

# Southern Sandoval County Arroyo Flood Control Authority

1041 Commercial Drive SE • Rio Rancho, NM 87124 Ph (505) 892-RAIN (7246) • Fax (505) 892-7241 BOARD OF DIRECTORS

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August 7, 2017

Mr. Jerry Lovato, Executive Engineer Albuquerque Metropolitan Arroyo Flood Control Authority 2600 Prospect Ave NE Albuquerque, NM 87107

RE: Memorandum of Understanding for Delegation of Authority for Data Entry into netDMR System

Dear Mr. Lovato,

As you are aware, twelve of the permittees under NPDES Permit No. NMR04A000 (Permit) have entered into a cooperative agreement for the performance of permit-mandated water quality monitoring. Currently, results from the samples taken during monitoring events are shared among the twelve members of the Compliance Monitoring Cooperative (CMC) and must be entered by each entity into the netDMR database individually, creating twelve identical (barring typos or other data entry error) records. This is clearly inefficient, at best.

Following discussions between the CMC and the EPA, the EPA has approved a methodology whereby one member of the CMC will enter data in netDMR on behalf of any other CMC-member entity. Each CMC-member entity that wishes to participate will delegate authority to the data entry CMC-member entity or their designed contractor, for this purpose. We appreciate Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA) volunteering to be the data entry CMC entity on behalf of the CMC.

Therefore, the Southern Sandoval County Arroyo Flood Control Authority (SSCAFCA), permit number NMR04A001, hereby delegates authority for data entry and approval of sampling results into netDMR to AMAFCA for the purposes of compliance with Permit requirements. Please provide us notification of the completion of data entry via email for our records.

In the event that AMAFCA becomes unable to perform this function on behalf of SSCAFCA, please notify me a minimum of 60 days prior to the deadline for date entry so that we may arrange to perform this function internally.

If you have any questions or need any clarification regarding this letter, please feel free to contact me at <a href="mailto:cthomas@sscafca.com">cthomas@sscafca.com</a> or at 505-892-7246. Thank you again for your willingness to perform this operation on behalf of the membership of the CMC.

Requested

Charles Thomas, P.E.

**Executive Engineer, SSCAFCA** 

Acknowledged and Accepted

Jerry Løvato, P.E.

Executive Director, AMAFCA



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6 1445 ROSS AVENUE, SUITE 1200 DALLAS, TEXAS 75202-2733

RECEIVED APR 25 2017

## APR 1 0 2017

CERTIFIED MAIL - RETURN RECEIPT REQUESTED: 7014 0150 0000 2454 3244

Mr. Dave Gatterman, P.E. Southern Sandoval County Arroyo Flood Control Authority 1041 Commercial Dr. S.E. Rio Rancho, NM 87124

Re: Request for Delegation of Entering Data

Mr. Gatterman:

Thank you for your email of February 8, 2017, requesting that the Middle Rio Grande member for entering monitoring events data into NetDMR on behalf of the other members. It is our understanding that Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA) will be the member who will be inputing the data. EPA approves CMC's request for the delegation because it is efficient and not duplicative. While we approve the CMC's request for the delegation, EPA would like to emphasize a few items.

EPA's NPDES Permits and TMDLs Branch has pointed out that AMAFCA has certain obligations:

- If AMAFCA agrees to enter monitoring events data on the permittees' (CMC member entities) behalf, this should be memorialized in a Memorandum of Agreement (MOA) or its equivalent. AMAFCA must maintain this obligation as part of their SWMP description and it should also be incorporated into the AMAFCA's SWMP.
- The CMC's SWMPs should also indicate that AMAFCA is responsible for implementing this action.

EPA's Water Enforcement Branch would also like to highlight Part I D.3.b of the Middle Rio Grande MS4 Permit requirements regarding Shared Responsibility and cooperative Programs, and Part IV.A of the MS4 Permit regarding Standard Permit Conditions and Duty to Comply.

- Part I D.3.b states that Implementation of the SWMP may be achieved through participation with other permittees, public agencies, or private entities in cooperative efforts to satisfy the requirements of Part I. D in lieu of creating duplicate program elements for each individual permittee, only if:

"(c) The permittee remains responsible for compliance with the permit obligations if the other entity fails to implement the control measure component."

- Part IV A states that the permittee(s) must comply with all conditions of this permit insofar as those conditions are applicable to each permittee, either individually or jointly. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action.

As stated above, please note that each permittee is responsible for meeting its own permit obligations. If you have any questions, please contact Robert Houston, Special Projects Section Chief, at (214) 665-8565.

Sincerely,

Cheryl T. Seager

Division Director

Compliance Assurance and Enforcement Division



# Engineering Spatial Data

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www.bhinc.com

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## MEMORANDUM

**DATE:** February 20, 2018

**TO:** Jerry Lovato, PE, AMAFCA

Patrick Chavez, PE, AMAFCA

**FROM:** Craig Hoover, PE

Sarah Ganley, PE Evan Burn, PE

SUBJECT: CMC Wet Season, Wet Weather Stormwater Monitoring

Data Verification, Analysis Results Database, and Reporting FY 2018 Wet Season (July 1, 2017, to October 31, 2017) Task 28

**Reissued Memo** 

#### **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 2018 wet season had results that exceeded applicable water quality standards for one or more samples: E. coli, Polychlorinated Biphenyls (PCBs), and Gross Alpha. Table 1 summarizes the samples with exceedances and the applicable water quality standard (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 2018 Wet Season Monitoring

