Annual Report Format

National Pollutant Discharge Elimination System Stormwater Program

MS4 Annual Report Format

Check box if you are submitting an individual Annual Report with one or more cooperative program elements. ☒

Check box if you are submitting an individual Annual Report with individual program elements only. ☐

Check box if this is a new name, address, etc. ☐

1. MS4(s) Information

NMR04A014 City of Albuquerque

Name of MS4

Kathleen	Verhage	Senior Engineer
Name of Contact Person (First)	(Last)	(Title)

(505) 768-3654	kverhage@cabq.gov
Telephone (including area code)	E-mail

PO Box 1293, City of Albuquerque, Dept of Municipal Development, Attn: Kathy Verhage Rm 301

Mailing Address

Albuquerque	NM	87103
City	State	ZIP code

What size population does your MS4(s) serve? 546,000 NPDES number

What is the reporting period for this report? (mm/dd/yyyy) From Jul 1, 2021 to Jun 30, 2022

2. Water Quality Priorities

A. Does your MS4(s) discharge to waters listed as impaired on a state 303(d) list? ☒ Yes ☐ No

B. If yes, identify each impaired water, the impairment, whether a TMDL has been approved by EPA for each, and whether the TMDL assigns a wasteload allocation to your MS4(s). Use a new line for each impairment, and attach additional pages as necessary.

Impaired Water	Impairment	Approved TMDL		TMDL assigns WLA to MS4	
Middle Rio Grande	E-coli	☒ Yes	☐ No	☒ Yes	☐ No
Middle Rio Grande	Temperature	☐ Yes	☒ No	☐ Yes	☐ No
Middle Rio Grande	Polychlorinated Biphenyls in Fi	☐ Yes	☒ No	☐ Yes	☐ No
Middle Rio Grande	Dissolved Oxygen	☐ Yes	☒ No	☐ Yes	☐ No

2. B. Continued

Impaired Water	Impairment	Approved TMDL		TMDL assigns WLA to MS4	
Middle Rio Grande	Mercury	☐ Yes	☒ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No

C. What specific sources contributing to the impairment(s) are you targeting in your stormwater program?

Pet waste, household hazardous waste, trash and debris (including natural vegetation), sediments, automotive fluids and detergents. A "floatables study" and microbial source testing have been performed. Birds are primary source of E-

D. Do you discharge to any high-quality waters (e.g., Tier 2, Tier 3, outstanding natural resource waters, or other state or federal designation)? ☐ Yes ☒ No

E. Are you implementing additional specific provisions to ensure their continued integrity? ☐ Yes ☒ No

3. Public Education and Public Participation

A. Is your public education program targeting specific pollutants and sources of those pollutants? ☒ Yes ☐ No

B. If yes, what are the specific sources and/or pollutants addressed by your public education program?

Our public education program targets pet waste, household hazardous waste, trash and debris (including natural vegetation), sediments, automotive fluids, detergents, fertilizers, pesticides

C. Note specific successful outcome(s) (e.g., quantified reduction in fertilizer use; NOT tasks, events, publications) fully or partially attributable to your public education program during this reporting period.

Survey showed that over 90% of individuals understood the importance of pollution prevention and valued improved stormwater quality. One household hazardous recycling event resulted in the participation of 585 residents. See

D. Do you have an advisory committee or other body comprised of the public and other stakeholders that provides regular input on your stormwater program? ☒ Yes ☐ No

4. Construction

A. Do you have an ordinance or other regulatory mechanism stipulating:

- Erosion and sediment control requirements? ☒ Yes ☐ No
- Other construction waste control requirements? ☒ Yes ☐ No
- Requirement to submit construction plans for review? ☒ Yes ☐ No
- MS4 enforcement authority? ☒ Yes ☐ No

B. Do you have written procedures for:

- Reviewing construction plans? ☒ Yes ☐ No
- Performing inspections? ☒ Yes ☐ No
- Responding to violations? ☒ Yes ☐ No

C. Identify the number of active construction sites ≥ 1 acre in operation in your jurisdiction at any time during the reporting period. 220

D. How many of the sites identified in 4.C did you inspect during this reporting period? 131

E. Describe, on average, the frequency with which your program conducts construction site inspections.

The primary inspector position was vacant for 11.5 mo. during which time the principal in charge of Construction Storm Water Quality performed 194 inspections on 131 of the sites. On average, 15 inspections per month were performed.

F. Do you prioritize certain construction sites for more frequent inspections? ☒ Yes ☐ No

If Yes, based on what criteria? Sites with violations are prioritized until compliance is achieved.

G. Identify which of the following types of enforcement actions you used during the reporting period for construction activities, indicate the number of actions, or note those for which you do not have authority:

☒ Yes	Notice of violation	46	No Authority	☐
☒ Yes	Administrative fines	14	No Authority	☐
☐ Yes	Stop Work Orders		No Authority	☒
☒ Yes	Civil penalties	0	No Authority	☐
☐ Yes	Criminal actions		No Authority	☒
☐ Yes	Administrative orders		No Authority	☒
☒ Yes	Other	Second notice of violation		

H. Do you use an electronic tool (e.g., GIS, data base, spreadsheet) to track the locations, inspection results, and enforcement actions of active construction sites in your jurisdiction? ☒ Yes ☐ No

I. What are the 3 most common types of violations documented during this reporting period?

1. SWPPP missing; 2. BMPs not implemented; 3. Sediment discharge into MS4; 4. Washout from the site

J. How often do municipal employees receive training on the construction program? Annually

5. Illicit Discharge Elimination

A. Have you completed a map of all outfalls and receiving waters of your storm sewer system? ☒ Yes ☐ No

B. Have you completed a map of all storm drain pipes and other conveyances in the storm sewer system? ☒ Yes ☐ No

C. Identify the number of outfalls in your storm sewer system. 40 (see Item 10)

D. Do you have documented procedures, including frequency, for screening outfalls? ☒ Yes ☐ No

E. Of the outfalls identified in 5.C, how many were screened for dry weather discharges during this reporting period?

40

F. Of the outfalls identified in 5.C, how many have been screened for dry weather discharges at any time since you obtained MS4 permit coverage? see Item 10

G. What is your frequency for screening outfalls for illicit discharges? Describe any variation based on size/type.

Complaints regarding spills are investigated immediately (see item 10). The 40 Dry Weather Screening outfalls are screened annually during the Dry Season--typically sometime in November through March (see item 10 for more

H. Do you have an ordinance or other regulatory mechanism that effectively prohibits illicit discharges? ☒ Yes ☐ No

I. Do you have an ordinance or other regulatory mechanism that provides authority for you to take enforcement action and/or recover costs for addressing illicit discharges? ☒ Yes ☐ No

J. During this reporting period, how many illicit discharges/illegal connections have you discovered? see item 10

K. Of those illicit discharges/illegal connections that have been discovered or reported, how many have been eliminated? All Complai

L. How often do municipal employees receive training on the illicit discharge program? Annually (appropriate d

6. Stormwater Management for Municipal Operations

A. Have stormwater pollution prevention plans (or an equivalent plan) been developed for:

All public parks, ball fields, other recreational facilities and other open spaces	☐ Yes	☒ No
All municipal construction activities, including those disturbing less than 1 acre	☐ Yes	☒ No
All municipal turf grass/landscape management activities	☒ Yes	☐ No
All municipal vehicle fueling, operation and maintenance activities	☒ Yes	☐ No
All municipal maintenance yards	☒ Yes	☐ No
All municipal waste handling and disposal areas	☒ Yes	☐ No

Other: All COA golf courses and warehouses have SWPPPs for their operations. General Parks and Open Spaces do not.

B. Are stormwater inspections conducted at these facilities? ☒ Yes ☐ No

C. If Yes, at what frequency are inspections conducted? It depends. See It

D. List activities for which operating procedures or management practices specific to stormwater management have been developed (e.g., road repairs, catch basin cleaning).

Construction activities, detention pond cleaning, storm inlet and drain cleaning, fueling operations, storage of hazardous and non-hazardous materials, general good housekeeping operations, landfill operations

E. Do you prioritize certain municipal activities and/or facilities for more frequent inspection? ☒ Yes ☐ No

F. If Yes, which activities and/or facilities receive most frequent inspections?

Most frequent inspections occur at facilities that require a Multi Sector General Permit (Solid Waste and Transit). Good Housekeeping inspections are performed at general maintenance facilities quarterly. Monthly if the facility has had

G. Do all municipal employees and contractors overseeing planning and implementation of stormwater-related activities receive comprehensive training on stormwater management? ☒ Yes ☐ No

H. If yes, do you also provide regular updates and refreshers? ☒ Yes ☐ No

I. If so, how frequently and/or under what circumstances?

All training is on-line. Annual refreshers are required for existing staff and new hires. On the spot training also occurs during inspections, as needed.

7. Long-term (Post-Construction) Stormwater Measures

A. Do you have an ordinance or other regulatory mechanism to require:

Site plan reviews for stormwater/water quality of all new and re-development projects?	☒ Yes	☐ No
Long-term operation and maintenance of stormwater management controls?	☐ Yes	☒ No
Retrofitting to incorporate long-term stormwater management controls?	☐ Yes	☒ No

B. If you have retrofit requirements, what are the circumstances/criteria?

None required at this time.

C What are your criteria for determining which new/re-development stormwater plans you will review (e.g., all projects, projects disturbing greater than one acre, etc.)?

Per COA ordinance the following projects are reviewed: 1. more than 500 cu yard earthwork or more than 1 ac disturbed; 2. Buildings 1000 sq ft or more; 3. Paving 10,000 sq ft or more; 4. any fill placed in a floodplain.

D. Do you require water quality or quantity design standards or performance standards, either directly or by reference to a state or other standard, be met for new development and re-development? ☒ Yes ☐ No

E. Do these performance or design standards require that pre-development hydrology be met for:

Flow volumes	☐ Yes	☒ No
Peak discharge rates	☐ Yes	☒ No
Discharge frequency	☐ Yes	☒ No
Flow duration	☐ Yes	☒ No

F. Please provide the URL/reference where all post-construction stormwater management standards can be found.

https://codelibrary.amlegal.com/codes/albuquerque/latest/overview

G. How many development and redevelopment project plans were reviewed during the reporting period to assess impacts to water quality and receiving stream protection? 759

H. How many of the plans identified in 7.G were approved? 631

I. How many privately owned permanent stormwater management practices/facilities were inspected during the reporting period? 145

J. How many of the practices/facilities identified in I were found to have inadequate maintenance? 10

K. How long do you give operators to remedy any operation and maintenance deficiencies identified during inspections? 30 days

L. Do you have authority to take enforcement action for failure to properly operate and maintain stormwater practices/facilities? ☒ Yes ☐ No

M. How many formal enforcement actions (i.e., more than a verbal or written warning) were taken for failure to adequately operate and/or maintain stormwater management practices? 0

N. Do you use an electronic tool (e.g., GIS, database, spreadsheet) to track post-construction BMPs, inspections and maintenance? ☒ Yes ☐ No

O. Do all municipal departments and/or staff (as relevant) have access to this tracking system? ☒ Yes ☐ No

P. How often do municipal employees receive training on the post-construction program? Planning - Month

8. Program Resources

A. What was the annual expenditure to implement MS4 permit requirements this reporting period? $8.1 Million

B. What is next year's budget for implementing the requirements of your MS4 NPDES permit? $6.5 Million

C. This year what is/are your source(s) of funding for the stormwater program, and annual revenue (amount or percentage) derived from each?

Source:	G.O. Bonds (NPDES, Water Quality Compliance)	Amount $	0.65 Mill	OR %	
Source:	General Funds (Arroyo and Street Maintenance)	Amount $	3.3 Mill	OR %	
Source:	Customer Billing (Household Hazardous Waste, G	Amount $	3.5 Mill	OR %	

D. How many FTEs does your municipality devote to the stormwater program (specifically for implementing the stormwater program; not municipal employees with other primary responsibilities)? 20 see

E. Do you share program implementation responsibilities with any other entities? ☒ Yes ☐ No

Entity	Activity/Task/Responsibility	Your Oversight/Accountability Mechanism
AMAFCA, SCAFC	Sampling and Monitoring Wet Weath	Memo of Understanding
AMAFCA, SCAFC	Education and Outreach	Memo of Understanding
AMAFCA, SCAFC	General Watershed Based Permit Impl	Memo of Understanding

9. Evaluating/Measuring Progress

A. What indicators do you use to evaluate the overall effectiveness of your stormwater management program, how long have you been tracking them, and at what frequency? These are not measurable goals for individual management practices or tasks, but large-scale or long-term metrics for the overall program, such as macroinvertebrate community indices, measures of effective impervious cover in the watershed, indicators of in-stream hydrologic stability, etc.

Indicator	Began Tracking (year)	Frequency	Number of Locations
Example: E. coli	2003	Weekly April–September	20
311 Complaint System Responses to IDDE	2003	As reported; number varies pe	Varies
Student and General Public Education a	2006	Reporting annually; events he	Varies
Dry Weather Screening	2003	Annually	40 locations
Good Housekeeping Inspections	2012	Quarterly to Monthly (if neede	41 locations
City Employees Taking SWPPP or SPCC t	2020	Annually	554 employees

B. What environmental quality trends have you documented over the duration of your stormwater program? Reports or summaries can be attached electronically, or provide the URL to where they may be found on the Web.

https://www.cabq.gov/municipaldevelopment/our-department/engineering/storm-water-management/municipal-separate-storm-sewer-system-ms4-permit.

10. Additional Information

Please attach any additional information on the performance of your MS4 program, including information required in Parts I.C, I.D, and III.B. If providing clarification to any of the questions above, please provide the question number (e.g., 2C) in your response.

Certification Statement and Signature

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

☒ Yes ☐ No

Federal regulations require this application to be signed as follows: **For a municipal, State, Federal, or other public facility**: by either a principal executive or ranking elected official.

Signature | Name of Certifying Official, Title | Date (mm/dd/yyyy)

CITY OF ALBUQUERQUE

Annual Report for Fiscal Year 2022 (FY22)

July 1, 2021 to June 30, 2022

NPDES PERMIT NMR04A000, Effective Date December 22, 2014

eNOI Application Date June 21, 2015

ITEM 10 Additional Information

I.C. Special Conditions

1. Compliance with Water Quality Standards

d. Dissolved Oxygen (DO): The Arroyo Metropolitan Flood Control Authority (AMAFCA) has installed aeration devices in areas prone to stagnation and monitors the DO in these areas. Results collected by the Compliance Monitoring Cooperative (CMC) in the Rio Grande during the permit term and in this period of administrative continuance indicate that stormwater runoff does not contribute to low DO conditions.

e. Polychlorinated Biphenyls (PCBs): The City of Albuquerque (COA) began a sediment assessment study in FY16 which was completed in FY17 with a final letter report submitted in FY18 on July 10, 2017. Under this study, soil samples were taken from the 5 outfall locations monitored under the former Phase 1 permit NMS000101 as well as from up and down stream locations along the Rio Grande. These samples were analyzed for PCBs using the Aroclor method. Detection of PCBs at any of these locations resulted in further sampling and analysis of upstream areas. Twelve locations were ultimately screened for both PCBs and select metals in the Phase II Assessment based upon the results of the original study. The Synthetic Precipitation Leaching Procedure (SPLP) was used to analyze the following metals: aluminum, cadmium, chromium, lead, nickel, and zinc. No PCBs were found in any of the sediment samples at concentrations above the detection limits that ranged from 0.019 to 0.2 milligrams per kilogram (mg/kg) for the six aroclors analyzed. Both studies are available in the FY17 Annual Report under Attachment 1. The Phase II Assessment was also included in the FY18 Annual Report under Attachment 1. As discussed in the Progress Evaluation Report for the Sediment Pollutant Load Reduction Strategy, submitted last year in FY19 under Attachment 1, recent investigations did not identify any sources of PCBs in the Albuquerque metropolitan area that represent a continuing impact to the waters of the Rio Grande.

f. Temperature: AMAFCA continues to monitor temperature in the Rio Grande and at the North Diversion Channel through the deployment of sondes. Analysis of stormwater flows for temperature under the former Phase 1 permit indicates no contribution to temperature exceedances in the Middle Rio Grande and continues to indicate no contribution to any potential temperature exceedances. Results collected by the Compliance Monitoring Cooperative (CMC) during the permit term and in this period of

administrative continuance indicate that stormwater runoff does not contribute to low temperature conditions.

2. Discharges to Impaired Waters with and without approved TMDLs

b(i)(c)B: The Monitoring Cooperative successfully implemented the sampling plan approved in the summer of 2016 and over the course of the permit term, submitted the results of 7 storm events collected from 2 locations in the Rio Grande at the northern or upstream (Angostura Diversion Dam) and at the southern or downstream (Isleta Diversion Dam) boundaries of the watershed as required by the Watershed Based Permit (WBP). Samples from 4 events during the wet season and 3 events during the dry season were collected meeting the WBP sampling criteria of 7 samples with 3 events from the wet season and 2 events from the dry season. Results from the WBP required sampling events were provided in the FY17, FY18, and FY19 Annual reports as well as submitted electronically into EPA's NetDMR system.

The WBP expired on December 19, 2019 and has been administratively continued. A letter submitted to the EPA by the Middle Rio Grande Technical Advisory Group discusses its members' intent to continue operations under coverage of the administratively extended permit (see Attachment 1 of the FY20 Annual Report). Although no additional monitoring is required during the period of administrative continuance, agencies participating in the Monitoring Cooperative have continued to fund sampling efforts. These results are provided in Attachment 1 of each year's Annual Report.

Although an in-stream sample for both a wet season and a dry season storm event was submitted for analysis in FY22, only the wet season sample occurred during a qualifying storm event. Due to drought, no qualifying storm events occurred during the dry season in FY22. The results from the qualifying event during the wet season and the non-qualifying event are provided in 2 memos: Wet Season and Dry Season Wet Weather Monitoring Results included as Attachment 1 in this year's FY22 report. Impairments to the Middle Rio Grande include E. coli bacteria, PCBs, Gross Alpha, Dissolved Oxygen and Temperature. In addition to the impairments, a list of other potential contaminants that were found in stormwater samples collected at select outfall locations in years prior to implementation of the WBP are also monitored. Of these constituents, only E. coli bacteria have an approved Total Maximum Daily Load (TMDL), a permit compliance item.

Results indicate that E. coli water quality standards for Pueblo of Isleta primary contact was exceeded in the wet season sample in all segments of the Rio Grande. In addition, the E. coli level in the southern most segment exceeded water quality standards specified in New Mexico's Administrative Code (NMAC 20.4). Finally, and more importantly, waste load allocations (WLA) for both segments were potentially exceeded. Exceedance of the WLA is noteworthy because the permit requires compliance with the TMDL rather than tribal and state water quality standards.

The COA continues its work to reduce E. coli loads through the pet waste education and outreach program. Dog waste had been estimated to contribute about 22% of the fecal coliform bacteria to the Middle Rio Grande watershed in a microbial source tracking (MST) study completed in 2004. A new MST that uses quantitative polymerase chain

reaction (qPCR) analysis and fecal indicator bacteria (FIB) by E. coli enumeration was scoped and commissioned by the COA in FY17 at cost of about $250,000. The Quality Assurance Program Plan (QAPP) and sampling and analysis plan (SAP) were prepared in FY17 and sample collection and analysis were completed in FY19. The results of this study indicated the presence of moderate canine markers in channels, drains, and arroyos in the northeast and northwest parts of the watershed. Weak human markers were also indicated near some of the bridges as well as downstream of the sanitary reclamation facility. A copy of the finalized report was provided as Attachment 2 Completion Report for Microbial Source Tracking Program in the FY20 Annual Report.

Finally, the Middle Rio Grande Storm Water Quality Team (MRGSWQT), of which the COA is a member, funded additional years of dry weather E. coli data collection by college students as part of the Bosque Ecosystem Monitoring Program (BEMP) to better understand the baseline concentration of E.coli prior to storm events. The MRGSWQT also funded a master student's thesis that studied the variability of E. coli concentrations in a water column compared to the juxtaposed sediment. The results of this study, completed in FY19, indicate that E. coli are harbored in riverbed sediments, and that trends in sediment concentrations and corresponding loadings of E. coli in river water are irregular. The net direction of E. coli transfer (river water to sediment or sediment to water) is unknown.

b(i)(e)A,C,D,E: The COA continues to work with the Albuquerque Bernalillo County Water Utility Authority (WUA) to make improvements to its pump and lift stations. The WUA provides the COA and AMAFCA with copies of Discharge Monitoring Reports (DMRs) each month that report sanitary overflows, should any have occurred, and corresponding disinfection and clean-up efforts. One illegal cross connection was reported during FY22.

b(i)(e)C: The Environmental Health Department continues to work with restaurants to reduce waste sources of bacteria from grease traps.

b(i)(e)D. The Storm Drainage Section continues to work with BioPark staff and perform quarterly Good Housekeeping inspections in an effort to ensure that bacteria from animal waste are not discharged to the MS4.

b(i)(e)E. The COA contributes funding to and participates as a founding member of the Storm Water Quality Team. The Team continues education and outreach efforts to educate residents on the effects of bacteria associated with improper pet waste disposal. The COA also works with both the Team and the WUA to educate the public with regards to proper oil and grease disposal and the potential for sanitary overflows due to clogged plumbing.

b(iii)(c): The COA continues to work with Bernalillo County (BernCo) and the NM Department of Transportation (NMDOT) on a joint sampling program in the Tijeras Arroyo. A total maximum daily load for nutrients was approved by the Water Quality Control Commission on September 12, 2017. As a result, the COA has begun to develop Best Management Practices (BMPs) to minimize impacts, if any, due to potential contributions from the urbanized area that makes up about 1% of the watershed.

In addition, during the late spring of FY18, the COA began work on a joint funding agreement (JFA) with the Ciudad Soil Water and Conservation District for the preparation

of a Watershed Based Plan (WBP) for the Upper Tijeras Arroyo. The JFA was signed in September 2018 and a request for proposals to prepare the WBP was issued in early 2019. The winning proposal was selected in February 2019 and was provided in the FY19 Annual Report under Attachment 5. A draft WBP was submitted to the New Mexico Environment Department Surface Water Quality Bureau for comment in July 2021 and was finalized in late December 2021.

The COA Open Space Division (OSD) created a Tijeras Arroyo Bio-Zone Resource Management Plan for a 3.7 mile stretch of the arroyo along Tijeras Creek in 2014 with a goal of conserving native vegetation and wildlife habitat and restoring vegetation and wildlife where feasible. The COA is actively working on purchasing property in the arroyo for this purpose. In addition, the OSD and partners (Carnuel Land Grand, Village of Tijeras, Bernalillo County Open Space) are preparing the Tijeras Creek Cultural Corridor Plan that will help the COA and its partners identify cultural and biological themes and assist in planning natural resource objectives.

3. Endangered Species Act (ESA) Requirements

a(i) AMAFCA has filled in the low-lying area between the discharge point of the North Diversion Channel (NDC) and the Rio Grande. This area was prone to stagnation and had the potential to develop low DO which could be flushed into the Rio Grande during storm events. AMAFCA continues to monitor this area for DO. The COA continues to install water quality features, such as trash racks and water quality manholes in efforts to collect and reduce trash and debris that contribute to the DO problem.

a(ii) AMAFCA has submitted a revised strategy for reduction of pollutants contributed by the embayment. As stated above, the embayment has been filled in. Annual Incident Take Reports are submitted by AMAFCA to the EPA and Fish and Wildlife Service (FWS).

b(i) See also item 1.e. The COA performed two Sediment Assessment Studies that included an analysis of PCBs and SPLP metals in soils. The first, finalized in October 2016 assessed sediments from 5 major outfall locations. The second, completed in July 2017, further examined potential upstream sources, if any. No PCBs were reported. Metals in general, with the exceptions of Aluminum (Al) and Zinc (Zn) were present at concentrations below detection limits. Detected Al concentrations ranged from 1.9 to 11 mg/L. Detected Zn concentrations ranged from 0.022 to 0.048 mg/L. The Phase II assessment was provided in the FY18 Annual Report under Attachment 1. The Phase I Assessment was included in the FY17 Annual Report under Attachment 1.

b(iv) A Progress Evaluation Report for the Sediment Pollutant Load Reduction Strategy was submitted in the FY19 Annual Report under Attachment 1. This report was prepared using the results of several previous studies submitted by the COA including data from the Sediment Assessments as well as the USGS Summary of Urban Stormwater Quality in Albuquerque, 2003-2012. Additional data, provided by Bernalillo County, Southern Sandoval County Arroyo Flood Control Authority (SSAFCA) and AMAFCA, was used to provide baseline sediment loading and relative potential for contamination by these sediments from urban activities for areas draining to the Rio Grande. The results of this study pinpointed areas of highest sediment discharge into the Rio Grande during the permit period, which included the North Diversion Channel and

Tijeras Arroyo. Although many BMPs, such as ponds, trash racks, and other water quality structures are already in place to reduce pollutants and sediment loads to these drainages, additional projects to improve water quality will continue to be implemented.

I.D. Stormwater Management Program (SWMP)

A copy of the updated SWMP adapted for compliance under NMR04A000 was included with the first full Annual Report on December 1, 2016. A subsequent update was prepared and submitted in FY19, year 4 of the permit cycle, per requirements (page 7 of Part III, Section B). A copy of the SWMP is available on the COA's DMD MS4 webpage: http://www.cabq.gov/municipaldevelopment/documents/swmp-11-24-2019-submitted.pdf. Copies are also available on compact disks that can be mailed to regulators, stakeholders, and others upon request.

5b. Post-Construction Stormwater Management in New Development and Redevelopment

(i) and 7.E (Annual Report Format) The COA's Planning Hydrology Department reviews plans for new development and redevelopment projects that address storm water runoff when one acre or more are disturbed. The allowable discharge is determined on a site-by-site basis and is determined by the COA's and AMAFCA's Drainage Management Plans that freely discharge in some locations and 0.1 cubic foot per second per acre (cfs/ac) in others based upon downstream capacity, not on historic flows.

(ii)(a) Twenty structural stormwater quality features have been installed since the WBP effective date of December 22, 2014. A listing, map, and description of all of the COA's water quality features were included in Attachment 3 of the FY20 report. Three new features were installed in FY22, including a new pond liner at a COA maintenance facility, a new pump station and pond, including a bar screen, and a retrofit of a trash rack at an existing pond. A location map, photographs, and description of these features is included in Attachment 2, Stormwater Quality Features. Information regarding the COA's ponds, dams, and cattle guards, which also serve to capture trash, debris, and sediment is available upon request.

(ii)(b) An ordinance increasing the volume of capture of the 80th and 90th percentile storm events and supplying provisions for inspection of post construction stormwater controls and enforcement to ensure compliance was introduced to City Council on January 3, 2018, passed on September 17, 2018, and sent to the Mayor for signature on September 25, 2018. Click on the following link for an electronic copy of the ordinance https://codelibrary.amlegal.com/codes/albuquerque/latest/albuquerque_nm/0-0-0-19774#JD_Chapter14Article5Part2.

(ii)(c) Prior to private development construction, Planning Hydrology staff review and approve BMPs designed to capture the 80th and 90th percentile storm events. Planning Hydrology building construction and stormwater quality inspection staff then oversee compliance with federal and local permits during the Construction Phase. Once constructed and permitted, information regarding these features is provided to the Storm Drainage Section for follow up during the Post-Construction phase. Subsequently, Storm Drainage Section staff investigate complaints related to these features and perform inspections of them every 5 years to ensure proper maintenance. This year 759 reviews of newly constructed "first flush" water quality features were conducted by Planning

Hydrology personnel and only 1 inspection of features installed 5 years ago was conducted by Storm Drainage inspectors due to COVID-19 restrictions. Inspections are scheduled to resume in FY23. The 5-year Post Construction inspections are required by the COA's Drainage Ordinance discussed above in (ii)(b).

(vi) Approximately 143 acres of impervious area (IA) was added to the Albuquerque Metropolitan area in FY22. See Attachment 3, Impervious Area Added for a listing. Of this area, roughly 95% drains to first flush ponds and regional features which collect dirt, debris, and trash. Therefore, the directly connected impervious area (DCIA) added in FY22 was 143 acres minus 136 acres for a total of 7 acres. The methodology for estimating impervious area is based on land use codes and was sent to EPA in the 2013 Annual Report under the former Phase 1 permit NMS000101.

(vii) The COA's Master Drainage Plan provides a ranking of MS4-owned properties for flood control projects including retrofits. In addition to those identified in the Master Drainage Plan, the COA installs retrofits during construction activities on an as-needed basis or as funding becomes available.

5c. Pollution Prevention/Good Housekeeping for Municipal/Co-permittee Operations

(i)(a) Storm Drainage Inspection staff work with COA facility maintenance personnel to ensure training regarding permit compliance requirements, site-specific best management practices, and spill response procedures is provided. This training is conducted annually and provided to all staff via online presentations. In addition, inspections of maintenance facilities are performed quarterly at a minimum. Inspection staff conducted 156 Good Housekeeping inspections at COA facilities in FY22.

5d. Industrial and High Risk Runoff

(vi) In FY22, COA in-house inspectors did not perform any industrial and high-risk inspections of private facilities requiring a Multi Sector General Permit (MSGP) due to COVID-19 restrictions. The inspections are anticipated to resume in FY23. 17 COA facilities that are permitted under the MSGP were inspected during this time. Quarterly inspections were performed by storm drainage inspectors at 16 of the facilities while the Cerro Colorado Landfill was inspected monthly from July 2021 through January 2022. Since January 2022, storm drainage inspectors have been performing quarterly inspections at the landfill while solid waste staff have been performing the monthly inspections.

5e. Illicit Discharges and Improper Disposal

(i)e, ii The COA implemented a 311 complaint system to report illicit discharges in the mid-2000s. See Attachment 4 for a map showing the locations of discharges and a listing of the types of discharges via this system in FY22. Individual reports, including more detailed descriptions, photos, and resolution are available upon request.

(iv)A,C The Storm Drainage Section of the Department of Municipal Development (DMD) coordinated with the Solid Waste Department (SWD) to host one Household Hazardous Waste (HHW) recycling event in FY22. 585 residents participated in the event, held on November 13, 2021, during which approximately 58,753 pounds (lbs) of HHW and non-regulated solid waste were collected or just over 100 lbs/customer.

In addition, 12,331 participants disposed of almost 346,000 lbs of HHW throughout FY22 at the HHW collection center run by a contractor on behalf of the COA SWD. Of this amount, 270,500 lbs were recycled and diverted from the landfill. An additional 26,016 lbs of materials were submitted by 2132 individuals for reuse at the Material Reuse Center.

(vii) In addition to using the 311 complaint system to pinpoint illicit discharges, the COA implemented an Illicit Discharge Detection and Elimination (IDDE) inspection program in FY16 to mitigate the influence of discharges with lower risk but higher likelihood of occurrence. At the onset of the program, a local environmental consulting firm was hired to supply staff to perform these inspections. These inspection results were summarized in a report submitted in the FY19 Annual Report as Attachment 9. The COA hired an inspector supervisor and 3 inspectors as permanent employees in FY17 to assist in IDDE inspection and data tracking efforts. In late FY18, COA inspectors took over the IDDE inspection program. 75 IDDE complaints were investigated by COA engineers and inspectors in FY22. The COA will resume inspection of businesses that do not require a MSGP but have a high potential for illicit discharges in FY23.

5f. Control of Floatables Discharges

(iii). Street Sweeping crews picked up almost 6,900 cubic yards (5,310 tons) of dirt and debris from 41,570 miles of COA Right of Way in FY22. Dirt comprises about 65% of the material picked up by street sweepers with debris making up the remaining 35%. Of the debris, roughly 70% is vegetation. The remaining waste is comprised of plastics (bottles, bags, containers/lids) at 15%, paper and cardboard at 10%, and metal at 5%.

In addition, the COA's Arroyo Maintenance Section cleaned over 3,700 cubic yards of dirt, trash, debris, and vegetation from the storm drain system during FY22.

III.A. Monitoring and Assessment

1. Wet Weather Reporting: Permit requirements called for the submission of 7 samples by the end of the permit term. To cooperatively meet this requirement, the CMC submitted a sampling and analysis plan to EPA Region 6 for approval in June 2016. The CMC collected compliance samples through the rest of the permit term and in FY19 collected the one remaining sample required by the permit. The permit expired on December 19, 2019 and no further sample collection efforts are required. However, as a good faith effort, the COA and other CMC members have continued to fund sampling efforts during this period of administrative continuance. As discussed on page 2 under "Discharges to Impaired Waters", one in-stream sample was collected during the wet season in FY22. The results are provided in Attachment 1 of this report. Results indicate that E. coli TMDLs were exceeded in both the northern and southern segments of the Middle Rio Grande during this wet season sampling event.

2. Dry Weather Reporting: Dry weather screening is performed at 40 locations (24 direct discharge points to the Rio Grande and an additional 16 locations to assess subwatersheds). See Attachment 5 for results.

3. Floatables Reporting: See item 5f above. In addition, an estimated 45 cubic yards of floatables were removed from the Barelas Pump Station in FY22, the COA's selected floatables monitoring location. AMAFCA provides the information on floatables monitoring in the NDC.

4a. Industrial and High Risk Reporting: The COA's landfill is located outside of the MS4 and drains to the Rio Puerco rather than the Rio Grande. Nonetheless, the landfill is permitted under the federal MSGP.

4.b COA's transfer stations, solid waste station at Pino Yards, transit stations, warehouse and streets facilities, all located within the MS4, are classed as sector P. Because of sporadic localized events that often occur during evening, weekends and other non-work hours, it is often difficult to obtain results. Quarterly visual inspections are completed and samples are taken when possible. Copies of inspections are available upon request. Per changes in the 2021 MSGP, which went into effect on March 1, 2021, monitoring for appropriate constituents took place at all permitted facilities in FY22 and were reported in the NetDMR system. Copies of the DMRs are available upon request.

ADDITIONAL INFORMATION TO SUPPLEMENT REPORT FORM

Item 3. Public Participation and Education

C. The COA Storm Drainage staff participated in and the Storm Drainage Section contributed $15,000 in dues to the MRGSWQT in FY22 Outreach activities performed by the 10 agencies that comprise the MRGSWQT are provided in the Outcomes Report found on their webpage at https://keeptheriograndе.org/. Additional COA public participation and outreach activities that pertain to watershed enhancement and improvement of stormwater quality, such as tree plantings, trash clean up, or educational walking tours conducted in the Bosque or Sandia Foothills are described below.

The COA's Open Space Division (OSD) with Parks and Recreation recorded 697 volunteers assisting with the tree and pole planting program (about 350 willow whips and 640 cottonwoods) in the bosque.

The OSD clean-up events along the trails and Rio Grande resumed this year after 2 years of limited activity due to the COVID-19 pandemic. Outreach has occurred along the trails by staff encouraging visitors to keep the areas clean and free from trash. In addition, 452 volunteers removed 35 cubic yards (cy) of trash, 31 bags of recyclables, 110 gallons of glass, and 150 pounds of dog waste from 6 trailheads during spring clean-up and National Trails Day. During the 2022 River Clean-up along the banks of the Rio Grande, 102 participants filled a dump trailer and 4 pick-up trucks with trash and large items including tires, shopping carts, and a kiddie wading pool.

The SWD Keep Albuquerque Beautiful campaign sponsors annual clean up events in each of the four quadrants of the metropolitan area during the month of April. Neighborhood groups and individuals collect trash and drop it off at select locations to be recorded. In FY22, 732 residents participated in the event and collected almost 95,000 lbs (47 tons) of trash.

Environmental Health Department (EHD) staff volunteer to conduct hikes in the Bosque and Sandia Foothills to promote environmental awareness. During these hikes, the importance of stormwater quality and its effect on the habitat and its interconnection and value to the freshwater supply is discussed. 206 residents participated in the hikes in FY22.

Item 5. Illicit Discharges

C. There are 24 direct discharge points to the Rio Grande. Assessment of industrial and commercial development within subwatersheds of the Albuquerque Metropolitan area has led to the selection of 16 additional dry weather screening locations in channels and arroyos. In total, 40 locations are monitored per MS4 permit requirements for the COA's dry weather screening program. See Attachment 4, Dry Weather Screening for the results.

J. During the reporting period from July 1, 2021 through June 30, 2022, 79 improper discharge related complaints were reported to the 311 system and investigated by a City storm drainage engineer or inspector. See Attachment 5 for a map indicating location and type of discharge as well as additional details on the spill response. One cross connection between the sanitary and storm sewer system was reported and corrected in FY22.

Item 8. Program Resources

D. If fully staffed, 26 full time employees that perform work related to the COA's MS4 include: 16 Arroyo/Storm Drainage Maintenance personnel, 8 Storm Drainage Design/NPDES personnel (consisting of a Section Manager, 3 engineers, 1 supervisor inspector, and 3 inspectors), and 1 Stormwater Quality Engineer and 1 Construction Inspector in the Planning Hydrology Department. During this period of COVID-19, the COA has been dealing with staff shortages and is attempting to fill vacancies.

In addition to FTE's employed by the COA, the Storm Drainage Section budgets and spends approximately $255,000 per year on consultants hired solely to perform NPDES permit compliance tasks. This is the equivalent of 2.5 FTE's. The Clean City Solid Waste program also employs 70 FTEs and uses 80 contractor positions to collect and dispose of trash that would otherwise make its way into the COA's MS4. Additionally, 20 employees in Street Maintenance perform street sweeping in support of dirt and debris removal efforts.

Finally, Parks and Open Space personnel conduct restoration projects, host citizen clean up days, and perform education and outreach related to stormwater quality. Also, Parks design project managers continue to work on the installation of green stormwater infrastructure in our COA parks, such as native plantings, permeable paving, and bioswales.

Attachment 1

Wet Weather Monitoring Results

Waste Load Allocation Results

Compliance Monitoring Cooperative (CMC)
E. coli Loading Calculation Compared to Waste Load Allocation (WLA)
FY 2022 - Wet Season Wet Weather Sampling

Date: 7/1/2022

Storm Event Date: 9/1/2021 - 9/2/2021

Calculated using the sample results obtained from the Rio Grande at Alameda (division point between Rio Grande North and South segments), This is different than the regular CMC calculation, since the mid-point E. coli sample is not a part of the original CMC Monitoring Plan.

Table 1
Stormwater Sample Analysis Results for E. coli:

Monitoring Location	E. coli Concentration (CFU/100 mL)[3]	Date & Time of Sample	Date & Time Sample Delivered to HEAL
Rio Grande North	183	9/1/2021 10:05 AM	9/1/2021 4:10 PM
Rio Grande at Alameda	20	9/1/2021 11:25 AM	9/1/2021 4:10 PM
Rio Grande at Alameda	554	9/2/2021 10:30 AM	9/2/2021 12:17 AM
Rio Grande South	4,884	9/2/2021 9:20 AM	9/2/2021 12:17 AM

Notes:
1. Hall Environmental Analysis Laboratory (HEAL) lab report for Rio Grande North & Alameda on 9/1/2021: Order number 2109083
2. HEAL lab report for Rio Grande South & Alameda on 9/2/2021: Order number 2109132
3. HEAL lab method: SM 9223B Fecal Indicator. Note - lab method uses units of MPN/100 mL, WLA calculations use CFU/100 mL, for this analysis it was assumed that the two units are equivalent based on Feb. 26, 2014 NMED Memo "Triennial Review - Most probable number (MPN)/colony forming units (CFU) enumeration methods and probable standards reporting revision" and discussions with NMED, Feb. 2017.

Table 2
Rio Grande Flow:

Monitoring Location	USGS Gage & Location	Daily Mean Flow (cfs) 9/1/2021	Daily Mean Flow (cfs) 9/2/2021	Calculated Average Flow (cfs) from 9/1/2021 to 9/2/2021	Maximum Flow Used for this Analysis (cfs)
Rio Grande North	08329928 - Rio Grande near Alameda	153	116	146	153
Rio Grande South	0833000 - Rio Grande at Albuquerque, NM (Central)	80	148	165	165

Notes:
1. See '2021-22 USGS Daily Mean Discharge' worksheet for data obtained from USGS website on 7/13/2022.
2. Since this storm spans 2 days - BHI also checked mean flow by calculating mean flow from 9/1/2021 to 9/2/2021.

Table 3
Determination of Storm Event Flow Conditions - As Defined in the WSB MS4 Permit and NMED TMDL Report:

Stream Segment	Stream Name / Related USGS Gage	Flow Conditions (from WSB MS4 Permit Appendix B) & NMED 2010 TMDL Report				
		High (>3,670 cfs)	Moist (922-3,670 cfs)	Mid (647-922 cfs)	Dry (359-647 cfs)	Low (0-359 cfs)
2105.1_00	***Alameda to Angostura*** Non-Pueblo Alameda Bridge to Angostura Diversion / 08329928 - Rio Grande near Alameda	--	--	--	--	Storm Event Flow Condition
		High (>3,360 cfs)	**Moist (929-3,360 cfs)**	**Mid (664-929 cfs)**	**Dry (319-664 cfs)**	**Low (0-319 cfs)**
2105_50	***Isleta to Alameda*** Isleta Pueblo Boundary to Alameda Street Bridge / 0833000 - Rio Grande at Albuquerque, NM (Central)	--	--	--	--	Storm Event Flow Condition
		High	**Moist**	**Mid**	**Dry**	**Low**

Notes:
1. Flow ranges for flow conditions are not listed in Appendix B of WSB MS4 Permit, the flow ranges are from NMED, Sarah Holcomb, Nov. 2016 e-mail (see "WLAs From NMED" worksheet) and 2/1/17 NMED meeting, which are from the US EPA Approved, Total Maximum Daily Load (TMDL) for the Middle Rio Grande Watershed, June 30, 2010, Figures 4.3 and 4.4.

Table 4
Calculate E. coli Loading for Rio Grande North and Rio Grande South and Delta in E. coli Loading Between North and South Locations:

Monitoring Location	E. coli Concentration (CFU/100 mL)	Daily Mean Flow (cfs)	E. coli Loading (CFU/day)	
Rio Grande North	183	153	6.85E+11	
Rio Grande at Alameda	554	153	2.07E+12	
Delta in E. coli Loading Between North and Alameda Locations - This is the E. coli Loading for the Northern Segment			1.39E+12	* If loading is negative, the delta will default to zero.
Rio Grande South	4,884	165	1.97E+13	
Delta in E. coli Loading Between Alameda and South Locations - This is the E. coli Loading for the Southern Segment			1.76E+13	* If loading is negative, the delta will default to zero.

Notes:
1. Used maximum flow in Table 2 for the Daily Mean Flow in the loading calculation. E. coli loading instream looked at on a daily basis by NMED and EPA.
2. Used Rio Grande near Alameda gage for the flow rate at Alameda.
3. Used the higher E. coli value for the Rio Grande at Alameda samples.

E. Coli Loading Calculation:

$$E.Coli\ Concentration\ \left(\frac{CFU}{100mL}\right) x\ 28{,}316.85\ \left(\frac{mL}{ft^3}\right) x\ \text{Mean Daily Flow}\ \left(\frac{ft^3}{sec}\right) \text{ x } 3{,}600\ \left(\frac{sec}{hr}\right) \text{ x } 24\ \left(\frac{hr}{day}\right) = \text{E. coli Loading}\ \left(\frac{CFU}{day}\right)$$

Not all E. coli sampled in the Rio Grande is attributable to MS4 activities. This storm event E. coli loading must be reduced to only represent the estimated CMC MS4 E. coli loading so that a comparison can be made to the MS4 Waste Load Allocations (WLAs).

The NMED presented a Jurisdictional Area Approach in Appendix F of the US EPA Approved, Total Maximum Daily Load (TMDL) for the Middle Rio Grande Watershed, June 30, 2010. This approach is the MS4s divided into Phase I and Phase II permittees, which no longer applies. NMED provided an e-mail that applies to the current CMC MS4 members and remaining MS4 members.

The CMC monitoring scheme does not have an interim E. coli sample at the Alameda Bridge during collection of this sample, which is the division of the two stream segments. However, for this storm event, an E. coli sample was obtained at the Alameda Bridge.

For this storm - calculations will be done two ways - 1) using the area approach, as has been done with prior CMC samples and 2) using the Alameda sample to determine the north and south segment loads.

See previous worksheet for the area approach.

In Table 6 - An estimation of the E. coli loading attributable to the CMC is needed to allow comparison with the LA values. This approach uses percentages that calculate a percentage of the CMC LA value divided by the TMDL minus the MOS. This percentage represents an estimate of the percent of the CMC E. coli loading to all of the E. coli contributors (point sources, MS4s, and natural background). This percentage allows a reasonable estimation of the percent of the E. coli loading that is attributable to the CMC MS4s. Since our discussion, we removed the MOS from our percentage calculation.

Using the above approach, the CMC then has an E. coli loading value to compare to the applicable WLA values, for a given stream segment and flow regime.

Table 5
Calculate E. coli Loading Per Stream Segment Reach and Compare to Total TMDL:

Stream Segment	Stream Name / Related USGS Gage	Contributing Area Ratio for Each Segment	E. coli Loading (CFU/day) for Each Segment	Total TMDL for Segment	TMDL Exceedance?
2105.1_00	***Alameda to Angostura*** Non-Pueblo Alameda Bridge to Angostura Diversion / 08329928 - Rio Grande near Alameda	Not Applicable - Have a Mid Point Sample	1.39E+12	2.94E+11	TMDL Exceeded
2105_50	***Isleta to Alameda*** Isleta Pueblo Boundary to Alameda Street Bridge / 0833000 - Rio Grande at Albuquerque, NM (Central)	Not Applicable - Have a Mid Point Sample	1.76E+13	1.90E+11	TMDL Exceeded

1. Compares the E. coli loading to the TMDL - the E. coli loading represents all of the E. coli sources and not just the CMC MS4. The TMDL could be from any source and this analysis cannot distinguish between sources.

Calculated using the sample result obtained from The Rio Grande at Alameda (division point between Rio Grande North and South segments), This is different than the regular CMC calculation, since the mid-point E. coli sample is not a part of the CMC Monitoring Plan.

Table 6
Calculate CMC MS4 E. coli Loading Per Stream Segment Reach - apply Percent based on CMC WLA compared to Total TMDL:

Stream Segment	Stream Name / Related USGS Gage	Flow Conditions	Percent of E. coli Associated with CMC Members	Total CMC E. coli Loading (CFU/day) for Each Segment
2105.1_00	***Alameda to Angostura*** Non-Pueblo Alameda Bridge to Angostura Diversion / 08329928 - Rio Grande near Alameda	Low	5.8%	1.02E+12
2105_50	***Isleta to Alameda*** Isleta Pueblo Boundary to Alameda Street Bridge / 0833000 - Rio Grande at Albuquerque, NM (Central)	Low	1.8%	3.20E+11

Notes:
1. Refer to "WLAs From NMED" worksheet for WLA for estimated percent of E. coli associated with the CMC compared to total TMDL minus the MOS.
2. The CMC measured a total E. coli loading in the Rio Grande - this is all of the E. coli, regardless of source - so the CMC WLA compared to the TMDL minus the Margin of Safety was used as a way to estimate what percent of the total E. coli could be attributed to the CMC. Discussed this approach with NMED on 2/16/17.

Table 7
Compare Storm Event E. coli Loading to WLA for CMC:

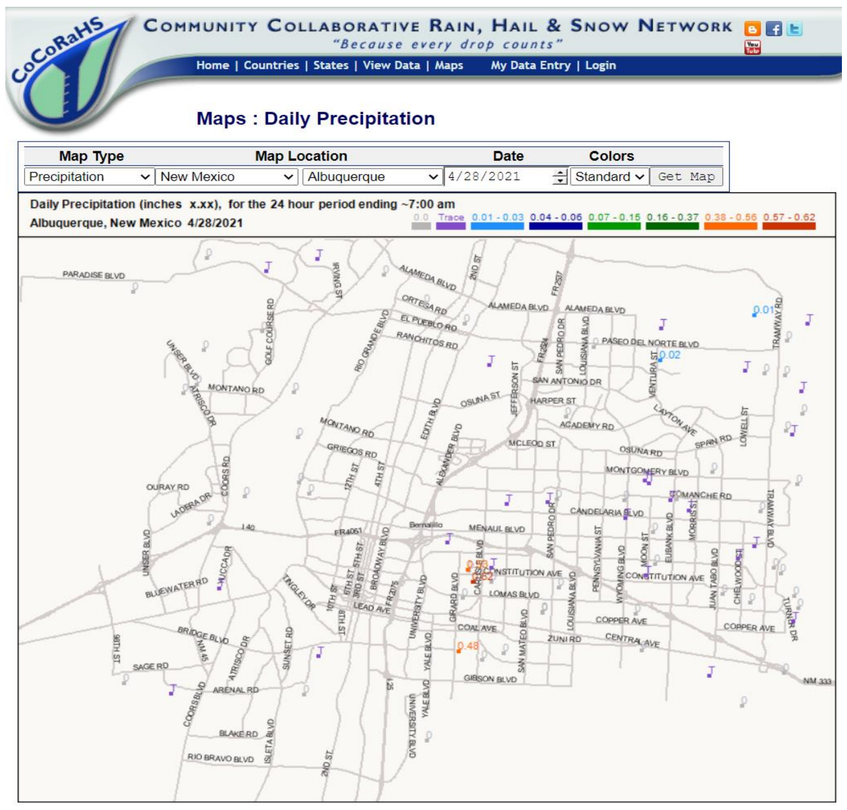
Stream Segment	Stream Name / Related USGS Gage	CMC E. coli Loading (CFU/day) for Each Segment	Flow Conditions	WLA for CMC for Flow Conditions	WLA - Potential Exceedance or Acceptable
2105.1_00	***Alameda to Angostura*** Non-Pueblo Alameda Bridge to Angostura Diversion / 08329928 - Rio Grande near Alameda	1.02E+12	Low	1.68E+10	WLA Potential Exceedance
2105_50	***Isleta to Alameda*** Isleta Pueblo Boundary to Alameda Street Bridge / 0833000 - Rio Grande at Albuquerque, NM (Central)	3.20E+11	Low	3.42E+09	WLA Potential Exceedance

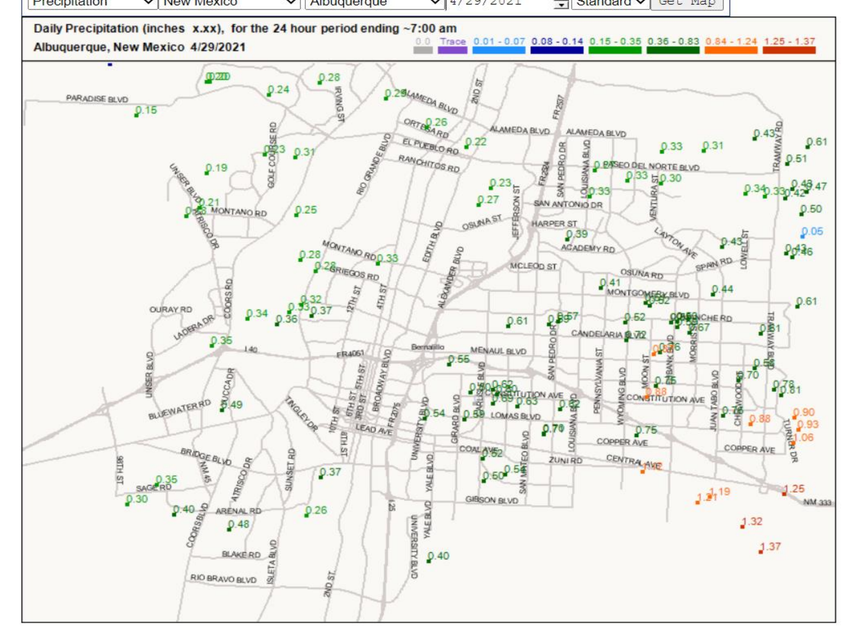
Notes:
1. Refer to "WLAs From NMED" worksheet for WLA for CMC for Storm Event.
2. Flow Conditions were defined in Table 3 "Determination of Storm Event Flow Conditions" above.

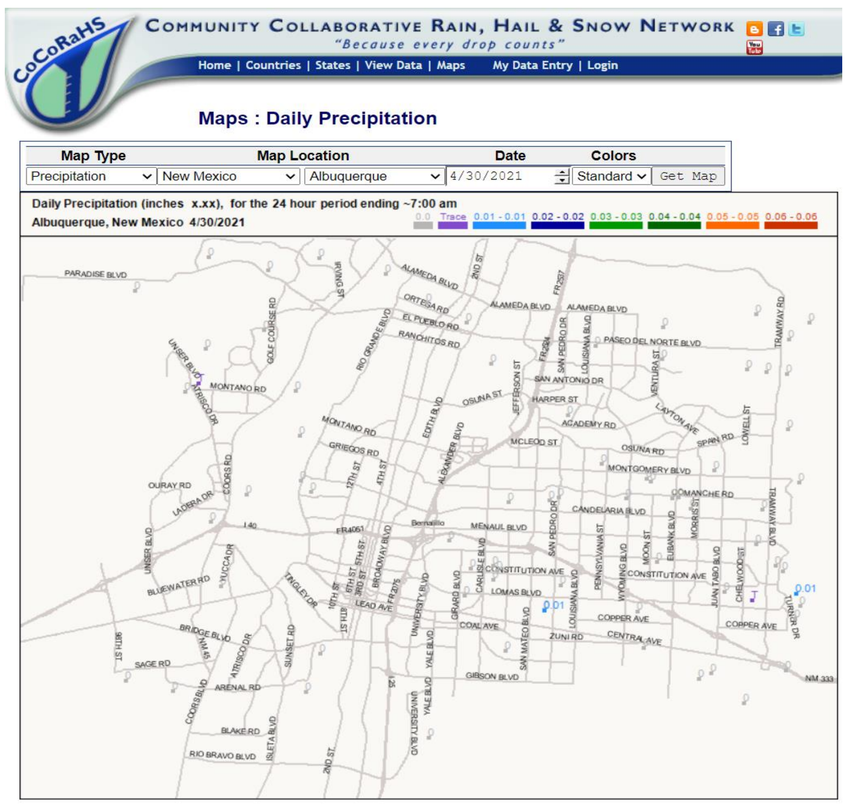
US EPA Approved, Total Maximum Daily Load (TMDL) for the Middle Rio Grande Watershed, June 30, 2010, page 40:

It is important to remember that the TMDL is a planning tool to be used to achieve water quality standards. Since flows vary throughout the year in these systems the target load will vary based on the changing flow. Management of the load to improve stream water quality and meet water quality criteria should be a goal to be attained. Meeting the calculated TMDL may be a difficult objective.

Rainfall Data - CoCoRaHS.org - Precip is for date prior to that shown on map - recorded precipitation is typically at 7 am on date shown.







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M E M O R A N D U M

DATE: August 10, 2022

TO: Patrick Chavez, PE, AMAFCA

FROM: Sarah Ganley, PE, ENV-SP
Savannah Maynard
Emma Adams, EI

SUBJECT: **CMC Wet Season, Wet Weather Stormwater Monitoring Data Verification, Analysis Results Database, and Reporting Memo FY 2022 Wet Season (July 1, 2021 to October 31, 2021)**

Notification of In-Stream Water Quality Exceedances

For downstream notification purposes, the following parameters for in-stream samples taken in the Rio Grande for the FY 2022 wet season had results that exceeded applicable water quality standards (WQSs) for one or more samples: E. coli, polychlorinated biphenyls (PCBs), and gross alpha, adjusted. Table 1 summarizes the samples with exceedances and the applicable WQS that was exceeded. Additional details on the sampling results are provided in this memo.

