

October 7, 2022

VIA ELECTRONIC MAIL
marian.fugitt@FloridaDEP.gov

Marian Fugitt
Professional Geologist I
Source and Drinking Water Program
Division of Water Resource Management
2600 Blair Stone Road
Tallahassee, FL 32399-2400

**Re: Water Quality Criteria Exemption
DeSoto County
Facility Name: Peace River Manasota Regional Water Supply Authority
Facility WACS ID: 40593**

Dear Ms. Fugitt:

We have been asked to provide this response to the Department's correspondence, dated August 26, 2022, requesting additional information with respect to the above referenced exemption request. Responses to each of the requested items is provided below or in the referenced attachments.

- 1. We understand that PRMRWSA is requesting Water Quality Criteria Exemptions (WQCEs) for all their wells at WF2 in its entirety that are listed in Table 1-2 of the 2020 annual report. However, Rule 62-520.500(1), Florida Administrative Code (F.A.C.), states that the petition shall include alternative compliance levels for the parameters from which an exemption is being sought.**

For clarification, Peace River Manasota Regional Water Supply Authority (the "Authority") is seeking a WQCE for secondary drinking water standards¹ to allow for the implementation of partially treated surface water at the Peace River Facility ASR Wellfield No. 2. The WQCEs will set an alternate compliance level for each of these secondary drinking water standards for the injected water and receiving zone of the ASR system, the Suwannee Limestone permeable unit. The Authority believes this is consistent with FAC 62-520.500(1) and with other WQCEs issued for similar projects (e.g., City of Marco Island, Class V ASR Wells, OGC File No. 21-0262 File 141218—059-UO-V1 WACS ID 74184).

¹ The original request included alternative compliance levels for aluminum, color, odor, and iron. As discussed below, the exemption for odor is being withdrawn and the alternate compliance levels for color and iron are being modified.

2. **Based on the response to question 2, it appears that the monitoring wells completed above the Suwannee Limestone (please identify them by name), and monitoring well M-6, a Suwannee limestone well will not qualify for WQCEs since they have not shown exceedances or adverse effects by ASR operations. The same is true in the case of iron, which, according to the response for question 6 was sporadically sampled, but all the results were below the Maximum Contaminant Level (MCL). In order to obtain exemptions for any wells, justification must be provided that demonstrates the need for the WQCEs. Please understand that WQCEs cannot be issued for wells that do not have supporting water quality data for the particular wells in question.**

As noted above, the Authority is seeking exemptions for specific parameters, not for specific monitoring wells. The Authority's initial request was for WQCEs for iron, aluminum, color and odor. Upon further consideration, the Authority officially retracts the request for an exemption for odor. The native groundwater level for odor in the Suwannee Limestone permeable unit is 67 Threshold Odor Number (TON), as established in a laboratory analysis from a sample collected at monitor well M-6, located approximately one mile south of Wellfield 2 (Rule 62-520.420(2), F.A.C). The laboratory report for this sample is provided in **Exhibit 2**. The compliance level for odor will therefore be 67 TON (native background) in the injected water for the proposed partially treated surface water ASR system at Wellfield No. 2.

The exemption request is now limited to WQCEs for iron, aluminum, and color. A single alternate compliance level for each of these secondary drinking water standards is requested that will be applicable to the injected water and the ASR Wellfield No. 2 receiving zone (Suwannee Limestone permeable unit). The injected water and ASR recovered water would be expected to remain below these alternate compliance levels. Wellfield No. 2's compliance with these alternate levels will be determined through the monitor wells identified in the permit.

The Authority is proposing alternate levels based on available data from the proposed source water for ASR recharge which is surface water originating from the Peace River. Water quality from select ASR Wellfield No. 2 wells and monitor wells completed in the ASR receiving zone were submitted as additional support for the alternate levels requested in the WQCE petition. The data submitted was collected during limited partially treated surface water cycle testing, authorized by the Department under permit no. 136595-016-017-UO/M5. Under this permit the Department authorized a zone of discharge for aluminum, color, and total coliform pursuant to Rule 62-520.465(2)(b). This cycle testing occurred in 2017.