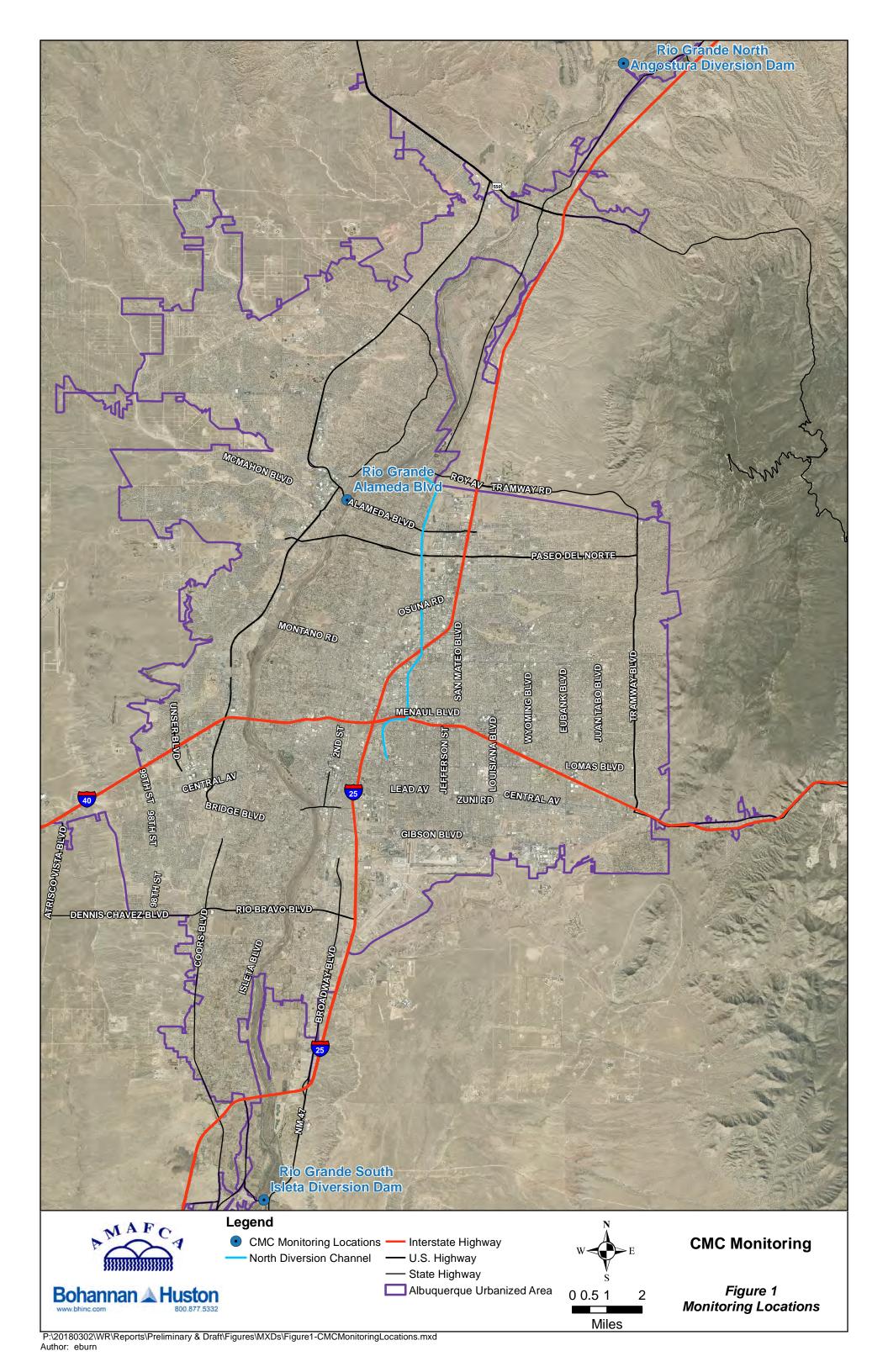
		icable Water Quality S Its Exceeding Applicat	
	E. coli	PCBs	Gross Alpha
Sampling Date	WQS: 88 CFU/100	WQS: 0.00017 ug/L	WQS: 15 pCi/L
Location	ml	Pueblo of Isleta	Pueblo of Isleta
Location	Pueblo of Isleta	Human Health	(General Standards)
	Primary Contact	Criteria (based on	and NM domestic
	Ceremonial &	fish consumption	water supply and
	Recreational	only)	livestock watering
7/28/17 Rio Grande South	236 CFU/100ml	0.000215 ug/L	No Exceedance
Isleta Diversion Dam 9/27/17			
Rio Grande North Angostura Diversion Dam	733 CFU/100ml	0.00021 ug/L	No Exceedance
9/28/17 Rio Grande South Isleta Diversion Dam	6,131 CFU/100ml	0.00104 ug/L	20.9 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) 2018 (July 1, 2017, to June 30, 2018). 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 Watershed Based Municipal Separate Storm Sewer System (MS4) Permit, NPDES Permit No. NMR04A000 ("WSB MS4 Permit").

As identified in the CMC Monitoring Plan, the WSB MS4 Permit requires 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). Four (4) samples were collected in FY 2017 toward the WSB MS4 Permit requirements. This task assumes the remaining three (3) storm events, weather permitting, will be sampled in FY 2018 (July 1, 2017, to June 30, 2018) at both the Rio Grande North and Rio Grande South locations identified in the CMC Monitoring Plan. In addition, a mid-point E. coli sample may be obtained in the Rio Grande at Alameda Blvd. for each of these events.

Of these three (3) remaining storm events, two (2) samples were collected during the FY 2018 wet season (July 1, 2017, to October 31, 2017). The CMC collected one FY 2018 wet season sample on July 27-28, 2017, and one on September 27-28, 2017.



The CMC Excel based database (created under Task 20) will be updated with the FY 2018 wet weather monitoring data as results are received. The database contains sample location, sample date, analyses conducted, methods used, applicable surface water quality standards (WQS), WSB MS4 Permit required Minimum Qualification Levels (MQL) and results. Any unusable data will be identified.

#### **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<sub>5</sub>)

Dissolved Oxygen (DO)

Oil & grease (N-Hexane Extractable Material)

E. coli

рΗ

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

Tetrahydrofuran

Benzo(a)pyrene

Benzo(b)fluoranthene (3, 4 Benzofluoranthene)

Benzo(k)fluoranthene

Chrysene

Indeno(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 fifteen (15) minutes of sample collection. All E. coli samples were submitted to the laboratory within six (6) hours of collection in order to meet the specified hold time.

#### Sampling Locations:

The sampling locations are shown in Figure 1, page 3.

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 New Mexico Environment Department (NMED) to meet the WSB MS4 Permit requirements in Part III.A.

During this FY 2018 wet season, an E. coli only sampling point was added within the Rio Grande at Alameda Blvd. This is the location of the NMED defined stream segment divide. 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) as well as by CMC members. Since BHI was not involved, 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 with their field notes and field sample data (temperature, DO, specific conductivity, and pH) for the FY 2018 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 2018 wet season from July 2017 through October 2017. Two (2) qualifying storm events were sampled and analyzed during the FY 2018 wet season.