Table 1: Parameters Detected Above Applicable Water Quality Standards
CMC FY 2022 Wet Season Monitoring

Sampling Date Location	Parameters, Applicable Water Quality Standard (WQS), and Results Exceeding Applicable WQS		
	E. coli	**PCBs**	**Gross Alpha, Adjusted**
	WQS: 88 MPN (CFU/100 mL) Pueblo of Isleta Primary Contact Ceremonial & Recreational	**WQS: 0.00017 ug/L** Pueblo of Isleta Human Health Criteria (based on fish consumption only)	**WQS: 0.00017 ug/L** Pueblo of Isleta Human Health Criteria (based on fish consumption only)
8/16/2021 Rio Grande North Angostura Diversion Dam Pre-Storm Sample – E. coli Only	6,867 MPN (CFU/100mL)	Not Tested	Not Tested

Table 1 (continued).

Sampling Date Location	Parameters, Applicable Water Quality Standard (WQS), and Results Exceeding Applicable WQS		
	E. coli	**PCBs**	**Gross Alpha, Adjusted**
	WQS: 88 MPN (CFU/100 mL) Pueblo of Isleta Primary Contact Ceremonial & Recreational	**WQS: 0.00017 ug/L** Pueblo of Isleta Human Health Criteria (based on fish consumption only)	**WQS: 0.00017 ug/L** Pueblo of Isleta Human Health Criteria (based on fish consumption only)
9/1/2021 Rio Grande North Angostura Diversion Dam Pre-Storm Sample	183 MPN (CFU/100mL)	0.00027 ug/L	No Exceedance
9/2/2021 Rio Grande at Alameda Bridge E. coli Only	554 MPN (CFU/100mL)	Not Tested	Not Tested
9/2/2021 Rio Grande South Isleta Diversion Dam	4,884 MPN (CFU/100mL)	0.00172 ug/L	31.56 pCi/L

Overview of Stormwater Monitoring Activity

Bohannan Huston, Inc. (BHI) has been tasked to perform water quality services for the Compliance Monitoring Cooperative (CMC) Stormwater Data Verification, Database, and Reporting for the Wet Weather Stormwater Quality Monitoring Program for Fiscal Year (FY) 2022 (July 1, 2021 to June 30, 2022). The scope of work for this task includes data verification of the stormwater laboratory analysis results, compiling the analysis results into a database, and calculating the E. coli loading to compare with the Waste Load Allocation (WLA) for the qualifying storm events. The stormwater compliance monitoring is conducted separately by Daniel B. Stephens & Associates, Inc. (DBS&A) and is not a part of this task. This task is being conducted to assist the CMC members with their comprehensive monitoring and assessment program for compliance under the 2014 Middle Rio Grande (MRG) Watershed Based Municipal Separate Storm Sewer System (MS4) Permit, NPDES Permit No. NMR04A000 ("WSB MS4 Permit").

The WSB MS4 Permit entered Administrative Continuance in December 2019 when U.S. Environmental Protection Agency (EPA) Region 6 did not issue a new MS4 Permit before the current MS4 Permit's expiration date. The MRG Technical Advisory Group (TAG) sent EPA a letter dated October 15, 2019, acknowledging Administrative Continuance after the expiration date of the 5-year Permit term. Until a new MS4 Permit is issued, there are no compliance monitoring requirements for the CMC in the Rio Grande. As identified in the CMC Monitoring

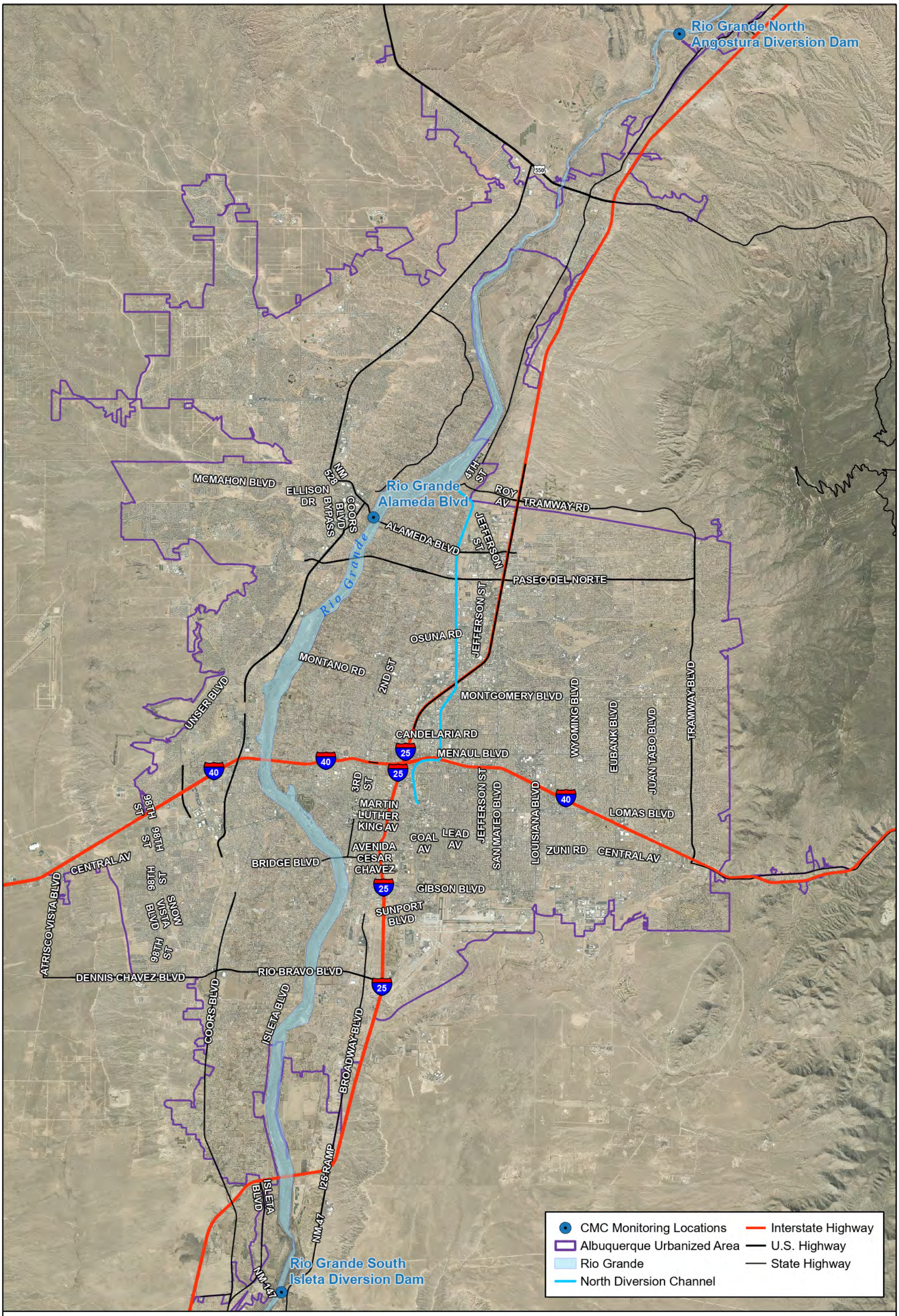
Plan, the WSB MS4 Permit required a minimum of seven (7) storm events be sampled at both the Rio Grande North and Rio Grande South locations (refer to Figure 1, page 4). All Permit required samples have been obtained by the CMC, as well as two (2) samples obtained in FY 2021 and the one (1) sample obtained in FY 2022 wet season during Administrative Continuance; all CMC samples are summarized in Table 2 below.

Table 2: CMC Sample Summary
Compared to WSB MS4 Permit Requirements

No. of Storm Events Required to Sample	CMC-WSB MS4 Permit Required Samples per Season	FY (Date) Samples Obtained for CMC
1	#1 Wet Season	FY 2017 (8/10/2016)
2	#2 Wet Season	FY 2017 (9/12/2016)
3	#3 Wet Season	FY 2017 (9/21/2016)
4	#1 Dry Season	FY 2017 (11/21/2016)
5	#2 Dry Season	FY 2019 (3/13/2019)
6	Any Season	FY 2018 (Wet Season - 7/27/2017)
7	Any Season	FY 2018 (Wet Season - 9/27/2017)
Not Required	Wet Season	FY 2021 (10/28/2020)
Not Required	Dry Season	FY 2021 (4/28/2021)
Not Required	Wet Season	FY 2022 (9/1/2021)

During the WSB MS4 Permit Administrative Continuance, the CMC members chose to continue sampling within the Rio Grande to support their MS4 program needs and gather additional data in support of the future MS4 Permit compliance. This memo reports on the wet weather stormwater monitoring activity for the FY 2022 wet season (July 1, 2021 to October 31, 2021).

The CMC Excel database was updated with the FY 2022 wet season, wet weather monitoring data as results were received. The database contains sample location, sample date, analyses conducted, methods used, applicable surface WQSs, WSB MS4 Permit required Minimum Qualification Levels (MQL) and results. Any unusable data will be identified.



AMAFCA

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N

0 6,000 12,000 24,000 Feet
1 inch = 12,205 feet

CMC Monitoring

Figure 1
Monitoring Locations

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Author: mcrooks

August 2022

Summary of the CMC Sampling Plan

Sampling Parameters:

Samples from both the Rio Grande North and Rio Grande South monitoring locations were analyzed for the parameters defined in the EPA approved WSB MS4 CMC Monitoring Plan, May 5, 2016. The parameter list for both locations, which is intended to characterize stormwater discharges into the river, is as follows:

Total Suspended Solids (TSS)
Total Dissolved Solids (TDS)
Chemical Oxygen Demand (COD)
Biological Oxygen Demand – 5-day (BOD_5)
Dissolved Oxygen (DO)
Oil & grease (N-Hexane Extractable Material)
E. coli
pH
Total Kjeldahl Nitrogen (TKN)
Nitrate plus Nitrite
Dissolved Phosphorus
Ammonia plus Organic Nitrogen (Nitrogen, Ammonia and Nitrogen, Total)
Phosphorous (Total Phosphorous)
Polychlorinated Biphenyls (PCBs - Method 1668A)
Gross Alpha, adjusted
Tetrahydrofuran
Benzo(a)pyrene
Benzo(b)fluoranthene (3, 4 Benzofluoranthene)
Benzo(k)fluoranthene
Chrysene
lndeno (1 ,2,3-cd) Pyrene
Dieldrin
Pentachlorophenol
Benzidine
Benzo(a)anthracene
Dibenzofuran
Dibenzo(a, h)anthracene
Chromium VI (Hexavalent)
Copper – Dissolved
Lead – Dissolved
Bis (2-ethylhexyl) phthalate
Conductivity
Temperature

Hardness (as CaCO3) was added to the parameter list to allow dissolved metal results to be compared to the applicable WQSs. DO, pH, conductivity, and temperature are required by the WSB MS4 Permit to be analyzed in the field during sample collection, which was conducted by DBS&A, within 15 minutes of sample collection. All E. coli samples were submitted to the laboratory within eight (8) hours of collection in order to meet the specified hold time.

Sampling Locations:

The sampling locations are shown in Figure 1, page 4.

Rio Grande North – In-stream sampling within the Rio Grande was performed upstream of the Angostura Diversion Dam at the north end of the watershed. The location is upstream of all inputs from the Urban Area (UA) to the river and provides the background water conditions.

Rio Grande South – In-stream sampling within the Rio Grande was performed at the Isleta Bridge at the south end of the watershed. The location is downstream of all inputs from the UA to the river and provides the downstream water conditions. These locations have been accepted by EPA and the New Mexico Environment Department (NMED) to meet the WSB MS4 Permit requirements in Part III.A.

During this FY 2022 wet season, E. coli samples were collected within the Rio Grande at Alameda Blvd. This is the location of the NMED defined stream segment divide (refer to Figure 6). This sample point was added after discussion with NMED in February 2017 regarding potential refinements to E. coli loading calculations.

Sample Collection:

As mentioned previously, sample collection for the CMC is being conducted by DBS&A (through a separate on-call contract). Since BHI was not involved in the sample collection, this task and memo do not address the details of the methodologies regarding sampling, determining if an event was a qualifying storm event, or determining the timing of the hydrograph at the Rio Grande Alameda and Rio Grande South locations.

DBS&A provided BHI their field notes and field sample data (temperature, DO, specific conductivity, and pH) for the FY 2022 wet season sampling. AMAFCA provided BHI the completed laboratory analysis reports from Hall Environmental Analysis Laboratory (HEAL) for this monitoring season.

Quality Assurance Project Plan (QAPP):

AMAFCA provided BHI with the Draft Quality Assurance Project Plan (QAPP) for the CMC dated June 14, 2016. DBS&A followed this QAPP during sample collection. BHI used this QAPP and the included standard operating procedures (SOPs) for the data verification and validation.

Monitoring Activity & Lab Analysis Summary

The list below provides a summary of the CMC comprehensive monitoring program activities completed for the FY 2022 wet season from July 2021 through October 2021. One (1) qualifying storm event was sampled and analyzed during the FY 2022 wet season.

- **August 16, 2021 – Only E. Coli for Rio Grande North.** A sample was collected at the Rio Grande North location at 10:00 a.m. on August 16, 2021, and was sent to the laboratory for an E. coli only test. Based on the CMC review of the storm, it was determined this was not a qualifying storm event, hence further parameter testing was not conducted for the sample collected at the Rio Grande North location.

- **September 1-2, 2021 – Qualifying Storm Event – Full Analysis of Samples.** A sample was collected at the Rio Grande North location beginning at 9:15 a.m. on September 1 and sent to the laboratory for an E. coli and BOD test. A pre-storm sample was collected at the Rio Grande at Alameda Blvd. location at 11:25 a.m. on September 1 and tested for E. Coli only. The CMC determined that the storm event beginning September 1 was a qualifying storm event. A sample in the Rio Grande at Alameda Blvd. was obtained at 10:30 a.m. on September 2 and sent to the laboratory for E. Coli testing only. A Rio Grande South sample was collected beginning at 8:35 a.m. on September 2. The samples from the North (from September 1) and South (from September 2) locations were taken to HEAL for full parameter testing.

Stormwater Quality Database for CMC

As stated previously, there was one (1) qualifying storm event during the FY 2022 wet season, wet weather monitoring sampled by the CMC, which occurred September 1-2, 2021. DBS&A's field notes containing DO, pH, conductivity, and temperature measurements, as well as sampling comments have been received, and field results have been added to the database. Additionally, the HEAL reports for the corresponding time period have been received, added to the database, and are provided with this memo (Attachment 1). The laboratory reports attached to this memo have BHI added comments including the field parameter measurements and other relevant notes related to the laboratory report.

Database Data Entry:

The CMC Excel database was updated with the FY 2022 wet season, wet weather monitoring data. The database contains sample locations, sample date, analyses conducted, methods used, applicable surface water quality standards (WQS), WSB MS4 Permit required Minimum Quantification Levels (MQL), and analysis results. The database was updated under this Task to include the Rio Grande at Alameda sample location. Applicable surface WQSs found in New Mexico Administrative Code (NMAC) 20.6.4, as well as the Pueblo of Isleta WQSs, are entered in the Excel database for comparison purposes with testing results. There is an indicator in the database to show if the monitoring results exceed the applicable surface WQS. An exceedance is not a violation of the WSB MS4 Permit, as the Permit does not have numeric discharge limitations. These ">WQ Standard" flags simply and quickly show the CMC members where the results of the lab data exceed the applicable WQS.

Water quality data was entered into the database upon receipt of the lab reports. All data entered into the database is initially denoted with a "P" to indicate that it is provisional and has not been through the verification and validation process yet. Full parameter analyses of qualifying storm events for both Rio Grande North and Rio Grande South locations were entered respectively into the database. The E. coli only samples from the Rio Grande Alameda location were also entered into the database.

Data Verification and Validation:

The HEAL analysis reports were provided to BHI by AMAFCA. The lab reports also contain the Chain of Custody for the submitted samples. Field data was requested by and provided to BHI by DBS&A. Data verification and validation (V&V) was conducted by BHI on all field notes, lab reports, and Chain of Custody documents in accordance with the CMC WQS Operating Procedure

(SOP) #2, which is part of the existing CMC QAPP, Draft June 14, 2016. These procedures are based on EPA Guidance for Environmental Data Verification and Validation (EPA, 2008).

As stated in the QAPP, the V&V process was completed by a different person than the one who entered the data into the database. The V&V process included use of the *Data Verification and Validation Worksheet* (provided in the QAPP). For this task, field data was verified first, confirming all field notes were complete. BHI handled field parameter questions directly with DBS&A. Chemical data verification began as soon as the lab reports were received, checking that all parameters were tested and looking for any obvious exceedances of WQS. Other steps listed on the *Data Verification and Validation Worksheet* were completed after all data from the laboratory was received and entered into the database. Sample blank results were reviewed to identify potential contamination during field processing or transport. Replica/duplicate samples were evaluated based on relative percent difference (as described in more detail in the QAPP) to determine the variability of the samples.

All CMC FY 2021 wet season data met the appropriate QA/QC requirements. If there were any data that did not meet the appropriate QA/QC requirements, it would have been assigned an appropriate laboratory qualifier or validation codes. A summary of validation codes is provided in the QAPP.

Once the V&V process was completed, the worksheets were signed. Copies of the V&V worksheets are provided with this memo (Attachment 2). In the database, data that was checked during the V&V process was then changed from being denoted with a “P” for provisional to a “V” for verified, and laboratory qualifiers were added, as needed.

CMC FY 2022 Wet Season Assessment and Evaluation of Monitoring Results

The EPA approved WSB MS4 CMC Monitoring Plan, May 5, 2016, has 33 parameters to monitor at the Rio Grande North and Rio Grande South monitoring locations. Of these 33 parameters, 15 parameters were not detected in the FY 2022 wet season samples at either the Rio Grande North or South locations. Refer to Table 3 for a list of the parameters that were not detected.

Table 3: Parameters Not Detected
CMC FY 2022 Wet Season Monitoring

Parameters Not Detected	
Oil and Grease (N-Hexane Extractable Material)	Pentachlorophenol
Tetrahydrofuran	Benzidine
Benzo(a)pyrene	Benzo(a)anthracene
Benzo(b)fluoranthene (3, 4 Benzofluoranthene)	Dibenzofuran
Benzo(k)fluoranthene	Dibenzo(a,h)anthracene
Chrysene	Chromium VI (Hexavalent)
Indeno (1,2,3-cd) Pyrene	Bis (2-ethyhexyl) Phthalate (other names: Di(2-ethylhexly)phthalate, DEHP)
Dieldrin	

For the remaining 18 parameters on the CMC monitoring parameter list, only three (3) parameters (E. coli, PCBs, and gross alpha, adjusted) had exceedances of the applicable surface WQS found in New Mexico Administrative Code (NMAC) 20.6.4 and the Pueblo of Isleta WQS during the FY 2022 wet season. These exceedances are summarized on Table 1, pages 1-2, and discussed below in further detail.

E. coli:

The E. coli results collected during the FY 2022 wet season are summarized in Table 4.

Table 4: E. coli Results
CMC FY 2022 Wet Season Monitoring

Date – Rio Grande Location	E. coli Results MPN (CFU/100 mL)
August 16, 2021 – North	6,867
September 1, 2021 – North	183
September 1, 2021 – Alameda	20
September 2, 2021 – Alameda	554
September 2, 2021 – South	4,884

At the Rio Grande North location (upstream of the Albuquerque UA, at the Angostura Diversion Dam), two (2) samples were collected and tested for E. coli. Both E. coli results exceeded Pueblo of Isleta and Pueblo of Sandia's primary contact-single sample WQS of 88 CFU/100 mL, and one sample (August 16, 2021) was above and one sample (September 1, 2021) was below NMAC's primary contact-single sample WQS of 410 CFU/100 mL. At the Rio Grande South location (downstream of the MS4 UA), one (1) sample was collected and tested for E. coli. This sample also exceeded the Pueblo of Isleta WQS (88 CFU/100 mL) and the NMAC's WQS (410 CFU/100 mL) for E. coli concentration.

In addition, the CMC collected two (2) E. coli samples in the Rio Grande at Alameda Blvd. during the FY 2022 wet season. The Alameda Blvd. analysis point was based on discussions with NMED in February 2017 on collecting actual E. coli data at the stream segment divide verses using an area percentage (as defined in the TMDL) for E. coli loading calculations. For the FY 2022 wet season storm event, two (2) samples were collected at the Alameda location. One sample was taken before the storm event and one was taken after. The lab results showed that the pre-storm sample had an acceptable E. coli concentration, while the post-storm sample exceeded the primary contact-single sample Pueblo of Isleta WQS (88 CFU/100 mL) and the primary contact-single sample NMAC WQS (410 CFU/100 mL).

As a reminder, in January 2017 the CMC members clarified with NMED that the units MPN/100 mL and CFU/100 mL are considered to be interchangeable for the purposes of this stormwater quality monitoring reporting. The New Mexico and Pueblo WQS for E. coli are currently in units of CFU/100 mL while the lab reports are typically in units of MPN/100mL. The graph presented in this section uses units of CFU/100 mL to be consistent with the WQS units. Refer to Figure 2 for a graphical representation of E. coli results from August and September 2021.

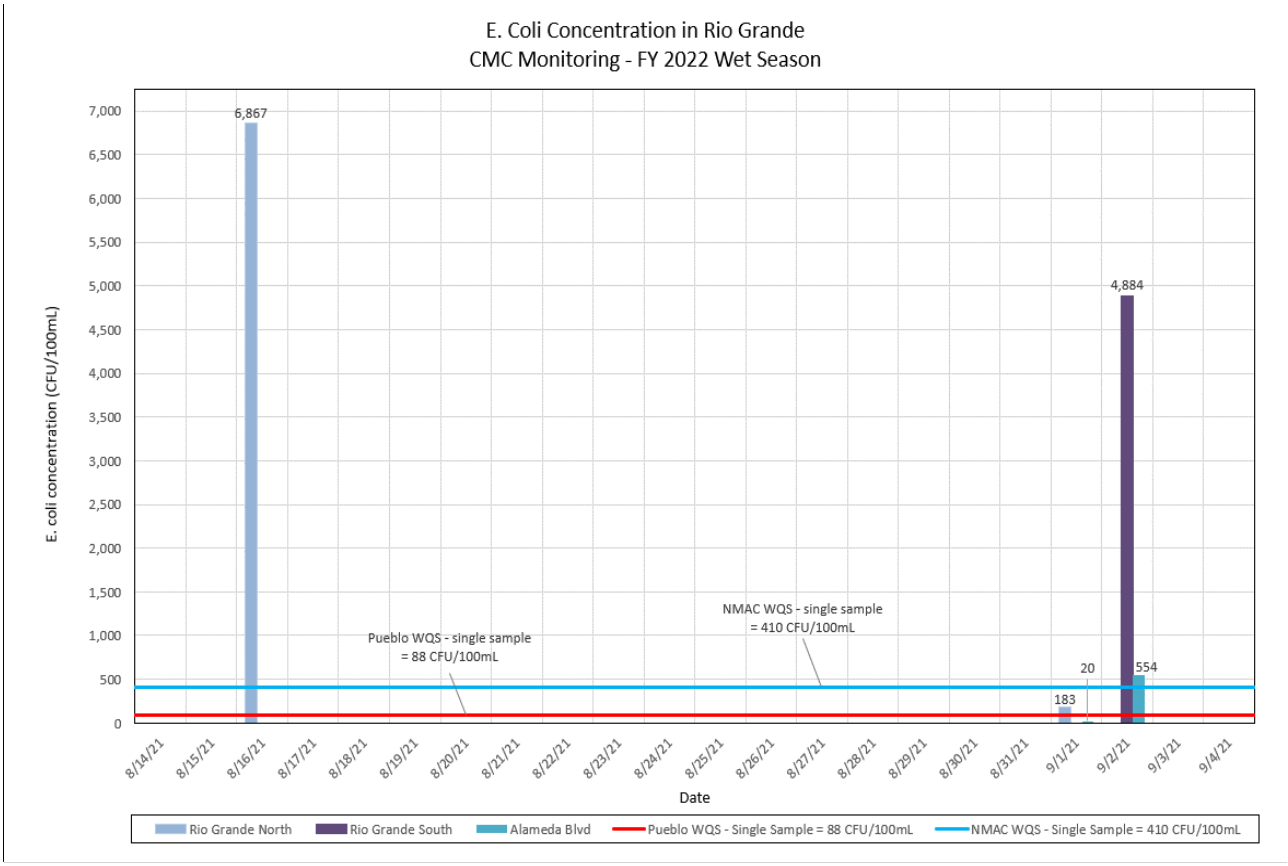


Figure 2: E. coli Results in Rio Grande
CMC Monitoring – FY 2022 Wet Season

PCBs:

There are multiple surface WQS values listed for PCBs in both the Pueblo of Isleta and the State of New Mexico standards for the various designated uses. The PCBs measured in samples collected from the Rio Grande during the FY 2022 wet season stormwater event were all below the minimum quantification level (MQL) established in EPA standards for the MS4 NPDES Permit (Appendix F, 0.2 ug/L for PCBs). The PCB results were also well below the New Mexico Surface WQSs and Pueblo of Isleta Surface WQSs for designated uses including drinking water (0.5 ug/L) and wildlife habitat, acute aquatic life, and chronic aquatic life (0.014 ug/L). However, the CMC sample from the Rio Grande South location was above the Pueblo of Isleta human health criteria (based on fish consumption only) WQS for surface waters. The human health-organism only criterion is based upon human consumption of fish and other aquatic life that bioaccumulate contaminants over time. The PCB results from 2016 through 2021 are shown in Figure 3 relative to several of the WQSs for PCBs.

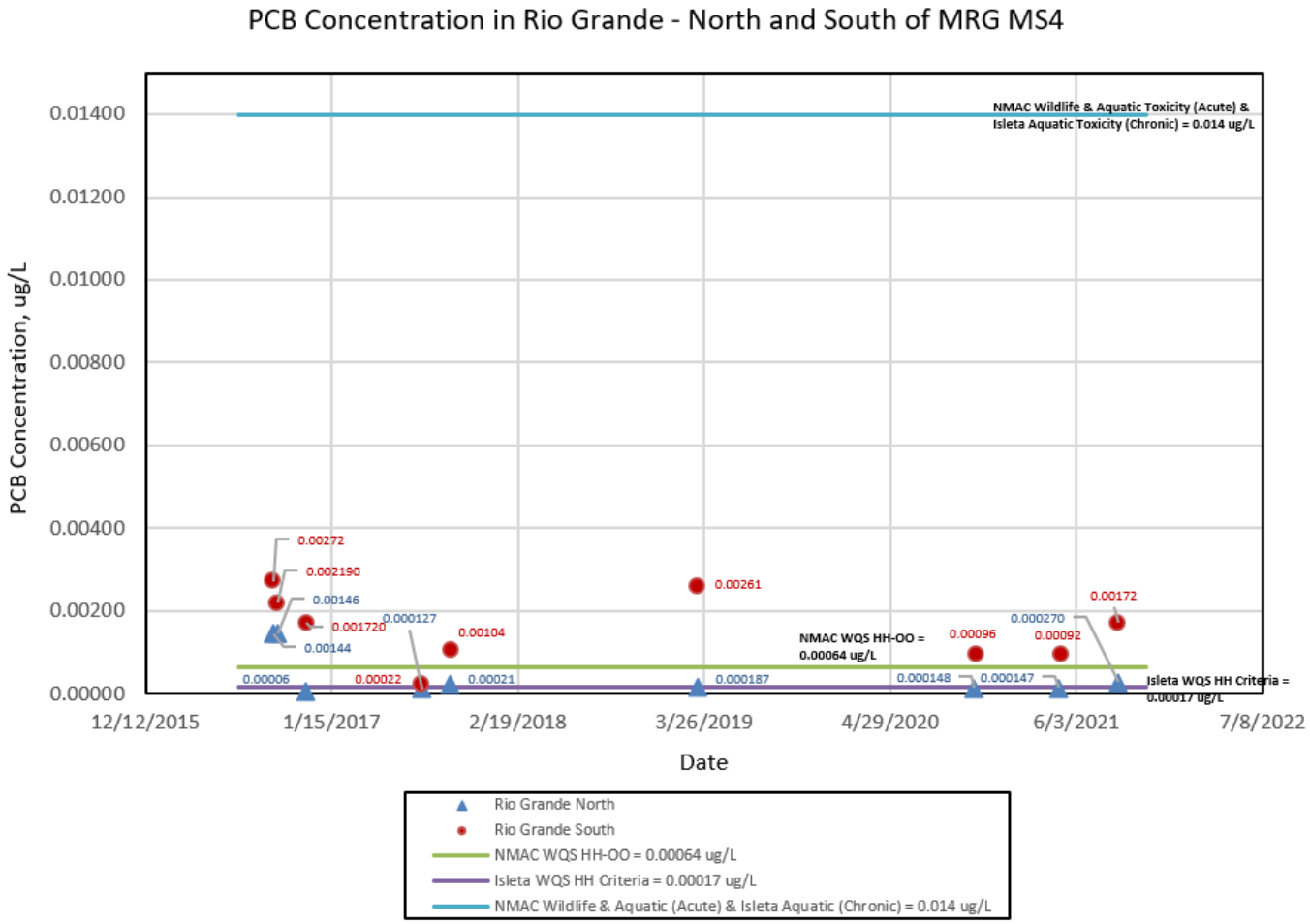


Figure 3: PCB Monitoring Results in Rio Grande
CMC Monitoring – 2016 - 2021

Adjusted Gross Alpha:

The September 2, 2021, Rio Grande South sample results exceeded the New Mexico and Pueblo of Isleta WQS for adjusted gross alpha. The WQS for adjusted gross alpha is the same value for both the NMAC 20.6.4 Water Quality Criterion and Pueblo of Isleta; the WQS of 15 pCi/L ("pCi/L" means picocuries per liter) is a general standard for the Pueblo of Isleta, and for New Mexico it is based on Domestic Water Supply and Livestock Watering designated uses. In surface water, the adjusted gross alpha analyses may be affected by a high content of suspended load, particularly where sediment sources may be derived from granitic terrain; gross alpha results may reflect the radioactivity of the natural elements in the sediment more than the surface water.

The September 2, 2021, Rio Grande South adjusted gross alpha analytical results are detailed below; the units are in pCi/L:

- Rio Grande South CMC sample result for adjusted gross alpha = 31.56 pCi/L
- Adjusted gross alpha WQS at the Rio Grande South location = 15 pCi/L (NMAC 20.6.4 Water Quality Criterion for livestock watering and domestic water supply designated uses and general standard for Pueblo of Isleta)

This is the second time since 2016 that the analytical results from a CMC sample have had an exceedance in adjusted gross alpha. The prior exceedance was reported for the September 28, 2017, Rio Grande South sample. The CMC will continue to closely evaluate this parameter in future samples. If additional exceedances occur, the CMC will discuss the results further and may consult NMED for further guidance.

Dissolved Oxygen and Temperature:

Two (2) of the water quality parameters are specifically worth mentioning in this memo because they are listed in the WSB MS4 Permit, Part I.C.1 – Special Conditions: dissolved oxygen and temperature. These parameters did not have any surface water quality exceedances during the FY 2022 wet season sampling.

Dissolved oxygen is a water quality concern in the Rio Grande if it is below 5 mg/L. None of the samples taken from the Rio Grande during the FY 2022 wet season monitoring had dissolved oxygen values below 5 mg/L. This provides the MS4s with specific monitoring data showing that stormwater did not cause or contribute to exceedances of applicable dissolved oxygen water quality standards in the Rio Grande from any of the CMC samples from 2016 to 2021. Refer to Figure 4 for CMC dissolved oxygen results and comparison to applicable WQSs.

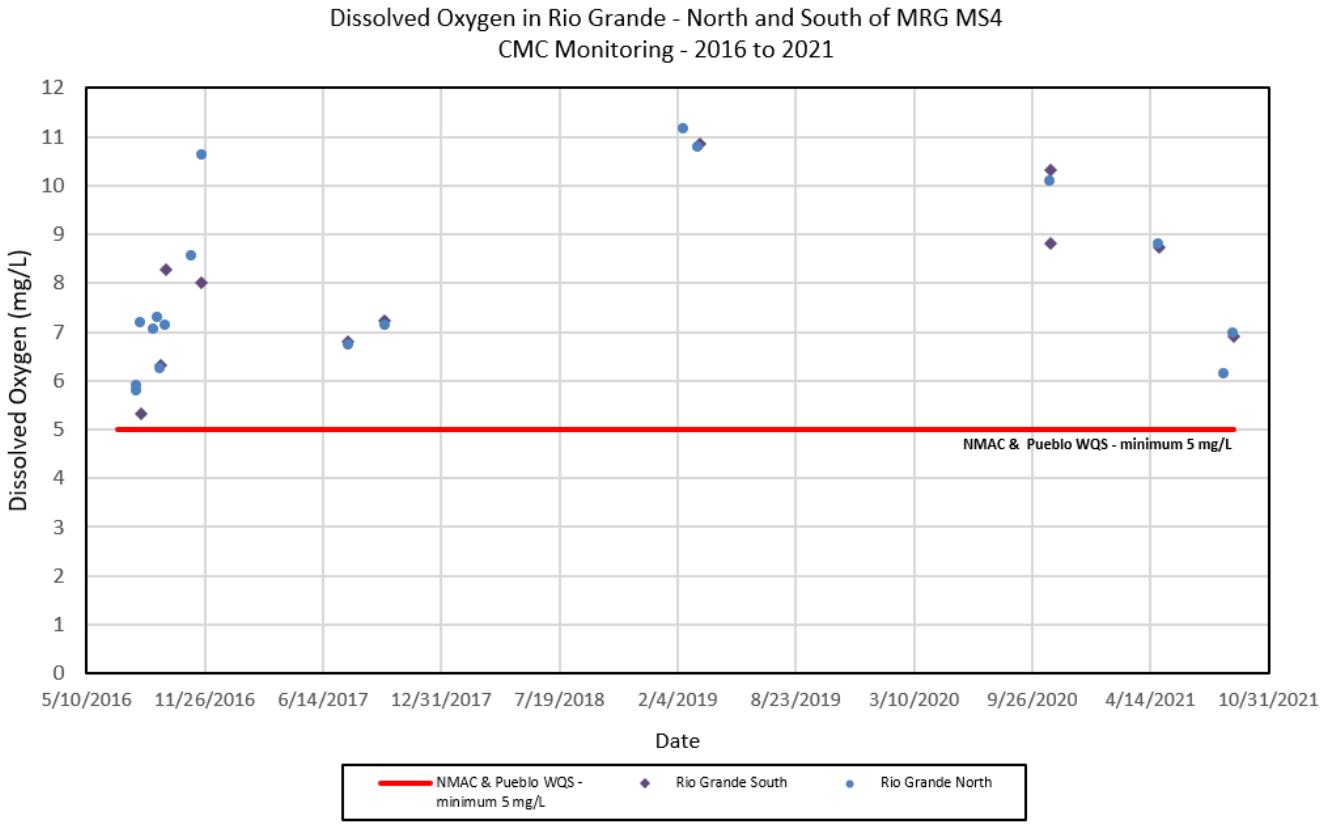


Figure 4: Dissolved Oxygen Results in the Rio Grande
CMC Monitoring – 2016 - 2021

Temperature is listed in the WSB MS4 Permit as a special condition (currently only applicable to the City of Albuquerque and AMAFCA). Past data submitted to EPA and NMED by the MS4 permittees have proven that stormwater discharges into the Rio Grande are not raising the Rio Grande temperature above the WQSs. The data collected during this FY 2022 wet season monitoring also supports this conclusion. All the temperature field readings taken in the Rio Grande during the CMC FY 2022 wet season were below 32.2°C (90°F), which is the WQS for the State of New Mexico and for the Isleta and Sandia Pueblos. Refer to Figure 5 for temperature results and comparison to applicable WQSs for all CMC samples taken upstream and downstream of the MRG MS4 area from 2016 to 2021.

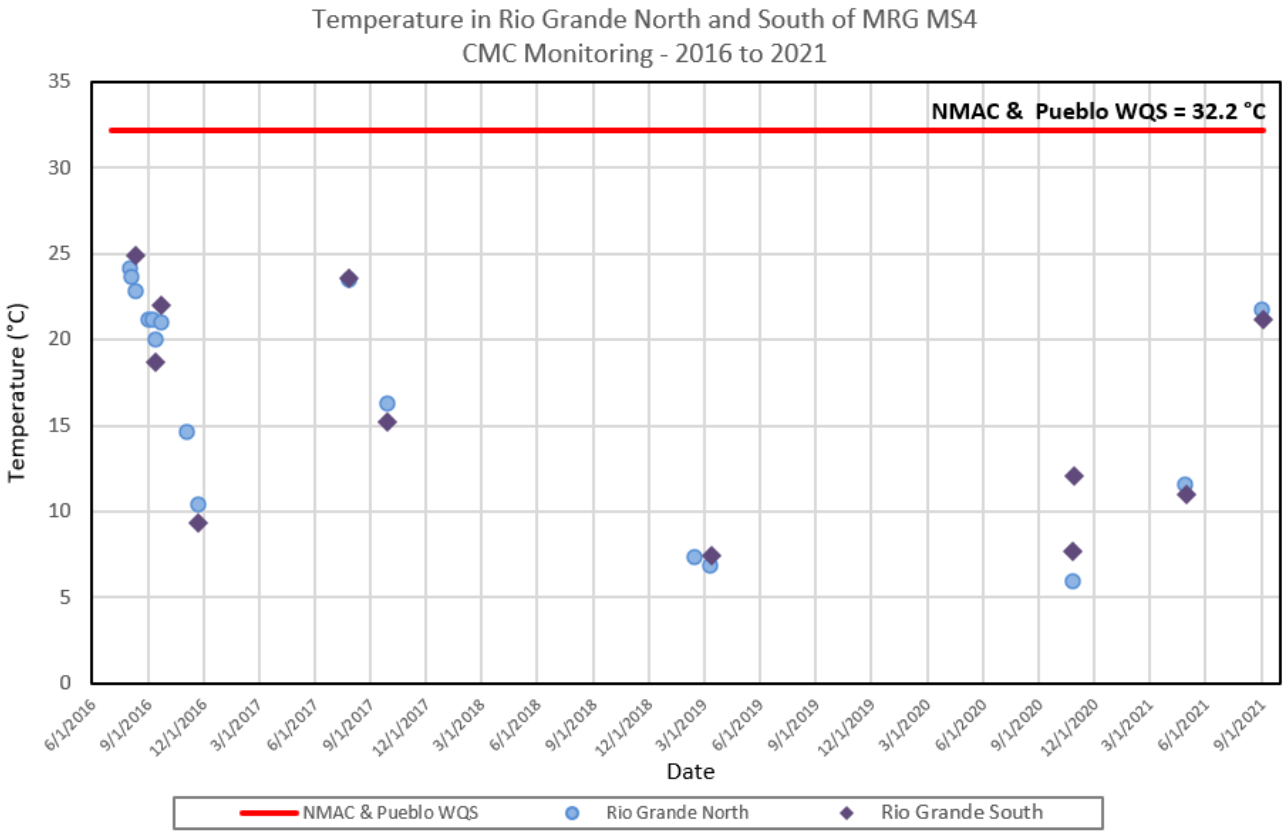


Figure 5: Temperature Monitoring Results in the Rio Grande CMC Monitoring – 2016 - 2021

CMC FY 2022 Wet Season E. coli Loading Calculations and Waste Load Allocation (WLA)

Related to assessing the stormwater results, the E. coli loading was calculated and compared to the aggregate Total Maximum Daily Load (TMDL) Waste Load Allocation (WLA) for the CMC group. A TMDL is the maximum amount of a pollutant (E. coli in this case) that a water body (Rio Grande) can assimilate on a daily basis without violating applicable surface WQSs. The total TMDL for a stream segment consists of the multiple WLA for point sources, non-point sources, and natural sources, plus a margin of safety. The CMC MS4 allotted WLA was determined in the EPA Approved, Total Maximum Daily Load for the Middle Rio Grande Watershed, June 30, 2010, and subsequent communications with NMED. The WLA varies by flow condition in the Rio Grande and by stream segment.

E. coli loading calculations and comparison to the WLA follows the WSB MS4 Permit requirements in "Discharges to Water Quality Impaired Water Bodies with an Approved TMDL", Part I.C.2.b.(i).(c).B, Appendix B-Total Maximum Daily Loads (TMDLs) Tables of the WSB MS4 Permit, and the NMED guidance provided to the CMC. Attached to this memo is the WLA Calculation spreadsheet which steps through the E. coli loading calculations and assumptions comparing the calculated E. coli loading to the CMC aggregate WLA defined by NMED.

There are two (2) stream segments defined in the WSB MS4 Permit (Appendix B): Isleta Pueblo Boundary to Alameda Street Bridge (Stream Segment 2105_50) and Non-Pueblo Alameda Bridge to Angostura Diversion (Stream Segment 2105.1_00). These stream segments differ from NMED's current stream segments defined in the *2020-2022 State of New Mexico Clean Water Act Section 303(d)/Section 305(b) Integrated Report* (NMED, 2020). NMED currently has four (4) stream segments instead of the two (2) WSB MS4 stream segments. These various stream segment designations are shown in Figure 6, page 16.

The *NMED 303(d)/305(b) 2020-2022 Integrated Report* tables show the most recent assessment results, and currently all segments of the Rio Grande (Isleta to Angostura Diversion) are impaired for E. coli and have a TMDL for E. coli.

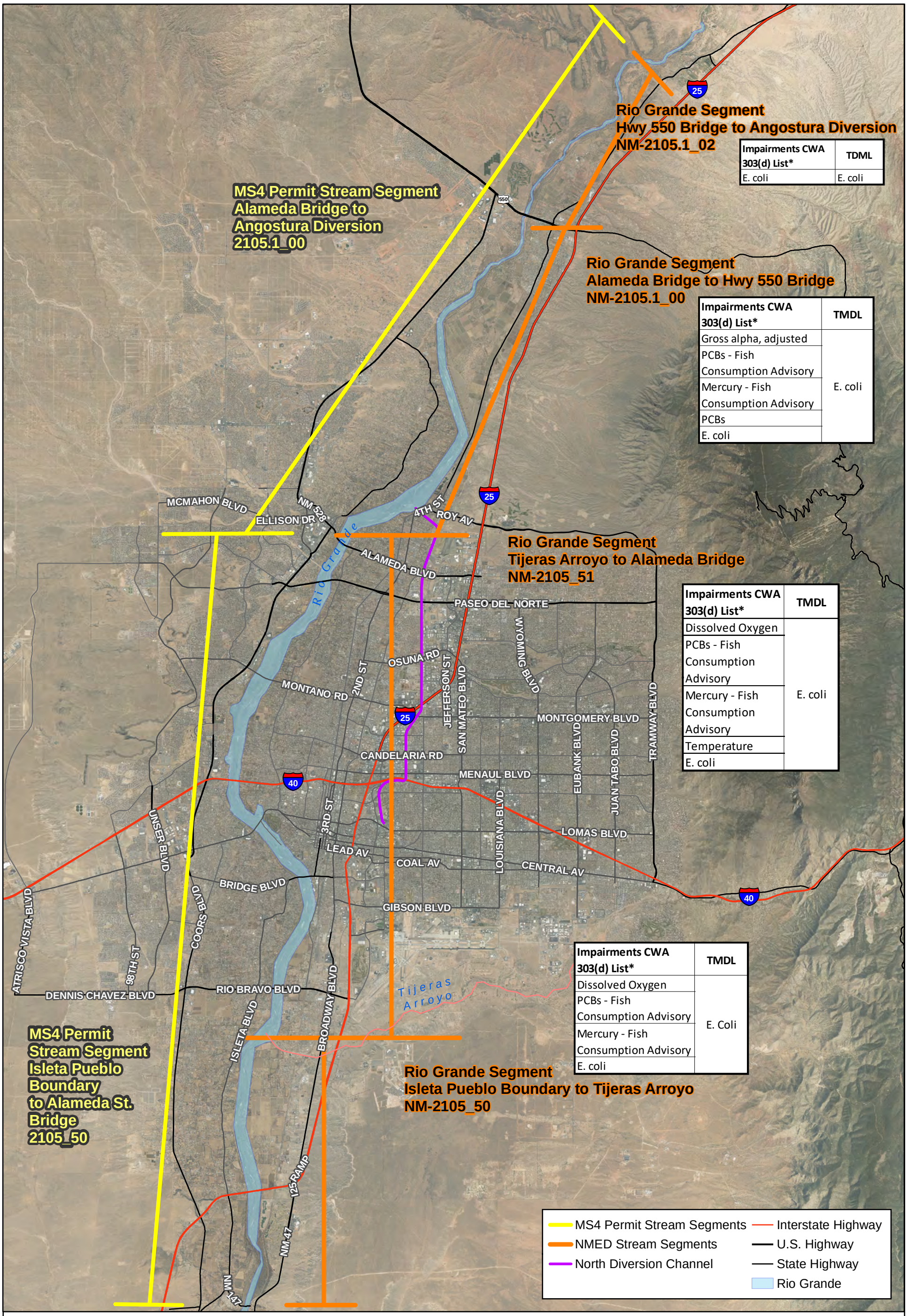
The E. coli daily loading associated with the CMC group and comparison to the NMED WLA was completed for the one (1) qualifying wet season storm event – September 1-2, 2021. For this event, the CMC obtained an E. coli sample in the Rio Grande at Alameda and used this to calculate the E. coli loading for the two (2) river segments. Refer to Table 5 for a summary of the WLA comparison results. A spreadsheet is attached to this memo that provides the detailed WLA calculations.

Table 5: Summary of CMC E. Coli Loading Compared to WLA for the CMC

Date / Stream Segment	**Daily Mean Flow (cfs)**	**Flow Conditions (cfs)** *range defined by NMED*	**CMC Daily E. coli Loading (CFU/day)**	**NMED WLA for CMC for Stream Segment and Flow Conditions**	**Loading Compared to WLA Potential Exceedance or Acceptable**
September 1-2, 2021 – Rio Grande North E. coli Concentration 9/1/2021 = 183 MPN (CFU/100 mL) Rio Grande at Alameda pre-storm E. coli Concentration 9/1/2021 = 20 MPN (CFU/100 mL) Rio Grande at Alameda E. coli Concentration 9/2/2021 = 554 MPN (CFU/100 mL) Rio Grande South E. coli Concentration 9/2/2021 = 4,884 MPN (CFU/100 mL)					
Alameda to Angostura	146	Low	1.02E+12	1.68E+10	WLA Potential Exceedance
Isleta to Alameda	165	Low	3.20E+11	3.42E+09	WLA Potential Exceedance

As Table 5 illustrates, the calculated E. coli loading for the September 1-2, 2021 storm event for the northern segment (Alameda to Angostura) and the southern segment (Isleta to Almeda) of the Rio Grande exceeded the WLA for the CMC MS4s. This analysis used the mid-point E. coli sample result obtained in the Rio Grande at Alameda.

The WSB MS4 Permit implies that the WLA is a measurable goal for the MS4s related to E. coli. Based on extensive review of the EPA Approved, Total Maximum Daily Load (TMDL) for the Middle Rio Grande Watershed, June 30, 2010, this seems to be an unattainable goal for MS4s.



AMAFCA

Bohannan Huston
www.bhinc.com
800.877.5332

N

0 12,000 24,000 Feet
1 in = 12,500 ft

CMC Monitoring

Figure 6
Rio Grande Impairments & TMDL Information

* Final 2020-2022 State of NM Clean Water Act, Section 303(d)/Section 305(b) Integrated Report

P:\20230125\WR\Reports\Final\Figures\MXDs\Figure6-MS4_TMDLStreamSegments_2021_0416.mxd
Author: mcrooks

August 2022

Page 40 of the 2010 TMDL Report states, “It is important to remember that the TMDL is a planning tool to be used to achieve water quality standards…Meeting the calculated TMDL may be a difficult objective.” The TMDL/WLA was calculated by NMED to meet the Pueblo (Sandia and Isleta) geometric mean maximum of 47 CFU/100 ml, which was done to be “protective of downstream waters” and “to provide an implicit margin of safety (MOS)”. A single grab sample E. coli result meeting this very low geometric means WQSs will be very difficult for the MS4s to obtain.

The CMC members discussed the difficulty of using the WLA as a measurable goal with NMED on February 1, 2017. NMED explained that exceeding the WLA does not trigger enforcement. However, NMED strongly encouraged the MS4s to document what they are doing once they realize the WLA is potentially exceeded. The meeting on February 1, 2017, and the CMC discussion with NMED on February 16, 2017, demonstrate CMC members are working toward understanding the WLA. In addition, the CMC members began implementing a refinement to the sampling plan discussed with NMED by obtaining an E. coli sample in the Rio Grande at Alameda effective the FY 2018 wet season, as feasible. This demonstrates that the CMC is continuing to investigate the potential exceedances and make improvements to monitor E. coli in the Rio Grande.

Data Entry for Discharge Monitoring Reports

The WSB MS4 Permit entered Administrative Continuance in December 2019 when EPA Region 6 did not issue a new MS4 Permit before the current MS4 Permit’s expiration date. Until a new MS4 Permit is issued, there are no compliance monitoring requirements for the CMC in the Rio Grande. As identified in the CMC Monitoring Plan, the WSB MS4 Permit required a minimum of seven (7) storm events be sampled at both the Rio Grande North and Rio Grande South locations. All MS4 Permit required samples have been obtained by the CMC and verified stormwater quality data from these required events have been submitted to the EPA using electronic Discharge Monitoring Report (DMR) forms. Data from the DMRs are uploaded to a comprehensive nationwide database that contains discharge data for facilities and other point sources that discharge directly to receiving streams. For this Task, BHI has not completed any data entry related to the EPA DMRs for the FY 2022 wet season.

Conclusions and Planning

During the FY 2022 wet season (July 1 to October 31, 2021), one (1) qualifying stormwater sample was obtained by the CMC. Lab results were received, and this data has been entered into the CMC Excel database. The lab data entered is marked in the spreadsheet as “V” (verified), and data V&V has been completed (refer to Attachment 2).

To summarize, monitoring results and E. coli loading calculations for the FY 2022 wet season show that:

- The WSB MS4 Permit entered Administrative Continuance in December 2019 when U.S. Environmental Protection Agency (EPA) Region 6 did not issue a new MS4 Permit before the current MS4 Permit’s expiration date. Until a new MS4 Permit is issued, there are no compliance monitoring requirements for the CMC in the Rio Grande. All MS4 Permit required samples have been obtained by the CMC, as well several samples collected during Administrative Continuance, including the one (1) sample obtained in the FY 2022 wet season, as reported in this memo.

- For the FY 2022 wet season, 15 of the 33 parameters tested were not detected in any of the Rio Grande North or South samples.
- Several key parameters all met the applicable WQSs, as they have for all the CMC samples to date:
    - All dissolved oxygen results were greater than 5 mg/L (minimum WQS).
    - All temperature results were less than 32.2°C (maximum WQS).
- The PCB results were below the New Mexico Surface WQSs and Pueblo of Isleta Surface WQSs for designated uses including drinking water, wildlife habitat, acute aquatic life, and chronic aquatic life. However, the Rio Grande North and South CMC samples from September 1-2, 2021 were above the Pueblo of Isleta human health criteria (based on fish consumption only) WQS for surface waters.
- The September 2, 2021, Rio Grande South sample result exceeded the New Mexico Surface WQSs and Pueblo of Isleta Surface WQSs (15 pCi/L) for adjusted gross alpha. This is the second time since 2016 that the analytical results from a CMC sample have had an exceedance in adjusted gross alpha. The CMC will continue to closely evaluate this parameter in future samples
- The calculated E. coli loading for the September 1-2, 2021 storm event for the northern segment (Alameda to Angostura) and the southern segment (Isleta to Almeda) of the Rio Grande exceeded the WLA for the CMC MS4s. This analysis used the mid-point E. coli sample result obtained in the Rio Grande at Alameda.
    - Sources for the E. coli loading measured in the river are not solely attributable to the CMC MS4 members; the E. coli loading calculations serve to provide a reasonable estimate of the CMC contribution to the measured E. coli loading.
    - This sampling and calculation approach is only an estimate of the CMC contribution to the E. coli loading which is why the term “potential exceedance” is used.
    - The in-stream data does not provide the concentration of E. coli contributed by only the CMC MS4s or any of the other potential sources. By using this percentage calculation approach, if other contributors are in exceedance of the WLA, then the CMC will likely also be in exceedance since this approach relies on a percentage of a total.

For planning purposes for the CMC members, the FY 2022 dry season CMC monitoring will be summarized by BHI for the CMC in a dry season memo.

SG/ab

Attachments:

Attachment 1 – DBS&A Field Data & Hall Environmental Analysis Laboratory Reports with BHI Notes for FY 2022 Wet Season

Attachment 2 – FY 2022 Wet Season Completed Data Verification and Validation (V&V) Forms

Spreadsheets Included Separately:

E. coli Loading and Comparison to Waste Load Allocation (WLA) Excel Spreadsheet

Excel CMC Spreadsheet with FY 2022 Wet Season Stormwater Quality Monitoring Results

ATTACHMENT 1

DBS&A FIELD DATA & HALL ENVIRONMENTAL ANALYSIS LABORATORY REPORTS WITH BHI NOTES FOR FY 2022 WET SEASON

CMC Water Quality Results Database
FY 2017 -FY 2021
Date: August 10, 2022
Summary of Lab Results for CMC samples

		Rio Grande - North - At Angostura Dam								Rio Grande - Alameda Bridge (E. coli Only Samples)									
Parameter	**Permit Required Units**	**Provisional or Verified**	**2022 CMC SAMPLE - EXTRA NORTH Collection Date 8/16/2021** Wet Season Sample Non Qualifying Storm Event	**Qualifier**	**Check compared to Water Quality Criterion**	**Provisional or Verified**	**2022 CMC SAMPLE - EXTRA NORTH Collection Date 9/01/2021** Wet Season Sample	**Qualifier**	**Check compared to Water Quality Criterion**	**Provisional or Verified**	**2022 CMC SAMPLE - EXTRA SOUTH Collection Date 9/02/2021** Wet Season Sample	**Qualifier**	**Check compared to Water Quality Criterion**	**Provisional or Verified**	**2022 CMC SAMPLE - EXTRA ALAMEDA Collection Date 9/1/2021** Wet Season Pre-Storm Sample	**Qualifier**	**Check compared to Water Quality Criterion**	**Provisional or Verified**	**2022 CMC SAMPLE - EXTRA ALAMEDA Collection Date 9/2/2021** Wet Season Sample	**Qualifier**	**Check compared to Water Quality Criterion**
Total Suspended Solids (TSS)	mg/L					V	130		--	V	790	D	--								
Total Dissolved Solids (TDS)	mg/L					V	230	D	OK	V	330	D	OK								
Chemical Oxygen Demand (COD)	mg/L					V	22.2		--	V	54.2		--								
Biochemical Oxygen Demand (BOD_5)	mg/L					V	2.7	RE	--	V	4.9		--								
Dissolved Oxygen (DO)	mg/L	V	6.13		OK	V	6.98		OK	V	6.92		OK	V	7.06		OK	V	6.92		OK
Oil and Grease (N-Hexane Extractable Material)	mg/L					V	ND		OK	V	ND		OK								
E. coli	MPN (CFU/100 mL)	V	6,867		>WQ Standard	V	183		>WQ Standard	V	4,884		>WQ Standard	V	20.0		OK	V	554.0		>WQ Standard
pH	S.U.	V	7.92		OK	V	8.63		OK	V	8.11		OK	V	8.37		OK	V	7.72		OK
Total Kjedahl Nitrogen (TKN)	mg/L					V	4.1		--	V	2	JD	--								
Nitrate plus Nitrite	mg/L					V	ND		OK	V	1.8		OK								
Dissolved Phosphorous	mg/L					V	0.15	D	--	V	1.4	D	--								
Ammonia (mg/L as N)	mg/L					V	0.42	J	OK	V	ND		OK								
Total Nitrogen	mg/L					V	4.52	J	OK	V	3.80		OK								
Total Phosphorous	mg/L					V	0.29	D	--	V	1.3	D	--								
PCBS - 0.000064 (Method 1668A - sum of all congeners)	µg/L					V	0.00027	J	>WQ Standard	V	0.00172	J	>WQ Standard								
Gross Alpha, Adjusted	pCi/L					v	4.94	Note - Gross Alpha was reported, not adjusted gross alpha. Calculation completed to determine adjusted gross alpha.	OK	V	31.56	Note - Gross Alpha was reported, not adjusted gross alpha. Calculation completed to determine adjusted gross alpha.	>WQ Standard								
Tetrahydrofuran	µg/L					V	ND		--	V	ND		--								
Benzo(a)pyrene	µg/L					V	ND		OK	V	ND		OK								
Benzo[b]fluoranthene (other name: 3,4-Benzofluoranthene)	µg/L					V	ND		OK	V	ND		OK								
Benzo(k)fluoranthene	µg/L					V	ND		OK	V	ND		OK								
Chrysene	µg/L					V	ND		OK	V	ND		OK								
Indeno(1,2,3-cd)Pyrene	µg/L					V	ND		OK	V	ND		OK								
Dieldrin	µg/L					V	ND		OK	V	ND		OK								
Pentachlorophenol	µg/L					V	ND		OK	V	ND		OK								
Benzidine	µg/L					V	ND		OK	V	ND		OK								
Benzo(a)anthracene	µg/L					V	ND		OK	V	ND		OK								
Dibenzofuran	µg/L					V	ND		--	V	ND		--								
Dibenzo(a,h)anthracene	µg/L					V	ND		OK	V	ND		OK								
Chromium VI (Hexavalent)	µg/L					V	ND		OK	V	ND		OK								
Dissolved Copper	µg/L					V	0.84	J	OK	V	1.5		OK								
Dissolved Lead	µg/L					V	0.065	J	OK	V	0.32	J	OK								
Bis (2-ethyhexyl) Phthalate (other names: Di(2-ethylhexly)phthalate, DEHP) - 2.2	µg/L					V	ND		OK	V	ND		OK								
Conductivity	umhos/cm	V	591		--	V	315		--	V	484		--	V	375		--	V	383		--
Temperature	°C	V	21.24		OK	V	21.71		OK	V	21.21		OK	V	23.19		OK	V	22.14		OK
Hardness (as $CaCO_3$)	mg/L					V	160		--	V	290		--								
Mercury	µg/l																				

Data Verification/Validation and Qualifier Notes:
(R) The sample results are unusable because certain criteria were not met. The analyte may or may not be present in the sample.
(H) Sample holding time exceeded.
(J) The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
(D) Sample was diluted by Lab due to matrix
(U) Analyte was analyzed for, but not detected above the specified detection limit.

