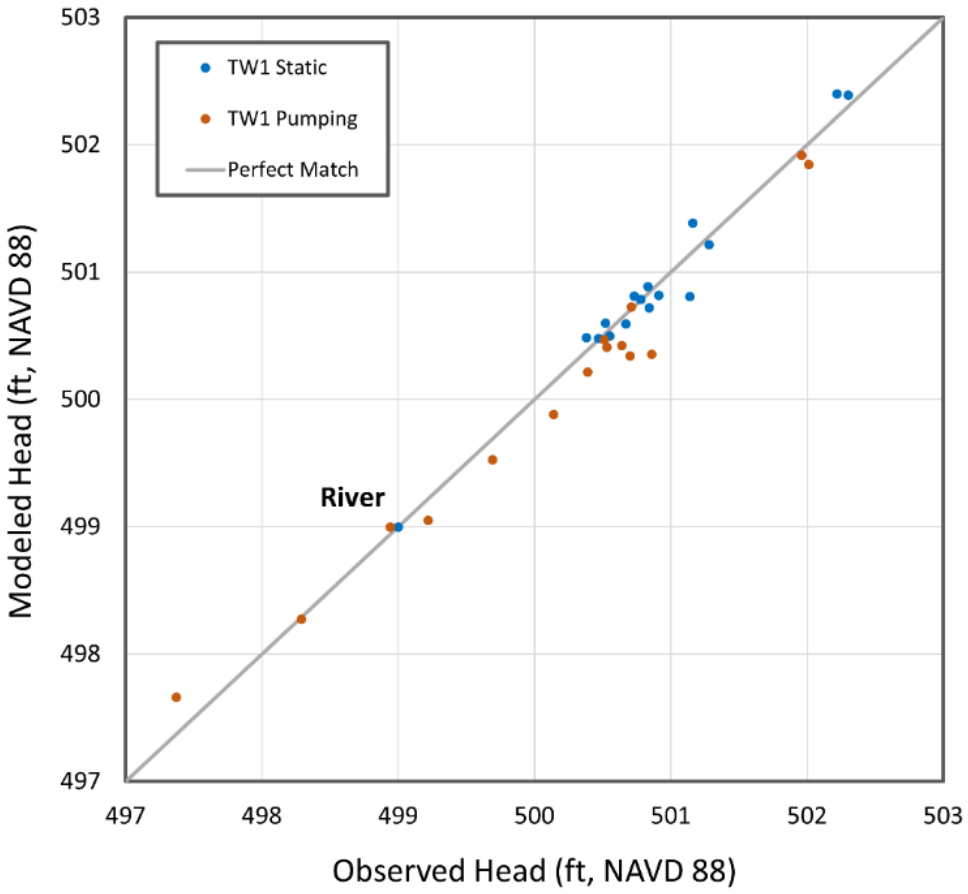

Figure 16. Calibration results for the best-fit parameters at Site 1 (k=500 feet/day, c=2 days).

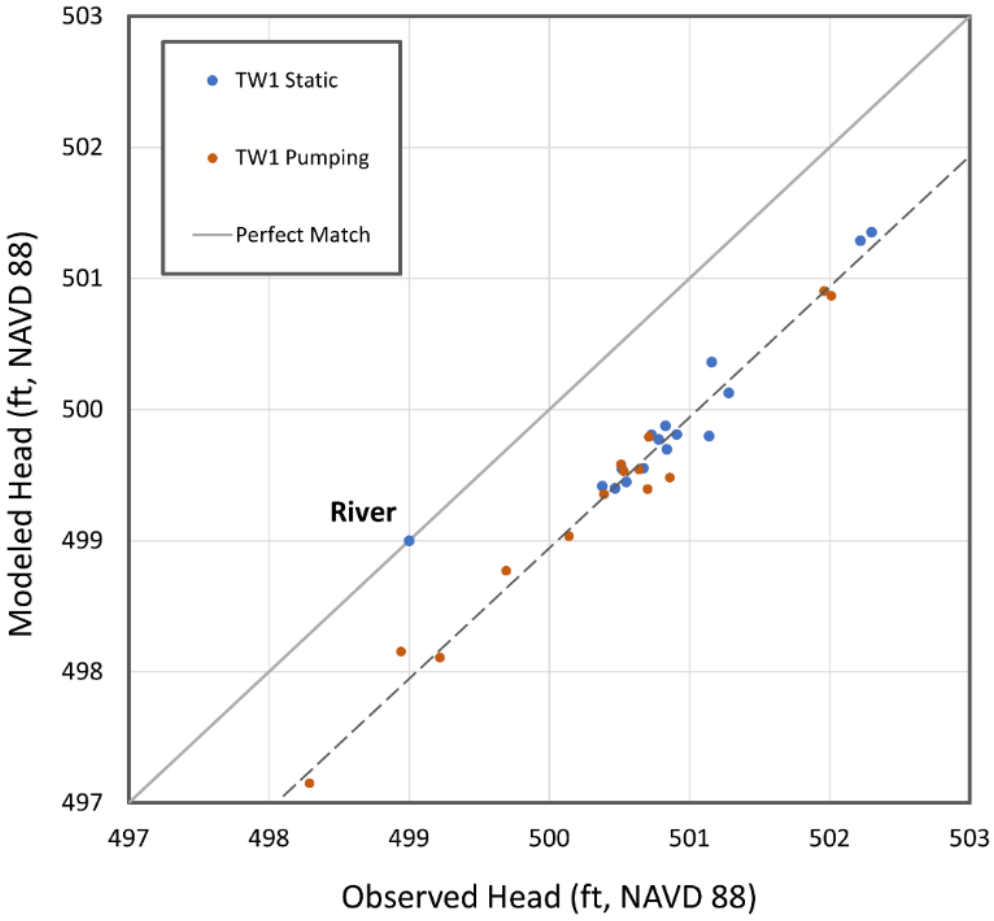

Figure 17. Calibration results for the alternate realization (k=350 feet/day, c=0.05 days).

6.7 Dewatering at Well

In general, dewatering should not exceed 50% of the static saturated thickness. A summary of the predicted aquifer dewatering under the critical summer low river stage and winter low river stage scenarios for a collector well at both Sites 1 and 2 is presented in Table 9, for a minimum water elevation in the caisson of 442 feet NAVD 88; for the scenarios shown, the water elevation in the aquifer outside the caisson is dependent on the lateral resistance and in all cases is significantly higher than 442 feet. As summarized in the table the maximum aquifer dewatering is 44% of the static saturated thickness. Only results for the aquifer drawdown near the collector well at Site 1 is presented. The aquifer drawdown at a collector well at Site 2 is slightly less than at Site 1.

Table 9. Summary of aquifer dewatering for Summer and Winter Low Stage Scenarios at Site 1.

	Units	Summer Low Stage		Winter Low Stage	
Lateral Resistance/Width	days/ft	0.01	0.02	0.01	0.02
River Elevation	ft, NAVD 88	498	498	499	499
Aquifer Base Elevation	ft, NAVD 88	410	410	410	410
Aquifer Saturated Thickness	feet	88	88	89	89
Min. Aquifer Elevation	ft, NAVD 88	459.9	472.1	459.5	471.9
Max. Aquifer Drawdown	feet	38.1	25.9	39.5	27.1
Aquifer Dewatering	%	43	29	44	30

7.0 WATER QUALITY

INTERA collected raw-water samples from each test well during their respective aquifer tests. The samples were collected according to a sampling and analysis plan (SAP) developed by Black and Veatch (Black and Veatch, 2023). The objectives of the sampling effort were to:

1) characterize the groundwater component of the source water and inform assumptions related to treatment process strategies, and

2) identify any contamination that might be present near the proposed collector well locations.

The water samples were submitted to Eurofins Environmental Testing Laboratory for analysis of a broad suite of analytes, including the United States Environmental Protection Agency's (USEPA's) primary and secondary drinking-water contaminants and additional water-quality parameters. All analytes are provided in Table B-1 in Appendix B.

Also sampled and analyzed were analytes included in the USEPA Unregulated Contaminant Monitoring Rule (UCMR). The UCMR program is part of the Safe Drinking Water Act. It requires public water systems to monitor and test for the presence of certain unregulated contaminants in drinking water. Unregulated contaminants are substances that are not currently subject to regulatory standards, but the USEPA wants to gather data about their occurrence and potential health effects. The UCMR analytes that were tested include the UCMR 5 list of PFAS compounds as well as select compounds from UCMR 1-4.

7.1 Sampling Approach

Prior to sample collection, field parameters were monitored using a Horiba multi-sonde and a flow-through device. The unit was outfitted with sondes for measuring temperature, pH, specific conductance, turbidity, dissolved oxygen, oxidation-reduction potential (ORP), and total dissolved solids (TDS) (Table 10).

After the field parameters had stabilized, water samples were collected from a spigot installed on the pump discharge piping at each test well. Water samples were collected from TW-1 on 6/28/23 at 70 hours into the test, just prior to cessation of pumping. A total of approximately 6 million gallons (MG) of water had been pumped from the TW-1 prior to sample collection.

Due to schedule and holding time constraints, water samples were collected from TW-2 on 7/14/23, the second day of the test, well before the cessation of pumping. Specifically, the TW-2 samples were collected at 26 hours into the test, after a total of approximately 2 MG had been pumped from the well.

All samples were packed in coolers of ice and delivered in person to the Eurofins Laboratory in South Bend, Indiana on the same day as sample collection.

7.2 Results

Water-quality results are summarized in three tables. Table 8 presents the field parameters observed prior to sample collection. Detections above respective reporting limits for inorganic analytes are summarized in Table 9. Detections above respective reporting limits for physical parameters, nutrients, organics, and microbes are summarized in Table 10. Where applicable, the USEPA maximum contaminant level (MCL) and secondary maximum contaminant level (SMCL) are shown. Full lab reports are included in Appendix B.

Some of the results from TW-1 suggest that the well may not have been sufficiently developed prior to sampling, as indicated by a relatively high turbidity (Table 10) and color result (Table 12).

A piper plot like the one shown in Figure 18 is a tri-linear diagram that summarizes and illustrates the major inorganic species in a water sample and can be used to compare different water samples and determine water type. The clustering of the data points on the plot indicates that the source water from the two test wells is similar in type and can be classified as calcium-bicarbonate type water, which is typical for groundwater in Indiana (Figure 18).

The testing results indicate that the water meets necessary criteria and is safe for use as a drinking water source. No VOC, SVOC, or pesticide was detected above a respective reporting limit. No primary USEPA standard was exceeded.

No analyte associated with the UCMR was detected except for perchlorate in TW-1 (Table 11). Perchlorate in groundwater primarily originates from human activities and industrial processes. Perchlorate is not commonly found in significant concentrations in natural groundwater but has become a concern due to its widespread use in various applications, including manufacturing and industrial processes, and fertilizers and agricultural runoff.

The observed iron and manganese concentrations in the test wells were above the respective SMCL, with iron ranging from 1.4 to 1.5 mg/L and manganese ranging from 0.1 to 0.7 mg/L (Table 11). For both iron and manganese, the SMCL is set to minimize corrosion, staining, and undesirable taste and odor effects. Given the observed concentrations, treatment would be required for both iron and manganese. However, iron and manganese concentrations pumped by collector wells generally decrease over time as oxygenated river water is induced through the riverbed.

Table 10. Summary of field parameters observed prior to sample collection.

Parameter	Units	TW-1	TW-2
Date	-	6/28/2023	7/14/2023
Time	-	0850	1015
Temperature	degrees C	13.42	13.93
pH	-	7.43	7.84
Specific Conductance	uS/cm	795	792
Turbidity	NTU	184	0
Oxygen, Dissolved	mg/L	0	0
Oxygen Reduction Potential	mV	-79	-108
Total Dissolved Solids	mg/L	509	507

Notes: mg/L = milligrams per liter; uS/cm = microsiemens per centimeter
mV = millivolts; NTU = Nephelometric Turbidity Unit; '-' = Not Applicable

Table 11. Summary of inorganic analytes detected above reporting limits.

Parameter	Units	RL	MCL	SMCL	TW-1	TW-2
Inorganics, Major Metals						
Calcium	mg/L	0.10	-	-	110	100
Magnesium	mg/L	0.10	-	-	32	35
Potassium	mg/L	0.20	-	-	1.4	1.4
Sodium	mg/L	0.10	-	-	5.6	6.0
Inorganics, Major Non-Metals						
Alkalinity, Total	mg/L	1.0	-	-	290	270
Bromide	ug/L	10.0	-	-	41	48
Carbon Dioxide, Free	mg/L	0.1	-	-	25	11
Chloride	ug/L	2.0	-	-	17	16
Fluoride	mg/L	0.1	2	-	0.1	0.2
Oxygen, Dissolved	mg/L	1.00	-	-	2.9	5.5
Sulfate	mg/L	5.0	-	250	86	91
Inorganics, Minor Metals						
Aluminum	ug/L	2.0	-	50	< 2.0	5.1
Arsenic	ug/L	1.0	10	-	1.4	1.1
Barium	ug/L	2.0	2000	-	70	70
Chromium	ug/L	0.90	100	-	1.1	2.6
Iron	mg/L	0.010	-	0.3	**1.5**	**1.4**
Lithium	ug/L	2.0	-	-	4.0	< 2.0
Manganese	ug/L	2.0	-	50	**100**	**170**
Zinc	ug/L	5.0	-	5000	< 5.0	7.6
Inorganics, Minor Non-Metals						
Silica	mg/L	0.043	-	-	15	15
Perchlorate	ug/L	0.05	-	-	0.24	< 0.05

Notes: mg/L = milligrams per liter; RL = Reporting Limit; ug/L = micrograms per liter
MCL= Maximum Contaminant Level; SMCL = Secondary Maximum Contaminant Level
- = Not Applicable

Table 12. Summary of detections above reporting limits for physical parameters, nutrients, organics, and microbes.

Parameter/Analyte	Units	RL	MCL	SMCL	TW-1	TW-2
Physical						
Color	Color Units	3.0	-	15	35	NR
Langelier Index	LangSU	-	-	-	0.3	0.7
pH	SU	0.10	-	-	NR	7.7
Specific Conductance	uS/cm	2.0	-	-	720	720
Total Dissolved Solids	mg/L	10.0	-	500	490	460
Turbidity	NTU	0.1	-	-	10	15
Nutrients						
Ammonia, Nitrogen	mg/L	0.1	-	-	0.1	< 0.1
Nitrite (N)	mg/L	0.01	1	-	<0.01	<0.01
Nitrate (N)	mg/L	0.10	10	-	1.6	0.41
Organics, Other						
Dissolved Organic Carbon	mg/L	0.5	-	-	0.542	< 0.5
Total Organic Carbon	mg/L	0.5	-	-	0.55	NR
Ultraviolet Absorption, 254 nm	1/cm	0.009	-	-	0.021	0.033
Microbial						
Heterotrophic Plate Count	MPN/mL	2.0	-	-	33	17
Total Coliform	-	-	5%[1]	-	Present	Absent

Notes: mg/L = milligrams per liter; RL = Reporting Limit; NR = Not Reported; '-' = Not Applicable
uS/cm = microsiemens per centimeter; NTU = Nephelometric turbidity units; SU = Standard Units
MCL= Maximum Contaminant Level; SMCL = Secondary Maximum Contaminant Level
[1] total percent positives within a month; MPN/mL = most probable number per milliliter

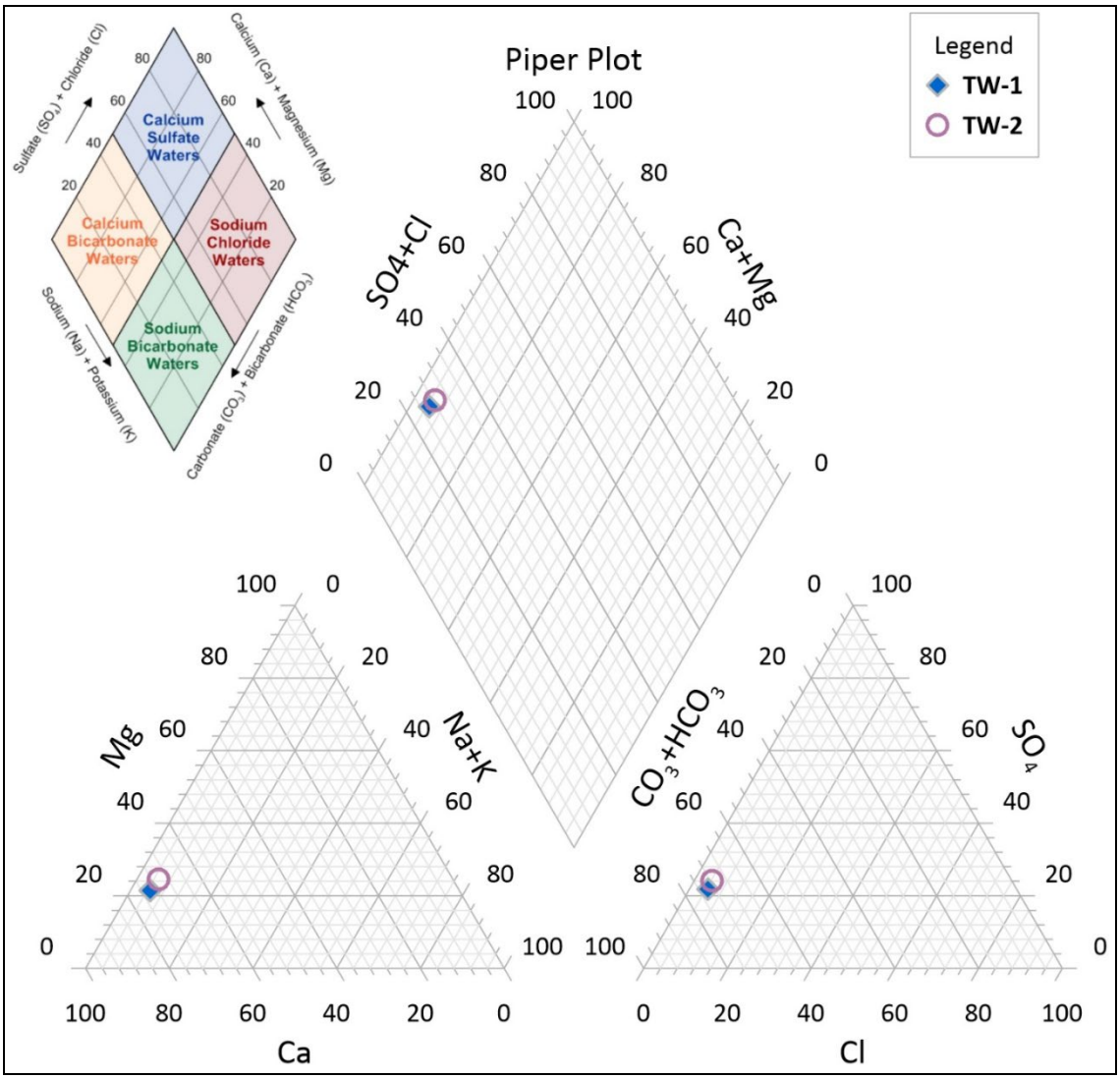

Figure 18. Piper plot of water-quality results from TW-1 and TW-2.

8.0 CONCLUSIONS

The field program at Parcel 1 has yielded valuable insights into the site's hydrogeological characteristics. Below we present conclusions for Sites 1 and 2 and a discussion of the additional steps needed to develop a design-level analysis for the two sites.

8.1 Sites 1 and 2

The field program encompassed drilling sonic test borings, logging geologic sediments, installing monitoring wells and test production wells, conducting aquifer tests, and collecting water-quality samples. These efforts have provided essential data to evaluate potential source-water quality, estimate yields, enhance the conceptual well field design.

- Results of the test drilling show that the underlying stratigraphy at the site is consistent with the regional setting. The aquifer system in the area consists of large bodies of highly permeable unconsolidated sand and gravel which were deposited as glacial outwash or alluvial valley fill. These permeable sediments fill both the recent alluvial valleys as well as the ancient valleys eroded into the bedrock by pre-glacial drainage.

- Two separate aquifer tests were conducted at Parcel 1. Each test well was pumped at a constant rate of approximately 2 MGD for a standard length of 72 hours. The testing results indicate that the water meets necessary criteria and is safe for use as a drinking water source. No VOC, SVOC, or pesticide was detected above a respective reporting limit. No primary USEPA standard was exceeded.

- The aquifer test results were analyzed to estimate hydraulic properties of the aquifer conductivity of the aquifer and the hydraulic resistance between the bed of the river and the aquifer. Results from the tests were incorporated into a predictive groundwater flow model analysis.

- The objective of the modeling was to provide a conservative, lower bound on collector well yield. Based on the modeling scenarios, a conservative lower bound on the yield of a single collector well at Parcel 1 was set at 11 MGD, and two collector wells at 20 MGD.

- Higher yields are possible from Parcel 1, with the summer scenarios predicting a total of approximately 40 MGD from two collector wells. These higher yields would be a seasonal phenomenon in the summer months when the river stage is at normal levels

and the water is warm. Collector wells with capacity at or near 20 MGD would be the most prolific wells in all of Indiana.

8.2 Additional Steps for Design-Level Analysis

A preliminary design of horizontal collector wells was presented and used as a basis for developing preliminary design yields. A more detailed conceptual design is necessary prior to final design and construction of the wells. The conceptual design includes the following considerations:

1. **Site-specific conditions and stratigraphy.** Additional design considerations can be addressed with a more in-depth modeling analysis that includes location and total depth of the caisson, lateral alignment, the total number of laterals, and lateral elevation. The caisson can be moved toward the river to increase yields, and the lateral alignment may be adjusted to either maximize yield or maintain separation distances from the river.
2. **Mechanical Capacity of the well screens and laterals.** Screen inlet velocities – which depend on screen size, alignment, and maximum design yield – must be evaluated and limited to standard design capacities. If inlet velocities are too high for the preliminary design and yield, more feet of screen must be included. This can be accomplished by increasing individual lateral lengths or adding additional laterals in one or more tiers. Similarly, the maximum inline velocity within each lateral must be assessed and limited to standard design criteria.
3. **Allowable drawdown in the caisson.** Finally, the minimum water level in the caisson must be reassessed based on the results of items 1 and 2 above. A minimum of 5 feet of water in the caisson above the top of the laterals is typically required based on the construction technique used to install the laterals.

9.0 REFERENCES

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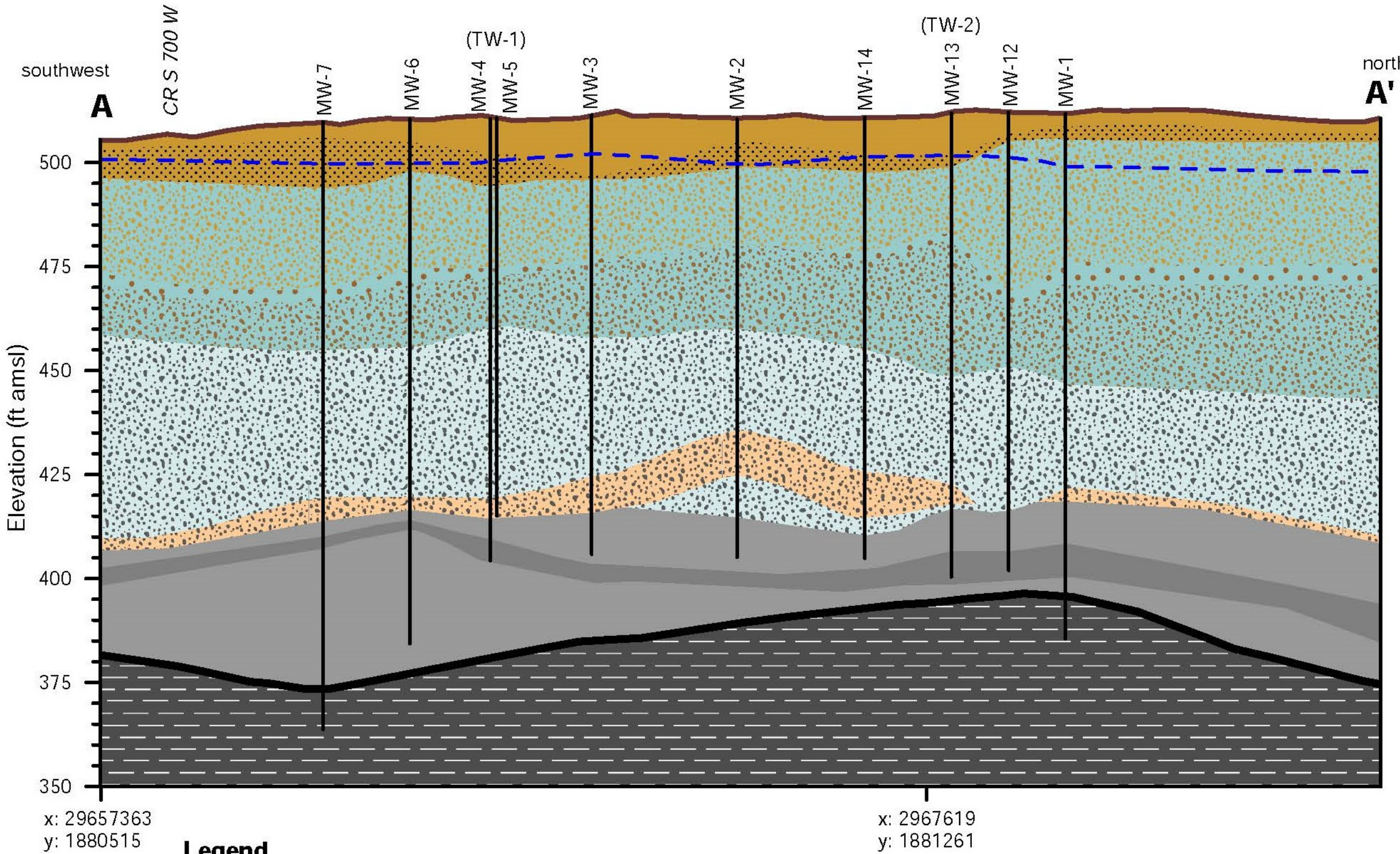
Exhibits



Geologic Cross Section A-A'

INTERA

DATE: OCT 2023

B&V PROJECT

EXHIBIT A

north
B

south
B'

Elevation (ft amsl)

550
525
500
475
450
425
400
375

Wabash River
MW-2
MW-17
MW-8

x: 2967411
y: 1882537

x: 2967170
y: 1881158

x: 2966929
y: 1879779

Legend

- Surface clay/soil
- Clayey fine sand
- Upper sand
- Lower gravel
- Middle sand
- Lower sand
- Silty sand/gravel
- Basal silt/clay
- Shale bedrock
- Static water level
- Borehole

500 ft

vertical exaggeration = 10x
coordinate system: Indiana State Plane West (ft)

INTERA

Geologic CrossSection B B'

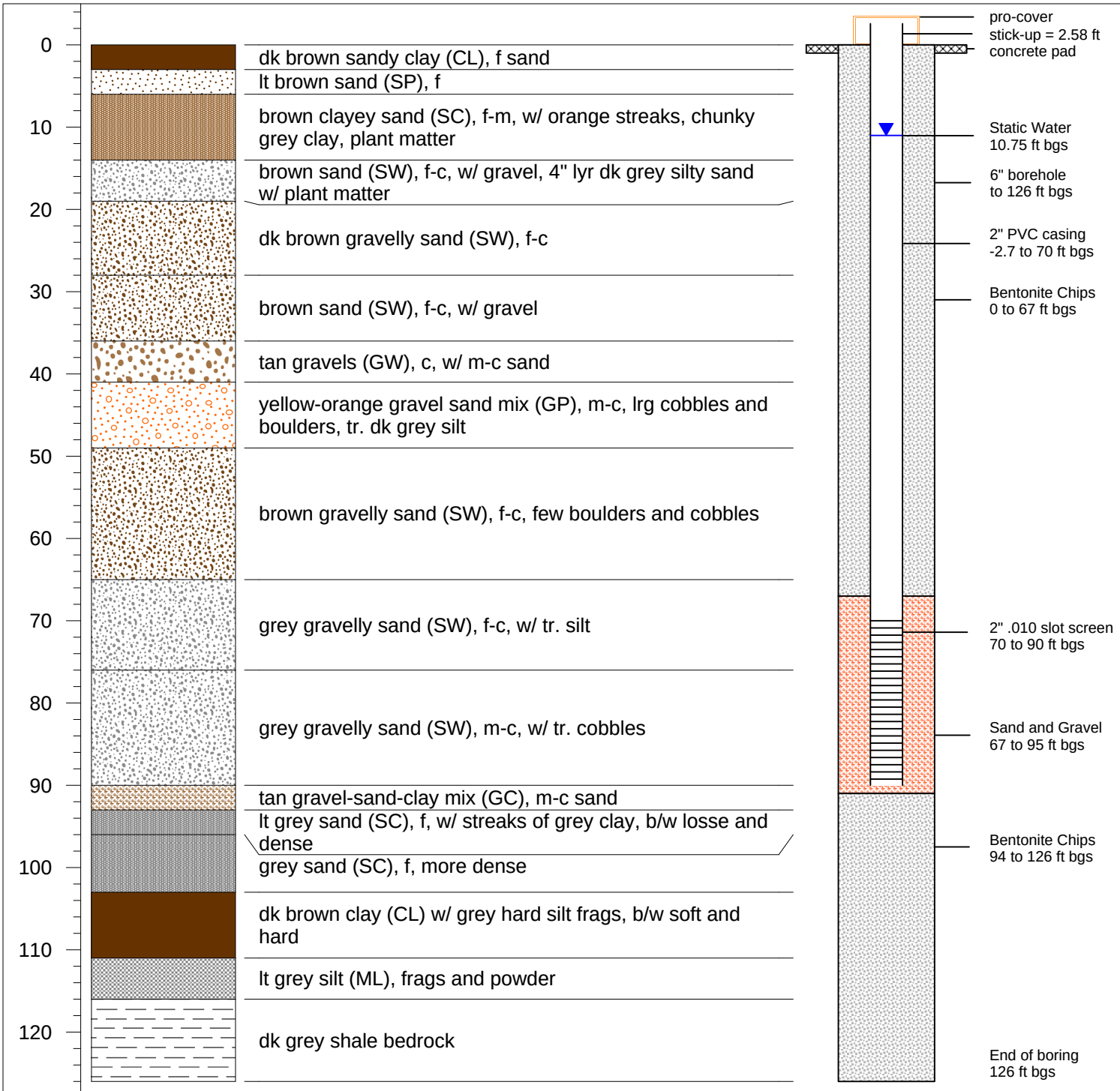
DATE: OCT 2023

EXHIBIT B

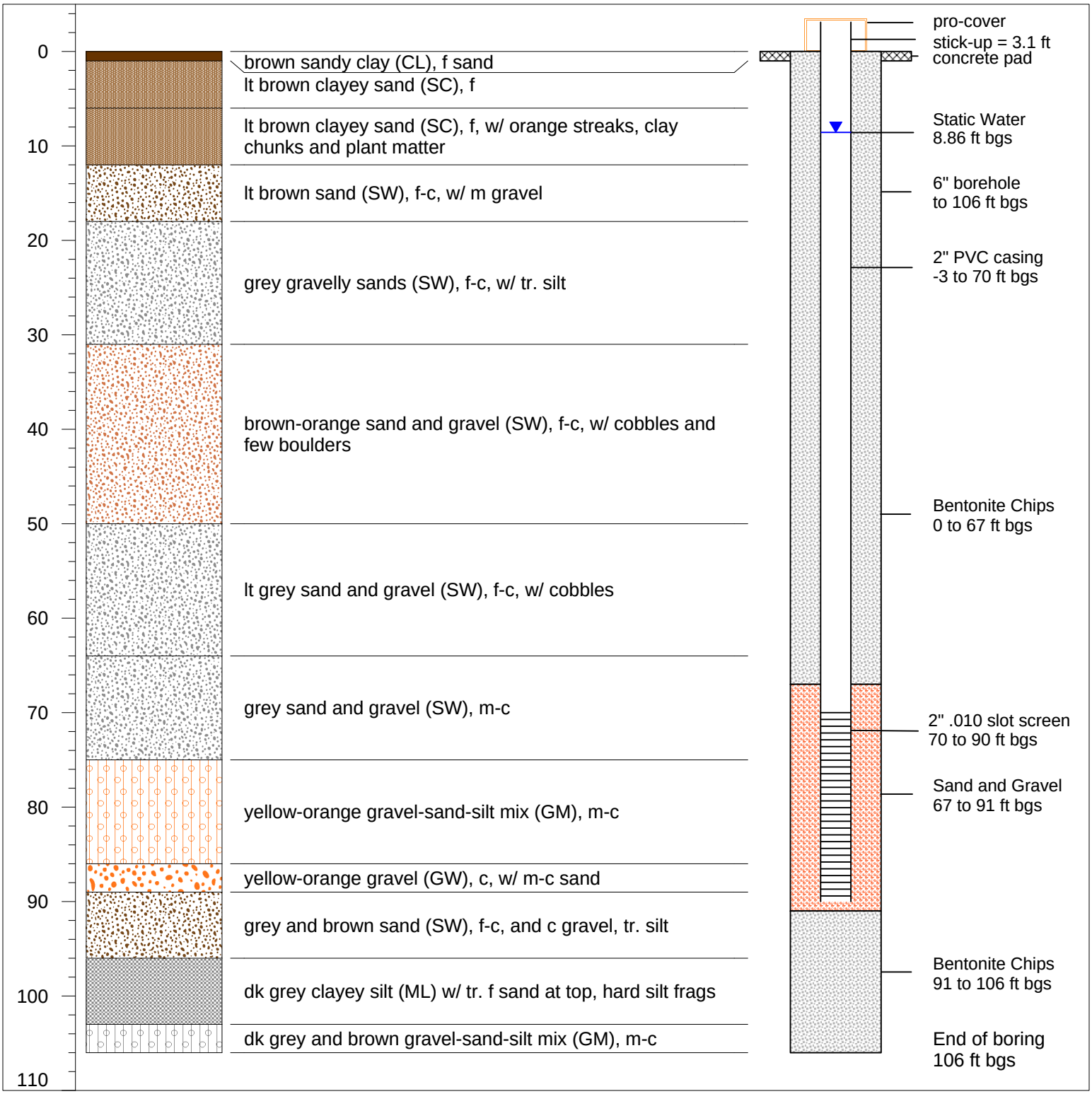
Appendix A

INTERA	**Boring ID:** MW-1	**Location:** Wabash Regional Wellfield **Site:** 1 and 2
Logged by: INTERA **Drilled by:** A Little, CASCADE	**Drilling Method:** Sonic **Borehole diameter:** 6"	**Elevation (TOC):** 514.26 ft **Lat:** 40.41359347° **Total Depth:** 126 ft **Long:** -87.02883806°
Date start: 5/19/2023	**Date finish:** 5/19/2023	**Date abandoned:**

Depth (ft bgs)	Lithology	Lithologic Description	Well Construction



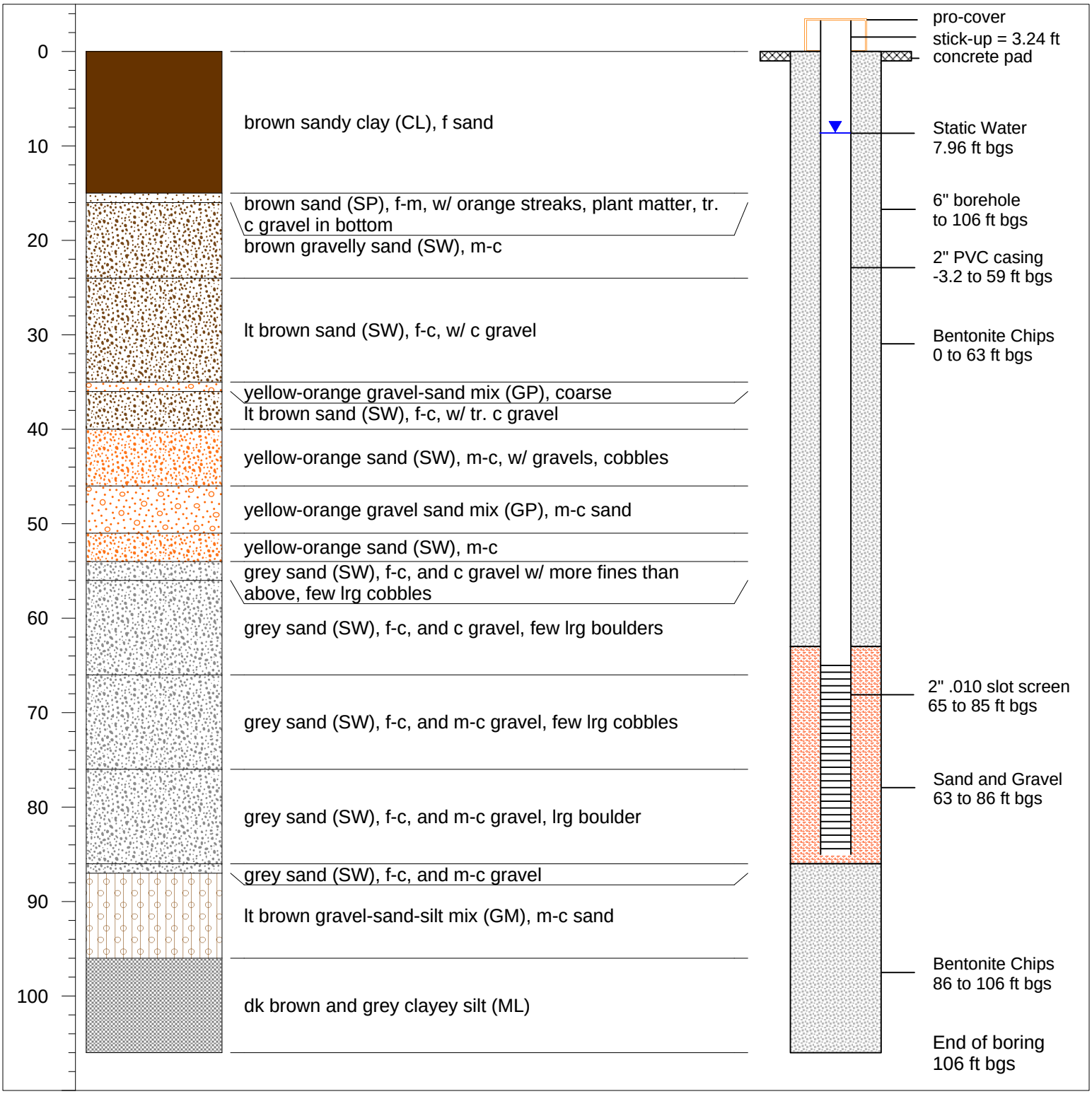
INTERA	**Boring ID:** MW-2	**Location:** Wabash Regional Wellfield **Site:** 1 and 2
Logged by: INTERA **Drilled by:** A Little, CASCADE	**Drilling Method:** Sonic **Borehole diameter:** 6"	**Elevation (TOC):** 512.79 ft **Lat:** 40.41290819° **Total Depth:** 106 ft **Long:** -87.03149794°
Date start: 5/19/2023	**Date finish:** 5/19/2023	**Date abandoned:**