In discussions with the Department regarding this RAI, it was conveyed that insufficient/incomplete data from the monitor wells were submitted for the parameters for which WQCEs are requested. It was also suggested that compliance levels would need to be established for each well within the ASR storage zone. The

Authority does not agree with this position. Again, this is a request for exemptions from water quality parameters. Further, the data submitted supports the request for the alternate compliance levels for each well. As noted, the data submitted was collected during *limited partially treated surface water cycle testing*. This testing demonstrates the potential for exceedances for the identified water quality parameters. As the facility transfers to full operations, the likelihood of the injection plume to travel is high along with the likelihood of exceedances at other monitoring wells. However, if it is the Department's position that the plume will not travel to these additional monitoring wells, then the Authority requests that those wells be removed from the permit.

Further, providing the requested additional data would require a significant period of operation to determine the appropriate levels. Logically additional data from monitor wells in support of the proposed alternate levels cannot be obtained from the system until it is operational, and the system cannot become operational without a permitting mechanism (WQCE) to allow operations to begin. This is inconsistent with the intent of the WQCE which is a parameter-based exemption that establishes alternate levels for the proposed source water and in the case of ASR, the zone in which the water is recharged and stored. For these reasons, the Authority is not considering a WQCE structured with multiple alternate levels for each Suwannee Limestone well.

While the Authority contends that the data provided is sufficient to support the requested exemptions, the Authority revises the basis for their WQCE alternate levels to focus primarily on the water quality obtained from the proposed source water. The Authority accepts that the alternate levels requested in this response will be met at the applicable monitoring wells and Wellfield No. 2 ASR wells. The basis for the alternate compliance level for each parameter is summarized in the paragraphs below, and in **Table 1**. After the system has been in operation for a sufficient amount of time, the Authority and the Department may wish to have further discussions regarding either the removal of several of the monitoring wells or an adjustment to the requested exemptions.

TABLE 1

WQCE Alternate Compliance Levels for Partially Treated Surface Water and
ASR Receiving Zone (Suwannee Limestone Permeable Unit)

Secondary Drinking Water Parameter	Regulatory MCL	Requested Alternate Compliance Level
Aluminum	0.2 mg/L	4 mg/L
Color	15 PCU	800 PCU
Iron	0.3 mg/L	3 mg/L

Requested Alternative Compliance Level for Aluminum

The requested alternate level for aluminum is 4 mg/L. A graph of aluminum concentrations from the surface water at the Peace River Facility, which includes river and reservoir data, is presented in **Exhibit 3**. As the available historical data shows, aluminum concentrations in the reservoir water are generally higher than the maximum contaminant level (MCL) for this secondary drinking water standard (DWS). Aluminum concentrations approached 2 mg/L in 2017. The requested alternate level is 4 mg/L, or twice the concentration of 2 mg/L. This is conservatively high to account for potential fluctuations in aluminum concentrations in the reservoir that historically appear to vary over a relatively broad concentration range. As stated previously, this alternate compliance level would be applicable to the injected water and the groundwater from the Wellfield No. 2 ASR wells and monitor wells completed into the Suwannee Limestone. Compliance with the aluminum alternate compliance standard from the wells would be via filtered samples, as needed, to remove turbidity related to clay particles generated from purging activities. It is believed that this protocol will eliminate the potential for elevated aluminum concentrations from the wells.

Requested Alternative Compliance Level for Color

The requested alternate compliance level for color is 800 platinum cobalt units (PCU). A graph of color levels from the surface water at the Peace River Facility, which includes river and reservoir data, is presented in **Exhibit 4**. The maximum observed color value was 760 PCU. However, most data were below 400 PCU, therefore the Authority is requesting 800 PCU as an appropriately conservative alternate compliance level for this system. This is approximately twice the high color level observed in June 2017, and above the highest level recorded over the POR (760 PCU) recorded in September 2017. This alternate compliance level of 800 PCU would apply to the injected water and the groundwater from the Wellfield No. 2 ASR wells and monitor wells completed into the Suwannee Limestone.

Requested Alternative Compliance Level for Iron

The requested alternative compliance level for iron is 3 mg/L. A graph of iron concentrations from the surface water at the Peace River Facility, which includes river and reservoir data, is presented in **Exhibit 5**. The maximum observed iron value was 2.7 mg/L. However, most data were below 1.5 mg/L, therefore the Authority is confident that 3 mg/L will be an adequate alternate compliance level for this system. This is approximately twice the high concentration observed in June 2017, and above the highest concentration over the POR (2.7 mg/L) recorded in June 2018. This alternate compliance level of 3 mg/L would apply to the injected water and the groundwater from the Wellfield No. 2 ASR wells and monitor wells completed into the Suwannee Limestone.