Notes:
1. Wet Season monitoring period - July 1 to October 31 and Dry Season monitoring period - November 1 to June 30 according to the Watershed Based MS4 Permit NMR04A000.
2. Water Quality Criterion from 20.6.4 NMAC; Rio Grande Basin - section 20.6.4.105; For a mean monthly flow of 100 cfs, monthly average
3. Aquatic life criteria for metals are expressed as a function of total
4. According to NMAC 20.6.4, E. coli bacteria for Primary Contact - monthly
5. Water quality criterion for metals is based on dissolved metals, NMAC 20.6.4.900.I and individual sample results compared to acute toxicity
6. HEAL lab method: SM 9223B Fecal Indicator. Note - lab method for units of MPN/100 ml, lab report uses units CFU/100 ml, for this analysis assuming

ND - analyte not detected above the laboratory method detection limit
NA - not analyzed
Hatching also indicates that parameter was not analyzed

National recommended WQ criteria Human Health
https://www.epa.gov/wqc/national-recommended-water-quality-criteria-human-health-criteria-table

Samplers S. Williams / M. Zboralek

CMC Sampling Data Sheet

Site Identification: Angastoca Dam

Notes:

Full Suite Sample Date and Time:	8/16/21 1049
Full Sample Identification:	RGNorth-20210816
QC Samples:	Duplicate / ~~None~~ QC Sample ID:
QC samples require a DIFFERENT sample time than the environmental sample. QC Sample time:	

Full Suite Collection Point : Angastoca Dam

Full Suite Sample Volume: ~2.5 gal Collection Time Start: 1000 End: 1045

Field Parameters for each 2-gallon grab

Grab	Time	Temp (°C)	pH	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (%)
1						
2						
3	1030	20.92	7.83	591	5.29	58.4
4	1045	20.69	7.89	581	5.37	59.2
Composite	1049	21.24	7.92	591	6.13	68.4

☒ *Turbid Water* ☒ *Color* B/N ☐ *Solids* ☐ *Oil/Sheen* ☐ *Foam* ☐ *Odor* _____

Analytical -see 2020 COC table

☐ Site Photo ☐ Sample Photo

Samplers Amy Ewing + Mike Zbrozek

CMC Sampling Data Sheet

Site Identification: RG North (Angostura Dam)

Notes:

Full Suite Sample Date and Time:	RGNorth-20210901
Full Sample Identification:	9/1/2021 1005
QC Samples: Duplicate / (None)	QC Sample ID:
QC samples require a DIFFERENT sample time than the environmental sample. QC Sample time:	

Full Suite Collection Point : NNE off the end of Angostura Dam

Full Suite Sample Volume: 4 gal Collection Time Start: 0917 End: 1002

Field Parameters for each 2-gallon grab

Grab	Time	Temp (°C)	pH	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (%)	ORP (mV)
1	0917	21.73	8.54	351	6.90	74.8	149.5
2	0932	21.33	8.62	305	7.23	84.1	168.4
3	0947	21.69	8.65	303	6.81	78.6	150.6
4	1002	22.07	8.70	302	6.98	80.7	134.5
Composite	1005	21.71	8.63	315	6.98	79.6	150.7

☑Turbid Water (semi-) ☐Color tan / clear ☐Solids ☐Oil/Sheen ☐Foam ☐Odor_____

Analytical -see 2020 COC table

☑Site Photo ☑Sample Photo

Samplers Amy Ewing + Mike Zbrozek

CMC Sampling Data Sheet

Site Identification: Rio Grande at Alameda

Notes: Sampled per Kali's request

E. coli

~~Full Suite~~ Sample Date and Time: 9/01/2021 1125
Full Sample Identification: RGAlameda-20210901
QC Samples: Duplicate / (None) QC Sample ID:
QC samples require a DIFFERENT sample time than the environmental sample. QC Sample time:

E. coli Downstream side of the

~~Full Suite~~ Collection Point : Alameda foot bridge across from USGS gage

Full Suite Sample Volume: — Collection Time Start: 1125 End: 1125 (grab)

Field Parameters for each 2-gallon grab

Grab	Time	Temp (°C)	pH	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (%)	ORP (mV)
1	1125	23.19	8.37	375	7.06	83.7	97.7
2							
3							
4							
Composite							

☑Turbid Water ☑Color Brown ☐Solids ☐Oil/Sheen ☐Foam ☐Odor_____

Analytical - see 2021 COC table

☑Site Photo ☑Sample Photo

Samplers Amy Ewing and Mike Zbrozek

CMC Sampling Data Sheet

Site Identification: Rio Grande at Alameda

Notes:

E. coli

~~Full Suite~~ Sample Date and Time:	9/2/21 1030
~~Full Sample~~ Identification:	RGAlameda-20210902
QC Samples: Duplicate / None	QC Sample ID:
QC samples require a DIFFERENT sample time than the environmental sample. QC Sample time:	

E. coli

~~Full Suite~~ Collection Point : off footbridge, downstream side, across from USGS stream gage

~~Full Suite~~ Sample Volume: — Collection Time Start: — End: —

Field Parameters for each 2-gallon grab

Grab	Time	Temp (°C)	pH	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (%)
1	1030	22.14	7.72	383	6.72	77.4
2						
3						
4						
Composite						

☑Turbid Water ☑Color Brown ☐Solids ☐Oil/Sheen ☐Foam ☐Odor_____

Analytical - ~~see 2021 COC table~~

E. coli only

☑Site Photo ☑Sample Photo

Samplers Amy Ewing and Mike Zbrozek

CMC Sampling Data Sheet

Site Identification: Rio Grande at Isleta diversion

Notes:

Full Suite Sample Date and Time:	9/2/21 ~~0905~~ 0920
Full Sample Identification:	RG South - 20210902
QC Samples: Duplicate / (None)	QC Sample ID:
QC samples require a DIFFERENT sample time than the environmental sample. QC Sample time:	

Full Suite Collection Point : off diversion structure, next to bldg.

Full Suite Sample Volume: 5 gallons Collection Time Start: 0835 End: 092

Field Parameters for each 2-gallon grab

Grab	Time	Temp (°C)	pH	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (%)
1	0835	20.05	7.99	495	5.89	64.1
2	0850	20.37	7.93	484	7.93	83.1
3	0905	20.66	7.97	485	6.06	66.6
4	0920	20.68	7.95	477	6.06	67.2
Composite	0928	21.21	8.11	484	6.92	77.6

☑Turbid Water ☑Color Brown ☑Solids minor bits ☐Oil/Sheen ☐Foam ☐Odor_____

Analytical - see 2021 COC table

☑Site Photo ☑Sample Photo

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

August 19, 2021

8/16/2021 CMC Sample at Rio Grande North. E. coli results for the pre-storm. Storm did not become a qualifying event.

Patrick Chavez
AMAFCA
2600 Prospect Ave NE
Albuquerque, NM 87107
TEL: (505) 884-2215
FAX:

RE: CMC

OrderNo.: 2108836

Dear Patrick Chavez:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/16/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Field Parameters
Rio Grande North-
Temp = 21.24 °C
pH = 7.92
Conductivity (uS/cm=umho/cm) = 591
Dissolved Oxygen (mg/L) = 6.13

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2108836**
Date Reported: **8/19/2021**

CLIENT: AMAFCA
Client Sample ID: RG North-20210816
Project: CMC
Collection Date: 8/16/2021 10:49:00 AM
Lab ID: 2108836-001 **Matrix:** AQUEOUS **Received Date:** 8/16/2021 12:49:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dms**
E. Coli	6867	10.00		MPN/100	10	8/17/2021 5:44:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: **AMAFCA** Work Order Number: **2108836** RcptNo: **1**

Received By: **Tracy Casarrubias** **8/16/2021 12:49:00 PM**

Completed By: **Sean Livingston** **8/16/2021 4:14:27 PM** S Livingston

Reviewed By: BOD/Enumeration JR @ 8/16/21 @ 16:40

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Samples were collected the same day and chilled.
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: (<2 or >12 unless noted)
Adjusted?
Checked by:

BOD/Enumeration: TML 8.16.21

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	23.8	Good				

Chain-of-Custody Record

Client: AMAFCA

Mailing Address:

Phone #:

email or Fax#: pchavez@amafca.org

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other_____
☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush_____

Project Name: CMC

Project #:

Project Manager: Patrick Chavez

Sampler:

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(Including CF): 24.0-0.2=23.8 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2108836	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8.16.21	1049	AQ	RGNorth-20210816	bottles		001		See attached								

Date: 8/16/21 Time: 1241 Relinquished by:

Received by: Via: Date Time 8.16.21 12:49

Date: Time: Relinquished by:

Received by: Via: Date Time

Remarks: Per Chad - only analyze for E. coli enumeration. JF 8/17/21

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

September 07, 2021

9/1/2021 CMC Sample at Rio Grande North and Alameda. E. coli results for the pre-storm. Storm did become a qualifying event.

Patrick Chavez
AMAFCA
2600 Prospect Ave NE
Albuquerque, NM 87107
TEL: (505) 884-2215
FAX:

RE: CMC

OrderNo.: 2109083

Dear Patrick Chavez:

Hall Environmental Analysis Laboratory received 2 sample(s) on 9/1/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Field Parameters
Rio Grande North-
Temp = 21.71 °C
pH = 8.63
Conductivity (uS/cm=umho/cm) = 315
Dissolved Oxygen (mg/L) = 6.98
Alameda-
Temp = 23.19 °C
pH = 8.37
Conductivity (uS/cm=umho/cm) = 375
Dissolved Oxygen (mg/L) = 7.06

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2109083**
Date Reported: **9/7/2021**

CLIENT: AMAFCA
Client Sample ID: RG North- 20210901
Project: CMC
Collection Date: 9/1/2021 10:05:00 AM
Lab ID: 2109083-001 **Matrix:** AQUEOUS **Received Date:** 9/1/2021 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dms**
E. Coli	183	10.00		MPN/100	10	9/2/2021 5:05:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: AMAFCA
Client Sample ID: RG Alameda- 20210901
Project: CMC
Collection Date: 9/1/2021 11:25:00 AM
Lab ID: 2109083-002
Matrix: AQUEOUS
Received Date: 9/1/2021 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dms**
E. Coli	20	10.00		MPN/100	10	9/2/2021 5:05:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: AMAFCA Work Order Number: 2109083 RcptNo: 1

Received By: Sean Livingston 9/1/2021 4:10:00 PM

Completed By: Isaiah Ortiz 9/1/2021 4:18:41 PM

Reviewed By: JRa 9/1/21 @ 16:25

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: SPA 9.1.21

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.9	Good	Not Present			

Chain-of-Custody Record

Client: AMAFCA

Mailing Address:

Phone #:

email or Fax#: pchavez@amafca.org

QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☑ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: CMC

Project #:

Project Manager: Patrick Chavez

Sampler: A.Ewing - DBS+A

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 4.2-0.3=3.9 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2109083	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	E. coli - enumeration
9/1/21	1005	AQ	RGNorth-20210901	1		001											✓
9/1/21	1125	AQ	RGAlameda-20210901	1		002											✓

Amy Ewing 9/1/21

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
9/1/21	1610	Amy Ewing	Sa	cno	9/1/21	16:10
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

9/2/2021 CMC Sample at Rio Grande North, Alameda (only E. coli), and Rio Grand South.

October 13, 2021

Patrick Chavez

AMAFCA
2600 Prospect Ave NE
Albuquerque, NM 87107
TEL: (505) 884-2215
FAX

RE: CMC OrderNo.: 2109132

Dear Patrick Chavez:

Hall Environmental Analysis Laboratory received 6 sample(s) on 9/2/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -

Field Parameters
Rio Grande North-
Temp = 21.71 °C
pH = 8.63
Conductivity (uS/cm=umho/cm) = 315
Dissolved Oxygen (mg/L) = 6.98
Rio Grande South-
Temp = 21.21 °C
pH = 8.11
Conductivity (uS/cm=umho/cm) = 484
Dissolved Oxygen (mg/L) = 6.92
Alameda-
Temp = 22.14 °C
pH = 7.72
Conductivity (uS/cm=umho/cm) = 383
Dissolved Oxygen (mg/L) = 6.72

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Case Narrative

WO#: **2109132**
Date: **10/13/2021**

CLIENT: AMAFCA
Project: CMC

Analytical Notes Regarding EPA Method 8081:
The method blank and sample RG South-20210902 were not spiked with surrogates. The samples were reextracted, outside of the holding time to confirm the original data. The samples are reported from the original extraction and analysis.

Analytical Notes Regarding BOD:
The method blank(s) had a DO depletion >0.2mg/L.

Hall Environmental Analysis Laboratory, Inc.

CLIENT: AMAFCA
Client Sample ID: RG North-20210901
Project: CMC
Collection Date: 9/1/2021 10:05:00 AM
Lab ID: 2109132-001
Matrix: AQUEOUS
Received Date: 9/2/2021 12:17:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8081: PESTICIDES							Analyst: **LSB**	
Dieldrin	ND	0.040	0.10		µg/L	1	9/17/2021 1:57:29 PM	62459
Surr: Decachlorobiphenyl	89.1	0	41.7-129		%Rec	1	9/17/2021 1:57:29 PM	62459
Surr: Tetrachloro-m-xylene	58.7	0	31.8-88.5		%Rec	1	9/17/2021 1:57:29 PM	62459
EPA METHOD 300.0: ANIONS							Analyst: **LRN**	
Nitrate+Nitrite as N	ND	0.11	1.0		mg/L	5	9/3/2021 4:14:05 PM	R81067
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Calcium	51	0.11	1.0		mg/L	1	9/14/2021 12:30:15 PM	62544
Magnesium	8.7	0.067	1.0		mg/L	1	9/14/2021 12:30:15 PM	62544
EPA 200.8: DISSOLVED METALS							Analyst: **bcv**	
Copper	0.00084	0.00037	0.0010	J	mg/L	1	9/18/2021 6:25:56 PM	A81374
Lead	0.000065	0.000057	0.00050	J	mg/L	1	9/18/2021 6:25:56 PM	A81374
SM2340B: HARDNESS							Analyst: **ELS**	
Hardness as CaCO3	160	2.5	6.6		mg/L	1	9/14/2021 8:50:00 AM	R81263
EPA METHOD 1664B							Analyst: **dms**	
N-Hexane Extractable Material	ND	4.10	10.2		mg/L	1	9/8/2021 12:03:00 PM	62408
SM5210B: BOD							Analyst: **AG**	
Biochemical Oxygen Demand	2.7	2.0	2.0	RE	mg/L	1	9/8/2021 4:15:00 PM	62380

NOTES:
R- RPD between dilutions >30%. E- Estimated value due to final read time exceeding +/-6 hour read time.

SM 4500 NH3: AMMONIA							Analyst: **CJS**	
Nitrogen, Ammonia	0.42	0.42	1.0	J	mg/L	1	9/16/2021 2:40:00 PM	R81339
SM4500-H+B / 9040C: PH							Analyst: **CAS**	
pH	8.54			H*	pH units	1	9/8/2021 9:52:08 PM	R81133
EPA METHOD 365.1: TOTAL PHOSPHOROUS							Analyst: **CJS**	
Phosphorus, Total (As P)	0.29	0.050	0.050	D	mg/L	1	9/15/2021 1:39:00 PM	62548
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: **KS**	
Total Dissolved Solids	230	100	100	D	mg/L	1	9/10/2021 10:00:00 AM	62453
SM 4500 NORG C: TKN							Analyst: **EKM**	
Nitrogen, Kjeldahl, Total	4.1	0.50	1.0		mg/L	1	9/17/2021 1:45:00 PM	62630
SM 2540D: TSS							Analyst: **KS**	
Suspended Solids	130	4.0	4.0		mg/L	1	9/9/2021 1:39:00 PM	62455

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: AMAFCA
Client Sample ID: RG North-20210901
Project: CMC
Collection Date: 9/1/2021 10:05:00 AM
Lab ID: 2109132-002
Matrix: AQUEOUS
Received Date: 9/2/2021 12:17:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 365.1: TOTAL PHOSPHOROUS							Analyst: **CJS**	
Phosphorus, Total (As P)	0.15	0.050	0.050	D	mg/L	1	9/15/2021 1:40:00 PM	62548

dissolved phosphorous

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: AMAFCA
Client Sample ID: RG South-20210902
Project: CMC
Collection Date: 9/2/2021 9:20:00 AM
Lab ID: 2109132-003
Matrix: AQUEOUS
Received Date: 9/2/2021 12:17:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8081: PESTICIDES							Analyst: **LSB**	
Dieldrin	ND	0.040	0.10		µg/L	1	9/17/2021 2:23:56 PM	62459
Surr: Decachlorobiphenyl	0	0	41.7-129	S	%Rec	1	9/17/2021 2:23:56 PM	62459
Surr: Tetrachloro-m-xylene	0	0	31.8-88.5	S	%Rec	1	9/17/2021 2:23:56 PM	62459
EPA METHOD 300.0: ANIONS							Analyst: **LRN**	
Nitrogen, Nitrite (As N)	ND	0.073	0.50		mg/L	5	9/3/2021 3:48:20 PM	R81067
Nitrogen, Nitrate (As N)	1.8	0.10	0.50		mg/L	5	9/3/2021 3:48:20 PM	R81067
EPA METHOD 200.7: METALS							Analyst: **ELS**	
Calcium	86	0.11	1.0		mg/L	1	9/14/2021 12:33:10 PM	62544
Magnesium	19	0.067	1.0		mg/L	1	9/14/2021 12:33:10 PM	62544
EPA 200.8: DISSOLVED METALS							Analyst: **bcv**	
Copper	0.0015	0.00037	0.0010		mg/L	1	9/18/2021 6:30:41 PM	A81374
Lead	0.00032	0.000057	0.00050	J	mg/L	1	9/18/2021 6:30:41 PM	A81374
SM2340B: HARDNESS							Analyst: **ELS**	
Hardness as CaCO3	290	2.5	6.6		mg/L	1	9/14/2021 8:50:00 AM	R81263
EPA METHOD 1664B							Analyst: **dms**	
N-Hexane Extractable Material	ND	3.99	9.89		mg/L	1	9/8/2021 12:03:00 PM	62408
SM5210B: BOD							Analyst: **AG**	
Biochemical Oxygen Demand	4.9	2.0	2.0		mg/L	1	9/8/2021 4:15:00 PM	62380
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **SMS**	
E. Coli	4884	10.00	10.00		MPN/100	10	9/3/2021 5:45:00 PM	62378
SM 4500 NH3: AMMONIA							Analyst: **CJS**	
Nitrogen, Ammonia	ND	0.42	1.0		mg/L	1	9/16/2021 2:40:00 PM	R81339
SM4500-H+B / 9040C: PH							Analyst: **CAS**	
pH	8.18			H	pH units	1	9/8/2021 9:56:07 PM	R81133
EPA METHOD 365.1: TOTAL PHOSPHOROUS							Analyst: **CJS**	
Phosphorus, Total (As P)	1.3	0.050	0.050	D	mg/L	1	9/15/2021 1:42:00 PM	62548
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: **KS**	
Total Dissolved Solids	330	200	200	D	mg/L	1	9/10/2021 10:00:00 AM	62453
SM 4500 NORG C: TKN							Analyst: **EKM**	
Nitrogen, Kjeldahl, Total	2.0	1.0	2.0	JD	mg/L	1	9/17/2021 1:45:00 PM	62630
SM 2540D: TSS							Analyst: **KS**	
Suspended Solids	790	40	40	D	mg/L	1	9/9/2021 1:39:00 PM	62455

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: AMAFCA
Project: CMC
Lab ID: 2109132-004
Matrix: AQUEOUS
Client Sample ID: RG South-20210902
Collection Date: 9/2/2021 9:20:00 AM
Received Date: 9/2/2021 12:17:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 365.1: TOTAL PHOSPHOROUS							Analyst: **CJS**	
Phosphorus, Total (As P)	1.4	0.050	0.050	D	mg/L	1	9/15/2021 1:43:00 PM	62548

dissolved phosphorous

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: AMAFCA
Client Sample ID: RG Alameda-20210902
Project: CMC
Collection Date: 9/2/2021 10:30:00 AM
Lab ID: 2109132-005
Matrix: AQUEOUS
Received Date: 9/2/2021 12:17:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **SMS**	
E. Coli	554	10.00	10.00		MPN/100	10	9/3/2021 5:45:00 PM	62378

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Client:	Hall Environmental Analysis Lab	Work Order:	MBI0301
Address:	4901 Hawkins NE Suite D	Project:	MDL Projects
	Albuquerque, NM 87109	Reported:	9/21/2021 11:03
Attn:	Andy Freeman		

Analytical Results Report

Sample Location:	2109132-001A (RG North-20210901)		
Lab/Sample Number:	MBI0301-01	Collect Date:	09/01/21 10:05
Date Received:	09/08/21 12:41	Collected By:	
Matrix:	Water		

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles								
Tetrahydrofuran	ND	ug/L	0.500	2.50	9/10/21 14:05	TEC	EPA 8260D	U
Surrogate: 1,2-Dichlorobenzene-d4	*104%*		*70-130*		*9/10/21 14:05*	*TEC*	*EPA 8260D*	
Surrogate: 4-Bromofluorobenzene	*98.8%*		*70-130*		*9/10/21 14:05*	*TEC*	*EPA 8260D*	
Surrogate: Toluene-d8	*94.9%*		*70-130*		*9/10/21 14:05*	*TEC*	*EPA 8260D*	

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Analytical Results Report

(Continued)

Sample Location: 2109132-001K (RG North-20210901)
Lab/Sample Number: MBI0301-02 Collect Date: 09/01/21 10:05
Date Received: 09/08/21 12:41 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles								
Benzidine	ND	ug/L	0.833	1.67	9/13/21 23:44	MAH	EPA 8270D	
Benzo[a]anthracene	ND	ug/L	0.333	1.67	9/13/21 23:44	MAH	EPA 8270D	
Benzo[a]pyrene	ND	ug/L	0.333	1.67	9/13/21 23:44	MAH	EPA 8270D	
Benzo[b]fluoranthene	ND	ug/L	0.333	1.67	9/13/21 23:44	MAH	EPA 8270D	
Benzo[k]fluoranthene	ND	ug/L	0.333	1.67	9/13/21 23:44	MAH	EPA 8270D	
Chrysene	ND	ug/L	0.333	1.67	9/13/21 23:44	MAH	EPA 8270D	
Di (2-ethylhexyl) phthalate	ND	ug/L	0.667	1.67	9/13/21 23:44	MAH	EPA 8270D	
Dibenz(a,h)anthracene	ND	ug/L	0.333	1.67	9/13/21 23:44	MAH	EPA 8270D	
Dibenzofuran	ND	ug/L	0.333	1.67	9/13/21 23:44	MAH	EPA 8270D	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.333	1.67	9/13/21 23:44	MAH	EPA 8270D	
Pentachlorophenol	ND	ug/L	0.667	1.67	9/13/21 23:44	MAH	EPA 8270D	
Surrogate: 2,4,6-Tribromophenol	*94.0%*		*48-120*		*9/13/21 23:44*	*MAH*	*EPA 8270D*	
Surrogate: 2-Fluorobiphenyl	*107%*		*57-120*		*9/13/21 23:44*	*MAH*	*EPA 8270D*	
Surrogate: 2-Fluorophenol	*64.6%*		*37-110*		*9/13/21 23:44*	*MAH*	*EPA 8270D*	
Surrogate: Nitrobenzene-d5	*81.0%*		*65-110*		*9/13/21 23:44*	*MAH*	*EPA 8270D*	
Surrogate: Phenol-2,3,4,5,6-d5	*85.3%*		*51-112*		*9/13/21 23:44*	*MAH*	*EPA 8270D*	
Surrogate: Terphenyl-d14	*102%*		*57-133*		*9/13/21 23:44*	*MAH*	*EPA 8270D*	

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Analytical Results Report

(Continued)

Sample Location: 2109132-003A (RG South-20210902)

Lab/Sample Number: MBI0301-03 Collect Date: 09/02/21 09:20

Date Received: 09/08/21 12:41 Collected By:

Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles								
Tetrahydrofuran	ND	ug/L	0.500	2.50	9/10/21 14:34	TEC	EPA 8260D	U
Surrogate: 1,2-Dichlorobenzene-d4	*104%*		*70-130*		*9/10/21 14:34*	*TEC*	*EPA 8260D*	
Surrogate: 4-Bromofluorobenzene	*99.1%*		*70-130*		*9/10/21 14:34*	*TEC*	*EPA 8260D*	
Surrogate: Toluene-d8	*95.2%*		*70-130*		*9/10/21 14:34*	*TEC*	*EPA 8260D*	

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Analytical Results Report

(Continued)

Sample Location: 2109132-003K (RG South-20210902)
Lab/Sample Number: MBI0301-04 Collect Date: 09/02/21 09:20
Date Received: 09/08/21 12:41 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles								
Benzidine	ND	ug/L	1.25	2.50	9/14/21 0:12	MAH	EPA 8270D	
Benzo[a]anthracene	ND	ug/L	0.500	2.50	9/14/21 0:12	MAH	EPA 8270D	
Benzo[a]pyrene	ND	ug/L	0.500	2.50	9/14/21 0:12	MAH	EPA 8270D	
Benzo[b]fluoranthene	ND	ug/L	0.500	2.50	9/14/21 0:12	MAH	EPA 8270D	
Benzo[k]fluoranthene	ND	ug/L	0.500	2.50	9/14/21 0:12	MAH	EPA 8270D	
Chrysene	ND	ug/L	0.500	2.50	9/14/21 0:12	MAH	EPA 8270D	
Di (2-ethylhexyl) phthalate	ND	ug/L	1.00	2.50	9/14/21 0:12	MAH	EPA 8270D	
Dibenz(a,h)anthracene	ND	ug/L	0.500	2.50	9/14/21 0:12	MAH	EPA 8270D	
Dibenzofuran	ND	ug/L	0.500	2.50	9/14/21 0:12	MAH	EPA 8270D	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.500	2.50	9/14/21 0:12	MAH	EPA 8270D	
Pentachlorophenol	ND	ug/L	1.00	2.50	9/14/21 0:12	MAH	EPA 8270D	
Surrogate: 2,4,6-Tribromophenol	*101%*		*48-120*		*9/14/21 0:12*	*MAH*	*EPA 8270D*	
Surrogate: 2-Fluorobiphenyl	*110%*		*57-120*		*9/14/21 0:12*	*MAH*	*EPA 8270D*	
Surrogate: 2-Fluorophenol	*64.4%*		*37-110*		*9/14/21 0:12*	*MAH*	*EPA 8270D*	
Surrogate: Nitrobenzene-d5	*81.9%*		*65-110*		*9/14/21 0:12*	*MAH*	*EPA 8270D*	
Surrogate: Phenol-2,3,4,5,6-d5	*83.3%*		*51-112*		*9/14/21 0:12*	*MAH*	*EPA 8270D*	
Surrogate: Terphenyl-d14	*96.5%*		*57-133*		*9/14/21 0:12*	*MAH*	*EPA 8270D*	

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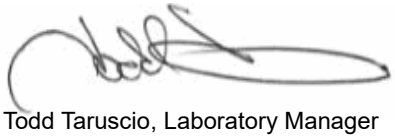
Analytical Results Report

(Continued)

Sample Location: 2109132-006A (Trip Blank)
Lab/Sample Number: MBI0301-05 Collect Date: 09/02/21 00:00
Date Received: 09/08/21 12:41 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles								
Tetrahydrofuran	ND	ug/L	0.100	0.500	9/10/21 12:03	TEC	EPA 8260D	U
Surrogate: 1,2-Dichlorobenzene-d4	*103%*		*70-130*		*9/10/21 12:03*	*TEC*	*EPA 8260D*	
Surrogate: 4-Bromofluorobenzene	*98.9%*		*70-130*		*9/10/21 12:03*	*TEC*	*EPA 8260D*	
Surrogate: Toluene-d8	*95.1%*		*70-130*		*9/10/21 12:03*	*TEC*	*EPA 8260D*	

Authorized Signature,



Todd Taruscio, Laboratory Manager

U	Compound was analyzed for but not detected
PQL	Practical Quantitation Limit
ND	Not Detected
MDL	Method Detection Limit
Dry	Sample results reported on a dry weight basis
*	Not a state-certified analyte
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was spiked or duplicated.

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Quality Control Data

Semivolatiles

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BBI0298 - SVOC Water										
Blank (BBI0298-BLK1)					Prepared: 9/8/2021 Analyzed: 9/13/2021					
bis(2-Chloroethyl)ether	ND		0.500	ug/L						
Di-n-octyl phthalate	ND		0.500	ug/L						
Di-n-butyl phthalate	ND		0.500	ug/L						
Dimethyl phthalate	ND		0.500	ug/L						
Dibenzofuran	ND		0.500	ug/L						
Chrysene	ND		0.500	ug/L						
Carbazole	ND		0.500	ug/L						
Benzyl Butyl Phthalate	ND		0.500	ug/L						
Anthracene	ND		0.500	ug/L						
bis(2-chloroisopropyl)ether	ND		0.500	ug/L						
Hexachlorobenzene	ND		0.500	ug/L						
bis(2-Chloroethoxy)methane	ND		0.500	ug/L						
Benzyl alcohol	ND		0.500	ug/L						
Benzo[k]fluoranthene	ND		0.500	ug/L						
Benzo(g,h,i)perylene	ND		0.500	ug/L						
Benzo[b]fluoranthene	ND		0.500	ug/L						
Benzo[a]pyrene	ND		0.500	ug/L						
Benzo[a]anthracene	ND		0.500	ug/L						
Benzidine	ND		0.500	ug/L						
Di (2-ethylhexyl) phthalate	ND		0.500	ug/L						
Pyridine	ND		0.500	ug/L						
Pyrene	ND		0.500	ug/L						
Phenol	ND		0.500	ug/L						
Phenanthrene	ND		0.500	ug/L						
Pentachlorophenol	ND		0.500	ug/L						
n-Nitrosodiphenylamine	ND		0.500	ug/L						
Fluoranthene	ND		0.500	ug/L						
n-nitrosodimethylamine	ND		0.500	ug/L						
Fluorene	ND		0.500	ug/L						
Nitrobenzene	ND		0.500	ug/L						
Naphthalene	ND		0.500	ug/L						
Isophorone	ND		0.500	ug/L						
Indeno(1,2,3-cd)pyrene	ND		0.500	ug/L						
Hexachloroethane	ND		0.500	ug/L						
Hexachlorocyclopentadiene	ND		0.500	ug/L						
Hexachlorobutadiene	ND		0.500	ug/L						
Dibenz(a,h)anthracene	ND		0.500	ug/L						
n-Nitroso-di-n-propylamine	ND		0.500	ug/L						
1-Methylnaphthalene	ND		0.500	ug/L						
2,6-Dinitrotoluene	ND		0.500	ug/L						
2,4-Dinitrotoluene	ND		0.500	ug/L						
2,4-Dinitrophenol	ND		0.500	ug/L						
2,4-Dimethylphenol	ND		0.500	ug/L						

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Quality Control Data
(Continued)

Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BBI0298 - SVOC Water (Continued)										
Blank (BBI0298-BLK1)					Prepared: 9/8/2021 Analyzed: 9/13/2021					
2,4-Dichlorophenol	ND		0.500	ug/L						
2,4,6-Trichlorophenol	ND		0.500	ug/L						
2,4,5-Trichlorophenol	ND		0.500	ug/L						
2-Chloronaphthalene	ND		0.500	ug/L						
2,3,4,6-Tetrachlorophenol	ND		0.500	ug/L						
1,4-Dichlorobenzene (para-Dichlorobenzene)	ND		0.500	ug/L						
1,4-Dinitrobenzene	ND		0.500	ug/L						
Aniline	ND		0.500	ug/L						
1,3-Dinitrobenzene	ND		0.500	ug/L						
Diethyl phthalate	ND		0.500	ug/L						
1,2-Diphenyl hydrazine	ND		0.500	ug/L						
1,2-Dinitrobenzene	ND		0.500	ug/L						
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	ND		0.500	ug/L						
1,2,4-Trichlorobenzene	ND		0.500	ug/L						
2,3,5,6-Tetrachlorophenol	ND		0.500	ug/L						
4-Nitroaniline	ND		0.500	ug/L						
m-Dichlorobenzene	ND		0.500	ug/L						
2-Chlorophenol	ND		0.500	ug/L						
Acenaphthylene	ND		0.500	ug/L						
4-Nitrophenol	ND		0.500	ug/L						
4-Chlorophenyl-phenylether	ND		0.500	ug/L						
4-Chloroaniline	ND		0.500	ug/L						
4-Chloro-3-methylphenol	ND		0.500	ug/L						
4-Bromophenyl-phenylether	ND		0.500	ug/L						
4,6-Dinitro-2-methylphenol	ND		0.500	ug/L						
3-Nitroaniline	ND		0.500	ug/L						
2-Methylnaphthalene	ND		0.500	ug/L						
3,3'-Dichlorobenzidine	ND		0.500	ug/L						
2-Nitrophenol	ND		0.500	ug/L						
2-Nitroaniline	ND		0.500	ug/L						
2-Methylphenol	ND		0.500	ug/L						
Acenaphthene	ND		0.500	ug/L						
3+4-Methylphenol	ND		0.500	ug/L						
Surrogate: Phenol-2,3,4,5,6-d5			*40.4*	*ug/L*	*50.5*		*79.9*	*51-112*		
Surrogate: Nitrobenzene-d5			*19.8*	*ug/L*	*25.0*		*79.4*	*65-110*		
Surrogate: Terphenyl-d14			*26.1*	*ug/L*	*25.8*		*101*	*57-133*		
Surrogate: 2-Fluorophenol			*29.1*	*ug/L*	*50.0*		*58.1*	*37-110*		
Surrogate: 2-Fluorobiphenyl			*25.7*	*ug/L*	*25.5*		*101*	*57-120*		
Surrogate: 2,4,6-Tribromophenol			*45.2*	*ug/L*	*51.8*		*87.2*	*48-120*		

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Quality Control Data
(Continued)

Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BBI0298 - SVOC Water (Continued)										
LCS (BBI0298-BS1)					Prepared: 9/8/2021 Analyzed: 9/13/2021					
2-Methylphenol	4.08		0.500	ug/L	5.00		81.6	66-120		
2-Methylnaphthalene	4.24		0.500	ug/L	5.00		84.8	67-121		
2-Chlorophenol	4.13		0.500	ug/L	5.00		82.6	64-120		
3-Nitroaniline	4.23		0.500	ug/L	5.00		84.6	49-121		
2-Chloronaphthalene	4.34		0.500	ug/L	5.00		86.8	72-120		
2,6-Dinitrotoluene	4.53		0.500	ug/L	5.00		90.6	67-116		
2-Nitroaniline	4.79		0.500	ug/L	5.00		95.8	69-120		
3+4-Methylphenol	4.26		0.500	ug/L	5.00		85.2	68-120		
4,6-Dinitro-2-methylphenol	4.72		0.500	ug/L	5.00		94.4	26-150		
2,4-Dinitrotoluene	4.79		0.500	ug/L	5.00		95.8	74-121		
4-Chloroaniline	3.01		0.500	ug/L	5.00		60.2	30-130		
1,3-Dinitrobenzene	4.70		0.500	ug/L	5.00		94.0	75-123		
4-Bromophenyl-phenylether	4.28		0.500	ug/L	5.00		85.6	71-121		
2-Nitrophenol	4.21		0.500	ug/L	5.00		84.2	69-120		
1-Methylnaphthalene	4.23		0.500	ug/L	5.00		84.6	67-121		
4-Nitroaniline	4.53		0.500	ug/L	5.00		90.6	47-128		
4-Chlorophenyl-phenylether	4.29		0.500	ug/L	5.00		85.8	72-120		
1,2,4-Trichlorobenzene	3.86		0.500	ug/L	5.00		77.2	69-120		
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	3.91		0.500	ug/L	5.00		78.2	67-120		
1,2-Dinitrobenzene	4.38		0.500	ug/L	5.00		87.6	70-120		
1,4-Dinitrobenzene	5.05		0.500	ug/L	5.00		101	71-121		
1,4-Dichlorobenzene (para-Dichlorobenzene)	3.84		0.500	ug/L	5.00		76.8	67-120		
2,4-Dinitrophenol	5.00		0.500	ug/L	5.00		100	21-128		
2,3,4,6-Tetrachlorophenol	4.25		0.500	ug/L	5.00		85.0	66-120		
2,3,5,6-Tetrachlorophenol	4.28		0.500	ug/L	5.00		85.6	52-115		
2,4,5-Trichlorophenol	4.34		0.500	ug/L	5.00		86.8	71-120		
2,4,6-Trichlorophenol	4.37		0.500	ug/L	5.00		87.4	72-120		
2,4-Dichlorophenol	4.28		0.500	ug/L	5.00		85.6	72-120		
m-Dichlorobenzene	3.77		0.500	ug/L	5.00		75.4	67-120		
Di-n-octyl phthalate	4.81		0.500	ug/L	5.00		96.2	45-127		
Fluoranthene	4.56		0.500	ug/L	5.00		91.2	70-121		
Fluorene	4.41		0.500	ug/L	5.00		88.2	74-120		
Hexachlorobenzene	4.21		0.500	ug/L	5.00		84.2	67-118		
Hexachlorobutadiene	3.65		0.500	ug/L	5.00		73.0	68-120		
Hexachloroethane	3.65		0.500	ug/L	5.00		73.0	68-120		
Indeno(1,2,3-cd)pyrene	4.24		0.500	ug/L	5.00		84.8	62-123		
Isophorone	4.61		0.500	ug/L	5.00		92.2	78-120		
Di-n-butyl phthalate	4.63		0.500	ug/L	5.00		92.6	74-124		
Nitrobenzene	4.22		0.500	ug/L	5.00		84.4	71-120		
Phenanthrene	4.45		0.500	ug/L	5.00		89.0	74-120		
n-nitrosodimethylamine	4.11		0.500	ug/L	5.00		82.2	60-120		
n-Nitroso-di-n-propylamine	4.44		0.500	ug/L	5.00		88.8	71-112		
n-Nitrosodiphenylamine	4.36		0.500	ug/L	5.00		87.2	70-121		
Pentachlorophenol	4.36		0.500	ug/L	5.00		87.2	51-118		
Phenol	4.08		0.500	ug/L	5.00		81.6	54-121		
Pyrene	4.65		0.500	ug/L	5.00		93.0	59-130		

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Quality Control Data
(Continued)

Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BBI0298 - SVOC Water (Continued)										
LCS (BBI0298-BS1)					Prepared: 9/8/2021 Analyzed: 9/13/2021					
4-Nitrophenol	4.12		0.500	ug/L	5.00		82.4	52-118		
4-Chloro-3-methylphenol	4.49		0.500	ug/L	5.00		89.8	74-120		
Naphthalene	4.13		0.500	ug/L	5.00		82.6	70-120		
Benzo(g,h,i)perylene	4.23		0.500	ug/L	5.00		84.6	63-129		
Anthracene	4.51		0.500	ug/L	5.00		90.2	76-120		
Acenaphthene	4.11		0.500	ug/L	5.00		82.2	76-120		
Benzo[a]anthracene	4.35		0.500	ug/L	5.00		87.0	80-120		
Dimethyl phthalate	4.50		0.500	ug/L	5.00		90.0	72-122		
Benzo[b]fluoranthene	4.29		0.500	ug/L	5.00		85.8	72-116		
Acenaphthylene	4.36		0.500	ug/L	5.00		87.2	75-120		
Benzo[k]fluoranthene	5.03		0.500	ug/L	5.00		101	71-121		
bis(2-Chloroethoxy)methane	4.42		0.500	ug/L	5.00		88.4	74-120		
Dibenzofuran	4.46		0.500	ug/L	5.00		89.2	75-120		
bis(2-chloroisopropyl)ether	4.18		0.500	ug/L	5.00		83.6	69-120		
Di (2-ethylhexyl) phthalate	4.91		0.500	ug/L	5.00		98.2	60-144		
Benzyl Butyl Phthalate	4.71		0.500	ug/L	5.00		94.2	62-135		
Carbazole	4.92		0.500	ug/L	5.00		98.4	76-123		
Chrysene	4.53		0.500	ug/L	5.00		90.6	74-124		
Dibenz(a,h)anthracene	4.44		0.500	ug/L	5.00		88.8	62-120		
bis(2-Chloroethyl)ether	4.33		0.500	ug/L	5.00		86.6	70-120		
Benzo[a]pyrene	4.14		0.500	ug/L	5.00		82.8	66-116		
Diethyl phthalate	4.52		0.500	ug/L	5.00		90.4	76-121		
Surrogate: Phenol-2,3,4,5,6-d5			*46.5*	*ug/L*	*50.5*		*92.0*	*51-112*		
Surrogate: Nitrobenzene-d5			*22.5*	*ug/L*	*25.0*		*90.0*	*65-110*		
Surrogate: Terphenyl-d14			*26.8*	*ug/L*	*25.8*		*104*	*57-133*		
Surrogate: 2-Fluorophenol			*34.4*	*ug/L*	*50.0*		*68.7*	*37-110*		
Surrogate: 2-Fluorobiphenyl			*29.2*	*ug/L*	*25.5*		*115*	*57-120*		
Surrogate: 2,4,6-Tribromophenol			*50.5*	*ug/L*	*51.8*		*97.6*	*48-120*		

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Quality Control Data
(Continued)

Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BBI0298 - SVOC Water (Continued)										
LCS Dup (BBI0298-BSD1)					Prepared: 9/8/2021 Analyzed: 9/13/2021					
Carbazole	4.90		0.500	ug/L	5.00		98.0	76-123	0.407	40
Chrysene	4.48		0.500	ug/L	5.00		89.6	74-124	1.11	25
Dibenz(a,h)anthracene	4.83		0.500	ug/L	5.00		96.6	62-120	8.41	30
Dibenzofuran	4.43		0.500	ug/L	5.00		88.6	75-120	0.675	25
Diethyl phthalate	4.47		0.500	ug/L	5.00		89.4	76-121	1.11	25
Di-n-butyl phthalate	4.75		0.500	ug/L	5.00		95.0	74-124	2.56	25
Dimethyl phthalate	4.51		0.500	ug/L	5.00		90.2	72-122	0.222	25
Benzyl Butyl Phthalate	4.29		0.500	ug/L	5.00		85.8	62-135	9.33	34
Di (2-ethylhexyl) phthalate	4.48		0.500	ug/L	5.00		89.6	60-144	9.16	32
bis(2-chloroisopropyl)ether	4.22		0.500	ug/L	5.00		84.4	69-120	0.952	28
bis(2-Chloroethyl)ether	4.27		0.500	ug/L	5.00		85.4	70-120	1.40	30
bis(2-Chloroethoxy)methane	4.29		0.500	ug/L	5.00		85.8	74-120	2.99	25
Benzo[k]fluoranthene	4.96		0.500	ug/L	5.00		99.2	71-121	1.40	25
Di-n-octyl phthalate	4.01		0.500	ug/L	5.00		80.2	45-127	18.1	32
Benzo[b]fluoranthene	4.10		0.500	ug/L	5.00		82.0	72-116	4.53	25
Benzo[a]pyrene	4.89		0.500	ug/L	5.00		97.8	66-116	16.6	25
Benzo(g,h,i)perylene	4.55		0.500	ug/L	5.00		91.0	63-129	7.29	25
Nitrobenzene	4.14		0.500	ug/L	5.00		82.8	71-120	1.91	25
2,6-Dinitrotoluene	4.48		0.500	ug/L	5.00		89.6	67-116	1.11	35
Benzo[a]anthracene	4.33		0.500	ug/L	5.00		86.6	80-120	0.461	25
Phenol	4.09		0.500	ug/L	5.00		81.8	54-121	0.245	33
Phenanthrene	4.50		0.500	ug/L	5.00		90.0	74-120	1.12	25
Pentachlorophenol	4.29		0.500	ug/L	5.00		85.8	51-118	1.62	25
n-Nitrosodiphenylamine	4.45		0.500	ug/L	5.00		89.0	70-121	2.04	25
Naphthalene	4.22		0.500	ug/L	5.00		84.4	70-120	2.16	25
n-nitrosodimethylamine	4.03		0.500	ug/L	5.00		80.6	60-120	1.97	35
Pyrene	4.33		0.500	ug/L	5.00		86.6	59-130	7.13	35
Isophorone	4.48		0.500	ug/L	5.00		89.6	78-120	2.86	25
Indeno(1,2,3-cd)pyrene	4.63		0.500	ug/L	5.00		92.6	62-123	8.79	25
Hexachloroethane	3.67		0.500	ug/L	5.00		73.4	68-120	0.546	28
Hexachlorobutadiene	3.74		0.500	ug/L	5.00		74.8	68-120	2.44	25
Hexachlorobenzene	4.51		0.500	ug/L	5.00		90.2	67-118	6.88	25
Fluorene	4.38		0.500	ug/L	5.00		87.6	74-120	0.683	25
Fluoranthene	4.70		0.500	ug/L	5.00		94.0	70-121	3.02	25
n-Nitroso-di-n-propylamine	4.37		0.500	ug/L	5.00		87.4	71-112	1.59	25
1,4-Dinitrobenzene	4.84		0.500	ug/L	5.00		96.8	71-121	4.25	25
2,4-Dinitrophenol	4.18		0.500	ug/L	5.00		83.6	21-128	17.9	36
2-Chlorophenol	4.13		0.500	ug/L	5.00		82.6	64-120	0.00	33
2,4,6-Trichlorophenol	4.39		0.500	ug/L	5.00		87.8	72-120	0.457	25
2,4,5-Trichlorophenol	4.39		0.500	ug/L	5.00		87.8	71-120	1.15	25
2,3,5,6-Tetrachlorophenol	4.20		0.500	ug/L	5.00		84.0	52-115	1.89	25
Anthracene	4.50		0.500	ug/L	5.00		90.0	76-120	0.222	25
1-Methylnaphthalene	4.26		0.500	ug/L	5.00		85.2	67-121	0.707	25
2,4-Dinitrotoluene	4.58		0.500	ug/L	5.00		91.6	74-121	4.48	25
1,4-Dichlorobenzene (para-Dichlorobenzene)	3.85		0.500	ug/L	5.00		77.0	67-120	0.260	25
1,3-Dinitrobenzene	4.27		0.500	ug/L	5.00		85.4	75-123	9.59	25

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Quality Control Data
(Continued)

Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BBI0298 - SVOC Water (Continued)										
LCS Dup (BBI0298-BSD1)					Prepared: 9/8/2021 Analyzed: 9/13/2021					
m-Dichlorobenzene	3.82		0.500	ug/L	5.00		76.4	67-120	1.32	25
1,2-Dinitrobenzene	3.73		0.500	ug/L	5.00		74.6	70-120	16.0	25
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	3.94		0.500	ug/L	5.00		78.8	67-120	0.764	25
1,2,4-Trichlorobenzene	4.01		0.500	ug/L	5.00		80.2	69-120	3.81	25
2,3,4,6-Tetrachlorophenol	4.03		0.500	ug/L	5.00		80.6	66-120	5.31	25
4-Bromophenyl-phenylether	4.58		0.500	ug/L	5.00		91.6	71-121	6.77	25
Acenaphthylene	4.44		0.500	ug/L	5.00		88.8	75-120	1.82	30
Acenaphthene	4.20		0.500	ug/L	5.00		84.0	76-120	2.17	25
4-Nitrophenol	3.26		0.500	ug/L	5.00		65.2	52-118	23.3	35
4-Nitroaniline	4.12		0.500	ug/L	5.00		82.4	47-128	9.48	32
4-Chlorophenyl-phenylether	4.29		0.500	ug/L	5.00		85.8	72-120	0.00	25
2,4-Dichlorophenol	4.25		0.500	ug/L	5.00		85.0	72-120	0.703	25
4-Chloro-3-methylphenol	4.22		0.500	ug/L	5.00		84.4	74-120	6.20	25
2-Chloronaphthalene	4.39		0.500	ug/L	5.00		87.8	72-120	1.15	25
4,6-Dinitro-2-methylphenol	4.38		0.500	ug/L	5.00		87.6	26-150	7.47	25
3-Nitroaniline	3.96		0.500	ug/L	5.00		79.2	49-121	6.59	39
3+4-Methylphenol	4.20		0.500	ug/L	5.00		84.0	68-120	1.42	25
2-Nitrophenol	4.24		0.500	ug/L	5.00		84.8	69-120	0.710	25
2-Nitroaniline	4.39		0.500	ug/L	5.00		87.8	69-120	8.71	25
2-Methylphenol	4.05		0.500	ug/L	5.00		81.0	66-120	0.738	25
2-Methylnaphthalene	4.27		0.500	ug/L	5.00		85.4	67-121	0.705	25
4-Chloroaniline	3.04		0.500	ug/L	5.00		60.8	30-130	0.992	40
Surrogate: Phenol-2,3,4,5,6-d5			*45.6*	*ug/L*	*50.5*		*90.3*	*51-112*		
Surrogate: Nitrobenzene-d5			*21.8*	*ug/L*	*25.0*		*87.3*	*65-110*		
Surrogate: Terphenyl-d14			*24.7*	*ug/L*	*25.8*		*95.8*	*57-133*		
Surrogate: 2-Fluorophenol			*33.5*	*ug/L*	*50.0*		*67.0*	*37-110*		
Surrogate: 2-Fluorobiphenyl			*29.9*	*ug/L*	*25.5*		*117*	*57-120*		
Surrogate: 2,4,6-Tribromophenol			*51.1*	*ug/L*	*51.8*		*98.7*	*48-120*		

Quality Control Data
(Continued)

Volatiles

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BBI0293 - VOC										
Blank (BBI0293-BLK1)					Prepared & Analyzed: 9/10/2021					
Tetrahydrofuran	ND	U	0.500	ug/L						
LCS (BBI0293-BS1)					Prepared & Analyzed: 9/10/2021					
Tetrahydrofuran	21.9		0.500	ug/L	20.0		109	80-120		
Matrix Spike (BBI0293-MS1)		**Source: MBI0298-01**			Prepared & Analyzed: 9/10/2021					
Tetrahydrofuran	108		2.50	ug/L	100	ND	108	70-130		
Matrix Spike Dup (BBI0293-MSD1)		**Source: MBI0298-01**			Prepared & Analyzed: 9/10/2021					

Anatek Labs, Inc.

1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - Fax (208) 8829246 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - fax (509) 838-4433 - email spokane@anateklabs.com

Quality Control Data
(Continued)

Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BBI0293 - VOC (Continued)										
Matrix Spike Dup (BBI0293-MSD1)		**Source: MBI0298-01**			Prepared & Analyzed: 9/10/2021					
Tetrahydrofuran	98.4		2.50	ug/L	100	ND	98.4	70-130	9.12	25

HALL ENVIRONMENTAL ANALYSIS LABORATORY

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Hall

MBI0301

Due: 09/22/21

Wel

SUB CONTRATOR:	Anatek ID	COMPANY:	Anatek Labs, Inc.	PHONE: (208) 883-2839	FAX: (208) 882-9246
ADDRESS:	1282 Alturas Dr			ACCOUNT #:	EMAIL:
CITY, STATE, ZIP:	Moscow, ID 83843				

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2109132-001A	RG North-20210901	VOAHCL	Aqueous	9/1/2021 10:05:00 AM	3	8260: Tetrahydrofuran
2	2109132-001K	RG North-20210901	1LAMGU	Aqueous	9/1/2021 10:05:00 AM	2	8270 See attached list
3	2109132-003A	RG South-20210902	VOAHCL	Aqueous	9/2/2021 9:20:00 AM	3	8260: Tetrahydrofuran
4	2109132-003K	RG South-20210902	1LAMGU	Aqueous	9/2/2021 9:20:00 AM	2	8270 See attached list
5	2109132-006A	Trip Blank	VOAHCL	Trip Blank		2	8260: Tetrahydrofuran

Sec 9/3/21

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By: SEC	Date: 9/2/2021	Time: 2:44 PM	Received By: CS	Date: 09/3/21	Time: 1241
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

TAT: Standard ☑ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:

☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY

Temp of samples _____ °C Attempt to Cool ? _____

Comments: _____

MBI0301

Due: 09/22/21

Collaborative Monitoring Cooperative - Analyses Li

Attach to Chain of Custody

Please refer to attached NPDES Permit No. NMR04A00 Appendix F. Methods and minimum (MQL's) will be those approved under 40 CFR 136 and specified in the attached permit

Analyte (Bold Indicates WQS)	CAS #	Fraction	Method #	MDL (µg/L)
Hardness (Ca + Mg)	NA	Total	200.7	2.4
Lead	7439-92-1	Dissolved	200.8	0.09
Copper	7440-50-8	Dissolved	200.8	1.06
Ammonia + organic nitrogen	7664-41-7	Total	350.1	31.32
Total Kjehldal Nitrogen	17778-88-0	Total	351.2	58.78
Nitrate + Nitrite	14797-55-8	Total	353.2	10.17
Polychlorinated biphenyls (PCBs)	1336-36-3	Total	1668	0.014
Tetrahydrofuran (THF)	109-99-9	Total	8260C	7.9
bis(2-Ethylhexyl)phthalate	117-81-7	Total	8270D	0.2
Dibenzofuran	132-64-9	Total	8270D	0.2
Indeno(1,2,3-cd)pyrene	193-39-5	Total	8270D	0.2
Benzo(b)fluoranthene	205-99-2	Total	8270D	0.1
Benzo(k)fluoranthene	207-08-9	Total	8270D	0.1
Chrysene	218-01-9	Total	8270D	0.2
Benzo(a)pyrene	50-32-8	Total	8270D	0.3
Dibenzo(a,h)anthracene	53-70-3	Total	8270D	0.3
Benzo(a)anthracene	56-55-3	Total	8270D	0.2
Dieldrin	60-57-1	Total	8081	0.1
Pentachlorophenol	87-86-5	Total	8270D	0.2
Benzidine	92-87-5	Total	8270D	0.1
Chemical Oxygen Demand	E1641638[2]	Total	HACH	5100
Gross alpha (adjusted)	NA	Total	Method 900	0.1 pCi/L
Total Dissolved Solids	E1642222[2]	Total	SM 2540C	60.4
Total Suspended Solids	NA	Total	SM 2540D	3450
Biological Oxygen Demand	N/A	Total	Standard Methods	930
Oil and Grease		Total	1664A	5000
Ecoli enumeration			SM 9223B	
pH			SM 4500	
Phosphorus		Dissolved	365.1	100
Phosphorus		Total	365.1	100
Chromium IV		Total	3500Cr C-2011	100

Anatek Labs, Inc.