TOC = top of casing
bgs = below ground surface

MW-2

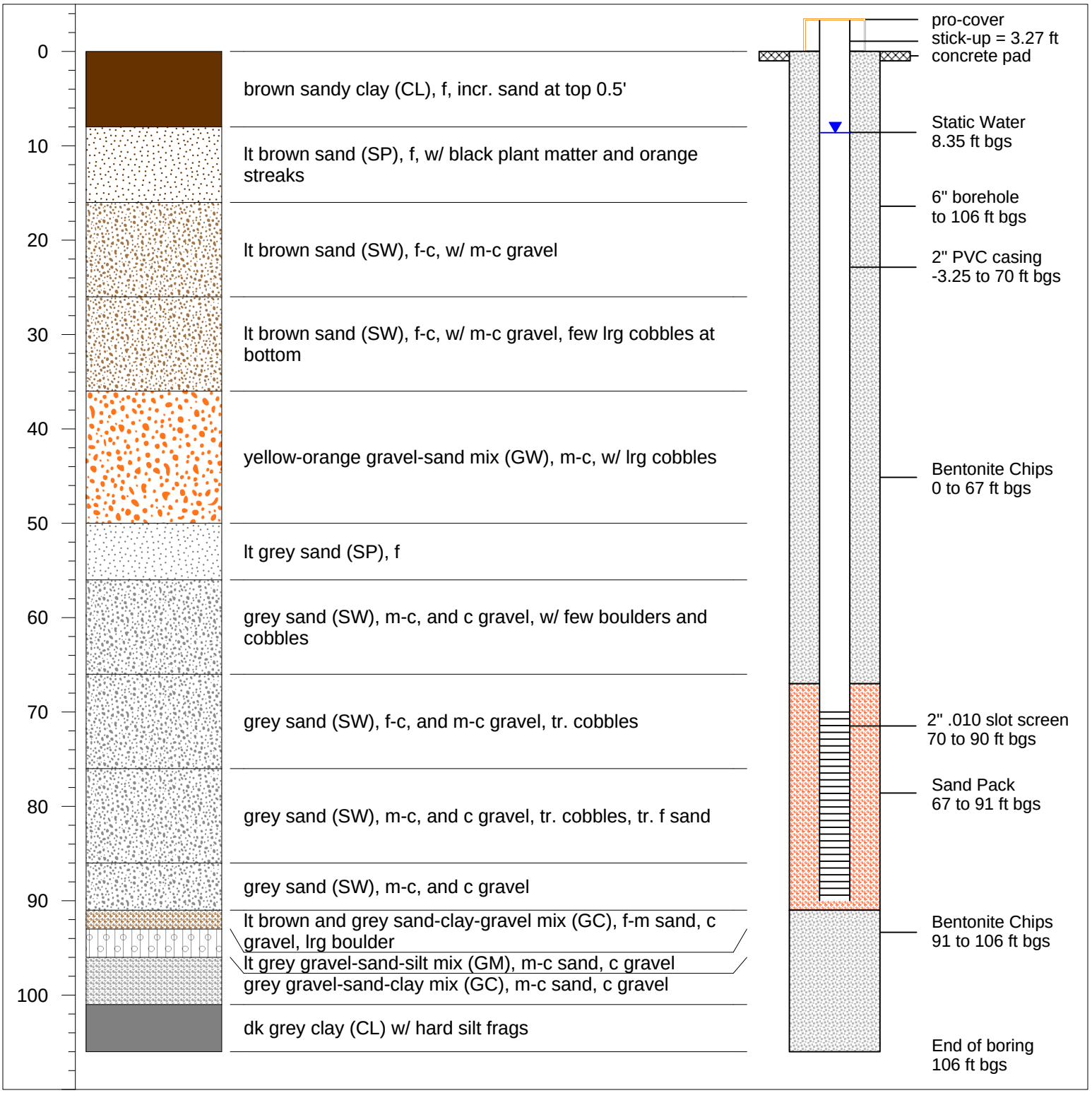
INTERA	**Boring ID:** MW-3	**Location:** Wabash Regional Wellfield **Site:** 1 and 2
Logged by: INTERA **Drilled by:** A Little, CASCADE	**Drilling Method:** Sonic **Borehole diameter:** 6"	**Elevation (TOC):** 511.94 ft **Lat:** 40.41256822° **Total Depth:** 106 ft **Long:** -87.03271911°
Date start: 5/17/2023	**Date finish:** 5/18/2023	**Date abandoned:**



TOC = top of casing
bgs = below ground surface

MW-3

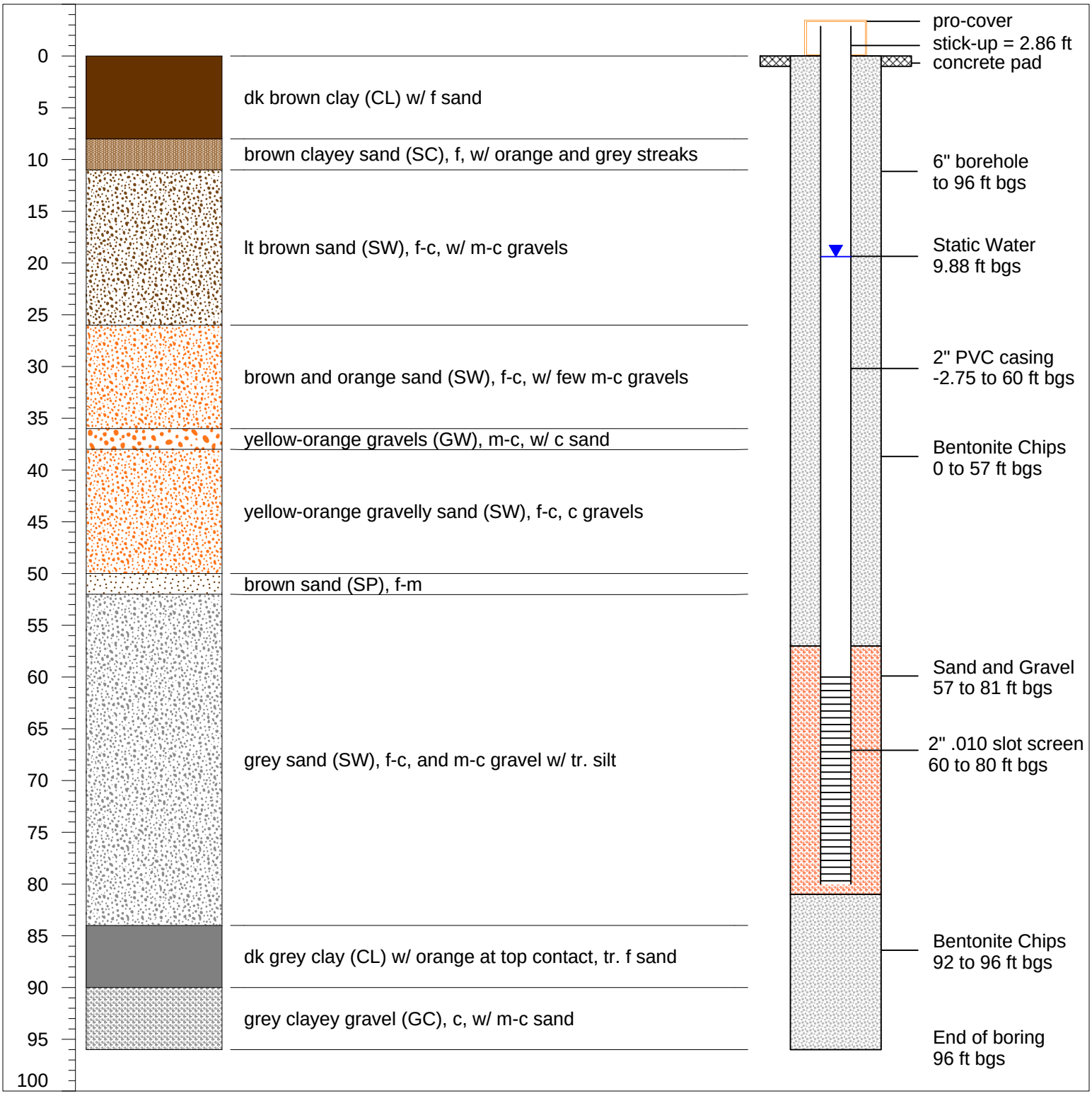
INTERA	**Boring ID:** MW-4	**Location:** Wabash Regional Wellfield **Site:** 1 and 2
Logged by: INTERA **Drilled by:** Arlen L., CASCADE	**Drilling Method:** Sonic **Borehole diameter:** 6"	**Elevation (TOC):** 512.29 ft **Lat:** 40.41233375° **Total Depth:** 106 ft **Long:** -87.03349853°
Date start: 5/17/2023	**Date finish:** 5/17/2023	**Date abandoned:**



TOC = top of casing
bgs = below ground surface

MW-4

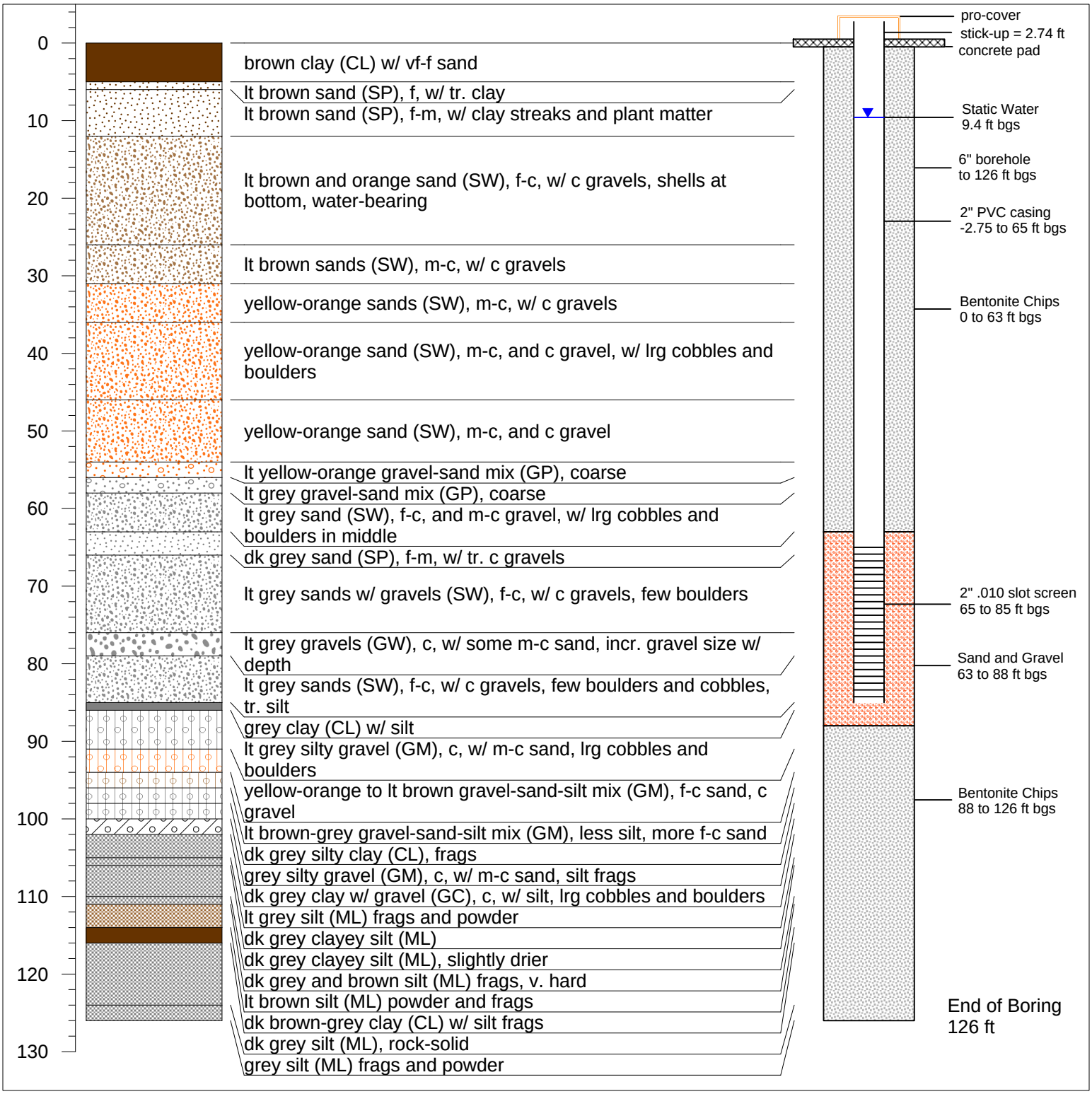
INTERA	**Boring ID:** MW-5	**Location:** Wabash Regional Wellfield **Site:** 1 and 2
Logged by: INTERA **Drilled by:** Arlen L, CASCADE	**Drilling Method:** Sonic **Borehole diameter:** 6"	**Elevation (TOC):** 513.27 ft **Lat:** 40.41220558° **Total Depth:** 96 ft **Long:** -87.03340283°
Date start: 5/21/2023	**Date finish:** 5/21/2023	**Date abandoned:**



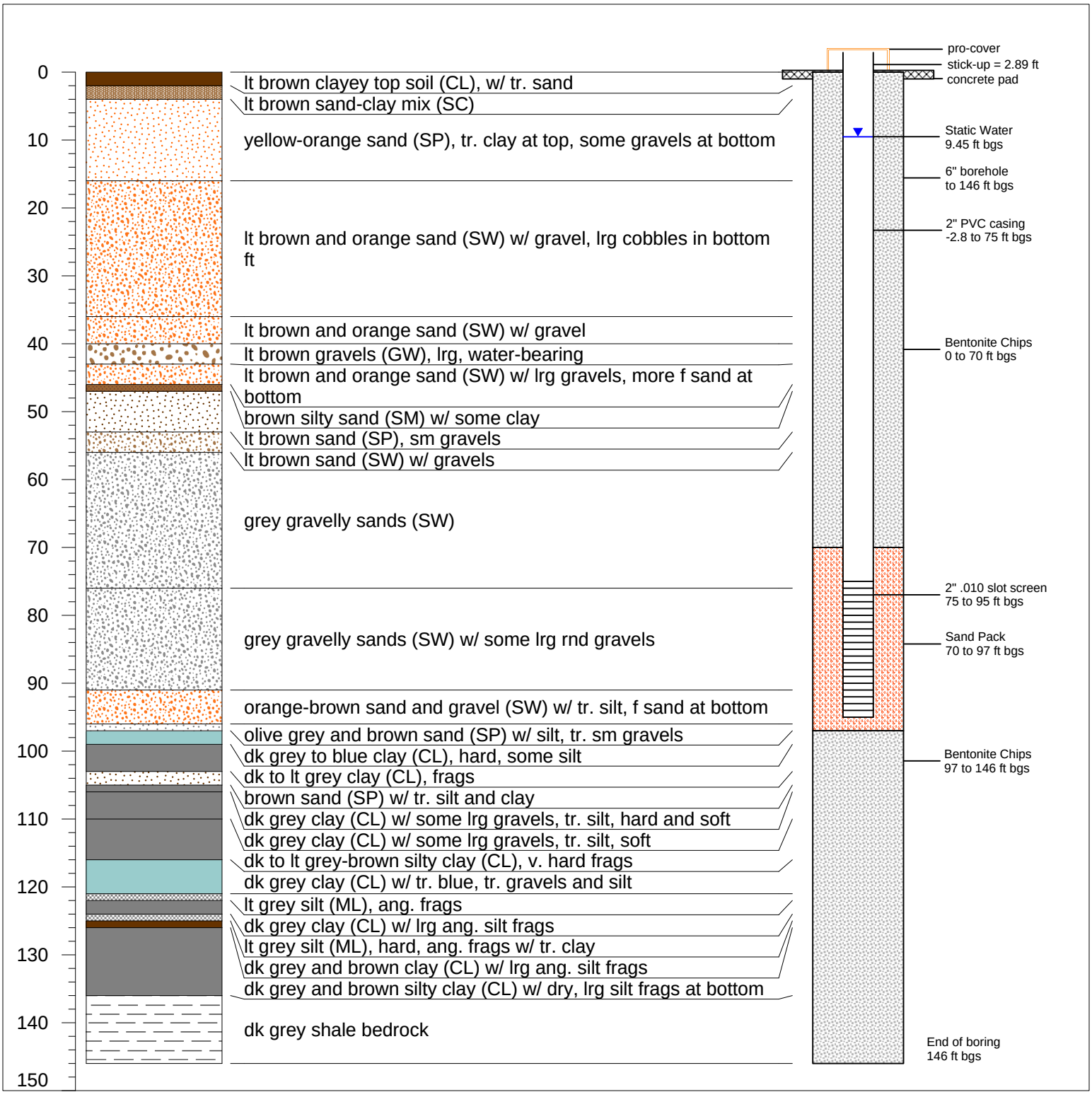
TOC = top of casing
bgs = below ground surface

MW-5

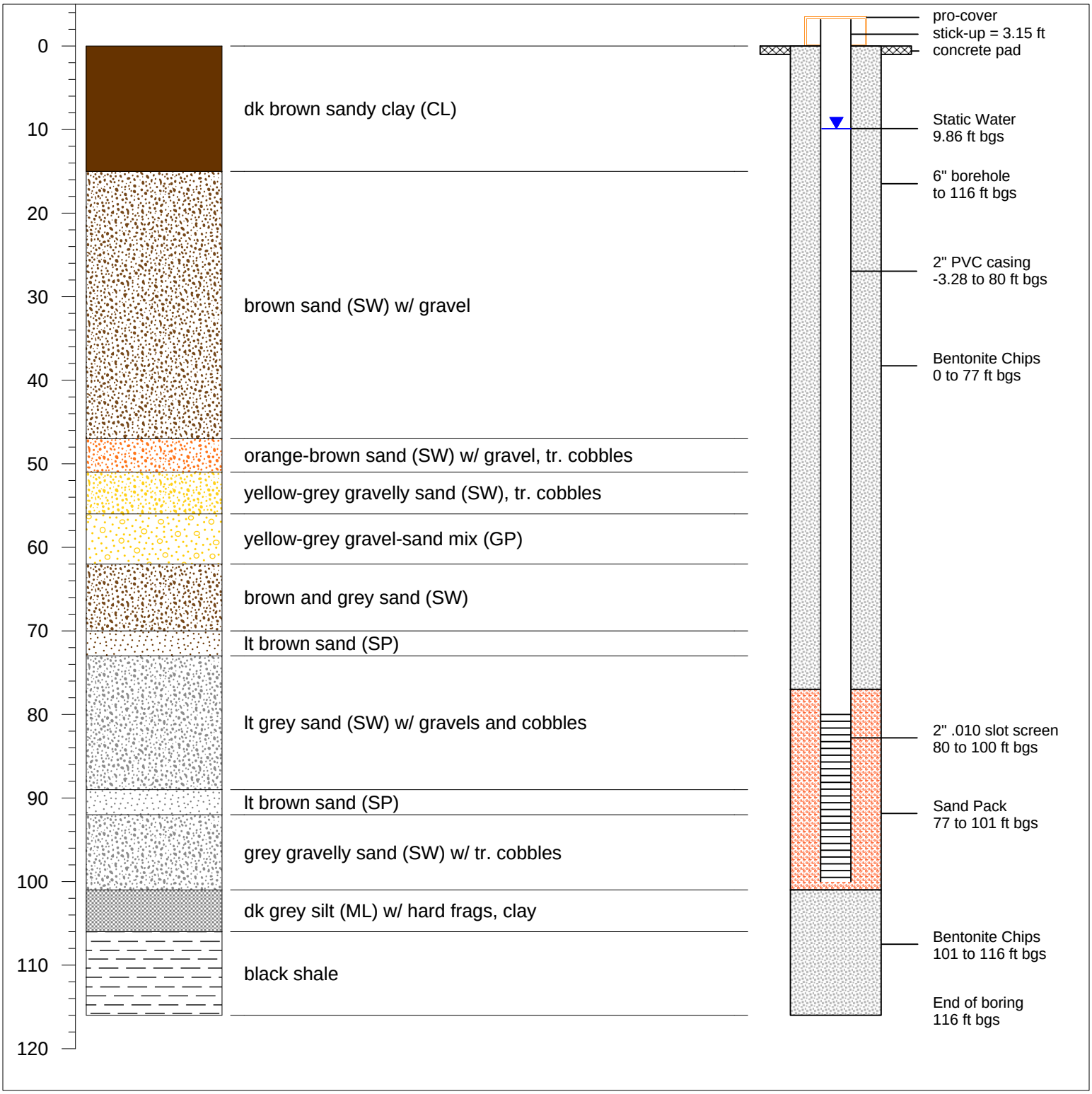
INTERA	**Boring ID:** MW-6	**Location:** Wabash Regional Wellfield **Site:** 1 and 2
Logged by: INTERA **Drilled by:** A. Little, CASCADE	**Drilling Method:** Sonic **Borehole diameter:** 6"	**Elevation (TOC):** 512.66 ft **Lat:** 40.41203961° **Total Depth:** 126 ft **Long:** -87.03412656°
Date start: 5/12/2023	**Date finish:** 5/16/2023	**Date abandoned:**



INTERA	**Boring ID:** MW-7	**Location:** Wabash Regional Wellfield **Site:** 1 and 2
Logged by: INTERA **Drilled by:** A. Little, CASCADE	**Drilling Method:** Sonic **Borehole diameter:** 6"	**Elevation (TOC):** 512.84 ft **Lat:** 40.41173783° **Total Depth:** 146 ft **Long:** -87.03476058°
Date start: 5/9/2023	**Date finish:** 5/11/2023	**Date abandoned:**



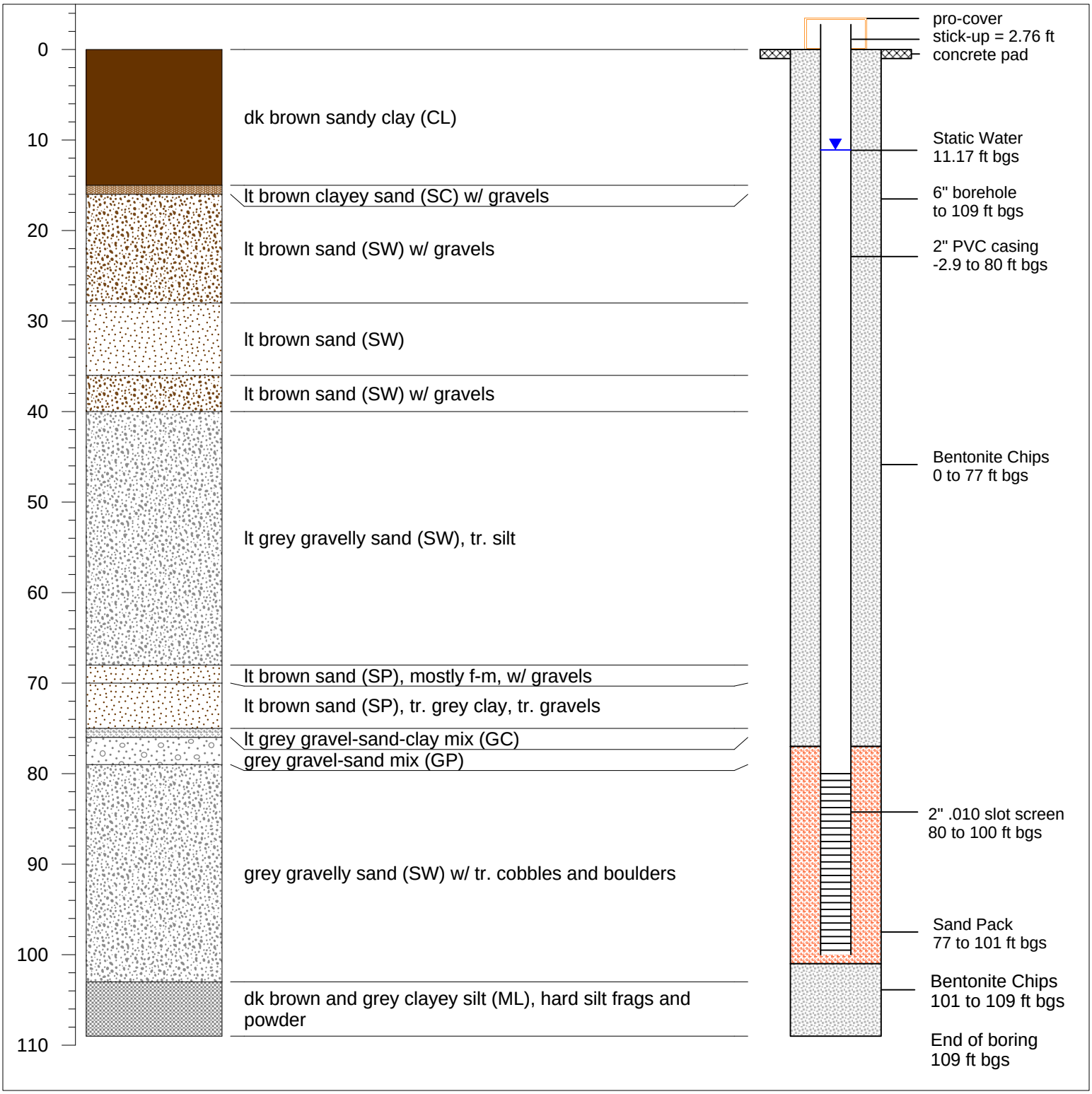
INTERA	**Boring ID:** MW-8	**Location:** Wabash Regional Wellfield **Site:** 1 and 2
Logged by: INTERA **Drilled by:** A Little, CASCADE	**Drilling Method:** Sonic **Borehole diameter:** 6"	**Elevation (TOC):** 515.4 ft **Lat:** 40.40960806° **Total Depth:** 116 ft **Long:** -87.03234294°
Date start: 5/22/2023	**Date finish:** 5/23/2023	**Date abandoned:**



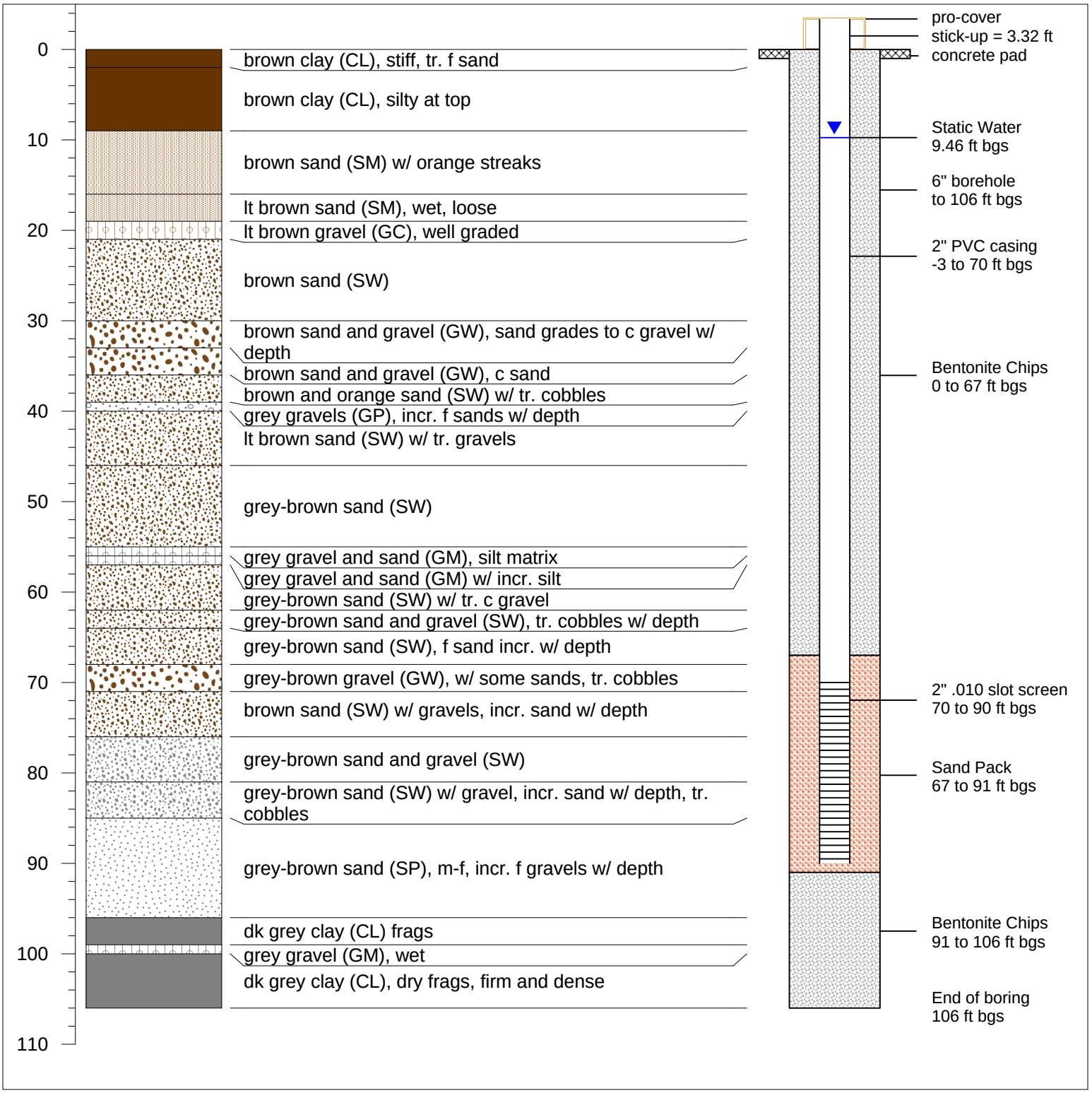
TOC = top of casing
bgs = below ground surface

MW-8

INTERA	**Boring ID:** MW-9	**Location:** Wabash Regional Wellfield **Site:** 1 and 2
Logged by: INTERA **Drilled by:** A Little, CASCADE	**Drilling Method:** Sonic **Borehole diameter:** 6"	**Elevation (TOC):** 516.39 ft **Lat:** 40.40876833° **Total Depth:** 109 ft **Long:** -87.03538078°
Date start: 5/24/2023	**Date finish:** 5/24/23	**Date abandoned:**



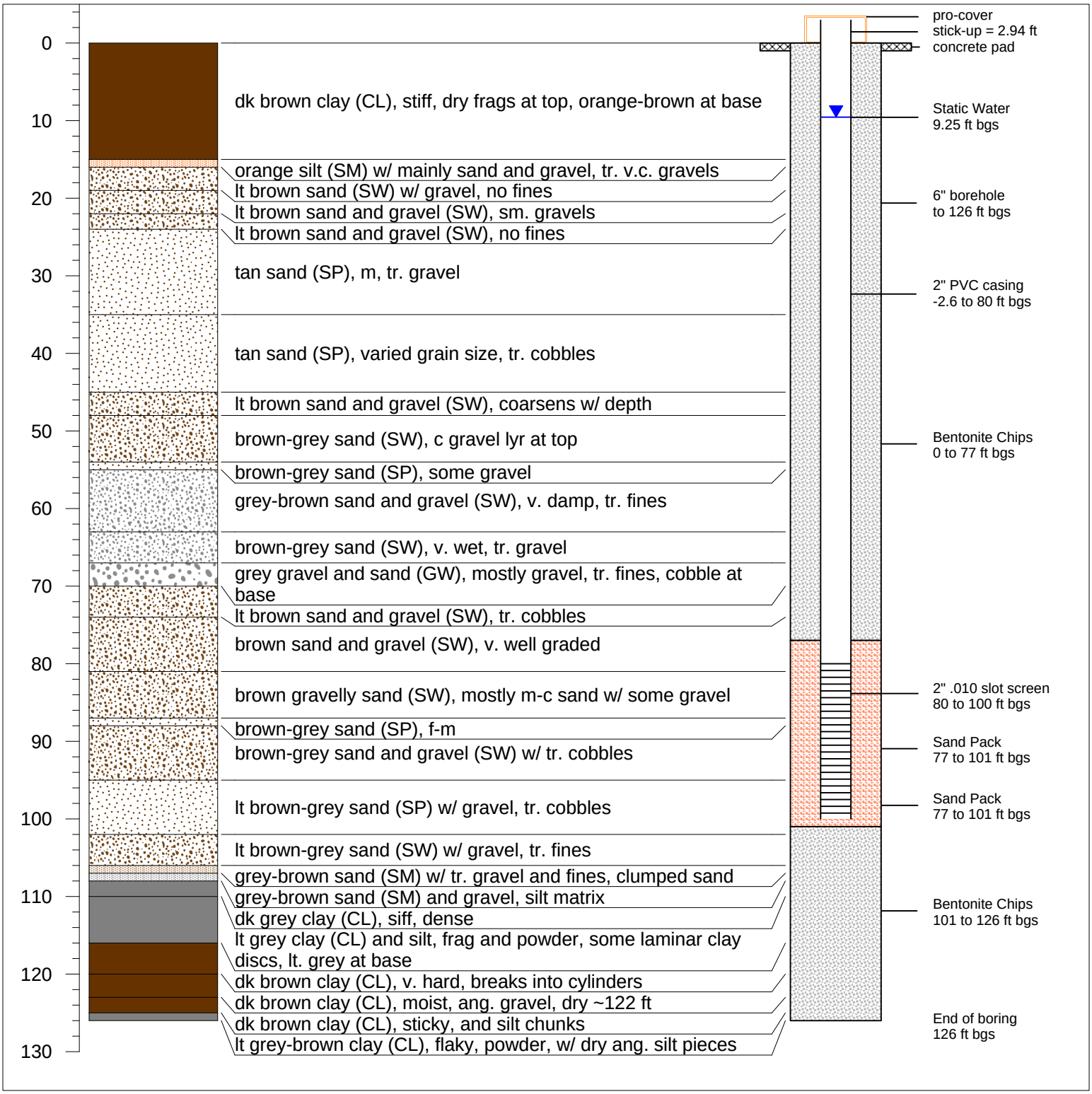
INTERA	**Boring ID:** MW-10	**Location:** Wabash Regional Wellfield **Site:** 1 and 2
Logged by: INTERA **Drilled by:** A Little, CASCADE	**Drilling Method:** Sonic **Borehole diameter:** 6"	**Elevation (TOC):** 513.84 ft **Lat:** 40.41070092° **Total Depth:** 106 ft **Long:** -87.03460072°
Date start: 5/31/2023	**Date finish:** 5/31/2023	**Date abandoned:**



TOC = top of casing
bgs = below ground surface

MW-10

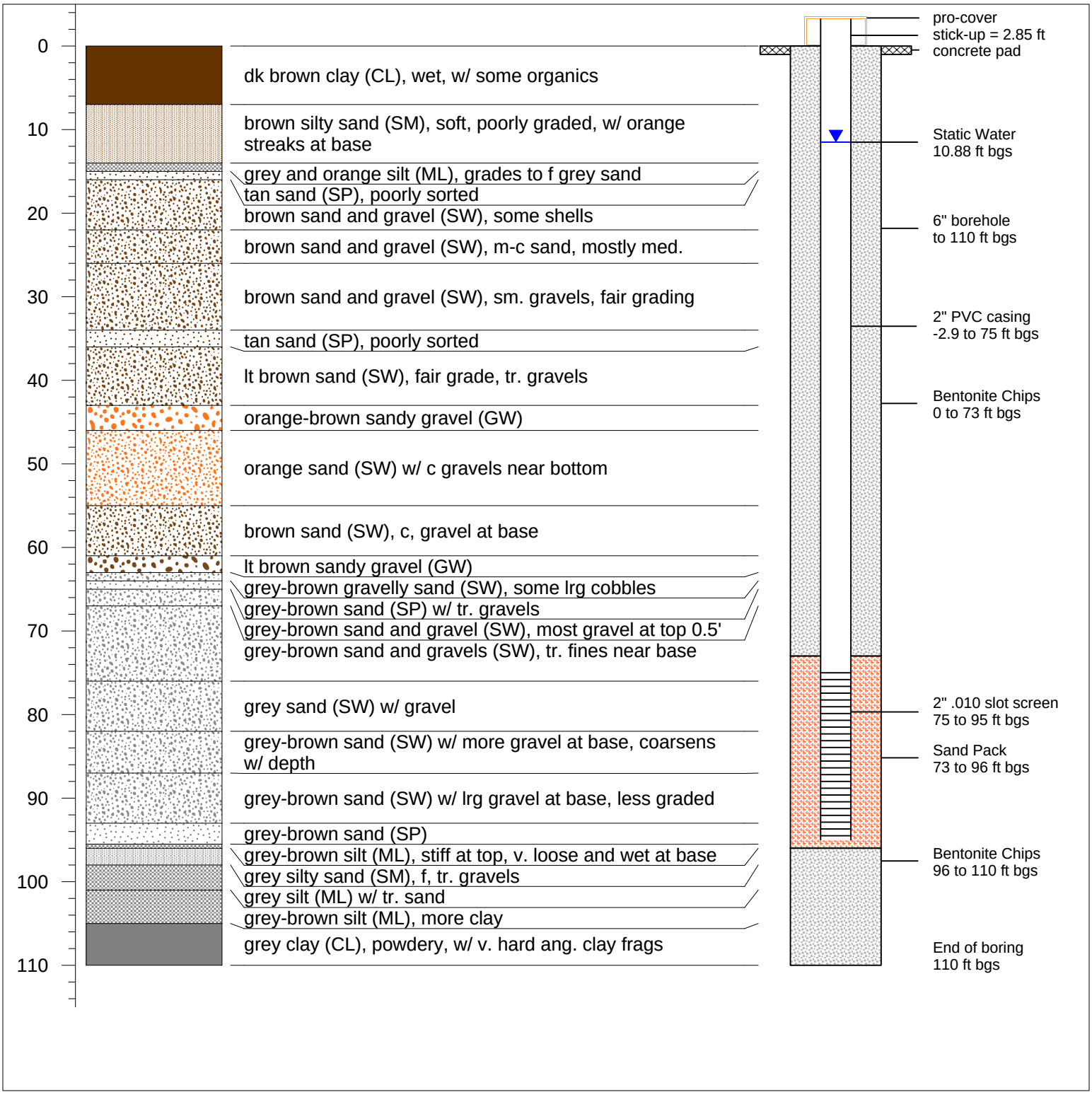
INTERA	**Boring ID:** MW-11	**Location:** Wabash Regional Wellfield **Site:** 1 and 2
Logged by: INTERA **Drilled by:** A Little, CASCADE	**Drilling Method:** Sonic **Borehole diameter:** 6"	**Elevation (TOC):** 514.23 ft **Lat:** 40.41050594° **Total Depth:** 126 ft **Long:** -87.02893008°
Date start: 6/01/2023	**Date finish:** 6/01/2023	**Date abandoned:**



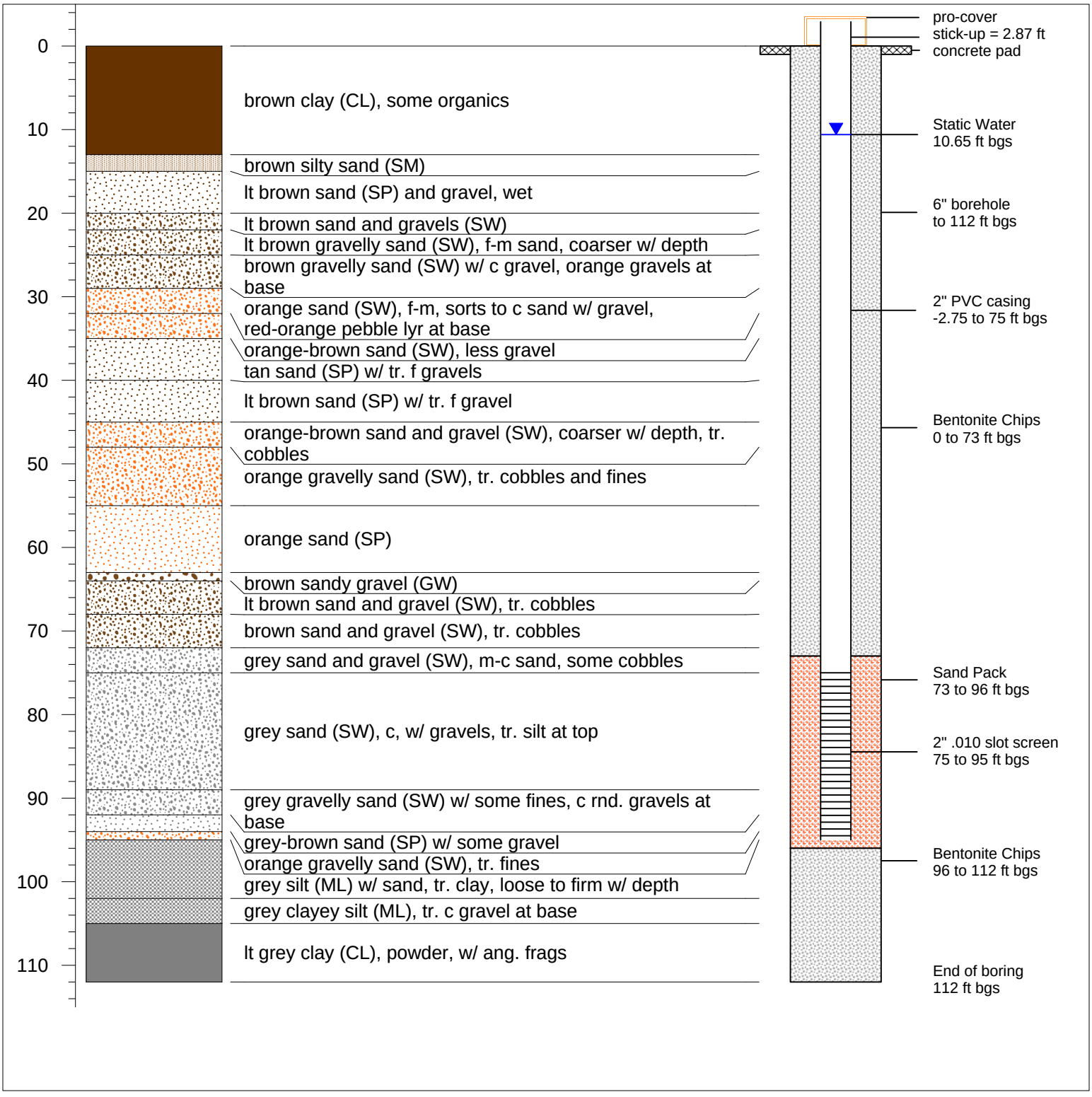
TOC = top of casing
bgs = below ground surface