- ➤ July 27-28, 2017 Qualifying Storm Event Full Analysis of Samples. A sample was collected at the Rio Grande North location beginning at 12:30 p.m. on July 27 and sent to the laboratory for an E. coli only test. The CMC determined that the storm event beginning July 27 was a qualifying storm event. A sample in the Rio Grande at Alameda Blvd. was obtained at 10:30 p.m. and tested for E. coli at the Bernalillo Waste Water Treatment Plant (WWTP). A Rio Grande South sample was collected beginning at 8:45 a.m. on July 28; the samples from the North (from July 27) and South locations were taken to the HEAL laboratory for full parameter testing.
- ➤ September 27-28, 2017 Qualifying Storm Event Full Analysis of Samples. A sample was collected at the Rio Grande North location beginning at 12:00 p.m. on September 27 and sent to the laboratory for an E. coli only test. The CMC determined the storm event beginning September 27 was a qualifying storm event. A sample in the Rio Grande at Alameda Blvd. was obtained at 10:00 p.m. and tested for E. coli at the Bernalillo WWTP. A Rio Grande South sample was collected beginning at 1:40 p.m. on September 28; the samples from the North (from September 27) and South locations were taken to the laboratory for full parameter testing.

#### **Stormwater Quality Database for CMC**

As stated previously, there were two (2) qualifying storm events during the FY 2018 wet season, wet weather monitoring which occurred July 27-28 and September 27-28. 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 and Bernalillo WWTP lab 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 2018 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 WQS 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.

Upon receipt of the lab reports, water quality data was entered in to the database. All data entered in to 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. In addition, the E. coli only samples from the Rio Grande Alameda location were also entered into the database.

#### Data Verification and Validation:

The HEAL laboratory 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 Water Quality Standard 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 (U.S. 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.

There were not any CMC FY 2018 wet season data that did not meet 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 2018 Wet Season Assessment and Evaluation of Monitoring Results

The EPA approved WSB MS4 CMC Monitoring Plan, May 5, 2016, has thirty-three (33) parameters to monitor at the Rio Grande North and Rio Grande South monitoring locations. Of these thirty-three (33) parameters, thirteen (13) parameters were not detected in either of the FY 2018 wet season samples at either the Rio Grande North or South locations. Refer to Table 2 for a list of the parameters that were not detected.

Table 2: Parameters Not Detected CMC FY 2018 Wet Season Monitoring

Parameters No	ot Detected
Tetrahydrofuran	Dieldren
Benzo(a)pyrene	Pentachlorophenol
Benzo(b)fluoranthene (3, 4 Benzofluoranthene)	Benzidine
Benzo(k)fluoranthene	Benzo(a)anthracene
Chrysene	Dibenzofuran
Indeno(1,2,3-cd)Pyrene	Dibenzo(a,h)anthracene
Chromium VI (Hexavalent)	

For the remaining twenty (20) parameters on the CMC monitoring parameter list, only three parameters (E. coli, PCBs, and gross alpha) 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 2018 wet season. These exceedances are summarized on Table 1, page 1 and discussed below in further detail.

#### E. coli:

The E. coli results collected during the FY 2018 wet season are summarized in Table 3.

Table 3: E. coli Results
CMC FY 2018 Wet Season Monitoring

Date – Rio Grande Location	E. coli Results (CFU/100 ml)
July 27, 2017 – North	20
July 27, 2017 – Alameda	52
July 28, 2017 – South	236
Sept. 27, 2017 – North	733
Sept. 27, 2017 – Alameda	Result not usable
Sept. 28, 2017 – South	6,131

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, and one (1) of the samples, the September 27-28, 2017 sample, had results that exceeded the primary contact-single sample Pueblo of Isleta and Pueblo of Sandia WQS (88 CFU/100 mL) as well as the primary contact-single sample NMAC WQS (410 CFU/100 ml). At the Rio Grande South location (downstream of the MS4 UA), two (2) samples were collected and tested for E. coli, and both of these samples had results that exceeded the Pueblo of Isleta and Pueblo of Sandia WQS (88 CFU/100 mL) and one (1) of the samples, the September 27-28, 2017 sample, also exceeded the primary contact-single sample NMAC WQS (410 CFU/100 ml).

In addition, the CMC added an E. coli sample point in the Rio Grande at Alameda. This added analysis point was based on discussions with NMED in February 2017 on collecting actual data at

the stream segment divide verses using an area percentage (as defined in the TMDL) for E. coli loading calculations. For both FY 2018 wet season storm events, a sample was collected during each storm event at the Alameda location, and this sample was tested by the Bernalillo WWTP. However, the September 27-28, 2017, storm event sample result was not usable for CMC E. coli loading calculations, as the lab reported the result as too numerous to count.

Monthly geometric mean values were not able to be calculated and compared to applicable WQSs because the CMC had only one (1) sample per location in each July and September. 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 WQSs units. Refer to Figure 2 for a graphical representation of wet season E. coli results at the Rio Grande North and Rio Grande South locations

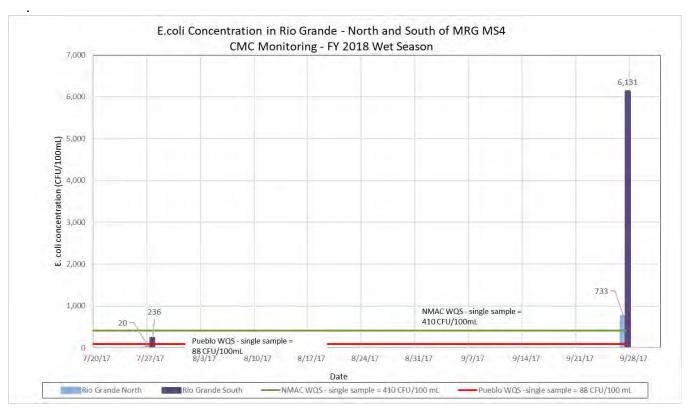


Figure 2: E. coli Results
CMC Monitoring – FY 2018 Wet Season

#### PCBs:

There are multiple surface water quality standard 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 2018 wet season stormwater events were all below the minimum quantification level (MQL) established in U.S. Environmental

Protection Agency (USEPA) standards for MS4 NPDES Permit (Appendix F, 0.2 ug/L for PCBs). The PCB results were also 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, three CMC samples from the Rio Grande were above the Pueblo of Isleta human health criteria (based on fish consumption only) WQS for surface waters, and one of these was also above the New Mexico human health-organism only (fish consumption only) WQS. The human health-organism only criterion is based upon human consumption of fish and other aquatic life that bioaccumulate contaminants over time. The FY 2018 wet season PCB results are shown in Figure 3 relative to various WQSs for PCBs.