Sample Receipt and Preservation Form

MBI0301

Due: 09/22/21

Client Name: HALL Project:

TAT: (Normal) RUSH: _____ days

Samples Received From: (FedEx) UPS USPS Client Courier Other: _____

Custody Seal on Cooler/Box: (Yes) No Custody Seals Intact: (Yes) No N/A

Number of Coolers/Boxes: 1 Type of Ice: (Ice/Ice Packs) Blue Ice Dry Ice None

Packing Material: (Bubble Wrap) Bags Foam/Peanuts None Other: (paper)

Cooler Temp As Read (°C): 2.6 Cooler Temp Corrected (°C): — Thermometer Used: DR-5

				Comments:
Samples Received Intact?	(Yes)	No	N/A	
Chain of Custody Present?	(Yes)	No	N/A	
Samples Received Within Hold Time?	(Yes)	No	N/A	
Samples Properly Preserved?	(Yes)	No	N/A	
VOC Vials Free of Headspace (<6mm)?	(Yes)	No	N/A	
VOC Trip Blanks Present?	(Yes)	No	N/A	
Labels and Chains Agree?	(Yes)	No	N/A	
Total Number of Sample Bottles Received: 10				

Chain of Custody Fully Completed?	(Yes)	No	N/A	
Correct Containers Received?	(Yes)	No	N/A	
Anatek Bottles Used?	Yes	(No)	Unknown	

Record preservatives (and lot numbers, if known) for containers below:

HCl - 8260 - 54441 x.6 + 2TB

Notes, comments, etc. (also use this space if contacting the client - record names and date/time)

8270 - 9L x2

Received/Inspected By: _____ Date/Time: 09/08/2021 1241

ANALYTICAL REPORT

September 13, 2021

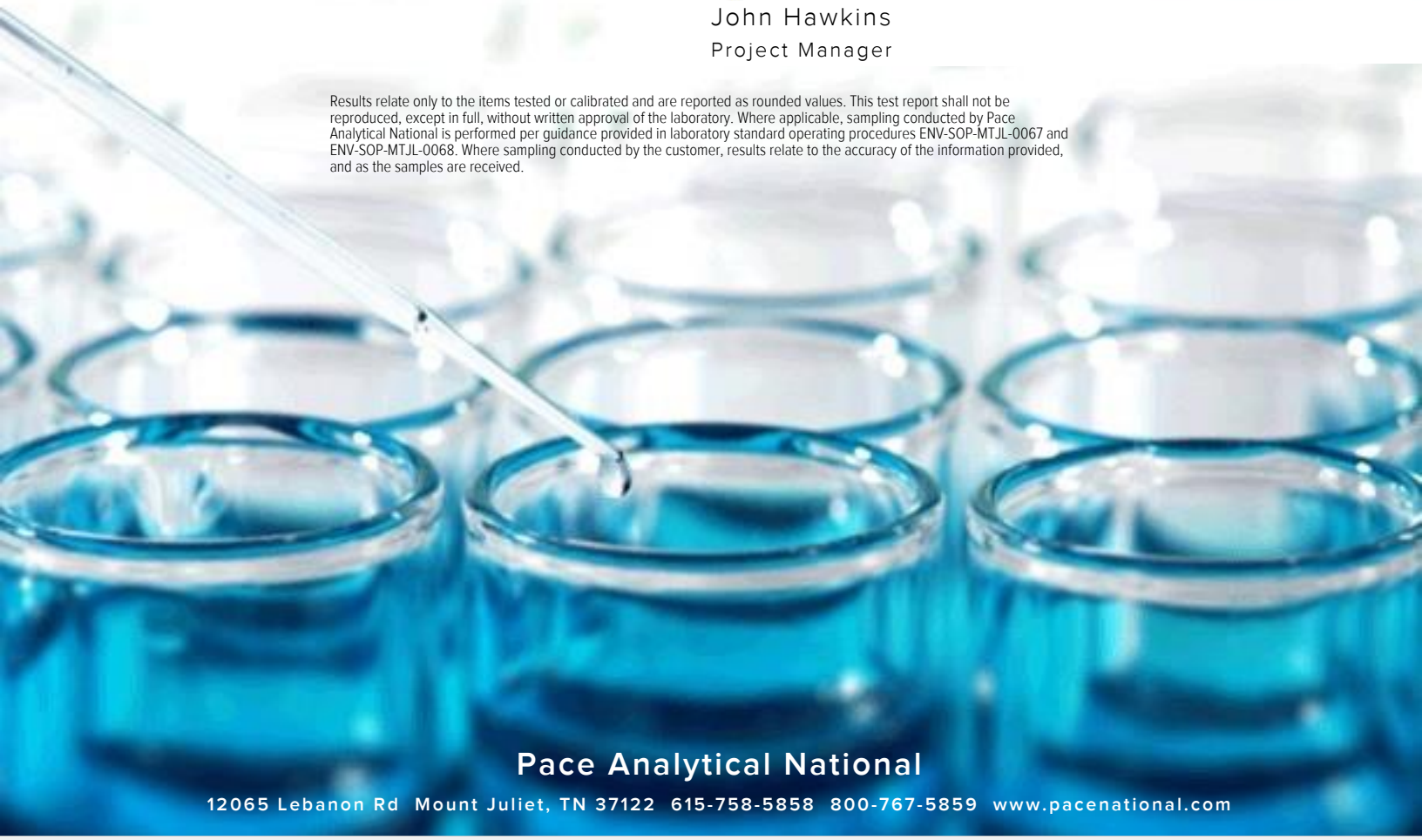
Hall Environmental Analysis Laboratory

Sample Delivery Group:	L1400264
Samples Received:	09/08/2021
Project Number:	
Description:	

Report To: Jackie Bolte
4901 Hawkins NE
Albuquerque, NM 87109

Entire Report Reviewed By:

John Hawkins
Project Manager



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

TABLE OF CONTENTS

SAMPLE SUMMARY

2109132-001 RG NORTH-20210901 L1400264-01 WW

Collected by	Collected date/time	Received date/time
	09/01/21 10:05	09/08/21 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3500Cr C-2011	WG1737107	1	09/10/21 16:47	09/10/21 16:47	GB	Mt. Juliet, TN
Wet Chemistry by Method 410.4	WG1737390	1	09/09/21 20:00	09/09/21 23:09	BFG	Mt. Juliet, TN

2109132-003 RG SOUTH-20210902 L1400264-02 WW

Collected by	Collected date/time	Received date/time
	09/02/21 09:20	09/08/21 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3500Cr C-2011	WG1737107	1	09/10/21 17:03	09/10/21 17:03	GB	Mt. Juliet, TN
Wet Chemistry by Method 410.4	WG1737390	1	09/09/21 20:00	09/09/21 23:09	BFG	Mt. Juliet, TN

CASE NARRATIVE

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

John Hawkins
Project Manager

Wet Chemistry by Method 3500Cr C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Hexavalent Chromium	ND		0.000500	1	09/10/2021 16:47	WG1737107

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	22.2		20.0	1	09/09/2021 23:09	WG1737390

Wet Chemistry by Method 3500Cr C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Hexavalent Chromium	ND		0.000500	1	09/10/2021 17:03	WG1737107

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
COD	54.2		20.0	1	09/09/2021 23:09	WG1737390

Method Blank (MB)

(MB) R3703139-1 09/10/21 11:55

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hexavalent Chromium	U		0.000150	0.000500

L1397842-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1397842-03 09/10/21 13:33 • (DUP) R3703139-3 09/10/21 13:43

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	ND	ND	1	0.000		20

L1400264-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1400264-02 09/10/21 17:03 • (DUP) R3703139-7 09/10/21 17:11

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	ND	ND	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3703139-2 09/10/21 12:03

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	0.00200	0.00200	100	90.0-110	

L1397842-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1397842-04 09/10/21 13:51 • (MS) R3703139-4 09/10/21 13:58 • (MSD) R3703139-5 09/10/21 14:06

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium	0.0500	0.109	0.152	0.152	86.1	87.0	1	90.0-110	E J6	E J6	0.294	20

L1400264-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1400264-01 09/10/21 16:47 • (MS) R3703139-6 09/10/21 16:55

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	0.0500	ND	0.0492	98.5	1	90.0-110	

Method Blank (MB)

(MB) R3702571-1 09/09/21 23:07

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
COD	U		11.7	20.0

L1400084-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1400084-01 09/09/21 23:07 • (DUP) R3702571-3 09/09/21 23:08

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
COD	ND	ND	1	200	P1	20

L1400373-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1400373-03 09/09/21 23:11 • (DUP) R3702571-6 09/09/21 23:11

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
COD	ND	ND	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3702571-2 09/09/21 23:07

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
COD	500	495	98.9	90.0-110	

L1400264-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1400264-02 09/09/21 23:09 • (MS) R3702571-4 09/09/21 23:10 • (MSD) R3702571-5 09/09/21 23:10

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
COD	500	54.2	568	570	103	103	1	80.0-120			0.399	20

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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

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

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

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: clients.hallenvironmental.com

SUB CONTRATOR: **Pace TN**	COMPANY: **PACE TN**		PHONE: **(800) 767-5859**	FAX: **(615) 758-5859**	
ADDRESS: **12065 Lebanon Rd**			ACCOUNT #:	EMAIL:	
CITY, STATE, ZIP: **Mt. Juliet, TN 37122**					

L1400264

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS	
1	2109132-001H	RG North-20210901	500HDPEH2SO4	Aqueous	9/1/2021 10:05:00 AM	1	COD	-01
~~2~~	~~2109132-001I~~	~~RG North-20210901~~	~~1LHDPEHNO3~~	~~Aqueous~~	~~9/1/2021 10:05:00 AM~~	~~1~~	~~Adjusted Gross Alpha~~	
3	2109132-001J	RG North-20210901	120mL	Aqueous	9/1/2021 10:05:00 AM	1	Cr 6	-01
4	2109132-003H	RG South-20210902	500HDPEH2SO4	Aqueous	9/2/2021 9:20:00 AM	1	COD	-02
~~5~~	~~2109132-003I~~	~~RG South-20210902~~	~~1LHDPEHNO3~~	~~Aqueous~~	~~9/2/2021 9:20:00 AM~~	~~1~~	~~Adjusted Gross Alpha~~	
6	2109132-003J	RG South-20210902	120mL	Aqueous	9/2/2021 9:20:00 AM	1	Cr 6	-02

Sample Receipt Checklist

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

B182

SPECIAL INSTRUCTIONS/COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

~~*~~ in separate cooler SGL 9/7/21

Relinquished By: SGL	Date: 9/2/2021	Time: 2:48 PM	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date: 9/8/21	Time: 9:15

TAT: Standard ✓ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY
Temp of samples 1.3+1=1.4 #205 Attempt to Cool ?
Comments

2834/8373660

CFA | Cape Fear Analytical LLC
an affiliate of The GEL Group INC

3306 Kitty Hawk Road, Suite 120 Wilmington, NC 28405
P 910.795.0421
www.capefearanalytical.com

October 01, 2021

Mr. Andy Freeman
Hall Environmental
4901 Hawkins NE
Suite D
Albuquerque, New Mexico 87109

Re: Routine Analysis
Work Order: 18708
SDG: 2109132

Dear Mr. Freeman:

Cape Fear Analytical LLC (CFA) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on September 08, 2021. This original data report has been prepared and reviewed in accordance with CFA's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at 910-795-0421.

Sincerely,

Cynde Larkins

Cynde Larkins
Project Manager

Purchase Order: IDIQ Pricing
Enclosures

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: clients.hallenvironmental.com

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

CFA WO#18708

SUB CONTRATOR: **Cape Fear Analytical**	COMPANY: **Cape Fear Analytical**	PHONE: **(910) 795-0421**	FAX:
ADDRESS: **3306 Kitty Hawk Rd Ste 120**		ACCOUNT #:	EMAIL:
CITY, STATE, ZIP: **Wilmington, NC 28405**			

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2109132-001G	RG North-20210901	1LAMGU	Aqueous	9/1/2021 10:05:00 AM	2	PCB Congeners 1668
2	2109132-003G	RG South-20210902	1LAMGU	Aqueous	9/2/2021 9:20:00 AM	2	PCB Congeners 1668

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Ple

Relinquished By: Sea	Date: 9/2/2021	Time: 2:49 PM	Received By:	Date: 9/3/21	Time: 13:20
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

TAT: Standard ☑ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY
Temp of samples 7.7 °C Attempt to Cool ? ✓
Comments:

SAMPLE RECEIPT CHECKLIST

Cape Fear Analytical

Client: HALL	Work Order: 18708
Shipping Company: FedEx	Date/Time Received: 9/8/21 13:20

Suspected Hazard Information	Yes	NA	No
Shipped as DOT Hazardous?			✓
Samples identified as Foreign Soil?			✓

DOE Site Sample Packages	Yes	NA	No*
Screened <0.5 mR/hr?		✓	
Samples < 2x background?		✓	

* Notify RSO of any responses in this column immediately.

Air Sample Receipt Specifics	Yes	NA	No
Air sample in shipment?			✓

Air Witness: _____

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: seals broken damaged container leaking container other(describe)
2	Custody seal/s present on cooler?	✓			Seal intact? (Yes) No
3	Chain of Custody documents included with shipment?	✓			
4	Samples requiring cold preservation within 0-6°C?			✓	Preservation Method: ice bags loose ice (blue ice) dry ice none other (describe) Temperature Blank present: Yes (No) 7.7+0.0=7.7
5	Aqueous samples found to have visible solids?	✓			Sample IDs, containers affected: all - minimal solids
5	Samples requiring chemical preservation at proper pH?	✓			Sample IDs, containers affected and pH observed: all - pH=7 If preservative added, Lot#:
7	Samples requiring preservation have no residual chlorine?	✓			Sample IDs, containers affected: If preservative added, Lot#:
8	Samples received within holding time?	✓			Sample IDs, tests affected:
9	Sample IDs on COC match IDs on containers?	✓			Sample IDs, containers affected:
10	Date & time of COC match date & time on containers?	✓			Sample IDs, containers affected:
11	Number of containers received match number indicated on COC?			✓	List type and number of containers / Sample IDs, containers affected: # containers listed on COC = 2 bottles per sample received 2-1 Liter - 1 per sample
12	COC form is properly signed in relinquished/received sections?	✓			

Comments:

Checklist performed by: Initials: JP Date: 9/9/21

CF-UD-F-7

Cynde Larkins

From: Andy Freeman <andy@hallenvironmental.com>
Sent: Wednesday, September 8, 2021 3:39 PM
To: Cynde Larkins
Subject: RE: 2109132

Please proceed with the analysis and note the temperature.

CFA WO#18708

Thank you,

Andy Freeman - Hall Environmental, 4901 Hawkins NE, Albuquerque, NM 87109, 505-345-3975, 505-345-4107 fax
www.hallenvironmental.com - andy@hallenvironmental.com - https://www.surveymonkey.com/r/NGVXRBV
For easy access to all of your past reports, setup an account on the Hall Environmental Web Portal. Just visit our website and follow the instructions for setting up an account.
We welcome your feedback. Please visit the survey monkey link to complete a brief survey on your experience with Hall Environmental.

From: Cynde Larkins <Cynde.Larkins@cfanalytical.com>
Sent: Wednesday, September 8, 2021 1:39 PM
To: Andy Freeman <andy@hallenvironmental.com>
Subject: 2109132

Andy,
CFA received these samples today in good condition but out of temperature at 7.7°C. Please advise if the lab can proceed with extraction and analysis.
Thank you,

Cynde Larkins
Project Manager
Cape Fear Analytical, LLC
3306 Kitty Hawk Road, Suite 120
Wilmington, NC 28405
(910) 795-0421

CFA | Cape Fear Analytical

PCB Congeners Analysis

Case Narrative

PCBC Case Narrative
Hall Environmental Analysis Laboratory (HALL)
SDG 2109132
Work Order 18708

Method/Analysis Information

Product: **PCB Congeners by EPA Method 1668A in Liquids**
Analytical Method: EPA Method 1668A
Extraction Method: SW846 3520C
Analytical Batch Number: 47901
Clean Up Batch Number: 47899
Extraction Batch Number: 47898

Sample Analysis

Samples were received at 7.7°C. (18708001,18708002).
The following samples were analyzed using the analytical protocol as established in EPA Method 1668A:

Sample ID	Client ID
12030238	Method Blank (MB)
12030239	Laboratory Control Sample (LCS)
12030240	Laboratory Control Sample Duplicate (LCSD)
18708001	2109132-001G RG North-20210901
18708002	2109132-003G RG South-20210902

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by Cape Fear Analytical LLC (CFA) as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with CF-OA-E-003 REV# 9.

Raw data reports are processed and reviewed by the analyst using the TargetLynx software package.

Calibration Information

Initial Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

Continuing Calibration Verification (CCV) Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Certification Statement
The test results presented in this document are certified to meet all requirements of the 2009 TNI Standard.

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Laboratory Control Sample Duplicate (LCSD) Recovery
The LCSD spike recoveries met the acceptance limits.

LCS/LCSD Relative Percent Difference (RPD) Statement
The RPD(s) between the LCS and LCSD met the acceptance limits.

QC Sample Designation
A matrix spike and matrix spike duplicate analysis was not required for this SDG.

Technical Information

Receipt Temperature
Samples were outside of the recommended range of 0-6°C. The client was notified of the temperature exceedance and the laboratory was instructed to proceed with analysis.

Holding Time Specifications
CFA assigns holding times based on the associated methodology, which assigns the date and time from sample collection. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG.

Miscellaneous Information

Manual Integrations
Manual integrations were required for data files in this SDG. Certain standards and QC samples required manual integrations to correctly position the baseline as set in the calibration standard injections. Where manual integrations were performed, copies of all manual integration peak profiles are included in the raw data section of this fraction.

System Configuration
This analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
HRP875_1	PCB Analysis	PCB Analysis	SPB-Octyl	30m x 0.25mm, 0.25um

Sample Data Summary

Cape Fear Analytical, LLC

3306 Kitty Hawk Road Suite 120, Wilmington, NC 28405 - (910) 795-0421 - www.capefearanalytical.com

Certificate of Analysis Report
for

HALL001 Hall Environmental Analysis Laboratory

Client SDG: 2109132 CFA Work Order: 18708

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria
** Analyte is a surrogate compound
B The target analyte was detected in the associated blank.
C Congener has coeluters. When Cxxx, refer to congener number xxx for data
J Value is estimated
U Analyte was analyzed for, but not detected above the specified detection limit.

Review/Validation

Cape Fear Analytical requires all analytical data to be verified by a qualified data reviewer.

The following data validator verified the information presented in this case narrative:

Signature:  **Name: Erin Suhrie**

Date: 01 OCT 2021 **Title: Data Validator**

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**18708001**	**Date Collected:**	**09/01/2021 10:05**	**Matrix:**	**WATER**
Client Sample:	**1668A Water**	**Date Received:**	**09/08/2021 13:20**		
Client ID:	**2109132-001G RG North-20210901**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/23/2021 08:11**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a_2-4**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**918.3 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
2051-60-7	1-MoCB	U	ND	pg/L	1.26	109
2051-61-8	2-MoCB	U	ND	pg/L	1.63	109
2051-62-9	3-MoCB	U	ND	pg/L	1.57	109
13029-08-8	4-DiCB	U	ND	pg/L	8.47	109
16605-91-7	5-DiCB	U	ND	pg/L	6.23	109
25569-80-6	6-DiCB	U	ND	pg/L	5.82	109
33284-50-3	7-DiCB	U	ND	pg/L	5.31	109
34883-43-7	8-DiCB	U	ND	pg/L	5.12	109
34883-39-1	9-DiCB	U	ND	pg/L	6.73	109
33146-45-1	10-DiCB	U	ND	pg/L	5.51	109
2050-67-1	11-DiCB	J	41.6	pg/L	6.47	109
2974-92-7	12-DiCB	CU	ND	pg/L	5.84	218
2974-90-5	13-DiCB	C12				
34883-41-5	14-DiCB	U	ND	pg/L	6.27	109
2050-68-2	15-DiCB	U	ND	pg/L	6.49	109
38444-78-9	16-TrCB	U	ND	pg/L	2.83	109
37680-66-3	17-TrCB	U	ND	pg/L	2.74	109
37680-65-2	18-TrCB	CJ	3.85	pg/L	2.31	218
38444-73-4	19-TrCB	U	ND	pg/L	2.83	109
38444-84-7	20-TrCB	CJ	6.60	pg/L	1.85	218
55702-46-0	21-TrCB	CJ	3.20	pg/L	1.89	218
38444-85-8	22-TrCB	J	2.48	pg/L	1.81	109
55720-44-0	23-TrCB	U	ND	pg/L	1.81	109
55702-45-9	24-TrCB	U	ND	pg/L	1.85	109
55712-37-3	25-TrCB	U	ND	pg/L	1.68	109
38444-81-4	26-TrCB	CU	ND	pg/L	1.96	218
38444-76-7	27-TrCB	U	ND	pg/L	2.13	109
7012-37-5	28-TrCB	C20				
15862-07-4	29-TrCB	C26				
35693-92-6	30-TrCB	C18				
16606-02-3	31-TrCB	J	5.10	pg/L	1.92	109
38444-77-8	32-TrCB	U	ND	pg/L	1.89	109

Comments:

B **The target analyte was detected in the associated blank.**
C **Congener has coeluters. When Cxxx, refer to congener number xxx for data**
J **Value is estimated**
U **Analyte was analyzed for, but not detected above the specified detection limit.**

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**18708001**	**Date Collected:**	**09/01/2021 10:05**	**Matrix:**	**WATER**
Client Sample:	**1668A Water**	**Date Received:**	**09/08/2021 13:20**		
Client ID:	**2109132-001G RG North-20210901**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/23/2021 08:11**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a_2-4**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**918.3 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
38444-86-9	33-TrCB	C21				
37680-68-5	34-TrCB	U	ND	pg/L	2.20	109
37680-69-6	35-TrCB	U	ND	pg/L	1.83	109
38444-87-0	36-TrCB	U	ND	pg/L	1.59	109
38444-90-5	37-TrCB	U	ND	pg/L	2.53	109
53555-66-1	38-TrCB	U	ND	pg/L	1.81	109
38444-88-1	39-TrCB	U	ND	pg/L	1.50	109
38444-93-8	40-TeCB	CU	ND	pg/L	2.81	218
52663-59-9	41-TeCB	U	ND	pg/L	4.18	109
36559-22-5	42-TeCB	U	ND	pg/L	3.35	109
70362-46-8	43-TeCB	U	ND	pg/L	4.53	109
41464-39-5	44-TeCB	CJ	5.03	pg/L	3.03	327
70362-45-7	45-TeCB	CJ	2.11	pg/L	1.81	218
41464-47-5	46-TeCB	U	ND	pg/L	1.85	109
2437-79-8	47-TeCB	C44				
70362-47-9	48-TeCB	U	ND	pg/L	2.96	109
41464-40-8	49-TeCB	CU	ND	pg/L	2.87	218
62796-65-0	50-TeCB	CU	ND	pg/L	1.70	218
68194-04-7	51-TeCB	C45				
35693-99-3	52-TeCB	U	ND	pg/L	5.92	218
41464-41-9	53-TeCB	C50				
15968-05-5	54-TeCB	U	ND	pg/L	1.37	109
74338-24-2	55-TeCB	U	ND	pg/L	1.66	109
41464-43-1	56-TeCB	U	ND	pg/L	1.79	109
70424-67-8	57-TeCB	U	ND	pg/L	1.76	109
41464-49-7	58-TeCB	U	ND	pg/L	1.59	109
74472-33-6	59-TeCB	CU	ND	pg/L	2.42	327
33025-41-1	60-TeCB	U	ND	pg/L	1.59	109
33284-53-6	61-TeCB	BCJ	7.21	pg/L	1.66	436
54230-22-7	62-TeCB	C59				
74472-34-7	63-TeCB	U	ND	pg/L	1.70	109
52663-58-8	64-TeCB	U	ND	pg/L	2.24	109

Comments:

B **The target analyte was detected in the associated blank.**

C **Congener has coeluters. When Cxxx, refer to congener number xxx for data**

J **Value is estimated**

U **Analyte was analyzed for, but not detected above the specified detection limit.**

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**18708001**	**Date Collected:**	**09/01/2021 10:05**	**Matrix:**	**WATER**
Client Sample:	**1668A Water**	**Date Received:**	**09/08/2021 13:20**		
Client ID:	**2109132-001G RG North-20210901**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/23/2021 08:11**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a_2-4**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**918.3 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
33284-54-7	65-TeCB	C44				
32598-10-0	66-TeCB	U	ND	pg/L	3.22	109
73575-53-8	67-TeCB	U	ND	pg/L	1.52	109
73575-52-7	68-TeCB	U	ND	pg/L	1.46	109
60233-24-1	69-TeCB	C49				
32598-11-1	70-TeCB	C61				
41464-46-4	71-TeCB	C40				
41464-42-0	72-TeCB	U	ND	pg/L	1.74	109
74338-23-1	73-TeCB	U	ND	pg/L	2.29	109
32690-93-0	74-TeCB	C61				
32598-12-2	75-TeCB	C59				
70362-48-0	76-TeCB	C61				
32598-13-3	77-TeCB	U	ND	pg/L	1.83	109
70362-49-1	78-TeCB	U	ND	pg/L	1.98	109
41464-48-6	79-TeCB	U	ND	pg/L	1.63	109
33284-52-5	80-TeCB	U	ND	pg/L	1.48	109
70362-50-4	81-TeCB	U	ND	pg/L	1.72	109
52663-62-4	82-PeCB	U	ND	pg/L	3.14	109
60145-20-2	83-PeCB	U	ND	pg/L	3.22	109
52663-60-2	84-PeCB	U	ND	pg/L	2.70	109
65510-45-4	85-PeCB	CU	ND	pg/L	2.05	327
55312-69-1	86-PeCB	CJ	5.03	pg/L	2.18	653
38380-02-8	87-PeCB	C86				
55215-17-3	88-PeCB	CU	ND	pg/L	2.59	218
73575-57-2	89-PeCB	U	ND	pg/L	3.20	109
68194-07-0	90-PeCB	CU	ND	pg/L	6.16	327
68194-05-8	91-PeCB	C88				
52663-61-3	92-PeCB	U	ND	pg/L	3.03	109
73575-56-1	93-PeCB	CU	ND	pg/L	2.33	218
73575-55-0	94-PeCB	U	ND	pg/L	2.46	109
38379-99-6	95-PeCB	J	4.97	pg/L	2.98	109
73575-54-9	96-PeCB	U	ND	pg/L	1.79	109

Comments:

B **The target analyte was detected in the associated blank.**

C **Congener has coeluters. When Cxxx, refer to congener number xxx for data**

J **Value is estimated**

U **Analyte was analyzed for, but not detected above the specified detection limit.**

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**18708001**	**Date Collected:**	**09/01/2021 10:05**	**Matrix:**	**WATER**
Client Sample:	**1668A Water**	**Date Received:**	**09/08/2021 13:20**		
Client ID:	**2109132-001G RG North-20210901**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/23/2021 08:11**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a_2-4**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**918.3 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
41464-51-1	97-PeCB	C86				
60233-25-2	98-PeCB	CU	ND	pg/L	2.59	218
38380-01-7	99-PeCB	U	ND	pg/L	2.05	109
39485-83-1	100-PeCB	C93				
37680-73-2	101-PeCB	C90				
68194-06-9	102-PeCB	C98				
60145-21-3	103-PeCB	U	ND	pg/L	2.70	109
56558-16-8	104-PeCB	U	ND	pg/L	1.63	109
32598-14-4	105-PeCB	J	3.85	pg/L	2.59	109
70424-69-0	106-PeCB	U	ND	pg/L	2.81	109
70424-68-9	107-PeCB	U	ND	pg/L	2.00	109
70362-41-3	108-PeCB	CU	ND	pg/L	2.42	218
74472-35-8	109-PeCB	C86				
38380-03-9	110-PeCB	CJ	7.36	pg/L	1.96	218
39635-32-0	111-PeCB	U	ND	pg/L	1.72	109
74472-36-9	112-PeCB	U	ND	pg/L	1.94	109
68194-10-5	113-PeCB	C90				
74472-37-0	114-PeCB	U	ND	pg/L	2.44	109
74472-38-1	115-PeCB	C110				
18259-05-7	116-PeCB	C85				
68194-11-6	117-PeCB	C85				
31508-00-6	118-PeCB	J	5.38	pg/L	2.40	109
56558-17-9	119-PeCB	C86				
68194-12-7	120-PeCB	U	ND	pg/L	2.05	109
56558-18-0	121-PeCB	U	ND	pg/L	1.76	109
76842-07-4	122-PeCB	U	ND	pg/L	3.29	109
65510-44-3	123-PeCB	U	ND	pg/L	2.40	109
70424-70-3	124-PeCB	C108				
74472-39-2	125-PeCB	C86				
57465-28-8	126-PeCB	U	ND	pg/L	2.83	109
39635-33-1	127-PeCB	U	ND	pg/L	2.66	109
38380-07-3	128-HxCB	CU	ND	pg/L	1.87	218

Comments:

B **The target analyte was detected in the associated blank.**

C **Congener has coeluters. When Cxxx, refer to congener number xxx for data**

J **Value is estimated**

U **Analyte was analyzed for, but not detected above the specified detection limit.**

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**18708001**	**Date Collected:**	**09/01/2021 10:05**	**Matrix:**	**WATER**
Client Sample:	**1668A Water**	**Date Received:**	**09/08/2021 13:20**		
Client ID:	**2109132-001G RG North-20210901**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/23/2021 08:11**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a_2-4**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**918.3 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
55215-18-4	129-HxCB	CJ	22.1	pg/L	1.94	327
52663-66-8	130-HxCB	U	ND	pg/L	2.37	109
61798-70-7	131-HxCB	U	ND	pg/L	2.33	109
38380-05-1	132-HxCB	J	4.31	pg/L	2.11	109
35694-04-3	133-HxCB	U	ND	pg/L	2.40	109
52704-70-8	134-HxCB	U	ND	pg/L	2.48	109
52744-13-5	135-HxCB	CU	ND	pg/L	6.71	218
38411-22-2	136-HxCB	U	ND	pg/L	2.44	109
35694-06-5	137-HxCB	U	ND	pg/L	1.79	109
35065-28-2	138-HxCB	C129				
56030-56-9	139-HxCB	CU	ND	pg/L	1.92	218
59291-64-4	140-HxCB	C139				
52712-04-6	141-HxCB	J	4.97	pg/L	2.13	109
41411-61-4	142-HxCB	U	ND	pg/L	2.64	109
68194-15-0	143-HxCB	U	ND	pg/L	2.81	109
68194-14-9	144-HxCB	U	ND	pg/L	1.85	109
74472-40-5	145-HxCB	U	ND	pg/L	1.24	109
51908-16-8	146-HxCB	U	ND	pg/L	2.92	109
68194-13-8	147-HxCB	CJ	14.6	pg/L	2.13	218
74472-41-6	148-HxCB	U	ND	pg/L	1.79	109
38380-04-0	149-HxCB	C147				
68194-08-1	150-HxCB	U	ND	pg/L	1.22	109
52663-63-5	151-HxCB	C135				
68194-09-2	152-HxCB	U	ND	pg/L	1.42	109
35065-27-1	153-HxCB	BCJ	20.3	pg/L	1.59	218
60145-22-4	154-HxCB	U	ND	pg/L	1.48	109
33979-03-2	155-HxCB	U	ND	pg/L	1.22	109
38380-08-4	156-HxCB	BCJ	3.35	pg/L	2.03	218
69782-90-7	157-HxCB	C156				
74472-42-7	158-HxCB	U	ND	pg/L	1.76	109
39635-35-3	159-HxCB	U	ND	pg/L	1.57	109
41411-62-5	160-HxCB	U	ND	pg/L	1.66	109

Comments:

B The target analyte was detected in the associated blank.
C Congener has coeluters. When Cxxx, refer to congener number xxx for data
J Value is estimated
U Analyte was analyzed for, but not detected above the specified detection limit.

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**18708001**	**Date Collected:**	**09/01/2021 10:05**	**Matrix:**	**WATER**
Client Sample:	**1668A Water**	**Date Received:**	**09/08/2021 13:20**		
Client ID:	**2109132-001G RG North-20210901**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/23/2021 08:11**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a_2-4**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**918.3 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
74472-43-8	161-HxCB	U	ND	pg/L	1.76	109
39635-34-2	162-HxCB	U	ND	pg/L	1.42	109
74472-44-9	163-HxCB	C129				
74472-45-0	164-HxCB	U	ND	pg/L	1.70	109
74472-46-1	165-HxCB	U	ND	pg/L	1.59	109
41411-63-6	166-HxCB	C128				
52663-72-6	167-HxCB	U	ND	pg/L	1.50	109
59291-65-5	168-HxCB	C153				
32774-16-6	169-HxCB	U	ND	pg/L	1.72	109
35065-30-6	170-HpCB	J	10.0	pg/L	2.05	109
52663-71-5	171-HpCB	CU	ND	pg/L	3.14	218
52663-74-8	172-HpCB	U	ND	pg/L	2.16	109
68194-16-1	173-HpCB	C171				
38411-25-5	174-HpCB	J	14.0	pg/L	2.03	109
40186-70-7	175-HpCB	U	ND	pg/L	2.05	109
52663-65-7	176-HpCB	U	ND	pg/L	1.61	109
52663-70-4	177-HpCB	U	ND	pg/L	7.95	109
52663-67-9	178-HpCB	U	ND	pg/L	3.99	109
52663-64-6	179-HpCB	U	ND	pg/L	5.42	109
35065-29-3	180-HpCB	CJ	25.4	pg/L	1.68	218
74472-47-2	181-HpCB	U	ND	pg/L	1.76	109
60145-23-5	182-HpCB	U	ND	pg/L	1.98	109
52663-69-1	183-HpCB	CJ	6.53	pg/L	1.85	218
74472-48-3	184-HpCB	U	ND	pg/L	1.37	109
52712-05-7	185-HpCB	C183				
74472-49-4	186-HpCB	U	ND	pg/L	1.48	109
52663-68-0	187-HpCB	J	15.1	pg/L	1.74	109
74487-85-7	188-HpCB	U	ND	pg/L	1.57	109
39635-31-9	189-HpCB	U	ND	pg/L	1.57	109
41411-64-7	190-HpCB	U	ND	pg/L	3.18	109
74472-50-7	191-HpCB	U	ND	pg/L	1.57	109
74472-51-8	192-HpCB	U	ND	pg/L	1.57	109

Comments:

B **The target analyte was detected in the associated blank.**

C **Congener has coeluters. When Cxxx, refer to congener number xxx for data**

J **Value is estimated**

U **Analyte was analyzed for, but not detected above the specified detection limit.**

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**18708001**	**Date Collected:**	**09/01/2021 10:05**	**Matrix:**	**WATER**
Client Sample:	**1668A Water**	**Date Received:**	**09/08/2021 13:20**		
Client ID:	**2109132-001G RG North-20210901**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/23/2021 08:11**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a_2-4**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**918.3 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
69782-91-8	193-HpCB	C180				
35694-08-7	194-OcCB	BJ	7.08	pg/L	1.79	109
52663-78-2	195-OcCB	J	3.20	pg/L	1.85	109
42740-50-1	196-OcCB	J	3.35	pg/L	1.70	109
33091-17-7	197-OcCB	CU	ND	pg/L	1.28	218
68194-17-2	198-OcCB	CJ	8.04	pg/L	1.66	218
52663-75-9	199-OcCB	C198				
52663-73-7	200-OcCB	C197				
40186-71-8	201-OcCB	U	ND	pg/L	1.28	109
2136-99-4	202-OcCB	U	ND	pg/L	1.85	109
52663-76-0	203-OcCB	BJ	3.99	pg/L	1.48	109
74472-52-9	204-OcCB	U	ND	pg/L	1.28	109
74472-53-0	205-OcCB	U	ND	pg/L	1.42	109
40186-72-9	206-NoCB	U	ND	pg/L	2.48	109
52663-79-3	207-NoCB	U	ND	pg/L	1.85	109
52663-77-1	208-NoCB	U	ND	pg/L	1.92	109
2051-24-3	209-DeCB	U	ND	pg/L	1.81	109
1336-36-3	Total PCB Congeners	J	270	pg/L		109

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1-MoCB		780	2180	pg/L	35.8	(15%-150%)
13C-3-MoCB		864	2180	pg/L	39.7	(15%-150%)
13C-4-DiCB		1020	2180	pg/L	46.6	(25%-150%)
13C-15-DiCB		1360	2180	pg/L	62.4	(25%-150%)
13C-19-TrCB		1330	2180	pg/L	60.9	(25%-150%)
13C-37-TrCB		1340	2180	pg/L	61.7	(25%-150%)
13C-54-TeCB		1180	2180	pg/L	54.3	(25%-150%)
13C-77-TeCB		1930	2180	pg/L	88.6	(25%-150%)
13C-81-TeCB		1940	2180	pg/L	88.9	(25%-150%)
13C-104-PeCB		1060	2180	pg/L	48.9	(25%-150%)
13C-105-PeCB		1610	2180	pg/L	73.8	(25%-150%)
13C-114-PeCB		1590	2180	pg/L	72.8	(25%-150%)
13C-118-PeCB		1560	2180	pg/L	71.6	(25%-150%)
13C-123-PeCB		1650	2180	pg/L	76.0	(25%-150%)
13C-126-PeCB		1740	2180	pg/L	79.9	(25%-150%)
13C-155-HxCB		1240	2180	pg/L	57.0	(25%-150%)
13C-156-HxCB	C	2620	4360	pg/L	60.2	(25%-150%)
13C-157-HxCB	C156L					
13C-167-HxCB		1350	2180	pg/L	62.1	(25%-150%)
13C-169-HxCB		1400	2180	pg/L	64.1	(25%-150%)
13C-188-HpCB		1670	2180	pg/L	76.6	(25%-150%)
13C-189-HpCB		1460	2180	pg/L	67.0	(25%-150%)

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**18708001**	**Date Collected:**	**09/01/2021 10:05**	**Matrix:**	**WATER**
Client Sample:	**1668A Water**	**Date Received:**	**09/08/2021 13:20**		
Client ID:	**2109132-001G RG North-20210901**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/23/2021 08:11**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a_2-4**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**918.3 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-202-OcCB		1540	2180	pg/L	70.6	(25%-150%)
13C-205-OcCB		1750	2180	pg/L	80.1	(25%-150%)
13C-206-NoCB		1840	2180	pg/L	84.6	(25%-150%)
13C-208-NoCB		1550	2180	pg/L	71.3	(25%-150%)
13C-209-DeCB		1640	2180	pg/L	75.4	(25%-150%)
13C-28-TrCB		1610	2180	pg/L	74.1	(30%-135%)
13C-111-PeCB		1830	2180	pg/L	84.0	(30%-135%)
13C-178-HpCB		1920	2180	pg/L	88.3	(30%-135%)

Comments:

B **The target analyte was detected in the associated blank.**
C **Congener has coeluters. When Cxxx, refer to congener number xxx for data**
J **Value is estimated**
U **Analyte was analyzed for, but not detected above the specified detection limit.**

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**18708002**	**Date Collected:**	**09/02/2021 09:20**	**Matrix:**	**WATER**
Client Sample:	**1668A Water**	**Date Received:**	**09/08/2021 13:20**		
Client ID:	**2109132-003G RG South-20210902**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/23/2021 09:21**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a_2-5**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**938.2 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
2051-60-7	1-MoCB	J	2.09	pg/L	0.938	107
2051-61-8	2-MoCB	J	2.03	pg/L	1.24	107
2051-62-9	3-MoCB	J	3.07	pg/L	1.22	107
13029-08-8	4-DiCB	U	ND	pg/L	7.80	107
16605-91-7	5-DiCB	U	ND	pg/L	5.52	107
25569-80-6	6-DiCB	U	ND	pg/L	5.14	107
33284-50-3	7-DiCB	U	ND	pg/L	4.71	107
34883-43-7	8-DiCB	U	ND	pg/L	4.52	107
34883-39-1	9-DiCB	U	ND	pg/L	5.95	107
33146-45-1	10-DiCB	U	ND	pg/L	5.97	107
2050-67-1	11-DiCB	J	95.7	pg/L	5.71	107
2974-92-7	12-DiCB	CU	ND	pg/L	5.16	213
2974-90-5	13-DiCB	C12				
34883-41-5	14-DiCB	U	ND	pg/L	5.54	107
2050-68-2	15-DiCB	J	10.4	pg/L	6.25	107
38444-78-9	16-TrCB	J	4.05	pg/L	2.69	107
37680-66-3	17-TrCB	U	ND	pg/L	3.97	107
37680-65-2	18-TrCB	CU	ND	pg/L	8.68	213
38444-73-4	19-TrCB	U	ND	pg/L	2.39	107
38444-84-7	20-TrCB	CU	ND	pg/L	17.0	213
55702-46-0	21-TrCB	CJ	7.08	pg/L	1.79	213
38444-85-8	22-TrCB	J	5.59	pg/L	1.71	107
55720-44-0	23-TrCB	U	ND	pg/L	1.73	107
55702-45-9	24-TrCB	U	ND	pg/L	1.75	107
55712-37-3	25-TrCB	U	ND	pg/L	1.60	107
38444-81-4	26-TrCB	CU	ND	pg/L	3.01	213
38444-76-7	27-TrCB	U	ND	pg/L	2.03	107
7012-37-5	28-TrCB	C20				
15862-07-4	29-TrCB	C26				
35693-92-6	30-TrCB	C18				
16606-02-3	31-TrCB	J	12.5	pg/L	1.81	107
38444-77-8	32-TrCB	J	3.20	pg/L	1.79	107

Comments:

B **The target analyte was detected in the associated blank.**

C **Congener has coeluters. When Cxxx, refer to congener number xxx for data**

J **Value is estimated**

U **Analyte was analyzed for, but not detected above the specified detection limit.**

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**18708002**	**Date Collected:**	**09/02/2021 09:20**	**Matrix:**	**WATER**
Client Sample:	**1668A Water**	**Date Received:**	**09/08/2021 13:20**		
Client ID:	**2109132-003G RG South-20210902**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/23/2021 09:21**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a_2-5**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**938.2 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
38444-86-9	33-TrCB	C21				
37680-68-5	34-TrCB	U	ND	pg/L	2.09	107
37680-69-6	35-TrCB	U	ND	pg/L	2.07	107
38444-87-0	36-TrCB	U	ND	pg/L	1.79	107
38444-90-5	37-TrCB	J	7.84	pg/L	2.28	107
53555-66-1	38-TrCB	U	ND	pg/L	2.05	107
38444-88-1	39-TrCB	U	ND	pg/L	1.71	107
38444-93-8	40-TeCB	CJ	5.90	pg/L	3.45	213
52663-59-9	41-TeCB	U	ND	pg/L	5.12	107
36559-22-5	42-TeCB	J	4.67	pg/L	4.11	107
70362-46-8	43-TeCB	U	ND	pg/L	5.54	107
41464-39-5	44-TeCB	CJ	19.9	pg/L	3.71	320
70362-45-7	45-TeCB	CJ	3.56	pg/L	1.96	213
41464-47-5	46-TeCB	U	ND	pg/L	2.03	107
2437-79-8	47-TeCB	C44				
70362-47-9	48-TeCB	U	ND	pg/L	3.62	107
41464-40-8	49-TeCB	CJ	10.7	pg/L	3.52	213
62796-65-0	50-TeCB	CJ	3.07	pg/L	1.85	213
68194-04-7	51-TeCB	C45				
35693-99-3	52-TeCB	J	35.8	pg/L	4.31	213
41464-41-9	53-TeCB	C50				
15968-05-5	54-TeCB	U	ND	pg/L	1.41	107
74338-24-2	55-TeCB	U	ND	pg/L	2.00	107
41464-43-1	56-TeCB	J	8.16	pg/L	2.17	107
70424-67-8	57-TeCB	U	ND	pg/L	2.15	107
41464-49-7	58-TeCB	U	ND	pg/L	1.92	107
74472-33-6	59-TeCB	CU	ND	pg/L	2.96	320
33025-41-1	60-TeCB	J	3.97	pg/L	1.94	107
33284-53-6	61-TeCB	BCJ	34.4	pg/L	2.00	426
54230-22-7	62-TeCB	C59				
74472-34-7	63-TeCB	U	ND	pg/L	2.07	107
52663-58-8	64-TeCB	J	8.16	pg/L	2.75	107

Comments:

B **The target analyte was detected in the associated blank.**

C **Congener has coeluters. When Cxxx, refer to congener number xxx for data**

J **Value is estimated**

U **Analyte was analyzed for, but not detected above the specified detection limit.**

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**18708002**	**Date Collected:**	**09/02/2021 09:20**	**Matrix:**	**WATER**
Client Sample:	**1668A Water**	**Date Received:**	**09/08/2021 13:20**		
Client ID:	**2109132-003G RG South-20210902**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/23/2021 09:21**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a_2-5**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**938.2 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
33284-54-7	65-TeCB	C44				
32598-10-0	66-TeCB	J	13.5	pg/L	2.03	107
73575-53-8	67-TeCB	U	ND	pg/L	1.83	107
73575-52-7	68-TeCB	U	ND	pg/L	1.77	107
60233-24-1	69-TeCB	C49				
32598-11-1	70-TeCB	C61				
41464-46-4	71-TeCB	C40				
41464-42-0	72-TeCB	U	ND	pg/L	2.11	107
74338-23-1	73-TeCB	U	ND	pg/L	2.79	107
32690-93-0	74-TeCB	C61				
32598-12-2	75-TeCB	C59				
70362-48-0	76-TeCB	C61				
32598-13-3	77-TeCB	J	6.31	pg/L	2.30	107
70362-49-1	78-TeCB	U	ND	pg/L	2.41	107
41464-48-6	79-TeCB	U	ND	pg/L	1.98	107
33284-52-5	80-TeCB	U	ND	pg/L	1.79	107
70362-50-4	81-TeCB	U	ND	pg/L	2.13	107
52663-62-4	82-PeCB	J	9.23	pg/L	5.73	107
60145-20-2	83-PeCB	U	ND	pg/L	5.90	107
52663-60-2	84-PeCB	J	13.1	pg/L	4.97	107
65510-45-4	85-PeCB	CJ	8.25	pg/L	3.75	320
55312-69-1	86-PeCB	CJ	47.1	pg/L	3.99	640
38380-02-8	87-PeCB	C86				
55215-17-3	88-PeCB	CJ	7.53	pg/L	4.75	213
73575-57-2	89-PeCB	U	ND	pg/L	5.86	107
68194-07-0	90-PeCB	CJ	63.7	pg/L	4.16	320
68194-05-8	91-PeCB	C88				
52663-61-3	92-PeCB	J	12.4	pg/L	5.52	107
73575-56-1	93-PeCB	CU	ND	pg/L	4.26	213
73575-55-0	94-PeCB	U	ND	pg/L	4.52	107
38379-99-6	95-PeCB	J	47.6	pg/L	5.46	107
73575-54-9	96-PeCB	U	ND	pg/L	1.79	107

Comments:

B **The target analyte was detected in the associated blank.**

C **Congener has coeluters. When Cxxx, refer to congener number xxx for data**

J **Value is estimated**

U **Analyte was analyzed for, but not detected above the specified detection limit.**

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**18708002**	**Date Collected:**	**09/02/2021 09:20**	**Matrix:**	**WATER**
Client Sample:	**1668A Water**	**Date Received:**	**09/08/2021 13:20**		
Client ID:	**2109132-003G RG South-20210902**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/23/2021 09:21**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a_2-5**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**938.2 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
41464-51-1	97-PeCB	C86				
60233-25-2	98-PeCB	CU	ND	pg/L	4.75	213
38380-01-7	99-PeCB	J	19.2	pg/L	3.77	107
39485-83-1	100-PeCB	C93				
37680-73-2	101-PeCB	C90				
68194-06-9	102-PeCB	C98				
60145-21-3	103-PeCB	U	ND	pg/L	4.95	107
56558-16-8	104-PeCB	U	ND	pg/L	1.64	107
32598-14-4	105-PeCB	J	32.6	pg/L	2.73	107
70424-69-0	106-PeCB	U	ND	pg/L	2.98	107
70424-68-9	107-PeCB	U	ND	pg/L	4.60	107
70362-41-3	108-PeCB	CU	ND	pg/L	2.56	213
74472-35-8	109-PeCB	C86				
38380-03-9	110-PeCB	CJ	93.9	pg/L	3.58	213
39635-32-0	111-PeCB	U	ND	pg/L	3.13	107
74472-36-9	112-PeCB	U	ND	pg/L	3.54	107
68194-10-5	113-PeCB	C90				
74472-37-0	114-PeCB	U	ND	pg/L	2.66	107
74472-38-1	115-PeCB	C110				
18259-05-7	116-PeCB	C85				
68194-11-6	117-PeCB	C85				
31508-00-6	118-PeCB	J	64.2	pg/L	2.56	107
56558-17-9	119-PeCB	C86				
68194-12-7	120-PeCB	U	ND	pg/L	3.75	107
56558-18-0	121-PeCB	U	ND	pg/L	3.22	107
76842-07-4	122-PeCB	U	ND	pg/L	3.50	107
65510-44-3	123-PeCB	U	ND	pg/L	2.54	107
70424-70-3	124-PeCB	C108				
74472-39-2	125-PeCB	C86				
57465-28-8	126-PeCB	U	ND	pg/L	2.92	107
39635-33-1	127-PeCB	U	ND	pg/L	2.84	107
38380-07-3	128-HxCB	CJ	20.6	pg/L	2.69	213

Comments:

B **The target analyte was detected in the associated blank.**

C **Congener has coeluters. When Cxxx, refer to congener number xxx for data**

J **Value is estimated**

U **Analyte was analyzed for, but not detected above the specified detection limit.**

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**18708002**	**Date Collected:**	**09/02/2021 09:20**	**Matrix:**	**WATER**
Client Sample:	**1668A Water**	**Date Received:**	**09/08/2021 13:20**		
Client ID:	**2109132-003G RG South-20210902**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/23/2021 09:21**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a_2-5**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**938.2 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
55215-18-4	129-HxCB	CJ	151	pg/L	2.88	320
52663-66-8	130-HxCB	J	7.74	pg/L	3.56	107
61798-70-7	131-HxCB	U	ND	pg/L	3.50	107
38380-05-1	132-HxCB	J	38.2	pg/L	3.15	107
35694-04-3	133-HxCB	U	ND	pg/L	3.58	107
52704-70-8	134-HxCB	U	ND	pg/L	4.73	107
52744-13-5	135-HxCB	CJ	38.2	pg/L	1.68	213
38411-22-2	136-HxCB	J	13.3	pg/L	1.41	107
35694-06-5	137-HxCB	J	4.73	pg/L	2.66	107
35065-28-2	138-HxCB	C129				
56030-56-9	139-HxCB	CU	ND	pg/L	2.86	213
59291-64-4	140-HxCB	C139				
52712-04-6	141-HxCB	J	25.4	pg/L	3.20	107
41411-61-4	142-HxCB	U	ND	pg/L	3.92	107
68194-15-0	143-HxCB	U	ND	pg/L	4.20	107
68194-14-9	144-HxCB	J	5.44	pg/L	1.79	107
74472-40-5	145-HxCB	U	ND	pg/L	1.19	107
51908-16-8	146-HxCB	J	16.6	pg/L	2.69	107
68194-13-8	147-HxCB	CJ	83.4	pg/L	3.18	213
74472-41-6	148-HxCB	U	ND	pg/L	1.75	107
38380-04-0	149-HxCB	C147				
68194-08-1	150-HxCB	U	ND	pg/L	1.19	107
52663-63-5	151-HxCB	C135				
68194-09-2	152-HxCB	U	ND	pg/L	1.39	107
35065-27-1	153-HxCB	CJ	105	pg/L	2.37	213
60145-22-4	154-HxCB	U	ND	pg/L	1.43	107
33979-03-2	155-HxCB	U	ND	pg/L	1.22	107
38380-08-4	156-HxCB	BCJ	16.1	pg/L	2.69	213
69782-90-7	157-HxCB	C156				
74472-42-7	158-HxCB	J	14.0	pg/L	2.17	107
39635-35-3	159-HxCB	U	ND	pg/L	2.11	107
41411-62-5	160-HxCB	U	ND	pg/L	2.45	107

Comments:

B **The target analyte was detected in the associated blank.**

C **Congener has coeluters. When Cxxx, refer to congener number xxx for data**

J **Value is estimated**

U **Analyte was analyzed for, but not detected above the specified detection limit.**

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**18708002**	**Date Collected:**	**09/02/2021 09:20**	**Matrix:**	**WATER**
Client Sample:	**1668A Water**	**Date Received:**	**09/08/2021 13:20**		
Client ID:	**2109132-003G RG South-20210902**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/23/2021 09:21**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a_2-5**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**938.2 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
74472-43-8	161-HxCB	U	ND	pg/L	2.64	107
39635-34-2	162-HxCB	U	ND	pg/L	1.92	107
74472-44-9	163-HxCB	C129				
74472-45-0	164-HxCB	J	10.3	pg/L	2.54	107
74472-46-1	165-HxCB	U	ND	pg/L	2.37	107
41411-63-6	166-HxCB	C128				
52663-72-6	167-HxCB	J	6.35	pg/L	2.03	107
59291-65-5	168-HxCB	C153				
32774-16-6	169-HxCB	U	ND	pg/L	2.26	107
35065-30-6	170-HpCB	J	40.6	pg/L	2.64	107
52663-71-5	171-HpCB	CJ	12.3	pg/L	2.77	213
52663-74-8	172-HpCB	U	ND	pg/L	9.55	107
68194-16-1	173-HpCB	C171				
38411-25-5	174-HpCB	J	42.6	pg/L	2.62	107
40186-70-7	175-HpCB	U	ND	pg/L	1.85	107
52663-65-7	176-HpCB	J	3.90	pg/L	1.47	107
52663-70-4	177-HpCB	J	27.4	pg/L	2.75	107
52663-67-9	178-HpCB	J	9.06	pg/L	2.00	107
52663-64-6	179-HpCB	J	16.2	pg/L	1.43	107
35065-29-3	180-HpCB	CJ	92.0	pg/L	2.15	213
74472-47-2	181-HpCB	U	ND	pg/L	2.28	107
60145-23-5	182-HpCB	U	ND	pg/L	1.79	107
52663-69-1	183-HpCB	CJ	26.5	pg/L	2.39	213
74472-48-3	184-HpCB	U	ND	pg/L	1.24	107
52712-05-7	185-HpCB	C183				
74472-49-4	186-HpCB	U	ND	pg/L	1.34	107
52663-68-0	187-HpCB	J	47.2	pg/L	1.58	107
74487-85-7	188-HpCB	U	ND	pg/L	1.49	107
39635-31-9	189-HpCB	U	ND	pg/L	2.34	107
41411-64-7	190-HpCB	J	9.61	pg/L	1.96	107
74472-50-7	191-HpCB	U	ND	pg/L	2.03	107
74472-51-8	192-HpCB	U	ND	pg/L	2.00	107