MW-11

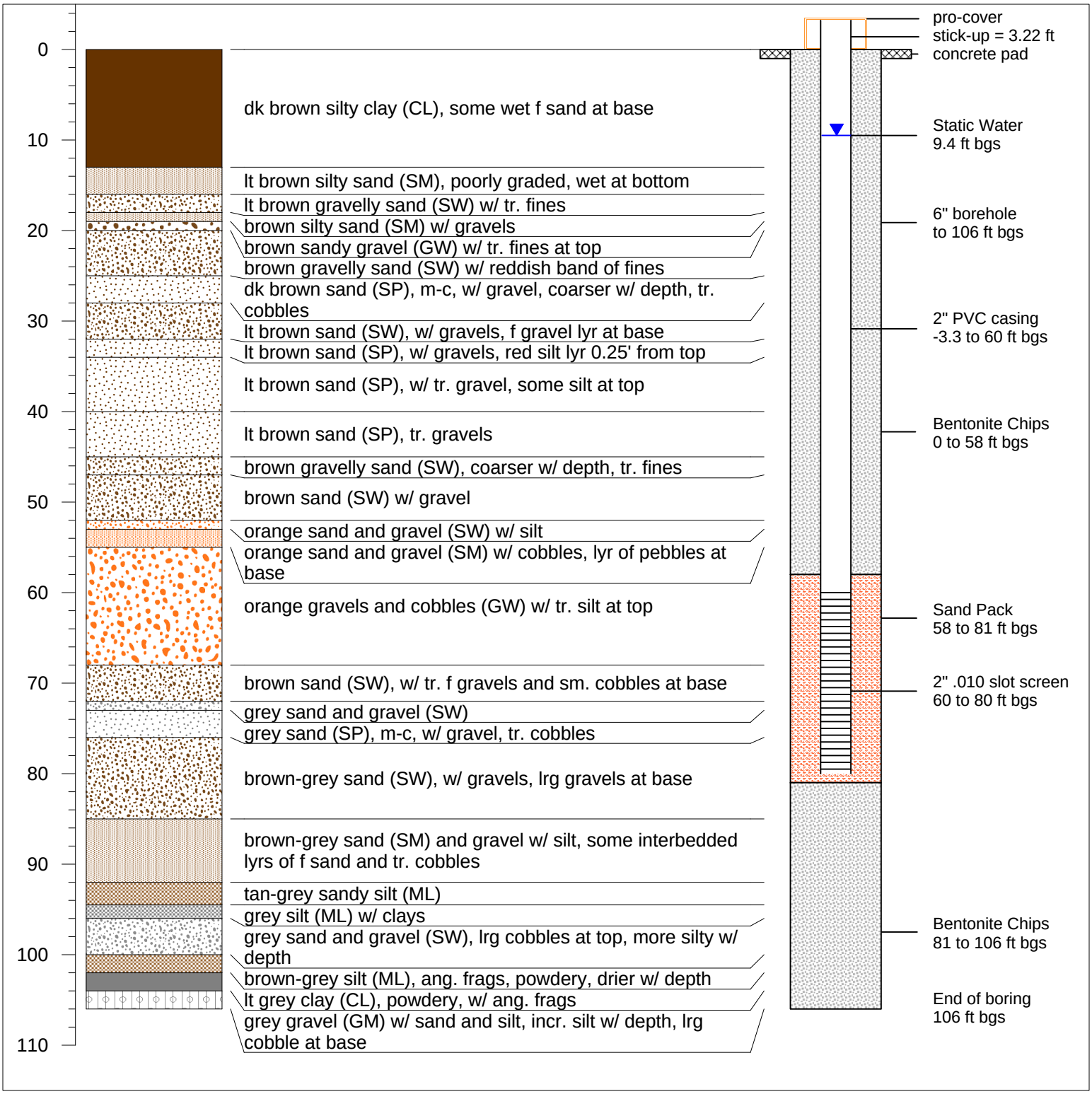
INTERA	**Boring ID:** MW-12	**Location:** Wabash Regional Wellfield **Site:** 1 and 2
Logged by: INTERA **Drilled by:** A Little, CASCADE	**Drilling Method:** Sonic **Borehole diameter:** 6"	**Elevation (TOC):** 514.76 ft **Lat:** 40.41347214° **Total Depth:** 110 ft **Long:** -87.02928931°
Date start: 6/04/2023	**Date finish:** 6/05/2023	**Date abandoned:**



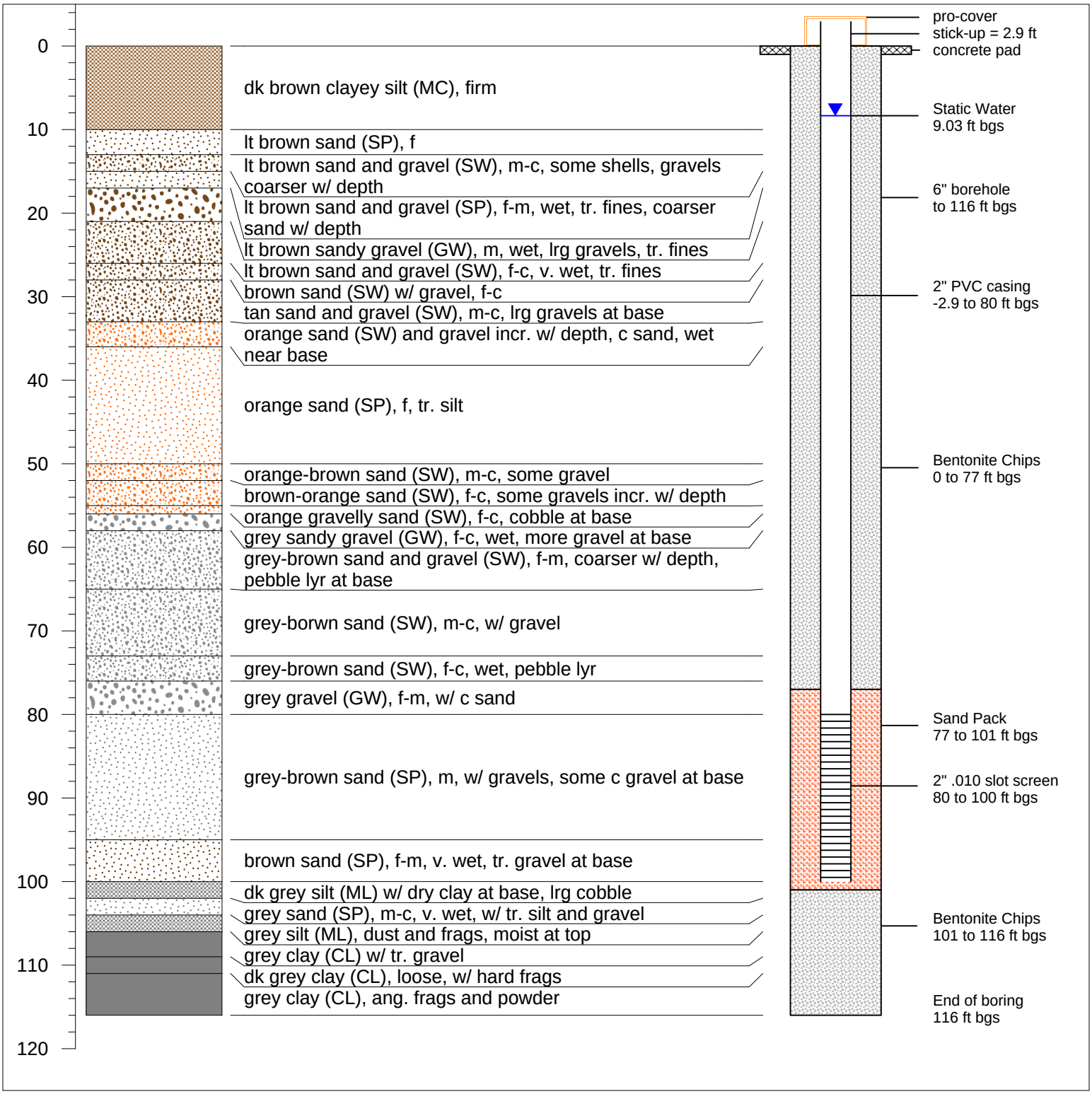
INTERA	**Boring ID:** MW-13	**Location:** Wabash Regional Wellfield **Site:** 1 and 2
Logged by: INTERA **Drilled by:** A Little, CASCADE	**Drilling Method:** Sonic **Borehole diameter:** 6"	**Elevation (TOC):** 514.66 ft **Lat:** 40.41335642° **Total Depth:** 112 ft **Long:** -87.02976925°
Date start: 6/05/2023	**Date finish:** 6/05/2023	**Date abandoned:**



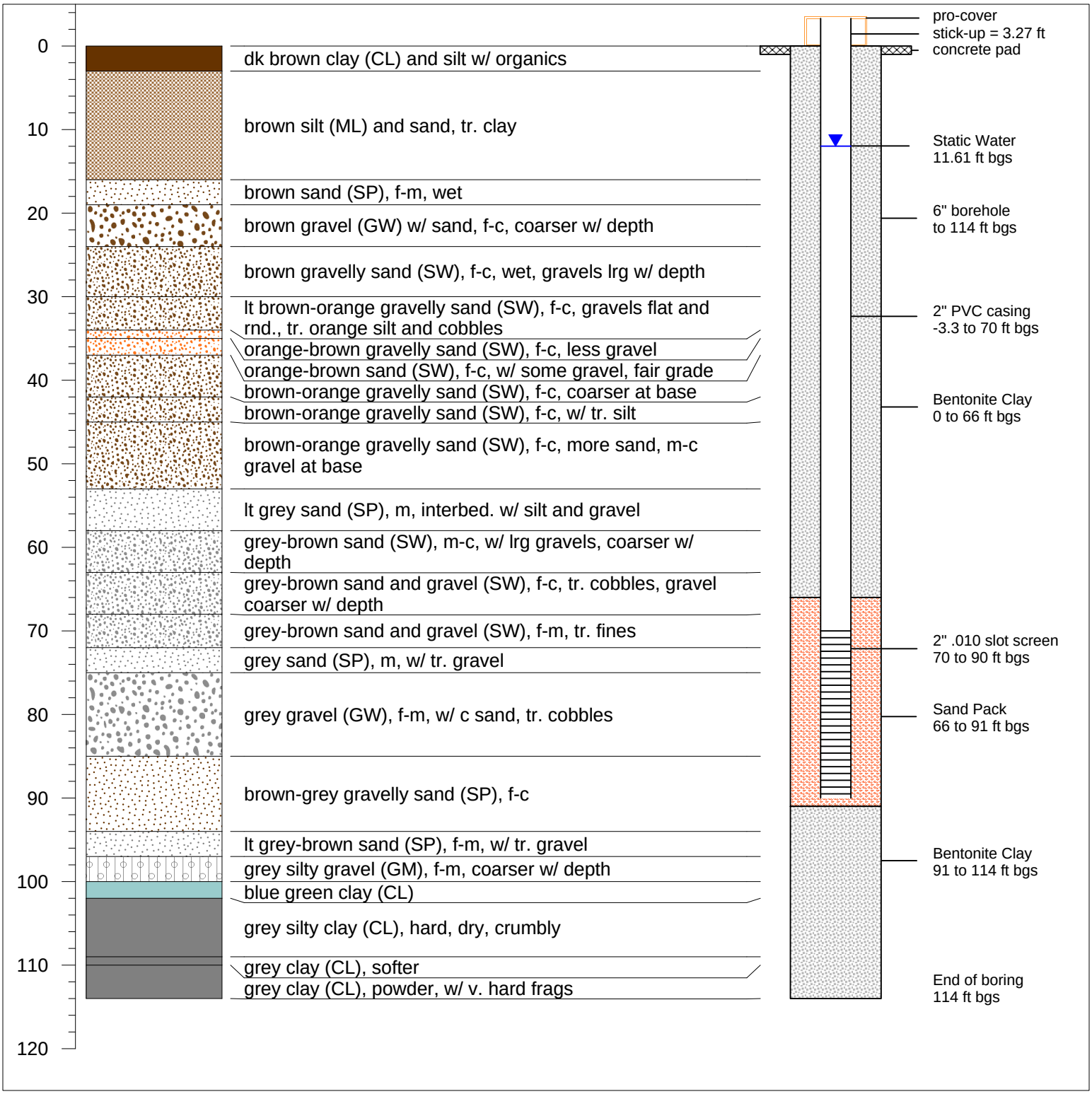
INTERA	**Boring ID:** MW-14	**Location:** Wabash Regional Wellfield **Site:** 1 and 2
Logged by: INTERA **Drilled by:** A Little, CASCADE	**Drilling Method:** Sonic **Borehole diameter:** 6"	**Elevation (TOC):** 513.58 ft **Lat:** 40.41317439° **Total Depth:** 106 ft **Long:** -87.03047425°
Date start: 6/06/2023	**Date finish:** 6/06/2023	**Date abandoned:**



INTERA	**Boring ID:** MW-15	**Location:** Wabash Regional Wellfield **Site:** 1 and 2
Logged by: INTERA **Drilled by:** A Little, CASCADE	**Drilling Method:** Sonic **Borehole diameter:** 6"	**Elevation (TOC):** 514.57 ft **Lat:** 40.41255617° **Total Depth:** 116 ft **Long:** -87.02854°
Date start: 6/04/2023	**Date finish:** 6/04/2023	**Date abandoned:**

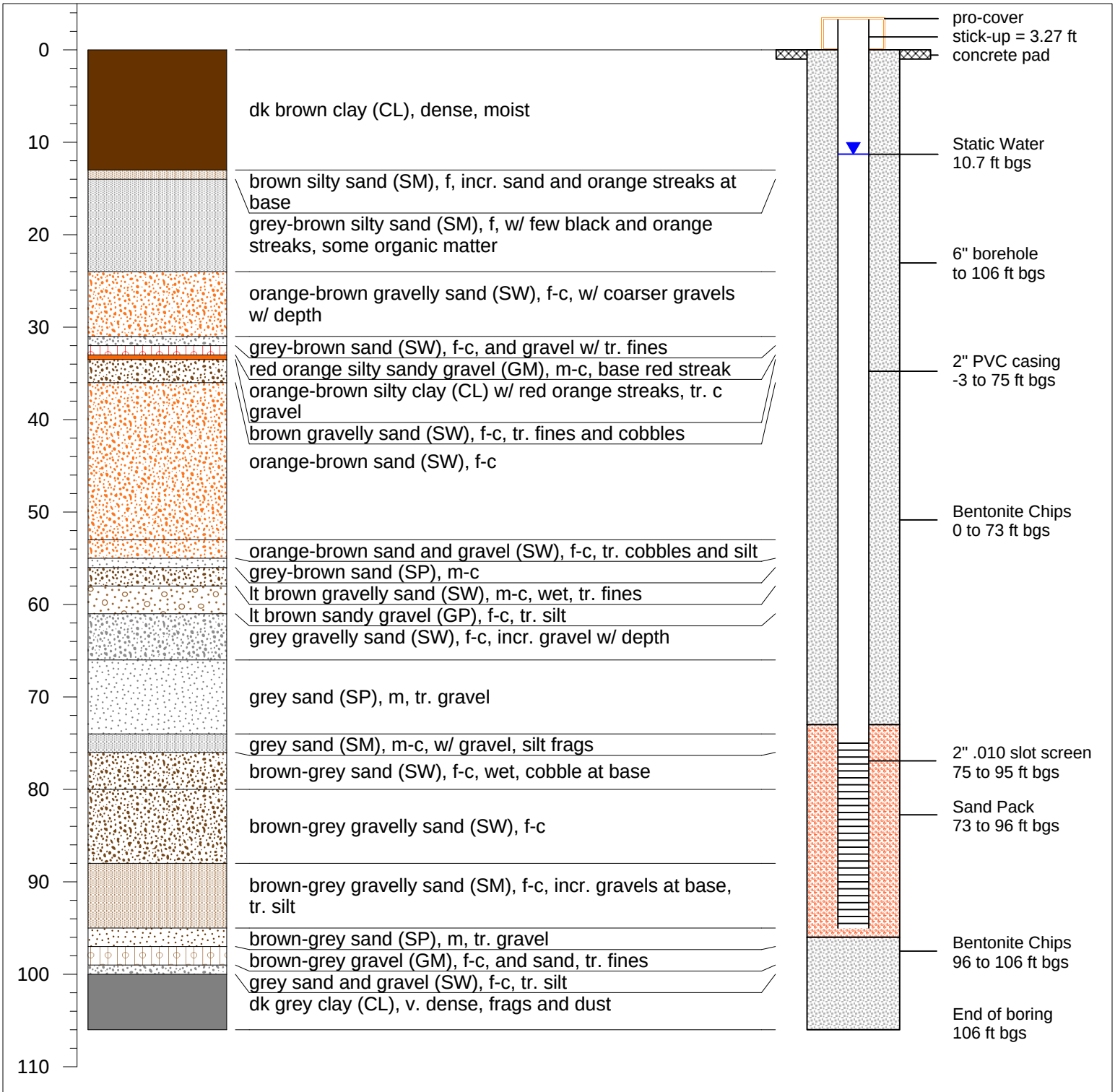


INTERA	**Boring ID:** MW-16	**Location:** Wabash Regional Wellfield **Site:** 1 and 2
Logged by: INTERA **Drilled by:** A Little, CASCADE	**Drilling Method:** Sonic **Borehole diameter:** 6"	**Elevation (TOC):** 516.16 ft **Lat:** 40.41210211° **Total Depth:** 114 ft **Long:** -87.02989908°
Date start: 6/03/2023	**Date finish:** 6/03/2023	**Date abandoned:**



INTERA	**Boring ID:** MW-17	**Location:** Wabash Regional Wellfield **Site:** 1 and 2
Logged by: INTERA **Drilled by:** A Little, CASCADE	**Drilling Method:** Sonic **Borehole diameter:** 6"	**Elevation (TOC):** 515.44 ft **Lat:** 40.41155839° **Total Depth:** 106 ft **Long:** -87.03188753°
Date start: 6/06/2023	**Date finish:** 6/06/2023	**Date abandoned:**

Depth (ft bgs) | **Lithology** | **Lithologic Description** | **Well Construction**



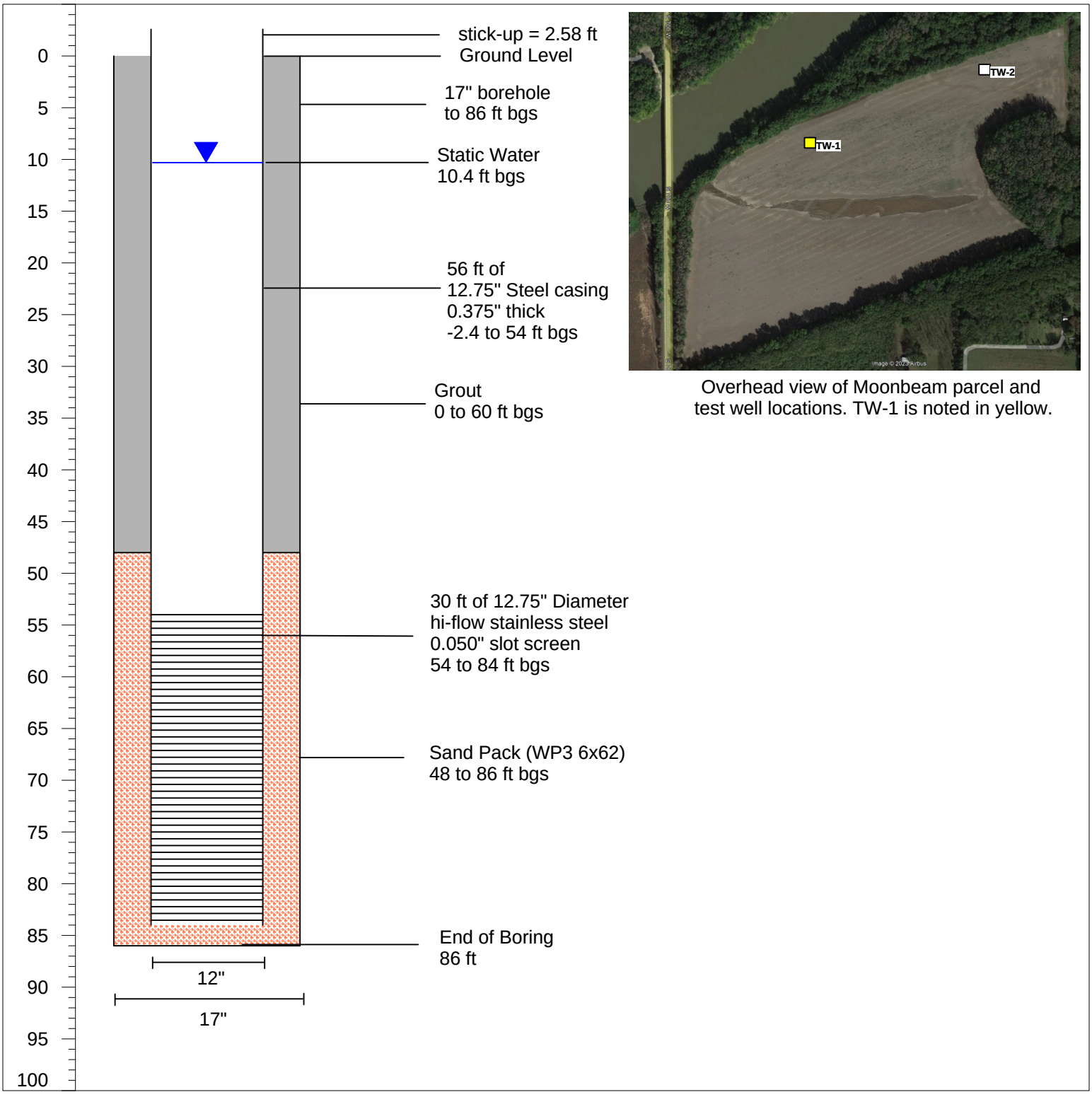
TOC = top of casing
bgs = below ground surface

MW-17

INTERA	**Boring ID:** TW-1	**Location:** Wabash Regional Wellfield **Site:** 1 and 2
Logged by: INTERA **Drilled by:** T Schmalfeldt, CASCADE	**Drilling Method:** Mud Rotary **Borehole diameter:** 17"	**Elevation (TOC):** 513.55 **Lat:** 40.41207856° **Total Depth:** 86 ft **Long:** -87.03328736°
Date start: 6/06/2023	**Date finish:** 6/21/2023	**Date abandoned:**

Depth (ft bgs)

Well Construction



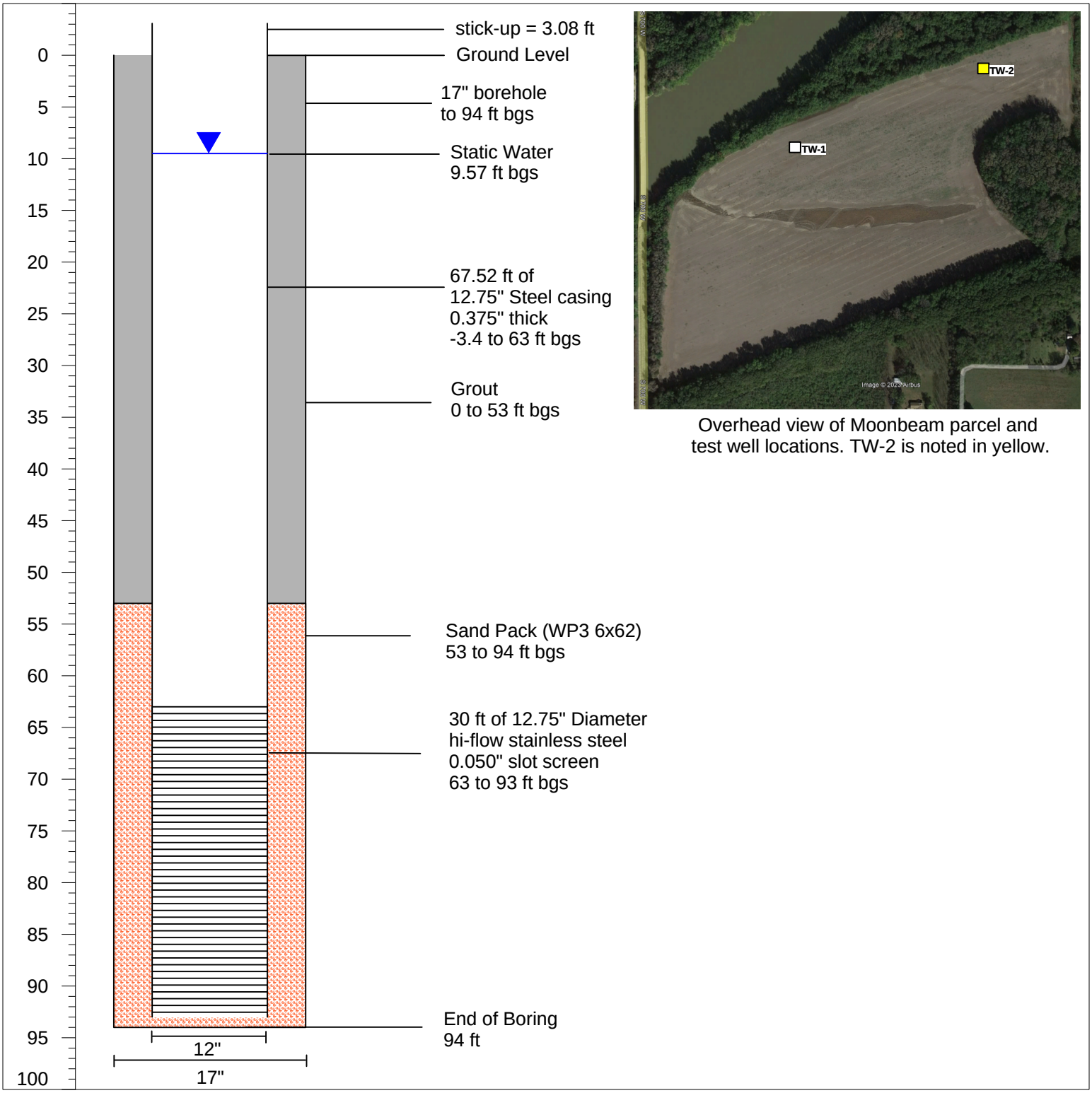
Overhead view of Moonbeam parcel and test well locations. TW-1 is noted in yellow.

TOC = top of casing
bgs = below ground surface

INTERA	**Boring ID:** TW-2	**Location:** Wabash Regional Wellfield **Site:** 1 and 2
Logged by: INTERA **Drilled by:** T Schmalfeldt, CASCADE	**Drilling Method:** Mud Rotary **Borehole diameter:** 17"	**Elevation (TOC):** 513.93 **Lat:** 40.41319656° **Total Depth:** 94 ft **Long:** -87.02969894°
Date start: 6/11/2023	**Date finish:** 6/22/2023	**Date abandoned:**

Depth (ft bgs)

Well Construction



Overhead view of Moonbeam parcel and test well locations. TW-2 is noted in yellow.

TOC = top of casing
bgs = below ground surface

TW-2

Appendix B

Method	Analyte	RL	MDL	Units
Primary Standards Microorganisms				
1623	Cryptosporidium	10	-	Oocyst/100L
SM 9223B	E. coli	-	-	-
1623	Giardia lamblia	10	-	Cyst/100L
SM 9215E	Heterotrophic plate count (HPC)	2	-	CFU/mL
SM 9260J	Legionella	1	-	CFU/100 mL
SM 9223B	Total coliforms	-	-	-
180.1	Turbidity	0.1	0.1	NTU
TCVA	Viruses	2	-	MPN/mL
Primary Standards Disinfection Byproducts				
300.0	Chlorite	10.0	5.9	ug/L
552.2 THAA	Haloacetic Acids	2.0	1.5	ug/L
524.3	Total Trihalomethanes	0.5	0.24	ug/L
Primary Standards Disinfectants				
4500 Cl F Amine	Chloramines (as Cl2)	0.2	0.2	mg/L
4500 Cl G	Chlorine (as Cl2)	0.5	0.036	mg/L
4500 ClO2 D	Chlorine dioxide (as ClO2)	0.24	0.24	mg/L
Primary Standards Radionuclides				
7110B	Alpha particles	3.0	-	pCi/L
7110B	Beta particles and photon emitters	4.0	-	pCi/L
7500 Ra D	Radium 226 and Radium 228 (combined)	1.0	-	pCi/L
200.8	Uranium	1.0	0.16	ug/L
Primary Standards Inorganic Chemicals				
200.8	Antimony	1.0	0.078	ug/L
200.8	Arsenic	1.0	0.60	ug/L
100.2	Asbestos (fiber > 10 micrometers)	-	-	MFL
200.8	Barium	2.0	0.34	ug/L
200.8	Beryllium	0.3	0.091	ug/L
200.8	Cadmium	0.5	0.19	ug/L
200.8	Chromium (total)	0.9	0.43	ug/L
200.8	Copper	1.0	0.57	ug/L
335.4	Cyanide (as free cyanide)	0.005	0.0022	mg/L
SM 4500 F C	Fluoride	0.05	0.02	mg/L
200.8	Lead	0.5	0.13	ug/L
200.8	Mercury (inorganic)	0.1	0.05	ug/L
353.2	Nitrate (measured as Nitrogen)	0.1	0.0042	mg/L
353.2	Nitrate Nitrite (measured as Nitrogen)	0.01	0.038	mg/L
200.8	Selenium	2.0	1.4	ug/L
200.8	Thallium	0.3	0.052	ug/L
Primary Standards Organic Chemicals				
525.2	Alachlor	0.1	0.01	ug/L
525.2	Atrazine	0.1	0.01	ug/L
524.2	Benzene	0.5	0.2	ug/L
525.2	Benzo(a)pyrene (PAHs)	0.02	0.012	ug/L
300.0	Bromide	10	7.2	ug/L
524.2	Carbon tetrachloride	0.5	0.1	ug/L

Method	Analyte	RL	MDL	Units
505	Chlordane	0.1	0.04	ug/L
524.2	Chlorobenzene	0.5	0.2	ug/L
524.2	Chloroform	0.5	0.2	ug/L
548.1	2,4-D	5	2.2	ug/L
515.3	Dalapon	1	0.5	ug/L
504.1	1,2-Dibromo-3-chloropropane (DBCP)	0.01	0.006	ug/L
524.2	o-Dichlorobenzene	0.5	0.2	ug/L
524.2	p-Dichlorobenzene	0.5	0.2	ug/L
524.2	1,2-Dichloroethane	0.5	0.2	ug/L
524.2	1,1-Dichloroethylene	0.5	0.2	ug/L
524.2	cis-1,2-Dichloroethylene	0.5	0.2	ug/L
524.2	trans-1,2-Dichloroethylene	0.5	0.2	ug/L
524.2	Dichloromethane	0.5	0.1	ug/L
524.2	1,2-Dichloropropane	0.25	0.2	ug/L
525.2	Di(2-ethylhexyl) adipate	0.6	0.02	ug/L
525.2	Di(2-ethylhexyl) phthalate	0.6	0.1	ug/L
525.2	Di-n-octyl phthalate	2	0.02	ug/L
515.3	Dinoseb	0.1	0.1	ug/L
1613B	Dioxin (2,3,7,8-TCDD)	4	0.873	pg/L
549.2	Diquat	0.4	0.25	ug/L
548.1	Endothall	5	2.2	ug/L
525.2	Endrin	0.01	0.0099	ug/L
504.1	Ethylene dibromide	0.01	0.005	ug/L
547	Glyphosate	6	4	ug/L
525.2	Heptachlor	0.01	0.0044	ug/L
525.2	Heptachlor epoxide	0.01	0.004	ug/L
525.2	Hexachlorobenzene	0.1	0.01	ug/L
525.2	Hexachlorocyclopentadiene	0.1	0.01	ug/L
525.2	Lindane	0.02	0.0084	ug/L
525.2	Methoxychlor	0.1	0.01	ug/L
505	Polychlorinated biphenyls (PCBs) (Total)	0.1	0.08	ug/L
515.3	Pentachlorophenol	0.04	0.02	ug/L
515.3	Picloram	0.1	0.1	ug/L
525.2	Simazine	0.07	0.03	ug/L
524.2	Styrene	0.5	0.2	ug/L
524.2	Tetrachloroethylene	0.5	0.2	ug/L
524.2	Toluene	0.5	0.2	ug/L
505	Toxaphene	0.5	0.06	ug/L
515.3	2,4,5-TP (Silvex)	0.1	0.08	ug/L
524.2	1,2,4-Trichlorobenzene	0.5	0.2	ug/L
524.2	1,1,1-Trichloroethane	0.5	0.2	ug/L
524.2	1,1,2-Trichloroethane	0.5	0.2	ug/L
524.2	Trichloroethylene	0.5	0.2	ug/L
524.2	Vinyl chloride	0.2	0.2	ug/L
524.2	Xylenes (total)	0.2	0.2	ug/L
Secondary Standard Analytes				

Method	Analyte	RL	MDL	Units
200.8	Aluminum	2.0	1.7	ug/L
300.0	Chloride	2.0	0.32	mg/L
SM 2120B	Color	3.0	3.0	Color Units
200.8	Copper	1.0	0.57	ug/L
SM 4500 F C	Fluoride	0.05	0.02	mg/L
200.7	Iron (total)	0.01	0.008	mg/L
200.7	Iron (dissolved)	0.01	0.008	mg/L
SM 2330B	Langelier Index	-	-	LangSU
200.8	Manganese (total)	2.0	0.66	ug/L
V210	Odor	2.0	-	ng/L
150.1	pH	0.1	-	SU
200.8	Silver	0.5	0.28	ug/L
300.0	Sulfate	5.0	0.72	mg/L
SM 2540C	Total Dissolved Solids (TDS)	10.0	10.0	mg/L
200.8	Zinc	5.0	2.3	ug/L
Additional Parameters				
SM 2320B	Alkalinity	1.0	1.0	mg/L
SM 4500 NH3 D	Ammonia	0.1	0.046	mg/L
524.2	Bromodichloromethane	0.5	0.1	ug/L
524.2	Bromoform	0.5	0.2	ug/L
200.7	Calcium	0.1	0.025	mg/L
SM 4500 CO2 B	Carbon Dioxide	0.1	0.1	mg/L
300	Chlorate	10	7.9	ug/L
300.0	Chloride	2.0	0.32	mg/L
SM 4500 Cl G	Chlorine, Residual	0.5	0.02	mg/L
SM 2120B	Color	3.0	3.0	Color Units
SM 2510B	Conductivity (Specific Conductance)	2.0	2.0	uS/cm
1623	Cryptosporidium	0.1	0.1	mL
552.2	Dibromoacetic acid	1	0.6	ug/L
524.2	Dibromochloromethane	0.5	0.1	ug/L
524.2	1,2-Dibromoethane (EDB)	0.2	0.005	ug/L
552.2	Dichloracetic acid	1	0.6	ug/L
4500 CL F Amine	Dichloramine	0.1	0.1	mg/L
524.2	1,2-Dichlorobenzene	0.5	0.2	ug/L
524.2	1,1-Dichloroethane	0.5	0.2	ug/L
524.2	1,1-Dichloroethene	0.5	0.2	ug/L
524.2	2,2-Dichloropropane	0.5	0.2	ug/L
524.2	cis-1,3-Dichloropropylene	0.5	0.2	ug/L
524.2	trans-1,3-Dichloropropylene	0.5	0.2	ug/L
SM 5310C	Dissolved Organic Carbon	0.5	0.2	mg/L
SM 4500 O G	Dissolved Oxygen	1.0	1.0	mg/L
SM 2340B	Hardness as calcium carbonate	0.66	0.66	mg/L
SM 2340B	Calcium hardness as calcium carbonate	0.25	0.25	mg/L
SM 2340B	Magnesium hardness as calcium carbonate	0.41	0.41	mg/L
537.1	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.0019	0.00053	ug/L
OSHA 100	Iron Reducing Bacteria	1	-	CFU/100 mL

Method	Analyte	RL	MDL	Units
200.7	Magnesium	0.1	0.0064	mg/L
552.2	Monochloroacetic acid	2	1.2	ug/L
4500 CL F Amine	Monochloramine	0.1	0.1	mg/L
4500 CL F Amine	Nitrogen trichloride	0.2	0.2	mg/L
521.1	N-Nitrosodiphenylamine (NDPhA)	20	2	ng/L
521.1	N-Nitrosomorpholine (NMOR)	2	0.3	ng/L
521.1	N-Nitrosopiperidine (NPIP)	2	0.5	ng/L
521.1	N-Nitrosopyrrolidine (NPYR)	2	0.4	ng/L
521.1	N-Nitrosodi-n-butylamine (NDBA)	2	0.4	ng/L
521.1	N-Nitrosodi-n-propylamine (NDPA)	2	0.3	ng/L
521.1	N-Nitrosodiethylamine (NDEA)	2	0.3	ng/L
521.1	N-Nitrosomethylethylamine (NMEA)	2	0.2	ng/L
505	PCB-1016	0.08	0.079	ug/L
505	PCB-1221	0.1	0.05	ug/L
505	PCB-1232	0.1	0.07	ug/L
505	PCB-1242	0.1	0.05	ug/L
505	PCB-1248	0.1	0.08	ug/L
505	PCB-1254	0.1	0.07	ug/L
505	PCB-1260	0.1	0.04	ug/L
SM 4500 P E	Phosphate, Ortho	0.092	0.046	mg/L
SM 4500 P E	Orthophosphate as PO4	0.092	0.046	mg/L
200.7	Potassium	0.2	0.024	mg/L
SM7500_Rn_B	Radon 222	12.0	9.7	pCi/L
200.7	Silica	0.0428	0.02	mg/L
200.7	Sodium	0.1	0.048	mg/L
SM 4500 S2 D	Sulfide	0.05	0.038	mg/L
V210	Taste and Odor Compounds (MIB, Geosmin, TCA, IPMP, IBMP)	2.0	0.8	ng/L
524.2	1,1,2,2-Tetrachloroethane	0.5	0.2	ug/L
524.2	1,2,3-Trichlorobenzene	0.5	0.2	ug/L
524.2	1,2,4-Trimethylbenzene	0.5	0.2	ug/L
SM 5310C	Total Organic Carbon (TOC)	0.5	0.2	mg/L
SM 2540D	Total Suspended Solids (TSS)	10.0	10.0	mg/L
552.2	Trichloracetic acid	1.0	0.5	ug/L
180.1	Turbidity	0.1	0.1	NTU
524.2	o-Xylene	0.5	0.2	ug/L
524.2	m-Xylene & p-Xylene	0.5	0.5	ug/L
SM 5910B	Ultraviolet Absorption, 254 nm (UV 254)	0.009	0.0045	1/cm
USEPA Fifth Unregulated Contaminant Monitoring Rule (UCMR 5) Analytes				
533	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	0.005	0.00051	ug/L
533	9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	0.002	0.00045	ug/L
533	4,8-dioxa-3H-perfluorononanoic acid (ADONA)	0.003	0.0004	ug/L
533	hexafluoropropylene oxide dimer acid (HFPO DA)	0.005	0.00053	ug/L
533	nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.02	0.00093	ug/L
533	perfluorobutanoic acid (PFBA)	0.005	0.00052	ug/L
533	perfluorobutanesulfonic acid (PFBS)	0.003	0.00042	ug/L

Method	Analyte	RL	MDL	Units
533	perfluorodecanoic acid (PFDA)	0.003	0.0036	ug/L
533	perfluorododecanoic acid (PFDoA)	0.003	0.00035	ug/L
533	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.003	0.00045	ug/L
533	perfluoroheptanesulfonic acid (PFHpS)	0.003	0.00044	ug/L
533	perfluoroheptanoic acid (PFHpA)	0.003	0.0004	ug/L
533	1H,1H, 2H, 2H-perfluorohexane sulfonic acid (4:2FTS)	0.003	0.00056	ug/L
533	1H,1H, 2H, 2H-perfluorooctane sulfonic acid (6:2FTS)	0.0019	0.00068	ug/L
533	1H,1H, 2H, 2H-perfluorodecane sulfonic acid (8:2FTS)	0.0019	0.00057	ug/L
533	perfluorohexanesulfonic acid (PFHxS)	0.003	0.00039	ug/L
533	perfluorohexanoic acid (PFHxA)	0.003	0.00042	ug/L
533	perfluoro-3-methoxypropanoic acid (PFMPA)	0.004	0.00032	ug/L
533	perfluoro-4-methoxybutanoic acid (PFMBA)	0.003	0.00035	ug/L
533	perfluorononanoic acid (PFNA)	0.004	0.00038	ug/L
533	1H,1H, 2H, 2H-perfluorooctane sulfonic acid (6:2FTS)	0.005	0.00068	ug/L
533	perfluorooctanesulfonic acid (PFOS)	0.004	0.00039	ug/L
533	perfluorooctanoic acid (PFOA)	0.004	0.00038	ug/L
533	perfluoropentanoic acid (PFPeA)	0.003	0.00038	ug/L
533	perfluoropentanesulfonic acid (PFPeS)	0.004	0.00039	ug/L
533	perfluoroundecanoic acid (PFUnA)	0.002	0.00038	ug/L
537.1 UCMR5	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.005	0.00051	ug/L
537.1 UCMR5	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.006	0.00062	ug/L
537.1 UCMR5	perfluorotetradecanoic acid (PFTA)	0.008	0.00065	ug/L
537.1 UCMR5	perfluorotridecanoic acid (PFTrDA)	0.007	0.0006	ug/L
Additional Unregulated Contaminant Monitoring Rule Analytes				
	UCMR 1			
331.0	Perchlorate	0.05	0.012	ug/L
524.2	Methyl-tert-butyl Ether (MTBE)	0.5	0.4	ug/L
	UCMR 2			
521.1	N-Nitrosodimethylamine (NDMA)	2.0	0.3	ng/L
	UCMR 3			
331.0	Perchlorate	0.05	0.012	ug/L
522	1,4-Dioxane	0.07	0.032	ug/L

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1 2 3 4 5 6 7 8 9 10 11 12

ANALYTICAL REPORT

PREPARED FOR

Attn: Rhett Moore
INTERA Inc
101 West Kirkwood Avenue
Suite 134
Bloomington, Indiana 47404

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JOB DESCRIPTION

B&V Project 414595 Groundwater Analysis

JOB NUMBER

810-67862-1

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend IN 46617

See page two for job notes and contact information.