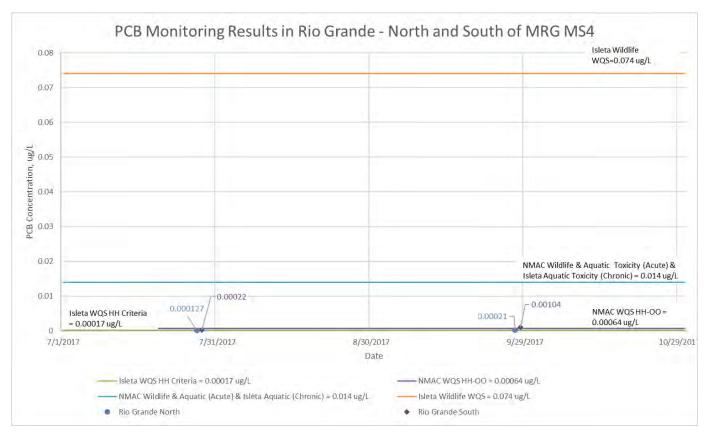


Figure 3: PCB Results
CMC Monitoring – FY 2018 Wet Season

#### Gross Alpha:

The September 27-28, 2017, Rio Grande South sample results exceeded the New Mexico and Pueblo of Isleta WQS for gross alpha. The WQS for 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. Once lab results were obtained and reviewed, the CMC was made aware of this exceedance on December 7, 2017. Sampling collection discussions with DBS&A did not note any variances from typical sampling procedures that would have impacted the analytical results for gross alpha (refer to Attachment 3

for additional documentation). In surface water, the 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 27-28, 2017, Rio Grande South Gross Alpha analytical results are detailed below; the units are in picocuries per liter (abbreviated as pCi/L):

- Rio Grande South CMC sample result = 20.9 pCi/L
- WQS at the Rio Grande South (Isleta Diversion Dam) 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 first time the analytical results from a CMC sample has had an exceedance in gross alpha. 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 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 two parameters did not have any surface water quality exceedances during the FY 2018 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 2018 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 during the FY 2018 wet season. Refer to Figure 4 for dissolved oxygen results and comparison to applicable WQS.

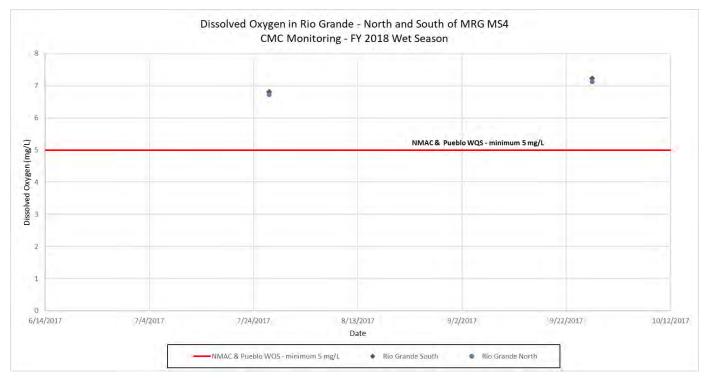


Figure 4: Dissolved Oxygen Results for Rio Grande CMC Monitoring – FY 2018 Wet Season

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 has proven that stormwater discharges into the Rio Grande are not raising the Rio Grande temperature above the WQS. The data collected during this FY 2018 wet season monitoring supports this conclusion. All the temperature field readings taken in the Rio Grande during the CMC FY 2018 wet season were below 32.2°C (90 °F) - 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 WQS.

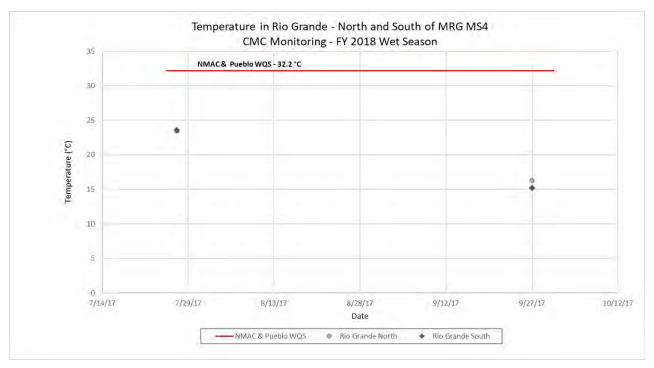


Figure 5: Temperature Monitoring Results in Rio Grande CMC Monitoring – FY 2018 Wet Season

#### CMC FY 2018 Wet Season E. coli Loading Calculations and Waste Load Allocation (WLA)

Related to assessing the stormwater results, BHI has calculated the E. coli loading and compared it 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 WQS. 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 US 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 "2016-2018 State of New Mexico Clean Water Act Section 303(d)/Section 305(b) Integrated Report," September 23, 2016. NMED currently has four

(4) stream segments instead of the two (2) WSB MS4 stream segments; of the four (4) segments, only one segment has an impairment for E. coli (2105\_50 Isleta Pueblo Boundary to Tijeras Arroyo). These various stream segment designations are shown in Figure 6, page 15.

The NMED 303(d)/305(b) 2016-2018 Integrated Report tables show the most recent assessment results, and currently there is only one segment of the Rio Grande (Isleta to Tijeras) that was found to be impaired for E. coli. However, the TMDL for the other stream segments do not go away even if they are no longer impaired—the TMDL remains in place as a protective measure. TMDLs remain in effect after impairments are removed as protective measures.

The E. coli daily loading associated with the CMC group and comparison to the NMED WLA was completed for the two (2) qualifying event wet season storm events—July 27-28 and September 27-28, 2017. For the July 27-28, 2017 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 river segments. Refer to Table 4 for a summary of the WLA comparison results. A spreadsheet is attached to this memo that provides the detailed calculations.