Odor

With this response the Authority is requesting acknowledgement of a native groundwater level of 67 TON for odor within the Suwanee Limestone permeable as demonstrated in M-6. This would be the compliance level for the injected water in Wellfield No. 2.

3. **Please submit a revised table that shows separate rows identifying each individual well by name, and provide the corresponding information for each well under the following column headers:**
- a. **Desired WQCE Parameter (aluminum, color, odor, or iron)**
 - b. **Units (mg/l, CU, TON or mg/l)**
 - c. **MCL pursuant to Rule 62-550.320, F.A.C. (0.2/15/3/or 0.3)**
 - d. **Maximum concentration observed in PWS or Wells. For wells that were not sampled please indicate so in the appropriate field**
 - e. **Background Concentration ASR Zone**
 - f. **Proposed WQCE Concentration**
 - g. **Comments for justification of alternate compliance levels**

Exhibit 1 is a table of the monitor wells and requested information that is applicable to the Authority's WQCE petition.

We believe the provided information sufficiently responds to the request. Should you have any questions, please call me at (850) 583-0007. I can also be reached by email at cvarn@mansonbolves.com.

Sincerely,

MANSON BOLVES DONALDSON VARN, P.A.



Craig Varn

cc: Mike Coates, mcoates@regionalwater.org
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Attachments

- Exhibit 1 – ASR Wellfield No. 2 Receiving Zone Wells
- Exhibit 2 – M-6 Laboratory Report for Odor
- Exhibit 3 – Graph of Aluminum Data from Peace River Surface Water
- Exhibit 4 – Graph of Color Data from Peace River Surface Water
- Exhibit 5 – Graph of Iron Data from Peace River Surface Water

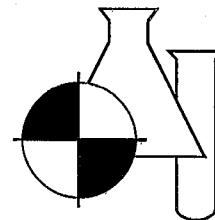
**ASR Wellfield No. 2 Receiving Zone Wells (Suwannee Limestone permeable unit)
Peace River Water Quality Criteria Exemption, Response to August 26, 2022 RAI No. 2**

PTSW/ ASR Wells	Secondary Standards Exempted	Units	MCL (62-550)	Background Concentration ASR Zone	Proposed Alternative Concentration	WQCE Justification	Comments for Justification
PTSW	Aluminum, Color, Iron	mg/L, CU, mg/L	0.2 mg/L Al, 15 CU, 0.3 mg/L Fe	NA	4 mg/L Al, 800 CU, 3 mg/L Fe	Alternative values for aluminum, color, and iron are approx. 2X highest observed values in surface water.	Filtration of samples for aluminum is proposed due to high turbidity causing higher aluminum results. The above applies to all wells.
S-4	Aluminum, Color, Iron	mg/L, CU, mg/L	0.2 mg/L Al, 15 CU, 0.3 mg/L Fe	<0.2 mg/L Al, <15 CU, <0.3 mg/L (applicable for all wells)	4 mg/L Al, 800 CU, 3 mg/L Fe		
S-10	Aluminum, Color, Iron	mg/L, CU, mg/L	0.2 mg/L Al, 15 CU, 0.3 mg/L Fe		4 mg/L Al, 800 CU, 3 mg/L Fe		
S-11	Aluminum, Color, Iron	mg/L, CU, mg/L	0.2 mg/L Al, 15 CU, 0.3 mg/L Fe		4 mg/L Al, 800 CU, 3 mg/L Fe		
S-12	Aluminum, Color, Iron	mg/L, CU, mg/L	0.2 mg/L Al, 15 CU, 0.3 mg/L Fe		4 mg/L Al, 800 CU, 3 mg/L Fe		
S-13	Aluminum, Color, Iron	mg/L, CU, mg/L	0.2 mg/L Al, 15 CU, 0.3 mg/L Fe		4 mg/L Al, 800 CU, 3 mg/L Fe		
S-14	Aluminum, Color, Iron	mg/L, CU, mg/L	0.2 mg/L Al, 15 CU, 0.3 mg/L Fe		4 mg/L Al, 800 CU, 3 mg/L Fe		
S-15	Aluminum, Color, Iron	mg/L, CU, mg/L	0.2 mg/L Al, 15 CU, 0.3 mg/L Fe		4 mg/L Al, 800 CU, 3 mg/L Fe		
S-16	Aluminum, Color, Iron	mg/L, CU, mg/L	0.2 mg/L Al, 15 CU, 0.3 mg/L Fe		4 mg/L Al, 800 CU, 3 mg/L Fe		
S-17	Aluminum, Color, Iron	mg/L, CU, mg/L	0.2 mg/L Al, 15 CU, 0.3 mg/L Fe		4 mg/L Al, 800 CU, 3 mg/L Fe		
S-18	Aluminum, Color, Iron	mg/L, CU, mg/L	0.2 mg/L Al, 15 CU, 0.3 mg/L Fe		4 mg/L Al, 800 CU, 3 mg/L Fe		
S-19	Aluminum, Color, Iron	mg/L, CU, mg/L	0.2 mg/L Al, 15 CU, 0.3 mg/L Fe		4 mg/L Al, 800 CU, 3 mg/L Fe		
S-20	Aluminum, Color, Iron	mg/L, CU, mg/L	0.2 mg/L Al, 15 CU, 0.3 mg/L Fe		4 mg/L Al, 800 CU, 3 mg/L Fe		