Job Notes

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Authorization

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Table of Contents

Definitions/Glossary

Client: INTERA Inc
Job ID: 810-67862-1
Project/Site: B&V Project 414595 Groundwater Analysis

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.

LCMS

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Rad

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 810-67862-1

Laboratory: Eurofins Eaton Analytical South Bend

Narrative

Job Narrative
810-67862-1

Receipt
The samples were received on 6/28/2023 3:40 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.8°C

SUBCONTRACTING

The following analysis was subcontracted to Eurofins CEI Inc:
Asbestos 100.2

The following analyses were subcontracted to Scientific Methods, Inc:
Iron Oxidizing Bacteria EPA 9240B
Legionella - CDC Method

GC/MS VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC/MS Semi VOA
Method 548.1_PREC: Surrogate recovery for the following sample was outside control limits: TW-1 (810-67862-1). Evidence of matrix interferences is not obvious. Re-preparation and/or re-analysis was not performed as the holding time had expired. The sample was reanalyzed with a similar result.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

LCMS
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

PFAS
Method 537.1_DW_PREC: The laboratory control sample (LCS) for preparation batch 810-65121 and analytical batch 810-65204 recovered outside control limits for the following analytes in method 537.1: 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) (170%), N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) (155%), Hexafluoropropylene Oxide Dimer Acid (HFPO-DA) (162%), Perfluorobutanesulfonic acid (PFBS) (165%), Perfluorodecanoic acid (PFDA) (159%), Perfluorododecanoic acid (PFDoA) (155%). Perfluoroheptanoic acid (PFHpA) (163%), Perfluorohexanesulfonic acid (PFHxS) (153%), Perfluorohexanoic acid (PFHxA) (178%), Perfluorononanoic acid (PFNA) (172%), Perfluorooctanesulfonic acid (PFOS) (169%), Perfluorooctanoic acid (PFOA) (166%), Perfluoroundecanoic acid (PFUnA) (164%). Limits are 50-150%. Sample 810-67862-1 was not re-extracted due to no additional volume available.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Dioxin
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals
Method 200.8_SDWA: The continuing calibration verification (CCV) analyzed in 810-64876 was outside the method criteria of + 10 % but within + 15% for Lithium. As indicated in the reference method, this continuing calibration verification (CCV) will be used as the closing

Job ID: 810-67862-1 (Continued)

Laboratory: Eurofins Eaton Analytical South Bend (Continued)

CCV and previous samples will not be reanalyzed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

Method 5310C: No vials were received for this method. used one DOC vial and preserved sample upon receipt per Caleb.TW-1 (810-67862-1)

Method 5310C: Sample RSDs> 10% with result > MRL. Client did not provide enough sample for reanalysis. Report sample with comment. TW-1 (810-67862-1)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Rad

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Biology

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Subcontract Lab non-Sister Lab

See attached subcontract report.

Client: INTERA Inc
Job ID: 810-67862-1
Project/Site: B&V Project 414595 Groundwater Analysis

Client Sample ID: TW-1
Lab Sample ID: 810-67862-1
Date Collected: 06/28/23 10:00
Matrix: Drinking Water
Date Received: 06/28/23 15:40

Method: EPA-DW 524.2 - Total Trihalomethanes

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Trihalomethanes, Total	<0.5000		0.5000		ug/L			07/03/23 08:54	1

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	<0.50		0.50		ug/L			06/29/23 23:46	1
1,1,1-Trichloroethane	<0.50		0.50		ug/L			07/05/23 16:54	1
Bromoform	<0.50		0.50		ug/L			06/29/23 23:46	1
1,1,2,2-Tetrachloroethane	<0.50		0.50		ug/L			07/05/23 16:54	1
Chloroform	<0.50		0.50		ug/L			06/29/23 23:46	1
1,1,2-Trichloroethane	<0.50		0.50		ug/L			07/05/23 16:54	1
Dibromochloromethane	<0.50		0.50		ug/L			06/29/23 23:46	1
1,1-Dichloroethane	<0.50		0.50		ug/L			07/05/23 16:54	1
1,1-Dichloroethene	<0.50		0.50		ug/L			07/05/23 16:54	1
1,2,3-Trichlorobenzene	<0.50		0.50		ug/L			07/05/23 16:54	1
1,2,4-Trichlorobenzene	<0.50		0.50		ug/L			07/05/23 16:54	1
1,2,4-Trimethylbenzene	<0.50		0.50		ug/L			07/05/23 16:54	1
1,2-Dibromo-3-Chloropropane	<0.20		0.20		ug/L			07/05/23 16:54	1
1,2-Dibromoethane (EDB)	<0.20		0.20		ug/L			07/05/23 16:54	1
1,2-Dichlorobenzene	<0.50		0.50		ug/L			07/05/23 16:54	1
1,2-Dichloroethane	<0.50		0.50		ug/L			07/05/23 16:54	1
1,2-Dichloropropane	<0.25		0.25		ug/L			07/05/23 16:54	1
o-Xylene	<0.50		0.50		ug/L			07/05/23 16:54	1
m-Xylene & p-Xylene	<0.50		0.50		ug/L			07/05/23 16:54	1
1,3-Dichlorobenzene	<0.50		0.50		ug/L			07/05/23 16:54	1
1,4-Dichlorobenzene	<0.50		0.50		ug/L			07/05/23 16:54	1
2,2-Dichloropropane	<0.50		0.50		ug/L			07/05/23 16:54	1
Benzene	<0.50		0.50		ug/L			07/05/23 16:54	1
Carbon tetrachloride	<0.50		0.50		ug/L			07/05/23 16:54	1
Chlorobenzene	<0.50		0.50		ug/L			07/05/23 16:54	1
Methyl-tert-butyl Ether (MTBE)	<0.50		0.50		ug/L			07/05/23 16:54	1
Styrene	<0.50		0.50		ug/L			07/05/23 16:54	1
Tetrachloroethene	<0.50		0.50		ug/L			07/05/23 16:54	1
Toluene	<0.50		0.50		ug/L			07/05/23 16:54	1
Trichloroethylene	<0.50		0.50		ug/L			07/05/23 16:54	1
Vinyl chloride	<0.20		0.20		ug/L			07/05/23 16:54	1
cis-1,2-Dichloroethylene	<0.50		0.50		ug/L			07/05/23 16:54	1
cis-1,3-Dichloropropylene	<0.50		0.50		ug/L			07/05/23 16:54	1
trans-1,2-Dichloroethylene	<0.50		0.50		ug/L			07/05/23 16:54	1
trans-1,3-Dichloropropylene	<0.50		0.50		ug/L			07/05/23 16:54	1
Xylenes, Total	<0.50		0.50		ug/L			07/05/23 16:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*06/29/23 23:46*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*06/29/23 23:46*	*1*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*		*06/29/23 23:46*	*1*
1,2-Dichlorobenzene-d4 (Surr)	*88*		*70 - 130*		*06/29/23 23:46*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*07/05/23 16:54*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*07/05/23 16:54*	*1*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*		*07/05/23 16:54*	*1*
1,2-Dichlorobenzene-d4 (Surr)	*88*		*70 - 130*		*07/05/23 16:54*	*1*

Client Sample ID: TW-1
Lab Sample ID: 810-67862-1
Date Collected: 06/28/23 10:00
Matrix: Drinking Water
Date Received: 06/28/23 15:40

Method: Lab SOP V210 - Taste and Odor Compounds (GC/MS/SIS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichloroanisole (TCA)	<2.0		2.0		ng/L			06/29/23 20:01	1
2-Methylisoborneol (MIB)	<2.0		2.0		ng/L			06/29/23 20:01	1
Isopropyl methoxy pyrazine (IPMP)	<2.0		2.0		ng/L			06/29/23 20:01	1
Isobutyl methoxy pyrazine (IBMP)	<2.0		2.0		ng/L			06/29/23 20:01	1
Geosmin	<2.0		2.0		ng/L			06/29/23 20:01	1

Method: EPA 521.1 - Nitrosoamines (GC/MS/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodiphenylamine (NDPhA)	<20		20		ng/L		07/10/23 07:40	07/26/23 23:59	1
N-Nitrosomorpholine (NMOR)	<2.0		2.0		ng/L		07/10/23 07:40	07/26/23 23:59	1
N-Nitrosopiperidine (NPIP)	<2.0		2.0		ng/L		07/10/23 07:40	07/26/23 23:59	1
N-Nitrosopyrrolidine (NPYR)	<2.0		2.0		ng/L		07/10/23 07:40	07/26/23 23:59	1
N-Nitrosodi-n-butylamine (NDBA)	<2.0		2.0		ng/L		07/10/23 07:40	07/26/23 23:59	1
N-Nitrosodi-n-propylamine (NDPA)	<2.0		2.0		ng/L		07/10/23 07:40	07/26/23 23:59	1
N-Nitrosodiethylamine (NDEA)	<2.0		2.0		ng/L		07/10/23 07:40	07/26/23 23:59	1
N-Nitrosomethylethylamine (NMEA)	<2.0		2.0		ng/L		07/10/23 07:40	07/26/23 23:59	1
N-Nitrosodimethylamine (NDMA)	<2.0		2.0		ng/L		07/10/23 07:40	07/26/23 23:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
N-Nitrosodimethylamine-d6 (Surr)	*91*		*70 - 130*	*07/10/23 07:40*	*07/26/23 23:59*	*1*

Method: EPA 522 - 1,4 Dioxane (GC/MS SIM)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	<0.070		0.070		ug/L		07/18/23 08:57	07/19/23 03:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*97*		*70 - 130*	*07/18/23 08:57*	*07/19/23 03:00*	*1*

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor epoxide	<0.010		0.010		ug/L		07/06/23 07:31	07/07/23 09:18	1
Di(2-ethylhexyl)adipate	<0.60		0.60		ug/L		07/06/23 07:31	07/07/23 09:18	1
Di (2-ethylhexyl)phthalate	<0.60		0.60		ug/L		07/06/23 07:31	07/07/23 09:18	1
Di-n-octyl phthalate	<2.0		2.0		ug/L		07/06/23 07:31	07/07/23 09:18	1
Hexachlorobenzene	<0.10		0.10		ug/L		07/06/23 07:31	07/07/23 09:18	1
Simazine	<0.070		0.070		ug/L		07/06/23 07:31	07/07/23 09:18	1
Alachlor	<0.10		0.10		ug/L		07/06/23 07:31	07/07/23 09:18	1
Atrazine	<0.10		0.10		ug/L		07/06/23 07:31	07/07/23 09:18	1
Benzo[a]pyrene	<0.020		0.020		ug/L		07/06/23 07:31	07/07/23 09:18	1
gamma-BHC (Lindane)	<0.020		0.020		ug/L		07/06/23 07:31	07/07/23 09:18	1
Endrin	<0.010		0.010		ug/L		07/06/23 07:31	07/07/23 09:18	1
Methoxychlor	<0.10		0.10		ug/L		07/06/23 07:31	07/07/23 09:18	1
Heptachlor	<0.010		0.010		ug/L		07/06/23 07:31	07/07/23 09:18	1
Hexachlorocyclopentadiene	<0.10		0.10		ug/L		07/06/23 07:31	07/07/23 09:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Perylene-d12	*90*		*70 - 130*	*07/06/23 07:31*	*07/07/23 09:18*	*1*
Triphenylphosphate	*102*		*70 - 130*	*07/06/23 07:31*	*07/07/23 09:18*	*1*
2-Nitro-m-xylene	*103*		*70 - 130*	*07/06/23 07:31*	*07/07/23 09:18*	*1*

Client Sample ID: TW-1
Lab Sample ID: 810-67862-1
Date Collected: 06/28/23 10:00
Matrix: Drinking Water
Date Received: 06/28/23 15:40

Method: EPA 548.1 - Endothall (GC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Endothall	<5.0		5.0		ug/L		07/05/23 09:04	07/06/23 10:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*62*	*S1-*	*70 - 130*	*07/05/23 09:04*	*07/06/23 10:41*	*1*

Method: EPA-DW2 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	<0.010		0.010		ug/L		07/07/23 09:53	07/07/23 18:17	1
1,2-Dibromo-3-Chloropropane	<0.010		0.010		ug/L		07/07/23 09:53	07/07/23 18:17	1

Method: EPA 505 - Organochlorine Pesticides/PCBs (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.080		0.080		ug/L		06/29/23 08:29	06/29/23 22:19	1
PCB-1221	<0.10		0.10		ug/L		06/29/23 08:29	06/29/23 22:19	1
PCB-1232	<0.10		0.10		ug/L		06/29/23 08:29	06/29/23 22:19	1
PCB-1242	<0.10		0.10		ug/L		06/29/23 08:29	06/29/23 22:19	1
PCB-1248	<0.10		0.10		ug/L		06/29/23 08:29	06/29/23 22:19	1
PCB-1254	<0.10		0.10		ug/L		06/29/23 08:29	06/29/23 22:19	1
PCB-1260	<0.10		0.10		ug/L		06/29/23 08:29	06/29/23 22:19	1
Chlordane	<0.10		0.10		ug/L		06/29/23 08:29	06/29/23 22:19	1
Toxaphene	<0.50		0.50		ug/L		06/29/23 08:29	06/29/23 22:19	1
Total PCBs as DCB (Qualitative)	<0.10		0.10		ug/L		06/29/23 08:29	06/29/23 22:19	1
Polychlorinated biphenyls, Total	<0.10		0.10		ug/L		06/29/23 08:29	06/29/23 22:19	1
Chlordane (n.o.s.)	<0.10		0.10		ug/L		06/29/23 08:29	06/29/23 22:19	1

Method: EPA 515.3 - Herbicides (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-TP (Silvex)	<0.10		0.10		ug/L		06/29/23 10:18	06/30/23 23:49	1
Dalapon	<1.0		1.0		ug/L		06/29/23 10:18	06/30/23 23:49	1
Dinoseb	<0.10		0.10		ug/L		06/29/23 10:18	06/30/23 23:49	1
Pentachlorophenol	<0.040		0.040		ug/L		06/29/23 10:18	06/30/23 23:49	1
Picloram	<0.10		0.10		ug/L		06/29/23 10:18	06/30/23 23:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*89*		*70 - 130*	*06/29/23 10:18*	*06/30/23 23:49*	*1*
2,4-Dichlorophenylacetic acid	*88*		*70 - 130*	*06/29/23 10:18*	*07/03/23 20:47*	*1*

Method: EPA 552.2 THAA - Total Haloacetic Acids (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total Haloacetic Acids 5	<2.000		2.000		ug/L			07/11/23 11:12	1

Method: EPA 552.2 - Haloacetic Acids (HAAs) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Dibromoacetic acid	<1.0		1.0		ug/L		07/07/23 08:09	07/07/23 23:13	1
Dichloroacetic acid	<1.0		1.0		ug/L		07/07/23 08:09	07/07/23 23:13	1
Monobromoacetic acid	<1.0		1.0		ug/L		07/07/23 08:09	07/07/23 23:13	1
Monochloroacetic acid	<2.0		2.0		ug/L		07/07/23 08:09	07/07/23 23:13	1
Trichloroacetic acid	<1.0		1.0		ug/L		07/07/23 08:09	07/07/23 23:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Bromopropionic acid (Surr)	*112*		*70 - 130*	*07/07/23 08:09*	*07/07/23 23:13*	*1*

Client Sample ID: TW-1
Lab Sample ID: 810-67862-1
Date Collected: 06/28/23 10:00
Matrix: Drinking Water
Date Received: 06/28/23 15:40

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**17**		2.0		mg/L			07/24/23 20:29	1
Chlorite	<10		10		ug/L			06/30/23 23:00	1
Chlorate	<10		10		ug/L			06/30/23 23:00	1
Sulfate	**86**		5.0		mg/L			07/24/23 20:29	1
Bromide	**41**		10		ug/L			06/30/23 23:00	1

Method: EPA 547 - Glyphosate (DAI HPLC) - Dissolved

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Glyphosate	<6.0		6.0		ug/L			07/10/23 17:37	1

Method: EPA 549.2 - Diquat and Paraquat (HPLC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diquat	<0.40		0.40		ug/L		07/03/23 10:05	07/06/23 17:35	1

Method: EPA 331.0 - Perchlorate (LC/MS/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**0.24**		0.050		ug/L			06/29/23 17:50	1

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		07/17/23 06:33	07/18/23 06:00	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		07/17/23 06:33	07/18/23 06:00	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		07/17/23 06:33	07/18/23 06:00	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		07/17/23 06:33	07/18/23 06:00	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		07/17/23 06:33	07/18/23 06:00	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		07/17/23 06:33	07/18/23 06:00	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		07/17/23 06:33	07/18/23 06:00	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		07/17/23 06:33	07/18/23 06:00	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		07/17/23 06:33	07/18/23 06:00	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		07/17/23 06:33	07/18/23 06:00	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		07/17/23 06:33	07/18/23 06:00	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		07/17/23 06:33	07/18/23 06:00	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		07/17/23 06:33	07/18/23 06:00	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		07/17/23 06:33	07/18/23 06:00	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		07/17/23 06:33	07/18/23 06:00	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		07/17/23 06:33	07/18/23 06:00	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		07/17/23 06:33	07/18/23 06:00	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		07/17/23 06:33	07/18/23 06:00	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<2.0		2.0		ng/L		07/17/23 06:33	07/18/23 06:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		07/17/23 06:33	07/18/23 06:00	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<2.0		2.0		ng/L		07/17/23 06:33	07/18/23 06:00	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<2.0		2.0		ng/L		07/17/23 06:33	07/18/23 06:00	1
Perfluoro(4-methoxybutanoic acid)	<2.0		2.0		ng/L		07/17/23 06:33	07/18/23 06:00	1

Client Sample ID: TW-1
Lab Sample ID: 810-67862-1
Date Collected: 06/28/23 10:00
Matrix: Drinking Water
Date Received: 06/28/23 15:40

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		07/17/23 06:33	07/18/23 06:00	1
Perfluoro-3,6-dioxaheptanoic acid	<2.0		2.0		ng/L		07/17/23 06:33	07/18/23 06:00	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*80*		*50 - 200*	*07/17/23 06:33*	*07/18/23 06:00*	*1*
13C5 PFPeA	*83*		*50 - 200*	*07/17/23 06:33*	*07/18/23 06:00*	*1*
13C5 PFHxA	*78*		*50 - 200*	*07/17/23 06:33*	*07/18/23 06:00*	*1*
13C4 PFHpA	*78*		*50 - 200*	*07/17/23 06:33*	*07/18/23 06:00*	*1*
13C8 PFOA	*76*		*50 - 200*	*07/17/23 06:33*	*07/18/23 06:00*	*1*
13C9 PFNA	*80*		*50 - 200*	*07/17/23 06:33*	*07/18/23 06:00*	*1*
13C6 PFDA	*72*		*50 - 200*	*07/17/23 06:33*	*07/18/23 06:00*	*1*
13C7 PFUnA	*64*		*50 - 200*	*07/17/23 06:33*	*07/18/23 06:00*	*1*
13C2 PFDoA	*61*		*50 - 200*	*07/17/23 06:33*	*07/18/23 06:00*	*1*
13C3 HFPO-DA	*74*		*50 - 200*	*07/17/23 06:33*	*07/18/23 06:00*	*1*
13C3 PFBS	*88*		*50 - 200*	*07/17/23 06:33*	*07/18/23 06:00*	*1*
13C8 PFOS	*83*		*50 - 200*	*07/17/23 06:33*	*07/18/23 06:00*	*1*
13C2-4:2-FTS	*89*		*50 - 200*	*07/17/23 06:33*	*07/18/23 06:00*	*1*
13C2-6:2-FTS	*87*		*50 - 200*	*07/17/23 06:33*	*07/18/23 06:00*	*1*
13C2-8:2-FTS	*82*		*50 - 200*	*07/17/23 06:33*	*07/18/23 06:00*	*1*
13C3 PFHxS	*90*		*50 - 200*	*07/17/23 06:33*	*07/18/23 06:00*	*1*

Method: EPA 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	<1.9	*+	1.9		ng/L		07/11/23 08:07	07/12/23 20:25	1
Perfluoroundecanoic acid (PFUnA)	<1.9	*+	1.9		ng/L		07/11/23 08:07	07/12/23 20:25	1
Perfluorohexanoic acid (PFHxA)	<1.9	*+	1.9		ng/L		07/11/23 08:07	07/12/23 20:25	1
Perfluorododecanoic acid (PFDoA)	<1.9	*+	1.9		ng/L		07/11/23 08:07	07/12/23 20:25	1
Perfluorooctanoic acid (PFOA)	<1.9	*+	1.9		ng/L		07/11/23 08:07	07/12/23 20:25	1
Perfluorodecanoic acid (PFDA)	<1.9	*+	1.9		ng/L		07/11/23 08:07	07/12/23 20:25	1
Perfluorohexanesulfonic acid (PFHxS)	<1.9	*+	1.9		ng/L		07/11/23 08:07	07/12/23 20:25	1
Perfluorobutanesulfonic acid (PFBS)	<1.9	*+	1.9		ng/L		07/11/23 08:07	07/12/23 20:25	1
Perfluoroheptanoic acid (PFHpA)	<1.9	*+	1.9		ng/L		07/11/23 08:07	07/12/23 20:25	1
Perfluorononanoic acid (PFNA)	<1.9	*+	1.9		ng/L		07/11/23 08:07	07/12/23 20:25	1
Perfluorotetradecanoic acid (PFTeDA)	<1.9		1.9		ng/L		07/11/23 08:07	07/12/23 20:25	1
Perfluorotridecanoic acid (PFTrDA)	<1.9		1.9		ng/L		07/11/23 08:07	07/12/23 20:25	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.9	*+	1.9		ng/L		07/11/23 08:07	07/12/23 20:25	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.9		1.9		ng/L		07/11/23 08:07	07/12/23 20:25	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.9	*+	1.9		ng/L		07/11/23 08:07	07/12/23 20:25	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<1.9		1.9		ng/L		07/11/23 08:07	07/12/23 20:25	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<1.9		1.9		ng/L		07/11/23 08:07	07/12/23 20:25	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.9	*+	1.9		ng/L		07/11/23 08:07	07/12/23 20:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*103*		*70 - 130*	*07/11/23 08:07*	*07/12/23 20:25*	*1*
13C2 PFDA	*97*		*70 - 130*	*07/11/23 08:07*	*07/12/23 20:25*	*1*

Client Sample ID: TW-1
Lab Sample ID: 810-67862-1
Date Collected: 06/28/23 10:00
Matrix: Drinking Water
Date Received: 06/28/23 15:40

Method: EPA 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*101*		*70 - 130*	*07/11/23 08:07*	*07/12/23 20:25*	*1*
d5-NEtFOSAA	*80*		*70 - 130*	*07/11/23 08:07*	*07/12/23 20:25*	*1*

Method: EPA 1613B - Tetra Chlorinated Dioxin in Drinking Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	<3.8		3.8		pg/L		07/05/23 21:37	07/08/23 09:20	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*106*		*25 - 164*	*07/05/23 21:37*	*07/08/23 09:20*	*1*

Method: EPA 200.7 - Metals (ICP)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Sodium	**5.6**		0.10		mg/L			07/11/23 14:49	1
Silica	**15**		0.043		mg/L			07/11/23 14:49	1
Potassium	**1.4**		0.20		mg/L			07/11/23 14:49	1
Magnesium	**32**		0.10		mg/L			07/11/23 14:49	1
Iron	**1.5**		0.010		mg/L			07/11/23 14:49	1
Calcium	**110**		0.10		mg/L			07/11/23 14:49	1

Method: EPA 200.7 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Iron	<0.010		0.010		mg/L			07/06/23 15:31	1

Method: EPA 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<2.0		2.0		ug/L			07/07/23 10:59	1
Lithium	**4.0**		2.0		ug/L			07/07/23 10:59	1
Antimony	<1.0		1.0		ug/L			07/07/23 10:59	1
Arsenic	**1.4**		1.0		ug/L			07/07/23 10:59	1
Barium	**70**		2.0		ug/L			07/07/23 10:59	1
Beryllium	<0.30		0.30		ug/L			07/07/23 10:59	1
Cadmium	<0.50		0.50		ug/L			07/07/23 10:59	1
Chromium	**1.1**		0.90		ug/L			07/07/23 10:59	1
Copper	<1.0		1.0		ug/L			07/07/23 10:59	1
Lead	<0.50		0.50		ug/L			07/07/23 10:59	1
Manganese	**100**		2.0		ug/L			07/07/23 10:59	1
Selenium	<2.0		2.0		ug/L			07/07/23 10:59	1
Silver	<0.50		0.50		ug/L			07/07/23 10:59	1
Thallium	<0.30		0.30		ug/L			07/07/23 10:59	1
Zinc	<5.0		5.0		ug/L			07/07/23 10:59	1

Method: EPA 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.10		0.10		ug/L		07/12/23 11:50	07/12/23 17:58	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**400**		0.66		mg/L			07/06/23 13:58	1
Calcium hardness as calcium carbonate	**260**		0.25		mg/L			07/06/23 13:58	1
Magnesium hardness as calcium carbonate	**130**		0.41		mg/L			07/06/23 13:58	1

Client Sample ID: TW-1
Lab Sample ID: 810-67862-1
Date Collected: 06/28/23 10:00
Matrix: Drinking Water
Date Received: 06/28/23 15:40

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Turbidity (EPA 180.1)	**10**		0.10		NTU			06/28/23 18:02	1
Cyanide, Total (EPA 335.4)	<0.0050		0.0050		mg/L		06/29/23 13:10	06/29/23 14:08	1
Nitrite as N (EPA 353.2)	<0.010		0.010		mg/L			06/29/23 15:04	1
Nitrate Nitrite as N (EPA 353.2)	**1.6**		0.10		mg/L			06/29/23 13:06	1
Monochloramine (SM 4500 Cl F Amine)	<0.10	HF	0.10		mg/L			06/28/23 17:07	1
Dichloramine (SM 4500 Cl F Amine)	<0.10	HF	0.10		mg/L			06/28/23 17:07	1
Nitrogen trichloride (SM 4500 Cl F Amine)	<0.20	HF	0.20		mg/L			06/28/23 17:07	1
Chloramines, Total (SM 4500 Cl F Amine)	<0.20	HF	0.20		mg/L			06/28/23 17:07	1
Free Chlorine (SM 4500 Cl G)	<0.50	HF	0.50		mg/L			06/28/23 17:39	1
Chlorine dioxide, Residual (SM 4500 ClO2 D)	<0.24	HF	0.24		mg/L			06/28/23 19:13	1
Nitrate as N (SM Nitrate by calc)	**1.6**		0.10		mg/L			06/29/23 21:51	1
Color, Apparent (SM 2120B)	**35**		3.0		Color Units			06/28/23 20:13	1
Alkalinity, Total (SM 2320B)	**290**		1.0		mg/L			06/29/23 19:20	1
Langelier Index (SM 2330B)	**0.30**				LangSU			07/10/23 10:36	1
Specific Conductance (SM 2510B)	**720**		2.0		uS/cm			07/03/23 15:14	1
Total Dissolved Solids (SM 2540C)	**490**		10		mg/L			06/29/23 17:26	1
Total Suspended Solids (SM 2540D)	<10		10		mg/L			06/30/23 14:06	1
Chlorine, Total Residual (SM 4500 Cl G)	<0.50		0.50		mg/L			06/28/23 17:33	1
Carbon Dioxide, Free (SM 4500 CO2 B)	**25**		0.10		mg/L			07/05/23 12:39	1
Fluoride (SM 4500 F C)	**0.13**		0.050		mg/L			06/28/23 19:15	1
Ammonia, Nitrogen (SM 4500 NH3 D)	**0.10**		0.10		mg/L			06/29/23 11:34	1
Oxygen, Dissolved (SM 4500 O G)	**2.9**	**HF**	1.0		mg/L			06/29/23 21:08	1
Phosphate, ortho (SM 4500 P E)	<0.030		0.030		mg/L			06/28/23 20:43	1
Orthophosphate as PO4 (SM 4500 P E)	<0.092		0.092		mg/L			06/28/23 20:43	1
Sulfide (SM 4500 S2 D)	<0.050		0.050		mg/L			07/05/23 11:16	1
Total Organic Carbon (SM 5310C)	**0.548**		0.500		mg/L			07/01/23 01:04	1
Ultraviolet Absorption, 254 nm (SM 5910B)	**0.021**		0.0090		1/cm			06/28/23 18:44	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (SM 5310C)	**0.542**		0.500		mg/L			07/07/23 23:36	1

Method: SM7500_Rn_B - Radon

Analyte	Result	Qualifier	Count Uncert. (σ+/-)	Total Uncert. (σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radon 222	**316**	*			9.70	pCi/L	06/29/23 14:57	06/30/23 12:11	1

Method: EPA 1623 - Cryptosporidium and Giardia (Filtration / IMS / FA)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Volume of resuspension processed	**`7.2**		1.00		mL		06/30/23 15:14	07/06/23 14:05	1
Volume of resuspended concentrate	**`7.2**		1.00		mL		06/30/23 15:14	07/06/23 14:05	1

Client: INTERA Inc
Job ID: 810-67862-1
Project/Site: B&V Project 414595 Groundwater Analysis

Client Sample ID: TW-1
Lab Sample ID: 810-67862-1
Date Collected: 06/28/23 10:00
Matrix: Drinking Water
Date Received: 06/28/23 15:40

Method: EPA 1623 - Cryptosporidium and Giardia (Filtration / IMS / FA) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Packed pellet volume	**`0.1**		0.100		mL		06/30/23 15:14	07/06/23 14:05	1
Number of filters used	**`1**		10.0		NONE		06/30/23 15:14	07/06/23 14:05	1
Number of oocysts counted	**`0**		10.0		NONE		06/30/23 15:14	07/06/23 14:05	1
Percentage of filtered volume examined	**`100**		10.0		%		06/30/23 15:14	07/06/23 14:05	1
Sample volume filtered	**`10.0**		1.00		L		06/30/23 15:14	07/06/23 14:05	1
Giardia	<10.0		10.0		cyst/100L		06/30/23 15:14	07/06/23 14:05	1
Cryptosporidium	<10.0		10.0		oocyst/100L		06/30/23 15:14	07/06/23 14:05	1

Method: SM 9223B - Coliforms, Total, and E.Coli (Presence/Absence)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Escherichia coli	ABSENT				NONE			06/28/23 16:50	1
Coliform, Total	**PRESENT**				NONE			06/28/23 16:50	1

Method: SM 9215E - Heterotrophic Plate Count

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Heterotrophic Plate Count	**33**		2.0		MPN/mL			06/28/23 16:30	1

Lab Chronicle

Client: INTERA Inc
Job ID: 810-67862-1
Project/Site: B&V Project 414595 Groundwater Analysis

Client Sample ID: TW-1
Lab Sample ID: 810-67862-1
Date Collected: 06/28/23 10:00
Matrix: Drinking Water
Date Received: 06/28/23 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	524.2		1	64221	CM	EA SB	06/29/23 23:46
Total/NA	Analysis	524.2		1	64457	JT	EA SB	07/03/23 08:54
Total/NA	Analysis	524.2		1	64574	CM	EA SB	07/05/23 16:54
Total/NA	Analysis	V210		1	64197	CM	EA SB	06/29/23 20:01
Total/NA	Prep	521			64981	HB	EA SB	07/10/23 07:40
Total/NA	Analysis	521.1		1	67122	JB	EA SB	07/26/23 23:59
Total/NA	Prep	522			65941	KB	EA SB	07/18/23 08:57
Total/NA	Analysis	522		1	66025	TD	EA SB	07/19/23 03:00
Total/NA	Prep	525.2			64691	MR	EA SB	07/06/23 07:31
Total/NA	Analysis	525.2		1	64810	BC	EA SB	07/07/23 09:18
Total/NA	Prep	548.1			64573	KB	EA SB	07/05/23 09:04
Total/NA	Analysis	548.1		1	64650	CM	EA SB	07/06/23 10:41
Total/NA	Prep	504.1			64866	HB	EA SB	07/07/23 09:53 - 07/07/23 12:00 [1]
Total/NA	Analysis	504.1		1	64909	JV	EA SB	07/07/23 18:17
Total/NA	Prep	505			64175	SS	EA SB	06/29/23 08:29 - 06/29/23 15:00 [1]
Total/NA	Analysis	505		1	64250	JV	EA SB	06/29/23 22:19
Total/NA	Prep	515.3			64186	ER	EA SB	06/29/23 10:18
Total/NA	Cleanup	Aliquot			64258	ER	EA SB	06/29/23 16:00
Total/NA	Analysis	515.3		1	64304	CM	EA SB	06/30/23 23:49
Total/NA	Prep	515.3			64186	ER	EA SB	06/29/23 10:18
Total/NA	Cleanup	Aliquot			64258	ER	EA SB	06/29/23 16:00
Total/NA	Analysis	515.3		1	64483	CM	EA SB	07/03/23 20:47
Total/NA	Prep	552.2			64854	PK	EA SB	07/07/23 08:09
Total/NA	Analysis	552.2		1	64883	DT	EA SB	07/07/23 23:13
Total/NA	Analysis	552.2 THAA		1	65099	JT	EA SB	07/11/23 11:12
Total/NA	Analysis	300.0		1	66689	NR	EA SB	07/24/23 20:29
Total/NA	Analysis	300.0		1	64388	NR	EA SB	06/30/23 23:00
Dissolved	Filtration	Filtration			64899	ER	EA SB	07/07/23 14:02
Dissolved	Analysis	547		1	65018	RS	EA SB	07/10/23 17:37
Total/NA	Prep	549.2			64496	ER	EA SB	07/03/23 10:05
Total/NA	Analysis	549.2		1	64750	CM	EA SB	07/06/23 17:35
Total/NA	Analysis	331.0		1	64183	CM	EA SB	06/29/23 17:50
Total/NA	Prep	533			65806	KL	EA SB	07/17/23 06:33
Total/NA	Analysis	533		1	65889	KB	EA SB	07/18/23 06:00
Total/NA	Prep	537.1 DW			65121	SS	EA SB	07/11/23 08:07
Total/NA	Analysis	537.1		1	65204	MH	EA SB	07/12/23 20:25
Total/NA	Prep	1613B			393881	SJ7Z	ELLE	07/05/23 21:37
Total/NA	Analysis	1613B		1	394762	RGA5	ELLE	07/08/23 09:20
Dissolved	Filtration	Filtration			64349	CA	EA SB	06/30/23 12:58
Dissolved	Analysis	200.7		1	64798	AC	EA SB	07/06/23 15:31
Total/NA	Analysis	200.7		1	65267	AC	EA SB	07/11/23 14:49
Total/NA	Analysis	200.8		1	64876	NB	EA SB	07/07/23 10:59

Lab Chronicle

Client: INTERA Inc
Job ID: 810-67862-1
Project/Site: B&V Project 414595 Groundwater Analysis

Client Sample ID: TW-1
Lab Sample ID: 810-67862-1

Date Collected: 06/28/23 10:00
Matrix: Drinking Water

Date Received: 06/28/23 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	245.1			65378	AC	EA SB	07/12/23 11:50
Total/NA	Analysis	245.1		1	65419	AC	EA SB	07/12/23 17:58
Total/NA	Analysis	SM 2340B		1	64763	AC	EA SB	07/06/23 13:58
Total/NA	Analysis	180.1		1	64134	JA	EA SB	06/28/23 18:02
Total/NA	Prep	Distill/CN			64196	JA	EA SB	06/29/23 13:10
Total/NA	Analysis	335.4		1	64230	JA	EA SB	06/29/23 14:08
Total/NA	Analysis	353.2		1	64242	KH	EA SB	06/29/23 13:06
Total/NA	Analysis	353.2		1	64259	KH	EA SB	06/29/23 15:04
Total/NA	Analysis	4500 Cl F Amine		1	64127	JA	EA SB	06/28/23 17:07
Total/NA	Analysis	4500 Cl G		1	64131	JA	EA SB	06/28/23 17:39
Total/NA	Analysis	4500 ClO2 D		1	64140	GB	EA SB	06/28/23 19:13
Total/NA	Analysis	Nitrate by calc		1	64280	NB	EA SB	06/29/23 21:51
Total/NA	Analysis	SM 2120B		1	64142	GB	EA SB	06/28/23 20:13
Total/NA	Analysis	SM 2320B		1	64301	KH	EA SB	06/29/23 19:20
Total/NA	Analysis	SM 2330B		1	65012	KH	EA SB	07/10/23 10:36
Total/NA	Analysis	SM 2510B		1	64530	GB	EA SB	07/03/23 15:14
Total/NA	Analysis	SM 2540C		1	64254	JA	EA SB	06/29/23 17:26
Total/NA	Analysis	SM 2540D		1	64378	GB	EA SB	06/30/23 14:06
Total/NA	Analysis	SM 4500 Cl G		1	64130	JA	EA SB	06/28/23 17:33
Total/NA	Analysis	SM 4500 CO2 B		1	64610	KH	EA SB	07/05/23 12:39
Total/NA	Analysis	SM 4500 F C		1	64163	KH	EA SB	06/28/23 19:15
Total/NA	Analysis	SM 4500 NH3 D		1	64202	KH	EA SB	06/29/23 11:34
Total/NA	Analysis	SM 4500 O G		1	64358	AC	EA SB	06/29/23 21:08
Total/NA	Analysis	SM 4500 P E		1	64144	GB	EA SB	06/28/23 20:43
Total/NA	Analysis	SM 4500 S2 D		1	64593	JA	EA SB	07/05/23 11:16
Dissolved	Filtration	Filtration			64271	AC	EA SB	06/29/23 14:28
Dissolved	Analysis	SM 5310C		1	65017	AC	EA SB	07/07/23 23:36
Total/NA	Analysis	SM 5310C		1	64658	AC	EA SB	07/01/23 01:04
Total/NA	Analysis	SM 5910B		1	64141	GB	EA SB	06/28/23 18:44
Total/NA	Prep	RAD Prep			64491	SM	EA SB	06/29/23 14:57
Total/NA	Analysis	SM7500_Rn_B		1	64522	SM	EA SB	06/30/23 12:11 - 06/30/23 12:11 [1]
Total/NA	Leach	1623			63875	RI	EA SB	06/29/23 08:03
Total/NA	Cleanup	1623			64060	MV	EA SB	06/29/23 11:55
Total/NA	Prep	1623			64311	MV	EA SB	06/30/23 15:14
Total/NA	Analysis	1623		1	64782	RI	EA SB	07/06/23 14:05 - 07/07/23 14:30 [1]
Total/NA	Analysis	9223B		1	64046	HW	EA SB	06/28/23 16:50 - 06/30/23 09:48 [1]
Total/NA	Analysis	SM 9215E		1	64084	SF	EA SB	06/28/23 16:30 - 06/30/23 15:30 [1]