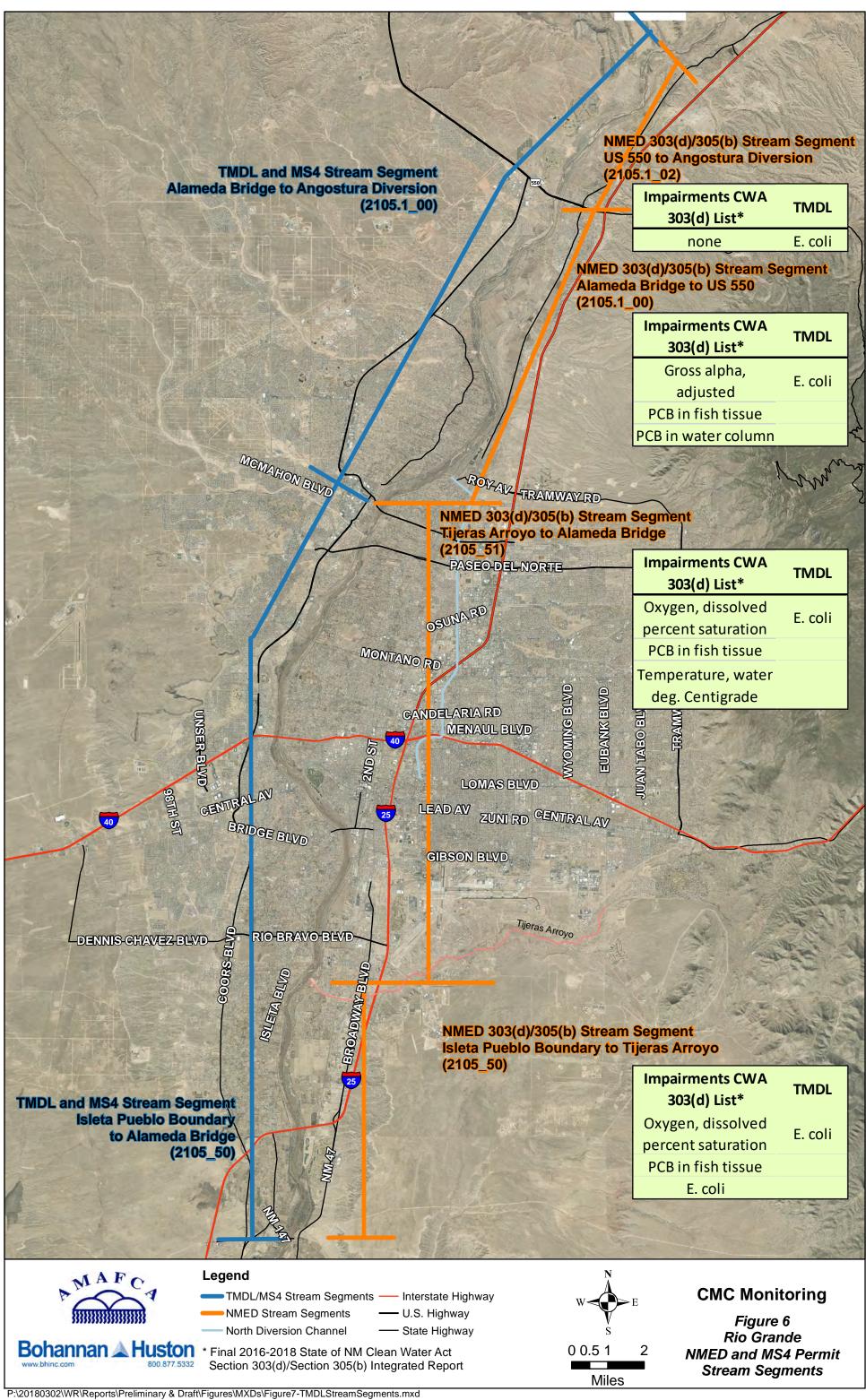


Table 4: Summary of CMC E. Coli Loading Compared to WLA for the CMC

Date / Stream Segment	Daily Mean Flow (cfs)	Flow Conditions (cfs) range defined by NMED	CMC Daily E. coli Load- ing (CFU/day)	NMED WLA for CMC for Stream Segment and Flow Conditions	Loading Compared to WLA Potential Exceedance or Acceptable
July 27-28, 201					
		oncentration = 20	•		
			n = 52 CFU/100 r	nL	
	<u>ıth E. coli C</u>	oncentration = 2	36 CFU/100 mL		
Alameda to Angostura	545	Dry	2.50E+10	3.24E+10	WLA Acceptable
Isleta to Alameda	470	Dry	8.63E+10	1.57E+10	WLA Potential Exceedance
September 27-	28, 2017 –				
Rio Grande Nor	th E. coli co	oncentration = 73	3 CFU/100 mL a	nd	
Rio Grande Sou	ıth E. coli C	oncentration = 6	,131 CFU/100 ml	_	
Alameda to	983	Moist	7.34E+12	9.09E+10	WLA Potential
Angostura	903	เขเบเธเ	7.34⊑+12	9.09⊑+10	Exceedance
Isleta to	1,190	Moist	2.18E+12	6.29E+10	WLA Potential
Alameda	1,190	IVIOIST	2.100+12	0.236+10	Exceedance

As Table 4 illustrates, the E. coli loading for the July 27-28, 2017, storm event for the northern segment (Alameda to Angostura) was below the WLA for the CMC MS4s. This analysis used the mid-point E. coli sample result obtained in the Rio Grande at Alameda. The E. coli loading for the southern segment for the July 27-28, 2017, and both segments for the Sept. 27-28, 2017, event all potentially exceeded the CMC allocated WLA.

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 US 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. The 2010 TMDL Report states on page 40, "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 mean WQS 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 February 1, 2017, meeting and the February 16, 2017, CMC discussion with NMED 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 during the FY 2018 wet season. 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**

As required in the WSB MS4 Permit, verified stormwater quality data must be submitted annually to the EPA using electronic Discharge Monitoring Report (DMR) forms. Data from the DMRs are uploaded to a comprehensive nation-wide 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 2018 wet season. DMRs with this data are due to EPA on December 1, 2018, and these forms will be completed as directed by AMAFCA, as the delegated data entry member for the CMC.