Comments:

B **The target analyte was detected in the associated blank.**

C **Congener has coeluters. When Cxxx, refer to congener number xxx for data**

J **Value is estimated**

U **Analyte was analyzed for, but not detected above the specified detection limit.**

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**18708002**	**Date Collected:**	**09/02/2021 09:20**	**Matrix:**	**WATER**
Client Sample:	**1668A Water**	**Date Received:**	**09/08/2021 13:20**		
Client ID:	**2109132-003G RG South-20210902**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/23/2021 09:21**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a_2-5**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**938.2 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
69782-91-8	193-HpCB	C180				
35694-08-7	194-OcCB	BJ	22.0	pg/L	1.98	107
52663-78-2	195-OcCB	J	8.83	pg/L	2.07	107
42740-50-1	196-OcCB	J	10.4	pg/L	1.88	107
33091-17-7	197-OcCB	CJ	4.01	pg/L	1.43	213
68194-17-2	198-OcCB	CJ	21.9	pg/L	1.83	213
52663-75-9	199-OcCB	C198				
52663-73-7	200-OcCB	C197				
40186-71-8	201-OcCB	J	2.54	pg/L	1.41	107
2136-99-4	202-OcCB	J	5.09	pg/L	1.62	107
52663-76-0	203-OcCB	BJ	13.2	pg/L	1.66	107
74472-52-9	204-OcCB	U	ND	pg/L	1.43	107
74472-53-0	205-OcCB	U	ND	pg/L	1.83	107
40186-72-9	206-NoCB	J	9.64	pg/L	2.98	107
52663-79-3	207-NoCB	U	ND	pg/L	2.22	107
52663-77-1	208-NoCB	U	ND	pg/L	4.22	107
2051-24-3	209-DeCB	J	7.97	pg/L	1.79	107
1336-36-3	Total PCB Congeners	J	1720	pg/L		107

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1-MoCB		909	2130	pg/L	42.6	(15%-150%)
13C-3-MoCB		980	2130	pg/L	46.0	(15%-150%)
13C-4-DiCB		1170	2130	pg/L	55.0	(25%-150%)
13C-15-DiCB		1310	2130	pg/L	61.5	(25%-150%)
13C-19-TrCB		1350	2130	pg/L	63.5	(25%-150%)
13C-37-TrCB		1300	2130	pg/L	61.1	(25%-150%)
13C-54-TeCB		1120	2130	pg/L	52.7	(25%-150%)
13C-77-TeCB		1820	2130	pg/L	85.4	(25%-150%)
13C-81-TeCB		1850	2130	pg/L	86.7	(25%-150%)
13C-104-PeCB		954	2130	pg/L	44.8	(25%-150%)
13C-105-PeCB		1470	2130	pg/L	69.1	(25%-150%)
13C-114-PeCB		1460	2130	pg/L	68.4	(25%-150%)
13C-118-PeCB		1430	2130	pg/L	67.0	(25%-150%)
13C-123-PeCB		1500	2130	pg/L	70.2	(25%-150%)
13C-126-PeCB		1670	2130	pg/L	78.2	(25%-150%)
13C-155-HxCB		1100	2130	pg/L	51.5	(25%-150%)
13C-156-HxCB	C	2420	4260	pg/L	56.6	(25%-150%)
13C-157-HxCB	C156L					
13C-167-HxCB		1230	2130	pg/L	57.6	(25%-150%)
13C-169-HxCB		1340	2130	pg/L	62.8	(25%-150%)
13C-188-HpCB		1440	2130	pg/L	67.4	(25%-150%)
13C-189-HpCB		1360	2130	pg/L	63.6	(25%-150%)

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**18708002**	**Date Collected:**	**09/02/2021 09:20**	**Matrix:**	**WATER**
Client Sample:	**1668A Water**	**Date Received:**	**09/08/2021 13:20**		
Client ID:	**2109132-003G RG South-20210902**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/23/2021 09:21**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a_2-5**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**938.2 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-202-OcCB		1320	2130	pg/L	61.9	(25%-150%)
13C-205-OcCB		1540	2130	pg/L	72.4	(25%-150%)
13C-206-NoCB		1650	2130	pg/L	77.4	(25%-150%)
13C-208-NoCB		1400	2130	pg/L	65.5	(25%-150%)
13C-209-DeCB		1440	2130	pg/L	67.5	(25%-150%)
13C-28-TrCB		1590	2130	pg/L	74.4	(30%-135%)
13C-111-PeCB		1750	2130	pg/L	82.0	(30%-135%)
13C-178-HpCB		1840	2130	pg/L	86.5	(30%-135%)

Comments:

B **The target analyte was detected in the associated blank.**

C **Congener has coeluters. When Cxxx, refer to congener number xxx for data**

J **Value is estimated**

U **Analyte was analyzed for, but not detected above the specified detection limit.**

Quality Control Summary

PCB Congeners

Surrogate Recovery Report

SDG Number: 2109132

Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
12030239	LCS for batch 47898	13C-1-MoCB		53.1	(15%-140%)
		13C-3-MoCB		58.3	(15%-140%)
		13C-4-DiCB		67.2	(30%-140%)
		13C-15-DiCB		80.8	(30%-140%)
		13C-19-TrCB		85.3	(30%-140%)
		13C-37-TrCB		64.0	(30%-140%)
		13C-54-TeCB		57.2	(30%-140%)
		13C-77-TeCB		84.3	(30%-140%)
		13C-81-TeCB		85.6	(30%-140%)
		13C-104-PeCB		55.9	(30%-140%)
		13C-105-PeCB		69.7	(30%-140%)
		13C-114-PeCB		70.5	(30%-140%)
		13C-118-PeCB		68.8	(30%-140%)
		13C-123-PeCB		73.0	(30%-140%)
		13C-126-PeCB		75.6	(30%-140%)
		13C-155-HxCB		65.9	(30%-140%)
		13C-156-HxCB	C	65.4	(30%-140%)
		13C-157-HxCB	C156L		
		13C-167-HxCB		66.8	(30%-140%)
		13C-169-HxCB		67.6	(30%-140%)
		13C-188-HpCB		83.6	(30%-140%)
		13C-189-HpCB		71.4	(30%-140%)
		13C-202-OcCB		77.8	(30%-140%)
		13C-205-OcCB		84.9	(30%-140%)
		13C-206-NoCB		90.1	(30%-140%)
		13C-208-NoCB		77.1	(30%-140%)
		13C-209-DeCB		82.2	(30%-140%)
		13C-28-TrCB		77.2	(40%-125%)
		13C-111-PeCB		87.1	(40%-125%)
		13C-178-HpCB		98.3	(40%-125%)
12030240	LCSD for batch 47898	13C-1-MoCB		51.1	(15%-140%)
		13C-3-MoCB		58.1	(15%-140%)
		13C-4-DiCB		67.8	(30%-140%)
		13C-15-DiCB		83.4	(30%-140%)
		13C-19-TrCB		84.3	(30%-140%)
		13C-37-TrCB		66.1	(30%-140%)
		13C-54-TeCB		58.5	(30%-140%)
		13C-77-TeCB		85.7	(30%-140%)
		13C-81-TeCB		87.1	(30%-140%)
		13C-104-PeCB		54.9	(30%-140%)
		13C-105-PeCB		70.2	(30%-140%)
		13C-114-PeCB		70.1	(30%-140%)
		13C-118-PeCB		68.4	(30%-140%)
		13C-123-PeCB		72.6	(30%-140%)
		13C-126-PeCB		74.8	(30%-140%)
		13C-155-HxCB		63.3	(30%-140%)
		13C-156-HxCB	C	63.6	(30%-140%)
		13C-157-HxCB	C156L		
		13C-167-HxCB		64.4	(30%-140%)
		13C-169-HxCB		66.2	(30%-140%)
		13C-188-HpCB		81.7	(30%-140%)
		13C-189-HpCB		69.5	(30%-140%)

Surrogate Recovery Report

SDG Number: 2109132

Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
12030240	LCSD for batch 47898	13C-202-OcCB		76.3	(30%-140%)
		13C-205-OcCB		81.2	(30%-140%)
		13C-206-NoCB		84.7	(30%-140%)
		13C-208-NoCB		75.5	(30%-140%)
		13C-209-DeCB		77.0	(30%-140%)
		13C-28-TrCB		71.3	(40%-125%)
		13C-111-PeCB		80.9	(40%-125%)
		13C-178-HpCB		86.5	(40%-125%)
12030238	MB for batch 47898	13C-1-MoCB		36.6	(15%-150%)
		13C-3-MoCB		39.9	(15%-150%)
		13C-4-DiCB		47.9	(25%-150%)
		13C-15-DiCB		60.2	(25%-150%)
		13C-19-TrCB		59.9	(25%-150%)
		13C-37-TrCB		52.5	(25%-150%)
		13C-54-TeCB		47.0	(25%-150%)
		13C-77-TeCB		68.3	(25%-150%)
		13C-81-TeCB		68.5	(25%-150%)
		13C-104-PeCB		44.0	(25%-150%)
		13C-105-PeCB		57.8	(25%-150%)
		13C-114-PeCB		57.7	(25%-150%)
		13C-118-PeCB		56.2	(25%-150%)
		13C-123-PeCB		59.2	(25%-150%)
		13C-126-PeCB		60.9	(25%-150%)
		13C-155-HxCB		50.0	(25%-150%)
		13C-156-HxCB	C	49.2	(25%-150%)
		13C-157-HxCB	C156L		
		13C-167-HxCB		50.2	(25%-150%)
		13C-169-HxCB		51.5	(25%-150%)
		13C-188-HpCB		67.2	(25%-150%)
		13C-189-HpCB		55.8	(25%-150%)
		13C-202-OcCB		59.6	(25%-150%)
		13C-205-OcCB		65.5	(25%-150%)
		13C-206-NoCB		69.3	(25%-150%)
		13C-208-NoCB		61.0	(25%-150%)
		13C-209-DeCB		62.0	(25%-150%)
		13C-28-TrCB		60.1	(30%-135%)
		13C-111-PeCB		69.1	(30%-135%)
		13C-178-HpCB		73.3	(30%-135%)
18708001	2109132-001G RG North-20210901	13C-1-MoCB		35.8	(15%-150%)
		13C-3-MoCB		39.7	(15%-150%)
		13C-4-DiCB		46.6	(25%-150%)
		13C-15-DiCB		62.4	(25%-150%)
		13C-19-TrCB		60.9	(25%-150%)
		13C-37-TrCB		61.7	(25%-150%)
		13C-54-TeCB		54.3	(25%-150%)
		13C-77-TeCB		88.6	(25%-150%)
		13C-81-TeCB		88.9	(25%-150%)
		13C-104-PeCB		48.9	(25%-150%)
		13C-105-PeCB		73.8	(25%-150%)
		13C-114-PeCB		72.8	(25%-150%)
		13C-118-PeCB		71.6	(25%-150%)

PCB Congeners

Surrogate Recovery Report

SDG Number: 2109132

Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
18708001	2109132-001G RG North-20210901	13C-123-PeCB		76.0	(25%-150%)
		13C-126-PeCB		79.9	(25%-150%)
		13C-155-HxCB		57.0	(25%-150%)
		13C-156-HxCB	C	60.2	(25%-150%)
		13C-157-HxCB	C156L		
		13C-167-HxCB		62.1	(25%-150%)
		13C-169-HxCB		64.1	(25%-150%)
		13C-188-HpCB		76.6	(25%-150%)
		13C-189-HpCB		67.0	(25%-150%)
		13C-202-OcCB		70.6	(25%-150%)
		13C-205-OcCB		80.1	(25%-150%)
		13C-206-NoCB		84.6	(25%-150%)
		13C-208-NoCB		71.3	(25%-150%)
		13C-209-DeCB		75.4	(25%-150%)
		13C-28-TrCB		74.1	(30%-135%)
		13C-111-PeCB		84.0	(30%-135%)
		13C-178-HpCB		88.3	(30%-135%)
18708002	2109132-003G RG South-20210902	13C-1-MoCB		42.6	(15%-150%)
		13C-3-MoCB		46.0	(15%-150%)
		13C-4-DiCB		55.0	(25%-150%)
		13C-15-DiCB		61.5	(25%-150%)
		13C-19-TrCB		63.5	(25%-150%)
		13C-37-TrCB		61.1	(25%-150%)
		13C-54-TeCB		52.7	(25%-150%)
		13C-77-TeCB		85.4	(25%-150%)
		13C-81-TeCB		86.7	(25%-150%)
		13C-104-PeCB		44.8	(25%-150%)
		13C-105-PeCB		69.1	(25%-150%)
		13C-114-PeCB		68.4	(25%-150%)
		13C-118-PeCB		67.0	(25%-150%)
		13C-123-PeCB		70.2	(25%-150%)
		13C-126-PeCB		78.2	(25%-150%)
		13C-155-HxCB		51.5	(25%-150%)
		13C-156-HxCB	C	56.6	(25%-150%)
		13C-157-HxCB	C156L		
		13C-167-HxCB		57.6	(25%-150%)
		13C-169-HxCB		62.8	(25%-150%)
		13C-188-HpCB		67.4	(25%-150%)
		13C-189-HpCB		63.6	(25%-150%)
		13C-202-OcCB		61.9	(25%-150%)
		13C-205-OcCB		72.4	(25%-150%)
		13C-206-NoCB		77.4	(25%-150%)
		13C-208-NoCB		65.5	(25%-150%)
		13C-209-DeCB		67.5	(25%-150%)
		13C-28-TrCB		74.4	(30%-135%)
		13C-111-PeCB		82.0	(30%-135%)
		13C-178-HpCB		86.5	(30%-135%)

* Recovery outside Acceptance Limits

Column to be used to flag recovery values

D Sample Diluted

PCB Congeners

Quality Control Summary
Spike Recovery Report

SDG Number: 2109132 **Sample Type:** Laboratory Control Sample

Client ID: LCS for batch 47898 **Matrix:** WATER

Lab Sample ID: 12030239

Instrument: HRP875 **Analysis Date:** 09/22/2021 18:01 **Dilution:** 1

Analyst: MJC **Prep Batch ID:** 47898

Batch ID: 47901

CAS No.		Parmname	Amount Added pg/L		Spike Conc. pg/L	Recovery %	Acceptance Limits
2051-60-7	LCS	1-MoCB	500		433	86.7	50-150
2051-62-9	LCS	3-MoCB	500		481	96.1	50-150
13029-08-8	LCS	4-DiCB	500		427	85.5	50-150
2050-68-2	LCS	15-DiCB	500		494	98.8	50-150
38444-73-4	LCS	19-TrCB	500		454	90.9	50-150
38444-90-5	LCS	37-TrCB	500		477	95.4	50-150
15968-05-5	LCS	54-TeCB	1000		1040	104	50-150
32598-13-3	LCS	77-TeCB	1000		928	92.8	50-150
70362-50-4	LCS	81-TeCB	1000		792	79.2	50-150
56558-16-8	LCS	104-PeCB	1000		1080	108	50-150
32598-14-4	LCS	105-PeCB	1000		887	88.7	50-150
74472-37-0	LCS	114-PeCB	1000		1080	108	50-150
31508-00-6	LCS	118-PeCB	1000		1050	105	50-150
65510-44-3	LCS	123-PeCB	1000		989	98.9	50-150
57465-28-8	LCS	126-PeCB	1000		967	96.7	50-150
33979-03-2	LCS	155-HxCB	1000		1040	104	50-150
38380-08-4	LCS	156-HxCB	2000	C	2160	108	50-150
69782-90-7	LCS	157-HxCB		C156			
52663-72-6	LCS	167-HxCB	1000		1020	102	50-150
32774-16-6	LCS	169-HxCB	1000		964	96.4	50-150
74487-85-7	LCS	188-HpCB	1000		954	95.4	50-150
39635-31-9	LCS	189-HpCB	1000		976	97.6	50-150
2136-99-4	LCS	202-OcCB	1500		1600	107	50-150
74472-53-0	LCS	205-OcCB	1500		1380	91.8	50-150
40186-72-9	LCS	206-NoCB	1500		1360	90.8	50-150
52663-77-1	LCS	208-NoCB	1500		1600	107	50-150
2051-24-3	LCS	209-DeCB	1500		1470	97.7	50-150

PCB Congeners

Quality Control Summary
Spike Recovery Report

SDG Number: 2109132 **Sample Type:** Laboratory Control Sample Duplicate

Client ID: LCSD for batch 47898 **Matrix:** WATER

Lab Sample ID: 12030240

Instrument: HRP875 **Analysis Date:** 09/22/2021 19:11 **Dilution:** 1

Analyst: MJC **Prep Batch ID:** 47898

Batch ID: 47901

CAS No.		Parmname	Amount Added pg/L		Spike Conc. pg/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
2051-60-7	LCSD	1-MoCB	500		447	89.4	50-150	3.06	0-20
2051-62-9	LCSD	3-MoCB	500		504	101	50-150	4.68	0-20
13029-08-8	LCSD	4-DiCB	500		434	86.9	50-150	1.62	0-20
2050-68-2	LCSD	15-DiCB	500		507	101	50-150	2.49	0-20
38444-73-4	LCSD	19-TrCB	500		478	95.7	50-150	5.12	0-20
38444-90-5	LCSD	37-TrCB	500		484	96.8	50-150	1.48	0-20
15968-05-5	LCSD	54-TeCB	1000		1040	104	50-150	0.148	0-20
32598-13-3	LCSD	77-TeCB	1000		937	93.7	50-150	0.912	0-20
70362-50-4	LCSD	81-TeCB	1000		808	80.8	50-150	2.01	0-20
56558-16-8	LCSD	104-PeCB	1000		1090	109	50-150	0.877	0-20
32598-14-4	LCSD	105-PeCB	1000		905	90.5	50-150	2.10	0-20
74472-37-0	LCSD	114-PeCB	1000		1110	111	50-150	2.80	0-20
31508-00-6	LCSD	118-PeCB	1000		1070	107	50-150	1.55	0-20
65510-44-3	LCSD	123-PeCB	1000		1000	100	50-150	1.49	0-20
57465-28-8	LCSD	126-PeCB	1000		1010	101	50-150	4.46	0-20
33979-03-2	LCSD	155-HxCB	1000		1050	105	50-150	1.34	0-20
38380-08-4	LCSD	156-HxCB	2000	C	2200	110	50-150	1.40	0-20
69782-90-7	LCSD	157-HxCB		C156					
52663-72-6	LCSD	167-HxCB	1000		1030	103	50-150	1.29	0-20
32774-16-6	LCSD	169-HxCB	1000		990	99	50-150	2.65	0-20
74487-85-7	LCSD	188-HpCB	1000		980	98	50-150	2.75	0-20
39635-31-9	LCSD	189-HpCB	1000		1000	100	50-150	2.82	0-20
2136-99-4	LCSD	202-OcCB	1500		1610	107	50-150	0.759	0-20
74472-53-0	LCSD	205-OcCB	1500		1390	92.8	50-150	1.12	0-20
40186-72-9	LCSD	206-NoCB	1500		1380	92.3	50-150	1.71	0-20
52663-77-1	LCSD	208-NoCB	1500		1610	107	50-150	0.721	0-20
2051-24-3	LCSD	209-DeCB	1500		1490	99.2	50-150	1.50	0-20

Method Blank Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Matrix:**	**WATER**
Client ID:	**MB for batch 47898**	**Instrument ID:**	**HRP875**	**Data File:**	**d22sep21a-5**
Lab Sample ID:	**12030238**	**Prep Date:**	**21-SEP-21**	**Analyzed:**	**09/22/21 20:21**
Column:					

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 47898	12030239	d22sep21a-3	09/22/21	1801
02	LCSD for batch 47898	12030240	d22sep21a-4	09/22/21	1911
03	2109132-001G RG North-20210901	18708001	d22sep21a_2-4	09/23/21	0811
04	2109132-003G RG South-20210902	18708002	d22sep21a_2-5	09/23/21	0921

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**12030238**			**Matrix:**	**WATER**
Client Sample:	**QC for batch 47898**				
Client ID:	**MB for batch 47898**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/22/2021 20:21**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a-5**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**1000 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
2051-60-7	1-MoCB	U	ND	pg/L	1.48	100
2051-61-8	2-MoCB	U	ND	pg/L	2.02	100
2051-62-9	3-MoCB	U	ND	pg/L	1.86	100
13029-08-8	4-DiCB	U	ND	pg/L	12.2	100
16605-91-7	5-DiCB	U	ND	pg/L	9.28	100
25569-80-6	6-DiCB	U	ND	pg/L	8.66	100
33284-50-3	7-DiCB	U	ND	pg/L	7.94	100
34883-43-7	8-DiCB	U	ND	pg/L	7.82	100
34883-39-1	9-DiCB	U	ND	pg/L	10.3	100
33146-45-1	10-DiCB	U	ND	pg/L	8.30	100
2050-67-1	11-DiCB	U	ND	pg/L	52.4	100
2974-92-7	12-DiCB	CU	ND	pg/L	8.88	200
2974-90-5	13-DiCB	C12				
34883-41-5	14-DiCB	U	ND	pg/L	9.44	100
2050-68-2	15-DiCB	U	ND	pg/L	9.80	100
38444-78-9	16-TrCB	U	ND	pg/L	3.14	100
37680-66-3	17-TrCB	U	ND	pg/L	3.18	100
37680-65-2	18-TrCB	CU	ND	pg/L	2.62	200
38444-73-4	19-TrCB	U	ND	pg/L	3.28	100
38444-84-7	20-TrCB	CU	ND	pg/L	2.08	200
55702-46-0	21-TrCB	CU	ND	pg/L	2.20	200
38444-85-8	22-TrCB	U	ND	pg/L	2.08	100
55720-44-0	23-TrCB	U	ND	pg/L	2.10	100
55702-45-9	24-TrCB	U	ND	pg/L	2.14	100
55712-37-3	25-TrCB	U	ND	pg/L	1.94	100
38444-81-4	26-TrCB	CU	ND	pg/L	2.24	200
38444-76-7	27-TrCB	U	ND	pg/L	2.48	100
7012-37-5	28-TrCB	C20				
15862-07-4	29-TrCB	C26				
35693-92-6	30-TrCB	C18				
16606-02-3	31-TrCB	U	ND	pg/L	2.46	100
38444-77-8	32-TrCB	U	ND	pg/L	2.18	100

Comments:

C Congener has coeluters. When Cxxx, refer to congener number xxx for data

J Value is estimated

U Analyte was analyzed for, but not detected above the specified detection limit.

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**12030238**			**Matrix:**	**WATER**
Client Sample:	**QC for batch 47898**				
Client ID:	**MB for batch 47898**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/22/2021 20:21**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a-5**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**1000 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
38444-86-9	33-TrCB	C21				
37680-68-5	34-TrCB	U	ND	pg/L	2.44	100
37680-69-6	35-TrCB	U	ND	pg/L	2.52	100
38444-87-0	36-TrCB	U	ND	pg/L	2.24	100
38444-90-5	37-TrCB	U	ND	pg/L	2.58	100
53555-66-1	38-TrCB	U	ND	pg/L	2.52	100
38444-88-1	39-TrCB	U	ND	pg/L	2.10	100
38444-93-8	40-TeCB	CU	ND	pg/L	2.56	200
52663-59-9	41-TeCB	U	ND	pg/L	3.92	100
36559-22-5	42-TeCB	U	ND	pg/L	3.08	100
70362-46-8	43-TeCB	U	ND	pg/L	4.04	100
41464-39-5	44-TeCB	CU	ND	pg/L	2.78	300
70362-45-7	45-TeCB	CU	ND	pg/L	2.38	200
41464-47-5	46-TeCB	U	ND	pg/L	2.46	100
2437-79-8	47-TeCB	C44				
70362-47-9	48-TeCB	U	ND	pg/L	2.72	100
41464-40-8	49-TeCB	CU	ND	pg/L	2.62	200
62796-65-0	50-TeCB	CU	ND	pg/L	2.24	200
68194-04-7	51-TeCB	C45				
35693-99-3	52-TeCB	U	ND	pg/L	3.36	200
41464-41-9	53-TeCB	C50				
15968-05-5	54-TeCB	U	ND	pg/L	1.80	100
74338-24-2	55-TeCB	U	ND	pg/L	2.46	100
41464-43-1	56-TeCB	U	ND	pg/L	2.64	100
70424-67-8	57-TeCB	U	ND	pg/L	2.60	100
41464-49-7	58-TeCB	U	ND	pg/L	2.30	100
74472-33-6	59-TeCB	CU	ND	pg/L	2.24	300
33025-41-1	60-TeCB	U	ND	pg/L	2.38	100
33284-53-6	61-TeCB	CJ	5.62	pg/L	2.46	400
54230-22-7	62-TeCB	C59				
74472-34-7	63-TeCB	U	ND	pg/L	2.56	100
52663-58-8	64-TeCB	U	ND	pg/L	2.10	100

Comments:

C Congener has coeluters. When Cxxx, refer to congener number xxx for data

J Value is estimated

U Analyte was analyzed for, but not detected above the specified detection limit.

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**12030238**			**Matrix:**	**WATER**
Client Sample:	**QC for batch 47898**				
Client ID:	**MB for batch 47898**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/22/2021 20:21**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a-5**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**1000 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
33284-54-7	65-TeCB	C44				
32598-10-0	66-TeCB	U	ND	pg/L	2.52	100
73575-53-8	67-TeCB	U	ND	pg/L	2.28	100
73575-52-7	68-TeCB	U	ND	pg/L	2.14	100
60233-24-1	69-TeCB	C49				
32598-11-1	70-TeCB	C61				
41464-46-4	71-TeCB	C40				
41464-42-0	72-TeCB	U	ND	pg/L	2.56	100
74338-23-1	73-TeCB	U	ND	pg/L	2.12	100
32690-93-0	74-TeCB	C61				
32598-12-2	75-TeCB	C59				
70362-48-0	76-TeCB	C61				
32598-13-3	77-TeCB	U	ND	pg/L	2.68	100
70362-49-1	78-TeCB	U	ND	pg/L	3.02	100
41464-48-6	79-TeCB	U	ND	pg/L	2.48	100
33284-52-5	80-TeCB	U	ND	pg/L	2.20	100
70362-50-4	81-TeCB	U	ND	pg/L	2.60	100
52663-62-4	82-PeCB	U	ND	pg/L	4.58	100
60145-20-2	83-PeCB	U	ND	pg/L	4.64	100
52663-60-2	84-PeCB	U	ND	pg/L	3.82	100
65510-45-4	85-PeCB	CU	ND	pg/L	2.96	300
55312-69-1	86-PeCB	CU	ND	pg/L	3.08	600
38380-02-8	87-PeCB	C86				
55215-17-3	88-PeCB	CU	ND	pg/L	3.66	200
73575-57-2	89-PeCB	U	ND	pg/L	4.48	100
68194-07-0	90-PeCB	CU	ND	pg/L	3.18	300
68194-05-8	91-PeCB	C88				
52663-61-3	92-PeCB	U	ND	pg/L	4.24	100
73575-56-1	93-PeCB	CU	ND	pg/L	3.26	200
73575-55-0	94-PeCB	U	ND	pg/L	3.44	100
38379-99-6	95-PeCB	U	ND	pg/L	4.20	100
73575-54-9	96-PeCB	U	ND	pg/L	2.36	100

Comments:

C Congener has coeluters. When Cxxx, refer to congener number xxx for data

J Value is estimated

U Analyte was analyzed for, but not detected above the specified detection limit.

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**12030238**			**Matrix:**	**WATER**
Client Sample:	**QC for batch 47898**				
Client ID:	**MB for batch 47898**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/22/2021 20:21**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a-5**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**1000 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
41464-51-1	97-PeCB	C86				
60233-25-2	98-PeCB	CU	ND	pg/L	3.60	200
38380-01-7	99-PeCB	U	ND	pg/L	2.80	100
39485-83-1	100-PeCB	C93				
37680-73-2	101-PeCB	C90				
68194-06-9	102-PeCB	C98				
60145-21-3	103-PeCB	U	ND	pg/L	3.76	100
56558-16-8	104-PeCB	U	ND	pg/L	2.20	100
32598-14-4	105-PeCB	U	ND	pg/L	3.74	100
70424-69-0	106-PeCB	U	ND	pg/L	4.36	100
70424-68-9	107-PeCB	U	ND	pg/L	2.90	100
70362-41-3	108-PeCB	CU	ND	pg/L	3.48	200
74472-35-8	109-PeCB	C86				
38380-03-9	110-PeCB	CU	ND	pg/L	2.86	200
39635-32-0	111-PeCB	U	ND	pg/L	2.50	100
74472-36-9	112-PeCB	U	ND	pg/L	2.90	100
68194-10-5	113-PeCB	C90				
74472-37-0	114-PeCB	U	ND	pg/L	3.52	100
74472-38-1	115-PeCB	C110				
18259-05-7	116-PeCB	C85				
68194-11-6	117-PeCB	C85				
31508-00-6	118-PeCB	U	ND	pg/L	3.44	100
56558-17-9	119-PeCB	C86				
68194-12-7	120-PeCB	U	ND	pg/L	2.98	100
56558-18-0	121-PeCB	U	ND	pg/L	2.44	100
76842-07-4	122-PeCB	U	ND	pg/L	4.80	100
65510-44-3	123-PeCB	U	ND	pg/L	3.42	100
70424-70-3	124-PeCB	C108				
74472-39-2	125-PeCB	C86				
57465-28-8	126-PeCB	U	ND	pg/L	4.22	100
39635-33-1	127-PeCB	U	ND	pg/L	4.00	100
38380-07-3	128-HxCB	CU	ND	pg/L	3.58	200

Comments:

C Congener has coeluters. When Cxxx, refer to congener number xxx for data

J Value is estimated

U Analyte was analyzed for, but not detected above the specified detection limit.

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**12030238**			**Matrix:**	**WATER**
Client Sample:	**QC for batch 47898**				
Client ID:	**MB for batch 47898**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/22/2021 20:21**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a-5**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**1000 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
55215-18-4	129-HxCB	CU	ND	pg/L	6.84	300
52663-66-8	130-HxCB	U	ND	pg/L	3.76	100
61798-70-7	131-HxCB	U	ND	pg/L	3.56	100
38380-05-1	132-HxCB	U	ND	pg/L	3.22	100
35694-04-3	133-HxCB	U	ND	pg/L	3.74	100
52704-70-8	134-HxCB	U	ND	pg/L	3.94	100
52744-13-5	135-HxCB	CU	ND	pg/L	1.86	200
38411-22-2	136-HxCB	U	ND	pg/L	1.50	100
35694-06-5	137-HxCB	U	ND	pg/L	2.82	100
35065-28-2	138-HxCB	C129				
56030-56-9	139-HxCB	CU	ND	pg/L	2.90	200
59291-64-4	140-HxCB	C139				
52712-04-6	141-HxCB	U	ND	pg/L	3.50	100
41411-61-4	142-HxCB	U	ND	pg/L	4.04	100
68194-15-0	143-HxCB	U	ND	pg/L	4.34	100
68194-14-9	144-HxCB	U	ND	pg/L	2.00	100
74472-40-5	145-HxCB	U	ND	pg/L	1.30	100
51908-16-8	146-HxCB	U	ND	pg/L	2.78	100
68194-13-8	147-HxCB	CU	ND	pg/L	3.40	200
74472-41-6	148-HxCB	U	ND	pg/L	1.92	100
38380-04-0	149-HxCB	C147				
68194-08-1	150-HxCB	U	ND	pg/L	1.28	100
52663-63-5	151-HxCB	C135				
68194-09-2	152-HxCB	U	ND	pg/L	1.50	100
35065-27-1	153-HxCB	CJ	2.90	pg/L	2.46	200
60145-22-4	154-HxCB	U	ND	pg/L	1.56	100
33979-03-2	155-HxCB	U	ND	pg/L	1.28	100
38380-08-4	156-HxCB	CJ	5.02	pg/L	2.68	200
69782-90-7	157-HxCB	C156				
74472-42-7	158-HxCB	U	ND	pg/L	2.32	100
39635-35-3	159-HxCB	U	ND	pg/L	2.06	100
41411-62-5	160-HxCB	U	ND	pg/L	2.64	100

Comments:

C Congener has coeluters. When Cxxx, refer to congener number xxx for data

J Value is estimated

U Analyte was analyzed for, but not detected above the specified detection limit.

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**12030238**			**Matrix:**	**WATER**
Client Sample:	**QC for batch 47898**				
Client ID:	**MB for batch 47898**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/22/2021 20:21**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a-5**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**1000 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
74472-43-8	161-HxCB	U	ND	pg/L	2.74	100
39635-34-2	162-HxCB	U	ND	pg/L	1.84	100
74472-44-9	163-HxCB	C129				
74472-45-0	164-HxCB	U	ND	pg/L	2.68	100
74472-46-1	165-HxCB	U	ND	pg/L	2.44	100
41411-63-6	166-HxCB	C128				
52663-72-6	167-HxCB	U	ND	pg/L	2.46	100
59291-65-5	168-HxCB	C153				
32774-16-6	169-HxCB	U	ND	pg/L	2.32	100
35065-30-6	170-HpCB	U	ND	pg/L	2.82	100
52663-71-5	171-HpCB	CU	ND	pg/L	2.84	200
52663-74-8	172-HpCB	U	ND	pg/L	2.88	100
68194-16-1	173-HpCB	C171				
38411-25-5	174-HpCB	U	ND	pg/L	2.66	100
40186-70-7	175-HpCB	U	ND	pg/L	2.04	100
52663-65-7	176-HpCB	U	ND	pg/L	1.58	100
52663-70-4	177-HpCB	U	ND	pg/L	2.78	100
52663-67-9	178-HpCB	U	ND	pg/L	2.20	100
52663-64-6	179-HpCB	U	ND	pg/L	1.56	100
35065-29-3	180-HpCB	CU	ND	pg/L	2.22	200
74472-47-2	181-HpCB	U	ND	pg/L	2.32	100
60145-23-5	182-HpCB	U	ND	pg/L	1.98	100
52663-69-1	183-HpCB	CU	ND	pg/L	2.42	200
74472-48-3	184-HpCB	U	ND	pg/L	1.34	100
52712-05-7	185-HpCB	C183				
74472-49-4	186-HpCB	U	ND	pg/L	1.46	100
52663-68-0	187-HpCB	U	ND	pg/L	1.74	100
74487-85-7	188-HpCB	U	ND	pg/L	1.50	100
39635-31-9	189-HpCB	U	ND	pg/L	2.32	100
41411-64-7	190-HpCB	U	ND	pg/L	2.16	100
74472-50-7	191-HpCB	U	ND	pg/L	2.10	100
74472-51-8	192-HpCB	U	ND	pg/L	2.08	100

Comments:

C Congener has coeluters. When Cxxx, refer to congener number xxx for data

J Value is estimated

U Analyte was analyzed for, but not detected above the specified detection limit.

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**12030238**			**Matrix:**	**WATER**
Client Sample:	**QC for batch 47898**				
Client ID:	**MB for batch 47898**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/22/2021 20:21**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a-5**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**1000 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
69782-91-8	193-HpCB	C180				
35694-08-7	194-OcCB	J	3.38	pg/L	2.26	100
52663-78-2	195-OcCB	U	ND	pg/L	2.38	100
42740-50-1	196-OcCB	U	ND	pg/L	1.98	100
33091-17-7	197-OcCB	CU	ND	pg/L	1.42	200
68194-17-2	198-OcCB	CU	ND	pg/L	1.98	200
52663-75-9	199-OcCB	C198				
52663-73-7	200-OcCB	C197				
40186-71-8	201-OcCB	U	ND	pg/L	1.42	100
2136-99-4	202-OcCB	U	ND	pg/L	1.56	100
52663-76-0	203-OcCB	J	1.88	pg/L	1.74	100
74472-52-9	204-OcCB	U	ND	pg/L	1.44	100
74472-53-0	205-OcCB	U	ND	pg/L	1.78	100
40186-72-9	206-NoCB	U	ND	pg/L	3.08	100
52663-79-3	207-NoCB	U	ND	pg/L	2.30	100
52663-77-1	208-NoCB	U	ND	pg/L	2.30	100
2051-24-3	209-DeCB	U	ND	pg/L	1.94	100
1336-36-3	Total PCB Congeners	J	18.8	pg/L		100

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1-MoCB		732	2000	pg/L	36.6	(15%-150%)
13C-3-MoCB		798	2000	pg/L	39.9	(15%-150%)
13C-4-DiCB		959	2000	pg/L	47.9	(25%-150%)
13C-15-DiCB		1200	2000	pg/L	60.2	(25%-150%)
13C-19-TrCB		1200	2000	pg/L	59.9	(25%-150%)
13C-37-TrCB		1050	2000	pg/L	52.5	(25%-150%)
13C-54-TeCB		941	2000	pg/L	47.0	(25%-150%)
13C-77-TeCB		1370	2000	pg/L	68.3	(25%-150%)
13C-81-TeCB		1370	2000	pg/L	68.5	(25%-150%)
13C-104-PeCB		880	2000	pg/L	44.0	(25%-150%)
13C-105-PeCB		1160	2000	pg/L	57.8	(25%-150%)
13C-114-PeCB		1150	2000	pg/L	57.7	(25%-150%)
13C-118-PeCB		1120	2000	pg/L	56.2	(25%-150%)
13C-123-PeCB		1180	2000	pg/L	59.2	(25%-150%)
13C-126-PeCB		1220	2000	pg/L	60.9	(25%-150%)
13C-155-HxCB		1000	2000	pg/L	50.0	(25%-150%)
13C-156-HxCB	C	1970	4000	pg/L	49.2	(25%-150%)
13C-157-HxCB	C156L					
13C-167-HxCB		1000	2000	pg/L	50.2	(25%-150%)
13C-169-HxCB		1030	2000	pg/L	51.5	(25%-150%)
13C-188-HpCB		1340	2000	pg/L	67.2	(25%-150%)
13C-189-HpCB		1120	2000	pg/L	55.8	(25%-150%)

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**12030238**			**Matrix:**	**WATER**
Client Sample:	**QC for batch 47898**				
Client ID:	**MB for batch 47898**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/22/2021 20:21**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a-5**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**1000 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-202-OcCB		1190	2000	pg/L	59.6	(25%-150%)
13C-205-OcCB		1310	2000	pg/L	65.5	(25%-150%)
13C-206-NoCB		1390	2000	pg/L	69.3	(25%-150%)
13C-208-NoCB		1220	2000	pg/L	61.0	(25%-150%)
13C-209-DeCB		1240	2000	pg/L	62.0	(25%-150%)
13C-28-TrCB		1200	2000	pg/L	60.1	(30%-135%)
13C-111-PeCB		1380	2000	pg/L	69.1	(30%-135%)
13C-178-HpCB		1470	2000	pg/L	73.3	(30%-135%)

Comments:

C **Congener has coeluters. When Cxxx, refer to congener number xxx for data**
J **Value is estimated**
U **Analyte was analyzed for, but not detected above the specified detection limit.**

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**12030239**			**Matrix:**	**WATER**
Client Sample:	**QC for batch 47898**				
Client ID:	**LCS for batch 47898**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/22/2021 18:01**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a-3**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**1000 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
2051-60-7	1-MoCB		433	pg/L	2.16	100
2051-62-9	3-MoCB		481	pg/L	2.58	100
13029-08-8	4-DiCB		427	pg/L	13.1	100
2050-68-2	15-DiCB		494	pg/L	9.78	100
38444-73-4	19-TrCB		454	pg/L	3.84	100
38444-90-5	37-TrCB		477	pg/L	7.66	100
15968-05-5	54-TeCB		1040	pg/L	1.68	100
32598-13-3	77-TeCB		928	pg/L	8.20	100
70362-50-4	81-TeCB		792	pg/L	7.64	100
56558-16-8	104-PeCB		1080	pg/L	2.12	100
32598-14-4	105-PeCB		887	pg/L	9.04	100
74472-37-0	114-PeCB		1080	pg/L	8.26	100
31508-00-6	118-PeCB		1050	pg/L	8.16	100
65510-44-3	123-PeCB		989	pg/L	7.86	100
57465-28-8	126-PeCB		967	pg/L	9.82	100
33979-03-2	155-HxCB		1040	pg/L	1.56	100
38380-08-4	156-HxCB	C	2160	pg/L	8.28	200
69782-90-7	157-HxCB	C156				
52663-72-6	167-HxCB		1020	pg/L	6.02	100
32774-16-6	169-HxCB		964	pg/L	7.04	100
74487-85-7	188-HpCB		954	pg/L	2.02	100
39635-31-9	189-HpCB		976	pg/L	3.06	100
2136-99-4	202-OcCB		1600	pg/L	1.94	100
74472-53-0	205-OcCB		1380	pg/L	2.78	100
40186-72-9	206-NoCB		1360	pg/L	3.44	100
52663-77-1	208-NoCB		1600	pg/L	2.68	100
2051-24-3	209-DeCB		1470	pg/L	1.78	100

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1-MoCB		1060	2000	pg/L	53.1	(15%-140%)
13C-3-MoCB		1170	2000	pg/L	58.3	(15%-140%)
13C-4-DiCB		1340	2000	pg/L	67.2	(30%-140%)
13C-15-DiCB		1620	2000	pg/L	80.8	(30%-140%)
13C-19-TrCB		1710	2000	pg/L	85.3	(30%-140%)
13C-37-TrCB		1280	2000	pg/L	64.0	(30%-140%)
13C-54-TeCB		1140	2000	pg/L	57.2	(30%-140%)
13C-77-TeCB		1690	2000	pg/L	84.3	(30%-140%)
13C-81-TeCB		1710	2000	pg/L	85.6	(30%-140%)
13C-104-PeCB		1120	2000	pg/L	55.9	(30%-140%)
13C-105-PeCB		1390	2000	pg/L	69.7	(30%-140%)
13C-114-PeCB		1410	2000	pg/L	70.5	(30%-140%)
13C-118-PeCB		1380	2000	pg/L	68.8	(30%-140%)

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**12030239**			**Matrix:**	**WATER**
Client Sample:	**QC for batch 47898**				
Client ID:	**LCS for batch 47898**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/22/2021 18:01**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a-3**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**1000 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-123-PeCB		1460	2000	pg/L	73.0	(30%-140%)
13C-126-PeCB		1510	2000	pg/L	75.6	(30%-140%)
13C-155-HxCB		1320	2000	pg/L	65.9	(30%-140%)
13C-156-HxCB	C	2610	4000	pg/L	65.4	(30%-140%)
13C-157-HxCB	C156L					
13C-167-HxCB		1340	2000	pg/L	66.8	(30%-140%)
13C-169-HxCB		1350	2000	pg/L	67.6	(30%-140%)
13C-188-HpCB		1670	2000	pg/L	83.6	(30%-140%)
13C-189-HpCB		1430	2000	pg/L	71.4	(30%-140%)
13C-202-OcCB		1560	2000	pg/L	77.8	(30%-140%)
13C-205-OcCB		1700	2000	pg/L	84.9	(30%-140%)
13C-206-NoCB		1800	2000	pg/L	90.1	(30%-140%)
13C-208-NoCB		1540	2000	pg/L	77.1	(30%-140%)
13C-209-DeCB		1640	2000	pg/L	82.2	(30%-140%)
13C-28-TrCB		1540	2000	pg/L	77.2	(40%-125%)
13C-111-PeCB		1740	2000	pg/L	87.1	(40%-125%)
13C-178-HpCB		1970	2000	pg/L	98.3	(40%-125%)

Comments:

C **Congener has coeluters. When Cxxx, refer to congener number xxx for data**

U **Analyte was analyzed for, but not detected above the specified detection limit.**

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**12030240**			**Matrix:**	**WATER**
Client Sample:	**QC for batch 47898**				
Client ID:	**LCSD for batch 47898**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/22/2021 19:11**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a-4**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**1000 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
2051-60-7	1-MoCB		447	pg/L	2.22	100
2051-62-9	3-MoCB		504	pg/L	2.60	100
13029-08-8	4-DiCB		434	pg/L	8.98	100
2050-68-2	15-DiCB		507	pg/L	7.66	100
38444-73-4	19-TrCB		478	pg/L	3.56	100
38444-90-5	37-TrCB		484	pg/L	2.84	100
15968-05-5	54-TeCB		1040	pg/L	1.44	100
32598-13-3	77-TeCB		937	pg/L	6.96	100
70362-50-4	81-TeCB		808	pg/L	6.58	100
56558-16-8	104-PeCB		1090	pg/L	1.70	100
32598-14-4	105-PeCB		905	pg/L	7.98	100
74472-37-0	114-PeCB		1110	pg/L	7.72	100
31508-00-6	118-PeCB		1070	pg/L	7.52	100
65510-44-3	123-PeCB		1000	pg/L	7.36	100
57465-28-8	126-PeCB		1010	pg/L	9.14	100
33979-03-2	155-HxCB		1050	pg/L	9.20	100
38380-08-4	156-HxCB	C	2200	pg/L	7.88	200
69782-90-7	157-HxCB	C156				
52663-72-6	167-HxCB		1030	pg/L	5.84	100
32774-16-6	169-HxCB		990	pg/L	6.86	100
74487-85-7	188-HpCB		980	pg/L	1.50	100
39635-31-9	189-HpCB		1000	pg/L	4.86	100
2136-99-4	202-OcCB		1610	pg/L	1.56	100
74472-53-0	205-OcCB		1390	pg/L	4.38	100
40186-72-9	206-NoCB		1380	pg/L	2.54	100
52663-77-1	208-NoCB		1610	pg/L	1.86	100
2051-24-3	209-DeCB		1490	pg/L	1.50	100

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1-MoCB		1020	2000	pg/L	51.1	(15%-140%)
13C-3-MoCB		1160	2000	pg/L	58.1	(15%-140%)
13C-4-DiCB		1360	2000	pg/L	67.8	(30%-140%)
13C-15-DiCB		1670	2000	pg/L	83.4	(30%-140%)
13C-19-TrCB		1690	2000	pg/L	84.3	(30%-140%)
13C-37-TrCB		1320	2000	pg/L	66.1	(30%-140%)
13C-54-TeCB		1170	2000	pg/L	58.5	(30%-140%)
13C-77-TeCB		1710	2000	pg/L	85.7	(30%-140%)
13C-81-TeCB		1740	2000	pg/L	87.1	(30%-140%)
13C-104-PeCB		1100	2000	pg/L	54.9	(30%-140%)
13C-105-PeCB		1400	2000	pg/L	70.2	(30%-140%)
13C-114-PeCB		1400	2000	pg/L	70.1	(30%-140%)
13C-118-PeCB		1370	2000	pg/L	68.4	(30%-140%)

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number:	**2109132**	**Client:**	**HALL001**	**Project:**	**HALL00113**
Lab Sample ID:	**12030240**			**Matrix:**	**WATER**
Client Sample:	**QC for batch 47898**				
Client ID:	**LCSD for batch 47898**			**Prep Basis:**	**As Received**
Batch ID:	**47901**	**Method:**	**EPA Method 1668A**		
Run Date:	**09/22/2021 19:11**	**Analyst:**	**MJC**	**Instrument:**	**HRP875**
Data File:	**d22sep21a-4**			**Dilution:**	**1**
Prep Batch:	**47898**	**Prep Method:**	**SW846 3520C**	**Prep SOP Ref:**	**CF-OA-E-001**
Prep Date:	**21-SEP-21**	**Prep Aliquot:**	**1000 mL**		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-123-PeCB		1450	2000	pg/L	72.6	(30%-140%)
13C-126-PeCB		1500	2000	pg/L	74.8	(30%-140%)
13C-155-HxCB		1270	2000	pg/L	63.3	(30%-140%)
13C-156-HxCB	C	2540	4000	pg/L	63.6	(30%-140%)
13C-157-HxCB	C156L					
13C-167-HxCB		1290	2000	pg/L	64.4	(30%-140%)
13C-169-HxCB		1320	2000	pg/L	66.2	(30%-140%)
13C-188-HpCB		1630	2000	pg/L	81.7	(30%-140%)
13C-189-HpCB		1390	2000	pg/L	69.5	(30%-140%)
13C-202-OcCB		1530	2000	pg/L	76.3	(30%-140%)
13C-205-OcCB		1620	2000	pg/L	81.2	(30%-140%)
13C-206-NoCB		1690	2000	pg/L	84.7	(30%-140%)
13C-208-NoCB		1510	2000	pg/L	75.5	(30%-140%)
13C-209-DeCB		1540	2000	pg/L	77.0	(30%-140%)
13C-28-TrCB		1430	2000	pg/L	71.3	(40%-125%)
13C-111-PeCB		1620	2000	pg/L	80.9	(40%-125%)
13C-178-HpCB		1730	2000	pg/L	86.5	(40%-125%)

Comments:

C **Congener has coeluters. When Cxxx, refer to congener number xxx for data**

U **Analyte was analyzed for, but not detected above the specified detection limit.**

ANALYTICAL REPORT

September 17, 2021

Hall Environmental Analysis Laboratory

Sample Delivery Group:	L1400265
Samples Received:	09/08/2021
Project Number:	
Description:	
Report To:	Andy Freeman

Entire Report Reviewed By:

John Hawkins
Project Manager

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

TABLE OF CONTENTS

SAMPLE SUMMARY

2109132-001I RG NORTH-20210901 L1400265-01 Non-Potable Water

Collected by	Collected date/time	Received date/time
	09/01/21 10:05	09/08/21 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 900	WG1737547	1	09/13/21 14:07	09/14/21 22:57	JMR	Mt. Juliet, TN
Radiochemistry by Method D5174	WG1739188	1	09/15/21 10:53	09/16/21 12:31	KK	Mt. Juliet, TN

2109132-003I RG SOUTH-20210901 L1400265-02 Non-Potable Water

Collected by	Collected date/time	Received date/time
	09/01/21 10:05	09/08/21 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 900	WG1737547	1	09/13/21 14:07	09/14/21 22:57	JMR	Mt. Juliet, TN
Radiochemistry by Method D5174	WG1739188	1	09/15/21 10:53	09/16/21 12:33	KK	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

John Hawkins
Project Manager

Radiochemistry by Method 900

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
GROSS ALPHA	7.03		1.76	1.25	09/14/2021 22:57	WG1737547

Radiochemistry by Method D5174

Analyte	Result	Qualifier	Uncertainty	RDL	Analysis Date	Batch
	mg/l		+ / -	mg/l	date / time	
Uranium	0.00312			0.00100	09/16/2021 12:31	WG1739188

Uranium = 0.00312 mg/l = 2.09 pCi/L
milligrams per liter (mg/L) can be converted to pCi/L by multiplying the U (mg/L) by 670

Adjusted Gross Alpha = Gross Alpha minus Uranium.
Adjusted Gross Alpha =7.03 pCi/L - 2.09 = 4.94 pCi/L
* Compliance gross alpha equals the concentration of analytical gross alpha minus the concentration of Uranium
Reference: http://www.eai-labs.com/assets/docs/radioactive_in_water.pdf

Radiochemistry by Method 900

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
GROSS ALPHA	34.4		7.82	5.87	09/14/2021 22:57	WG1737547

Radiochemistry by Method D5174

Analyte	Result	Qualifier	Uncertainty	RDL	Analysis Date	Batch
	mg/l		+ / -	mg/l	date / time	
Uranium	0.00424			0.00100	09/16/2021 12:33	WG1739188

Uranium = 0.00424 mg/l = 2.84 pCi/L
milligrams per liter (mg/L) can be converted to pCi/L by multiplying the U (mg/L) by 670

Adjusted Gross Alpha = Gross Alpha minus Uranium.
Adjusted Gross Alpha =34.4 pCi/L - 2.84 = 31.56 pCi/L
* Compliance gross alpha equals the concentration of analytical gross alpha minus the concentration of Uranium
Reference: http://www.eai-labs.com/assets/docs/radioactive_in_water.pdf

QUALITY CONTROL SUMMARY

L1400265-01,02

Method Blank (MB)

(MB) R3704721-1 09/14/21 22:57

Analyte	MB Result pCi/l	MB Qualifier	MB MDA pCi/l
GROSS ALPHA	0.0501	U	0.704

Original Sample (OS) • Duplicate (DUP)

(OS) • (DUP) R3704721-5 09/14/21 22:57

Analyte	Original Result	DUP Result pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
GROSS ALPHA		3.03	1	64.8	0.900		20	3

Laboratory Control Sample (LCS)

(LCS) R3704721-2 09/14/21 22:57

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
GROSS ALPHA	15.0	14.3	95.4	80.0-120	

Method Blank (MB)

(MB) R3705183-1 09/16/21 11:45

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Uranium	U		0.00100	0.00100

L1397565-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1397565-03 09/16/21 12:02 • (DUP) R3705183-5 09/16/21 11:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Uranium	0.00556	0.00559	1	0.427		20

Laboratory Control Sample (LCS)

(LCS) R3705183-2 09/16/21 11:48

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Uranium	0.0300	0.0287	95.7	80.0-120	

L1397565-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1397565-01 09/16/21 11:59 • (MS) R3705183-3 09/16/21 11:52 • (MSD) R3705183-4 09/16/21 11:54

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Uranium	0.0200	0.0915	0.109	0.110	88.8	93.4	1	75.0-125			0.840	20

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier	Description
U	Below Detectable Limits: Indicates that the analyte was not detected.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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

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

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

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

CHAIN OF CUSTODY RECORD

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: clients.hallenvironmental.com

COPY

SUB CONTRATOR: Pace TN	COMPANY: PACE TN	PHONE: (800) 767-5859	FAX: (615) 758-5859
ADDRESS: 12065 Lebanon Rd		ACCOUNT #:	EMAIL:
CITY, STATE, ZIP: Mt. Juliet, TN 37122			

L1400264 (4 corrected to 5)

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2109132-001H	RG North-20210901	500HDPEH2SO4	Aqueous	9/1/2021 10:05:00 AM	1	COD
2	2109132-001I	RG North-20210901	1LHDPEHNO3	Aqueous	9/1/2021 10:05:00 AM	1	Adjusted Gross Alpha <2 -01
3	2109132-001J	RG North-20210901	120mL	Aqueous	9/1/2021 10:05:00 AM	1	Cr 6
4	2109132-003H	RG South-20210902	500HDPEH2SO4	Aqueous	9/2/2021 9:20:00 AM	1	COD
5	2109132-003I	RG South-20210902	1LHDPEHNO3	Aqueous	9/2/2021 9:20:00 AM	1	Adjusted Gross Alpha <2 -02
6	2109132-003J	RG South-20210902	120mL	Aqueous	9/2/2021 9:20:00 AM	1	Cr 6

Sample Receipt Checklist

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

B185

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Samples 001I, 003I in this cooler

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
SEL	9/2/2021	2:48 PM			
			[signature]	9/4/21	9:15

TAT: Standard ✓ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED: ☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY

Temp of samples: 1.9+.1=2.0 AZWT Attempt to Cool ?