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Lab Chronicle

Client: INTERA Inc
Job ID: 810-67862-1
Project/Site: B&V Project 414595 Groundwater Analysis

Laboratory References:

E CEI = E CEI, 730 SE Maynard Road, Cary, NC 27511

EA SB = Eurofins Eaton Analytical South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sci Method = Scientific Methods, Inc, 12441 Beckley St, Granger, IN 46530

Accreditation/Certification Summary

Client: INTERA Inc
Job ID: 810-67862-1
Project/Site: B&V Project 414595 Groundwater Analysis

Laboratory: Eurofins Eaton Analytical South Bend

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Indiana	State	C-71-01	12-31-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1623	1623	Drinking Water	Cryptosporidium
1623	1623	Drinking Water	Giardia
1623	1623	Drinking Water	Number of filters used
1623	1623	Drinking Water	Number of oocysts counted
1623	1623	Drinking Water	Packed pellet volume
1623	1623	Drinking Water	Percentage of filtered volume examined
1623	1623	Drinking Water	Sample volume filtered
1623	1623	Drinking Water	Volume of resuspended concentrate
1623	1623	Drinking Water	Volume of resuspension processed
180.1		Drinking Water	Turbidity
200.7		Drinking Water	Calcium
200.7		Drinking Water	Iron
200.7		Drinking Water	Magnesium
200.7		Drinking Water	Potassium
200.7		Drinking Water	Silica
200.7		Drinking Water	Sodium
200.8		Drinking Water	Aluminum
200.8		Drinking Water	Lithium
200.8		Drinking Water	Manganese
200.8		Drinking Water	Silver
200.8		Drinking Water	Zinc
300.0		Drinking Water	Bromide
300.0		Drinking Water	Chlorate
300.0		Drinking Water	Chloride
300.0		Drinking Water	Sulfate
331.0		Drinking Water	Perchlorate
353.2		Drinking Water	Nitrate Nitrite as N
4500 Cl F Amine		Drinking Water	Chloramines, Total
4500 Cl F Amine		Drinking Water	Dichloramine
4500 Cl F Amine		Drinking Water	Monochloramine
4500 Cl F Amine		Drinking Water	Nitrogen trichloride
4500 Cl G		Drinking Water	Free Chlorine
4500 ClO2 D		Drinking Water	Chlorine dioxide, Residual
505	505	Drinking Water	Chlordane (n.o.s.)
505	505	Drinking Water	Polychlorinated biphenyls, Total
505	505	Drinking Water	Total PCBs as DCB (Qualitative)
521.1	521	Drinking Water	N-Nitrosodiethylamine (NDEA)
521.1	521	Drinking Water	N-Nitrosodimethylamine (NDMA)
521.1	521	Drinking Water	N-Nitrosodi-n-butylamine (NDBA)
521.1	521	Drinking Water	N-Nitrosodi-n-propylamine (NDPA)
521.1	521	Drinking Water	N-Nitrosodiphenylamine (NDPhA)
521.1	521	Drinking Water	N-Nitrosomethylethylamine (NMEA)
521.1	521	Drinking Water	N-Nitrosomorpholine (NMOR)
521.1	521	Drinking Water	N-Nitrosopiperidine (NPIP)
521.1	521	Drinking Water	N-Nitrosopyrrolidine (NPYR)

Laboratory: Eurofins Eaton Analytical South Bend (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
522	522	Drinking Water	1,4-Dioxane
524.2		Drinking Water	1,1,2,2-Tetrachloroethane
524.2		Drinking Water	1,1-Dichloroethane
524.2		Drinking Water	1,2,3-Trichlorobenzene
524.2		Drinking Water	1,2,4-Trimethylbenzene
524.2		Drinking Water	1,2-Dibromo-3-Chloropropane
524.2		Drinking Water	1,2-Dibromoethane (EDB)
524.2		Drinking Water	1,3-Dichlorobenzene
524.2		Drinking Water	2,2-Dichloropropane
524.2		Drinking Water	cis-1,3-Dichloropropylene
524.2		Drinking Water	Methyl-tert-butyl Ether (MTBE)
524.2		Drinking Water	m-Xylene & p-Xylene
524.2		Drinking Water	o-Xylene
524.2		Drinking Water	trans-1,3-Dichloropropylene
525.2	525.2	Drinking Water	Di-n-octyl phthalate
533	533	Drinking Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
533	533	Drinking Water	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)
533	533	Drinking Water	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)
533	533	Drinking Water	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)
533	533	Drinking Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
533	533	Drinking Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid
533	533	Drinking Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)
533	533	Drinking Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)
533	533	Drinking Water	Perfluoro(4-methoxybutanoic acid)
533	533	Drinking Water	Perfluoro-3,6-dioxaheptanoic acid
533	533	Drinking Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
533	533	Drinking Water	Perfluorobutanesulfonic acid (PFBS)
533	533	Drinking Water	Perfluorobutanoic acid (PFBA)
533	533	Drinking Water	Perfluorodecanoic acid (PFDA)
533	533	Drinking Water	Perfluorododecanoic acid (PFDoA)
533	533	Drinking Water	Perfluoroheptanesulfonic acid (PFHpS)
533	533	Drinking Water	Perfluoroheptanoic acid (PFHpA)
533	533	Drinking Water	Perfluorohexanesulfonic acid (PFHxS)
533	533	Drinking Water	Perfluorohexanoic acid (PFHxA)
533	533	Drinking Water	Perfluorononanoic acid (PFNA)
533	533	Drinking Water	Perfluorooctanesulfonic acid (PFOS)
533	533	Drinking Water	Perfluorooctanoic acid (PFOA)
533	533	Drinking Water	Perfluoropentanesulfonic acid (PFPeS)
533	533	Drinking Water	Perfluoropentanoic acid (PFPeA)
533	533	Drinking Water	Perfluoroundecanoic acid (PFUnA)

Accreditation/Certification Summary

Client: INTERA Inc
Job ID: 810-67862-1
Project/Site: B&V Project 414595 Groundwater Analysis

Laboratory: Eurofins Eaton Analytical South Bend (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537.1	537.1 DW	Drinking Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
537.1	537.1 DW	Drinking Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
537.1	537.1 DW	Drinking Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid
537.1	537.1 DW	Drinking Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)
537.1	537.1 DW	Drinking Water	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)
537.1	537.1 DW	Drinking Water	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)
537.1	537.1 DW	Drinking Water	Perfluorobutanesulfonic acid (PFBS)
537.1	537.1 DW	Drinking Water	Perfluorodecanoic acid (PFDA)
537.1	537.1 DW	Drinking Water	Perfluorododecanoic acid (PFDoA)
537.1	537.1 DW	Drinking Water	Perfluoroheptanoic acid (PFHpA)
537.1	537.1 DW	Drinking Water	Perfluorohexanesulfonic acid (PFHxS)
537.1	537.1 DW	Drinking Water	Perfluorohexanoic acid (PFHxA)
537.1	537.1 DW	Drinking Water	Perfluorononanoic acid (PFNA)
537.1	537.1 DW	Drinking Water	Perfluorooctanesulfonic acid (PFOS)
537.1	537.1 DW	Drinking Water	Perfluorooctanoic acid (PFOA)
537.1	537.1 DW	Drinking Water	Perfluorotetradecanoic acid (PFTeDA)
537.1	537.1 DW	Drinking Water	Perfluorotridecanoic acid (PFTrDA)
537.1	537.1 DW	Drinking Water	Perfluoroundecanoic acid (PFUnA)
9223B		Drinking Water	Coliform, Total
9223B		Drinking Water	Escherichia coli
SM 2120B		Drinking Water	Color, Apparent
SM 2320B		Drinking Water	Alkalinity, Total
SM 2330B		Drinking Water	Langelier Index
SM 2340B		Drinking Water	Calcium hardness as calcium carbonate
SM 2340B		Drinking Water	Hardness as calcium carbonate
SM 2340B		Drinking Water	Magnesium hardness as calcium carbonate
SM 2510B		Drinking Water	Specific Conductance
SM 2540C		Drinking Water	Total Dissolved Solids
SM 2540D		Drinking Water	Total Suspended Solids
SM 4500 Cl G		Drinking Water	Chlorine, Total Residual
SM 4500 CO2 B		Drinking Water	Carbon Dioxide, Free
SM 4500 NH3 D		Drinking Water	Ammonia, Nitrogen
SM 4500 O G		Drinking Water	Oxygen, Dissolved
SM 4500 P E		Drinking Water	Orthophosphate as PO4
SM 4500 P E		Drinking Water	Phosphate, ortho
SM 4500 S2 D		Drinking Water	Sulfide
SM 5310C		Drinking Water	Dissolved Organic Carbon
SM 5310C		Drinking Water	Total Organic Carbon
SM 5910B		Drinking Water	Ultraviolet Absorption, 254 nm
SM 9215E		Drinking Water	Heterotrophic Plate Count
SM7500_Rn_B	RAD Prep	Drinking Water	Radon 222

Laboratory: Eurofins Eaton Analytical South Bend (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
V210		Drinking Water	2,4,6-Trichloroanisole (TCA)
V210		Drinking Water	2-Methylisoborneol (MIB)
V210		Drinking Water	Geosmin
V210		Drinking Water	Isobutyl methoxy pyrazine (IBMP)
V210		Drinking Water	Isopropyl methoxy pyrazine (IPMP)

Indiana (Micro)	State		M-76-07	12-31-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1623	1623	Drinking Water	Cryptosporidium
1623	1623	Drinking Water	Giardia
1623	1623	Drinking Water	Number of filters used
1623	1623	Drinking Water	Number of oocysts counted
1623	1623	Drinking Water	Packed pellet volume
1623	1623	Drinking Water	Percentage of filtered volume examined
1623	1623	Drinking Water	Sample volume filtered
1623	1623	Drinking Water	Volume of resuspended concentrate
1623	1623	Drinking Water	Volume of resuspension processed
180.1		Drinking Water	Turbidity
200.7		Drinking Water	Calcium
200.7		Drinking Water	Iron
200.7		Drinking Water	Magnesium
200.7		Drinking Water	Potassium
200.7		Drinking Water	Silica
200.7		Drinking Water	Sodium
200.8		Drinking Water	Aluminum
200.8		Drinking Water	Antimony
200.8		Drinking Water	Arsenic
200.8		Drinking Water	Barium
200.8		Drinking Water	Beryllium
200.8		Drinking Water	Cadmium
200.8		Drinking Water	Chromium
200.8		Drinking Water	Copper
200.8		Drinking Water	Lead
200.8		Drinking Water	Lithium
200.8		Drinking Water	Manganese
200.8		Drinking Water	Selenium
200.8		Drinking Water	Silver
200.8		Drinking Water	Thallium
200.8		Drinking Water	Zinc
245.1	245.1	Drinking Water	Mercury
300.0		Drinking Water	Bromide
300.0		Drinking Water	Chlorate
300.0		Drinking Water	Chloride
300.0		Drinking Water	Chlorite
300.0		Drinking Water	Sulfate

Laboratory: Eurofins Eaton Analytical South Bend (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
331.0		Drinking Water	Perchlorate
335.4	Distill/CN	Drinking Water	Cyanide, Total
353.2		Drinking Water	Nitrate Nitrite as N
353.2		Drinking Water	Nitrite as N
4500 Cl F Amine		Drinking Water	Chloramines, Total
4500 Cl F Amine		Drinking Water	Dichloramine
4500 Cl F Amine		Drinking Water	Monochloramine
4500 Cl F Amine		Drinking Water	Nitrogen trichloride
4500 Cl G		Drinking Water	Free Chlorine
4500 ClO2 D		Drinking Water	Chlorine dioxide, Residual
504.1	504.1	Drinking Water	1,2-Dibromo-3-Chloropropane
504.1	504.1	Drinking Water	1,2-Dibromoethane (EDB)
505	505	Drinking Water	Chlordane
505	505	Drinking Water	Chlordane (n.o.s.)
505	505	Drinking Water	PCB-1016
505	505	Drinking Water	PCB-1221
505	505	Drinking Water	PCB-1232
505	505	Drinking Water	PCB-1242
505	505	Drinking Water	PCB-1248
505	505	Drinking Water	PCB-1254
505	505	Drinking Water	PCB-1260
505	505	Drinking Water	Polychlorinated biphenyls, Total
505	505	Drinking Water	Total PCBs as DCB (Qualitative)
505	505	Drinking Water	Toxaphene
515.3	515.3	Drinking Water	2,4,5-TP (Silvex)
515.3	515.3	Drinking Water	Dalapon
515.3	515.3	Drinking Water	Dinoseb
515.3	515.3	Drinking Water	Pentachlorophenol
515.3	515.3	Drinking Water	Picloram
521.1	521	Drinking Water	N-Nitrosodiethylamine (NDEA)
521.1	521	Drinking Water	N-Nitrosodimethylamine (NDMA)
521.1	521	Drinking Water	N-Nitrosodi-n-butylamine (NDBA)
521.1	521	Drinking Water	N-Nitrosodi-n-propylamine (NDPA)
521.1	521	Drinking Water	N-Nitrosodiphenylamine (NDPhA)
521.1	521	Drinking Water	N-Nitrosomethylethylamine (NMEA)
521.1	521	Drinking Water	N-Nitrosomorpholine (NMOR)
521.1	521	Drinking Water	N-Nitrosopiperidine (NPIP)
521.1	521	Drinking Water	N-Nitrosopyrrolidine (NPYR)
522	522	Drinking Water	1,4-Dioxane
524.2		Drinking Water	1,1,1-Trichloroethane
524.2		Drinking Water	1,1,2,2-Tetrachloroethane
524.2		Drinking Water	1,1,2-Trichloroethane
524.2		Drinking Water	1,1-Dichloroethane
524.2		Drinking Water	1,1-Dichloroethene
524.2		Drinking Water	1,2,3-Trichlorobenzene
524.2		Drinking Water	1,2,4-Trichlorobenzene
524.2		Drinking Water	1,2,4-Trimethylbenzene

Laboratory: Eurofins Eaton Analytical South Bend (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
524.2		Drinking Water	1,2-Dibromo-3-Chloropropane
524.2		Drinking Water	1,2-Dibromoethane (EDB)
524.2		Drinking Water	1,2-Dichlorobenzene
524.2		Drinking Water	1,2-Dichloroethane
524.2		Drinking Water	1,2-Dichloropropane
524.2		Drinking Water	1,3-Dichlorobenzene
524.2		Drinking Water	1,4-Dichlorobenzene
524.2		Drinking Water	2,2-Dichloropropane
524.2		Drinking Water	Benzene
524.2		Drinking Water	Bromodichloromethane
524.2		Drinking Water	Bromoform
524.2		Drinking Water	Carbon tetrachloride
524.2		Drinking Water	Chlorobenzene
524.2		Drinking Water	Chloroform
524.2		Drinking Water	cis-1,2-Dichloroethylene
524.2		Drinking Water	cis-1,3-Dichloropropylene
524.2		Drinking Water	Dibromochloromethane
524.2		Drinking Water	Methyl-tert-butyl Ether (MTBE)
524.2		Drinking Water	m-Xylene & p-Xylene
524.2		Drinking Water	o-Xylene
524.2		Drinking Water	Styrene
524.2		Drinking Water	Tetrachloroethene
524.2		Drinking Water	Toluene
524.2		Drinking Water	trans-1,2-Dichloroethylene
524.2		Drinking Water	trans-1,3-Dichloropropylene
524.2		Drinking Water	Trichloroethylene
524.2		Drinking Water	Trihalomethanes, Total
524.2		Drinking Water	Vinyl chloride
524.2		Drinking Water	Xylenes, Total
525.2	525.2	Drinking Water	Alachlor
525.2	525.2	Drinking Water	Atrazine
525.2	525.2	Drinking Water	Benzo[a]pyrene
525.2	525.2	Drinking Water	Di (2-ethylhexyl)phthalate
525.2	525.2	Drinking Water	Di(2-ethylhexyl)adipate
525.2	525.2	Drinking Water	Di-n-octyl phthalate
525.2	525.2	Drinking Water	Endrin
525.2	525.2	Drinking Water	gamma-BHC (Lindane)
525.2	525.2	Drinking Water	Heptachlor
525.2	525.2	Drinking Water	Heptachlor epoxide
525.2	525.2	Drinking Water	Hexachlorobenzene
525.2	525.2	Drinking Water	Hexachlorocyclopentadiene
525.2	525.2	Drinking Water	Methoxychlor
525.2	525.2	Drinking Water	Simazine
533	533	Drinking Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
533	533	Drinking Water	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)

Laboratory: Eurofins Eaton Analytical South Bend (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
533	533	Drinking Water	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)
533	533	Drinking Water	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)
533	533	Drinking Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
533	533	Drinking Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid
533	533	Drinking Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)
533	533	Drinking Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)
533	533	Drinking Water	Perfluoro(4-methoxybutanoic acid)
533	533	Drinking Water	Perfluoro-3,6-dioxaheptanoic acid
533	533	Drinking Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
533	533	Drinking Water	Perfluorobutanesulfonic acid (PFBS)
533	533	Drinking Water	Perfluorobutanoic acid (PFBA)
533	533	Drinking Water	Perfluorodecanoic acid (PFDA)
533	533	Drinking Water	Perfluorododecanoic acid (PFDoA)
533	533	Drinking Water	Perfluoroheptanesulfonic acid (PFHpS)
533	533	Drinking Water	Perfluoroheptanoic acid (PFHpA)
533	533	Drinking Water	Perfluorohexanesulfonic acid (PFHxS)
533	533	Drinking Water	Perfluorohexanoic acid (PFHxA)
533	533	Drinking Water	Perfluorononanoic acid (PFNA)
533	533	Drinking Water	Perfluorooctanesulfonic acid (PFOS)
533	533	Drinking Water	Perfluorooctanoic acid (PFOA)
533	533	Drinking Water	Perfluoropentanesulfonic acid (PFPeS)
533	533	Drinking Water	Perfluoropentanoic acid (PFPeA)
533	533	Drinking Water	Perfluoroundecanoic acid (PFUnA)
537.1	537.1 DW	Drinking Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
537.1	537.1 DW	Drinking Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
537.1	537.1 DW	Drinking Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid
537.1	537.1 DW	Drinking Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)
537.1	537.1 DW	Drinking Water	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)
537.1	537.1 DW	Drinking Water	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)
537.1	537.1 DW	Drinking Water	Perfluorobutanesulfonic acid (PFBS)
537.1	537.1 DW	Drinking Water	Perfluorodecanoic acid (PFDA)
537.1	537.1 DW	Drinking Water	Perfluorododecanoic acid (PFDoA)
537.1	537.1 DW	Drinking Water	Perfluoroheptanoic acid (PFHpA)
537.1	537.1 DW	Drinking Water	Perfluorohexanesulfonic acid (PFHxS)
537.1	537.1 DW	Drinking Water	Perfluorohexanoic acid (PFHxA)
537.1	537.1 DW	Drinking Water	Perfluorononanoic acid (PFNA)
537.1	537.1 DW	Drinking Water	Perfluorooctanesulfonic acid (PFOS)

Accreditation/Certification Summary

Client: INTERA Inc
Job ID: 810-67862-1
Project/Site: B&V Project 414595 Groundwater Analysis

Laboratory: Eurofins Eaton Analytical South Bend (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537.1	537.1 DW	Drinking Water	Perfluorooctanoic acid (PFOA)
537.1	537.1 DW	Drinking Water	Perfluorotetradecanoic acid (PFTeDA)
537.1	537.1 DW	Drinking Water	Perfluorotridecanoic acid (PFTrDA)
537.1	537.1 DW	Drinking Water	Perfluoroundecanoic acid (PFUnA)
547		Drinking Water	Glyphosate
548.1	548.1	Drinking Water	Endothall
549.2	549.2	Drinking Water	Diquat
552.2	552.2	Drinking Water	Dibromoacetic acid
552.2	552.2	Drinking Water	Dichloroacetic acid
552.2	552.2	Drinking Water	Monobromoacetic acid
552.2	552.2	Drinking Water	Monochloroacetic acid
552.2	552.2	Drinking Water	Trichloroacetic acid
552.2 THAA		Drinking Water	Total Haloacetic Acids 5
Nitrate by calc		Drinking Water	Nitrate as N
SM 2120B		Drinking Water	Color, Apparent
SM 2320B		Drinking Water	Alkalinity, Total
SM 2330B		Drinking Water	Langelier Index
SM 2340B		Drinking Water	Calcium hardness as calcium carbonate
SM 2340B		Drinking Water	Hardness as calcium carbonate
SM 2340B		Drinking Water	Magnesium hardness as calcium carbonate
SM 2510B		Drinking Water	Specific Conductance
SM 2540C		Drinking Water	Total Dissolved Solids
SM 2540D		Drinking Water	Total Suspended Solids
SM 4500 Cl G		Drinking Water	Chlorine, Total Residual
SM 4500 CO2 B		Drinking Water	Carbon Dioxide, Free
SM 4500 F C		Drinking Water	Fluoride
SM 4500 NH3 D		Drinking Water	Ammonia, Nitrogen
SM 4500 O G		Drinking Water	Oxygen, Dissolved
SM 4500 P E		Drinking Water	Orthophosphate as PO4
SM 4500 P E		Drinking Water	Phosphate, ortho
SM 4500 S2 D		Drinking Water	Sulfide
SM 5310C		Drinking Water	Dissolved Organic Carbon
SM 5310C		Drinking Water	Total Organic Carbon
SM 5910B		Drinking Water	Ultraviolet Absorption, 254 nm
SM 9215E		Drinking Water	Heterotrophic Plate Count
SM7500_Rn_B	RAD Prep	Drinking Water	Radon 222
V210		Drinking Water	2,4,6-Trichloroanisole (TCA)
V210		Drinking Water	2-Methylisoborneol (MIB)
V210		Drinking Water	Geosmin
V210		Drinking Water	Isobutyl methoxy pyrazine (IBMP)
V210		Drinking Water	Isopropyl methoxy pyrazine (IPMP)

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date

Accreditation/Certification Summary

Client: INTERA Inc
Job ID: 810-67862-1
Project/Site: B&V Project 414595 Groundwater Analysis

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-24
A2LA	ISO/IEC 17025	0001.01	11-30-24
Alabama	State	43200	01-31-24
Alaska	State	PA00009	06-30-24
Alaska (UST)	State	17-027	02-28-24
Arizona	State	AZ0780	03-12-24
Arkansas DEQ	State	88-00660	08-09-23
California	State	2792	11-30-23
Colorado	State	PA00009	06-30-24
Connecticut	State	PH-0746	06-30-25
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-24
Delaware (DW)	State	N/A	01-31-24
Florida	NELAP	E87997	06-30-24
Georgia (DW)	State	C048	01-31-24
Hawaii	State	N/A	01-31-24
Illinois	NELAP	200027	01-31-24
Iowa	State	361	03-01-24
Kansas	NELAP	E-10151	10-31-23
Kentucky (DW)	State	KY90088	12-31-23
Kentucky (UST)	State	0001.01	11-30-24
Kentucky (WW)	State	KY90088	12-31-23
Louisiana (All)	NELAP	02055	06-30-24
Maine	State	2019012	03-12-25
Maryland	State	100	06-30-24
Massachusetts	State	M-PA009	06-30-24
Michigan	State	9930	01-31-24
Minnesota	NELAP	042-999-487	12-31-23
Mississippi	State	023	01-31-24
Missouri	State	450	01-31-25
Montana (DW)	State	0098	01-01-24
Nebraska	State	NE-OS-32-17	01-31-24
New Hampshire	NELAP	2730	01-10-24
New Jersey	NELAP	PA011	06-30-24
New York	NELAP	10670	04-01-24
North Carolina (DW)	State	42705	07-31-24
North Carolina (WW/SW)	State	521	12-31-23
North Dakota	State	R-205	01-31-24
Oklahoma	NELAP	9804	08-31-23
Oregon	NELAP	PA200001	09-11-23
PALA	Canada	1978	09-16-24
Pennsylvania	NELAP	36-00037	07-20-23
Rhode Island	State	LAO00338	12-31-23
South Carolina	State	89002	01-31-24
Tennessee	State	02838	01-31-24
Texas	NELAP	T104704194-23-46	08-31-23
USDA	US Federal Programs	525-22-298-19481	10-25-25
Vermont	State	VT - 36037	10-28-23
Virginia	NELAP	460182	07-14-23
Washington	State	C457	07-17-23
West Virginia (DW)	State	9906 C	12-31-23

Accreditation/Certification Summary

Client: INTERA Inc
Job ID: 810-67862-1
Project/Site: B&V Project 414595 Groundwater Analysis

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
West Virginia DEP	State	055	07-31-24
Wyoming	State	8TMS-L	01-31-24
Wyoming (UST)	A2LA	0001.01	11-30-24

Method Summary

Client: INTERA Inc
Job ID: 810-67862-1
Project/Site: B&V Project 414595 Groundwater Analysis

Method	Method Description	Protocol	Laboratory
524.2	Total Trihalomethanes	EPA-DW	EA SB
524.2	Volatile Organic Compounds (GC/MS)	EPA-DW	EA SB
V210	Taste and Odor Compounds (GC/MS/SIS)	Lab SOP	EA SB
521.1	Nitrosoamines (GC/MS/MS)	EPA	EA SB
522	1,4 Dioxane (GC/MS SIM)	EPA	EA SB
525.2	Semivolatile Organic Compounds (GC/MS)	EPA	EA SB
548.1	Endothall (GC/MS)	EPA	EA SB
504.1	EDB, DBCP and 1,2,3-TCP (GC)	EPA-DW2	EA SB
505	Organochlorine Pesticides/PCBs (GC)	EPA	EA SB
515.3	Herbicides (GC)	EPA	EA SB
552.2	Haloacetic Acids (HAAs) (GC)	EPA	EA SB
552.2 THAA	Total Haloacetic Acids (GC)	EPA	EA SB
300.0	Anions, Ion Chromatography	EPA	EA SB
547	Glyphosate (DAI HPLC)	EPA	EA SB
549.2	Diquat and Paraquat (HPLC)	EPA	EA SB
331.0	Perchlorate (LC/MS/MS)	EPA	EA SB
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA SB
537.1	Perfluorinated Alkyl Acids (LC/MS)	EPA	EA SB
1613B	Tetra Chlorinated Dioxin in Drinking Water	EPA	ELLE
200.7	Metals (ICP)	EPA	EA SB
200.8	Metals (ICP/MS)	EPA	EA SB
245.1	Mercury (CVAA)	EPA	EA SB
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EA SB
180.1	Turbidity, Nephelometric	EPA	EA SB
335.4	Cyanide, Total	EPA	EA SB
353.2	Nitrogen, Nitrate-Nitrite	EPA	EA SB
4500 Cl F Amine	Chloramines	SM	EA SB
4500 Cl G	Chlorine, Free	SM	EA SB
4500 ClO2 D	Chlorine Dioxide	SM	EA SB
Nitrate by calc	Nitrogen, Nitrate-Nitrite	SM	EA SB
SM 2120B	Color, Colorimetric	SM	EA SB
SM 2320B	Alkalinity	SM	EA SB
SM 2330B	Corrosivity, LSI Calculation	SM	EA SB
SM 2510B	Conductivity, Specific Conductance	SM	EA SB
SM 2540C	Solids, Total Dissolved (TDS)	SM	EA SB
SM 2540D	Solids, Total Suspended (TSS)	SM	EA SB
SM 4500 Cl G	Chlorine, Residual	SM	EA SB
SM 4500 CO2 B	Free Carbon Dioxide	SM	EA SB
SM 4500 F C	Fluoride	SM	EA SB
SM 4500 NH3 D	Ammonia	SM	EA SB
SM 4500 O G	Oxygen, Dissolved	SM	EA SB
SM 4500 P E	Orthophosphate	SM	EA SB
SM 4500 S2 D	Sulfide, Total	SM	EA SB
SM 5310C	TOC	SM	EA SB
SM 5910B	Organic Constituents, UV-Absorbing	SM	EA SB
SM7500_Rn_B	Radon	SM	EA SB
1623	Cryptosporidium and Giardia (Filtration / IMS / FA)	EPA	EA SB
9223B	Coliforms, Total, and E.Coli (Presence/Absence)	SM	EA SB
SM 9215E	Heterotrophic Plate Count	SM	EA SB
100.2	EPA 100.2 Asbestos in Drinking Water	EPA	E CEI
OSHA 100	OSHA 100	OSHA	Sci Method
Subcontract	Legionella - CDC Method	None	Sci Method
1613B	Separatory Funnel (Liquid-Liquid) Extraction	EPA	ELLE

Method Summary

Client: INTERA Inc
Job ID: 810-67862-1
Project/Site: B&V Project 414595 Groundwater Analysis

Method	Method Description	Protocol	Laboratory
1623	Purification	EPA	EA SB
1623	Sample Staining	EPA	EA SB
1623	Elution	EPA	EA SB
245.1	Preparation, Mercury	EPA	EA SB
504.1	Microextraction	EPA-DW	EA SB
505	Extraction, Organochlorine Pesticides/PCBs	EPA	EA SB
515.3	Extraction of Chlorinated Acids	EPA-DW	EA SB
521	Solid-Phase Extraction (SPE)	EPA	EA SB
522	Solid-Phase Extraction (SPE)	EPA	EA SB
525.2	Extraction of Semivolatile Compounds	EPA	EA SB
533	Extraction of Perfluorinated and Polyfluorinated Alkyl Acids	EPA	EA SB
537.1 DW	Extraction of Perfluorinated Alkyl Acids	EPA	EA SB
548.1	Extraction of Endothall	EPA-DW	EA SB
549.2	Extraction of Diquat and Paraquat	EPA	EA SB
552.2	Microextraction	EPA	EA SB
Aliquot	Preparation, Extract aliquot	None	EA SB
Distill/CN	Distillation, Cyanide	None	EA SB
Filtration	Filtration	None	EA SB
Filtration	Sample Filtration	None	EA SB
RAD Prep	Preparation, Radiologicals	None	EA SB
V210	Purge and Trap	Lab SOP	EA SB

Protocol References:

EPA = US Environmental Protection Agency

EPA-DW = "Methods For The Determination Of Organic Compounds In Drinking Water", EPA/600/4-88/039, December 1988 And Its Supplements.

EPA-DW2 = "Methods For The Determination of Organic Compounds in Drinking Water - Supplement III ",, EPA/600/R-95-131, August 1995

Lab SOP = Laboratory Standard Operating Procedure

None = None

OSHA = OSHA Analytical Methods Manual, Occupational Safety And Health Administration.

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

E CEI = E CEI, 730 SE Maynard Road, Cary, NC 27511

EA SB = Eurofins Eaton Analytical South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sci Method = Scientific Methods, Inc, 12441 Beckley St, Granger, IN 46530

Sample Summary

Client: INTERA Inc
Job ID: 810-67862-1
Project/Site: B&V Project 414595 Groundwater Analysis

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
810-67862-1	TW-1	Drinking Water	06/28/23 10:00	06/28/23 15:40

SCIENTIFIC METHODS

12441 Beckley Street • Granger, Indiana 46530
574.277.4078 [Phone] • www.scientificmethods.com

Laboratory Report

Client: Caleb Hunsberger
Eurofins Eaton Analytical
110 S Hill Street
South Bend, IN 46617
(574)233-4777
Anthony.Hunsberger@et.eurofins

Report no.: 34053

Sample Collection Date: 6/28/2023
Received Date: 6/29/2023
Sample Analysis Date: 6/30/2023

Samples Submitted: 1
Analytical Method: SM 9260J

Legionella by Membrane Filtration

Lab ID	Site Description	Sampling Time	Analysis Time	Legionella Species (cfu/100mL)	Legionella *pneumophila* (cfu/100mL)
34053	TW-1 (810-67862-1)	10:00	14:28	< 2.38	NA

Scientific Methods appreciates the opportunity to provide you with this analysis. Please feel free to contact us (574-277-4078) if you have any questions regarding this report.

Reviewed by: Taylor Beck — Date: July 13, 2023
Taylor Beck, Analyst

Finalized by: Alicia Jones — Date: July 13, 2023
Alicia Jones, Senior Analyst

SCIENTIFIC METHODS

12441 Beckley Street • Granger, Indiana 46530
574.277.4078 [Phone] • www.scientificmethods.com

Laboratory Report

Client: Caleb Hunsberger
Eurofins Eaton Analytical
110 South Hill Street
South Bend, IN 46617-2702
574-472-5527
anthony.hunsberger@et.eurofinsus.com

Report no.: 34055

Site Description: TW-1 (810-67862-1)
Sample Date and Time: 6/28/2023 10:00
Receive Date: 6/29/2002

Samples Submitted: 1

Microscopic Analysis - Iron Bacteria

Lab ID: 34055 Analysis Date and Time: 6/30/2023 15:30
Sample Volume Centrifuged (mL): 1000 Sample Volume Assayed (mL): 5

Iron Bacteria	Total organisms per 100 mL of sample
Acidithiobacillus ferooxidans	857,000

Scientific Methods appreciates the opportunity to provide you with this analysis. Please feel free to contact us (574-277-4078) if you have any questions regarding this report.

Reviewed by: Alicia Jones
Alicia Jones, Senior Analyst

Date: July 3, 2023

Finalized by: Rebecca Wong
Rebecca Wong, Director of Operations

Date: July 3,2023

SCIENTIFIC METHODS

12441 Beckley Street • Granger, Indiana 46530
574.277.4078 [Phone] • www.scientificmethods.com

References and Definitions

References: Iron Bacteria,
Standard Methods 9240B, 18th Edition

Definitions:

MRL: Minimum Reporting Limit

< = "less than," It indicated the lowest reportable value by the proceedure used for analysis.

Iron bacteria are considered to be capable of metabolizing reduced iron present in their habitat and of depositing it in the form of hydrated ferric oxide, on or in their mucilaginous secretions. Usually, the amound of ferric hydroxide is very large in comparison with the enclosed cells.

eurofins | CEI

July 19, 2023

Eurofins Eaton Analytical
941 Corporate Center Drive
Pomona, CA 91768

CLIENT PROJECT: B&V Project 414595 Groundwater Analysis, 81006251, 810-67862-1
LAB CODE: W230626

Dear Customer:

Enclosed are asbestos analysis results for TEM drinking water samples received at our laboratory on June 30, 2023. The samples were analyzed for asbestos using transmission electron microscopy (TEM) per the US EPA 100.2 Method.

The current EPA regulatory limit for asbestos in drinking water is 7 million fibers per liter (MFL, > 10 µm in length). The analytical sensitivity for the EPA 100.2 method is 0.2 MFL.

Thank you for your business and we look forward to continuing good relations.

Kind Regards,

Tianbao Bai, Ph.D., CIH
Laboratory Director

eurofins | CEI

ASBESTOS ANALYTICAL REPORT
By: Transmission Electron Microscopy

Prepared for

Eurofins Eaton Analytical

CLIENT PROJECT:	B&V Project 414595 Groundwater Analysis, 81006251, 810-67862-1
LAB CODE:	W230626
TEST METHOD:	EPA 100.2
REPORT DATE:	07/19/23

730 SE Maynard Road • Cary, NC 27511 • 919.481.1413

eurofins | CEI

ASBESTOS IN DRINKING WATER ANALYSIS
By: TRANSMISSION ELECTRON MICROSCOPY

Client: Eurofins Eaton Analytical
941 Corporate Center Drive
Pomona, CA 91768

		Lab Code:	W230626
Time Collected:	10:00 AM	**Date Collected:**	06-28-23
Time Received:	9:30 AM	**Date Received:**	06-30-23
Time Filtered:	3:00 PM	**Date Filtered:**	07-17-23
Time Analyzed:	11:06 AM	**Date Analyzed:**	07-19-23
Avg Grid Opening Size:	0.0100 mm^2	**Date Reported:**	07-19-23

Project: B&V Project 414595 Groundwater Analysis, 81006251, 810-67862-1

TEM DRINKING WATER (EPA 100.2)

Client ID / Lab ID	Sample Volume Filtered	Dilution Factor	Effective Filter Area (mm^2)	# Of Grid Openings Analyzed	Total Area of Filter Examined	Analytical Sensitivity (MFL)	Asbestos Type	Concentration >10 µm	Concentration (MFL)	Confidence Limit Lower	Confidence Limit Upper
TW-1 (810-67862-1) W4319	100	50	1060	10	0.1	5.3	None Detected	0	**<5.3**	0.0	<20

Sample ozonated prior to analysis due to lab receipt time exceeding 48hr method hold time.
Due to excessive particulate the analytical sensitivity of 0.2 MFL as required by the method was not reached.

eurofins | CEI

LEGEND: MFL = million fibers per liter , > 10 um in length
NSD = no asbestos structures detected
ml = milliliter
CHRY = chrysotile
um = micrometer
CROC = crocidolite
mm = millimeter

METHOD: EPA 100.2

ANALYTICAL SENSITIVITY: 0.2 MFL

MAXIMUM CONTAMINANT LEVEL: 7 MFL

This report relates only to the samples tested or analyzed and may not be reproduced, except in full, without written approval by Eurofins CEI. Eurofins CEI makes no warranty representation regarding the accuracy of customer submitted information in preparing and presenting analytical results. Interpretation of the analytical results is the sole responsibility of the customer. Samples were received in acceptable condition unless otherwise noted.

Information provided by customer includes customer sample ID, location, volume and area as well as date and time of sampling.