Monitor Wells ¹	Secondary Standards Exempted	Units	MCL (62-550)	Background Concentration ASR Zone	Proposed Alternative Concentration	WQCE Justification	Comments for Justification
M-6	Aluminum, Color, Iron	mg/L, CU, mg/L	0.2 mg/L Al, 15 CU, 0.3 mg/L Fe	<0.2 mg/L Al, <15 CU, <0.3 mg/L (applicable for all wells)	NA - offsite well	NA - offsite well	M-6 located approx. 1 mile south of WF2.
M-8	Aluminum, Color, Iron	mg/L, CU, mg/L	0.2 mg/L Al, 15 CU, 0.3 mg/L Fe		4 mg/L Al, 800 CU, 3 mg/L Fe	Alternative values for aluminum, color, and iron are approx. 2X highest observed values in surface water.	Filtration of samples for aluminum is proposed due to high turbidity causing higher aluminum results.
M-11	Aluminum, Color, Iron	mg/L, CU, mg/L	0.2 mg/L Al, 15 CU, 0.3 mg/L Fe		4 mg/L Al, 800 CU, 3 mg/L Fe		The above applies to all wells except M-6.
M-12	Aluminum, Color, Iron	mg/L, CU, mg/L	0.2 mg/L Al, 15 CU, 0.3 mg/L Fe		4 mg/L Al, 800 CU, 3 mg/L Fe		
M-13	Aluminum, Color, Iron	mg/L, CU, mg/L	0.2 mg/L Al, 15 CU, 0.3 mg/L Fe		4 mg/L Al, 800 CU, 3 mg/L Fe	See next column for note on aluminum.	
M-14	Aluminum, Color, Iron	mg/L, CU, mg/L	0.2 mg/L Al, 15 CU, 0.3 mg/L Fe		4 mg/L Al, 800 CU, 3 mg/L Fe	The above applies to all wells except M-6.	
M-15	Aluminum, Color, Iron	mg/L, CU, mg/L	0.2 mg/L Al, 15 CU, 0.3 mg/L Fe		4 mg/L Al, 800 CU, 3 mg/L Fe		
M-16	Aluminum, Color, Iron	mg/L, CU, mg/L	0.2 mg/L Al, 15 CU, 0.3 mg/L Fe		4 mg/L Al, 800 CU, 3 mg/L Fe		
M-17	Aluminum, Color, Iron	mg/L, CU, mg/L	0.2 mg/L Al, 15 CU, 0.3 mg/L Fe		4 mg/L Al, 800 CU, 3 mg/L Fe		
M-18	Aluminum, Color, Iron	mg/L, CU, mg/L	0.2 mg/L Al, 15 CU, 0.3 mg/L Fe		4 mg/L Al, 800 CU, 3 mg/L Fe		
M-19	Aluminum, Color, Iron	mg/L, CU, mg/L	0.2 mg/L Al, 15 CU, 0.3 mg/L Fe		4 mg/L Al, 800 CU, 3 mg/L Fe		

1. The list of Suwannee Limestone monitor wells are existing wells, many of which are legacy wells constructed for academic purposes to further Florida's understanding of arsenic mobilization. Only select wells will require water quality monitoring for this system, these will be specified in the operation permit.