#### **Conclusions and Planning**

During the FY 2018 wet season (July 1 to October 31, 2017), two (2) qualifying stormwater samples were obtained by the CMC. Lab results have been received for all of these samples. 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 2018 wet season show that:

- ➤ With the two FY 2018 wet season samples, six (6) of the seven (7) required samples in the WSB MS4 Permit Wet Weather Monitoring section have been obtained. Seven (7) samples are required during the 5-year Permit term, so this is significant progress for the CMC. The CMC has met the required Permit minimum of three (3) events during the wet season.
- ➤ 13 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:
  - o All dissolved oxygen results were greater than 5 mg/L (minimum WQS).
  - o All temperature results were less than 32.2 °C (maximum WQS).
- The PCB results were also 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, three CMC samples from the Rio Grande were above the Pueblo of Isleta human health criteria (based on fish consumption only) WQS for surface waters and one of these was also above the New Mexico human health-organism only (fish consumption only) WQS.
- ➤ The September 27-28, 2017, Rio Grande South sample results exceeded the WQS for gross alpha. This is the first time the analytical results from a CMC sample has had an exceedance in gross alpha. The CMC will continue to closely evaluate this parameter in future samples.
- ➤ The calculated E. coli loading for the July 27-28, 2017, storm event for the northern segment (Alameda to Angostura) was below the WLA for the CMC MS4s. This analysis used the mid-point E. coli sample result obtained in the Rio Grande at Alameda. The E. coli loading for the southern segment for the July 27-28, 2017, and both segments for the September 27-28, 2017, event all potentially exceeded the CMC allocated WLA.

- 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 purposed for the CMC members, the FY 2018 dry season monitoring activity (weather permitting), analytical results, and E. coli loading calculations will be summarized by BHI for the CMC in a memo due August 15, 2018.

#### SG/le

#### Attachments:

- Attachment 1 Hall Environmental Analysis Laboratory Reports with BHI Notes for FY 2018 Wet Season
- Attachment 2 FY 2017 Wet Season Completed Data Verification and Validation Forms
- Attachment 3 Documentation from DBS&A Related to September 27-28, 2017, Sample Collection and Gross Alpha Analytical Result

#### Spreadsheets Included Separately:

E. coli Loading and Comparison to Waste Load Allocation (WLA) Excel Spreadsheet Excel CMC Spreadsheet with FY 2018 Wet Season Stormwater Quality Monitoring Results

# ATTACHMENT 1 HALL ENVIRONMENTAL ANALYSIS LABORATORY REPORTS WITH BHI NOTES FOR FY 2018 WET SEASON



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

July 27, 2017 Rio Grande

North and Rio Grande at

Alameda (pre storm) - E.

coli results

August 11, 2017

Patrick Chavez
AMAFCA
2600 Prospect Ave NE
Albuquerque, NM 87107

TEL: (505) 884-2215

FAX

RE: CMC OrderNo.: 1707E07

Dear Patrick Chavez:

Hall Environmental Analysis Laboratory received 2 sample(s) on 7/27/2017 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> 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 #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

andel

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order **1707E07** 

Date Reported: 8/11/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: AMAFCA Client Sample ID: Alameda-20170727

 Project:
 CMC
 Collection Date: 7/27/2017 10:20:00 AM

 Lab ID:
 1707E07-001
 Matrix: AQUEOUS
 Received Date: 7/27/2017 1:30:00 PM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR	: E. COLI MPN				Analy	/st: SMS
E. Coli	50.4	1.000	MPN/100mL	1	7/28/2017 4:04:00 PI	M 33053

*	Value exceeds Maximum Contaminant Level.	В	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 Page 1 of 2
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified
	D H ND	<ul> <li>D Sample Diluted Due to Matrix</li> <li>H Holding times for preparation or analysis exceeded</li> <li>ND Not Detected at the Reporting Limit</li> <li>PQL Practical Quanitative Limit</li> </ul>	D     Sample Diluted Due to Matrix     E       H     Holding times for preparation or analysis exceeded     J       ND     Not Detected at the Reporting Limit     P       PQL     Practical Quanitative Limit     RL

Lab Order **1707E07**Date Reported: **8/11/2017** 

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: AMAFCA Client Sample ID: Rio Grande-North-20170727

 Project:
 CMC
 Collection Date: 7/27/2017 12:30:00 PM

 Lab ID:
 1707E07-002
 Matrix: AQUEOUS
 Received Date: 7/27/2017 1:30:00 PM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E	. COLI MPN				Analy	yst: SMS
E. Coli	20	10.00	MPN/100mL	10	7/28/2017 4:04:00 PI	M 33053

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 2 of 2
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

## Sample Log-In Check List

**AMAFCA** Client Name: Work Order Number: 1707E07 RcptNo: 1 Received By: 7/27/2017 1:30:00 PM **Anne Thorne** anne Sham Completed By: **Anne Thorne** 7/27/2017 1:43:54 PM 7/22 (0) 1348 Reviewed By: Chain of Custody Yes 🗌 No 🗆 Not Present 1. Custody seals intact on sample bottles? No 🗌 Yes 🗹 Not Present 2. Is Chain of Custody complete? 3 How was the sample delivered? Client Log In No 🔲 NA 🗀 Yes 🗹 4. Was an attempt made to cool the samples? No 🗸 NA 🗔 5. Were all samples received at a temperature of >0° C to 6.0°C Yes Samples were collected the same day and chilled. Yes 🗹 No 🗌 Sample(s) in proper container(s)? No 🔲 Yes 🗹 7. Sufficient sample volume for indicated test(s)? No 🗌 Yes 🗸 8. Are samples (except VOA and ONG) properly preserved? No 🗹 NA 🗌 9. Was preservative added to bottles? Yes No 🗌 No VOA Vials 🗹 10. VOA vials have zero headspace? Yes 🗌 Yes No 🗹 11. Were any sample containers received broken? # of preserved bottles checked Yes 🔽 No 🗌 for pH: 12. Does paperwork match bottle labels? (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? Yes 🗸 No 🗌 13. Are matrices correctly identified on Chain of Custody? No 🗀 14. Is it clear what analyses were requested? Yes 🔽 Checked by: No 🗌 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) Yes 16. Was client notified of all discrepancies with this order? No 🗌 NA 🗸 Person Notified: Date By Whom: Via: eMail Phone Fax In Person Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Seal Intact | Seal No Cooler No Temp ºC Condition Seal Date Signed By 16.9 Good Not Present

HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com		EDB (Method 504.1) PAH's (8310 or 8270 SIMS) RCRA 8 Metals Anions (F,Cl,NO <sub>3</sub> ,NO <sub>2</sub> ,PO <sub>4</sub> ,SO <sub>4</sub> ) 8081 Pesticides \ 8082 PCB's 8260B (VOA) BZ60B (VOA)  Air Bubbles (Y or N)	>> >> >> >> >> >> >> >> >> >> >> >> >>	×.					acted data will be clearly notated on the analytical report.
ANA Www.h	Tel. 505-345-3975	BTEX + MTBE + TMB's (8021) BTEX + MTBE + TPH (Gas only) TPH 8015B (GRO \ DRO \ MRO)	-					Remarks:	possibility. Any sub-confr
Turn-Around Time:	Project #:	Project Manager:  Patrick Charle  Sampler: Cahawesm - DBS A On Ice: A Yes D No Sample Temperature: A Yes  Container Preservative HEAL No. Type and # Type	192	202   1220				Received by: Date Of Time 1/1/3 Received by: Date Time	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
Chain-of-Custody Record Client: AMAFCA Mailing Address: 7,600 Plasect App	87103	ckage:  ckage:  I Level 4 (Full Validation)  tion  Type)  Time Matrix Sample Request ID	7-2747 1020 AQ Alameda-20170727	Ag				Date: Time: Relinquished by: Date: Time: Relinquished by:	If necessary, samples submitted to Hall Environmental may be subco

July 27, 2018
Rio Grande at Alameda E.
coli sample during storm
event

# Bernalillo WWTP

E. coli WORKSHEET

Time of Sampling: O. 3 Time of Arrival: O. 47 PM  Type of Sample: Grab Sample Instantaneous Flow: MGD  Exact Location: EFF WW  Method Used: Hach m-ColiBlue 24 EPA Approved Method  Refrigerator Temperature:  (Samples must be stored at <6°C)
In Incubator: Date: $7 - 27 - 7$ Time: $24 + 2 + 2 = 24 $
**Formula: Calculate coliform density: Use all plates and filtered volumes that fall between the ideal range. Include duplicates and multiple dilutions.  Colonies/100 mL = (coliform colonies counted) X (100)  mLs Sample filtered
**Formula: If no plate falls in the ideal range, use all plates and filtered volumes not categorized as TNTC or Confluent Growth.  Colonies/100 mL = (Sum of colonies in all samples) X (100)

0
0

IF: The total number of colonies exceeds 200 per membrane, or the colonies are too indistinct for accurate counting, or exceed 60 blue colonies, report the results as "Too Numerous to Count (TNTC)" Or "confluent growth" as applies.

\*\*Use plates that fall in the ideal range for Quantitative Determinations for e-coli (20-60)

E. coli

Sample	Volume	Blue Colonies
Blank I	100 mL	0
MW 25 10	MW25 ml 10ml	6
MW 50A 20A	mw 50 mL 20 mL	10
mw 50B 20B	MW_50 mL 20 ML	14
MW_100 50	mulloomL somh	52
Blank II	100 mL	0

Sum of volume (in mL) of all samples

(Use the worksheet below to calculate coliform density)

Sampled By: Math water



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

September 21, 2017

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

FAX

July 27, 2018 Rio Grande North and July 28, 2017 Rio Grand South results

RE: CMC OrderNo.: 1707E46

#### Dear Patrick Chavez:

Hall Environmental Analysis Laboratory received 6 sample(s) on 7/28/2017 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> 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 #NM0190

Sincerely,

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

andel

Field Data - Provided by DBS&A (field notebook):

7/27/17 - Rio Grande North

DO = 6.73 mg/L, pH = 7.33, Conductivity = 247

umhos/cm, and Temperature = 23.47°C

7/28/17 - Rio Grande South

DO = 6.8 mg/L, pH = 8.13, Conductivity = 361

umhos/cm, and Temperature = 23.6°C



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

Website: www.hallenvironmental.com

**Case Narrative** 

WO#: **1707E46**Date: **9/21/2017** 

CLIENT: AMAFCA
Project: CMC

Analytical Notes Regarding EPA Method 8260:

Both samples in this report were analyzed by EPA Method 8260, however Tetrahydrofuran was not included in the list of reportable compounds. We have scanned the samples using the MS for Tetrahydrofuran and this compound was not detected.

Analytical Notes Regarding EPA Method 8270:

Both samples in this report were analyzed by EPA Method 8270, however Benzidine and Dieldrin were not included in the list of reportable compounds. We have scanned the samples using the MS for Benzidine and Dieldrin and these compounds were not detected.

Date Reported:

Lab Order: **1707E46** 

9/21/2017

## Hall Environmental Analysis Laboratory, Inc.

**AMAFCA** 

1707E46-001B

CMC

**CLIENT:** 

**Project:** 

Lab ID:

Client Sample ID: Rio Grande-North-20170727

**Collection Date:** 7/27/2017 12:30:00 PM

Matrix: Aqueous

Analyses	Result	MDI	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: <b>DAM</b>	
Benz(a)anthracene	ND	3.9	10		μg/L	1	8/11/2017 4:39:12 PM	33127
Benzo(a)pyrene	ND	4.0	10		μg/L	1	8/11/2017 4:39:12 PM	33127
Benzo(b)fluoranthene	ND	4.0	10		μg/L	1	8/11/2017 4:39:12 PM	33127
Benzo(k)fluoranthene	ND	4.4	10		μg/L	1	8/11/2017 4:39:12 PM	33127
Bis(2-ethylhexyl)phthalate	5.5	4.8	10	J	μg/L	1	8/11/2017 4:39:12 PM	33127
Chrysene	ND	3.8	10		μg/L	1	8/11/2017 4:39:12 PM	33127
Dibenz(a,h)anthracene	ND	4.6	10		μg/L	1	8/11/2017 4:39:12 PM	33127
Dibenzofuran	ND	4.1	10		μg/L	1	8/11/2017 4:39:12 PM	33127
Indeno(1,2,3-cd)pyrene	ND	4.2	10		μg/L	1	8/11/2017 4:39:12 PM	33127
Pentachlorophenol	ND	4.9	20		μg/L	1	8/11/2017 4:39:12 PM	33127
Surr: 2-Fluorophenol	52.2	0	15-88		%Rec	1	8/11/2017 4:39:12 PM	33127
Surr: Phenol-d5	40.6	0	15-72.4		%Rec	1	8/11/2017 4:39:12 PM	33127
Surr: 2,4,6-Tribromophenol	74.9	0	15-117		%Rec	1	8/11/2017 4:39:12 PM	33127
Surr: Nitrobenzene-d5	92.1	0	33.5-120		%Rec	1	8/11/2017 4:39:12 PM	33127
Surr: 2-Fluorobiphenyl	86.4	0	26.5-109		%Rec	1	8/11/2017 4:39:12 PM	33127
Surr: 4-Terphenyl-d14	64.2	0	21.7-98.7		%Rec	1	8/11/2017 4:39:12 PM	33127