Comments:

2834 1886 3777

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2109132**

13-Oct-21

Client: AMAFCA

Project: CMC

Sample ID: **MB-62408**	SampType: **MBLK**	TestCode: **EPA Method 1664B**
Client ID: **PBW**	Batch ID: **62408**	RunNo: **81111**
Prep Date: **9/7/2021**	Analysis Date: **9/8/2021**	SeqNo: **2863208** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	ND	10.0								

Sample ID: **LCS-62408**	SampType: **LCS**	TestCode: **EPA Method 1664B**
Client ID: **LCSW**	Batch ID: **62408**	RunNo: **81111**
Prep Date: **9/7/2021**	Analysis Date: **9/8/2021**	SeqNo: **2863209** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	32.2	10.0	40.00	0	80.5	78	114			

Sample ID: **LCSD-62408**	SampType: **LCSD**	TestCode: **EPA Method 1664B**
Client ID: **LCSS02**	Batch ID: **62408**	RunNo: **81111**
Prep Date: **9/7/2021**	Analysis Date: **9/8/2021**	SeqNo: **2863210** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	32.8	10.0	40.00	0	82.0	78	114	1.85	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2109132**

13-Oct-21

Client: AMAFCA

Project: CMC

Sample ID: **LCS-62544**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **62544**	RunNo: **81263**
Prep Date: **9/13/2021**	Analysis Date: **9/14/2021**	SeqNo: **2869383** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	49	1.0	50.00	0	97.9	85	115			
Magnesium	49	1.0	50.00	0	98.0	85	115			

Sample ID: **MB-62544**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **62544**	RunNo: **81263**
Prep Date: **9/13/2021**	Analysis Date: **9/14/2021**	SeqNo: **2869399** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								

Sample ID: **LLLCS-62544**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **62544**	RunNo: **81263**
Prep Date: **9/13/2021**	Analysis Date: **9/14/2021**	SeqNo: **2869401** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.48	1.0	0.5000	0	95.7	50	150			J
Magnesium	0.49	1.0	0.5000	0	97.5	50	150			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2109132**

13-Oct-21

Client: AMAFCA

Project: CMC

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A81374**	RunNo: **81374**
Prep Date:	Analysis Date: **9/18/2021**	SeqNo: **2873894** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	ND	0.0010								
Lead	ND	0.00050								

Sample ID: **LCSLL**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A81374**	RunNo: **81374**
Prep Date:	Analysis Date: **9/18/2021**	SeqNo: **2873895** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0010	0.0010	0.001000	0	101	50	150			
Lead	0.00051	0.00050	0.0005001	0	101	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A81374**	RunNo: **81374**
Prep Date:	Analysis Date: **9/18/2021**	SeqNo: **2873896** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.024	0.0010	0.02500	0	94.7	85	115			
Lead	0.012	0.00050	0.01250	0	97.7	85	115			

Sample ID: **2109132-003FMSLL**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **RG South-20210902**	Batch ID: **A81374**	RunNo: **81374**
Prep Date:	Analysis Date: **9/18/2021**	SeqNo: **2873927** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.026	0.0010	0.02500	0.001481	96.1	70	130			
Lead	0.013	0.00050	0.01250	0.0003243	98.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2109132**

13-Oct-21

Client: AMAFCA

Project: CMC

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R81067**	RunNo: **81067**
Prep Date:	Analysis Date: **9/3/2021**	SeqNo: **2861406** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Nitrate+Nitrite as N	ND	0.20								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R81067**	RunNo: **81067**
Prep Date:	Analysis Date: **9/3/2021**	SeqNo: **2861407** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	96.6	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	102	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	100	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2109132**

13-Oct-21

Client: AMAFCA

Project: CMC

Sample ID: **MB-62459**	SampType: **MBLK**	TestCode: **EPA Method 8081: PESTICIDES**
Client ID: **PBW**	Batch ID: **62459**	RunNo: **81383**
Prep Date: **9/8/2021**	Analysis Date: **9/17/2021**	SeqNo: **2896453** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dieldrin	ND	0.10								
Surr: Decachlorobiphenyl	0		2.500		0	41.7	129			S
Surr: Tetrachloro-m-xylene	0		2.500		0	31.8	88.5			S

Sample ID: **MB-62459**	SampType: **MBLK**	TestCode: **EPA Method 8081: PESTICIDES**
Client ID: **PBW**	Batch ID: **62459**	RunNo: **81383**
Prep Date: **9/8/2021**	Analysis Date: **9/17/2021**	SeqNo: **2896456** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dieldrin	ND	0.10								
Surr: Decachlorobiphenyl	0		2.500		0	41.7	129			S
Surr: Tetrachloro-m-xylene	0		2.500		0	31.8	88.5			S

Sample ID: **LCS-62459**	SampType: **LCS**	TestCode: **EPA Method 8081: PESTICIDES**
Client ID: **LCSW**	Batch ID: **62459**	RunNo: **81383**
Prep Date: **9/8/2021**	Analysis Date: **9/17/2021**	SeqNo: **2896457** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dieldrin	0.38	0.10	0.5000	0	76.2	17.4	145			
Surr: Decachlorobiphenyl	2.8		2.500		112	41.7	129			
Surr: Tetrachloro-m-xylene	1.5		2.500		61.1	31.8	88.5			

Sample ID: **LCSD-62459**	SampType: **LCSD**	TestCode: **EPA Method 8081: PESTICIDES**
Client ID: **LCSS02**	Batch ID: **62459**	RunNo: **81383**
Prep Date: **9/8/2021**	Analysis Date: **9/17/2021**	SeqNo: **2896458** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dieldrin	0.42	0.10	0.5000	0	84.4	17.4	145	10.2	20	
Surr: Decachlorobiphenyl	2.9		2.500		116	41.7	129	0	20	
Surr: Tetrachloro-m-xylene	1.6		2.500		63.4	31.8	88.5	0	20	

Sample ID: **LCS-62459**	SampType: **LCS**	TestCode: **EPA Method 8081: PESTICIDES**
Client ID: **LCSW**	Batch ID: **62459**	RunNo: **81383**
Prep Date: **9/8/2021**	Analysis Date: **9/17/2021**	SeqNo: **2896467** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dieldrin	0.36	0.10	0.5000	0	72.7	17.4	145			
Surr: Decachlorobiphenyl	2.7		2.500		108	41.7	129			
Surr: Tetrachloro-m-xylene	1.4		2.500		55.5	31.8	88.5			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2109132**

13-Oct-21

Client: AMAFCA

Project: CMC

Sample ID: **LCSD-62459**	SampType: **LCSD**	TestCode: **EPA Method 8081: PESTICIDES**
Client ID: **LCSS02**	Batch ID: **62459**	RunNo: **81383**
Prep Date: **9/8/2021**	Analysis Date: **9/17/2021**	SeqNo: **2896468** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dieldrin	0.40	0.10	0.5000	0	80.5	17.4	145	10.2	20	
Surr: Decachlorobiphenyl	2.8		2.500		112	41.7	129	0	20	
Surr: Tetrachloro-m-xylene	1.7		2.500		69.2	31.8	88.5	0	20	

Sample ID: **MB-62710**	SampType: **MBLK**	TestCode: **EPA Method 8081: PESTICIDES**
Client ID: **PBW**	Batch ID: **62710**	RunNo: **81863**
Prep Date: **9/21/2021**	Analysis Date: **9/23/2021**	SeqNo: **2896469** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	2.5		2.500		100	41.7	129			
Surr: Tetrachloro-m-xylene	1.6		2.500		64.6	31.8	88.5			

Sample ID: **MB-62710**	SampType: **MBLK**	TestCode: **EPA Method 8081: PESTICIDES**
Client ID: **PBW**	Batch ID: **62710**	RunNo: **81863**
Prep Date: **9/21/2021**	Analysis Date: **9/23/2021**	SeqNo: **2896470** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	2.5		2.500		98.3	41.7	129			
Surr: Tetrachloro-m-xylene	1.5		2.500		60.0	31.8	88.5			

Sample ID: **LCS-62710**	SampType: **LCS**	TestCode: **EPA Method 8081: PESTICIDES**
Client ID: **LCSW**	Batch ID: **62710**	RunNo: **81863**
Prep Date: **9/21/2021**	Analysis Date: **9/23/2021**	SeqNo: **2896471** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	2.5		2.500		102	41.7	129			
Surr: Tetrachloro-m-xylene	1.4		2.500		56.4	31.8	88.5			

Sample ID: **LCS-62710**	SampType: **LCS**	TestCode: **EPA Method 8081: PESTICIDES**
Client ID: **LCSW**	Batch ID: **62710**	RunNo: **81863**
Prep Date: **9/21/2021**	Analysis Date: **9/23/2021**	SeqNo: **2896472** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	2.5		2.500		99.5	41.7	129			
Surr: Tetrachloro-m-xylene	1.3		2.500		52.5	31.8	88.5			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2109132**

13-Oct-21

Client: AMAFCA

Project: CMC

Sample ID: **MB-62380**	SampType: **MBLK**	TestCode: **SM5210B: BOD**
Client ID: **PBW**	Batch ID: **62380**	RunNo: **81139**
Prep Date: **9/3/2021**	Analysis Date: **9/8/2021**	SeqNo: **2864260** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID: **LCS-62380**	SampType: **LCS**	TestCode: **SM5210B: BOD**
Client ID: **LCSW**	Batch ID: **62380**	RunNo: **81139**
Prep Date: **9/3/2021**	Analysis Date: **9/8/2021**	SeqNo: **2864261** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	188	2.0	198.0	0	94.9	84.6	115.4			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2109132**

13-Oct-21

Client: AMAFCA

Project: CMC

Sample ID: **MB-62378**	SampType: **MBLK**	TestCode: **SM 9223B Fecal Indicator: E. coli MPN**
Client ID: **PBW**	Batch ID: **62378**	RunNo: **81068**
Prep Date: **9/2/2021**	Analysis Date: **9/3/2021**	SeqNo: **2861458** Units: **MPN/100mL**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2109132**

13-Oct-21

Client: AMAFCA

Project: CMC

Sample ID: **MB**	SampType: **MBLK**	TestCode: **SM 4500 NH3: Ammonia**
Client ID: **PBW**	Batch ID: **R81339**	RunNo: **81339**
Prep Date:	Analysis Date: **9/16/2021**	SeqNo: **2872464** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	ND	1.0								

Sample ID: **LCS**	SampType: **LCS**	TestCode: **SM 4500 NH3: Ammonia**
Client ID: **LCSW**	Batch ID: **R81339**	RunNo: **81339**
Prep Date:	Analysis Date: **9/16/2021**	SeqNo: **2872465** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	10	1.0	10.00	0	102	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2109132**

13-Oct-21

Client: AMAFCA

Project: CMC

Sample ID: **MB-62548**	SampType: **MBLK**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **PBW**	Batch ID: **62548**	RunNo: **81302**
Prep Date: **9/13/2021**	Analysis Date: **9/15/2021**	SeqNo: **2871378** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	ND	0.010								

Sample ID: **LCS-62548**	SampType: **LCS**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **LCSW**	Batch ID: **62548**	RunNo: **81302**
Prep Date: **9/13/2021**	Analysis Date: **9/15/2021**	SeqNo: **2871379** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	0.24	0.010	0.2500	0	97.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2109132**

13-Oct-21

Client: AMAFCA

Project: CMC

Sample ID: **MB-62453**	SampType: **MBLK**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW**	Batch ID: **62453**	RunNo: **81180**
Prep Date: **9/8/2021**	Analysis Date: **9/10/2021**	SeqNo: **2865947** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: **LCS-62453**	SampType: **LCS**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW**	Batch ID: **62453**	RunNo: **81180**
Prep Date: **9/8/2021**	Analysis Date: **9/10/2021**	SeqNo: **2865948** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1010	20.0	1000	0	101	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2109132**

13-Oct-21

Client: AMAFCA

Project: CMC

Sample ID: **MB-62630**	SampType: **MBLK**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **PBW**	Batch ID: **62630**	RunNo: **81365**
Prep Date: **9/16/2021**	Analysis Date: **9/17/2021**	SeqNo: **2873549** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	ND	1.0								

Sample ID: **LCS-62630**	SampType: **LCS**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **LCSW**	Batch ID: **62630**	RunNo: **81365**
Prep Date: **9/16/2021**	Analysis Date: **9/17/2021**	SeqNo: **2873550** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	9.9	1.0	10.00	0	99.4	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2109132**

13-Oct-21

Client: AMAFCA

Project: CMC

Sample ID: **MB-62455**	SampType: **MBLK**	TestCode: **SM 2540D: TSS**
Client ID: **PBW**	Batch ID: **62455**	RunNo: **81152**
Prep Date: **9/8/2021**	Analysis Date: **9/9/2021**	SeqNo: **2864535** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0								

Sample ID: **LCS-62455**	SampType: **LCS**	TestCode: **SM 2540D: TSS**
Client ID: **LCSW**	Batch ID: **62455**	RunNo: **81152**
Prep Date: **9/8/2021**	Analysis Date: **9/9/2021**	SeqNo: **2864536** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	97	4.0	92.10	0	105	83.71	119.44			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: AMAFCA Work Order Number: 2109132 RcptNo: 1

Received By: Cheyenne Cason 9/2/2021 12:17:00 PM

Completed By: Sean Livingston 9/2/2021 2:19:27 PM

Reviewed By: JO 9.3.21

UNPRES: SPA 9.2.21 17:01

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☑	No ☐	NA ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 12 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? NO
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: JR 9/3/21

Bod & coliform: JR 9/2/21

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.9	Good				
2	4.9	Good				

Chain-of-Custody Record

Client: AMAFCA

Mailing Address:

Phone #:

email or Fax#: pchavez@amafca.org

QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: CMC

Project #:

Project Manager: Patrick Chavez

Sampler: A. Ewing, DBS+A

On Ice: ☒ Yes ☐ No

# of Coolers: 2 2.1 - 0.2 = 1.9

Cooler Temp (including CF): 5.1 - 0.2 = 4.9 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2109132	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	See attached CMC list	E. coli enumeration
9/1/21	1005	AQ	RGNorth-20210901			001/002											X	
			Trip blank			006								X				
9/2/21	0920	AQ	RGSouth-20210902			003/004 ~~002~~	5x	9/2/21									X	X
9/2/21	1030	AQ	RGAlameda-20210902			005 ~~003~~												X
							Amy Ewing 9/2/21											

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
9/2/21	1125	Amy Ewing		Hand Del OFF	9/2/21	1127
9/2/21	1137		cmc CDO		9/2/21	1217

Remarks: RGNorth-20210901 E. coli sample was dropped off yesterday.

Collaborative Monitoring Cooperative - Analyses List
Attach to Chain of Custody

Please refer to attached NPDES Permit No. NMR04A00 Appendix F. Methods and minimum quantification levels (MQL's) will be those approved under 40 CFR 136 and specified in the attached permit

Analyte (Bold Indicates WQS)	CAS #	Fraction	Method #	MDL (µg/L)
Hardness (Ca + Mg)	NA	Total	200.7	2.4
Lead	7439-92-1	Dissolved	200.8	0.09
Copper	7440-50-8	Dissolved	200.8	1.06
Ammonia + organic nitrogen	7664-41-7	Total	350.1	31.32
Total Kjehldal Nitrogen	17778-88-0	Total	351.2	58.78
Nitrate + Nitrite	14797-55-8	Total	353.2	10.17
Polychlorinated biphenyls (PCBs)	1336-36-3	Total	1668	0.014
Tetrahydrofuran (THF)	109-99-9	Total	8260C	7.9
bis(2-Ethylhexyl)phthalate	117-81-7	Total	8270D	0.2
Dibenzofuran	132-64-9	Total	8270D	0.2
Indeno(1,2,3-cd)pyrene	193-39-5	Total	8270D	0.2
Benzo(b)fluoranthene	205-99-2	Total	8270D	0.1
Benzo(k)fluoranthene	207-08-9	Total	8270D	0.1
Chrysene	218-01-9	Total	8270D	0.2
Benzo(a)pyrene	50-32-8	Total	8270D	0.3
Dibenzo(a,h)anthracene	53-70-3	Total	8270D	0.3
Benzo(a)anthracene	56-55-3	Total	8270D	0.2
Dieldrin	60-57-1	Total	8081	0.1
Pentachlorophenol	87-86-5	Total	8270D	0.2
Benzidine	92-87-5	Total	8270D	0.1
Chemical Oxygen Demand	E1641638[2]	Total	HACH	5100
Gross alpha (adjusted)	NA	Total	Method 900	0.1 pCi/L
Total Dissolved Solids	E1642222[2]	Total	SM 2540C	60.4
Total Suspended Solids	NA	Total	SM 2540D	3450
Biological Oxygen Demand	N/A	Total	Standard Methods	930
Oil and Grease		Total	1664A	5000
Ecoli-enumeration			SM 9223B	
pH			SM 4500	
Phosphorus		Dissolved	365.1	100
Phosphorus		Total	365.1	100
Chromium IV		Total	3500Cr C-2011	100

ATTACHMENT 2

FY 2022 WET SEASON COMPLETED DATA VERIFICATION AND VALIDATION (V&V) FORMS

Attachment 1.1 Water Quality Sample Data Verification and Validation Worksheet

Study Name: Compliance Monitoring Cooperative (CMC)
Year: FY 2022 (August 2021 – Wet Season Sample)
Project Coordinator: For Data Review and Reporting – SJG, BHI
V&V Reviewer: SJG
Data covered by this worksheet: Rio Grande North – 08/16/21 – E. coli Only Sample – Was Not Qualifying Storm Event
Version of Verification/Validation Procedures: QAPP –AMAFCA SOP #5 (7/2022)

Step 1: Verify Field Data
A. Are all Field Data forms present and complete? ☒ Yes ☐ No

If yes, proceed; if no, attempt to locate missing forms, then indicate any remaining missing forms and action taken.

Missing Field Data Forms	Action Taken
_____	_____
_____	_____

Total number of occurrences: 0

B. Are station name and ID, and sampling date and time on forms consistent with database? ☒ Yes ☐ No
If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify.

Station and Parameter	Action Taken	Re-verified?
_____	_____	_____
_____	_____	_____

Total number of occurrences: 0

C. Are field data on forms consistent with database? ☒ Yes ☐ No
If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify.

Station	Sampling Date	Parameter(s) Corrected	Re-verified?
_____	_____	_____	_____
_____	_____	_____	_____

Total number of occurrences: 0

D. Are RIDs correct and associated with the correct analytical suite, media subdivision (e.g. surface water, municipal waste, etc.) and activity type (e.g. Field observation, Routine sample, QA sample etc.)?

☒ Yes ☐ No

If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify

Station/RID	Sampling Date	RID Corrected	Re-verified?
______	______	______	_________
______	______	______	_________

Total number of occurrences: **0**

☒ **Step 1 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 2: Verify Data Deliverables

A. Have all data in question been delivered? ☒ Yes ☐ No

If yes, proceed; if no, indicate RIDs with missing data (samples or blanks) or attach report with applicable RIDs highlighted. Contact data source and indicate action taken. Complete this step upon receipt of all missing data.

RID	Submittal Date	Missing Data/Parameters	Date of Initial Verification	Date Missing Data Were Received
______	______	______	______	______

Total number of occurrences: **0**

B. Do all of the analytical suites have the correct number and type of analytes. ☒ Yes ☐ No

If yes, proceed; if no, indicate RIDs with missing or incorrect analyte(s) or attach report with applicable RIDs highlighted. Contact data source and indicate action taken.

RID	Submittal Date	Missing or Incorrect Parameters	Action Taken	Re-verified?
______	______	______	______	______

☒ **Step 2 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 3: Verify Flow Data
*Note – Not Applicable – no flow data provided with CMC sample collection
A. Identify incorrect or missing data on the flow calculation spreadsheet and correct errors.

Station	Sampling Date	Flow data missing or incorrect?

Total number of occurrences: 0

B. Identify incorrect or missing discharge measurements, correct errors in database and re-verify.

Station	Sampling Date	Flow data missing or incorrect?	Re-verified?

Total number of occurrences: 0

Not Applicable
☐ **Step 3 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 4: Verify Analytical Results for Missing Information or Questionable Results

Were any results with missing/questionable information identified? ☐ Yes ☒ No

If no, proceed; if yes, indicate results with missing information or questionable results or attach report. Contact data source and indicate action taken. Complete this step upon receipt of missing information or clarification of questionable results (clarify questionable results only, DO NOT change results without written approval (from lab or QA officer) and associated documentation).

RID	Sample Date	Missing or Questionable Information/Results	Action Taken

Total number of occurrences: 0

☒ **Step 4 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 5: Validate Blanks Results
Were any analytes of concern detected in blank samples? ☐ Yes ☒ No

If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager, with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes have been added to database correctly.

RID	Sample Date	Parameter	[Blank]	[Sample]	Validatio n Code/Fla g Applied	Code/Flag verified in database? *
_____	______	______	______	______		_________
______	______	______	______	______		_________

*See validation procedures to determine which associated data need to be flagged and include on *Validation Codes Form*.

Total number of occurrences: **<u>0</u>**

☒ **Step 5 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 6: Validate Holding Times Violations
Were any samples submitted that did not meet specified holding times? ☐ Yes ☒ No

If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes/flags have been added to database.

RID	Sample Date	Parameter	[Blank]	[Sample]	Validation Code/Flag Applied	Code/Flag verified in database to ALL associated data?*
______	______	______	______	______		_________

Total number of occurrences: **0**

☒ **Step 6 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 7: Validate Replicate/Duplicate Results (if applicable)
Were any replicate/duplicate pairs submitted outside of the established control limit of 20%?

☐ Yes ☒ No
If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes/flags have been added to database.

RID Pairs		Replicate or Duplicate?	Sample Date	Parameter	RPD	Validation Code/Flag Applied	Code/Flag verified in database applied?*
_____	_____	_____	_____	_____	_____		_____
_____	_____	_____	_____	_____	_____		_____

Total number of occurrences: 0

☒ **Step 7 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

****

After all of the above steps have been completed, save and print the worksheet, attach all applicable supplemental information and sign below.

I acknowledge that the data verification and validation process has been completed for the data identified above in accordance with the procedures described in the CMC QAPP, SOP #2

8/9/22

Data Verifier/Validator Signature Date

COMPLETION OF DATA VERIFICATION AND VALIDATION PROCESS

Once the data verification and validation process has been completed for the entire study (note: if the worksheet is for a subset of the data from a study, be sure ALL the data for the entire study is included before final completion of the data verification and validation process), notify the NMSQUID administrator that the process is complete and request that “V V in STORET” be added to the project title.

Once all data have been verified and validated for a study provide copies of ALL *Data Verification and Validation Worksheets* and attachments associated with the study to the Quality Assurance Officer and retain originals in the project binder.

Attachment 1.2 SWQB Validation Codes

When deficiencies are identified through the data verification and validation process, AMAFCA documents or "flags" the deficiencies by assigning validation codes. All data collected from the last compliant QC sample and up to the next compliant QC sample are assigned validation codes. The validation code alerts the data user that the results are outside QA control limits and may require re-sampling or a separate, qualitative analysis based on professional judgment.

Validation Code	Definition	WQX Equivalent
A1	Sample not collected according to SOP	
B1	Chemical was detected in the field blank at a concentration less than 5% of the sample concentration.	
BN	Blanks NOT collected during sampling run	
BU	Detection in blank. Analyte was not detected in this sample above the method's sample detection limit.	BU
RB1	Chemical was detected in the field blank at a concentration greater than or equal to 5% of the sample concentration. Results for this sample are rejected because they may be the result of contamination; the results may not be reported or used for regulatory compliance purposes.	B
R1	Rejected due to incorrect sample preservation	R
R2	Rejected due to equipment failure in the field	R
R3	Rejected based on best professional judgment	R
D1	Spike recovery not within method acceptance limits	
F1	Sample filter time exceeded	
J1	Estimated: the analyte was positively identified and the associated value is an approximate concentration of the analyte in the sample	J
K1	Holding time violation	H
Ea	Estimated-Incubation temperature between 35.5 and 38.0° Celsius	
Er	Rejected-Incubation temperature < 34.5 or >38.0° Celsius	
PD1	Percent difference between duplicate samples excessive	
S1	Per SLD, uncertainties (sigmas) are expressed as one standard deviation, i.e. one standard error. Small negative or positive values that are less than two standard deviations should be interpreted as "less than the detection limit."	
S2	Data are suspect but deemed usable based on best professional judgment; documentation of justification is required and should be included in the Data Verification and Validation Packet and reported with results	
Z1	Macroinvertebrate data did not meet QC criteria specified in Section 2.5 of QAPP	
H1	Habitat data did not meet QC criteria specified in Section 2.5 of QAPP	

Attachment 1.1 Water Quality Sample Data Verification and Validation Worksheet

Study Name: Compliance Monitoring Cooperative (CMC)
Year: FY 2022 (September 2021 – Wet Season Sample)
Project Coordinator: For Data Review and Reporting – SJG, BHI
V&V Reviewer: SJG
Data covered by this worksheet: Rio Grande North – 9/1/21
Version of Verification/Validation Procedures: QAPP –AMAFCA SOP #5 (7/2022)

Step 1: Verify Field Data

A. Are all Field Data forms present and complete? ☒ Yes ☐ No

If yes, proceed; if no, attempt to locate missing forms, then indicate any remaining missing forms and action taken.

Missing Field Data Forms	Action Taken

Total number of occurrences: 0

B. Are station name and ID, and sampling date and time on forms consistent with database? ☒ Yes ☐ No
If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify.

Station and Parameter	Action Taken	Re-verified?

Total number of occurrences: 0

C. Are field data on forms consistent with database? ☒ Yes ☐ No
If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify.

Station	Sampling Date	Parameter(s) Corrected	Re-verified?

Total number of occurrences: 0

D. Are RIDs correct and associated with the correct analytical suite, media subdivision (e.g. surface water, municipal waste, etc.) and activity type (e.g. Field observation, Routine sample, QA sample etc.)?

☒ Yes ☐ No

If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify

Station/RID	Sampling Date	RID Corrected	Re-verified?
______	______	______	_________
______	______	______	_________

Total number of occurrences: **0**

☒ **Step 1 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 2: Verify Data Deliverables

A. Have all data in question been delivered? ☒ Yes ☐ No

If yes, proceed; if no, indicate RIDs with missing data (samples or blanks) or attach report with applicable RIDs highlighted. Contact data source and indicate action taken. Complete this step upon receipt of all missing data.

RID	Submittal Date	Missing Data/Parameters	Date of Initial Verification	Date Missing Data Were Received
______	______	______	______	______

Total number of occurrences: **0**

B. Do all of the analytical suites have the correct number and type of analytes. ☒ Yes ☐ No

If yes, proceed; if no, indicate RIDs with missing or incorrect analyte(s) or attach report with applicable RIDs highlighted. Contact data source and indicate action taken.

*Note – Lab report identifies “Dissolved Phosphorous” as “Total Phosphorous” on a filtered sample. Also, reports gross alpha and uranium and not adjusted gross alpha. See Section 4.

RID	Submittal Date	Missing or Incorrect Parameters	Action Taken	Re-verified?

*Note – HEAL Lab report order number 2109132.

☒ **Step 2 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 3: Verify Flow Data

*Note – Not Applicable – no flow data provided with CMC sample collection

A. Identify incorrect or missing data on the flow calculation spreadsheet and correct errors.

Station	Sampling Date	Flow data missing or incorrect?
_____	_____	_____
_____	_____	_____

Total number of occurrences: 0

B. Identify incorrect or missing discharge measurements, correct errors in database and re-verify.

Station	Sampling Date	Flow data missing or incorrect?	Re-verified?
_____	_____	_____	_____
_____	_____	_____	_____

Total number of occurrences: 0

Not Applicable

☐ **Step 3 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 4: Verify Analytical Results for Missing Information or Questionable Results

Were any results with missing/questionable information identified? ☒ Yes ☐ No

If no, proceed; if yes, indicate results with missing information or questionable results or attach report. Contact data source and indicate action taken. Complete this step upon receipt of missing information or clarification of questionable results (clarify questionable results only, DO NOT change results without written approval (from lab or QA officer) and associated documentation).

RID	Sample Date	Missing or Questionable Information/Results	Action Taken
Rio Grande North	9/1/2021	Lab report lists Dissolved Phosphorous results as "Total Phosphorous" for "filtered sample".	BHI added note to the lab report.
Rio Grande North	9/1/2021	Lab report did not report Adjusted gross alpha. Reported gross alpha and uranium values.	AMAFCA and HEAL were informed of this. BHI Added notes to the lab report & calculated adjusted gross alpha (gross alpha minus uranium).

*Note – HEAL Lab report order number 2109132.

Total number of occurrences: 2

☒ **Step 4 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 5: Validate Blanks Results
Were any analytes of concern detected in blank samples? ☐ Yes ☒ No

If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager, with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes have been added to database correctly.

RID	Sample Date	Parameter	[Blank]	[Sample]	Validation Code/Flag Applied	Code/Flag verified in database? *

*See validation procedures to determine which associated data need to be flagged and include on *Validation Codes Form*.

Total number of occurrences: 0

☒ **Step 5 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 6: Validate Holding Times Violations

Were any samples submitted that did not meet specified holding times? ☐ Yes ☒ No

If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes/flags have been added to database.

RID	Sample Date	Parameter	[Blank]	[Sample]	Validation Code/Flag Applied	Code/Flag verified in database to ALL associated data?*
______	______	______	______	______		_________

*See validation procedures to determine which associated data need to be flagged.
*Note – Lab reports lists pH with hold time flag. Database uses field data reported pH, so this is hold time is not applicable.
Total number of occurrences: 0

☒ **Step 6 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 7: Validate Replicate/Duplicate Results (if applicable)
Were any replicate/duplicate pairs submitted outside of the established control limit of 20%?
☐ Yes ☒ No
If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes/flags have been added to database.

RID Pairs		Replicate or Duplicate?	Sample Date	Parameter	RPD	Validation Code/Flag Applied	Code/Flag verified in database applied?*
______	______	______	______	______	______		_________
______	______	______	______	______	______		_________

Total number of occurrences: 0

☒ **Step 7 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

****

After all of the above steps have been completed, save and print the worksheet, attach all applicable supplemental information and sign below.

I acknowledge that the data verification and validation process has been completed for the data identified above in accordance with the procedures described in the CMC QAPP, SOP #2

8/9/22

Data Verifier/Validator Signature Date

COMPLETION OF DATA VERIFICATION AND VALIDATION PROCESS

Once the data verification and validation process has been completed for the entire study (note: if the worksheet is for a subset of the data from a study, be sure ALL the data for the entire study is included before final completion of the data verification and validation process), notify the NMSQUID administrator that the process is complete and request that “V V in STORET” be added to the project title.

Once all data have been verified and validated for a study provide copies of ALL *Data Verification and Validation Worksheets* and attachments associated with the study to the Quality Assurance Officer and retain originals in the project binder.

Attachment 1.2 SWQB Validation Codes

When deficiencies are identified through the data verification and validation process, AMAFCA documents or "flags" the deficiencies by assigning validation codes. All data collected from the last compliant QC sample and up to the next compliant QC sample are assigned validation codes. The validation code alerts the data user that the results are outside QA control limits and may require re-sampling or a separate, qualitative analysis based on professional judgment.

Validation Code	Definition	WQX Equivalent
A1	Sample not collected according to SOP	
B1	Chemical was detected in the field blank at a concentration less than 5% of the sample concentration.	
BN	Blanks NOT collected during sampling run	
BU	Detection in blank. Analyte was not detected in this sample above the method's sample detection limit.	BU
RB1	Chemical was detected in the field blank at a concentration greater than or equal to 5% of the sample concentration. Results for this sample are rejected because they may be the result of contamination; the results may not be reported or used for regulatory compliance purposes.	B
R1	Rejected due to incorrect sample preservation	R
R2	Rejected due to equipment failure in the field	R
R3	Rejected based on best professional judgment	R
D1	Spike recovery not within method acceptance limits	
F1	Sample filter time exceeded	
J1	Estimated: the analyte was positively identified and the associated value is an approximate concentration of the analyte in the sample	J
K1	Holding time violation	H
Ea	Estimated-Incubation temperature between 35.5 and 38.0° Celsius	
Er	Rejected-Incubation temperature < 34.5 or >38.0° Celsius	
PD1	Percent difference between duplicate samples excessive	
S1	Per SLD, uncertainties (sigmas) are expressed as one standard deviation, i.e. one standard error. Small negative or positive values that are less than two standard deviations should be interpreted as "less than the detection limit."	
S2	Data are suspect but deemed usable based on best professional judgment; documentation of justification is required and should be included in the Data Verification and Validation Packet and reported with results	
Z1	Macroinvertebrate data did not meet QC criteria specified in Section 2.5 of QAPP	
H1	Habitat data did not meet QC criteria specified in Section 2.5 of QAPP	

Attachment 1.1 Water Quality Sample Data Verification and Validation Worksheet

Study Name: Compliance Monitoring Cooperative (CMC)
Year: FY 2022 (September 2021 – Wet Season Sample)
Project Coordinator: For Data Review and Reporting – SJG, BHI
V&V Reviewer: SJG
Data covered by this worksheet: Alameda – 9/1/21 – E. coli Only Sample
Version of Verification/Validation Procedures: QAPP –AMAFCA SOP #5 (7/2022)

Step 1: Verify Field Data

A. Are all Field Data forms present and complete? ☒ Yes ☐ No

If yes, proceed; if no, attempt to locate missing forms, then indicate any remaining missing forms and action taken.

Missing Field Data Forms	Action Taken
_____	_____
_____	_____

Total number of occurrences: 0

B. Are station name and ID, and sampling date and time on forms consistent with database? ☒ Yes ☐ No
If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify.

Station and Parameter	Action Taken	Re-verified?
_____	_____	_____
_____	_____	_____

Total number of occurrences: 0

C. Are field data on forms consistent with database? ☒ Yes ☐ No
If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify.

Station	Sampling Date	Parameter(s) Corrected	Re-verified?
_____	_____	_____	_____
_____	_____	_____	_____

Total number of occurrences: 0

D. Are RIDs correct and associated with the correct analytical suite, media subdivision (e.g. surface water, municipal waste, etc.) and activity type (e.g. Field observation, Routine sample, QA sample etc.)?
☒ Yes ☐ No

If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify

Station/RID	Sampling Date	RID Corrected	Re-verified?
______	______	______	_________
______	______	______	_________

Total number of occurrences: 0

☒ **Step 1 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 2: Verify Data Deliverables
A. Have all data in question been delivered? ☒ Yes ☐ No

If yes, proceed; if no, indicate RIDs with missing data (samples or blanks) or attach report with applicable RIDs highlighted. Contact data source and indicate action taken. Complete this step upon receipt of all missing data.

RID	Submittal Date	Missing Data/Parameters	Date of Initial Verification	Date Missing Data Were Received
______	______	______	______	______

Total number of occurrences: 0

B. Do all of the analytical suites have the correct number and type of analytes. ☒ Yes ☐ No

If yes, proceed; if no, indicate RIDs with missing or incorrect analyte(s) or attach report with applicable RIDs highlighted. Contact data source and indicate action taken.

RID	Submittal Date	Missing or Incorrect Parameters	Action Taken	Re-verified?
______	______	______	______	______

☒ **Step 2 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 3: Verify Flow Data

*Note – Not Applicable – no flow data provided with CMC sample collection

A. Identify incorrect or missing data on the flow calculation spreadsheet and correct errors.

Station	Sampling Date	Flow data missing or incorrect?

Total number of occurrences: 0

B. Identify incorrect or missing discharge measurements, correct errors in database and re-verify.

Station	Sampling Date	Flow data missing or incorrect?	Re-verified?

Total number of occurrences: 0

Not Applicable

☐ **Step 3 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 4: Verify Analytical Results for Missing Information or Questionable Results

Were any results with missing/questionable information identified? ☐ Yes ☒ No

If no, proceed; if yes, indicate results with missing information or questionable results or attach report. Contact data source and indicate action taken. Complete this step upon receipt of missing information or clarification of questionable results (clarify questionable results only, DO NOT change results without written approval (from lab or QA officer) and associated documentation).

RID	Sample Date	Missing or Questionable Information/Results	Action Taken

Total number of occurrences: 0

☒ **Step 4 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 5: Validate Blanks Results
Were any analytes of concern detected in blank samples? ☐ Yes ☒ No

If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager, with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes have been added to database correctly.

RID	Sample Date	Parameter	[Blank]	[Sample]	Validation Code/Flag Applied	Code/Flag verified in database? *
_____	______	______	______	______		_________
______	______	______	______	______		_________

*See validation procedures to determine which associated data need to be flagged and include on *Validation Codes Form*.

Total number of occurrences: 0

☒ **Step 5 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 6: Validate Holding Times Violations
Were any samples submitted that did not meet specified holding times? ☐ Yes ☒ No

If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes/flags have been added to database.

RID	Sample Date	Parameter	[Blank]	[Sample]	Validation Code/Flag Applied	Code/Flag verified in database to ALL associated data?*
______	______	______	______	______		_________

*See validation procedures to determine which associated data need to be flagged.
Total number of occurrences: 0

☒ **Step 6 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 7: Validate Replicate/Duplicate Results (if applicable)
Were any replicate/duplicate pairs submitted outside of the established control limit of 20%?
☐ Yes ☒ No
If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes/flags have been added to database.

RID Pairs		Replicate or Duplicate?	Sample Date	Parameter	RPD	Validation Code/Flag Applied	Code/Flag verified in database applied?*

Total number of occurrences: 0

☒ **Step 7 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

****

After all of the above steps have been completed, save and print the worksheet, attach all applicable supplemental information and sign below.

I acknowledge that the data verification and validation process has been completed for the data identified above in accordance with the procedures described in the CMC QAPP, SOP #2

Sarah Comey 8/9/22

Data Verifier/Validator Signature Date

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Once the data verification and validation process has been completed for the entire study (note: if the worksheet is for a subset of the data from a study, be sure ALL the data for the entire study is included before final completion of the data verification and validation process), notify the NMSQUID administrator that the process is complete and request that “V V in STORET” be added to the project title.

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Validation Code	Definition	WQX Equivalent
A1	Sample not collected according to SOP	
B1	Chemical was detected in the field blank at a concentration less than 5% of the sample concentration.	
BN	Blanks NOT collected during sampling run	
BU	Detection in blank. Analyte was not detected in this sample above the method's sample detection limit.	BU
RB1	Chemical was detected in the field blank at a concentration greater than or equal to 5% of the sample concentration. Results for this sample are rejected because they may be the result of contamination; the results may not be reported or used for regulatory compliance purposes.	B
R1	Rejected due to incorrect sample preservation	R
R2	Rejected due to equipment failure in the field	R
R3	Rejected based on best professional judgment	R
D1	Spike recovery not within method acceptance limits	
F1	Sample filter time exceeded	
J1	Estimated: the analyte was positively identified and the associated value is an approximate concentration of the analyte in the sample	J
K1	Holding time violation	H
Ea	Estimated-Incubation temperature between 35.5 and 38.0° Celsius	
Er	Rejected-Incubation temperature < 34.5 or >38.0° Celsius	
PD1	Percent difference between duplicate samples excessive	
S1	Per SLD, uncertainties (sigmas) are expressed as one standard deviation, i.e. one standard error. Small negative or positive values that are less than two standard deviations should be interpreted as "less than the detection limit."	
S2	Data are suspect but deemed usable based on best professional judgment; documentation of justification is required and should be included in the Data Verification and Validation Packet and reported with results	
Z1	Macroinvertebrate data did not meet QC criteria specified in Section 2.5 of QAPP	
H1	Habitat data did not meet QC criteria specified in Section 2.5 of QAPP	

Attachment 1.1 Water Quality Sample Data Verification and Validation Worksheet

Study Name: Compliance Monitoring Cooperative (CMC)
Year: FY 2022 (September 2021 – Wet Season Sample)
Project Coordinator: For Data Review and Reporting – SJG, BHI
V&V Reviewer: SJG
Data covered by this worksheet: Alameda – 9/2/21 – E. coli Only Sample
Version of Verification/Validation Procedures: QAPP –AMAFCA SOP #5 (7/2022)

Step 1: Verify Field Data

A. Are all Field Data forms present and complete? ☒ Yes ☐ No

If yes, proceed; if no, attempt to locate missing forms, then indicate any remaining missing forms and action taken.

Missing Field Data Forms	Action Taken
_____	_____
_____	_____

Total number of occurrences: 0

B. Are station name and ID, and sampling date and time on forms consistent with database? ☒ Yes ☐ No
If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify.

Station and Parameter	Action Taken	Re-verified?
_____	_____	_____
_____	_____	_____

Total number of occurrences: 0

C. Are field data on forms consistent with database? ☒ Yes ☐ No
If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify.

Station	Sampling Date	Parameter(s) Corrected	Re-verified?
_____	_____	_____	_____
_____	_____	_____	_____

Total number of occurrences: 0

D. Are RIDs correct and associated with the correct analytical suite, media subdivision (e.g. surface water, municipal waste, etc.) and activity type (e.g. Field observation, Routine sample, QA sample etc.)?
☒ Yes ☐ No

If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify

Station/RID	Sampling Date	RID Corrected	Re-verified?
______	______	______	_________
______	______	______	_________

Total number of occurrences: 0

☒ **Step 1 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 2: Verify Data Deliverables

A. Have all data in question been delivered? ☒ Yes ☐ No

If yes, proceed; if no, indicate RIDs with missing data (samples or blanks) or attach report with applicable RIDs highlighted. Contact data source and indicate action taken. Complete this step upon receipt of all missing data.

RID	Submittal Date	Missing Data/Parameters	Date of Initial Verification	Date Missing Data Were Received
______	______	______	______	______

Total number of occurrences: 0

B. Do all of the analytical suites have the correct number and type of analytes. ☒ Yes ☐ No

If yes, proceed; if no, indicate RIDs with missing or incorrect analyte(s) or attach report with applicable RIDs highlighted. Contact data source and indicate action taken.

RID	Submittal Date	Missing or Incorrect Parameters	Action Taken	Re-verified?
______	______	______	______	______

☒ **Step 2 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 3: Verify Flow Data

*Note – Not Applicable – no flow data provided with CMC sample collection

A. Identify incorrect or missing data on the flow calculation spreadsheet and correct errors.

Station	Sampling Date	Flow data missing or incorrect?

Total number of occurrences: 0

B. Identify incorrect or missing discharge measurements, correct errors in database and re-verify.

Station	Sampling Date	Flow data missing or incorrect?	Re-verified?

Total number of occurrences: 0

Not Applicable

☐ **Step 3 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 4: Verify Analytical Results for Missing Information or Questionable Results

Were any results with missing/questionable information identified? ☐ Yes ☒No

If no, proceed; if yes, indicate results with missing information or questionable results or attach report. Contact data source and indicate action taken. Complete this step upon receipt of missing information or clarification of questionable results (clarify questionable results only, DO NOT change results without written approval (from lab or QA officer) and associated documentation).

RID	Sample Date	Missing or Questionable Information/Results	Action Taken

Total number of occurrences: 0

☒ **Step 4 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 5: Validate Blanks Results
Were any analytes of concern detected in blank samples? ☐ Yes ☒ No

If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager, with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes have been added to database correctly.

RID	Sample Date	Parameter	[Blank]	[Sample]	Validation Code/Flag Applied	Code/Flag verified in database?*
_____	______	______	______	______		_________
______	______	______	______	______		_________

*See validation procedures to determine which associated data need to be flagged and include on *Validation Codes Form*.

Total number of occurrences: 0

☒ **Step 5 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 6: Validate Holding Times Violations
Were any samples submitted that did not meet specified holding times? ☐ Yes ☒ No

If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes/flags have been added to database.

RID	Sample Date	Parameter	[Blank]	[Sample]	Validation Code/Flag Applied	Code/Flag verified in database to ALL associated data?*
______	______	______	______	______		_________

*See validation procedures to determine which associated data need to be flagged.
Total number of occurrences: 0

☒ **Step 6 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 7: Validate Replicate/Duplicate Results (if applicable)
Were any replicate/duplicate pairs submitted outside of the established control limit of 20%?
☐ Yes ☒ No
If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes/flags have been added to database.

RID Pairs		Replicate or Duplicate?	Sample Date	Parameter	RPD	Validation Code/Flag Applied	Code/Flag verified in database applied?*

Total number of occurrences: 0

☒ **Step 7 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

****

After all of the above steps have been completed, save and print the worksheet, attach all applicable supplemental information and sign below.

I acknowledge that the data verification and validation process has been completed for the data identified above in accordance with the procedures described in the CMC QAPP, SOP #2

Sarah Comey 8/9/22

Data Verifier/Validator Signature Date

COMPLETION OF DATA VERIFICATION AND VALIDATION PROCESS

Once the data verification and validation process has been completed for the entire study (note: if the worksheet is for a subset of the data from a study, be sure ALL the data for the entire study is included before final completion of the data verification and validation process), notify the NMSQUID administrator that the process is complete and request that “V V in STORET” be added to the project title.

Once all data have been verified and validated for a study provide copies of ALL *Data Verification and Validation Worksheets* and attachments associated with the study to the Quality Assurance Officer and retain originals in the project binder.

Attachment 1.2 SWQB Validation Codes

When deficiencies are identified through the data verification and validation process, AMAFCA documents or "flags" the deficiencies by assigning validation codes. All data collected from the last compliant QC sample and up to the next compliant QC sample are assigned validation codes. The validation code alerts the data user that the results are outside QA control limits and may require re-sampling or a separate, qualitative analysis based on professional judgment.

Validation Code	Definition	WQX Equivalent
A1	Sample not collected according to SOP	
B1	Chemical was detected in the field blank at a concentration less than 5% of the sample concentration.	
BN	Blanks NOT collected during sampling run	
BU	Detection in blank. Analyte was not detected in this sample above the method's sample detection limit.	BU
RB1	Chemical was detected in the field blank at a concentration greater than or equal to 5% of the sample concentration. Results for this sample are rejected because they may be the result of contamination; the results may not be reported or used for regulatory compliance purposes.	B
R1	Rejected due to incorrect sample preservation	R
R2	Rejected due to equipment failure in the field	R
R3	Rejected based on best professional judgment	R
D1	Spike recovery not within method acceptance limits	
F1	Sample filter time exceeded	
J1	Estimated: the analyte was positively identified and the associated value is an approximate concentration of the analyte in the sample	J
K1	Holding time violation	H
Ea	Estimated-Incubation temperature between 35.5 and 38.0° Celsius	
Er	Rejected-Incubation temperature < 34.5 or >38.0° Celsius	
PD1	Percent difference between duplicate samples excessive	
S1	Per SLD, uncertainties (sigmas) are expressed as one standard deviation, i.e. one standard error. Small negative or positive values that are less than two standard deviations should be interpreted as "less than the detection limit."	
S2	Data are suspect but deemed usable based on best professional judgment; documentation of justification is required and should be included in the Data Verification and Validation Packet and reported with results	
Z1	Macroinvertebrate data did not meet QC criteria specified in Section 2.5 of QAPP	
H1	Habitat data did not meet QC criteria specified in Section 2.5 of QAPP	

Attachment 1.1 Water Quality Sample Data Verification and Validation Worksheet

Study Name: Compliance Monitoring Cooperative (CMC)
Year: FY 2022 (September 2021 – Wet Season Sample)
Project Coordinator: For Data Review and Reporting – SJG, BHI
V&V Reviewer: SJG
Data covered by this worksheet: Rio Grande South – 9/2/21
Version of Verification/Validation Procedures: QAPP –AMAFCA SOP #5 (7/2022)

Step 1: Verify Field Data

A. Are all Field Data forms present and complete? ☒ Yes ☐ No

If yes, proceed; if no, attempt to locate missing forms, then indicate any remaining missing forms and action taken.

Missing Field Data Forms	Action Taken

Total number of occurrences: 0

B. Are station name and ID, and sampling date and time on forms consistent with database? ☒ Yes ☐ No
If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify.

Station and Parameter	Action Taken	Re-verified?

Total number of occurrences: 0

C. Are field data on forms consistent with database? ☒ Yes ☐ No
If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify.

Station	Sampling Date	Parameter(s) Corrected	Re-verified?

Total number of occurrences: 0

D. Are RIDs correct and associated with the correct analytical suite, media subdivision (e.g. surface water, municipal waste, etc.) and activity type (e.g. Field observation, Routine sample, QA sample etc.)?
☒ Yes ☐ No

If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify

Station/RID	Sampling Date	RID Corrected	Re-verified?
______	______	______	_________
______	______	______	_________

Total number of occurrences: 0

☒ **Step 1 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 2: Verify Data Deliverables

A. Have all data in question been delivered? ☒ Yes ☐ No

If yes, proceed; if no, indicate RIDs with missing data (samples or blanks) or attach report with applicable RIDs highlighted. Contact data source and indicate action taken. Complete this step upon receipt of all missing data.

RID	Submittal Date	Missing Data/Parameters	Date of Initial Verification	Date Missing Data Were Received
______	______	______	______	______

Total number of occurrences: 0

B. Do all of the analytical suites have the correct number and type of analytes. ☒ Yes ☐ No

If yes, proceed; if no, indicate RIDs with missing or incorrect analyte(s) or attach report with applicable RIDs highlighted. Contact data source and indicate action taken.
*Note – Lab report identifies “Dissolved Phosphorous” as “Total Phosphorous” on a filtered sample. Also, reports gross alpha and uranium and not adjusted gross alpha. See Section 4.

RID	Submittal Date	Missing or Incorrect Parameters	Action Taken	Re-verified?

*Note – HEAL Lab report order number 2109132.

☒ **Step 2 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 3: Verify Flow Data

*Note – Not Applicable – no flow data provided with CMC sample collection

A. Identify incorrect or missing data on the flow calculation spreadsheet and correct errors.

Station	Sampling Date	Flow data missing or incorrect?
_____	_____	_____
_____	_____	_____

Total number of occurrences: 0

B. Identify incorrect or missing discharge measurements, correct errors in database and re-verify.

Station	Sampling Date	Flow data missing or incorrect?	Re-verified?
_____	_____	_____	_____
_____	_____	_____	_____

Total number of occurrences: 0

Not Applicable

☐ **Step 3 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 4: Verify Analytical Results for Missing Information or Questionable Results

Were any results with missing/questionable information identified? ☒ Yes ☐ No

If no, proceed; if yes, indicate results with missing information or questionable results or attach report. Contact data source and indicate action taken. Complete this step upon receipt of missing information or clarification of questionable results (clarify questionable results only, DO NOT change results without written approval (from lab or QA officer) and associated documentation).

RID	Sample Date	Missing or Questionable Information/Results	Action Taken
Rio Grande South	9/2/2021	Lab report lists Dissolved Phosphorous results as "Total Phosphorous" for "filtered sample".	BHI added note to the lab report.
Rio Grande South	9/2/2021	Lab report did not report Adjusted gross alpha. Reported gross alpha and uranium values.	AMAFCA and HEAL were informed of this. BHI Added notes to the lab report & calculated adjusted gross alpha (gross alpha minus uranium).

*Note – HEAL Lab report order number 2109132.

Total number of occurrences: 2

☒ **Step 4 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 5: Validate Blanks Results
Were any analytes of concern detected in blank samples? ☐ Yes ☒ No

If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager, with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes have been added to database correctly.

RID	Sample Date	Parameter	[Blank]	[Sample]	Validation Code/Flag Applied	Code/Flag verified in database? *

*See validation procedures to determine which associated data need to be flagged and include on *Validation Codes Form*.

Total number of occurrences: 0

☒ **Step 5 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 6: Validate Holding Times Violations

Were any samples submitted that did not meet specified holding times? ☐ Yes ☒ No

If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes/flags have been added to database.

RID	Sample Date	Parameter	[Blank]	[Sample]	Validation Code/Flag Applied	Code/Flag verified in database to ALL associated data?*
______	______	______	______	______		_________

*See validation procedures to determine which associated data need to be flagged.
*Note – Lab reports lists pH with hold time flag. Database uses field data reported pH, so this is hold time is not applicable.
Total number of occurrences: 0

☒ **Step 6 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 7: Validate Replicate/Duplicate Results (if applicable)
Were any replicate/duplicate pairs submitted outside of the established control limit of 20%?
☐ Yes ☒ No
If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes/flags have been added to database.

RID Pairs		Replicate or Duplicate?	Sample Date	Parameter	RPD	Validation Code/Flag Applied	Code/Flag verified in database applied?*
______	______	______	______	______	______		_________
______	______	______	______	______	______		_________

Total number of occurrences: 0

☒ **Step 7 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

****

After all of the above steps have been completed, save and print the worksheet, attach all applicable supplemental information and sign below.

I acknowledge that the data verification and validation process has been completed for the data identified above in accordance with the procedures described in the CMC QAPP, SOP #2

8/9/22

Data Verifier/Validator Signature Date

COMPLETION OF DATA VERIFICATION AND VALIDATION PROCESS

Once the data verification and validation process has been completed for the entire study (note: if the worksheet is for a subset of the data from a study, be sure ALL the data for the entire study is included before final completion of the data verification and validation process), notify the NMSQUID administrator that the process is complete and request that “V V in STORET” be added to the project title.

Once all data have been verified and validated for a study provide copies of ALL *Data Verification and Validation Worksheets* and attachments associated with the study to the Quality Assurance Officer and retain originals in the project binder.

Attachment 1.2 SWQB Validation Codes

When deficiencies are identified through the data verification and validation process, AMAFCA documents or "flags" the deficiencies by assigning validation codes. All data collected from the last compliant QC sample and up to the next compliant QC sample are assigned validation codes. The validation code alerts the data user that the results are outside QA control limits and may require re-sampling or a separate, qualitative analysis based on professional judgment.

Validation Code	Definition	WQX Equivalent
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RB1	Chemical was detected in the field blank at a concentration greater than or equal to 5% of the sample concentration. Results for this sample are rejected because they may be the result of contamination; the results may not be reported or used for regulatory compliance purposes.	B
R1	Rejected due to incorrect sample preservation	R
R2	Rejected due to equipment failure in the field	R
R3	Rejected based on best professional judgment	R
D1	Spike recovery not within method acceptance limits	
F1	Sample filter time exceeded	
J1	Estimated: the analyte was positively identified and the associated value is an approximate concentration of the analyte in the sample	J
K1	Holding time violation	H
Ea	Estimated-Incubation temperature between 35.5 and 38.0° Celsius	
Er	Rejected-Incubation temperature < 34.5 or >38.0° Celsius	
PD1	Percent difference between duplicate samples excessive	
S1	Per SLD, uncertainties (sigmas) are expressed as one standard deviation, i.e. one standard error. Small negative or positive values that are less than two standard deviations should be interpreted as "less than the detection limit."	
S2	Data are suspect but deemed usable based on best professional judgment; documentation of justification is required and should be included in the Data Verification and Validation Packet and reported with results	
Z1	Macroinvertebrate data did not meet QC criteria specified in Section 2.5 of QAPP	
H1	Habitat data did not meet QC criteria specified in Section 2.5 of QAPP	

Bohannan Huston

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M E M O R A N D U M

DATE: August 10, 2022

TO: Patrick Chavez, PE, AMAFCA

FROM: Sarah Ganley, PE, ENV-SP
Savannah Maynard
Emma Adams, EI

SUBJECT: **CMC Dry Season, Wet Weather Stormwater Monitoring**
Data Verification, Analysis Results Database, and Reporting
FY 2022 Dry Season (November 1, 2021 to June 30, 2022)

Notification of In-Stream Water Quality Exceedances

For downstream notification purposes, the following parameters for in-stream samples taken in the Rio Grande for the FY 2022 dry season had results that exceeded applicable E. coli water quality standards (WQSs) for samples obtained on June 22, 2022. Based on the Compliance Monitoring Cooperative (CMC) review of the storm, it was determined that this was not a qualifying storm event, hence further sampling and testing were not conducted. Table 1 summarizes the samples with E. coli exceedances.