BENCHMARK EA SOUTH



ANALYTICAL TEST REPORT

NELAC Certification #E85086

THESE RESULTS MEET NELAC STANDARDS

Submission
Number :

S22020780

Peace River/Manasota R W S
8998 SW County Road 769
Arcadia, FL 34269

Project Name : M-6 ODOR TEST

Date Received : 02/24/2022

Time Received : 08:55

Submission: S22020780

Sample Number: 001

Sample Description: M-6

Sample Date: 02/24/2022

Sample Method: Grab

Sample Time: 08:20

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
ODOR	67	TON	1	4	140.1	02/24/2022	13:15	MM

Melinda Merchant

03/01/2022

Dale D. Dixon / Laboratory Director
Melinda Merchant / Laboratory Manager

Date

DATA QUALIFIERS THAT MAY APPLY:

A = Value reported is an average of two or more determinations.
B = Results based upon colony counts outside the ideal range.
H = Value based on field kit determination. Results may not be accurate.
I = Reported value is between the laboratory MDL and the PQL.
J1 = Est. value surrogate recovery limits exceeded.
J2 = Est. value. No quality control criteria exists for component.
J3 = Est. value quality control criteria for precision or accuracy not met.
J4 = Est. value. Sample matrix interference suspected.
J5 = Est. value. Data questionable due to improper lab or field protocols
K = Off-scale low. Value is known to be < the value reported.
L = Off-scale high. Value is known to be > the value reported

PQL = 4xMDL. Except for Micro PQL=MDL

X = Value exceed MCL.

N = Presumptive evidence of presence of material.

Q = Sample held beyond accepted hold time (15 minutes for pH).

T = Value reported is < MDL. Reported for informational purposes only and shall not be used in statistical analysis.

U = Analyte analyzed but not detected at the value indicated.

V = Analyte detected in sample and method blank.

Y = Analysis performed on an improperly preserved sample. Data may be inaccurate.

Z = Too many colonies were present (TNTC); the numeric value represents the filtration volume.

? = Data rejected and should not be used. Some or all of QC data were outside criteria, and the Presence or absence of the analyte cannot be determined from the data.

I = Data deviate from historically established concentration ranges.

* = Not reported due to interference.

COMMENTS:

For questions or comments regarding these results, please contact us at (941) 625-3137.

These results relate only to the samples included in this report.

1001 Corporate Ave, Suite 102 North Port, FL 34289 Phone: (941) 625-3137 Fax: (941) 240-3071

standard report

22020780

PAGE 1 OF 2

Exhibit 2

Benchmark EnviroAnalytical, Inc.

1711 Twelfth Street East
Palmetto, FL 34221
(941) 723-9986
(941) 723-6061 fax
www.benchmarkea.com

Client:

Benchmark EA South E85086
1001 Corporate Ave. Ste 102
North Port FL 34289
941-240-3066 / 941-625-3137

Peace River Regional Water Supply

8998 SW County Road 769
Arcadia, FL 34269
(863) 993-4565
(863) 993-4568

M-C odor test

Chain of Custody Form: ~~Reservoir~~ **Odor Test**
Method of Discharge: SW

Laboratory Submission #:				S22020780					
Sample Name	Sample Type ¹	Collection		Qty	Capacity	Type ³	Preservative	Parameters for Analysis	Laboratory Sample #
		Date	Time						
M-C	Grab	2/24/22	0820	1	250 mL	Glass Amber	Plain	Odor (140.1)	1

Chlorine residual at time of collection: 0

Temperature at time of collection: 5.2

Turbidity at time of collection: 5.2

1 "Sample Type" is used to indicate whether the sample was a grab (G) or whether it was a composite (C).

2 "Sample Matrix" is used to indicate whether the sample is being discharged to drinking water (DW), groundwater (GW), surface water (SW), soil, sediment (SDMNT), or sludge (SLDGG).

3 "Container Type" is used to indicate whether the container is plastic (P) or glass (G).

4 Sample must be refrigerated or stored in wet ice after collection. The temperature during storage should be less than or equal to 6°C (42.8°F).

Instructions:

- Each bottle has a label identifying sample ID, premeasured preservative contained in the bottle, sample type, client ID, and parameters for analysis.
- The following information should be added to each bottle label after collection with permanent black ink: date and time of collection, sampler's name or initials, and any field number or ID.
- All bottles not containing preservative may be rinsed with appropriate sample prior to collection.
- The client is responsible for documentation of the sampling event. Please note special sampling events on the sample custody form.