Sample bottle was not provided by Eurofins CEI.
For the current states of certification please refer to the website: www.EurofinsUS.com/CEI

ANALYST: _____
Partima Poudel Acharya

APPROVED BY: _____
Tianbao Bai, Ph.D., CIH
Laboratory Director

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hunsberger, Caleb	Carrier Tracking No(s):	COC No: 810-26576.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Anthony.Hunsberger@et.eurofinsus.com	State of Origin: Indiana	Page: Page 1 of 1
Company: Eurofins CEI Inc		Accreditations Required (See note): State - Indiana; State - Indiana (Micro)		Job #: 810-67862-1
Address: 730 SE Maynard Road,	Due Date Requested: 7/19/2023			
City: Cary	TAT Requested (days):			
State, Zip: NC, 27511				
Phone:	PO #:			
Email:	WO #:			
Project Name: B&V Project 414595 Groundwater Analysis	Project #: 81006251			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos 100.2)/ Asbestos 100.2	Total Number of containers	Special Instructions/Note:
			Preservation Code: -						
TW-1 (810-67862-1)	6/28/23	10:00 Eastern		Drinking Wate			X	1	
Please Ozonate Sample ES	6-29-23								

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time	Company	Received by:	Date/Time:	Company
[signature]	6-29-23 1600				
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∧ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hunsberger, Caleb	Carrier Tracking No(s):	COC No: 810-26577.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Anthony.Hunsberger@et.eurofinsus.com	State of Origin: Indiana	Page: Page 1 of 1
Company: Eurofins Lancaster Laboratories Environm		Accreditations Required (See note): State - Indiana; State - Indiana (Micro)		Job #: 810-67862-1
Address: 2425 New Holland Pike, ,	Due Date Requested: 7/19/2023			
City: Lancaster	TAT Requested (days):			
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #:			
Email:	WO #:			
Project Name: B&V Project 414595 Groundwater Analysis	Project #: 81006251			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B_DW/1613B_P_Sep 2,3,7,8-TCDD	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
TW-1 (810-67862-1)	6/28/23	10:00 Eastern		Drinking Wate			X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	6-29-23 16:00	EEA			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

eurofins Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hunsberger, Caleb	Carrier Tracking No(s):	COC No: 810-26574.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Anthony.Hunsberger@et.eurofinsus.com	State of Origin: Indiana	Page: Page 1 of 1
Company: Scientific Methods, Inc		Accreditations Required (See note): State - Indiana; State - Indiana (Micro)		Job #: 810-67862-1
Address: 12441 Beckley St, ,	Due Date Requested: 7/18/2023			
City: Granger	TAT Requested (days):			
State, Zip: IN, 46530				
Phone:	PO #:			
Email:	WO #:			
Project Name: B&V Project 414595 Groundwater Analysis	Project #: 81006251			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Legionella - CDC Method)/ Legionella - CDC	SUB (Virus 1615)/ Virus 1615	SUB (Iron Oxidizing Bacteria EPA 9240B)/ Iron Oxidizing Bacteria EPA 9240B	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
TW-1 (810-67862-1)	6/28/23	10:00 Eastern		Drinking Wate			X	X	X	3	

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment

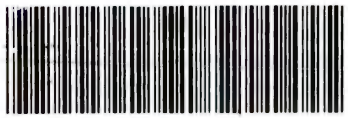
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Joyce Dudgeon	10:21 6-29-2023		J. Dong 10:2	6.24.2023	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 10°C	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record



eurofins Environment Testing

Client Information	Sampler: RCM	Lab PM: Hunsberger, Caleb	COC No: 810-28337-7894.1
Client Contact: Rhett Moore	Phone: 812-219-6552	E-Mail: Anthony.Hunsberger@et.eurofinsus.com	State of Origin: IN
Company: INTERA Inc	PWSID: NA		Page: Page 1 of 4
Address: 101 West Kirkwood Avenue Suite 247	Due Date Requested:		Job #: BLKVC, MOOL
City: Bloomington	TAT Requested (days):		
State, Zip: IN, 47404	Compliance Project: Δ Yes Δ No		
Phone: 812-676-9984(Tel)	PO #: Purchase Order not required		
Email: RMoore@intera.com	WO #:		
Project Name: B&V Project 414595 Groundwater Analysis	Project #: 81006251		
Site: Moonbeam TW-1	SSOW#:		

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.7_SDWA, 200.8_SDWA, 245.1_SDWA	200.7_SDWA - ICP-AES Metals Scan	331.0_PREC - Perchlorate	335.4 - Total Cyanide	4500_F_C - Fluoride	SM2330B - Langlier Index Calculation	Nitrate_Calc - Nitrate as N by calculation	180.1, 353.2, 4500_P_E_Ortho	SUBCONTRACT - Asbestos 100.2	300_OF_14D_B - ALL 300 B	300_OF_28D_PREC - Chloride, Sulfate	524.2_TTHM_Sum - Total Trihalomethanes - Summary	524.2_Pres_PREC - Trihalomethanes	Total Number of containers	Special Instructions/Note:
				Preservation Code:	N	N	D	N	N	N	N	N	N	N	N	N	N	N	N		
TW-1	6/20/23	1000	G	Drinking Wate			1	1	1	1	1		1	1	1	1	1	3			
				Drinking Wate																	
				Drinking Wate																	
				Drinking Wate																	

Chlorine NP
pH Acceptable
522

~~PERCHLORATE~~ SAMPLES WERE FILTERED UPON RECEIPT

pH Acceptable *

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Rhett Moore	6/28/23 0540				
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 6/28/23 3:40PM	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: Wet Ice Fresh Draw

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

eurofins Environment Testing

Client Information
Client Contact: Rhett Moore
Company: INTERA Inc
Address: 101 West Kirkwood Avenue Suite 247
City: Bloomington
State, Zip: IN, 47404
Phone: 812-676-9984(Tel)
Email: RMoore@intera.com
Project Name: B&V Project 414595 Groundwater Analysis
Site: Moonbeam TW1

Sampler: RCM
Phone: 812-219-6552
PWSID: NA
Due Date Requested:
TAT Requested (days):
Compliance Project: Δ Yes Δ No
PO #: Purchase Order not required
WO #:
Project #: 81006251
SSOW#:

Lab PM: Hunsberger, Caleb
E-Mail: Anthony.Hunsberger@et.eurofinsus.com
Carrier Tracking No(s):
State of Origin: IN

COC No: 810-28337-7894.2
Page: Page 2 of 4
Job #: BLKUC.M001

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	1623 - Cryptosporidium and Giardia	9223B_PA_DW - Local Method	9215E_DW - Heterotrophic Plate Count (HPC)	SUBCONTRACT - Iron Oxidizing Bacteria EPA 9240B	SUBCONTRACT - Virus 1615	SUBCONTRACT - Legionella - CDC Method	552.2_PREC - Haloacetic Acids 5	552.2_THAA_SUM - Total Haloacetic Acids - Summary	4500_Cl_F_ClrAm - Local Method	4500_Cl_F_FC, 4500_ClO2_D	2120B, 4500_Cl_G, 4500_Cl_G_FC, 4500_ClO2_D	SM7110B, SM7500_Ra_B, SM7500_Ra_D	SM7500_Ra_D_SUM - Radium 226 and 228 - Combined	200.8_U - Uranium	Total Number of containers	Special Instructions/Note:
			Preservation Code:			N	R	R	N	N	N	G	N	N	N	D	N	D		
TW-1	6/28/23	1000	G	Drinking Wate		1	1	1	1	1	1	1	1	1	*	2	5	1		Virus Vol. = 100 L
				Drinking Wate											*					
				Drinking Wate											*					
				Drinking Wate																

Received out of 15 minute hold time - ok to proceed per ASM. **

pH Acceptable *

Rads logged on Sep job 556-2823

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by: Date: Time:

Method of Shipment:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:					
Relinquished by:			Received by:		
Relinquished by:			Received by:	Date/Time: 6-28-23	Company 1640

Custody Seals Intact: Custody Seal No.: Cooler Temperature(s) °C and Other Remarks: 0.8°C

Ver: 06/08/2021

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: RCM	Lab PM: Hunsberger, Caleb	Carrier Tracking No(s):	COC No: 810-28337-7894.3
Client Contact: Rhett Moore	Phone: 812-249-6552	E-Mail: Anthony.Hunsberger@et.eurofinsus.com	State of Origin: IN	Page: Page 3 of 4
Company: INTERA Inc	PWSID:			Job #: BLKVC.14001
Address: 101 West Kirkwood Avenue Suite 247	Due Date Requested:			
City: Bloomington	TAT Requested (days):			
State, Zip: IN, 47404	Compliance Project: Δ Yes Δ No			
Phone: 812-676-9984(Tel)	PO #: Purchase Order not required			
Email: RMoore@intera.com	WO #:			
Project Name: B&V Project 414595 Groundwater Analysis	Project #: 81006251			
Site: Moonbeam TW-1	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	504.1_PREC, 505_PREC, 547_PREC	515.3_PREC - Chlorinated Acids - Extended by 515.3	1613B_DW - 2,3,7,8-TCDD	521.1 - Nitrosoamines	522_PREC - 1,4-Dioxane	525.2_PREC - 525.2 State Compounds	548.1_PREC - Endothall	549.2_PREC - Diquat *	2320B - Total Alkalinity Only	SM2340B - Total Hardness as CaCO3 by Calculation	2510B - Specific Conductance	2540C_Calcd - Total Dissolved Solids (TDS) *	5310C - Dissolved Organic Carbon	Total Number of Containers	Special Instructions/Note:
			Preservation Code:				R	Q	N	R			R		N	N	N	N	N		
TW-1	6-28-23	1000	G	Drinking Wate			6	2	2	1	2	2	2	1	1		1	1	3		
				Drinking Wate																	
				Drinking Wate																	
				Drinking Wate																	

pH Acceptable *

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by: for C. Hunsburger	Date/Time: 6/28/23 1540	Company EGA

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: RCM	Lab PM: Hunsberger, Caleb	Carrier Tracking No(s):	COC No: 810-28337-7894.4
Client Contact: Rhett Moore	Phone: 812-219-6552	E-Mail: Anthony.Hunsberger@et.eurofinsus.com	State of Origin: IN	Page: Page 4 of 4
Company: INTERA Inc	PWSID: NA	Analysis Requested		Job #: BLKVC.M001
Address: 101 West Kirkwood Avenue Suite 247	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
City: Bloomington	TAT Requested (days):			
State, Zip: IN, 47404	Compliance Project: Δ Yes Δ No			
Phone: 812-676-9984(Tel)	PO #: Purchase Order not required			Other:
Email: RMoore@intera.com	WO #:			
Project Name: B&V Project 414595 Groundwater Analysis	Project #: 81006251			
Site: Moonbeam TW-1	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Preservation Code	Field Filtered Sample (Yes or No)	5910B - UV Absorption, 254 nm	SM4500NH3_D - Ammonia *	SM4500_CO2_B - Local Method	SM4500_O_G - Dissolved Oxygen	SM4500_S2_D - Sulfide	SM7500_Rn_B - Radon *	2540D - Total Suspended Solids (TSS) 250 mL	V210 - Taste and Odor Compounds	537.1_DW_PREC - PFC18	533 - Local Method	524.2_Pres_PREC - Phase I,II & V Regulated & Unregulated V	504.1_PREC - Full List	TOC	Total Number of containers	Special Instructions/Note:
TW-1	6/29/23	1000	G	Drinking Wate		N	1	1		1	1	2	1	3	2	3	3		1		
LTB 6-2-23 FTB				Drinking Wate		S											2	1			
				Drinking Wate		N									1	1					
				Drinking Wate		N															
used 1 vial (DOC) for TOC and preserved Sample upon receipt CS 6-28-23																					
																					* VIALS CONTAIN ACCEPTABLE BUBBLES

pH Acceptable *

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by: Shannon for C. Hunsberger	Date/Time: 6/28/23 1540	Company EEA

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

SHIP -Langlier Index Calculation

Field Sampled Parameters

Sample Site	Sample Location	Collection Date	Collection Time	pH	Temperature	Units
Moonbeam RWCF	TW-1	6/28/23	1000	7.4	13.5	(C) F

Instructions

Please complete this form for each Langlier Index Calculation sample submitted to our laboratory.
Use a separate line for each sample
We cannot perform the Langlier Index Calculation without this information.
Failure to submit this information may delay the delivery of your report.

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

W230626

Chain of Custody Record

W4319 (1)

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hunsberger, Caleb	Carrier Tracking No(s):	COC No: 810-26576.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Anthony.Hunsberger@et.eurofinsus.com	State of Origin: Indiana	Page: Page 1 of 1
Company: Eurofins CEI Inc		Accreditations Required (See note): State - Indiana; State - Indiana (Micro)		Job #: 810-67862-1
Address: 730 SE Maynard Road,	Due Date Requested: 7/19/2023			
City: Cary	TAT Requested (days):			
State, Zip: NC, 27511				
Phone:	PO #:			
Email:	WO #:			
Project Name: B&V Project 414595 Groundwater Analysis	Project #: 81006251			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos 100.2)/ Asbestos 100.2	Total Number of containers	Special Instructions/Note:
			Preservation Code: -						
TW-1 (810-67862-1)	6/28/23	10:00 Eastern		Drinking Wate			X	1	2-3°C
Please ozonate sample ss	6-29-23								

CEI Accept Sam...
CC 6/30/23 10:00

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	[signature]	6-29-23 1600		CC	6/30/23 9:30	
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

9504 70606 18915

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hunsberger, Caleb	Carrier Tracking No(s):	COC No: 810-26577.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Anthony.Hunsberger@et.eurofinsus.com	State of Origin: Indiana	Page: Page 1 of 1
Company: Eurofins Lancaster Laboratories Environm		Accreditations Required (See note): State - Indiana; State - Indiana (Micro)		Job #: 810-67862-1
Address: 2425 New Holland Pike,	Due Date Requested: 7/19/2023			
City: Lancaster	TAT Requested (days):			
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #:			
Email:	WO #:			
Project Name: B&V Project 414595 Groundwater Analysis	Project #: 81006251			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Y - Trizma
Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B_DW/1613B_P_Sep 2,3,7,8-TCDD	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
TW-1 (810-67862-1)	6/28/23	10:00 Eastern		Drinking Wate			X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	[signature]	6-29-23 16:00	EEA			
2	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
3	Relinquished by	Date/Time	Company	Received by [signature]	6/30/23 09:35	ELLET

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: RAW: 2.8 COR: 2.7

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: INTERA Inc

Job Number: 810-67862-1

Login Number: 67862

List Source: Eurofins Eaton Analytical South Bend

List Number: 1

Creator: Spurgeon, Sheri

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

Login Sample Receipt Checklist

Client: INTERA Inc

Job Number: 810-67862-1

Login Number: 67862
List Number: 2
Creator: McBeth, Jessica

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC
List Creation: 06/30/23 02:01 PM

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Refer to Job Narrative for details.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

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1 2 3 4 5 6 7 8 9 10 11

ANALYTICAL REPORT

PREPARED FOR

Attn: Rhett Moore
INTERA Inc
101 West Kirkwood Avenue
Suite 134
Bloomington, Indiana 47404

Generated 8/21/2023 11:28:44 AM

JOB DESCRIPTION

B&V Project 414595 Groundwater Analysis

JOB NUMBER

810-69676-1

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend IN 46617

See page two for job notes and contact information.

myEOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

Authorization

Generated
8/21/2023 11:28:44 AM

Authorized for release by
Caleb Hunsberger, Project Manager
Anthony.Hunsberger@et.eurofinsus.com
(574)233-4777

Table of Contents

Definitions/Glossary

Client: INTERA Inc
Job ID: 810-69676-1
Project/Site: B&V Project 414595 Groundwater Analysis

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*3	ISTD response or retention time outside acceptable limits.

LCMS

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Rad

Qualifier	Qualifier Description
G	The Sample MDC is greater than the requested RL.
U	Result is less than the sample detection limit.

Biology

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 810-69676-1

Laboratory: Eurofins Eaton Analytical South Bend

Narrative

Job Narrative
810-69676-1

Receipt
The samples were received on 7/14/2023 3:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 5.2°C, 5.4°C, 5.4°C and 10.0°C

Receipt Exceptions
<Samples were received at 15:00 on a Friday. OK to proceed if hold time is missed per comment from the client>

TW-2 (810-69676-1), TW-2 LTB 7-6-23 (810-69676-2) and FTB (810-69676-3)

GC/MS VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC/MS Semi VOA
Method 521.1: In the 521.1 sample TW-2 (810-69676-1), the internal standard failed high (131%) against the previous CCV internal standard area outside the acceptance limits of 70-130%. The sample internal standard passed against the initial calibration. Sample is outside of holding time for re-extraction.

Method 521.1: In the 521.1 MB 810-66137/1-A, the internal standard failed high (135%) against the previous CCV internal standard area outside the acceptance limits of 70-130%. Additionally, in the 521.1 LLCS 810-65815/2-A, the internal standard failed high (141%) against the previous CCV internal standard area outside the acceptance limits of 70-130%. The MBL and LCS internal standards passed against the initial calibration. Affected samples: TW-2 (810-69676-1)

Method 522_PREC: The method blank associated with sample 810-69676-1 in preparation batch 810-69085 and analytical batch 810-69206 contained 1,4-Dioxane (0.031ug/L) greater than one-third the reporting limit (RL) (0.023ug/L) but less than the minimum detection limit (MDL) (0.032ug/L). The sample results have been qualified and reported.

Method 525.2_PREC: The laboratory control sample (LCS) for TW-2 (810-69676-1) recovered outside control limits (70-130%) for the following analytes: Chlorothalonil @ 136%. This analyte was biased high in the LCS and was not detected in the associated sample; therefore, the data have been reported.

Method 525.2_PREC: Recovery standard p-Terphenyl-d14 response @ 140% for the following sample was outside of acceptance limits (70-130%): TW-2 (810-69676-1). This recovery standard was not used to calculate any analyte result. Method 525.2 does not specify an upper recovery limit for the recovery standard. The sample was not re-analyzed.

Method 548.1_PREC: Surrogate recovery (66%) in the associated LLCS recovered below the lower control limit of 130%. Endothall recovery was within control limits.(LLCS 810-66309/2-A)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA
Method 515.3_PREC: The continuing calibration verification (CCV) @ 3 ug/L associated with batch 810-66533 recovered above the upper control limit of 130% for DCPA (acid degradates) (134%) and Dichlorprop (225% and 260%). The sample, (CCV 810-66154/4-B), associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Job ID: 810-69676-1 (Continued)

Laboratory: Eurofins Eaton Analytical South Bend (Continued)

LCMS

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

PFAS

Method 537.1_DW_PREC: The laboratory control sample (LCS) for preparation batch 810-66801 and analytical batch 810-67138 recovered outside control limits for the following analytes: Perfluorobutanesulfonic acid (PFBS) (68%) and Perfluorotetradecanoic acid (PFTeDA) (65%) failed low. Limit 70-130%. The following 537.1 sample could not be re-extracted within hold time: 810-69676-1.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Dioxin

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Rad

Method SM7500_Ra_D: Sample had a low biased barium carrier recovery. Results may be high biased, but because result is less than the detection limit of 1pCi/L sample is unaffected. The barium carrier limits are 41.5-63.5 mg. The sample barium precipitate is 31.9 mg.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Biology

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client: INTERA Inc
Job ID: 810-69676-1
Project/Site: B&V Project 414595 Groundwater Analysis

Client Sample ID: TW-2
Lab Sample ID: 810-69676-1
Date Collected: 07/14/23 11:00
Matrix: Drinking Water
Date Received: 07/14/23 15:00

Method: EPA-DW 524.2 - Total Trihalomethanes

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Trihalomethanes, Total	<0.5000		0.5000		ug/L			07/21/23 08:32	1

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	<0.50		0.50		ug/L			07/20/23 06:28	1
1,1,1-Trichloroethane	<0.50		0.50		ug/L			07/19/23 13:24	1
Bromoform	<0.50		0.50		ug/L			07/20/23 06:28	1
1,1,2,2-Tetrachloroethane	<0.50		0.50		ug/L			07/19/23 13:24	1
Chloroform	<0.50		0.50		ug/L			07/20/23 06:28	1
1,1,2-Trichloroethane	<0.50		0.50		ug/L			07/19/23 13:24	1
Dibromochloromethane	<0.50		0.50		ug/L			07/20/23 06:28	1
1,1-Dichloroethane	<0.50		0.50		ug/L			07/19/23 13:24	1
1,1-Dichloroethene	<0.50		0.50		ug/L			07/19/23 13:24	1
1,2,3-Trichlorobenzene	<0.50		0.50		ug/L			07/19/23 13:24	1
1,2,4-Trichlorobenzene	<0.50		0.50		ug/L			07/19/23 13:24	1
1,2,4-Trimethylbenzene	<0.50		0.50		ug/L			07/19/23 13:24	1
1,2-Dibromo-3-Chloropropane	<0.20		0.20		ug/L			07/19/23 13:24	1
1,2-Dibromoethane (EDB)	<0.20		0.20		ug/L			07/19/23 13:24	1
1,2-Dichlorobenzene	<0.50		0.50		ug/L			07/19/23 13:24	1
1,2-Dichloroethane	<0.50		0.50		ug/L			07/19/23 13:24	1
1,2-Dichloropropane	<0.25		0.25		ug/L			07/19/23 13:24	1
o-Xylene	<0.50		0.50		ug/L			07/19/23 13:24	1
m-Xylene & p-Xylene	<0.50		0.50		ug/L			07/19/23 13:24	1
1,3-Dichlorobenzene	<0.50		0.50		ug/L			07/19/23 13:24	1
1,4-Dichlorobenzene	<0.50		0.50		ug/L			07/19/23 13:24	1
2,2-Dichloropropane	<0.50		0.50		ug/L			07/19/23 13:24	1
Benzene	<0.50		0.50		ug/L			07/19/23 13:24	1
Carbon tetrachloride	<0.50		0.50		ug/L			07/19/23 13:24	1
Chlorobenzene	<0.50		0.50		ug/L			07/19/23 13:24	1
Methyl-tert-butyl Ether (MTBE)	<0.50		0.50		ug/L			07/19/23 13:24	1
Styrene	<0.50		0.50		ug/L			07/19/23 13:24	1
Tetrachloroethene	<0.50		0.50		ug/L			07/19/23 13:24	1
Toluene	<0.50		0.50		ug/L			07/19/23 13:24	1
Trichloroethylene	<0.50		0.50		ug/L			07/19/23 13:24	1
Vinyl chloride	<0.20		0.20		ug/L			07/19/23 13:24	1
cis-1,2-Dichloroethylene	<0.50		0.50		ug/L			07/19/23 13:24	1
cis-1,3-Dichloropropylene	<0.50		0.50		ug/L			07/19/23 13:24	1
trans-1,2-Dichloroethylene	<0.50		0.50		ug/L			07/19/23 13:24	1
trans-1,3-Dichloropropylene	<0.50		0.50		ug/L			07/19/23 13:24	1
Xylenes, Total	<0.50		0.50		ug/L			07/19/23 13:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*		*07/20/23 06:28*	*1*
Toluene-d8 (Surr)	*95*		*70 - 130*		*07/20/23 06:28*	*1*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*		*07/20/23 06:28*	*1*
1,2-Dichlorobenzene-d4 (Surr)	*80*		*70 - 130*		*07/20/23 06:28*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 130*		*07/19/23 13:24*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*07/19/23 13:24*	*1*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*		*07/19/23 13:24*	*1*
1,2-Dichlorobenzene-d4 (Surr)	*77*		*70 - 130*		*07/19/23 13:24*	*1*

Client Sample ID: TW-2
Lab Sample ID: 810-69676-1
Date Collected: 07/14/23 11:00
Matrix: Drinking Water
Date Received: 07/14/23 15:00

Method: Lab SOP V210 - Taste and Odor Compounds (GC/MS/SIS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichloroanisole (TCA)	<2.0		2.0		ng/L			07/16/23 10:56	1
2-Methylisoborneol (MIB)	<2.0		2.0		ng/L			07/16/23 10:56	1
Isopropyl methoxy pyrazine (IPMP)	<2.0		2.0		ng/L			07/16/23 10:56	1
Isobutyl methoxy pyrazine (IBMP)	<2.0		2.0		ng/L			07/16/23 10:56	1
Geosmin	<2.0		2.0		ng/L			07/16/23 10:56	1

Method: EPA 521.1 - Nitrosoamines (GC/MS/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodiphenylamine (NDPhA)	<20	*3	20		ng/L		07/19/23 06:22	07/29/23 21:41	1
N-Nitrosomorpholine (NMOR)	<2.0	*3	2.0		ng/L		07/19/23 06:22	07/29/23 21:41	1
N-Nitrosopiperidine (NPIP)	<2.0	*3	2.0		ng/L		07/19/23 06:22	07/29/23 21:41	1
N-Nitrosopyrrolidine (NPYR)	<2.0	*3	2.0		ng/L		07/19/23 06:22	07/29/23 21:41	1
N-Nitrosodi-n-butylamine (NDBA)	<2.0	*3	2.0		ng/L		07/19/23 06:22	07/29/23 21:41	1
N-Nitrosodi-n-propylamine (NDPA)	<2.0	*3	2.0		ng/L		07/19/23 06:22	07/29/23 21:41	1
N-Nitrosodiethylamine (NDEA)	<2.0	*3	2.0		ng/L		07/19/23 06:22	07/29/23 21:41	1
N-Nitrosomethylethylamine (NMEA)	<2.0	*3	2.0		ng/L		07/19/23 06:22	07/29/23 21:41	1
N-Nitrosodimethylamine (NDMA)	<2.0	*3	2.0		ng/L		07/19/23 06:22	07/29/23 21:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
N-Nitrosodimethylamine-d6 (Surr)	*91*	*3*	*70 - 130*	*07/19/23 06:22*	*07/29/23 21:41*	*1*

Method: EPA 522 - 1,4 Dioxane (GC/MS SIM)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	<0.070		0.070		ug/L		08/10/23 07:39	08/11/23 05:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*76*		*70 - 130*	*08/10/23 07:39*	*08/11/23 05:21*	*1*

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor epoxide	<0.0099		0.0099		ug/L		07/20/23 08:33	07/20/23 22:25	1
Di(2-ethylhexyl)adipate	<0.59		0.59		ug/L		07/20/23 08:33	07/20/23 22:25	1
Di (2-ethylhexyl)phthalate	<0.59		0.59		ug/L		07/20/23 08:33	07/20/23 22:25	1
Di-n-octyl phthalate	<2.0		2.0		ug/L		07/20/23 08:33	07/20/23 22:25	1
Hexachlorobenzene	<0.099		0.099		ug/L		07/20/23 08:33	07/20/23 22:25	1
Simazine	<0.069		0.069		ug/L		07/20/23 08:33	07/20/23 22:25	1
Alachlor	<0.099		0.099		ug/L		07/20/23 08:33	07/20/23 22:25	1
Atrazine	<0.099		0.099		ug/L		07/20/23 08:33	07/20/23 22:25	1
Benzo[a]pyrene	<0.020		0.020		ug/L		07/20/23 08:33	07/20/23 22:25	1
gamma-BHC (Lindane)	<0.020		0.020		ug/L		07/20/23 08:33	07/20/23 22:25	1
Endrin	<0.0099		0.0099		ug/L		07/20/23 08:33	07/20/23 22:25	1
Methoxychlor	<0.099		0.099		ug/L		07/20/23 08:33	07/20/23 22:25	1
Heptachlor	<0.0099		0.0099		ug/L		07/20/23 08:33	07/20/23 22:25	1
Hexachlorocyclopentadiene	<0.099		0.099		ug/L		07/20/23 08:33	07/20/23 22:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Perylene-d12	*93*		*70 - 130*	*07/20/23 08:33*	*07/20/23 22:25*	*1*
Triphenylphosphate	*108*		*70 - 130*	*07/20/23 08:33*	*07/20/23 22:25*	*1*
2-Nitro-m-xylene	*96*		*70 - 130*	*07/20/23 08:33*	*07/20/23 22:25*	*1*

Client: INTERA Inc
Job ID: 810-69676-1
Project/Site: B&V Project 414595 Groundwater Analysis

Client Sample ID: TW-2
Lab Sample ID: 810-69676-1
Date Collected: 07/14/23 11:00
Matrix: Drinking Water
Date Received: 07/14/23 15:00

Method: EPA 548.1 - Endothall (GC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Endothall	<5.0		5.0		ug/L		07/20/23 09:02	07/22/23 18:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*87*		*70 - 130*	*07/20/23 09:02*	*07/22/23 18:15*	*1*

Method: EPA-DW2 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	<0.010		0.010		ug/L		07/18/23 10:46	07/19/23 01:19	1
1,2-Dibromo-3-Chloropropane	<0.010		0.010		ug/L		07/18/23 10:46	07/19/23 01:19	1

Method: EPA 505 - Organochlorine Pesticides/PCBs (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.080		0.080		ug/L		07/18/23 09:07	07/18/23 17:55	1
PCB-1221	<0.10		0.10		ug/L		07/18/23 09:07	07/18/23 17:55	1
PCB-1232	<0.10		0.10		ug/L		07/18/23 09:07	07/18/23 17:55	1
PCB-1242	<0.10		0.10		ug/L		07/18/23 09:07	07/18/23 17:55	1
PCB-1248	<0.10		0.10		ug/L		07/18/23 09:07	07/18/23 17:55	1
PCB-1254	<0.10		0.10		ug/L		07/18/23 09:07	07/18/23 17:55	1
PCB-1260	<0.10		0.10		ug/L		07/18/23 09:07	07/18/23 17:55	1
Chlordane	<0.10		0.10		ug/L		07/18/23 09:07	07/18/23 17:55	1
Toxaphene	<0.50		0.50		ug/L		07/18/23 09:07	07/18/23 17:55	1
Total PCBs as DCB (Qualitative)	<0.10		0.10		ug/L		07/18/23 09:07	07/18/23 17:55	1
Polychlorinated biphenyls, Total	<0.10		0.10		ug/L		07/18/23 09:07	07/18/23 17:55	1
Chlordane (n.o.s.)	<0.10		0.10		ug/L		07/18/23 09:07	07/18/23 17:55	1

Method: EPA 515.3 - Herbicides (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-TP (Silvex)	<0.10		0.10		ug/L		07/19/23 08:45	07/22/23 11:57	1
Dalapon	<1.0		1.0		ug/L		07/19/23 08:45	07/22/23 11:57	1
Dinoseb	<0.10		0.10		ug/L		07/19/23 08:45	07/22/23 11:57	1
Pentachlorophenol	<0.040		0.040		ug/L		07/19/23 08:45	07/22/23 11:57	1
Picloram	<0.10		0.10		ug/L		07/19/23 08:45	07/22/23 11:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*92*		*70 - 130*	*07/19/23 08:45*	*07/22/23 11:57*	*1*

Method: EPA 552.2 THAA - Total Haloacetic Acids (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total Haloacetic Acids 5	<2.000		2.000		ug/L			07/31/23 11:12	1

Method: EPA 552.2 - Haloacetic Acids (HAAs) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Dibromoacetic acid	<1.0		1.0		ug/L		07/26/23 06:01	07/27/23 16:22	1
Dichloroacetic acid	<1.0		1.0		ug/L		07/26/23 06:01	07/27/23 16:22	1
Monobromoacetic acid	<1.0		1.0		ug/L		07/26/23 06:01	07/27/23 16:22	1
Monochloroacetic acid	<2.0		2.0		ug/L		07/26/23 06:01	07/27/23 16:22	1
Trichloroacetic acid	<1.0		1.0		ug/L		07/26/23 06:01	07/27/23 16:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Bromopropionic acid (Surr)	*96*		*70 - 130*	*07/26/23 06:01*	*07/27/23 16:22*	*1*

Client Sample ID: TW-2
Lab Sample ID: 810-69676-1
Date Collected: 07/14/23 11:00
Matrix: Drinking Water
Date Received: 07/14/23 15:00

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**16**		2.0		mg/L			08/08/23 23:18	1
Chlorite	<10		10		ug/L			07/27/23 23:21	1
Chlorate	<10		10		ug/L			07/27/23 23:21	1
Sulfate	**91**		5.0		mg/L			08/08/23 23:18	1
Bromide	**48**		10		ug/L			07/27/23 23:21	1

Method: EPA 547 - Glyphosate (DAI HPLC) - Dissolved

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Glyphosate	<6.0		6.0		ug/L			07/19/23 16:57	1

Method: EPA 549.2 - Diquat and Paraquat (HPLC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diquat	<0.40		0.40		ug/L		07/20/23 08:12	07/20/23 21:26	1

Method: EPA 331.0 - Perchlorate (LC/MS/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	<0.050		0.050		ug/L			07/27/23 13:41	1

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		08/02/23 06:10	08/03/23 04:01	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		08/02/23 06:10	08/03/23 04:01	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		08/02/23 06:10	08/03/23 04:01	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		08/02/23 06:10	08/03/23 04:01	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		08/02/23 06:10	08/03/23 04:01	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		08/02/23 06:10	08/03/23 04:01	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		08/02/23 06:10	08/03/23 04:01	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		08/02/23 06:10	08/03/23 04:01	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		08/02/23 06:10	08/03/23 04:01	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		08/02/23 06:10	08/03/23 04:01	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		08/02/23 06:10	08/03/23 04:01	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		08/02/23 06:10	08/03/23 04:01	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		08/02/23 06:10	08/03/23 04:01	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		08/02/23 06:10	08/03/23 04:01	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		08/02/23 06:10	08/03/23 04:01	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		08/02/23 06:10	08/03/23 04:01	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		08/02/23 06:10	08/03/23 04:01	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		08/02/23 06:10	08/03/23 04:01	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<2.0		2.0		ng/L		08/02/23 06:10	08/03/23 04:01	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		08/02/23 06:10	08/03/23 04:01	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<2.0		2.0		ng/L		08/02/23 06:10	08/03/23 04:01	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<2.0		2.0		ng/L		08/02/23 06:10	08/03/23 04:01	1
Perfluoro(4-methoxybutanoic acid)	<2.0		2.0		ng/L		08/02/23 06:10	08/03/23 04:01	1

Client Sample ID: TW-2
Lab Sample ID: 810-69676-1
Date Collected: 07/14/23 11:00
Matrix: Drinking Water
Date Received: 07/14/23 15:00

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		08/02/23 06:10	08/03/23 04:01	1
Perfluoro-3,6-dioxaheptanoic acid	<2.0		2.0		ng/L		08/02/23 06:10	08/03/23 04:01	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*97*		*50 - 200*	*08/02/23 06:10*	*08/03/23 04:01*	*1*
13C5 PFPeA	*100*		*50 - 200*	*08/02/23 06:10*	*08/03/23 04:01*	*1*
13C5 PFHxA	*99*		*50 - 200*	*08/02/23 06:10*	*08/03/23 04:01*	*1*
13C4 PFHpA	*98*		*50 - 200*	*08/02/23 06:10*	*08/03/23 04:01*	*1*
13C8 PFOA	*98*		*50 - 200*	*08/02/23 06:10*	*08/03/23 04:01*	*1*
13C9 PFNA	*102*		*50 - 200*	*08/02/23 06:10*	*08/03/23 04:01*	*1*
13C6 PFDA	*98*		*50 - 200*	*08/02/23 06:10*	*08/03/23 04:01*	*1*
13C7 PFUnA	*91*		*50 - 200*	*08/02/23 06:10*	*08/03/23 04:01*	*1*
13C2 PFDoA	*76*		*50 - 200*	*08/02/23 06:10*	*08/03/23 04:01*	*1*
13C3 HFPO-DA	*97*		*50 - 200*	*08/02/23 06:10*	*08/03/23 04:01*	*1*
13C3 PFBS	*97*		*50 - 200*	*08/02/23 06:10*	*08/03/23 04:01*	*1*
13C8 PFOS	*98*		*50 - 200*	*08/02/23 06:10*	*08/03/23 04:01*	*1*
13C2-4:2-FTS	*97*		*50 - 200*	*08/02/23 06:10*	*08/03/23 04:01*	*1*
13C2-6:2-FTS	*92*		*50 - 200*	*08/02/23 06:10*	*08/03/23 04:01*	*1*
13C2-8:2-FTS	*93*		*50 - 200*	*08/02/23 06:10*	*08/03/23 04:01*	*1*
13C3 PFHxS	*96*		*50 - 200*	*08/02/23 06:10*	*08/03/23 04:01*	*1*

Method: EPA 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	<1.9		1.9		ng/L		07/25/23 08:41	07/27/23 15:08	1
Perfluoroundecanoic acid (PFUnA)	<1.9		1.9		ng/L		07/25/23 08:41	07/27/23 15:08	1
Perfluorohexanoic acid (PFHxA)	<1.9		1.9		ng/L		07/25/23 08:41	07/27/23 15:08	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9		ng/L		07/25/23 08:41	07/27/23 15:08	1
Perfluorooctanoic acid (PFOA)	<1.9		1.9		ng/L		07/25/23 08:41	07/27/23 15:08	1
Perfluorodecanoic acid (PFDA)	<1.9		1.9		ng/L		07/25/23 08:41	07/27/23 15:08	1
Perfluorohexanesulfonic acid (PFHxS)	<1.9		1.9		ng/L		07/25/23 08:41	07/27/23 15:08	1
Perfluorobutanesulfonic acid (PFBS)	<1.9	*-	1.9		ng/L		07/25/23 08:41	07/27/23 15:08	1
Perfluoroheptanoic acid (PFHpA)	<1.9		1.9		ng/L		07/25/23 08:41	07/27/23 15:08	1
Perfluorononanoic acid (PFNA)	<1.9		1.9		ng/L		07/25/23 08:41	07/27/23 15:08	1
Perfluorotetradecanoic acid (PFTeDA)	<1.9	*-	1.9		ng/L		07/25/23 08:41	07/27/23 15:08	1
Perfluorotridecanoic acid (PFTrDA)	<1.9		1.9		ng/L		07/25/23 08:41	07/27/23 15:08	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.9		1.9		ng/L		07/25/23 08:41	07/27/23 15:08	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.9		1.9		ng/L		07/25/23 08:41	07/27/23 15:08	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.9		1.9		ng/L		07/25/23 08:41	07/27/23 15:08	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<1.9		1.9		ng/L		07/25/23 08:41	07/27/23 15:08	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<1.9		1.9		ng/L		07/25/23 08:41	07/27/23 15:08	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.9		1.9		ng/L		07/25/23 08:41	07/27/23 15:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*83*		*70 - 130*	*07/25/23 08:41*	*07/27/23 15:08*	*1*
13C2 PFDA	*77*		*70 - 130*	*07/25/23 08:41*	*07/27/23 15:08*	*1*

Client Sample ID: TW-2
Lab Sample ID: 810-69676-1
Date Collected: 07/14/23 11:00
Matrix: Drinking Water
Date Received: 07/14/23 15:00

Method: EPA 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*81*		*70 - 130*	*07/25/23 08:41*	*07/27/23 15:08*	*1*
d5-NEtFOSAA	*71*		*70 - 130*	*07/25/23 08:41*	*07/27/23 15:08*	*1*

Method: EPA 1613B - Tetra Chlorinated Dioxin in Drinking Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	<3.9		3.9		pg/L		08/01/23 08:49	08/02/23 08:06	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*80*		*25 - 164*	*08/01/23 08:49*	*08/02/23 08:06*	*1*

Method: EPA 200.7 - Metals (ICP)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Sodium	**6.0**		0.10		mg/L			07/21/23 12:15	1
Silica	**15**		0.043		mg/L			07/21/23 12:15	1
Potassium	**1.4**		0.20		mg/L			07/21/23 12:15	1
Magnesium	**35**		0.10		mg/L			07/21/23 12:15	1
Iron	**1.4**		0.010		mg/L			07/21/23 12:15	1
Calcium	**100**		0.10		mg/L			07/21/23 12:15	1

Method: EPA 200.7 - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Iron	<0.010		0.010		mg/L			07/21/23 13:14	1

Method: EPA 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**5.1**		2.0		ug/L			07/19/23 12:53	1
Uranium	<1.0		1.0		ug/L			07/18/23 19:05	1
Antimony	<1.0		1.0		ug/L			07/19/23 12:53	1
Arsenic	**1.1**		1.0		ug/L			07/19/23 12:53	1
Barium	**70**		2.0		ug/L			07/19/23 12:53	1
Beryllium	<0.30		0.30		ug/L			07/19/23 12:53	1
Cadmium	<0.50		0.50		ug/L			07/19/23 12:53	1
Chromium	**2.6**		0.90		ug/L			07/19/23 12:53	1
Copper	<1.0		1.0		ug/L			07/19/23 12:53	1
Lead	<0.50		0.50		ug/L			07/19/23 12:53	1
Manganese	**170**		2.0		ug/L			07/19/23 12:53	1
Selenium	<2.0		2.0		ug/L			07/19/23 12:53	1
Silver	<0.50		0.50		ug/L			07/19/23 16:11	1
Thallium	<0.30		0.30		ug/L			07/19/23 12:53	1
Zinc	**7.6**		5.0		ug/L			07/19/23 12:53	1

Method: EPA 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.10		0.10		ug/L		07/20/23 10:27	07/20/23 18:11	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**390**		0.66		mg/L			07/26/23 14:36	1
Calcium hardness as calcium carbonate	**250**		0.25		mg/L			07/26/23 14:36	1
Magnesium hardness as calcium carbonate	**150**		0.41		mg/L			07/26/23 14:36	1

Client Sample ID: TW-2
Lab Sample ID: 810-69676-1
Date Collected: 07/14/23 11:00
Matrix: Drinking Water
Date Received: 07/14/23 15:00