Table 1: E. coli Detected Above Applicable Water Quality Standards
CMC FY 2022 Dry Season Monitoring

Sampling Date Location	**Parameters, Applicable Water Quality Standard (WQS), and Results Exceeding Applicable WQS**
	E. coli
	WQS: 88 MPN (CFU/100 mL) Pueblo of Isleta Primary Contact Ceremonial & Recreational
6/22/2022 Rio Grande North Angostura Diversion Dam	686.7 MPN (CFU/100ml)
6/22/2022 Rio Grande at Alameda Bridge E. coli Only	>2,419.6 MPN (CFU/100ml)

Overview of Stormwater Monitoring Activity

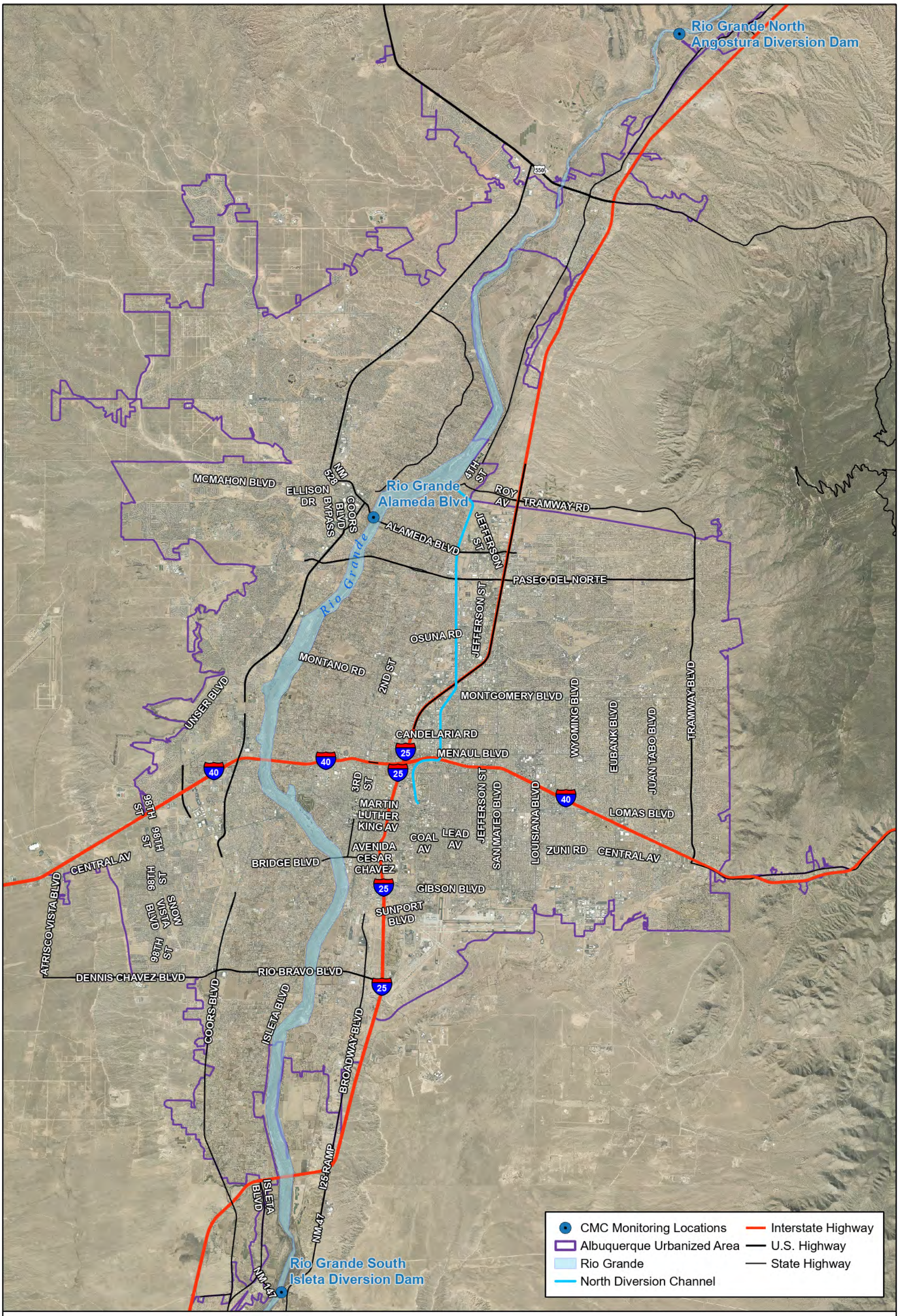
Bohannan Huston, Inc. (BHI) has been tasked to perform water quality services for the CMC Stormwater Data Verification, Database, and Reporting for the Wet Weather Stormwater Quality Monitoring Program for Fiscal Year (FY) 2022 (July 1, 2021 to June 30, 2022). The scope of work for this task includes data verification of the stormwater laboratory analysis results, compiling the analysis results into a database, and calculating the E. coli loading to compare with the Waste Load Allocation (WLA) for the qualifying storm events. The stormwater compliance monitoring is being conducted separately by Daniel B. Stephens & Associates, Inc. (DBS&A) and is not a part of this on-call task. This task is being conducted to assist the CMC members with their comprehensive monitoring and assessment program for compliance under the 2014 Middle Rio Grande (MRG) Watershed Based Municipal Separate Storm Sewer System (MS4) Permit, NPDES Permit No. NMR04A000 ("WSB MS4 Permit").

The WSB MS4 Permit entered Administrative Continuance in December 2019 when U.S. Environmental Protection Agency (EPA) Region 6 did not issue a new MS4 Permit before the current MS4 Permit's expiration date. The MRG Technical Advisory Group (TAG) sent EPA a letter dated October 15, 2019, acknowledging Administrative Continuance after the expiration date of the 5-year Permit term. Until a new MS4 Permit is issued, there are no compliance monitoring requirements for the CMC in the Rio Grande. As identified in the CMC Monitoring Plan, the WSB MS4 Permit required a minimum of seven (7) storm events be sampled at both the Rio Grande North and Rio Grande South locations (refer to Figure 1, page 3). All Permit required samples have been obtained by the CMC, as well as two (2) samples obtained in FY 2021 and the one (1) sample obtained in FY 2022 wet season during Administrative Continuance; all CMC samples are summarized in Table 2 below.

Table 2: CMC Sample Summary
Compared to WSB MS4 Permit Requirements

No. of Storm Events Required to Sample	CMC-WSB MS4 Permit Required Samples per Season	FY (Date) Samples Obtained for CMC
1	#1 Wet Season	FY 2017 (8/10/2016)
2	#2 Wet Season	FY 2017 (9/12/2016)
3	#3 Wet Season	FY 2017 (9/21/2016)
4	#1 Dry Season	FY 2017 (11/21/2016)
5	#2 Dry Season	FY 2019 (3/13/2019)
6	Any Season	FY 2018 (Wet Season - 7/27/2017)
7	Any Season	FY 2018 (Wet Season - 9/27/2017)
Not Required	Wet Season	FY 2021 (10/28/2020)
Not Required	Dry Season	FY 2021 (4/28/2021)
Not Required	Wet Season	FY 2022 (9/1/2021)

During the WSB MS4 Permit Administrative Continuance, the CMC members chose to continue sampling within the Rio Grande to support their MS4 program needs and gather additional data in support of the future MS4 Permit compliance. This memo reports on the wet weather stormwater monitoring activity for the FY 2022 dry season (November 1, 2022 to June 30, 2022).



AMAFCA

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N

0 6,000 12,000 24,000 Feet
1 inch = 12,205 feet

CMC Monitoring

Figure 1
Monitoring Locations

P:\20230125\WR\Reports\Preliminary & Draft\Figures\APRXs\Figure1.aprx
Author: mcrooks

August 2022

Monitoring Activity Summary

The list below provides a summary of the CMC comprehensive monitoring program activities completed for the FY 2022 dry season from November 2021 through June 2022. One (1) non-qualifying storm event was sampled and analyzed during the FY 2022 dry season.

- **June 22, 2022 – Only E. Coli for Rio Grande North and at Alameda Bridge.** A sample was collected at the Rio Grande North location at 2:00 p.m. and at Alameda Bridge at 3:30 p.m. on June 22, 2022, and samples were taken to the laboratory for E. coli only tests. Based on the CMC review of the storm, it was determined this was not a qualifying storm event, hence further sampling or testing was conducted.

Stormwater Quality Database for CMC

As stated previously, there were no qualifying storm events sampled for the CMC during the FY 2022 dry season, wet weather monitoring. However, the June 22, 2022, E. coli samples were added to the CMC Excel database. The Hall Environmental Analysis Laboratory (HEAL) analysis reports for this monitoring season have been received, added to the database, and are provided with this memo (Attachment 1). The lab data entered is marked in the spreadsheet as “V” (verified), and data V&V has been completed (refer to Attachment 2). The updated database is also included with this memo.

Conclusions and Planning

During the FY 2022 dry season (November 1, 2021 to June 30, 2022), one (1) non-qualifying storm event was sampled by the CMC. E. coli samples were collected at the Rio Grande North monitoring location and at Alameda Bridge. The lab reports for these samples have been received, and this data has been entered into the CMC Excel database.

To summarize:

- The WSB MS4 Permit entered Administrative Continuance in December 2019 when U.S. Environmental Protection Agency (EPA) Region 6 did not issue a new MS4 Permit before the current MS4 Permit’s expiration date. Until a new MS4 Permit is issued, there are no compliance monitoring requirements for the CMC in the Rio Grande. All MS4 Permit required samples have been obtained by the CMC, as well several samples collected during Administrative Continuance.
- There was not a qualifying storm event sampled by the CMC during the FY 2022 dry season (November 1, 2021 to June 30, 2022).

SG/ab

Attachments:

Attachment 1 – DBS&A Field Data & Hall Environmental Analysis Laboratory Reports with BHI Notes for FY 2022 Dry Season

Attachment 2 – FY 2022 Dry Season Completed Data Verification and Validation (V&V) Forms

Spreadsheet Included Separately:

Excel CMC Spreadsheet updated with water quality criterion details

ATTACHMENT 1

DBS&A FIELD DATA & HALL ENVIRONMENTAL ANALYSIS LABORATORY REPORTS WITH BHI NOTES FOR FY 2022 DRY SEASON

CMC Water Quality Results Database
FY 2017 -FY 2021
Date: August 10, 2022
Summary of Lab Results for CMC samples

		Rio Grande - North - At Angostura Dam												Rio Grande - Alameda Bridge (E. coli Only Samples)															
Parameter	**Permit Required Units**	Provisional or Verified	**2022 CMC SAMPLE - EXTRA NORTH Collection Date 8/16/2021** Wet Season Sample Non-Qualifying Storm Event	Qualifier	Check compared to Water Quality Criterion	Provisional or Verified	**2022 CMC SAMPLE - EXTRA NORTH Collection Date 9/01/2021** Wet Season Sample	Qualifier	Check compared to Water Quality Criterion	Provisional or Verified	**2022 CMC SAMPLE - EXTRA NORTH Collection Date 6/22/2022** Dry Season Sample Non-Qualifying Storm Event	Qualifier	Check compared to Water Quality Criterion	Provisional or Verified	**2022 CMC SAMPLE - EXTRA SOUTH Collection Date 9/02/2021** Wet Season Sample	Qualifier	Check compared to Water Quality Criterion	Provisional or Verified	**2022 CMC SAMPLE - EXTRA ALAMEDA Collection Date 9/1/2021** Wet Season Pre-Storm Sample	Qualifier	Check compared to Water Quality Criterion	Provisional or Verified	**2022 CMC SAMPLE - EXTRA ALAMEDA Collection Date 9/2/2021** Wet Season Sample	Qualifier	Check compared to Water Quality Criterion	Provisional or Verified	**2022 CMC SAMPLE - EXTRA ALAMEDA Collection Date 6/22/2022** Dry Season Sample Non-Qualifying Storm Event	Qualifier	Check compared to Water Quality Criterion
Total Suspended Solids (TSS)	mg/L					V	130		--					V	790	D	--												
Total Dissolved Solids (TDS)	mg/L					V	230	D	OK					V	330	D	OK												
Chemical Oxygen Demand (COD)	mg/L					V	22.2		--					V	54.2		--												
Biochemical Oxygen Demand (BOD_5)	mg/L					V	2.7	RE	--					V	4.9		--												
Dissolved Oxygen (DO)	mg/L	V	6.13		OK	V	6.98		OK	V	7.66		OK	V	6.92		OK	V	7.06		OK	V	6.92		OK	V	7.02		OK
Oil and Grease (N-Hexane Extractable Material)	mg/L					V	ND		OK					V	ND		OK												
E. coli	MPN (CFU/100 mL)	V	6,867		>WQ Standard	V	183		>WQ Standard	V	686.7		>WQ Standard	V	4,884		>WQ Standard	V	20.0		OK	V	554.0		>WQ Standard	V	>2,419.6		>WQ Standard
pH	S.U.	V	7.92		OK	V	8.63		OK	V	8.27		OK	V	8.11		OK	V	8.37		OK	V	7.72		OK	V	7.67		OK
Total Kjedahl Nitrogen (TKN)	mg/L					V	4.1		--					V	2	JD	--												
Nitrate plus Nitrite	mg/L					V	ND		OK					V	1.8		OK												
Dissolved Phosphorous	mg/L					V	0.15	D	--					V	1.4	D	--												
Ammonia (mg/L as N)	mg/L					V	0.42	J	OK					V	ND		OK												
Total Nitrogen	mg/L					V	4.52	J	OK					V	3.80		OK												
Total Phosphorous	mg/L					V	0.29	D	--					V	1.3	D	--												
PCBS - 0.000064 (Method 1668A - sum of all congeners)	pg/L					V	0.00027	J	>WQ Standard					V	0.00172	J	>WQ Standard												
Gross Alpha, Adjusted	pCi/L					v	4.94	Note - Gross Alpha was reported, not adjusted gross alpha. Calculation completed to determine adjusted gross alpha.	OK					V	31.56	Note - Gross Alpha was reported, not adjusted gross alpha. Calculation completed to determine adjusted gross alpha.	>WQ Standard												
Tetrahydrofuran	µg/L					V	ND		--					V	ND		--												
Benzo(a)pyrene	µg/L					V	ND		OK					V	ND		OK												
Benzo(b)fluoranthene (other name: 3,4-Benzofluoranthene)	µg/L					V	ND		OK					V	ND		OK												
Benzo(k)fluoranthene	µg/L					V	ND		OK					V	ND		OK												
Chrysene	µg/L					V	ND		OK					V	ND		OK												
Indeno(1,2,3-cd)Pyrene	µg/L					V	ND		OK					V	ND		OK												
Dieldrin	µg/L					V	ND		OK					V	ND		OK												
Pentachlorophenol	µg/L					V	ND		OK					V	ND		OK												
Benzidine	µg/L					V	ND		OK					V	ND		OK												
Benzo(a)anthracene	µg/L					V	ND		OK					V	ND		OK												
Dibenzofuran	µg/L					V	ND		--					V	ND		--												
Dibenzo(a,h)anthracene	µg/L					V	ND		OK					V	ND		OK												
Chromium VI (Hexavalent)	µg/L					V	ND		OK					V	ND		OK												
Dissolved Copper	µg/L					V	0.84	J	OK					V	1.5		OK												
Dissolved Lead	µg/L					V	0.065	J	OK					V	0.32	J	OK												
Bis (2-ethyhexyl) Phthalate (other names: DI(2-ethylhexly)phthalate, DEHP) - 2.2	µg/L					V	ND		OK					V	ND		OK												
Conductivity	umhos/cm	V	591		--	V	315		--	V	293		--	V	484		--	V	375		--	V	383		--	V	287		--
Temperature	°C	V	21.24		OK	V	21.71		OK	V	18.8		OK	V	21.21		OK	V	23.19		OK	V	22.14		OK	V	22.1		OK
Hardness (as $CaCO_3$)	mg/L					V	160		--					V	290		--												
Mercury	µg/l																												

Data Verification/Validation and Qualifier Notes:
(R) The sample results are unusable because certain criteria were not met. The analyte may or may not be present in the sample.
(H) Sample holding time exceeded.
(J) The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
(D) Sample was diluted by Lab due to matrix
(U) Analyte was analyzed for, but not detected above the specified detection limit.

Notes:
1. Wet Season monitoring period - July 1 to October 31 and Dry Season monitoring period - November 1 to June 30 according to the Watershed Based MS4 Permit NMR04A000.
2. Water Quality Criterion from 20.6.4 NMAC; Rio Grande Basin - section
20.6.4.105; For a mean monthly flow of 100 cfs, monthly average
3. Aquatic life criteria for metals are expressed as a function of total
4. According to NMAC 20.6.4, E. coli bacteria for Primary Contact - monthly
5. Water quality criterion for metals is based on dissolved metals, NMAC
20.6.4.900.J and individual sample results compared to acute toxicity
6. HEAL lab method: SM 9223B Fecal Indicator. Note - lab method for
units of MPN/100 ml, lab report uses units CFU/100 ml, for this analysis

ND - analyte not detected above the laboratory method detection limit
NA - not analyzed
Hatching also indicates that parameter was not analyzed

National recommended WQ criteria Human Health
https://www.epa.gov/wqc/national-recommended-water-quality-criteria-human-health-criteria-table

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 28, 2022

Patrick Chavez
AMAFCA
2600 Prospect Ave NE
Albuquerque, NM 87107
TEL: (505) 884-2215
FAX:

RE: CMC OrderNo.: 2206C11

Dear Patrick Chavez:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/22/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Field Parameters
Rio Grande North-
Temp = 18.80 °C
pH = 8.27
Conductivity (uS/cm=umho/cm) = 293
Dissolved Oxygen (mg/L) = 7.66
Rio Grande Alameda-
Temp = 22.10 °C
pH = 7.67
Conductivity (uS/cm=umho/cm) = 287
Dissolved Oxygen (mg/L) = 7.02

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2206C11**
Date Reported: **6/28/2022**

CLIENT: AMAFCA
Client Sample ID: RG - North - 20220622
Project: CMC
Collection Date: 6/22/2022 2:00:00 PM
Lab ID: 2206C11-001
Matrix: AQUEOUS
Received Date: 6/22/2022 4:05:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dms**
E. Coli	686.7	1.000		MPN/100	1	6/23/2022 5:28:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2206C11**
Date Reported: **6/28/2022**

CLIENT: AMAFCA
Client Sample ID: RG - Alameda - 20220622
Project: CMC
Collection Date: 6/22/2022 3:30:00 PM
Lab ID: 2206C11-002
Matrix: AQUEOUS
Received Date: 6/22/2022 4:05:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dms**
E. Coli	>2419.6	1.000		MPN/100	1	6/23/2022 5:28:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

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Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: AMAFCA Work Order Number: 2206C11 RcptNo: 1

Received By: **Andy Freeman** 6/22/2022 4:05:00 PM

Completed By: **Isaiah Ortiz** 6/22/2022 4:20:02 PM

Reviewed By: 6-22-22 @ 16:39

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: KPG 6.22.22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	16.8	Good	Not Present			

Chain-of-Custody Record

Client: AMAFCA

Mailing Address:

Phone #:

email or Fax#: pchavez@amafca.org

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: CMC

Project #:

Project Manager: Patrick Chavez

Sampler:
On Ice: ☒ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 16.7+0.1 = 16.8 (°C)

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www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2206C11	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Ecoli enumerated
6-22-22	1400	AQ	RG-North-20220622			001											X
6-22-22	1530	AQ	RG-Alameda-20220622			002											X

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
6-22-22	1605				6/22/22	1605
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Samplers CMJ, JK

CMC Sampling Data Sheet

Site Identification: RG-North

Notes: onsite ~ 12:50

Full Suite Sample Date and Time:	6/22/22 1400
Full Sample Identification:	RG-North-20220622
QC Samples: Duplicate / None	QC Sample ID:
QC samples require a DIFFERENT sample time than the environmental sample. QC Sample time:	

Full Suite Collection Point : MRGCD Dam structure

Full Suite Sample Volume: 6 gal Collection Time Start: 1315 End: 1408

Field Parameters for each 2-gallon grab

Grab	Time	Temp (°C)	pH	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (%)
1	1315	19.27	8.30	295	7.54	81.6
2	1330	19.04	8.20	292	7.97	85.8
3	1345	18.97	8.27	290	8.27	84.8
4	1400	18.91	8.26	288	7.90	83.9
Composite	1402	18.80	8.27	293	7.66	82.1

☒ *Turbid Water* ☒ *Color* Brown ☒ *Solids* ☐ *Oil/Sheen* ☐ *Foam* ☐ *Odor* _____

Analytical - see 2021 COC table

☒ Site Photo ☒ Sample Photo

Chain-of-Custody Record

Client: AMAFCA

Mailing Address:

Phone #:

email or Fax#: pchavez@amafca.org

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: CMC

Project #:

Project Manager: Patrick Chavez

Sampler:

On Ice: ☐ Yes ☐ No

# of Coolers:

Cooler Temp(including CF): (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No
6-22-22	1400	AG	RG-North-20220622			
6-22-22	1530	AG	RG-Alameda-20220622			

Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Ecoli: enumerated					
										X					
										X					

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
6-22-22	1605					
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Samplers IS JK

CMC Sampling Data Sheet

Site Identification: RG - Alameda

Notes:

Full Suite Sample Date and Time:	~~RG-Alameda~~ 6/22/22 1530
Full Sample Identification:	RG - Alameda - 20220622
QC Samples: Duplicate / None	QC Sample ID:
QC samples require a DIFFERENT sample time than the environmental sample. QC Sample time:	

Full Suite Collection Point : Bridge

Full Suite Sample Volume: 2 Gallons Collection Time Start: End:

Field Parameters for each 2-gallon grab

Grab	Time	Temp (°C)	pH	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (%)
1						
2						
3						
4						
Composite	1530	22.10	7.67	287	7.02	79.6

☒ *Turbid Water* ☐ *Color* Brown ☒ *Solids* ☐ *Oil/Sheen* ☐ *Foam* ☐ *Odor*_____

Analytical - see 2021 COC table

☒ Site Photo ☒ Sample Photo

YSI SONDE CALIBRATION WORKSHEET

Last Revision 01/05/2007

Sonde ID: 06K1697 Date/Time: 6/22/22 1300 Technician: CMJ

Reason for Calibration: CMC Samplings

Battery Voltage: — (6920 & 600 XLM only)

Specific Conductance:
Standard Used (mS) 1413

Calibration Values		
Initial	Post Cal.	Cell Constant:*
1351	1413	

(Range: 5 +/-0.5)

pH

		Calibration Values			
		Initial	Post Cal.	mV	
7 Buffer:	(first)	7.04	7.00	-1.0	(Range: 0 mV +/- 50)
4 Buffer:	(second)	4.03	4.00	165.6	(Range: +177 from pH 7)
10 Buffer:	(third)	10.14	10.00	-173.6	(Range: -177 from pH 7)

Note: Span between pH 7 and pH 4, and pH 7 and pH 10 should be aproximately 165 to 180 mV.

DO % Sat. Membrane Changed? Y/N _____ If yes, run probe at least 15 mins before calibration. Optimally, wait 6 to 8 hrs before calibration / use.

DO Charge _____ (Range: 50 +/- 25)

mm Hg
639.3

Calibration Values %		
Initial	Post Cal.	DO Gain*
76.1	84.1	

(Range: 1 (0.7 to 1.5))

Turbidity Wiper Changed? Y/N _____ Wiper parks ~180 degrees from optic port? Y/N _____

Standards Values (NTUs)	Calibration Values	
	Initial	Post Cal.
Zero (Always First)		

Note: Use longer probe guard with black turb probe; shorter guard with grey probe.

Post Calibration DO Sensor Output Test

Turn off handset (650MDS). Wait 1 minute, turn handset on and enter "Run". DO % Sat. **must** start reading with a high value and descend to the calibration value in 1 to 2 minutes. **If it does not, reject.**
Note: Disregard the first two readings as they may be affected by the warm-up process.

Accept? _____ Reject? _____ See note in comments

Calibration Comments

* Found in: Main Menu --> Sonde Menu --> Advanced --> Calibration Constants

ATTACHMENT 2

FY 2022 DRY SEASON COMPLETED DATA VERIFICATION AND VALIDATION (V&V) FORMS

Attachment 1.1 Water Quality Sample Data Verification and Validation Worksheet

Study Name: Compliance Monitoring Cooperative (CMC)
Year: FY 2022 (June 2022 – Dry Season Sample)
Project Coordinator: For Data Review and Reporting – SJG, BHI
V&V Reviewer: SJG
Data covered by this worksheet: Rio Grande North – 6/22/22 – E. coli Only Sample – Was Not Qualifying Storm Event
Version of Verification/Validation Procedures: QAPP –AMAFCA SOP #5 (7/2022)

Step 1: Verify Field Data

A. Are all Field Data forms present and complete? ☒ Yes ☐ No

If yes, proceed; if no, attempt to locate missing forms, then indicate any remaining missing forms and action taken.

Missing Field Data Forms	Action Taken

Total number of occurrences: 0

B. Are station name and ID, and sampling date and time on forms consistent with database? ☒ Yes ☐ No
If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify.

Station and Parameter	Action Taken	Re-verified?

Total number of occurrences: 0

C. Are field data on forms consistent with database? ☒ Yes ☐ No
If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify.

Station	Sampling Date	Parameter(s) Corrected	Re-verified?

Total number of occurrences: 0

D. Are RIDs correct and associated with the correct analytical suite, media subdivision (e.g. surface water, municipal waste, etc.) and activity type (e.g. Field observation, Routine sample, QA sample etc.)?
☒ Yes ☐ No

If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify

Station/RID	Sampling Date	RID Corrected	Re-verified?
______	______	______	_________
______	______	______	_________

Total number of occurrences: **<u>0</u>**

☒ **Step 1 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 2: Verify Data Deliverables
A. Have all data in question been delivered? ☒ Yes ☐ No

If yes, proceed; if no, indicate RIDs with missing data (samples or blanks) or attach report with applicable RIDs highlighted. Contact data source and indicate action taken. Complete this step upon receipt of all missing data.

RID	Submittal Date	Missing Data/Parameters	Date of Initial Verification	Date Missing Data Were Received
______	______	______	______	______

Total number of occurrences: **0**

B. Do all of the analytical suites have the correct number and type of analytes. ☒ Yes ☐ No

If yes, proceed; if no, indicate RIDs with missing or incorrect analyte(s) or attach report with applicable RIDs highlighted. Contact data source and indicate action taken.

RID	Submittal Date	Missing or Incorrect Parameters	Action Taken	Re-verified?
______	______	______	______	______

☒ **Step 2 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 3: Verify Flow Data

*Note – Not Applicable – no flow data provided with CMC sample collection

A. Identify incorrect or missing data on the flow calculation spreadsheet and correct errors.

Station	Sampling Date	Flow data missing or incorrect?

Total number of occurrences: 0

B. Identify incorrect or missing discharge measurements, correct errors in database and re-verify.

Station	Sampling Date	Flow data missing or incorrect?	Re-verified?

Total number of occurrences: 0

Not Applicable

☐ **Step 3 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 4: Verify Analytical Results for Missing Information or Questionable Results

Were any results with missing/questionable information identified? ☐ Yes ☒ No

If no, proceed; if yes, indicate results with missing information or questionable results or attach report. Contact data source and indicate action taken. Complete this step upon receipt of missing information or clarification of questionable results (clarify questionable results only, DO NOT change results without written approval (from lab or QA officer) and associated documentation).

RID	Sample Date	Missing or Questionable Information/Results	Action Taken

Total number of occurrences: 0

☒ **Step 4 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 5: Validate Blanks Results
Were any analytes of concern detected in blank samples? ☐ Yes ☒ No

If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager, with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes have been added to database correctly.

RID	Sample Date	Parameter	[Blank]	[Sample]	Validation Code/Flag Applied	Code/Flag verified in database? *
____	_____	_____	_____	_____		________
_____	_____	_____	_____	_____		________

*See validation procedures to determine which associated data need to be flagged and include on *Validation Codes Form*.

Total number of occurrences: 0

☒ **Step 5 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 6: Validate Holding Times Violations
Were any samples submitted that did not meet specified holding times? ☐ Yes ☒ No
If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes/flags have been added to database.

RID	Sample Date	Parameter	[Blank]	[Sample]	Validation Code/Flag Applied	Code/Flag verified in database to ALL associated data?*
_____	_____	_____	_____	_____		________

Total number of occurrences: 0

☒ **Step 6 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 7: Validate Replicate/Duplicate Results (if applicable)
Were any replicate/duplicate pairs submitted outside of the established control limit of 20%?
☐ Yes ☒ No
If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes/flags have been added to database.

RID Pairs		Replicate or Duplicate?	Sample Date	Parameter	RPD	Validation Code/Flag Applied	Code/Flag verified in database applied?*
_____	_____	_____	_____	_____	_____		_____
_____	_____	_____	_____	_____	_____		_____

Total number of occurrences: 0

☒ **Step 7 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

****

After all of the above steps have been completed, save and print the worksheet, attach all applicable supplemental information and sign below.

I acknowledge that the data verification and validation process has been completed for the data identified above in accordance with the procedures described in the CMC QAPP, SOP #2

Sarah Gomez 8/9/22

Data Verifier/Validator Signature Date

COMPLETION OF DATA VERIFICATION AND VALIDATION PROCESS

Once the data verification and validation process has been completed for the entire study (note: if the worksheet is for a subset of the data from a study, be sure ALL the data for the entire study is included before final completion of the data verification and validation process), notify the NMSQUID administrator that the process is complete and request that “V V in STORET” be added to the project title.

Once all data have been verified and validated for a study provide copies of ALL *Data Verification and Validation Worksheets* and attachments associated with the study to the Quality Assurance Officer and retain originals in the project binder.

Attachment 1.2 SWQB Validation Codes

When deficiencies are identified through the data verification and validation process, AMAFCA documents or "flags" the deficiencies by assigning validation codes. All data collected from the last compliant QC sample and up to the next compliant QC sample are assigned validation codes. The validation code alerts the data user that the results are outside QA control limits and may require re-sampling or a separate, qualitative analysis based on professional judgment.

Validation Code	Definition	WQX Equivalent
A1	Sample not collected according to SOP	
B1	Chemical was detected in the field blank at a concentration less than 5% of the sample concentration.	
BN	Blanks NOT collected during sampling run	
BU	Detection in blank. Analyte was not detected in this sample above the method's sample detection limit.	BU
RB1	Chemical was detected in the field blank at a concentration greater than or equal to 5% of the sample concentration. Results for this sample are rejected because they may be the result of contamination; the results may not be reported or used for regulatory compliance purposes.	B
R1	Rejected due to incorrect sample preservation	R
R2	Rejected due to equipment failure in the field	R
R3	Rejected based on best professional judgment	R
D1	Spike recovery not within method acceptance limits	
F1	Sample filter time exceeded	
J1	Estimated: the analyte was positively identified and the associated value is an approximate concentration of the analyte in the sample	J
K1	Holding time violation	H
Ea	Estimated-Incubation temperature between 35.5 and 38.0° Celsius	
Er	Rejected-Incubation temperature < 34.5 or >38.0° Celsius	
PD1	Percent difference between duplicate samples excessive	
S1	Per SLD, uncertainties (sigmas) are expressed as one standard deviation, i.e. one standard error. Small negative or positive values that are less than two standard deviations should be interpreted as "less than the detection limit."	
S2	Data are suspect but deemed usable based on best professional judgment; documentation of justification is required and should be included in the Data Verification and Validation Packet and reported with results	
Z1	Macroinvertebrate data did not meet QC criteria specified in Section 2.5 of QAPP	
H1	Habitat data did not meet QC criteria specified in Section 2.5 of QAPP	

Attachment 1.1 Water Quality Sample Data Verification and Validation Worksheet

Study Name: Compliance Monitoring Cooperative (CMC)
Year: FY 2022 (June 2022 – Dry Season Sample)
Project Coordinator: For Data Review and Reporting – SJG, BHI
V&V Reviewer: SJG
Data covered by this worksheet: Alameda – 6/22/22 – E. coli Only Sample – Was Not Qualifying Storm Event

Version of Verification/Validation Procedures: QAPP –AMAFCA SOP #5 (7/2022)

Step 1: Verify Field Data
A. Are all Field Data forms present and complete? ☒ Yes ☐ No

If yes, proceed; if no, attempt to locate missing forms, then indicate any remaining missing forms and action taken.

Missing Field Data Forms	Action Taken

Total number of occurrences: 0

B. Are station name and ID, and sampling date and time on forms consistent with database? ☒ Yes ☐ No
If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify.

Station and Parameter	Action Taken	Re-verified?

Total number of occurrences: 0

C. Are field data on forms consistent with database? ☒ Yes ☐ No
If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify.

Station	Sampling Date	Parameter(s) Corrected	Re-verified?

Total number of occurrences: 0

D. Are RIDs correct and associated with the correct analytical suite, media subdivision (e.g. surface water, municipal waste, etc.) and activity type (e.g. Field observation, Routine sample, QA sample etc.)?
☒ Yes ☐ No

If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify

Station/RID	Sampling Date	RID Corrected	Re-verified?
______	______	______	_________
______	______	______	_________

Total number of occurrences: **0**

☒ **Step 1 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

Step 2: Verify Data Deliverables

A. Have all data in question been delivered? ☒ Yes ☐ No

If yes, proceed; if no, indicate RIDs with missing data (samples or blanks) or attach report with applicable RIDs highlighted. Contact data source and indicate action taken. Complete this step upon receipt of all missing data.

RID	Submittal Date	Missing Data/Parameters	Date of Initial Verification	Date Missing Data Were Received
______	______	______	______	______

Total number of occurrences: **0**

B. Do all of the analytical suites have the correct number and type of analytes. ☒ Yes ☐ No

If yes, proceed; if no, indicate RIDs with missing or incorrect analyte(s) or attach report with applicable RIDs highlighted. Contact data source and indicate action taken.

RID	Submittal Date	Missing or Incorrect Parameters	Action Taken	Re-verified?
______	______	______	______	______

☒ **Step 2 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 3: Verify Flow Data
*Note – Not Applicable – no flow data provided with CMC sample collection
A. Identify incorrect or missing data on the flow calculation spreadsheet and correct errors.

Station	Sampling Date	Flow data missing or incorrect?

Total number of occurrences: 0

B. Identify incorrect or missing discharge measurements, correct errors in database and re-verify.

Station	Sampling Date	Flow data missing or incorrect?	Re-verified?

Total number of occurrences: 0 **Not Applicable**

☐ **Step 3 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 4: Verify Analytical Results for Missing Information or Questionable Results

Were any results with missing/questionable information identified? ☐ Yes ☒ No

If no, proceed; if yes, indicate results with missing information or questionable results or attach report. Contact data source and indicate action taken. Complete this step upon receipt of missing information or clarification of questionable results (clarify questionable results only, DO NOT change results without written approval (from lab or QA officer) and associated documentation).

RID	Sample Date	Missing or Questionable Information/Results	Action Taken

Total number of occurrences: 0

☒ **Step 4 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

- -

Step 5: Validate Blanks Results
Were any analytes of concern detected in blank samples? ☐ Yes ☒ No

If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager, with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes have been added to database correctly.

RID	Sample Date	Parameter	[Blank]	[Sample]	Validation Code/Flag Applied	Code/Flag verified in database? *
_____	______	______	______	______		_________
______	______	______	______	______		_________

*See validation procedures to determine which associated data need to be flagged and include on *Validation Codes Form*.

Total number of occurrences: <u>0</u>

☒ **Step 5 Completed** ***Initials:*** <u>SJG</u> ***Date:*** <u>8/9/22</u>

- -

Step 6: Validate Holding Times Violations
Were any samples submitted that did not meet specified holding times? ☐ Yes ☒ No

If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes/flags have been added to database.

RID	Sample Date	Parameter	[Blank]	[Sample]	Validation Code/Flag Applied	Code/Flag verified in database to ALL associated data?*
______	______	______	______	______		_________

Total number of occurrences: <u>0</u>

☒ **Step 6 Completed** ***Initials:*** <u>SJG</u> ***Date:*** <u>8/9/22</u>

- -

Step 7: Validate Replicate/Duplicate Results (if applicable)
Were any replicate/duplicate pairs submitted outside of the established control limit of 20%?
☐ Yes ☒ No
If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes/flags have been added to database.

RID Pairs		Replicate or Duplicate?	Sample Date	Parameter	RPD	Validation Code/Flag Applied	Code/Flag verified in database applied?*

Total number of occurrences: 0

☒ **Step 7 Completed** ***Initials:*** SJG ***Date:*** 8/9/22

****

After all of the above steps have been completed, save and print the worksheet, attach all applicable supplemental information and sign below.

I acknowledge that the data verification and validation process has been completed for the data identified above in accordance with the procedures described in the CMC QAPP, SOP #2

Sarah Carney 8/9/22

Data Verifier/Validator Signature Date

COMPLETION OF DATA VERIFICATION AND VALIDATION PROCESS

Once the data verification and validation process has been completed for the entire study (note: if the worksheet is for a subset of the data from a study, be sure ALL the data for the entire study is included before final completion of the data verification and validation process), notify the NMSQUID administrator that the process is complete and request that “V V in STORET” be added to the project title.

Once all data have been verified and validated for a study provide copies of ALL *Data Verification and Validation Worksheets* and attachments associated with the study to the Quality Assurance Officer and retain originals in the project binder.

Attachment 1.2 SWQB Validation Codes

When deficiencies are identified through the data verification and validation process, AMAFCA documents or "flags" the deficiencies by assigning validation codes. All data collected from the last compliant QC sample and up to the next compliant QC sample are assigned validation codes. The validation code alerts the data user that the results are outside QA control limits and may require re-sampling or a separate, qualitative analysis based on professional judgment.

Validation Code	Definition	WQX Equivalent
A1	Sample not collected according to SOP	
B1	Chemical was detected in the field blank at a concentration less than 5% of the sample concentration.	
BN	Blanks NOT collected during sampling run	
BU	Detection in blank. Analyte was not detected in this sample above the method's sample detection limit.	BU
RB1	Chemical was detected in the field blank at a concentration greater than or equal to 5% of the sample concentration. Results for this sample are rejected because they may be the result of contamination; the results may not be reported or used for regulatory compliance purposes.	B
R1	Rejected due to incorrect sample preservation	R
R2	Rejected due to equipment failure in the field	R
R3	Rejected based on best professional judgment	R
D1	Spike recovery not within method acceptance limits	
F1	Sample filter time exceeded	
J1	Estimated: the analyte was positively identified and the associated value is an approximate concentration of the analyte in the sample	J
K1	Holding time violation	H
Ea	Estimated-Incubation temperature between 35.5 and 38.0° Celsius	
Er	Rejected-Incubation temperature < 34.5 or >38.0° Celsius	
PD1	Percent difference between duplicate samples excessive	
S1	Per SLD, uncertainties (sigmas) are expressed as one standard deviation, i.e. one standard error. Small negative or positive values that are less than two standard deviations should be interpreted as "less than the detection limit."	
S2	Data are suspect but deemed usable based on best professional judgment; documentation of justification is required and should be included in the Data Verification and Validation Packet and reported with results	
Z1	Macroinvertebrate data did not meet QC criteria specified in Section 2.5 of QAPP	
H1	Habitat data did not meet QC criteria specified in Section 2.5 of QAPP	

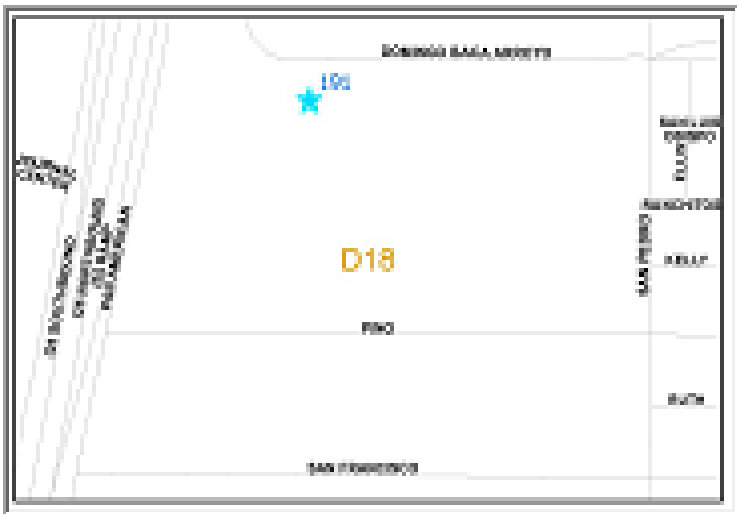
Attachment 2

FY2021 Storm Water Quality Features

SWQ Features

LOCATION	PINO YARD POND AT 5501 PINO NE

STRUCTURE_NAME	SWQ POND LINING



MAP_KEY	D18	City_Quad	NE

Year_Built	2022	link	X:\MD\SHARE\MD-Storm\Ponds-Trash Racks-cat\2-TRASH_RAC

NOTES	FIBER REINIFORCED SHOTCRETE (3" FOR THE BOTTOM, 2" FOR THE SIDES)

SWQ SIZE	1656 SY LINING	cost	$205,500

PROJECT_NO	52809	NUMBER	191

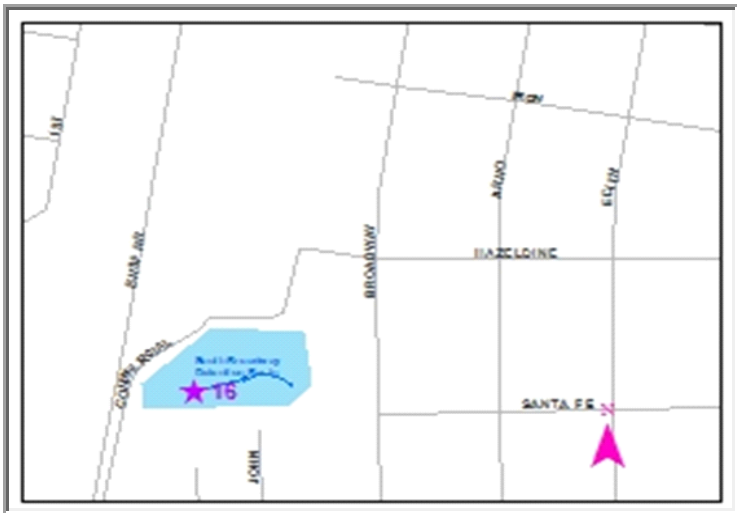
LOCATION	MARBLE-ARNO PS

STRUCTURE_NAME	MECHANICAL BARSCREEN

MAP_KEY	J14	City_Quad	NW
Year_Built	2022	link	X:\MD\SHARE\MD-Storm\Ponds-Trash Racks-cat\2-TRASH_RAC
NOTES	DUPERON FLEXRAKE TYPE FRHD		
SWQ SIZE	6' X 38' @1.5"X 9" CLEAR SPACING.	cost	$315,400
PROJECT_NO	595892	NUMBER	120

LOCATION	0.1 M SW BROADWAY AND HAZELDINE SW

STRUCTURE_NAME	CONCRETE BOX SPILLWAY



MAP_KEY	K14	City_Quad	SW

Year_Built	2021	link	X:\MD\SHARE\MD-Storm\Ponds-Trash Racks-cat\TRASH_RACKS

NOTES	INSIDE SOUTH BROADWAY POND

SWQ SIZE	8' X 8' X 4 1/2' WITH 6" DIA TUBES 12" OC COVERED WITH 2" X 2"WIRE MESH	cost	$122,000

PROJECT_NO	797200, 802614	NUMBER	16

Attachment 3

Impervious Area Added

DRAINAGE FILE	PROJECT NAME/DES	APPROVAL SOUGHT	MAPA2.REVIEW DATE	APPROVED	DISCHARGE	ACRES IMP	WQ POND AT CO	SQ FT IMP FEE IN LIEU	AMOUNT PAID FEE IN LIEU
A11D017	LOT 4 UNSER & MCMAHON CENTER	ROFG	17-Jun-22	Y	FREE		No		
A12D032	10800 OLYMPIC	CO-PERM	26-Apr-22	Y	FREE	0.1	Yes		
B10D003I	DUTCH BROS COFFEE	CO-PERM	24-Jun-22	Y	Free	0.6935	Yes		
B11D010A	VIVA PARADISE PHASE 2 (REVISION)	CO-PERM	10-Dec-21	Y	RETENTION	2.06	Yes		
C12D003A	KIDDIE ACADEMY WESTSIDE	CO-PERM	19-Nov-21	Y	DETENTION	0.662	Yes		
C12D003A	KIDDIE ACADEMY WESTSIDE	CO-TEMP	17-Sep-21	Y			No		
C12D003B8	FOUNTAIN HILLS PLAZA ASSISTED LIVING	CO-PERM	07-Oct-21	N	FREE	1.08	Yes		
C12D003B8	FOUNTAIN HILLS PLAZA ASSISTED LIVING	CO-PERM-R	14-Jan-22	Y	FREE		Yes		
C12D003C	THE LEARNING EXPERIENCE	CO-PERM	13-Apr-22	Y	FREE	0.92	Yes		
C12D003C	THE LEARNING EXPERIENCE	CO-TEMP	22-Feb-22	Y	FREE		Yes		
C12D058	TACO BELL	CO-PERM	09-Jul-21	Y	FREE	0.48	Yes		
C13D024	JIFFY LUBE	CO-PERM	04-Mar-22	Y	FREE	0.49	Yes		
C13D034	9419 BLACK FARM LANE	CO-PERM	02-Sep-21	N	RETENTION	0.293	Yes		
C13D035	CHASE BANK-COORS	CO-PERM	08-Apr-22	Y	FREE	0.49	No	21342	$3,699.28
C17D001U12	8405 WASHINGTON PL NE	CO-PERM	28-Apr-22	Y	FREE	0.427	Yes		
C17D128	STARBUCKS REVISION	CO-PERM	27-Sep-21	Y	Free	1.02	Yes		
C18D037H	THE COMMONS @ EAGLE ROCK BLDG E - 5501 EAGLE ROCK NE	CO-PERM	14-Mar-22	Y			No		
D10D003C14	6311 CAMINO ALTO	CO-PERM	30-Mar-22	Y	DETENTION	0.097	Yes		
D10D003D14	6419 CANAVIO NW	CO-PERM	04-Apr-22	Y	DETENTION	0.109	Yes		
D10D003D4	6416 PAPAGAYO	CO-PERM	15-Jun-22	Y	DETENTION	0.164	Yes		
D10D003D6	6408 PAPAGAYO	CO-PERM	04-Apr-22	Y	DETENTION	0.11	Yes		
D10D003E1	6428 CANAVIO RD NW	CO-PERM	30-Mar-22	Y	free	0.1395	Yes		
D10D003E12	6312 CANAVIO NW	CO-PERM	22-Jun-22	Y	DETENTION	0.134	Yes		
D10D003E24	6301 PETIRROJO	CO-PERM	06-Oct-21	Y	DETENTION	0.143	Yes		
D10D003E26	6309 PETIRROJO	CO-PERM	18-Apr-22	Y	DETENTION	0.116	Yes		
D10D003E27	6311 PETIRROJO (REVISION)	CO-PERM	08-Jun-22	Y	DETENTION	0.116	Yes		
D10D003E28	6315 PETIRROJO	CO-PERM	11-Apr-22	Y	DETENTION	0.116	Yes		
D10D003E3	6420 CANAVIO PL NW	CO-PERM	18-Aug-21	Y	DETENTION	0.12	Yes		
D10D003E37	6431 PICARDIA-LOT 37 -REVISION#2	CO-PERM	04-Aug-21	Y	DETENTION	0.09	Yes		
D10D003E4	6416 CANAVIO PL NW (REVISION)	CO-PERM	30-Mar-22	Y	DETENTION	0.124	Yes		
D10D003F22	7828 URRACA NW	CO-PERM	08-Jul-21	Y	DETENTION	0.119	Yes		
D10D003G24A	COMPASS/WILSON- 7716 COMPASS DR NW	CO-PERM	28-Mar-22	Y	DETENTION	0.113	Yes		
D10D003G2P	6612 PETIRROJO RD NW	CO-PERM	12-May-22	Y	DETENTION	0.12	Yes		
D10D003G36	7808 COMPASS DR (REVISION)	CO-PERM	04-Mar-22	Y	DETENTION	0.12	Yes		
D10D003H11	6515 AZOR	CO-PERM	14-Mar-22	Y	DETENTION	0.087	Yes		
D10D003H12	6511 AZOR NW (REVISION)	CO-PERM	20-Jul-21	Y	DETENTION	0.165	Yes		
D10D003H28	6528 PETIRROJO	CO-PERM	27-Jul-21	Y	DETENTION	0.12	Yes		
D10D003H33	6604 PETIRROJO	CO-PERM	23-Sep-21	Y	DETENTION	0.178	Yes		
D10D003H7	6531 AZOR	CO-PERM	04-Feb-22	Y	DETENTION	0.164	Yes		
D10D003I10	6528 PAPAGAYO(REVISION)	CO-PERM	23-Sep-21	Y	DETENTION	0.12	No		
D10D003I10	6528 PAPAGAYO(WALL)	CO-PERM	26-Apr-22	Y			Yes		
D10D003I19	6508 CANAVIO NW	CO-PERM	08-Jun-22	N	FREE	0.116	Yes		
D10D003I23	6505 PICARDIA	CO-PERM	15-Feb-22	N			Yes		
D10D003I23	6505 PICARDIA	CO-PERM-R	23-Feb-22	Y	DETENTION	0.147	Yes		
D10D003I27	6519 PICARDIA	CO-PERM	04-Mar-22	Y	DETENTION	0.164	No		
D10D003I28	6523 PICARDIA	CO-PERM	23-Mar-22	Y	DETENTION	0.138	Yes		
D10D003I3	7900 AGUILA (POOL ADDN)	CO-PERM, AS-BUILT	31-Aug-21	N	DETENTION	0.243	Yes		
D10D003J1	6620 PAPAGAYO	CO-PERM	26-Oct-21	Y	DETENTION	0.229	FALSE		
D10D003J11	6615 CUERVO PLACE (WITH CASITA)	CO-PERM	23-Mar-22	Y	DETENTION	0.213	FALSE		
D10D003J2	6616 PAPAGAYO	CO-PERM	16-Jun-22	Y	FREE	0.156	FALSE		
D10D003J3	6612 PAPAGAYO (POOL)	CO-PERM	26-Apr-22	Y	DETENTION	0.28	FALSE		
D10D003K18	6624 SUJETO ROAD NW	CO-PERM	18-Mar-22	Y	DETENTION	0.218	FALSE		
D10D003K3	6609 PAPAGAYO	CO-PERM	17-Nov-21	Y	DETENTION	0.192	FALSE		
D10D003K8	8002 COMPASS DR	CO-PERM	13-Jan-22	Y	DETENTION	0.128	FALSE		
D10D003M11	6532 KIMMICK	CO-PERM	08-Jun-22	Y	free	0.108	FALSE		
D10D003M12	6528 KIMMICK	CO PERM	30-Aug-21	Y	DETENTION	0.12	Yes		
D10D003M15	6516 KIMMICK DR	CO-PERM	14-Jul-21	Y	DETENTION	0.122	Yes		
D10D003M19	6500 KIMMICK	CO-PERM	06-Aug-21	Y	DETENTION	0.15	Yes		
D10D003M27	6527 PATO RD NW	CO-PERM	09-May-22	Y	DETENTION	0.15	FALSE		
D10D003M32	6547 PATO	CO-PERM	22-Apr-22	Y	DETENTION	0.161	FALSE		
D10D003M36	6611 SUJETO	CO-PERM	31-Aug-21	Y	DETENTION	0.48	Yes		
D10D003M6	6608 KIMMICK	CO-PERM	08-Jun-22	Y	DETENTION	0.194	FALSE		
D10D003N24	8000 AGUA FRIA	CO-PERM	30-Aug-21	Y	DETENTION	0.12	Yes		
D10D003N25	8001 CANOCITO DR (REVISION)	CO-PERM	07-Jun-22	Y	DETENTION	0.118	FALSE		
D10D003N27	8009 CANONCITO	CO-PERM	06-Oct-21	Y	DETENTION	0.124	FALSE		
D10D003P2	SIMS RESIDENCE 6508 PICARDIA	CO-PERM	10-Aug-21	N	DETENTION	0.14	Yes		
D10D003P2	SIMS RESIDENCE 6508 PICARDIA	CO-PERM-R	31-Aug-21	Y	DETENTION	0.138	Yes		
D10D003P4	6500 PICARDIA	CO-PERM	15-Apr-22	Y	FREE	0.109	FALSE		
D10D003Q11	6405 PETIRROJO NW (REVISION#3)	CO-PERM	14-Jul-21	Y	DETENTION	0.126	Yes		
D10D003Q12	6409 PETIRROJO (REVISION)	CO-PERM	04-Feb-22	Y	DETENTION	0.201	Yes		
D10D003Q15	6419 PETIRROJO	CO-PERM	08-Feb-22	Y	DETENTION	0.152	Yes		
D10D003R10	8001 CAMINO ALDERETE	CO-PERM	18-Feb-22	N	DETENTION	0.17	Yes		
D10D003R10	8001 CAMINO ALDERETE	CO-PERM-R	23-Feb-22	N			Yes		
D10D003R10	8001 CAMINO ALDERETE	CO-PERM-R	02-Mar-22	Y			Yes		
D10D003S3	6608 CUERVO	CO-PERM	04-Jan-22	Y	DETENTION	0.258	Yes		
D10D003V50	6209 CANAVIO	CO-PERM	09-Dec-21	Y	DETENTION	0.118	Yes		
D10D018	6604 RIM ROCK	CO-PERM	08-Sep-21	Y	Free	0.176	Yes		
D16D002A8	RAM RV	CO-PERM	04-Mar-22	Y	FREE	1.171	Yes		
D16D002J	THE LAMP SHOP	CO-PERM	22-Apr-22	Y	FREE	0.741	Yes		
D17D076A	7801 TIBRON STREET NE	CO-PERM	28-Apr-22	Y	FREE	0.257	Yes		
D17D077A	DOCK ENCLOSURE	CO-PERM	14-Jan-22	Y	FREE		FALSE		
D19D031	PALOMAS PEAK PH2	CO-PERM	08-Apr-22	Y	DETENTION	1.5	FALSE		
E10D046	7908 SHIPROCK CT NW REVISION#2	CO-PERM	08-Apr-22	Y	RETENTION	0.181	Yes		
E10D051	6201 KEYENTA	CO-PERM	27-Sep-21	Y	FREE	0.193	Yes		
E10D084	6100 CASA BLANCA	CO-PERM	11-May-22	N	RETENTION	0.182	Yes		
E10D085	5624 KIMBERLITE	CO-PERM	19-Jul-21	Y	DETENTION	0.31	Yes		
E10D087	5616 POPO	CO-PERM	02-Sep-21	Y	DETENTION	0.26	Yes		
E10D090	8035 KIBO	CO-PERM	11-Jan-22	N	DETENTION	0.137	FALSE		
E10D091	5608 KIMBERLITE	CO-PERM	12-Aug-21	Y	Free	0.14	Yes		
E10D093	6219 KEYENTA	CO-PERM	13-Sep-21	Y	DETENTION	0.136	Yes		
E10D094	8008 VICTORIA RD NW (REVISION)	CO-PERM	16-May-22	Y	FREE	0.174	Yes		
E10D095	8004 EMERALD	CO-PERM	08-Feb-22	Y	DETENTION	0.157	Yes		
E10D097	6514 JADE	CO-PERM	04-Mar-22	Y	DETENTION	0.148	Yes		
E11D030	5227 APOLLO NW	CO-PERM	17-Mar-22	Y	FREE	0.08	Yes		
E18D005C	PRESBYTERIAN HOSPICE HOUSE	TEMP-CO	24-Jun-22	Y			FALSE		
E18D036A	PRES HEALTHPLEX POOL ADDN. (REVISION#2)	CO-PERM	17-Dec-21	Y			FALSE		
E23D034	13648 APACHE PLUME (BP REVISION)	CO-PERM	02-Jul-21	Y	DETENTION	N/A	No		
E23D036	6800 BLANKET FLOWER PLACE NE	CO-PERM	14-Jan-22	Y	FREE	0.12	Yes		
F11D017A	5120 NORTHERN TRAIL	CO-PERM	14-Mar-22	Y	RETENTION	0.226	Yes		
F12D004	4801 VALLE RIO	CO-PERM	06-Jun-22	Y	FREE	0.17	Yes		
F13D030	1320 AVENIDA CRISTO REY	CO-PERM	26-Apr-22	Y	RETENTION	0.048	Yes		
F14D077	321 SANDIA RD NW	CO-PERM	15-Oct-21	Y	FREE	0.545	Yes		