Laboratory Sample Acceptability:
pH < 2 : ☐

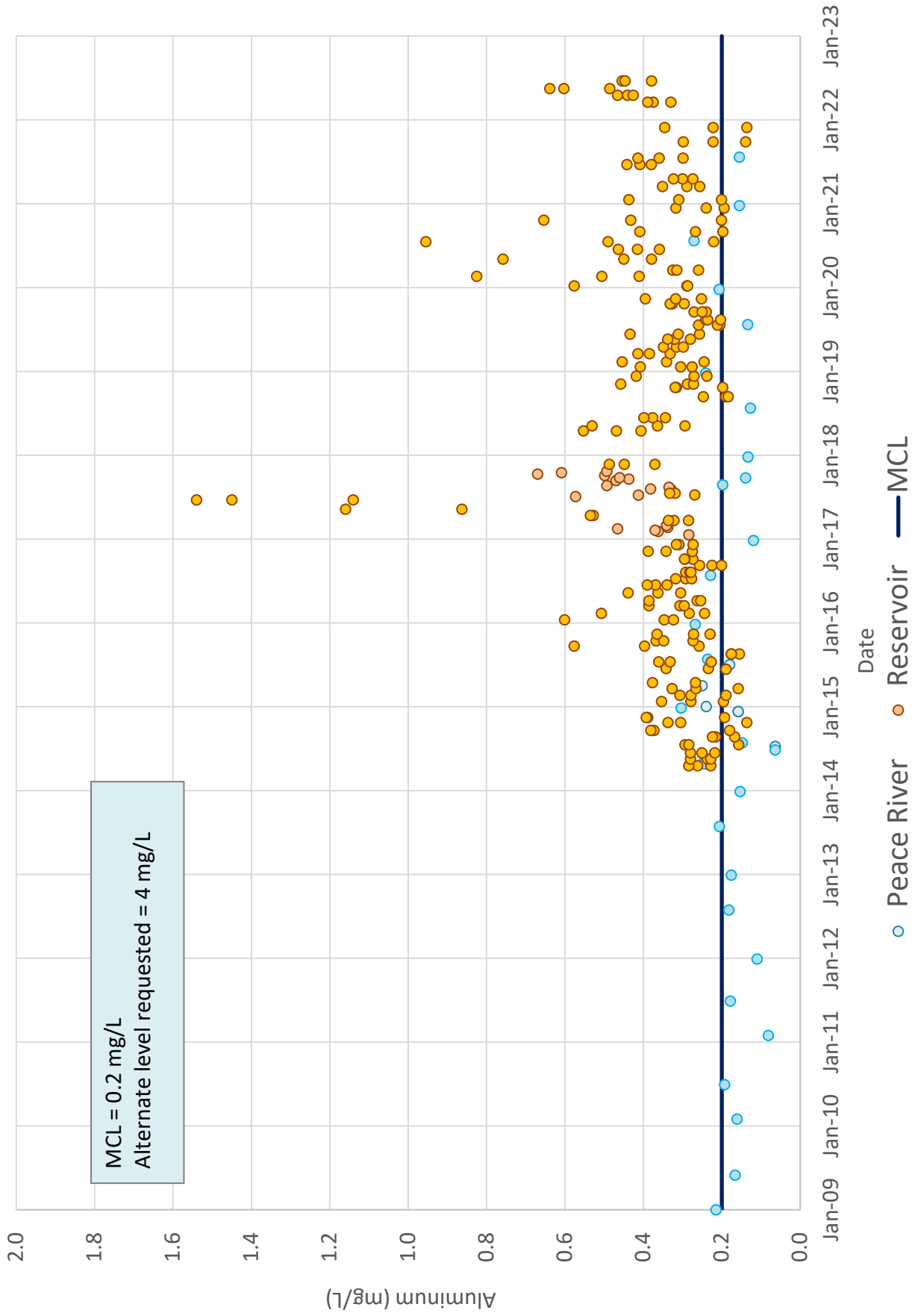
Temperature: 5.2 °C

1	Collector: <u>[Signature]</u>	Date: 2/24/22	Time: 0855	Received By: Kristin Hinton - BEAS	Date: 2/24/22	Time: 0855
2	Relinquished by:	Date:	Time:	Received By:	Date:	Time:
3	Relinquished by:	Date:	Time:	Received By:	Date:	Time:
4	Relinquished by:	Date:	Time:	Received By:	Date:	Time:

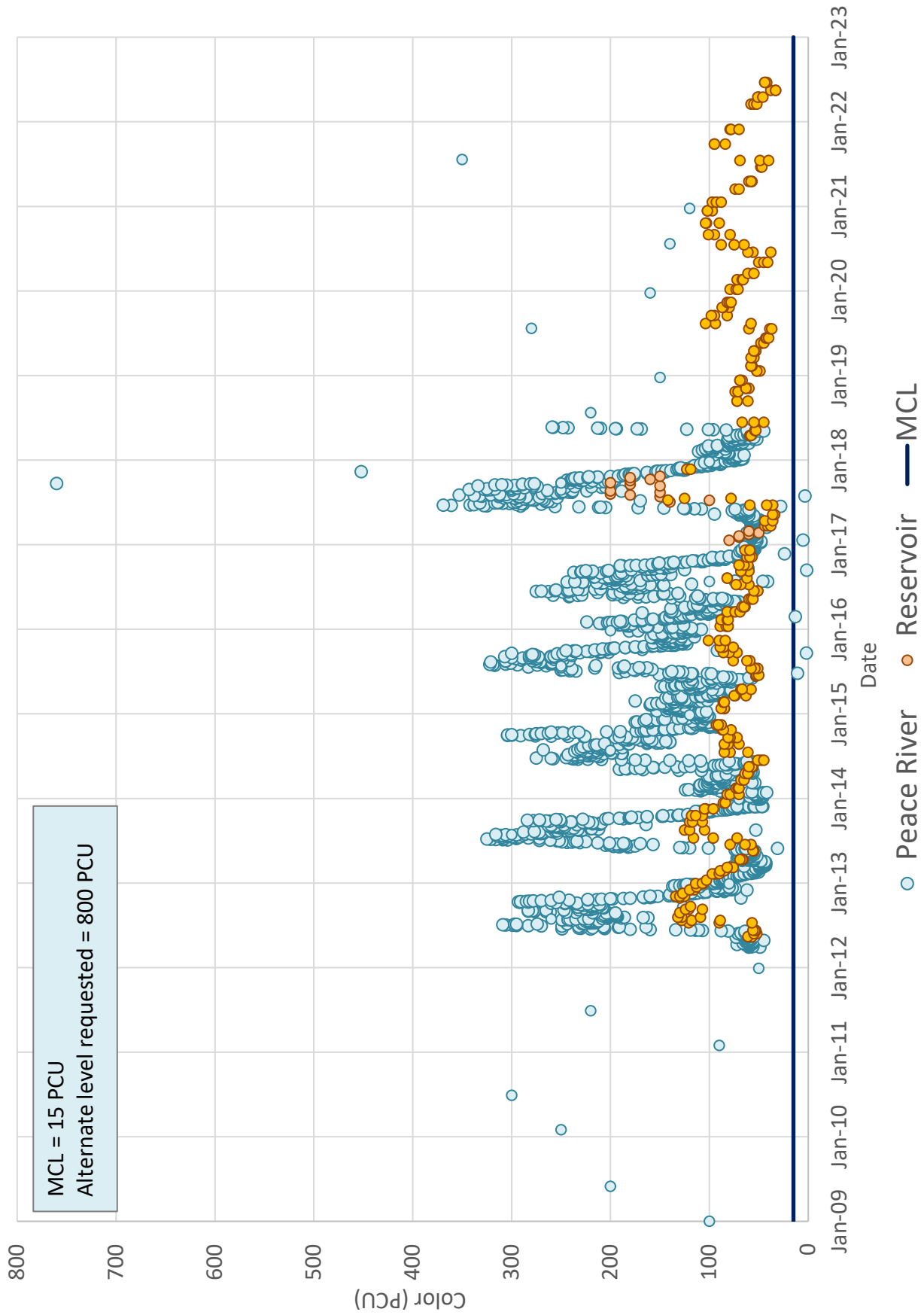
BEAS Sample Receipt Temp. _____ °C

Checked at Benchmark EA South E85086
With Temperature Gun ID #7

Peace River Surface Water - Aluminum



Peace River Surface Water - Color



Peace River Surface Water - Iron