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
pH (EPA 150.1)	**7.7**	**HF**	0.1		SU			08/01/23 15:22	1
Turbidity (EPA 180.1)	**15**		0.10		NTU			07/14/23 18:22	1
Cyanide, Total (EPA 335.4)	<0.0050		0.0050		mg/L		07/17/23 08:44	07/17/23 10:12	1
Nitrite as N (EPA 353.2)	<0.010		0.010		mg/L			07/16/23 08:48	1
Nitrate Nitrite as N (EPA 353.2)	**0.41**		0.10		mg/L			07/16/23 09:42	1
Monochloramine (SM 4500 Cl F Amine)	<0.10	HF	0.10		mg/L			07/14/23 17:43	1
Dichloramine (SM 4500 Cl F Amine)	<0.10	HF	0.10		mg/L			07/14/23 17:43	1
Nitrogen trichloride (SM 4500 Cl F Amine)	<0.20	HF	0.20		mg/L			07/14/23 17:43	1
Chloramines, Total (SM 4500 Cl F Amine)	<0.20	HF	0.20		mg/L			07/14/23 17:43	1
Free Chlorine (SM 4500 Cl G)	<0.50	HF	0.50		mg/L			07/16/23 10:19	1
Chlorine dioxide, Residual (SM 4500 ClO2 D)	<0.24	HF	0.24		mg/L			07/16/23 10:04	1
Nitrate as N (SM Nitrate by calc)	**0.41**		0.10		mg/L			07/17/23 11:00	1
Alkalinity, Total (SM 2320B)	**270**		1.0		mg/L			07/18/23 15:51	1
Langelier Index (SM 2330B)	**0.67**				LangSU			08/01/23 16:13	1
Specific Conductance (SM 2510B)	**720**		2.0		uS/cm			07/18/23 19:04	1
Total Dissolved Solids (SM 2540C)	**460**		10		mg/L			07/14/23 18:08	1
Total Suspended Solids (SM 2540D)	<10		10		mg/L			07/20/23 19:27	1
Chlorine, Total Residual (SM 4500 Cl G)	<0.50		0.50		mg/L			07/14/23 18:41	1
Carbon Dioxide, Free (SM 4500 CO2 B)	**11**		0.10		mg/L			08/01/23 16:16	1
Fluoride (SM 4500 F C)	**0.18**		0.050		mg/L			07/19/23 11:54	1
Ammonia, Nitrogen (SM 4500 NH3 D)	<0.10		0.10		mg/L			07/18/23 11:43	1
Oxygen, Dissolved (SM 4500 O G)	**5.5**	**HF**	1.0		mg/L			07/19/23 19:28	1
Phosphate, ortho (SM 4500 P E)	<0.030		0.030		mg/L			07/15/23 12:56	1
Orthophosphate as PO4 (SM 4500 P E)	<0.092		0.092		mg/L			07/15/23 12:56	1
Sulfide (SM 4500 S2 D)	<0.050		0.050		mg/L			07/18/23 11:25	1
Ultraviolet Absorption, 254 nm (SM 5910B)	**0.033**		0.0090		1/cm			07/14/23 16:40	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon (SM 5310C)	<0.500		0.500		mg/L			07/21/23 22:04	1

Method: SM 7110B - Gross Alpha and Gross Beta Radioactivity

Analyte	Result	Qualifier	Count Uncert. (σ+/-)	Total Uncert. (σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	-2.16	U G			3.05	pCi/L	07/21/23 09:35	07/27/23 19:37	1
Gross Beta	-0.940	U			2.19	pCi/L	07/21/23 09:35	07/27/23 19:37	1

Method: SM 7500 Ra D - Radium 226 Radium 228 Combined

Analyte	Result	Qualifier	Count Uncert. (σ+/-)	Total Uncert. (σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.000	U			0.660	pCi/L		07/25/23 14:50	1

Client Sample ID: TW-2
Lab Sample ID: 810-69676-1
Date Collected: 07/14/23 11:00
Matrix: Drinking Water
Date Received: 07/14/23 15:00

Method: SM7500 Ra B - Radium-226

Analyte	Result	Qualifier	Count Uncert. (σ+/-)	Total Uncert. (σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Ra-226	-0.140	U			0.570	pCi/L	07/19/23 15:35	07/25/23 09:53	1

Method: SM7500 Ra D - Radium-228

Analyte	Result	Qualifier	Count Uncert. (σ+/-)	Total Uncert. (σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Ra-228	-0.350	U			0.660	pCi/L	07/19/23 15:29	08/11/23 14:09	1

Method: SM7500_Rn_B - Radon

Analyte	Result	Qualifier	Count Uncert. (σ+/-)	Total Uncert. (σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radon 222	**136**				7.40	pCi/L	07/14/23 16:25	07/14/23 22:03	1

Method: EPA 1623 - Cryptosporidium and Giardia (Filtration / IMS / FA)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Volume of resuspension processed	**`6.5**		1.00		mL		07/20/23 14:03	07/24/23 11:14	1
Volume of resuspended concentrate	**`6.5**		1.00		mL		07/20/23 14:03	07/24/23 11:14	1
Packed pellet volume	**`0.3**		0.100		mL		07/20/23 14:03	07/24/23 11:14	1
Number of filters used	**`1**		10.0		NONE		07/20/23 14:03	07/24/23 11:14	1
Number of oocysts counted	**`0**		10.0		NONE		07/20/23 14:03	07/24/23 11:14	1
Percentage of filtered volume examined	**`100**		10.0		%		07/20/23 14:03	07/24/23 11:14	1
Sample volume filtered	**`10.0**		1.00		L		07/20/23 14:03	07/24/23 11:14	1
Giardia	<10.0		10.0		cyst/100L		07/20/23 14:03	07/24/23 11:14	1
Cryptosporidium	<10.0		10.0		oocyst/100L		07/20/23 14:03	07/24/23 11:14	1

Method: SM 9223B - Coliforms, Total, and E.Coli (Presence/Absence)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Escherichia coli	ABSENT	H			NONE			07/17/23 09:57	1
Coliform, Total	ABSENT	H			NONE			07/17/23 09:57	1

Method: SM 9215E - Heterotrophic Plate Count

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Heterotrophic Plate Count	**17**	**H**	2.0		MPN/mL			07/17/23 12:44	1

Lab Chronicle

Client: INTERA Inc
Job ID: 810-69676-1
Project/Site: B&V Project 414595 Groundwater Analysis

Client Sample ID: TW-2
Lab Sample ID: 810-69676-1

Date Collected: 07/14/23 11:00
Matrix: Drinking Water

Date Received: 07/14/23 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	524.2		1	66250	CM	EA SB	07/20/23 06:28
Total/NA	Analysis	524.2		1	66414	JT	EA SB	07/21/23 08:32
Total/NA	Analysis	524.2		1	66140	CM	EA SB	07/19/23 13:24
Total/NA	Analysis	V210		1	65764	CM	EA SB	07/16/23 10:56
Total/NA	Prep	521			66137	AC	EA SB	07/19/23 06:22
Total/NA	Analysis	521.1		1	67506	JB	EA SB	07/29/23 21:41
Total/NA	Prep	522			69085	HB	EA SB	08/10/23 07:39
Total/NA	Analysis	522		1	69206	TD	EA SB	08/11/23 05:21
Total/NA	Prep	525.2			66305	EB	EA SB	07/20/23 08:33
Total/NA	Analysis	525.2		1	66371	BC	EA SB	07/20/23 22:25
Total/NA	Prep	548.1			66309	KB	EA SB	07/20/23 09:02
Total/NA	Analysis	548.1		1	66573	CM	EA SB	07/22/23 18:15
Total/NA	Prep	504.1			65968	SS	EA SB	07/18/23 10:46 - 07/18/23 13:36 [1]
Total/NA	Analysis	504.1		1	66010	JV	EA SB	07/19/23 01:19
Total/NA	Prep	505			65944	SS	EA SB	07/18/23 09:07 - 07/18/23 11:20 [1]
Total/NA	Analysis	505		1	65981	JV	EA SB	07/18/23 17:55
Total/NA	Prep	515.3			66154	ER	EA SB	07/19/23 08:45
Total/NA	Cleanup	Aliquot			66193	ER	EA SB	07/19/23 12:17
Total/NA	Analysis	515.3		1	66533	CM	EA SB	07/22/23 11:57
Total/NA	Prep	552.2			67014	AD	EA SB	07/26/23 06:01
Total/NA	Analysis	552.2		1	67223	DT	EA SB	07/27/23 16:22
Total/NA	Analysis	552.2 THAA		1	67576	L1P	EA SB	07/31/23 11:12
Total/NA	Analysis	300.0		1	68767	NR	EA SB	08/08/23 23:18
Total/NA	Analysis	300.0		1	67299	NR	EA SB	07/27/23 23:21
Dissolved	Filtration	Filtration			65966	MP	EA SB	07/18/23 10:35
Dissolved	Analysis	547		1	66171	RS	EA SB	07/19/23 16:57
Total/NA	Prep	549.2			66303	PK	EA SB	07/20/23 08:12
Total/NA	Analysis	549.2		1	66374	CM	EA SB	07/20/23 21:26
Total/NA	Analysis	331.0		1	67095	JW	EA SB	07/27/23 13:41
Total/NA	Prep	533			67901	TK	EA SB	08/02/23 06:10
Total/NA	Analysis	533		1	67981	CM	EA SB	08/03/23 04:01
Total/NA	Prep	537.1 DW			66801	SS	EA SB	07/25/23 08:41
Total/NA	Analysis	537.1		1	67138	MH	EA SB	07/27/23 15:08
Total/NA	Prep	1613B			402956	UBKG	ELLE	08/01/23 08:49
Total/NA	Analysis	1613B		1	403277	DZ6A	ELLE	08/02/23 08:06
Dissolved	Filtration	Filtration			66256	CA	EA SB	07/19/23 17:49
Dissolved	Analysis	200.7		1	66539	AC	EA SB	07/21/23 13:14
Total/NA	Analysis	200.7		1	66539	AC	EA SB	07/21/23 12:15
Total/NA	Analysis	200.8		1	66213	NB	EA SB	07/19/23 12:53
Total/NA	Analysis	200.8		1	66251	NB	EA SB	07/19/23 16:11
Total/NA	Analysis	200.8		1	66075	NB	EA SB	07/18/23 19:05
Total/NA	Prep	245.1			66340	AC	EA SB	07/20/23 10:27
Total/NA	Analysis	245.1		1	66400	AC	EA SB	07/20/23 18:11

Eurofins Eaton Analytical South Bend

Lab Chronicle

Client: INTERA Inc
Job ID: 810-69676-1
Project/Site: B&V Project 414595 Groundwater Analysis

Client Sample ID: TW-2
Lab Sample ID: 810-69676-1

Date Collected: 07/14/23 11:00
Matrix: Drinking Water

Date Received: 07/14/23 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 2340B		1	67108	AC	EA SB	07/26/23 14:36
Total/NA	Analysis	150.1		1	67821	KH	EA SB	08/01/23 15:22
Total/NA	Analysis	180.1		1	65747	JA	EA SB	07/14/23 18:22
Total/NA	Prep	Distill/CN			65811	KH	EA SB	07/17/23 08:44
Total/NA	Analysis	335.4		1	65843	KH	EA SB	07/17/23 10:12
Total/NA	Analysis	353.2		1	65765	KH	EA SB	07/16/23 08:48
Total/NA	Analysis	353.2		1	65766	KH	EA SB	07/16/23 09:42
Total/NA	Analysis	4500 Cl F Amine		1	65746	JA	EA SB	07/14/23 17:43
Total/NA	Analysis	4500 Cl G		1	65767	KH	EA SB	07/16/23 10:19
Total/NA	Analysis	4500 ClO2 D		1	65769	KH	EA SB	07/16/23 10:04
Total/NA	Analysis	Nitrate by calc		1	65855	JW	EA SB	07/17/23 11:00
Total/NA	Analysis	SM 2320B		1	66148	KH	EA SB	07/18/23 15:51
Total/NA	Analysis	SM 2330B		1	67840	KH	EA SB	08/01/23 16:13
Total/NA	Analysis	SM 2510B		1	66074	GB	EA SB	07/18/23 19:04
Total/NA	Analysis	SM 2540C		1	65735	JA	EA SB	07/14/23 18:08
Total/NA	Analysis	SM 2540D		1	66401	GB	EA SB	07/20/23 19:27
Total/NA	Analysis	SM 4500 Cl G		1	65749	GB	EA SB	07/14/23 18:41
Total/NA	Analysis	SM 4500 CO2 B		1	67845	KH	EA SB	08/01/23 16:16
Total/NA	Analysis	SM 4500 F C		1	66192	KH	EA SB	07/19/23 11:54
Total/NA	Analysis	SM 4500 NH3 D		1	66000	KH	EA SB	07/18/23 11:43
Total/NA	Analysis	SM 4500 O G		1	66407	AC	EA SB	07/19/23 19:28
Total/NA	Analysis	SM 4500 P E		1	65763	GB	EA SB	07/15/23 12:56
Total/NA	Analysis	SM 4500 S2 D		1	65973	JA	EA SB	07/18/23 11:25
Dissolved	Filtration	Filtration			66406	GB	EA SB	07/14/23 18:02
Dissolved	Analysis	SM 5310C		1	66820	AC	EA SB	07/21/23 22:04
Total/NA	Analysis	SM 5910B		1	65987	GB	EA SB	07/14/23 16:40
Total/NA	Prep	RAD Prep			66491	SS	EA SB	07/21/23 09:35
Total/NA	Analysis	7110B		1	67390	SS	EA SB	07/27/23 19:37 - 07/28/23 07:37 [1]
Total/NA	Analysis	7500 Ra D		1	66899	SS	EA SB	07/25/23 14:50
Total/NA	Prep	RAD Prep			66231	SS	EA SB	07/19/23 15:35
Total/NA	Analysis	SM7500 Ra B		1	66827	SM	EA SB	07/25/23 09:53 - 07/25/23 10:23 [1]
Total/NA	Prep	RAD Prep			66229	SS	EA SB	07/19/23 15:29
Total/NA	Analysis	SM7500 Ra D		1	69407	OO	EA SB	08/11/23 14:09 - 08/11/23 16:09 [1]
Total/NA	Prep	RAD Prep			65924	SM	EA SB	07/14/23 16:25
Total/NA	Analysis	SM7500_Rn_B		1	65970	SM	EA SB	07/14/23 22:03 - 07/14/23 22:03 [1]
Total/NA	Leach	1623			65848	RI	EA SB	07/18/23 07:40
Total/NA	Cleanup	1623			65946	MV	EA SB	07/18/23 11:55
Total/NA	Prep	1623			66338	MV	EA SB	07/20/23 14:03
Total/NA	Analysis	1623		1	66914	RI	EA SB	07/24/23 11:14 - 07/26/23 15:19 [1]
Total/NA	Analysis	9223B		1	65839	MV	EA SB	07/17/23 09:57 - 07/19/23 09:07 [1]
Total/NA	Analysis	SM 9215E		1	65869	MV	EA SB	07/17/23 12:44 - 07/19/23 12:18 [1]

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Lab Chronicle

Client: INTERA Inc
Job ID: 810-69676-1
Project/Site: B&V Project 414595 Groundwater Analysis

Laboratory References:

EA SB = Eurofins Eaton Analytical South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: INTERA Inc
Job ID: 810-69676-1
Project/Site: B&V Project 414595 Groundwater Analysis

Laboratory: Eurofins Eaton Analytical South Bend

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Indiana	State	C-71-01	12-31-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
150.1		Drinking Water	pH
1623	1623	Drinking Water	Cryptosporidium
1623	1623	Drinking Water	Giardia
1623	1623	Drinking Water	Number of filters used
1623	1623	Drinking Water	Number of oocysts counted
1623	1623	Drinking Water	Packed pellet volume
1623	1623	Drinking Water	Percentage of filtered volume examined
1623	1623	Drinking Water	Sample volume filtered
1623	1623	Drinking Water	Volume of resuspended concentrate
1623	1623	Drinking Water	Volume of resuspension processed
180.1		Drinking Water	Turbidity
200.7		Drinking Water	Calcium
200.7		Drinking Water	Iron
200.7		Drinking Water	Magnesium
200.7		Drinking Water	Potassium
200.7		Drinking Water	Silica
200.7		Drinking Water	Sodium
200.8		Drinking Water	Aluminum
200.8		Drinking Water	Manganese
200.8		Drinking Water	Silver
200.8		Drinking Water	Zinc
300.0		Drinking Water	Bromide
300.0		Drinking Water	Chlorate
300.0		Drinking Water	Chloride
300.0		Drinking Water	Sulfate
331.0		Drinking Water	Perchlorate
353.2		Drinking Water	Nitrate Nitrite as N
4500 Cl F Amine		Drinking Water	Chloramines, Total
4500 Cl F Amine		Drinking Water	Dichloramine
4500 Cl F Amine		Drinking Water	Monochloramine
4500 Cl F Amine		Drinking Water	Nitrogen trichloride
4500 Cl G		Drinking Water	Free Chlorine
4500 ClO2 D		Drinking Water	Chlorine dioxide, Residual
505	505	Drinking Water	Chlordane (n.o.s.)
505	505	Drinking Water	Polychlorinated biphenyls, Total
505	505	Drinking Water	Total PCBs as DCB (Qualitative)
521.1	521	Drinking Water	N-Nitrosodiethylamine (NDEA)
521.1	521	Drinking Water	N-Nitrosodimethylamine (NDMA)
521.1	521	Drinking Water	N-Nitrosodi-n-butylamine (NDBA)
521.1	521	Drinking Water	N-Nitrosodi-n-propylamine (NDPA)
521.1	521	Drinking Water	N-Nitrosodiphenylamine (NDPhA)
521.1	521	Drinking Water	N-Nitrosomethylethylamine (NMEA)
521.1	521	Drinking Water	N-Nitrosomorpholine (NMOR)
521.1	521	Drinking Water	N-Nitrosopiperidine (NPIP)
521.1	521	Drinking Water	N-Nitrosopyrrolidine (NPYR)

Laboratory: Eurofins Eaton Analytical South Bend (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
522	522	Drinking Water	1,4-Dioxane
524.2		Drinking Water	1,1,2,2-Tetrachloroethane
524.2		Drinking Water	1,1-Dichloroethane
524.2		Drinking Water	1,2,3-Trichlorobenzene
524.2		Drinking Water	1,2,4-Trimethylbenzene
524.2		Drinking Water	1,2-Dibromo-3-Chloropropane
524.2		Drinking Water	1,2-Dibromoethane (EDB)
524.2		Drinking Water	1,3-Dichlorobenzene
524.2		Drinking Water	2,2-Dichloropropane
524.2		Drinking Water	cis-1,3-Dichloropropylene
524.2		Drinking Water	Methyl-tert-butyl Ether (MTBE)
524.2		Drinking Water	m-Xylene & p-Xylene
524.2		Drinking Water	o-Xylene
524.2		Drinking Water	trans-1,3-Dichloropropylene
525.2	525.2	Drinking Water	Di-n-octyl phthalate
533	533	Drinking Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
533	533	Drinking Water	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)
533	533	Drinking Water	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)
533	533	Drinking Water	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)
533	533	Drinking Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
533	533	Drinking Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid
533	533	Drinking Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)
533	533	Drinking Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)
533	533	Drinking Water	Perfluoro(4-methoxybutanoic acid)
533	533	Drinking Water	Perfluoro-3,6-dioxaheptanoic acid
533	533	Drinking Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
533	533	Drinking Water	Perfluorobutanesulfonic acid (PFBS)
533	533	Drinking Water	Perfluorobutanoic acid (PFBA)
533	533	Drinking Water	Perfluorodecanoic acid (PFDA)
533	533	Drinking Water	Perfluorododecanoic acid (PFDoA)
533	533	Drinking Water	Perfluoroheptanesulfonic acid (PFHpS)
533	533	Drinking Water	Perfluoroheptanoic acid (PFHpA)
533	533	Drinking Water	Perfluorohexanesulfonic acid (PFHxS)
533	533	Drinking Water	Perfluorohexanoic acid (PFHxA)
533	533	Drinking Water	Perfluorononanoic acid (PFNA)
533	533	Drinking Water	Perfluorooctanesulfonic acid (PFOS)
533	533	Drinking Water	Perfluorooctanoic acid (PFOA)
533	533	Drinking Water	Perfluoropentanesulfonic acid (PFPeS)
533	533	Drinking Water	Perfluoropentanoic acid (PFPeA)
533	533	Drinking Water	Perfluoroundecanoic acid (PFUnA)

Accreditation/Certification Summary

Client: INTERA Inc
Job ID: 810-69676-1
Project/Site: B&V Project 414595 Groundwater Analysis

Laboratory: Eurofins Eaton Analytical South Bend (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537.1	537.1 DW	Drinking Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
537.1	537.1 DW	Drinking Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
537.1	537.1 DW	Drinking Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid
537.1	537.1 DW	Drinking Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)
537.1	537.1 DW	Drinking Water	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)
537.1	537.1 DW	Drinking Water	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)
537.1	537.1 DW	Drinking Water	Perfluorobutanesulfonic acid (PFBS)
537.1	537.1 DW	Drinking Water	Perfluorodecanoic acid (PFDA)
537.1	537.1 DW	Drinking Water	Perfluorododecanoic acid (PFDoA)
537.1	537.1 DW	Drinking Water	Perfluoroheptanoic acid (PFHpA)
537.1	537.1 DW	Drinking Water	Perfluorohexanesulfonic acid (PFHxS)
537.1	537.1 DW	Drinking Water	Perfluorohexanoic acid (PFHxA)
537.1	537.1 DW	Drinking Water	Perfluorononanoic acid (PFNA)
537.1	537.1 DW	Drinking Water	Perfluorooctanesulfonic acid (PFOS)
537.1	537.1 DW	Drinking Water	Perfluorooctanoic acid (PFOA)
537.1	537.1 DW	Drinking Water	Perfluorotetradecanoic acid (PFTeDA)
537.1	537.1 DW	Drinking Water	Perfluorotridecanoic acid (PFTrDA)
537.1	537.1 DW	Drinking Water	Perfluoroundecanoic acid (PFUnA)
7110B	RAD Prep	Drinking Water	Gross Alpha
7110B	RAD Prep	Drinking Water	Gross Beta
7500 Ra D		Drinking Water	Combined Radium 226 + 228
9223B		Drinking Water	Coliform, Total
9223B		Drinking Water	Escherichia coli
SM 2320B		Drinking Water	Alkalinity, Total
SM 2330B		Drinking Water	Langelier Index
SM 2340B		Drinking Water	Calcium hardness as calcium carbonate
SM 2340B		Drinking Water	Hardness as calcium carbonate
SM 2340B		Drinking Water	Magnesium hardness as calcium carbonate
SM 2510B		Drinking Water	Specific Conductance
SM 2540C		Drinking Water	Total Dissolved Solids
SM 2540D		Drinking Water	Total Suspended Solids
SM 4500 Cl G		Drinking Water	Chlorine, Total Residual
SM 4500 CO2 B		Drinking Water	Carbon Dioxide, Free
SM 4500 NH3 D		Drinking Water	Ammonia, Nitrogen
SM 4500 O G		Drinking Water	Oxygen, Dissolved
SM 4500 P E		Drinking Water	Orthophosphate as PO4
SM 4500 P E		Drinking Water	Phosphate, ortho
SM 4500 S2 D		Drinking Water	Sulfide
SM 5310C		Drinking Water	Dissolved Organic Carbon
SM 5910B		Drinking Water	Ultraviolet Absorption, 254 nm
SM 9215E		Drinking Water	Heterotrophic Plate Count

Laboratory: Eurofins Eaton Analytical South Bend (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
SM7500 Ra B	RAD Prep	Drinking Water	Ra-226
SM7500 Ra D	RAD Prep	Drinking Water	Ra-228
SM7500_Rn_B	RAD Prep	Drinking Water	Radon 222
V210		Drinking Water	2,4,6-Trichloroanisole (TCA)
V210		Drinking Water	2-Methylisoborneol (MIB)
V210		Drinking Water	Geosmin
V210		Drinking Water	Isobutyl methoxy pyrazine (IBMP)
V210		Drinking Water	Isopropyl methoxy pyrazine (IPMP)

Indiana (Micro)	State	M-76-07	12-31-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
150.1		Drinking Water	pH
1623	1623	Drinking Water	Cryptosporidium
1623	1623	Drinking Water	Giardia
1623	1623	Drinking Water	Number of filters used
1623	1623	Drinking Water	Number of oocysts counted
1623	1623	Drinking Water	Packed pellet volume
1623	1623	Drinking Water	Percentage of filtered volume examined
1623	1623	Drinking Water	Sample volume filtered
1623	1623	Drinking Water	Volume of resuspended concentrate
1623	1623	Drinking Water	Volume of resuspension processed
180.1		Drinking Water	Turbidity
200.7		Drinking Water	Calcium
200.7		Drinking Water	Iron
200.7		Drinking Water	Magnesium
200.7		Drinking Water	Potassium
200.7		Drinking Water	Silica
200.7		Drinking Water	Sodium
200.8		Drinking Water	Aluminum
200.8		Drinking Water	Antimony
200.8		Drinking Water	Arsenic
200.8		Drinking Water	Barium
200.8		Drinking Water	Beryllium
200.8		Drinking Water	Cadmium
200.8		Drinking Water	Chromium
200.8		Drinking Water	Copper
200.8		Drinking Water	Lead
200.8		Drinking Water	Manganese
200.8		Drinking Water	Selenium
200.8		Drinking Water	Silver
200.8		Drinking Water	Thallium
200.8		Drinking Water	Uranium
200.8		Drinking Water	Zinc
245.1	245.1	Drinking Water	Mercury
300.0		Drinking Water	Bromide

Laboratory: Eurofins Eaton Analytical South Bend (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0		Drinking Water	Chlorate
300.0		Drinking Water	Chloride
300.0		Drinking Water	Chlorite
300.0		Drinking Water	Sulfate
331.0		Drinking Water	Perchlorate
335.4	Distill/CN	Drinking Water	Cyanide, Total
353.2		Drinking Water	Nitrate Nitrite as N
353.2		Drinking Water	Nitrite as N
4500 Cl F Amine		Drinking Water	Chloramines, Total
4500 Cl F Amine		Drinking Water	Dichloramine
4500 Cl F Amine		Drinking Water	Monochloramine
4500 Cl F Amine		Drinking Water	Nitrogen trichloride
4500 Cl G		Drinking Water	Free Chlorine
4500 ClO2 D		Drinking Water	Chlorine dioxide, Residual
504.1	504.1	Drinking Water	1,2-Dibromo-3-Chloropropane
504.1	504.1	Drinking Water	1,2-Dibromoethane (EDB)
505	505	Drinking Water	Chlordane
505	505	Drinking Water	Chlordane (n.o.s.)
505	505	Drinking Water	PCB-1016
505	505	Drinking Water	PCB-1221
505	505	Drinking Water	PCB-1232
505	505	Drinking Water	PCB-1242
505	505	Drinking Water	PCB-1248
505	505	Drinking Water	PCB-1254
505	505	Drinking Water	PCB-1260
505	505	Drinking Water	Polychlorinated biphenyls, Total
505	505	Drinking Water	Total PCBs as DCB (Qualitative)
505	505	Drinking Water	Toxaphene
515.3	515.3	Drinking Water	2,4,5-TP (Silvex)
515.3	515.3	Drinking Water	Dalapon
515.3	515.3	Drinking Water	Dinoseb
515.3	515.3	Drinking Water	Pentachlorophenol
515.3	515.3	Drinking Water	Picloram
521.1	521	Drinking Water	N-Nitrosodiethylamine (NDEA)
521.1	521	Drinking Water	N-Nitrosodimethylamine (NDMA)
521.1	521	Drinking Water	N-Nitrosodi-n-butylamine (NDBA)
521.1	521	Drinking Water	N-Nitrosodi-n-propylamine (NDPA)
521.1	521	Drinking Water	N-Nitrosodiphenylamine (NDPhA)
521.1	521	Drinking Water	N-Nitrosomethylethylamine (NMEA)
521.1	521	Drinking Water	N-Nitrosomorpholine (NMOR)
521.1	521	Drinking Water	N-Nitrosopiperidine (NPIP)
521.1	521	Drinking Water	N-Nitrosopyrrolidine (NPYR)
522	522	Drinking Water	1,4-Dioxane
524.2		Drinking Water	1,1,1-Trichloroethane
524.2		Drinking Water	1,1,2,2-Tetrachloroethane
524.2		Drinking Water	1,1,2-Trichloroethane
524.2		Drinking Water	1,1-Dichloroethane

Laboratory: Eurofins Eaton Analytical South Bend (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
524.2		Drinking Water	1,1-Dichloroethene
524.2		Drinking Water	1,2,3-Trichlorobenzene
524.2		Drinking Water	1,2,4-Trichlorobenzene
524.2		Drinking Water	1,2,4-Trimethylbenzene
524.2		Drinking Water	1,2-Dibromo-3-Chloropropane
524.2		Drinking Water	1,2-Dibromoethane (EDB)
524.2		Drinking Water	1,2-Dichlorobenzene
524.2		Drinking Water	1,2-Dichloroethane
524.2		Drinking Water	1,2-Dichloropropane
524.2		Drinking Water	1,3-Dichlorobenzene
524.2		Drinking Water	1,4-Dichlorobenzene
524.2		Drinking Water	2,2-Dichloropropane
524.2		Drinking Water	Benzene
524.2		Drinking Water	Bromodichloromethane
524.2		Drinking Water	Bromoform
524.2		Drinking Water	Carbon tetrachloride
524.2		Drinking Water	Chlorobenzene
524.2		Drinking Water	Chloroform
524.2		Drinking Water	cis-1,2-Dichloroethylene
524.2		Drinking Water	cis-1,3-Dichloropropylene
524.2		Drinking Water	Dibromochloromethane
524.2		Drinking Water	Methyl-tert-butyl Ether (MTBE)
524.2		Drinking Water	m-Xylene & p-Xylene
524.2		Drinking Water	o-Xylene
524.2		Drinking Water	Styrene
524.2		Drinking Water	Tetrachloroethene
524.2		Drinking Water	Toluene
524.2		Drinking Water	trans-1,2-Dichloroethylene
524.2		Drinking Water	trans-1,3-Dichloropropylene
524.2		Drinking Water	Trichloroethylene
524.2		Drinking Water	Trihalomethanes, Total
524.2		Drinking Water	Vinyl chloride
524.2		Drinking Water	Xylenes, Total
525.2	525.2	Drinking Water	Alachlor
525.2	525.2	Drinking Water	Atrazine
525.2	525.2	Drinking Water	Benzo[a]pyrene
525.2	525.2	Drinking Water	Di (2-ethylhexyl)phthalate
525.2	525.2	Drinking Water	Di(2-ethylhexyl)adipate
525.2	525.2	Drinking Water	Di-n-octyl phthalate
525.2	525.2	Drinking Water	Endrin
525.2	525.2	Drinking Water	gamma-BHC (Lindane)
525.2	525.2	Drinking Water	Heptachlor
525.2	525.2	Drinking Water	Heptachlor epoxide
525.2	525.2	Drinking Water	Hexachlorobenzene
525.2	525.2	Drinking Water	Hexachlorocyclopentadiene
525.2	525.2	Drinking Water	Methoxychlor
525.2	525.2	Drinking Water	Simazine

Laboratory: Eurofins Eaton Analytical South Bend (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
533	533	Drinking Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
533	533	Drinking Water	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)
533	533	Drinking Water	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)
533	533	Drinking Water	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)
533	533	Drinking Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
533	533	Drinking Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid
533	533	Drinking Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)
533	533	Drinking Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)
533	533	Drinking Water	Perfluoro(4-methoxybutanoic acid)
533	533	Drinking Water	Perfluoro-3,6-dioxaheptanoic acid
533	533	Drinking Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
533	533	Drinking Water	Perfluorobutanesulfonic acid (PFBS)
533	533	Drinking Water	Perfluorobutanoic acid (PFBA)
533	533	Drinking Water	Perfluorodecanoic acid (PFDA)
533	533	Drinking Water	Perfluorododecanoic acid (PFDoA)
533	533	Drinking Water	Perfluoroheptanesulfonic acid (PFHpS)
533	533	Drinking Water	Perfluoroheptanoic acid (PFHpA)
533	533	Drinking Water	Perfluorohexanesulfonic acid (PFHxS)
533	533	Drinking Water	Perfluorohexanoic acid (PFHxA)
533	533	Drinking Water	Perfluorononanoic acid (PFNA)
533	533	Drinking Water	Perfluorooctanesulfonic acid (PFOS)
533	533	Drinking Water	Perfluorooctanoic acid (PFOA)
533	533	Drinking Water	Perfluoropentanesulfonic acid (PFPeS)
533	533	Drinking Water	Perfluoropentanoic acid (PFPeA)
533	533	Drinking Water	Perfluoroundecanoic acid (PFUnA)
537.1	537.1 DW	Drinking Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
537.1	537.1 DW	Drinking Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
537.1	537.1 DW	Drinking Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid
537.1	537.1 DW	Drinking Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)
537.1	537.1 DW	Drinking Water	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)
537.1	537.1 DW	Drinking Water	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)
537.1	537.1 DW	Drinking Water	Perfluorobutanesulfonic acid (PFBS)
537.1	537.1 DW	Drinking Water	Perfluorodecanoic acid (PFDA)
537.1	537.1 DW	Drinking Water	Perfluorododecanoic acid (PFDoA)
537.1	537.1 DW	Drinking Water	Perfluoroheptanoic acid (PFHpA)

Accreditation/Certification Summary

Client: INTERA Inc
Job ID: 810-69676-1
Project/Site: B&V Project 414595 Groundwater Analysis

Laboratory: Eurofins Eaton Analytical South Bend (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537.1	537.1 DW	Drinking Water	Perfluorohexanesulfonic acid (PFHxS)
537.1	537.1 DW	Drinking Water	Perfluorohexanoic acid (PFHxA)
537.1	537.1 DW	Drinking Water	Perfluorononanoic acid (PFNA)
537.1	537.1 DW	Drinking Water	Perfluorooctanesulfonic acid (PFOS)
537.1	537.1 DW	Drinking Water	Perfluorooctanoic acid (PFOA)
537.1	537.1 DW	Drinking Water	Perfluorotetradecanoic acid (PFTeDA)
537.1	537.1 DW	Drinking Water	Perfluorotridecanoic acid (PFTrDA)
537.1	537.1 DW	Drinking Water	Perfluoroundecanoic acid (PFUnA)
547		Drinking Water	Glyphosate
548.1	548.1	Drinking Water	Endothall
549.2	549.2	Drinking Water	Diquat
552.2	552.2	Drinking Water	Dibromoacetic acid
552.2	552.2	Drinking Water	Dichloroacetic acid
552.2	552.2	Drinking Water	Monobromoacetic acid
552.2	552.2	Drinking Water	Monochloroacetic acid
552.2	552.2	Drinking Water	Trichloroacetic acid
552.2 THAA		Drinking Water	Total Haloacetic Acids 5
7110B	RAD Prep	Drinking Water	Gross Alpha
7110B	RAD Prep	Drinking Water	Gross Beta
7500 Ra D		Drinking Water	Combined Radium 226 + 228
Nitrate by calc		Drinking Water	Nitrate as N
SM 2320B		Drinking Water	Alkalinity, Total
SM 2330B		Drinking Water	Langelier Index
SM 2340B		Drinking Water	Calcium hardness as calcium carbonate
SM 2340B		Drinking Water	Hardness as calcium carbonate
SM 2340B		Drinking Water	Magnesium hardness as calcium carbonate
SM 2510B		Drinking Water	Specific Conductance
SM 2540C		Drinking Water	Total Dissolved Solids
SM 2540D		Drinking Water	Total Suspended Solids
SM 4500 Cl G		Drinking Water	Chlorine, Total Residual
SM 4500 CO2 B		Drinking Water	Carbon Dioxide, Free
SM 4500 F C		Drinking Water	Fluoride
SM 4500 NH3 D		Drinking Water	Ammonia, Nitrogen
SM 4500 O G		Drinking Water	Oxygen, Dissolved
SM 4500 P E		Drinking Water	Orthophosphate as PO4
SM 4500 P E		Drinking Water	Phosphate, ortho
SM 4500 S2 D		Drinking Water	Sulfide
SM 5310C		Drinking Water	Dissolved Organic Carbon
SM 5910B		Drinking Water	Ultraviolet Absorption, 254 nm
SM 9215E		Drinking Water	Heterotrophic Plate Count
SM7500 Ra B	RAD Prep	Drinking Water	Ra-226
SM7500 Ra D	RAD Prep	Drinking Water	Ra-228
SM7500_Rn_B	RAD Prep	Drinking Water	Radon 222
V210		Drinking Water	2,4,6-Trichloroanisole (TCA)
V210		Drinking Water	2-Methylisoborneol (MIB)
V210		Drinking Water	Geosmin

Client: INTERA Inc
Job ID: 810-69676-1
Project/Site: B&V Project 414595 Groundwater Analysis

Laboratory: Eurofins Eaton Analytical South Bend (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
V210		Drinking Water	Isobutyl methoxy pyrazine (IBMP)
V210		Drinking Water	Isopropyl methoxy pyrazine (IPMP)

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-24
A2LA	ISO/IEC 17025	0001.01	11-30-24
Alabama	State	43200	01-31-24
Alaska	State	PA00009	06-30-24
Alaska (UST)	State	17-027	02-28-24
Arizona	State	AZ0780	03-12-24
Arkansas DEQ	State	88-00660	08-08-23
California	State	2792	11-30-23
Colorado	State	PA00009	06-30-24
Connecticut	State	PH-0746	08-02-23
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-24
Delaware (DW)	State	N/A	01-31-24
Florida	NELAP	E87997	06-30-24
Georgia (DW)	State	C048	01-31-24
Hawaii	State	N/A	01-31-24
Illinois	NELAP	200027	01-31-24
Iowa	State	361	03-01-24
Kansas	NELAP	E-10151	10-31-23
Kentucky (DW)	State	KY90088	12-31-23
Kentucky (UST)	State	0001.01	11-30-24
Kentucky (WW)	State	KY90088	12-31-23
Louisiana (All)	NELAP	02055	06-30-24
Maine	State	2019012	03-12-25
Maryland	State	100	06-30-24
Massachusetts	State	M-PA009	06-30-24
Michigan	State	9930	01-31-24
Minnesota	NELAP	042-999-487	12-31-23
Mississippi	State	023	01-31-24
Missouri	State	450	01-31-25
Montana (DW)	State	0098	01-01-24
Nebraska	State	NE-OS-32-17	01-31-24
New Hampshire	NELAP	2730	01-10-24
New Jersey	NELAP	PA011	06-30-24
New York	NELAP	10670	04-01-24
North Carolina (DW)	State	42705	07-31-24
North Carolina (WW/SW)	State	521	12-31-23
North Dakota	State	R-205	01-31-24
Oklahoma	NELAP	9804	08-31-23
Oregon	NELAP	PA200001	09-11-23
PALA	Canada	1978	09-16-24

Accreditation/Certification Summary

Client: INTERA Inc
Job ID: 810-69676-1
Project/Site: B&V Project 414595 Groundwater Analysis

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	36-00037	01-31-24
Rhode Island	State	LAO00338	12-31-23
South Carolina	State	89002	01-31-24
Tennessee	State	02838	01-31-24
Texas	NELAP	T104704194-23-46	08-31-23
USDA	US Federal Programs	525-22-298-19481	10-25-25
Vermont	State	VT - 36037	10-28-23
Virginia	NELAP	460182	06-14-25
Washington	State	C457	04-11-24
West Virginia (DW)	State	9906 C	12-31-23
West Virginia DEP	State	055	07-31-24
Wyoming	State	8TMS-L	01-31-24
Wyoming (UST)	A2LA	0001.01	11-30-24

Method Summary

Client: INTERA Inc
Job ID: 810-69676-1
Project/Site: B&V Project 414595 Groundwater Analysis

Method	Method Description	Protocol	Laboratory
524.2	Total Trihalomethanes	EPA-DW	EA SB
524.2	Volatile Organic Compounds (GC/MS)	EPA-DW	EA SB
V210	Taste and Odor Compounds (GC/MS/SIS)	Lab SOP	EA SB
521.1	Nitrosoamines (GC/MS/MS)	EPA	EA SB
522	1,4 Dioxane (GC/MS SIM)	EPA	EA SB
525.2	Semivolatile Organic Compounds (GC/MS)	EPA	EA SB
548.1	Endothall (GC/MS)	EPA	EA SB
504.1	EDB, DBCP and 1,2,3-TCP (GC)	EPA-DW2	EA SB
505	Organochlorine Pesticides/PCBs (GC)	EPA	EA SB
515.3	Herbicides (GC)	EPA	EA SB
552.2	Haloacetic Acids (HAAs) (GC)	EPA	EA SB
552.2 THAA	Total Haloacetic Acids (GC)	EPA	EA SB
300.0	Anions, Ion Chromatography	EPA	EA SB
547	Glyphosate (DAI HPLC)	EPA	EA SB
549.2	Diquat and Paraquat (HPLC)	EPA	EA SB
331.0	Perchlorate (LC/MS/MS)	EPA	EA SB
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA SB
537.1	Perfluorinated Alkyl Acids (LC/MS)	EPA	EA SB
1613B	Tetra Chlorinated Dioxin in Drinking Water	EPA	ELLE
200.7	Metals (ICP)	EPA	EA SB
200.8	Metals (ICP/MS)	EPA	EA SB
245.1	Mercury (CVAA)	EPA	EA SB
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	EA SB
150.1	pH (Electrometric)	EPA	EA SB
180.1	Turbidity, Nephelometric	EPA	EA SB
335.4	Cyanide, Total	EPA	EA SB
353.2	Nitrogen, Nitrate-Nitrite	EPA	EA SB
4500 Cl F Amine	Chloramines	SM	EA SB
4500 Cl G	Chlorine, Free	SM	EA SB
4500 ClO2 D	Chlorine Dioxide	SM	EA SB
Nitrate by calc	Nitrogen, Nitrate-Nitrite	SM	EA SB
SM 2320B	Alkalinity	SM	EA SB
SM 2330B	Corrosivity, LSI Calculation	SM	EA SB
SM 2510B	Conductivity, Specific Conductance	SM	EA SB
SM 2540C	Solids, Total Dissolved (TDS)	SM	EA SB
SM 2540D	Solids, Total Suspended (TSS)	SM	EA SB
SM 4500 Cl G	Chlorine, Residual	SM	EA SB
SM 4500 CO2 B	Free Carbon Dioxide	SM	EA SB
SM 4500 F C	Fluoride	SM	EA SB
SM 4500 NH3 D	Ammonia	SM	EA SB
SM 4500 O G	Oxygen, Dissolved	SM	EA SB
SM 4500 P E	Orthophosphate	SM	EA SB
SM 4500 S2 D	Sulfide, Total	SM	EA SB
SM 5310C	TOC	SM	EA SB
SM 5910B	Organic Constituents, UV-Absorbing	SM	EA SB
7110B	Gross Alpha and Gross Beta Radioactivity	SM	EA SB
7500 Ra D	Radium 226 Radium 228 Combined	SM	EA SB
SM7500 Ra B	Radium-226	SM	EA SB
SM7500 Ra D	Radium-228	SM	EA SB
SM7500_Rn_B	Radon	SM	EA SB
1623	Cryptosporidium and Giardia (Filtration / IMS / FA)	EPA	EA SB
9223B	Coliforms, Total, and E.Coli (Presence/Absence)	SM	EA SB
SM 9215E	Heterotrophic Plate Count	SM	EA SB

Method Summary

Client: INTERA Inc
Job ID: 810-69676-1
Project/Site: B&V Project 414595 Groundwater Analysis

Method	Method Description	Protocol	Laboratory
1613B	Separatory Funnel (Liquid-Liquid) Extraction	EPA	ELLE
1623	Purification	EPA	EA SB
1623	Sample Staining	EPA	EA SB
1623	Elution	EPA	EA SB
245.1	Preparation, Mercury	EPA	EA SB
504.1	Microextraction	EPA-DW	EA SB
505	Extraction, Organochlorine Pesticides/PCBs	EPA	EA SB
515.3	Extraction of Chlorinated Acids	EPA-DW	EA SB
521	Solid-Phase Extraction (SPE)	EPA	EA SB
522	Solid-Phase Extraction (SPE)	EPA	EA SB
525.2	Extraction of Semivolatile Compounds	EPA	EA SB
533	Extraction of Perfluorinated and Polyfluorinated Alkyl Acids	EPA	EA SB
537.1 DW	Extraction of Perfluorinated Alkyl Acids	EPA	EA SB
548.1	Extraction of Endothall	EPA-DW	EA SB
549.2	Extraction of Diquat and Paraquat	EPA	EA SB
552.2	Microextraction	EPA	EA SB
Aliquot	Preparation, Extract aliquot	None	EA SB
Distill/CN	Distillation, Cyanide	None	EA SB
Filtration	Filtration	None	EA SB
Filtration	Sample Filtration	None	EA SB
RAD Prep	Preparation, Radiologicals	None	EA SB
V210	Purge and Trap	Lab SOP	EA SB

Protocol References:

EPA = US Environmental Protection Agency

EPA-DW = "Methods For The Determination Of Organic Compounds In Drinking Water", EPA/600/4-88/039, December 1988 And Its Supplements.