DRAINAGE FILE	PROJECT NAME/DES	APPROVAL SOUGHT	MAPA2.REVIEW DATE	APPROVED	DISCHARGE	ACRES IMP	WQ POND AT CO	SQ FT IMP FEE IN LIEU	AMOUNT PAID FEE IN LIEU
F16D001A	MAVERIK CARLISLE/MONTGOMERY	CO-PERM	10-Dec-21	Y	free	2.001	Yes		
F16D001A	MAVERIK CARLISLE/MONTGOMERY	CO-TEMP	09-Jul-21	Y			FALSE		
F16D001A	MAVERIK CARLISLE/MONTGOMERY	CO-TEMP-EXTENSION	11-Aug-21	Y			FALSE		
F16D001A	MAVERIK CARLISLE/MONTGOMERY	CO-TEMP-EXTENSION	20-Sep-21	Y			FALSE		
F16D001A	MAVERIK CARLISLE/MONTGOMERY	CO-TEMP-EXT	12-Nov-21	Y			FALSE		
F16D011	JATC	CO-PERM	23-Jul-21	Y	DETENTION	1.32	Yes		
F16D014C	WUA CUSTOMER SERVICE & OPERATIONS FACILITIES	CO-PERM	07-Oct-21	Y	RETENTION	11.1	Yes		
F18D010	COURTYARD APARTMENTS	CO-PERM	23-May-22	Y	FREE	0.14	Yes		
F20D004A	9616 CANDLE LN	CO-PERM	23-Dec-21	Y	FREE	0.031	Yes		
F21D028	LA VIDA LLENA HEALTH CARE CENTER REPOSITION - 10501 LAGRIMA DE ORO RD	CO-PERM	10-Dec-21	Y	DETENTION	10.24	Yes		
F21D028	LA VIDA LLENA HEALTH CARE CENTER REPOSITION - 10501 LAGRIMA DE ORO RD	CO-TEMP	27-Sep-21	Y	DETENTION		FALSE		
F21D028	LA VIDA LLENA HEALTH CARE CENTER REPOSITION - 10501 LAGRIMA DE ORO RD	CO-TEMP	05-Nov-21	Y	DETENTION		FALSE		
F21D047A	BOSQUE ON EUBANK	CO-PERM	02-Jun-22	Y	DETENTION	0.47	Yes		
F21D081	GUARDIAN STORAGE	CO-PERM	10-Dec-21	Y	FREE	1.481	Yes		
F21D081	GUARDIAN STORAGE	CO-TEMP	03-Sep-21	Y 30DAY	FREE		FALSE		
G13D023D	LOT 5A AND 5B CORIANDA SUBDIVISION- 2619 CORIANDA	CO-PERM	22-Oct-21	Y	RETENTION	0.237	Yes		
G13D041	CASTILLO RESIDENCE- 3305 MEADOW VIEW DR	CO-PERM	22-Apr-22	Y	RETENTION	0.104	Yes		
G16D095F	STORAGE BUILDING, 4100 YALE NE	CO-PERM	21-Jan-22	Y	Free	1.53	Yes		
G16D095F	STORAGE BUILDING, 4100 YALE NE	CO-TEMP	15-Nov-21	Y			Yes		
G21D032	MURPHY EXPRESS	CO-PERM	23-Aug-21	Y	FREE	0.75	No	697	$5,576.00
G23D016	13606 SUNSET CANYON	CO-PERM	10-Dec-21	Y	FREE	0.116	Yes		
H09D017A8	8505 MESA RAIN RD NW	CO-PERM	15-Apr-22	Y	FREE	0.092	Yes		
H09D017A9	8501 MESA RAIN	CO-PERM	15-Apr-22	Y	Free	0.1	Yes		
H09D017G	DEL WEBB @ MIREHAVEN PH4	ROFG	16-May-22	Y	FREE	19.6	Yes		
H10D032	T&M SELF STORAGE	CO-TEMP	23-Aug-21	Y TEMP	FREE	2.85	Yes		
H11D072	2504 ALAMOGORDO	CO-PERM	07-Oct-21	Y	FREE	0.058	Yes		
H12D003B	3401 CALLEE FACIO NW	CO-PERM	13-Jan-22	Y	RETENTION	0.203	Yes		
H12D003C	3300 CALLE FACIO NW	CO-PERM	08-Nov-21	Y	RETENTION	0.254	Yes		
H13D025C	SAWMILL VILLAGE-PHASE 2	CO-PERM	03-Dec-21	Y	FREE	0.65	Yes		
H13D025C	SAWMILL VILLAGE-PHASE 2	TEMP-CO	08-Oct-21	Y 30 DAY	FREE		Yes		
H13D113	AVANYU RETAIL	CO-PERM	21-Feb-22	Y	DETENTION	3.86	Yes		
H16D021	PASCETTI STEEL BUILDING	CO-PERM	31-Mar-22	Y	RETENTION	0.161	Yes		
H19D090	US EAGLE CREDIT UNION	CO-PERM	23-Dec-21	Y	FREE	0.79	FALSE	4657	$1,304.00
J10D002G1	BEK DISTRIBUTION FACILITY	CO-PERM	23-Jul-21	Y	RETENTION	4.983	Yes		
J10D045	WILSON WAREHOUSE	CO-PERM	14-Dec-21	Y	DETENTION	0.12	Yes		
J12D032!!!!	MONTEREY MOTEL	CO-PERM	22-Oct-21	Y	FREE	0.53	No	23087	$4,000.00
J13D207A	2410 MOUNTAIN RD	CO-PERM	04-Feb-22	Y	RETENTION	0.084	Yes		
J13D213	1210 11TH ST NW	CO-PERM	22-Oct-21	Y	FREE	0.076	Yes		
J14D194	HOPE WORKS HOPE VILLAGE	CO-TEMP	19-Jan-22	Y	FREE	0.275	Yes		
J14D194	HOPE WORKS HOPE VILLAGE (EXT x2)	CO-TEMP-EXT	23-Feb-22	Y EXT x 2	FREE		FALSE		
J18D001C	6670 INDIAN SCHOOL RD NE	CO-PERM	12-Nov-21	Y	FREE	0.269	FALSE	11707	$2,028.80
J18D001C	6670 INDIAN SCHOOL RD NE	CO-TEMP	08-Nov-21	Y	FREE		FALSE		
J22D050	ABQ. SCHOOL OF EXCELLENCE (REVISION)X5	CO-TEMP-EXTENSION	20-Jul-21	Y 30 DAY EXT X 5	RETENTION	0.32	Yes		
J22D050	ABQ. SCHOOL OF EXCELLENCE (REVISION)X6	CO-TEMP-EXTENSION	26-Aug-21	Y 30 DAY EXT X 6	RETENTION		Yes		
J22D050	ABQ. SCHOOL OF EXCELLENCE (REVISION)X7	CO-TEMP-EXTENSION	22-Sep-21	Y 30 DAY EXT X 6	RETENTION		Yes		
J22D050	ABQ. SCHOOL OF EXCELLENCE (REVISION)X8	CO-TEMP-EXTENSION	19-Oct-21	Y 30 DAY EXT X 8	RETENTION		Yes		
J22D050	ABQ. SCHOOL OF EXCELLENCE (REVISION)X9	CO-TEMP-EXTENSION	03-Jan-22	Y	RETENTION		Yes		
J22D050	ABQ. SCHOOL OF EXCELLENCE (REVISION)X10	CO-TEMP-EXTENSION	09-Feb-22	Y	RETENTION		Yes		
J23D029	1542 WELLS	CO-PERM	04-Mar-22	Y	FREE	0.127	Yes		
J23D030	13709 INDIAN SCHOOL	CO-PERM	17-Mar-22	Y	FREE	0.108	Yes		
K08D004	MISTER CAR WASH	CO-PERM	13-Aug-21	Y	FREE	1.1	Yes		
K08D004	MISTER CAR WASH	ROFG	24-Mar-22	Y	FREE		Yes		
K10D023I	LOT 22 MERIDIAN BUSINESS PARK	CO-PERM	06-May-22	Y	DETENTION	1.846	Yes		
K10D023I	LOT 22 MERIDIAN BUSINESS PARK	CO-TEMP	05-Apr-22	Y	DETENTION		Yes		
K10D060	7200 BLUEWATER	CO-PERM	10-Jun-22	Y	DETENTION	10.33	Yes		
K11D068B	6433 DENNISION SW	CO-PERM	26-Apr-22	Y	Free	0.8	Yes		
K13D034I	ASIA EXHIBIT AT COA BIOPARK	CO-PERM	10-Dec-21	Y	FREE	1.84	Yes		
K14D017	!!!CENTRAL AND BROADWAY HOTEL & PARKING STRUCTURE	CO-PERM	13-Aug-21	Y	FREE	0.77	No	1179	$9,432.00
K15D005G	PRES HOSPITAL PARKING GARAGE	TEMP-CO	15-Oct-21	Y		3.9	Yes		$27,280.00
K15D005G	PRES HOSPITAL PARKING GARAGE (EXT#1)	TEMP-CO	16-Nov-21	Y			FALSE		
K15D104	MLK TOWNHOMES	CO-PERM	30-Mar-22	N EMAIL	FREE	0.15	Yes		
K17D064	ROUTE 66 VET. CLINIC - 3601 CENTAL AVE NE	CO-PERM	22-Oct-21	Y	FREE	0.327	No	14241	$2,472.00
K17D073	APARTMENT URBAN LIVING @ NOB HILL	CO-PERM	13-Aug-21	Y	DETENTION	11.79	Yes	1175	$9,400.00
K18D110	314 ARIZONA	CO-PERM	12-May-22	Y	DETENTION	0.311	Yes		
K19D005	INTERNATIONAL DISTRICT LIBRARY	CO-PERM	03-Dec-21	Y	FREE	3.58	No		
K19D154	132 ALCAZAR (NO PAD CERT REQUIRED)	CO-PERM	28-Mar-22	Y	FREE	0.08	Yes		
L14D001A	(BUENO FOODS)!!! FREEZER EXPANSION PHASE 4, EL ENCANTO	CO-PERM	23-May-22	Y	DETENTION	3.3	Yes		
L21D045C	LUMINARIA SENIOR COMMUNITY (old hydro# L21D023)	CO-PERM	21-Mar-22	Y	FREE	1.4	Yes		
L22D055	SINGING ARROW COMMUNITY CENTER	CO-PERM	22-Oct-21	Y	Free	1.01	Yes		
L22D061	KENNAN PROPERTIES, 12900 CENTRAL AVE SE	CO-PERM	18-Oct-21	Y	DETENTION	0.57	Yes		
L22D061	KENNAN PROPERTIES, 12900 CENTRAL AVE SE (REVISION)	CO-TEMP	09-Sep-21	Y	DETENTION		Yes		
L22D061	KENNAN PROPERTIES, 12900 CENTRAL AVE SE (REVISION)	CO-TEMP-EXT	08-Oct-21	Y 30 DAY	DETENTION		Yes		
L23D014F	13704 COVERED WAGON	CO-PERM	28-Mar-22	Y	FREE	0.05	No		
L23D036	213 WELLS DR NE (REVISION)	CO-PERM	13-Jan-22	Y	FREE	0.083	Yes		
M09D019D	9800 DEL RAY	CO-PERM	09-Jul-21	Y	FREE	0.165	Yes		
M09D030	WESTGATE COMMUNITY CENTER	CO-PERM	08-Nov-21	Y	DETENTION	4.51	Yes		
M09D031A	SOLARE CHARTER SCHOOL PHASE 2	CO-TEMP	12-Aug-21	Y	FREE	0.49	Yes		
M10D020	KIDZ ACADEMY SAGE RD SW	CO-PERM	14-Mar-22	Y	FREE	0.9	Yes	1056	$8,448.00
M10D021	HUMAN BEAN COFFEE SHOP	CO-PERM	24-Jun-22	Y	FREE	0.96	Yes	648	$5,184.00
M10D021	HUMAN BEAN COFFEE SHOP	CO-TEMP	08-Feb-22	Y	FREE		Yes		
M16D044	CRESTLINE BAYLOR DRIVE PROPERTY	CO-PERM	30-Aug-21	Y	RETENTION	0.349	Yes		
M21D007A1	10800 GIBSON (RAYTHEON)(REVISION)	CO-PERM	09-Jul-21	Y	Free	0.47	Yes		
M22D019	906 GANADO CT SE (NO PAD CERT REQUIRED PER R.B.)	CO-PERM	10-Jun-22	Y	RETENTION	0.183	Yes		
N23D001	1701 SOPLO	CO-PERM	19-Aug-21	N	FREE	0.21	Yes		

DRAINAGE FILE	PROJECT NAME/DES	APPROVAL SOUGHT	MAPA2.REVIEW DATE	APPROVED	DISCHARGE	ACRES IMP	WQ POND AT CO	SQ FT IMP FEE IN LIEU	AMOUNT PAID FEE IN LIEU
Q16DA5000A	KAIROS POWER	CO-PERM	09-Jul-21	Y	Free	1.74	Yes		
R15D002A	NEW MEXICO UNITED LOCKER ROOM(CURB AND GUTTER)	CO-PERM	18-Mar-22	Y	Free	0.63	Yes		
R15D002A	NEW MEXICO UNITED LOCKER ROOM(CURB AND GUTTER)	CO-TEMP	15-Mar-22	Y	Free		Yes		
Count Overall	189					**Total Imp Area**		**Total Imp Area Pmt In Lieu (Acres)**	Total Pmt In Lieu (Dollars)
Yes	145					**143.009**		1.83	$ 78,824.08
No	13								
Count Pmnt Lieu	10								

Attachment 4

Dry Weather Screening Results

Dry Weather Screening of Outfalls 2022

DRY WEATHER OUTFALLS SCREENING 2022
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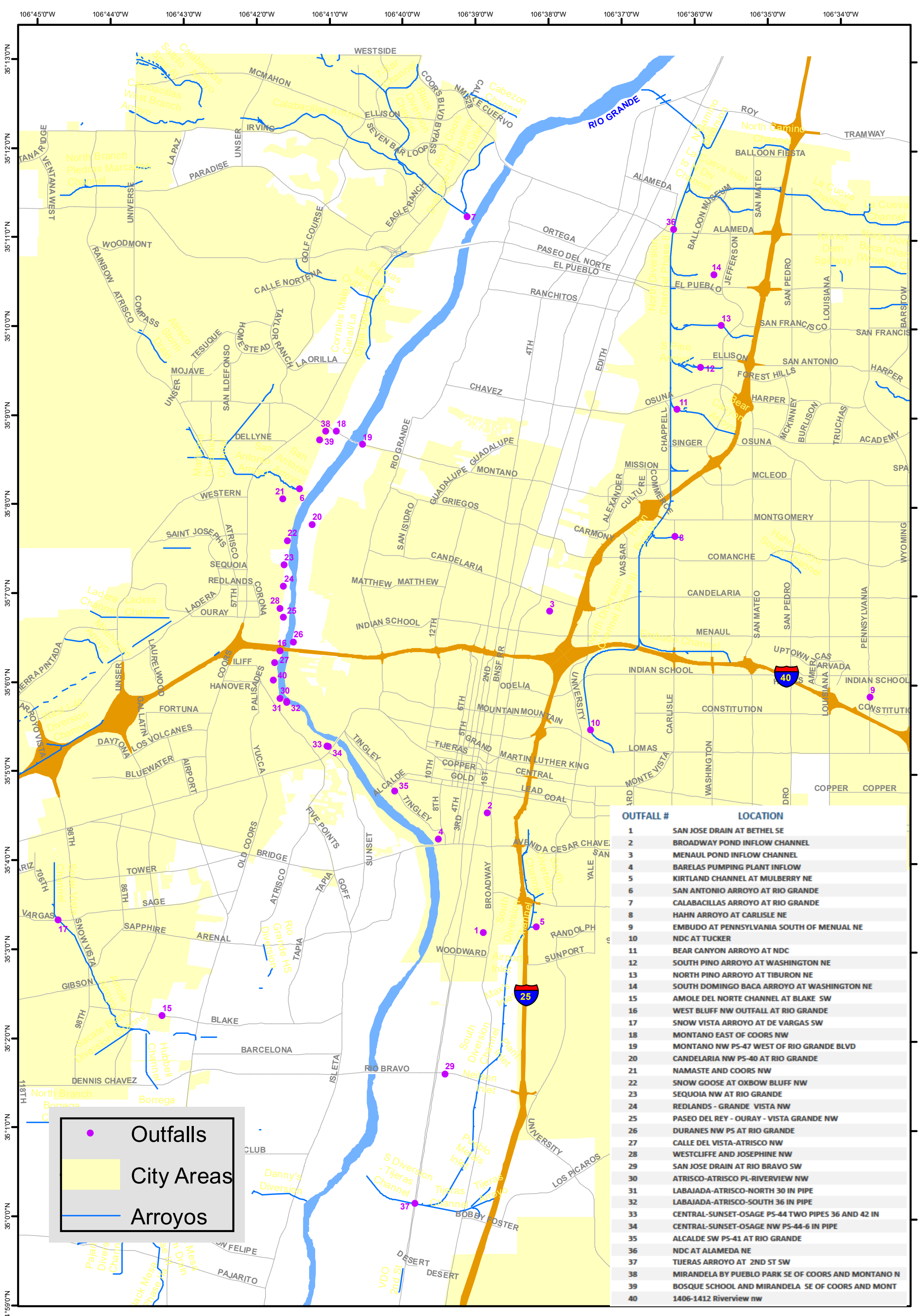


OUTFALL #	LOCATION
1	SAN JOSE DRAIN AT BETHEL SE
2	BROADWAY POND INFLOW CHANNEL
3	MENAUL POND INFLOW CHANNEL
4	BARELAS PUMPING PLANT INFLOW
5	KIRTLAND CHANNEL AT MULBERRY NE
6	SAN ANTONIO ARROYO AT RIO GRANDE
7	CALABACILLAS ARROYO AT RIO GRANDE
8	HAHN ARROYO AT CARLISLE NE
9	EMBUDO AT PENNSYLVANIA SOUTH OF MENUAL NE
10	NDC AT TUCKER
11	BEAR CANYON ARROYO AT NDC
12	SOUTH PINO ARROYO AT WASHINGTON NE
13	NORTH PINO ARROYO AT TIBURON NE
14	SOUTH DOMINGO BACA ARROYO AT WASHINGTON NE
15	AMOLE DEL NORTE CHANNEL AT BLAKE SW
16	WEST BLUFF NW OUTFALL AT RIO GRANDE
17	SNOW VISTA ARROYO AT DE VARGAS SW
18	MONTANO EAST OF COORS NW
19	MONTANO NW PS-47 WEST OF RIO GRANDE BLVD
20	CANDELARIA NW PS-40 AT RIO GRANDE
21	NAMASTE AND COORS NW
22	SNOW GOOSE AT OXBOW BLUFF NW
23	SEQUOIA NW AT RIO GRANDE
24	REDLANDS - GRANDE VISTA NW
25	PASEO DEL REY - OURAY - VISTA GRANDE NW
26	DURANES NW PS AT RIO GRANDE
27	CALLE DEL VISTA-ATRISCO NW
28	WESTCLIFFE AND JOSEPHINE NW
29	SAN JOSE DRAIN AT RIO BRAVO SW
30	ATRISCO-ATRISCO PL-RIVERVIEW NW
31	LABAJADA-ATRISCO-NORTH 30 IN PIPE
32	LABAJADA-ATRISCO-SOUTH 36 IN PIPE
33	CENTRAL-SUNSET-OSAGE PS-44 TWO PIPES 36 AND 42 IN
34	CENTRAL-SUNSET-OSAGE NW PS-44-6 IN PIPE
35	ALCALDE SW PS-41 AT RIO GRANDE
36	NDC AT ALAMEDA NE
37	TIJERAS ARROYO AT 2ND ST SW
38	MIRANDELA BY PUEBLO PARK SE OF COORS AND MONTANO N
39	BOSQUE SCHOOL AND MIRANDELA SE OF COORS AND MONT
40	1406-1412 Riverview nw

Dry Weather Screening of Outfalls-2022

LOCATION	**SAN JOSE DRAIN AT BETHEL SE**						
OUTFALL_NO	1	QUAD	SE	GRID	M-14	SAMPLED	☐
DATE_INSP	2/28/2022	TIME	12:13	Inspected by	MM		
WEATHER	SUNNY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\1-M14-SE-San Jose D						

AIR_TEMP_F	51	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**BROADWAY POND INFLOW CHANNEL**						
OUTFALL_NO	2	QUAD	SE	GRID	K-14	SAMPLED	☑
DATE_INSP	3/16/2022	TIME	10:00	Inspected by	MM		
WEATHER	CLOUDY	flow	YES	FLOW_GPM	1		
APPEARANCE	clear	GROSS POLLUTANT	No odor, no observable particulates, no sheen				
Source of Flow	Irrigation, carwash, Water Hydrent flushing,						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\2-K14-SE-Hazeldine-j						

AIR_TEMP_F	48	Lab	HALL ENVIRONMENTAL
WATER_TEMP_F	41	Lab_Report	2203901
pH	8.0	E_coli_Coliform_mpn/100ml	1553.1
CONDUCTIVITY_Umos/cm	760	Ammonia_mg/l	<1
BOD_mg/l	20.0	Nitrite_NO2_mg/l	<0.5
COD_mg/l	42	Nitrate_NO3_mg/l	0.82
TSS_mg/l	<4	TKN_Tot_Kjeld_N_mg/l	<1
TDS_mg/l	464	Phosphorus_total_mg/l_P	0.26
N-Hexane Extractabie-(Oil_Grease)_mg/l	<9.12	Hardness_mg/l_CaCO3	170
Floride_mg/l	0.97	Chlorine_mg/l	<0.05

LOCATION	**MENAUL POND INFLOW CHANNEL**						
OUTFALL_NO	3	QUAD	NE	GRID	H-15	SAMPLED	☐
DATE_INSP	3/28/2022	TIME	10:10	Inspected by	MM		
WEATHER	PARTLY CLOUDY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\3-H15-NE Menaul Po						

AIR_TEMP_F	59	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**BARELAS PUMPING PLANT INFLOW**						
OUTFALL_NO	4	QUAD	SW	GRID	L-13	SAMPLED	☑
DATE_INSP	4/29/2022	TIME	12:10	Inspected by	MM-LM		
WEATHER	SUNNY	flow	YES	FLOW_GPM	20		
APPEARANCE	clear	GROSS POLLUTANT	No odor, no particulates, no sheen				
Source of Flow	groundwater						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\4-L13-SW-Barelas PS						

AIR_TEMP_F	74	Lab	HALL ENVIRONMENTAL
WATER_TEMP_F	59	Lab_Report	22004D38
pH	8.23	E_coli_Coliform_mpn/100ml	>2419.6
CONDUCTIVITY_Umos/cm	790	Ammonia_mg/l	<1.0
BOD_mg/l	6.1	Nitrite_NO2_mg/l	<0.5
COD_mg/l	26.3	Nitrate_NO3_mg/l	<0.5
TSS_mg/l	<4	TKN_Tot_Kjeld_N_mg/l	1.1
TDS_mg/l	534	Phosphorus_total_mg/l_P	0.21
N-Hexane Extractabie-(Oil_Grease)_mg/l	<9.35	Hardness_mg/l_CaCO3	270
Floride_mg/l	<0.5	Chlorine_mg/l	<0.05

LOCATION	**KIRTLAND CHANNEL AT MULBERRY NE**						
OUTFALL_NO	5	QUAD	SE	GRID	M-15	SAMPLED	☐
DATE_INSP	3/28/2022	TIME	11:05	Inspected by	MM		
WEATHER	PARTLY CLOUDY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\5-M15-SE Kirtland C						

AIR_TEMP_F	67	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**SAN ANTONIO ARROYO AT RIO GRANDE**						
OUTFALL_NO	6	QUAD	NW	GRID	F-12	SAMPLED	☐
DATE_INSP	3/29/2022	TIME	9:00	Inspected by	MM		
WEATHER	SUNNY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\6-F12-NW-SanAnton						

AIR_TEMP_F	52	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**CALABACILLAS ARROYO AT RIO GRANDE**						
OUTFALL_NO	7	QUAD	NW	GRID	C-14	SAMPLED	☐
DATE_INSP	3/7/2022	TIME	7:47	Inspected by	MM		
WEATHER	PARTLY CLOUDY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\7-C14-NW Calabacill						

AIR_TEMP_F	26	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**HAHN ARROYO AT CARLISLE NE**						
OUTFALL_NO	8	QUAD	NE	GRID	G-16	SAMPLED	☐
DATE_INSP	3/24/2022	TIME	10:52	Inspected by	MM		
WEATHER	SUNNY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\8-G16-NE-Hahn arro						

AIR_TEMP_F	50	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**EMBUDO AT PENNSYLVANIA SOUTH OF MENUAL NE**						
OUTFALL_NO	9	QUAD	NE	GRID	J-19	SAMPLED	☐
DATE_INSP	3/3/2022	TIME	9:54	Inspected by	MM		
WEATHER	SUNNY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\9-J19-NE Embudo Ar						

AIR_TEMP_F	48	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**NDC AT TUCKER**						
OUTFALL_NO	10	QUAD	NE	GRID	J-16	SAMPLED	☐
DATE_INSP	3/25/2022	TIME	3:00	Inspected by	MM		
WEATHER	SUNNY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\10-J15-NE-NDC at Tu						

AIR_TEMP_F	73	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**BEAR CANYON ARROYO AT NDC**						
OUTFALL_NO	11	QUAD	NE	GRID	G-16	SAMPLED	☐
DATE_INSP	3/18/2022	TIME	9:56	Inspected by	MM		
WEATHER	SUNNY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\11-G16-NE-Bear arro						

AIR_TEMP_F	40	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**SOUTH PINO ARROYO AT WASHINGTON NE**						
OUTFALL_NO	12	QUAD	NE	GRID	D-17	SAMPLED	☐
DATE_INSP	3/18/2022	TIME	9:48	Inspected by	MM		
WEATHER	SUNNY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\12-E17-NE-South Pin						

AIR_TEMP_F	39	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**NORTH PINO ARROYO AT TIBURON NE**						
OUTFALL_NO	13	QUAD	NE	GRID	D-17	SAMPLED	☐
DATE_INSP	3/18/2022	TIME	9:23	Inspected by	MM		
WEATHER	SUNNY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\13-D17-NE-north pin						

AIR_TEMP_F	36	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**SOUTH DOMINGO BACA ARROYO AT WASHINGTON NE**						
OUTFALL_NO	14	QUAD	NE	GRID	C-17	SAMPLED	☐
DATE_INSP	3/18/2022	TIME	9:32	Inspected by	MM		
WEATHER	SUNNY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\14-C17-NE-South Do						

AIR_TEMP_F	37	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**AMOLE DEL NORTE CHANNEL AT BLAKE SW**						
OUTFALL_NO	15	QUAD	SW	GRID	N-10	SAMPLED	☐
DATE_INSP	3/17/2022	TIME	3:37	Inspected by	MM		
WEATHER	CLOUDY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\15-L10-SW-Amole d						

AIR_TEMP_F	57	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**WEST BLUFF NW OUTFALL AT RIO GRANDE**						
OUTFALL_NO	16	QUAD	NW	GRID	H-11	SAMPLED	☐
DATE_INSP	3/28/2022	TIME	12:32	Inspected by	MM		
WEATHER	PARTLY CLOUDY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\16_H11-NW West Bl						

AIR_TEMP_F	73	Lab	
WATER_TEMP_F	0	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**SNOW VISTA ARROYO AT DE VARGAS SW**						
OUTFALL_NO	17	QUAD	SW	GRID	M-09	SAMPLED	☐
DATE_INSP	3/18/2022	TIME	11:20	Inspected by	MM		
WEATHER	SUNNY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\17-M9-SW-snow vist						

AIR_TEMP_F	44	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**MONTANO EAST OF COORS NW**						
OUTFALL_NO	18	QUAD	NW	GRID	E-12	SAMPLED	☐
DATE_INSP	4/5/2022	TIME	1:00	Inspected by	MM-LM		
WEATHER	SUNNY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\18-E12-NW Montan						

AIR_TEMP_F	77	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**MONTANO NW PS-47 WEST OF RIO GRANDE BLVD**

OUTFALL_NO	19	QUAD	NW	GRID	F-12	SAMPLED	☑
DATE_INSP	4/6/2022	TIME	9:34	Inspected by	MM-LM		
WEATHER	SUNNY	flow	YES	FLOW_GPM	1		
APPEARANCE	cloudy	GROSS POLLUTANT	Musty odor, small particulates, no sheens				
Source of Flow	groundwater Infiltration						

link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\19-F12-NW-Montan

AIR_TEMP_F	54	Lab	HALL ENVIRONMENTAL
WATER_TEMP_F	46	Lab_Report	2204257
pH	7.10	E_coli_Coliform_mpn/100ml	677
CONDUCTIVITY_Umos/cm	450	Ammonia_mg/l	<1
BOD_mg/l	39	Nitrite_NO2_mg/l	<0.5
COD_mg/l	104	Nitrate_NO3_mg/l	<0.5
TSS_mg/l	<4	TKN_Tot_Kjeld_N_mg/l	1.4
TDS_mg/l	335	Phosphorus_total_mg/l_P	0.27
N-Hexane Extractabie-(Oil_Grease)_mg/l	<9.56	Hardness_mg/l_CaCO3	140
Floride_mg/l	1.0	Chlorine_mg/l	<0.05

LOCATION	**CANDELARIA NW PS-40 AT RIO GRANDE**						
OUTFALL_NO	20	QUAD	NW	GRID	G-12	SAMPLED	☑
DATE_INSP	4/6/2022	TIME	10:32	Inspected by	MM-LM		
WEATHER	SUNNY	flow	YES	FLOW_GPM	1		
APPEARANCE	clear	GROSS POLLUTANT	No odor, fine particulates, no sheen				
Source of Flow	well wash water						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\20-G12-NW-Candela						

AIR_TEMP_F	59	Lab	HALL ENVIRONMENTAL
WATER_TEMP_F	55	Lab_Report	2204257
pH	7.89	E_coli_Coliform_mpn/100ml	56.5
CONDUCTIVITY_Umos/cm	420	Ammonia_mg/l	<1
BOD_mg/l	30	Nitrite_NO2_mg/l	<0.1
COD_mg/l	<20	Nitrate_NO3_mg/l	<0.1
TSS_mg/l	<4	TKN_Tot_Kjeld_N_mg/l	<1
TDS_mg/l	285	Phosphorus_total_mg/l_P	0.063
N-Hexane Extractabie-(Oil_Grease)_mg/l	<9.46	Hardness_mg/l_CaCO3	150
Floride_mg/l	0.34	Chlorine_mg/l	<0.05

LOCATION	NAMASTE AND COORS NW						
OUTFALL_NO	21	QUAD	NW	GRID	F-11	SAMPLED	☐
DATE_INSP	3/29/2022	TIME	9:20	Inspected by	MM		
WEATHER	SUNNY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\21-F12-NW-Namast						

AIR_TEMP_F	54	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**SNOW GOOSE AT OXBOW BLUFF NW**						
OUTFALL_NO	22	QUAD	NW	GRID	G-11	SAMPLED	☐
DATE_INSP	3/29/2022	TIME	11:18	Inspected by	MM		
WEATHER	PARTLY CLOUDY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\22-G11-NW - Snow						

AIR_TEMP_F	57	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**SEQUOIA NW AT RIO GRANDE**						
OUTFALL_NO	23	QUAD	NW	GRID	G-11	SAMPLED	☐
DATE_INSP	3/28/2022	TIME	2:24	Inspected by	MM		
WEATHER	PARTLY CLOUDY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\23-G11-NW -Sequoi						

AIR_TEMP_F	74	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**REDLANDS - GRANDE VISTA NW**						
OUTFALL_NO	**24**	QUAD	NW	GRID	G-12	SAMPLED	☐
DATE_INSP	3/29/2022	TIME	10:39	Inspected by	MM		
WEATHER	SUNNY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\24-G11-NW-Grande						

AIR_TEMP_F	57	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**PASEO DEL REY - OURAY - VISTA GRANDE NW**						
OUTFALL_NO	25	QUAD	NW	GRID	H-11	SAMPLED	☐
DATE_INSP	3/28/2022	TIME	2:10	Inspected by	MM		
WEATHER	PARTLY CLOUDY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\25-H11-NW - S of Ou						

AIR_TEMP_F	73	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**DURANES NW PS AT RIO GRANDE**						
OUTFALL_NO	26	QUAD	NW	GRID	H-12	SAMPLED	☑
DATE_INSP	4/8/2022	TIME	1:44	Inspected by	MM		
WEATHER	SUNNY	flow	YES	FLOW_GPM	5		
APPEARANCE	clear	GROSS POLLUTANT	No Odor, minimal Particulates, No Sheen				
Source of Flow	well wash water						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\26-H12-NW-Durance						

AIR_TEMP_F	69	Lab	HALL ENVIRONMENTAL
WATER_TEMP_F	55	Lab_Report	2204419
pH	8.09	E_coli_Coliform_mpn/100ml	488.4
CONDUCTIVITY_Umos/cm	520	Ammonia_mg/l	<1
BOD_mg/l	2.0	Nitrite_NO2_mg/l	<0.5
COD_mg/l	<400	Nitrate_NO3_mg/l	<0.5
TSS_mg/l	<4	TKN_Tot_Kjeld_N_mg/l	<1
TDS_mg/l	371	Phosphorus_total_mg/l_P	0.056
N-Hexane Extractabie-(Oil_Grease)_mg/l	<9.93	Hardness_mg/l_CaCO3	180
Floride_mg/l	<0.5	Chlorine_mg/l	<0.05

LOCATION	CALLE DEL VISTA-ATRISCO NW						
OUTFALL_NO	27	QUAD	NW	GRID	H-11	SAMPLED	☐
DATE_INSP	3/28/2022	TIME	12:42	Inspected by	MM		
WEATHER	PARTLY CLOUDY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\27-H11-NW 1800 Cal						

AIR_TEMP_F	73	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**WESTCLIFFE AND JOSEPHINE NW**						
OUTFALL_NO	28	QUAD	NW	GRID	H-12	SAMPLED	☐
DATE_INSP	3/28/2022	TIME	2:00	Inspected by	MM		
WEATHER	PARTLY CLOUDY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\28-H11-NW - Westcli						

AIR_TEMP_F	73	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**SAN JOSE DRAIN AT RIO BRAVO SW**						
OUTFALL_NO	29	QUAD	SW	GRID	P-13	SAMPLED	☐
DATE_INSP	3/18/2022	TIME	10:30	Inspected by	MM		
WEATHER	SUNNY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\29-P14-SE-San Jose						

AIR_TEMP_F	44	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	ATRISCO-ATRISCO PL-RIVERVIEW NW						
OUTFALL_NO	30	QUAD	NW	GRID	J-11	SAMPLED	☐
DATE_INSP	1/18/2022	TIME	9:17	Inspected by	MM		
WEATHER	SUNNY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\30-J11-NW - Riversid						

AIR_TEMP_F	41	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**LABAJADA-ATRISCO-NORTH 30 IN PIPE**						
OUTFALL_NO	31	QUAD	NW	GRID	J-11	SAMPLED	☑
DATE_INSP	4/7/2022	TIME	1:20	Inspected by	MM-LM		
WEATHER	SUNNY	flow	YES	FLOW_GPM	1		
APPEARANCE	clear	GROSS POLLUTANT	No odor, fine particulates, no sheen				
Source of Flow	groundwater and irrigation						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\31-J11-NW - Atrisco						

AIR_TEMP_F	63	Lab	HALL ENVIRONMENTAL
WATER_TEMP_F	69	Lab_Report	2204360
pH	7.53	E_coli_Coliform_mpn/100ml	5.2
CONDUCTIVITY_Umos/cm	590	Ammonia_mg/l	<1
BOD_mg/l	5.6	Nitrite_NO2_mg/l	<0.5
COD_mg/l	43	Nitrate_NO3_mg/l	<0.5
TSS_mg/l	54	TKN_Tot_Kjeld_N_mg/l	1.3
TDS_mg/l	378	Phosphorus_total_mg/l_P	0.32
N-Hexane Extractabie-(Oil_Grease)_mg/l	<9.64	Hardness_mg/l_CaCO3	170
Floride_mg/l	0.67	Chlorine_mg/l	<0.05

LOCATION	**LABAJADA-ATRISCO-SOUTH 36 IN PIPE**						
OUTFALL_NO	32	QUAD	NW	GRID	J-11	SAMPLED	☐
DATE_INSP	4/7/2022	TIME	1:20	Inspected by	MM-LM		
WEATHER	SUNNY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\32_J11_NW - Atrisco						

AIR_TEMP_F	63	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**CENTRAL-SUNSET-OSAGE PS-44 TWO PIPES 36 AND 42 IN**						
OUTFALL_NO	33	QUAD	NW	GRID	J-12	SAMPLED	☑
DATE_INSP	4/7/2022	TIME	2:13	Inspected by	MM - LM		
WEATHER	SUNNY	flow	YES	FLOW_GPM	2		
APPEARANCE	clear	GROSS POLLUTANT	No odor, fine particulates, no sheen				
Source of Flow	groundwater						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\33-J12-NW-Central-S						

AIR_TEMP_F	63	Lab	HALL ENVIRONMENTAL
WATER_TEMP_F	69	Lab_Report	2204360
pH	8.16	E_coli_Coliform_mpn/100ml	4.1
CONDUCTIVITY_Umos/cm	590	Ammonia_mg/l	<1
BOD_mg/l	<2	Nitrite_NO2_mg/l	<0.5
COD_mg/l	<20	Nitrate_NO3_mg/l	<0.5
TSS_mg/l	4	TKN_Tot_Kjeld_N_mg/l	<1
TDS_mg/l	398	Phosphorus_total_mg/l_P	0.11
N-Hexane Extractabie-(Oil_Grease)_mg/l	<9.69	Hardness_mg/l_CaCO3	210
Floride_mg/l	0.68	Chlorine_mg/l	<0.05

LOCATION	**CENTRAL-SUNSET-OSAGE NW PS-44-6 IN PIPE**						
OUTFALL_NO	34	QUAD	NW	GRID	J-12	SAMPLED	☐
DATE_INSP	3/28/2022	TIME	12:10	Inspected by	MM		
WEATHER	PARTLY CLOUDY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\34-J12-NW-Central-S						

AIR_TEMP_F	71	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**ALCALDE SW PS-41 AT RIO GRANDE**						
OUTFALL_NO	35	QUAD	SW	GRID	K-13	SAMPLED	☐
DATE_INSP	3/28/2022	TIME	12:10	Inspected by	MM		
WEATHER	PARTLY CLOUDY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\35-K13-SW Alcalde a						

AIR_TEMP_F	71	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**NDC AT ALAMEDA NE**						
OUTFALL_NO	36	QUAD	NE	GRID	C-17	SAMPLED	☑
DATE_INSP	3/8/2022	TIME	3:00	Inspected by	MM		
WEATHER	SUNNY	flow	YES	FLOW_GPM	10		
APPEARANCE	CLEAR	GROSS POLLUTANT	No Odor, No Sheen, Heavy Particulates				
Source of Flow	well wash water, irrigation, water hydrant flushing and broken waterlines						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\36-C17-NE-NDC at Al						

AIR_TEMP_F	78	Lab	HALL ENVIRONMENTAL
WATER_TEMP_F	70	Lab_Report	2204419
pH	9.98	E_coli_Coliform_mpn/100ml	18.9
CONDUCTIVITY_Umos/cm	1100	Ammonia_mg/l	<1
BOD_mg/l	6.1	Nitrite_NO2_mg/l	<0.5
COD_mg/l	62.2	Nitrate_NO3_mg/l	<0.5
TSS_mg/l	<4	TKN_Tot_Kjeld_N_mg/l	1.8
TDS_mg/l	726	Phosphorus_total_mg/l_P	0.074
N-Hexane Extractabie-(Oil_Grease)_mg/l	<9.76	Hardness_mg/l_CaCO3	190
Floride_mg/l	1.4	Chlorine_mg/l	<0.05

LOCATION	**TIJERAS ARROYO AT 2ND ST SW**						
OUTFALL_NO	37	QUAD	SW	GRID	Q-12	SAMPLED	☐
DATE_INSP	3/18/2022	TIME	11:36	Inspected by	MM		
WEATHER	SUNNY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\37-Q13-SE-Tijeras Ch						

AIR_TEMP_F	44	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**MIRANDELA BY PUEBLO PARK SE OF COORS AND MONTANO NW**

OUTFALL_NO	38	QUAD	NW	GRID	E-12	SAMPLED	☐
DATE_INSP	2/7/2022	TIME	8:26	Inspected by	MM		
WEATHER	PARTLY CLOUDY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						

link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\38 and 39-E12-NW-P

AIR_TEMP_F	33	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**BOSQUE SCHOOL AND MIRANDELA SE OF COORS AND MONTANO NW**						
OUTFALL_NO	39	QUAD	NW	GRID	E-12	SAMPLED	☐
DATE_INSP	2/7/2022	TIME	8:26	Inspected by	MM		
WEATHER	PARTLY CLOUDY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\38 and 39-E12-NW-P						

AIR_TEMP_F	33	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

LOCATION	**1406-1412 RIVERVIEW NW**						
OUTFALL_NO	40	QUAD	NW	GRID	J-11	SAMPLED	☐
DATE_INSP	3/28/2022	TIME	12:54	Inspected by			
WEATHER	PARTLY CLOUDY	flow	NO FLOW	FLOW_GPM	0		
APPEARANCE	na	GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_Complaints\2022\2 - DW Screening\40-J11-NW-Rivervie						

AIR_TEMP_F	73	Lab	
WATER_TEMP_F	na	Lab_Report	
pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Ammonia_mg/l	
BOD_mg/l		Nitrite_NO2_mg/l	
COD_mg/l		Nitrate_NO3_mg/l	
TSS_mg/l		TKN_Tot_Kjeld_N_mg/l	
TDS_mg/l		Phosphorus_total_mg/l_P	
N-Hexane Extractabie-(Oil_Grease)_mg/l		Hardness_mg/l_CaCO3	
Floride_mg/l		Chlorine_mg/l	

Attachment 5

Map and Listing of Illicit Discharges

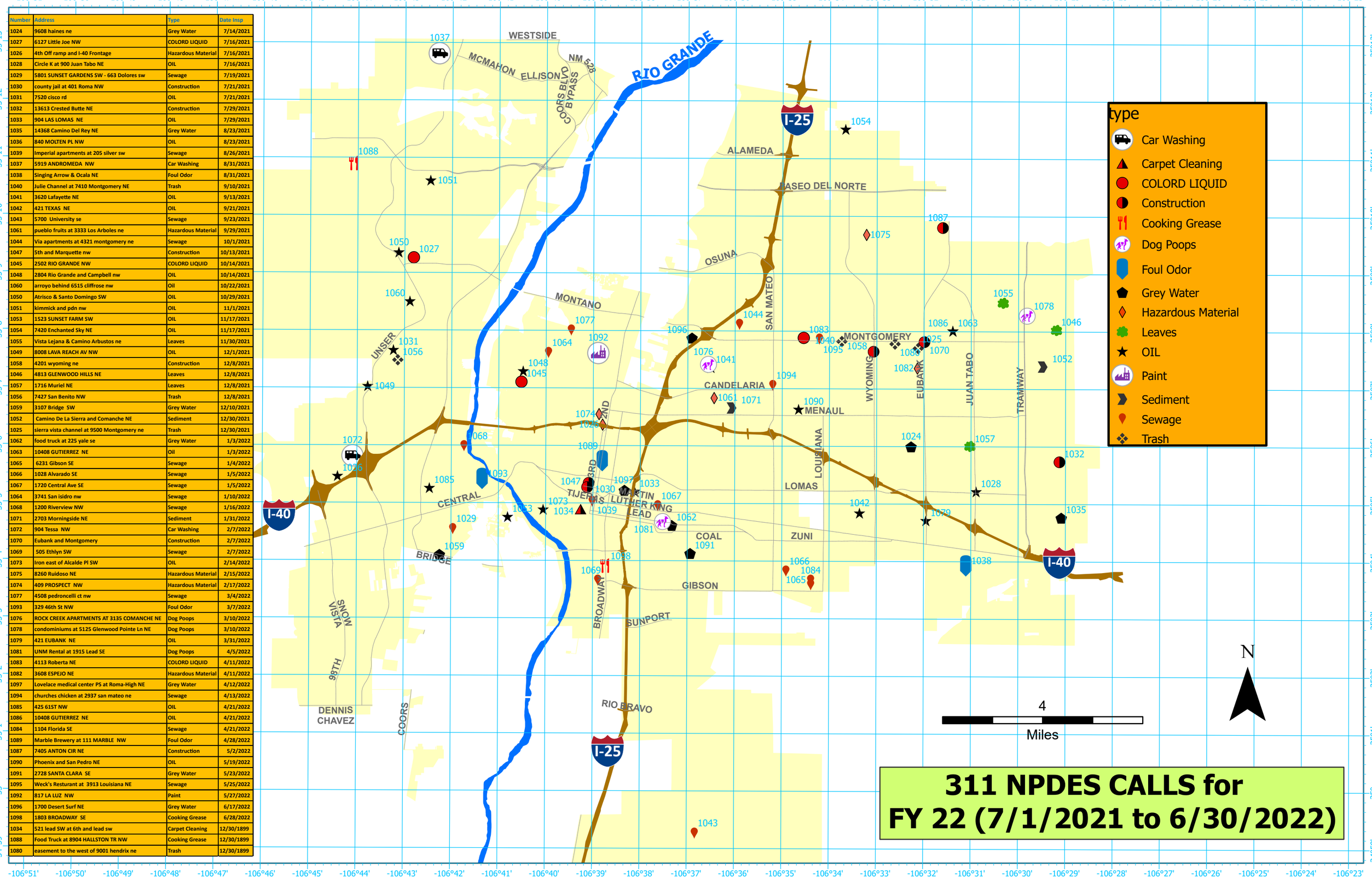
311 NPDES Calls

Annual Report

FY 2022

(7/1/2021 to 6/30/ 2022)

Number	Address	Type	Date Insp
1024	9608 haines ne	Grey Water	7/14/2021
1027	6127 Little Joe NW	COLORD LIQUID	7/16/2021
1026	4th Off ramp and I-40 Frontage	Hazardous Material	7/16/2021
1028	Circle K at 900 Juan Tabo NE	OIL	7/16/2021
1029	5801 SUNSET GARDENS SW - 663 Dolores sw	Sewage	7/19/2021
1030	county jail at 401 Roma NW	Construction	7/21/2021
1031	7520 cisco rd	OIL	7/21/2021
1032	13613 Crested Butte NE	Construction	7/29/2021
1033	904 LAS LOMAS NE	OIL	7/29/2021
1035	14368 Camino Del Rey NE	Grey Water	8/23/2021
1036	840 MOLTEN PL NW	OIL	8/23/2021
1039	Imperial apartments at 205 silver sw	Sewage	8/26/2021
1037	5919 ANDROMEDA NW	Car Washing	8/31/2021
1038	Singing Arrow & Ocala NE	Foul Odor	8/31/2021
1040	Julie Channel at 7410 Montgomery NE	Trash	9/10/2021
1041	3620 Lafayette NE	OIL	9/13/2021
1042	421 TEXAS NE	OIL	9/21/2021
1043	5700 University se	Sewage	9/23/2021
1061	pueblo fruits at 3333 Los Arboles ne	Hazardous Material	9/29/2021
1044	Via apartments at 4321 montgomery ne	Sewage	10/1/2021
1047	5th and Marquette nw	Construction	10/13/2021
1045	2502 RIO GRANDE NW	COLORD LIQUID	10/14/2021
1048	2804 Rio Grande and Campbell nw	OIL	10/14/2021
1060	arroyo behind 6515 cliffrose nw	Oil	10/22/2021
1050	Atrisco & Santo Domingo SW	OIL	10/29/2021
1051	kimmick and pdn nw	OIL	11/1/2021
1053	1523 SUNSET FARM SW	OIL	11/17/2021
1054	7420 Enchanted Sky NE	OIL	11/17/2021
1055	Vista Lejana & Camino Arbustos ne	Leaves	11/30/2021
1049	8008 LAVA REACH AV NW	OIL	12/1/2021
1058	4201 wyoming ne	Construction	12/8/2021
1046	4813 GLENWOOD HILLS NE	Leaves	12/8/2021
1057	1716 Muriel NE	Leaves	12/8/2021
1056	7427 San Benito NW	Trash	12/8/2021
1059	3107 Bridge SW	Grey Water	12/10/2021
1052	Camino De La Sierra and Comanche NE	Sediment	12/30/2021
1025	sierra vista channel at 9500 Montgomery ne	Trash	12/30/2021
1062	food truck at 225 yale se	Grey Water	1/3/2022
1063	10408 GUTIERREZ NE	Oil	1/3/2022
1065	6231 Gibson SE	Sewage	1/4/2022
1066	1028 Alvarado SE	Sewage	1/5/2022
1067	1720 Central Ave SE	Sewage	1/5/2022
1064	3741 San isidro nw	Sewage	1/10/2022
1068	1200 Riverview NW	Sewage	1/16/2022
1071	2703 Morningside NE	Sediment	1/31/2022
1072	904 Tessa NW	Car Washing	2/7/2022
1070	Eubank and Montgomery	Construction	2/7/2022
1069	505 Ethlyn SW	Sewage	2/7/2022
1073	Iron east of Alcalde Pl SW	OIL	2/14/2022
1075	8260 Ruidoso NE	Hazardous Material	2/15/2022
1074	409 PROSPECT NW	Hazardous Material	2/17/2022
1077	4508 pedroncelli ct nw	Sewage	3/4/2022
1093	329 46th St NW	Foul Odor	3/7/2022
1076	ROCK CREEK APARTMENTS AT 3135 COMANCHE NE	Dog Poops	3/10/2022
1078	condominiums at 5125 Glenwood Pointe Ln NE	Dog Poops	3/10/2022
1079	421 EUBANK NE	OIL	3/31/2022
1081	UNM Rental at 1915 Lead SE	Dog Poops	4/5/2022
1083	4113 Roberta NE	COLORD LIQUID	4/11/2022
1082	3608 ESPEJO NE	Hazardous Material	4/11/2022
1097	Lovelace medical center PS at Roma-High NE	Grey Water	4/12/2022
1094	churches chicken at 2937 san mateo ne	Sewage	4/13/2022
1085	425 61ST NW	OIL	4/21/2022
1086	10408 GUTIERREZ NE	OIL	4/21/2022
1084	1104 Florida SE	Sewage	4/21/2022
1089	Marble Brewery at 111 MARBLE NW	Foul Odor	4/28/2022
1087	7405 ANTON CIR NE	Construction	5/2/2022
1090	Phoenix and San Pedro NE	OIL	5/19/2022
1091	2728 SANTA CLARA SE	Grey Water	5/23/2022
1095	Weck's Resturant at 3913 Louisiana NE	Sewage	5/25/2022
1092	817 LA LUZ NW	Paint	5/27/2022
1096	1700 Desert Surf NE	Grey Water	6/17/2022
1098	1803 BROADWAY SE	Cooking Grease	6/28/2022
1034	521 lead SW at 6th and lead sw	Carpet Cleaning	12/30/1899
1088	Food Truck at 8904 HALLSTON TR NW	Cooking Grease	12/30/1899
1080	easement to the west of 9001 hendrix ne	Trash	12/30/1899



311 NPDES CALLS for FY 22 (7/1/2021 to 6/30/2022)

Table of Contents

EVENT_ID	Complaint_Date	Facility_Address	Type_of_Complaint	page
1053	11/15/2021	1523 SUNSET FARM SW	OIL	30
1054	11/16/2021	7420 Enchanted Sky NE	OIL	31
1055	11/24/2021	Vista Lejana & Camino Arbustos ne	Leaves	32
1056	12/3/2021	7427 San Benito NW	Trash	33
1057	12/6/2021	1716 Muriel NE	Leaves	34
1058	12/8/2021	dunkin donuts at 4201 wyoming ne	Construction	35
1059	12/10/2021	3107 Bridge SW	Grey Water	36
1060	9/22/2021	arroyo behind 6515 cliffrose nw	OIL	37
1061	9/27/2021	pueblo fruits at 3333 Los Arboles ne	Hazardous Material	38
1062	12/2/2021	food truck at 225 yale se	Grey Water	39
1063	12/20/2021	10408 GUTIERREZ NE	OIL	40
1064	12/30/2021	3741 San isidro nw	Sewage	41
1065	1/4/2022	6231 Gibson SE	Sewage	42
1066	1/5/2022	1028 Alvarado SE	Sewage	43
1067	1/5/2022	Alon Gas station at 1718/1720 Central Ave SE	Sewage	44
1068	1/18/2022	1200 Riverview NW	Sewage	45
1069	2/1/2022	505 Ethlyn SW	Sewage	46
1070	1/20/2022	Eubank and Montgomery	Construction	47
1071	1/31/2022	2703 Morningside NE	Sediment	48
1072	1/31/2022	904 Tessa NW	Car Washing	49
1073	2/14/2022	Iron east of Alcalde Pl SW	OIL	50
1074	2/15/2022	409 PROSPECT NW	Hazardous Material	51
1075	2/15/2022	8260 Ruidoso NE	Hazardous Material	52
1076	2/20/2022	ROCK CREEK APARTMENTS AT 3135 COMANCHE NE	Dog Poops	53
1077	3/2/2022	4508 pedroncelli ct nw	Sewage	54
1078	3/4/2022	condominiums at 5125 Glenwood Pointe Ln NE	Dog Poops	55
1079	3/31/2022	421 EUBANK NE	OIL	56
1080	4/3/2022	easement to the west of 9001 hendrix ne	Trash	57
1081	4/5/2022	UNM Rental at 1915 Lead SE	Dog Poops	58
1082	4/8/2022	3608 ESPEJO NE	Hazardous Material	59
1083	4/11/2022	4113 Roberta NE	COLORD LIQUID	60

EVENT_ID	Complaint_Date	Facility_Address	Type_of_Complaint	page
1084	4/11/2022	1104 Florida SE	Sewage	61
1085	4/14/2022	425 61ST NW	OIL	62
1086	4/15/2022	10408 GUTIERREZ NE	OIL	63
1087	4/22/2022	7405 ANTON CIR NE	Construction	64
1088	4/22/2022	Food Truck at 8904 HALLSTON TR NW	Cooking Grease	65
1089	4/25/2022	Marble Brewery at 111 MARBLE NW	Foul Odor	66
1090	5/19/2022	Phoenix and San Pedro NE	OIL	67
1091	5/21/2022	2728 SANTA CLARA SE	Grey Water	68
1092	5/26/2022	817 LA LUZ NW	Paint	69
1093	3/6/2022	329 46th St NW	Foul Odor	70
1094	4/13/2022	churches chicken at 2937 san mateo ne	Sewage	71
1095	5/25/2022	Weck's Resturant at 3913 Louisiana NE	Sewage	72
1096	6/14/2022	Flagship Food Group-Desert Premium Food at 1700 Desert Surf NE	Grey Water	73
1097	4/12/2022	Lovelace medical center PS at Roma-High NE	Grey Water	74
1098	6/25/2022	1803 BROADWAY SE	Cooking Grease	75