EPA-DW2 = "Methods For The Determination of Organic Compounds in Drinking Water - Supplement III ",, EPA/600/R-95-131, August 1995

Lab SOP = Laboratory Standard Operating Procedure

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EA SB = Eurofins Eaton Analytical South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: INTERA Inc
Job ID: 810-69676-1
Project/Site: B&V Project 414595 Groundwater Analysis

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
810-69676-1	TW-2	Drinking Water	07/14/23 11:00	07/14/23 15:00

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

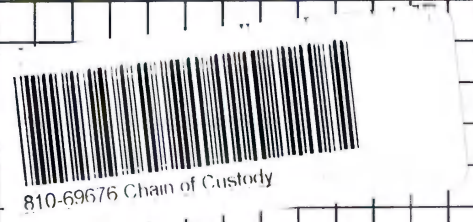
eurofins | Environment Testing

Client Information	Sampler: RCM	Lab PM: Hunsberger, Caleb	Carrier Tracking No(s):	COC No: 810-28338-7894.4
Client Contact: Rhett Moore	Phone: 812-249-6552	E-Mail: Anthony.Hunsberger@et.eurofinsus.com	State of Origin:	Page: Page 4 of 4
Company: INTERA Inc	PWSID: NA			Job #: BLKVC, WABAS11
Address: 101 West Kirkwood Avenue Suite 134	Due Date Requested:			
City: Bloomington	TAT Requested (days):			
State, Zip: IN, 47404	Compliance Project: Δ Yes Δ No			
Phone: 812-676-9984(Tel)	PO #: Purchase Order not required			
Email: RMoore@intera.com	WO #:			
Project Name: B&V Project 414595 Groundwater Analysis	Project #: 81006251			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	5910B - UV Absorption, 254 nm	SM4500NH3_D - Ammonia	SM4500_CO2_B - Local Method	SM4500_O_G - Dissolved Oxygen	SM4500_S2_D - Sulfide	SM7500_Rn_B - Radon	2540D - Total Suspended Solids (TSS)	V210 - Taste and Odor Compounds	537.1_DW_PREC - PFC18	533 - Local Method	524.2_Pres_PREC - Phase I,II & V Regulated & Unregulated V	504.1_PREC - Full List	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	S	N	N	CB	N	N	Q	Y	N	HA	R		
TW-2	7/14/23	1100		Drinking Wate																
				Drinking Wate																
LTB 7.6.23				Drinking Wate																
				Drinking Wate																
OK to run out of hold. 7-14-23 1100																				
5.0 5.2	9.8	5.2																		
Corrected Temp 5.2 5.4	10	5.4																		



Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: 7-14-23

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Rhett Moore	7/14/23 1500			7-14-23 1500	EEA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 55	Company
Relinquished by	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: Wet ice Fresh Draw

Ver: 06/08/2021

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

eurofins Environment Testing

Client Information	Sampler: RCM	Lab PM: Hunsberger, Caleb	Carrier Tracking No(s):	COC No: 810-28338-7894.3
Client Contact: Rhett Moore	Phone: 812 219 6552	E-Mail: Anthony.Hunsberger@et.eurofinsus.com	State of Origin:	Page: Page 3 of 4
Company: INTERA Inc	PWSID:			Job #: BLKVC. WABASH
Address: 101 West Kirkwood Avenue Suite 134	Due Date Requested:			
City: Bloomington	TAT Requested (days):			
State, Zip: IN, 47404	Compliance Project: Δ Yes Δ No			
Phone: 812-676-9984(Tel)	PO #: Purchase Order not required			
Email: RMoore@intera.com	WO #:			
Project Name: B&V Project 414595 Groundwater Analysis	Project #: 81006251			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	504.1_PREC, 505_PREC, 547_PREC	515.3_PREC - Chlorinated Acids - Extended by 515.3	1613B_DW - 2,3,7,8-TCDD	521.1 - Nitrosoamines	522_PREC - 1,4-Dioxane	525.2_PREC - 525.2 Suite Compounds	548.1_PREC - Endothall	549.2_PREC - Diquat	2320B - Total Alkalinity Only	SM2340B - Total Hardness as CaCO3 by Calculation	2510B - Specific Conductance	2540C_Calcd - Total Dissolved Solids (TDS)	5310C - Dissolved Organic Carbon	Total Number of containers	Special Instructions/Note:
				Preservation Code:			R	Q	N	R		R		N	N	N	N	N			
TW-2	7/14/23	1100		Drinking Wate																	
				Drinking Wate																	
				Drinking Wate																	
				Drinking Wate																	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
	Rhett Moore	7/14/23 1500	?	[signature]	7-14-23 1500	EEA
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: Wet ice Fresh Draw

Ver: 06/08/2021

8/21/2023

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: RCM	Lab PM: Hunsberger, Caleb	Carrier Tracking No(s):	COC No: 810-28338-7894.2
Client Contact: Rhett Moore	Phone: 812-219-6552	E-Mail: Anthony.Hunsberger@et.eurofinsus.com	State of Origin:	Page: Page 2 of 4
Company: INTERA Inc	PWSID:			Job #: BLKVC. WABASH
Address: 101 West Kirkwood Avenue Suite 134	Due Date Requested:			
City: Bloomington	TAT Requested (days):			
State, Zip: IN, 47404	Compliance Project: Δ Yes Δ No			
Phone: 812-676-9984(Tel)	PO #: Purchase Order not required			
Email: RMoore@intera.com	WO #:			
Project Name: B&V Project 414595 Groundwater Analysis	Project #: 81006251			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1623 - Cryptosporidium and Giardia	9223B_PA_DW - Local Method	9215E_DW - Heterotrophic Plate Count (HPC)	SUBCONTRACT - Iron Oxidizing Bacteria EPA 9240B	SUBCONTRACT - Virus 1615	SUBCONTRACT - Legionella - CDC Method	552.2_PREC - Haloacetic Acids 5	552.2_THAA_SUM - Total Haloacetic Acids - Summary	4500_Cl_F_ClrAm - Local Method	2120B, 4500_CL_G, 4500_CL_G_FC, 4500_ClO2_D	SM7110B, SM7500_Ra_B, SM7500_Ra_D	SM7500_Ra_D_SUM - Radium 226 and 228 - Combined	200.8_U - Uranium	Total Number of containers	Special Instructions/Note:
				Preservation Code:	X	X	N	R	R	N	N	N	G	N	N	N	D	N	D	X	
TW-2	7/14/23	1100		Drinking Wate																	Virus 306 L
				Drinking Wate																	
				Drinking Wate																	
				Drinking Wate																	
																					OK to proceed out of hold time if necessary per Rhett Moore SST 7-14-23

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Rhett Moore	7/14/23 1500			7-14-23 1500	EEA
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: Wet Ice Fresh Draw

Ver: 06/08/2021

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

eurofins Environment Testing

Client Information	Sampler: RCM	Lab PM: Hunsberger, Caleb	Carrier Tracking No(s):	COC No: 810-28338-7894.1
Client Contact: Rhett Moore	Phone: 812-219-6592	E-Mail: Anthony.Hunsberger@et.eurofinsus.com	State of Origin:	Page: Page 1 of 4
Company: INTERA Inc	PWSID: NA			Job #: BLKVC.WABASH
Address: 101 West Kirkwood Avenue Suite 134	Due Date Requested:			
City: Bloomington	TAT Requested (days):			
State, Zip: IN, 47404	Compliance Project: Δ Yes Δ No			
Phone: 812-676-9984(Tel)	PO #: Purchase Order not required			
Email: RMoore@intera.com	WO #:			
Project Name: B&V Project 414595 Groundwater Analysis	Project #: 81006251			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.7_SDWA, 200.8_SDWA, 245.1_SDWA	200.7_SDWA - ICP-AES Metals Scan	331.0_PREC - Perchlorate	335.4 - Total Cyanide	4500_F_C - Fluoride	SM2330B - Langlier Index Calculation	Nitrate_Calc - Nitrate as N by calculation	180.1, 353.2, 4500_P_E_Ortho	SUBCONTRACT - Asbestos 100.2	300_OF_14D_B - ALL 300 B	300_OF_28D_PREC - Chloride, Sulfate	524.2_TTHM_Sum - Total Trihalomethanes - Summary	524.2_Pres_PREC - Trihalomethanes	Total Number of containers	Special Instructions/Note:
				Preservation Code:			D	N	N		N	N	N	N	N	L	N	N	HA		
TW-2	7/14/23	1400		Drinking Wate																	
				Drinking Wate																	
				Drinking Wate																	
				Drinking Wate																	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Rhett Moore	7/14/23 1500			7-14-23 1500	EEA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: Wet Ice Fresh Draw

Ver: 06/08/2021

8/21/2023

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hunsberger, Caleb	Carrier Tracking No(s):	COC No: 810-27400.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Anthony.Hunsberger@et.eurofinsus.com	State of Origin: Indiana	Page: Page 1 of 1
Company: Scientific Methods, Inc		Accreditations Required (See note): State - Indiana; State - Indiana (Micro)		Job #: 810-69676-1
Address: 12441 Beckley St, ,	Due Date Requested: 8/2/2023			
City: Granger	TAT Requested (days):			
State, Zip: IN, 46530				
Phone:	PO #:			
Email:	WO #:			
Project Name: B&V Project 414595 Groundwater Analysis	Project #: 81006251			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Legionella - CDC Method)/ Legionella - CDC Method	SUB (Virus 1615)/ Virus 1615	SUB (Iron Oxidizing Bacteria EPA 9240B)/ Iron Oxidizing Bacteria EPA 9240B	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
TW-2 (810-69676-1)	7/14/23	11:00 Eastern		Drinking Wate			X	X	X	3	

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Joyce Dunglines 11:48 7-17-2023			Taylor Beck	7/17/23 11:49	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time: 7-17	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

eurofins | Environment Testing

8/21/2023

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hunsberger, Caleb	Carrier Tracking No(s):	COC No: 810-27405.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Anthony.Hunsberger@et.eurofinsus.com	State of Origin: Indiana	Page: Page 1 of 1
Company: Eurofins Lancaster Laboratories Environm		Accreditations Required (See note): State - Indiana; State - Indiana (Micro)		Job #: 810-69676-1
Address: 2425 New Holland Pike, ,	Due Date Requested: 8/3/2023			
City: Lancaster	TAT Requested (days):			
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #:			
Email:	WO #:			
Project Name: B&V Project 414595 Groundwater Analysis	Project #: 81006251			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Y - Trizma
Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B_DW/1613B_P_Sep 2,3,7,8-TCDD	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
TW-2 (810-69676-1)	7/14/23	11:00 Eastern		Drinking Wate			X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by: KP	Date/Time: 7-17-23 1300	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hunsberger, Caleb	Carrier Tracking No(s):	COC No: 810-27409.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Anthony.Hunsberger@et.eurofinsus.com	State of Origin: Indiana	Page: Page 1 of 1
Company: Eurofins CEI Inc		Accreditations Required (See note): State - Indiana; State - Indiana (Micro)		Job #: 810-69676-1
Address: 730 SE Maynard Road, ,	Due Date Requested: 8/3/2023			
City: Cary	TAT Requested (days):			
State, Zip: NC, 27511				
Phone:	PO #:			
Email:	WO #:			
Project Name: B&V Project 414595 Groundwater Analysis	Project #: 81006251			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos 100.2)/ Asbestos 100.2	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
TW-2 (810-69676-1)	7/14/23	11:00 Eastern		Drinking Wate			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by: KDM	Date/Time: 7.17.23 1300	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

8/21/2023

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hunsberger, Caleb	Carrier Tracking No(s):	COC No: 810-27405.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Anthony.Hunsberger@et.eurofinsus.com	State of Origin: Indiana	Page: Page 1 of 1
Company: Eurofins Lancaster Laboratories Environm		Accreditations Required (See note): State - Indiana; State - Indiana (Micro)		Job #: 810-69676-1
Address: 2425 New Holland Pike, ,	Due Date Requested: 8/3/2023			
City: Lancaster	TAT Requested (days):			
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #:			
Email:	WO #:			
Project Name: B&V Project 414595 Groundwater Analysis	Project #: 81006251			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify), Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B_DW/1613B_P_Sep 2,3,7,8-TCDD	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
TW-2 (810-69676-1)	7/14/23	11:00 Eastern		Drinking Wate			X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification Unconfirmed	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)* ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by: KD	Date/Time: 7-17-23 1300	Company	Received by:	Date/Time: 7-18-23 0955	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: Raw 0.3 - COR 05

Ver: 06/08/2021

MB

Login Sample Receipt Checklist

Client: INTERA Inc

Job Number: 810-69676-1

Login Number: 69676
List Number: 1
Creator: DePriest, Kellie

List Source: Eurofins Eaton Analytical South Bend

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	Received same day of collection; chilling process has begun.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

Login Sample Receipt Checklist

Client: INTERA Inc

Job Number: 810-69676-1

Login Number: 69676
List Number: 2
Creator: Ballard, Megan

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC
List Creation: 07/18/23 12:26 PM

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

eurofins | Environment Testing

1 2 3 4 5 6 7 8 9

ANALYTICAL REPORT

PREPARED FOR

Attn: Rhett Moore
INTERA Inc
101 West Kirkwood Avenue
Suite 134
Bloomington, Indiana 47404

Generated 8/29/2023 2:53:03 PM

JOB DESCRIPTION

B&V Project 414595 Groundwater Analysis

JOB NUMBER

810-69676-2

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend IN 46617

See page two for job notes and contact information.

myEOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

Authorization

Generated
8/29/2023 2:53:03 PM

Authorized for release by
Caleb Hunsberger, Project Manager
Anthony.Hunsberger@et.eurofinsus.com
(574)233-4777

Table of Contents

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 810-69676-2

Laboratory: Eurofins Eaton Analytical South Bend

Narrative

Job Narrative
810-69676-2

Receipt
The samples were received on 7/14/2023 3:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 5.2°C, 5.4°C, 5.4°C and 10.0°C

Receipt Exceptions
<Samples were received at 15:00 on a Friday. OK to proceed if hold time is missed per comment from the client>

TW-2 (810-69676-1), TW-2 LTB 7-6-23 (810-69676-2) and FTB (810-69676-3)

SUBCONTRACTING

The following analysis was subcontracted to Eurofins CEI Inc:
Asbestos 100.2

The following analyses were subcontracted to Scientific Methods, Inc:
Iron Oxidizing Bacteria EPA 9240B
Legionella - CDC Method
Virus 1615

Subcontract Lab non-Sister Lab
See attached subcontract report.

Method Summary

Client: INTERA Inc
Job ID: 810-69676-2
Project/Site: B&V Project 414595 Groundwater Analysis

Method	Method Description	Protocol	Laboratory
100.2	EPA 100.2 Asbestos in Drinking Water	EPA	E CEI
OSHA 100	OSHA 100	OSHA	Sci Method
Subcontract	Legionella - CDC Method	None	Sci Method
TCVA	TCVA Total Culturalable Virus Assay	None	Sci Method

Protocol References:

EPA = US Environmental Protection Agency

None = None

OSHA = OSHA Analytical Methods Manual, Occupational Safety And Health Administration.

Laboratory References:

E CEI = E CEI, 730 SE Maynard Road, Cary, NC 27511

Sci Method = Scientific Methods, Inc, 12441 Beckley St, Granger, IN 46530

Sample Summary

Client: INTERA Inc
Job ID: 810-69676-2
Project/Site: B&V Project 414595 Groundwater Analysis

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
810-69676-1	TW-2	Drinking Water	07/14/23 11:00	07/14/23 15:00

SCIENTIFIC METHODS

12441 Beckley Street • Granger, Indiana 46530
574.277.4078 [Phone] • www.scientificmethods.com

Laboratory Report

Client: Caleb Hunsberger
Eurofins Eaton Analytical
110 S Hill Street
South Bend, IN 46617
(574)233-4777
Anthony.Hunsberger@et.eurofins.com

Report no.: 34334

Sample Collection Date: 7/14/2023
Received Date: 7/17/2023
Sample Analysis Date: 7/18/2023

Samples Submitted: 1
Analytical Method: SM 9260J

Legionella by Membrane Filtration

Lab ID	Site Description	Sampling Time	Analysis Time	Legionella Species (cfu/100mL)	Legionella *pneumophila* (cfu/100mL)
34334	TW-2 (810-69676-1)	11:00	15:30	< 2.86	NA

Scientific Methods appreciates the opportunity to provide you with this analysis. Please feel free to contact us (574-277-4078) if you have any questions regarding this report.

Note: This report may not be reproduced, except in full, without written approval from Scientific Methods.

Reviewed by: Alicia Jones
Alicia Jones, Senior Analyst
Date: July 28, 2023

Finalized by: Taylor Beck
Taylor Beck, Analyst
Date: July 31, 2023

SCIENTIFIC METHODS

12441 Beckley Street • Granger, Indiana 46530
574.277.4078 [Phone] • www.scientificmethods.com

Laboratory Report

Client: Caleb Hunsberger
Eurofins Eaton Analytical
110 South Hill Street
South Bend, IN 46617-2702
Anthony.hunsberger@et.eurofinsus.com

Report no.: 34335

Sample Collection Point: TW-2
Sample Collection Date: 7/14/2023
Received Date: 7/17/2023
Elution Date and Time: 7/17/2023 @ 15:01 **Samples Submitted: 1**

Total Culturable Virus

Lab ID	EEA ID	Site Description	Results (MPN/100L)	Vol. Filtered (L)	Vol. Assayed (L)
34335	810-69676-1	TW-2	< 0.4248	306	235.38

Qualifier: This sample was received out of hold time. Permission to process was given by the client.

Scientific Methods appreciates the opportunity to provide you with this analysis. Please feel free to contact us (574-277-4078) if you have any questions regarding this report.

Reviewed by: Alicia Jones
Alicia Jones, Senior Analyst
Date: August 28, 2023

Finalized by: Taylor Beck
Taylor Beck, Analyst
Date: August 28, 2023

12441 Beckley Street • Granger, Indiana 46530
574.277.4078 [Phone] • www.scientificmethods.com

References:

Detection of Total Culturable Viruses, *by Virus Adsorption/Elution Method (VIRADEL)* **.**
Scientific Methods-Standard Operating Procedure-007. February 5, 2004.

ICR Microbial Laboratory Manual United States Environmental Protection Agency Office of Research and Development Washington DC 20460 EPA/600/R-95/178 April 1996 ICR Microbial Laboratory Manual ICR MICROBIAL LABORATORY MANUAL by G. Shay Fout, Ph.D., Frank W. Schaefer III, Ph.D., James W. Messer, Ph.D., Daniel R. Dahling and Ronald E. Stetler Biohazard Assessment Research Branch Human Exposure Research Division Cincinnati, Ohio 45268 NATIONAL EXPOSURE RESEARCH LABORATORY OFFICE OF RESEARCH AND DEVELOPMENT U.S.

MEASUREMENT OF ENTEROVIRUS AND NOROVIRUS OCCURRENCE IN WATER BY CULTURE AND RT-qPCR Based on EPA Method 1615.1

Definitions:
< = "less than" It indicates the lowest reportable value by the procedure used for analysis.

MPN = The Most Probable Number of viral particles that have displayed the ability to produce cytopathic effects in animal cell cultures.

GC/L = Genomic copies per L of water analyzed in RT-PCR of Method EPA1615.

Total Culturable Viruses are a group of enteric viruses such as Enteroviruses (polioviruses, coxsackieviruses and echoviruses), Rotavirus, Reovirus and Mastavirus that can be detected by cell culture infectivity assay.

SCIENTIFIC METHODS

12441 Beckley Street • Granger, Indiana 46530
574.277.4078 [Phone] • www.scientificmethods.com

Laboratory Report

Client: Caleb Hunsberger
Eurofins Eaton Analytical
110 South Hill Street
South Bend, IN 46617-2702
574-472-5527
anthony.hunsberger@et.eurofinsus.com

Report no.: 34336

Site Description: TW-2 (810-69676-1)
Sample Date and Time: 7/14/2023 11:00
Receive Date: 7/17/2023

Samples Submitted: 1

Microscopic Analysis - Iron Bacteria

Lab ID: 34336
Analysis Date and Time: 7/19/2023 11:00
Sample Volume Centrifuged (mL): 1000
Sample Volume Assayed (mL): 5

Iron Bacteria	Total organisms per 100 mL of sample
Acidithiobacillus ferooxidans	1,767,980
Leptothrix	120

Lab Comment: Diatoms and plant debris with chlorophyll were observed in this sample.

Scientific Methods appreciates the opportunity to provide you with this analysis. Please feel free to contact us (574-277-4078) if you have any questions regarding this report.

Note: This report may not be reproduced, except in full, without written approval from Scientific Methods.

Reviewed by: Alicia Jones
Alicia Jones, Senior Analyst
Date: July 27, 2023

Finalized by: Rebecca Wong
Rebecca Wong, Director of Operations
Date: July 28,2023

SCIENTIFIC METHODS

12441 Beckley Street • Granger, Indiana 46530
574.277.4078 [Phone] • www.scientificmethods.com

References and Definitions

References: Iron Bacteria,
Standard Methods 9240B, 18th Edition

Definitions:

MRL: Minimum Reporting Limit

< = "less than," It indicated the lowest reportable value by the proceedure used for analysis.

Iron bacteria are considered to be capable of metabolizing reduced iron present in their habitat and of depositing it in the form of hydrated ferric oxide, on or in their mucilaginous secretions. Usually, the amound of ferric hydroxide is very large in comparison with the enclosed cells.

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August 1, 2023

Eurofins Eaton Analytical
110 S. Hill Street
South Bend, IN 46617

CLIENT PROJECT: B&V Project 414595 Groundwater Analysis, 81006251, 810-69676-1
LAB CODE: W230709

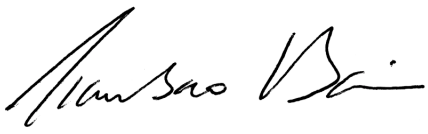
Dear Customer:

Enclosed are asbestos analysis results for TEM drinking water samples received at our laboratory on July 19, 2023. The samples were analyzed for asbestos using transmission electron microscopy (TEM) per the US EPA 100.2 Method.

The current EPA regulatory limit for asbestos in drinking water is 7 million fibers per liter (MFL, > 10 µm in length). The analytical sensitivity for the EPA 100.2 method is 0.2 MFL.

Thank you for your business and we look forward to continuing good relations.

Kind Regards,



Tianbao Bai, Ph.D., CIH
Laboratory Director

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ASBESTOS ANALYTICAL REPORT
By: Transmission Electron Microscopy

Prepared for

Eurofins Eaton Analytical

CLIENT PROJECT:	B&V Project 414595 Groundwater Analysis, 81006251, 810-69676-1
LAB CODE:	W230709
TEST METHOD:	EPA 100.2
REPORT DATE:	

730 SE Maynard Road • Cary, NC 27511 • 919.481.1413

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ASBESTOS IN DRINKING WATER ANALYSIS
By: TRANSMISSION ELECTRON MICROSCOPY

Client: Eurofins Eaton Analytical
110 S. Hill Street
South Bend, IN 46617

Time Collected:	11:00 AM	**Lab Code:**	W230709
Time Received:	9:30 AM	**Date Collected:**	07-14-23
Time Filtered:	6:00 PM	**Date Received:**	07-19-23
Time Analyzed:	11:39 AM	**Date Filtered:**	07-31-23
Avg Grid Opening Size:	.01 mm^2	**Date Analyzed:**	08-01-23
		Date Reported:	

Project: B&V Project 414595 Groundwater Analysis, 81006251, 810-69676-1

TEM DRINKING WATER (EPA 100.2)

Client ID / Lab ID	Sample Volume Filtered	Dilution Factor	Effective Filter Area (mm^2)	# Of Grid Openings Analyzed	Total Area of Filter Examined	Analytical Sensitivity (MFL)	Asbestos Type	Concentration >10 µm	Concentration (MFL)	Confidence Limit Lower	Confidence Limit Upper
TW-2 (810-69676-1) W4399	100	20	1060	10	0.1	2.12	None Detected	0	**<2.1**	0.0	<7.8

Sample ozonated prior to analysis due to lab receipt time exceeding 48 hr method hold time.

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LEGEND: MFL = million fibers per liter , > 10 um in length
NSD = no asbestos structures detected
ml = milliliter
CHRY = chrysotile
um = micrometer
CROC = crocidolite
mm = millimeter

METHOD: EPA 100.2

ANALYTICAL SENSITIVITY: 0.2 MFL

MAXIMUM CONTAMINANT LEVEL: 7 MFL

Information provided by customer includes customer sample ID, location, volume and area as well as date and time of sampling.

Sample bottle was not provided by Eurofins CEI.
For the current states of certification please refer to the website: www.EurofinsUS.com/CEI

ANALYST: Brunilda Gjoka
Brunilda Gjoka

APPROVED BY:
Tianbao Bai, Ph.D., CIH
Laboratory Director

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

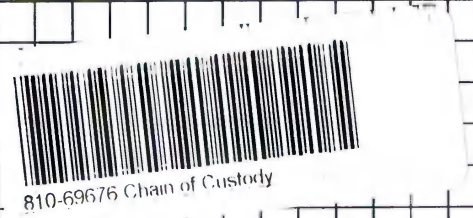
eurofins | Environment Testing

Client Information	Sampler: RCM	Lab PM: Hunsberger, Caleb	Carrier Tracking No(s):	COC No: 810-28338-7894.4
Client Contact: Rhett Moore	Phone: 812-249-6552	E-Mail: Anthony.Hunsberger@et.eurofinsus.com	State of Origin:	Page: Page 4 of 4
Company: INTERA Inc	PWSID: NA			Job #: BLKVC, WABAS11
Address: 101 West Kirkwood Avenue Suite 134	Due Date Requested:			
City: Bloomington	TAT Requested (days):			
State, Zip: IN, 47404	Compliance Project: Δ Yes Δ No			
Phone: 812-676-9984(Tel)	PO #: Purchase Order not required			
Email: RMoore@intera.com	WO #:			
Project Name: B&V Project 414595 Groundwater Analysis	Project #: 81006251			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	5910B - UV Absorption, 254 nm	SM4500NH3_D - Ammonia	SM4500_CO2_B - Local Method	SM4500_O_G - Dissolved Oxygen	SM4500_S2_D - Sulfide	SM7500_Rn_B - Radon	2540D - Total Suspended Solids (TSS)	V210 - Taste and Odor Compounds	537.1_DW_PREC - PFC18	533 - Local Method	524.2_Pres_PREC - Phase I,II & V Regulated & Unregulated V	504.1_PREC - Full List	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	S	N	N	CB	N	N	Q	Y	N	HA	R		
TW-2	7/14/23	1100		Drinking Wate																
				Drinking Wate																
LTB 7.6.23				Drinking Wate																
				Drinking Wate																
OK to run out of hold. 7-14-23 1100																				
5.0 5.2	9.8	5.2																		
Corrected Temp 5.2 5.4	10	5.4																		



Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: 7-14-23

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Rhett Moore	7/14/23 1500			7-14-23 1500	EEA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 55	Company
Relinquished by	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: Wet ice Fresh Draw

Ver: 06/08/2021

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: RCM	Lab PM: Hunsberger, Caleb	Carrier Tracking No(s):	COC No: 810-28338-7894.3
Client Contact: Rhett Moore	Phone: 812 219 6552	E-Mail: Anthony.Hunsberger@et.eurofinsus.com	State of Origin:	Page: Page 3 of 4
Company: INTERA Inc	PWSID:			Job #: BLKVC. WABASH
Address: 101 West Kirkwood Avenue Suite 134	Due Date Requested:			
City: Bloomington	TAT Requested (days):			
State, Zip: IN, 47404	Compliance Project: Δ Yes Δ No			
Phone: 812-676-9984(Tel)	PO #: Purchase Order not required			
Email: RMoore@intera.com	WO #:			
Project Name: B&V Project 414595 Groundwater Analysis	Project #: 81006251			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	504.1_PREC, 505_PREC, 547_PREC	515.3_PREC - Chlorinated Acids - Extended by 515.3	1613B_DW - 2,3,7,8-TCDD	521.1 - Nitrosoamines	522_PREC - 1,4-Dioxane	525.2_PREC - 525.2 Suite Compounds	548.1_PREC - Endothall	549.2_PREC - Diquat	2320B - Total Alkalinity Only	SM2340B - Total Hardness as CaCO3 by Calculation	2510B - Specific Conductance	2540C_Calcd - Total Dissolved Solids (TDS)	5310C - Dissolved Organic Carbon	Total Number of containers	Special Instructions/Note:
			Preservation Code:				R	Q	N	R		R		N	N	N	N	N			
TW-2	7/14/23	1100		Drinking Wate																	
				Drinking Wate																	
				Drinking Wate																	
				Drinking Wate																	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Rhett Moore	7/14/23 1500	?	[signature]	7-14-23 1500	EEA
2	Relinquished by:	Date/Time:	Company	Received by: [signature]	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: Wet ice Fresh Draw

Ver: 06/08/2021

8/29/2023

Page 18 of 25

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: RCM	Lab PM: Hunsberger, Caleb	Carrier Tracking No(s):	COC No: 810-28338-7894.2
Client Contact: Rhett Moore	Phone: 812-219-6552	E-Mail: Anthony.Hunsberger@et.eurofinsus.com	State of Origin:	Page: Page 2 of 4
Company: INTERA Inc	PWSID:			Job #: BLKVC. WABASH
Address: 101 West Kirkwood Avenue Suite 134	Due Date Requested:			
City: Bloomington	TAT Requested (days):			
State, Zip: IN, 47404	Compliance Project: Δ Yes Δ No			
Phone: 812-676-9984(Tel)	PO #: Purchase Order not required			
Email: RMoore@intera.com	WO #:			
Project Name: B&V Project 414595 Groundwater Analysis	Project #: 81006251			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1623 - Cryptosporidium and Giardia	9223B_PA_DW - Local Method	9215E_DW - Heterotrophic Plate Count (HPC)	SUBCONTRACT - Iron Oxidizing Bacteria EPA 9240B	SUBCONTRACT - Virus 1615	SUBCONTRACT - Legionella - CDC Method	552.2_PREC - Haloacetic Acids 5	552.2_THAA_SUM - Total Haloacetic Acids - Summary	4500_Cl_F_ClrAm - Local Method	2120B, 4500_CL_G, 4500_CL_G_FC, 4500_ClO2_D	SM7110B, SM7500_Ra_B, SM7500_Ra_D	SM7500_Ra_D_SUM - Radium 226 and 228 - Combined	200.8_U - Uranium	Total Number of containers	Special Instructions/Note:
TW-2	7/14/23	1100		Drinking Wate		N	R	R	N	N	N	G	N	N	N	D	N	D		Virus 306 L
				Drinking Wate																	
				Drinking Wate																	
				Drinking Wate																	
																					OK to proceed out of hold time if necessary per Rhett Moore SST 7-14-23

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Rhett Moore	7/14/23 1500			7-14-23 1500	EEA
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: Wet Ice Fresh Draw

Ver: 06/08/2021

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

eurofins Environment Testing

Client Information	Sampler: RCM	Lab PM: Hunsberger, Caleb	Carrier Tracking No(s):	COC No: 810-28338-7894.1
Client Contact: Rhett Moore	Phone: 812-219-6592	E-Mail: Anthony.Hunsberger@et.eurofinsus.com	State of Origin:	Page: Page 1 of 4
Company: INTERA Inc	PWSID: NA			Job #: BLKVC.WABASH
Address: 101 West Kirkwood Avenue Suite 134	Due Date Requested:			
City: Bloomington	TAT Requested (days):			
State, Zip: IN, 47404	Compliance Project: Δ Yes Δ No			
Phone: 812-676-9984(Tel)	PO #: Purchase Order not required			
Email: RMoore@intera.com	WO #:			
Project Name: B&V Project 414595 Groundwater Analysis	Project #: 81006251			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.7_SDWA, 200.8_SDWA, 245.1_SDWA	200.7_SDWA - ICP-AES Metals Scan	331.0_PREC - Perchlorate	335.4 - Total Cyanide	4500_F_C - Fluoride	SM2330B - Langlier Index Calculation	Nitrate_Calc - Nitrate as N by calculation	180.1, 353.2, 4500_P_E_Ortho	SUBCONTRACT - Asbestos 100.2	300_OF_14D_B - ALL 300 B	300_OF_28D_PREC - Chloride, Sulfate	524.2_TTHM_Sum - Total Trihalomethanes - Summary	524.2_Pres_PREC - Trihalomethanes	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N		N	N	N	N	N	L	N	N	HA		
TW-2	7/14/23	400		Drinking Wate																	
				Drinking Wate																	
				Drinking Wate																	
				Drinking Wate																	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Rhett Moore	7/14/23 1500		[signature]	7-14-23 1500	EEA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: Wet Ice Fresh Draw

Ver: 06/08/2021

8/29/2023

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

eurofins | Environment Testing

8/29/2023

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hunsberger, Caleb	Carrier Tracking No(s):	COC No: 810-27400.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Anthony.Hunsberger@et.eurofinsus.com	State of Origin: Indiana	Page: Page 1 of 1
Company: Scientific Methods, Inc		Accreditations Required (See note): State - Indiana; State - Indiana (Micro)		Job #: 810-69676-1
Address: 12441 Beckley St, ,	Due Date Requested: 8/2/2023			
City: Granger	TAT Requested (days):			
State, Zip: IN, 46530				
Phone:	PO #:			
Email:	WO #:			
Project Name: B&V Project 414595 Groundwater Analysis	Project #: 81006251			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Legionella - CDC Method)/ Legionella - CDC Method	SUB (Virus 1615)/ Virus 1615	SUB (Iron Oxidizing Bacteria EPA 9240B)/ Iron Oxidizing Bacteria EPA 9240B	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
TW-2 (810-69676-1)	7/14/23	11:00 Eastern		Drinking Wate			X	X	X	3	

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Joyce Dunglines 11:48 7-17-2023			Taylor Beck	7/17/23 11:49	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time: 7-17	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

eurofins | Environment Testing

8/29/2023

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hunsberger, Caleb	Carrier Tracking No(s):	COC No: 810-27405.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Anthony.Hunsberger@et.eurofinsus.com	State of Origin: Indiana	Page: Page 1 of 1
Company: Eurofins Lancaster Laboratories Environm		Accreditations Required (See note): State - Indiana; State - Indiana (Micro)		Job #: 810-69676-1
Address: 2425 New Holland Pike, ,	Due Date Requested: 8/3/2023			
City: Lancaster	TAT Requested (days):			
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #:			
Email:	WO #:			
Project Name: B&V Project 414595 Groundwater Analysis	Project #: 81006251			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B_DW/1613B_P_Sep 2,3,7,8-TCDD	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
TW-2 (810-69676-1)	7/14/23	11:00 Eastern		Drinking Wate			X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by: KP	Date/Time: 7-17-23 1300	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hunsberger, Caleb	Carrier Tracking No(s):	COC No: 810-27409.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Anthony.Hunsberger@et.eurofinsus.com	State of Origin: Indiana	Page: Page 1 of 1
Company: Eurofins CEI Inc		Accreditations Required (See note): State - Indiana; State - Indiana (Micro)		Job #: 810-69676-1
Address: 730 SE Maynard Road, ,	Due Date Requested: 8/3/2023			
City: Cary	TAT Requested (days):			
State, Zip: NC, 27511				
Phone:	PO #:			
Email:	WO #:			
Project Name: B&V Project 414595 Groundwater Analysis	Project #: 81006251			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos 100.2)/ Asbestos 100.2	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
TW-2 (810-69676-1)	7/14/23	11:00 Eastern		Drinking Wate			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by: KDW	Date/Time: 7-17-23 1300	Company	Received by:	Date/Time:	Company
Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend, IN 46617
Phone: 574-233-4777 Fax: 574-233-8207

W230709

Chain of Custody Record

W4399 (1)

eurofins Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hunsberger, Caleb	Carrier Tracking No(s):	COC No: 810-27409.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Anthony.Hunsberger@et.eurofinsus.com	State of Origin: Indiana	Page: Page 1 of 1
Company: Eurofins CEI Inc		Accreditations Required (See note): State - Indiana; State - Indiana (Micro)		Job #: 810-69676-1
Address: 730 SE Maynard Road, ,	Due Date Requested: 8/3/2023			
City: Cary	TAT Requested (days):			
State, Zip: NC, 27511				
Phone:	PO #:			
Email:	WO #:			
Project Name: B&V Project 414595 Groundwater Analysis	Project #: 81006251			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (Asbestos 100.2)/ Asbestos 100.2	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
TW-2 (810-69676-1)	7/14/23	11:00 Eastern		Drinking Wate			X	1	2.2°C

eurofins | CEI Accept Samples
CG 7/19/23 10:00

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
			CG	7/19/23 9:30	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by: KD	Date/Time: 7-17-23 1300	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

9564 7067 9040

Login Sample Receipt Checklist

Client: INTERA Inc

Job Number: 810-69676-2

Login Number: 69676
List Number: 1
Creator: DePriest, Kellie

List Source: Eurofins Eaton Analytical South Bend

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	Received same day of collection; chilling process has begun.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	