Qualifiers:	*	* Value exceeds Maximum Contaminant Level.		Analyte detected in the associated Method Blank			
Г		Sample Diluted Due to Matrix		Value above quantitation range			
	Н	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	Page 2 of 32		
	PQL	Practical Quanitative Limit	RL Reporting Detection Limit		1 uge 2 of 32		
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified			

Lab Order: 1707E46

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 9/21/2017

CLIENT: AMAFCA Client Sample ID: Rio Grande-North-20170727

**Project:** CMC Collection Date: 7/27/2017 12:30:00 PM

Lab ID: 1707E46-001C Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 1664B							Analyst: MAB	
N-Hexane Extractable Material	5.17	3.77	9.94	J	mg/L	1	8/1/2017	33094

Qualifiers:	<ul> <li>Value exceeds Maximum Contaminant Level.</li> </ul>		В	Analyte detected in the associated Method Blank			
Г		Sample Diluted Due to Matrix		Value above quantitation range			
	Н	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	Page 3 of 32		
	PQL	Practical Quanitative Limit	RL Reporting Detection Limit		1 age 3 of 32		
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified			

Lab Order: 1707E46

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 9/21/2017

CLIENT: AMAFCA Client Sample ID: Rio Grande-North-20170727

**Project:** CMC **Collection Date:** 7/27/2017 12:30:00 PM

**Lab ID:** 1707E46-001E **Matrix:** Aqueous

Analyses	Result	MDL	PQL	Qual Units	DF	Date Analyzed	Batch ID
SM5210B: BOD						Analyst: SMS	
Biochemical Oxygen Demand	DO Depletion<2.0	2.0	2.0	mg/L	1	8/2/2017 3:49:00 PM	33070

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method	d Blank		
	D Sample Diluted Due to Matrix E Value above quantitation			Value above quantitation range	ge		
	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	Page 4 of 32		
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit	1 uge + 01 32		
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified			

Lab Order: 1707E46

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 9/21/2017

CLIENT: AMAFCA Client Sample ID: Rio Grande-North-20170727

 Project:
 CMC
 Collection Date: 7/27/2017 12:30:00 PM

 Lab ID:
 1707E46-001F
 Matrix: Aqueous

Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
						Analyst: MRA	
ND	0.0069	0.10		mg/L	1	7/28/2017 3:28:31 PM	R44608
0.050	0.022	0.10	J	mg/L	1	7/28/2017 3:28:31 PM	R44608
						Analyst: CJS	
ND	0.40	1.0		mg/L	1	8/2/2017 2:36:00 PM	R44684
						Analyst: JRR	
8.19			Н	pH units	1	7/31/2017 1:10:24 PM	R44651
OROUS						Analyst: CJS	
0.062	0.010	0.010		mg/L	1	8/8/2017 12:25:00 PM	33215
OLIDS						Analyst: SRM	
181	11.8	20.0		mg/L	1	8/3/2017 12:07:00 PM	33122
						Analyst: smb	
ND	0.44	1.0		mg/L	1	8/11/2017 11:11:00 AM	M 33282
						Analyst: <b>KS</b>	
32	3.9	4.0		mg/L	1	8/3/2017 2:30:00 PM	33138
	ND 0.050 ND 8.19 OROUS 0.062 OLIDS 181	ND 0.0069 0.050 0.022 ND 0.40 8.19 OROUS 0.062 0.010 OLIDS 181 11.8 ND 0.44	ND 0.0069 0.10 0.050 0.022 0.10  ND 0.40 1.0  8.19  OROUS 0.062 0.010 0.010  OLIDS 181 11.8 20.0  ND 0.44 1.0	ND 0.0069 0.10 0.050 0.022 0.10 J ND 0.40 1.0 8.19 H OROUS 0.062 0.010 0.010 OLIDS 181 11.8 20.0 ND 0.44 1.0	ND 0.0069 0.10 mg/L 0.050 0.022 0.10 J mg/L  ND 0.40 1.0 mg/L  8.19 H pH units  OROUS 0.062 0.010 0.010 mg/L  OLIDS 181 11.8 20.0 mg/L  ND 0.44 1.0 mg/L	ND 0.0069 0.10 mg/L 1 0.050 0.022 0.10 J mg/L 1  ND 0.40 1.0 mg/L 1  8.19 H pH units 1  OROUS 0.062 0.010 0.010 mg/L 1  SOLIDS 181 11.8 20.0 mg/L 1  ND 0.44 1.0 mg/L 1	Analyst: MRA  ND 0.0069 0.10 mg/L 1 7/28/2017 3:28:31 PM 0.050 0.022 0.10 J mg/L 1 7/28/2017 3:28:31 PM  Analyst: CJS  ND 0.40 1.0 mg/L 1 8/2/2017 2:36:00 PM  Analyst: JRR  8.19 H pH units 1 7/31/2017 1:10:24 PM  OROUS  0.062 0.010 0.010 mg/L 1 8/8/2017 12:25:00 PM  Analyst: CJS  OLIDS  181 11.8 20.0 mg/L 1 8/3/2017 12:07:00 PM  Analyst: smb  ND 0.44 1.0 mg/L 1 8/11/2017 11:11:00 AM  Analyst: KS

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Me	thod Blank	
D		Sample Diluted Due to Matrix		Value above quantitation range		
	Н	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	Page 5 of 32	
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit	1 age 3 01 32	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified		

Lab Order: 1707E46

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 9/21/2017

CLIENT: AMAFCA Client Sample ID: Rio Grande-North-20170727

Project: CMC Collection Date: 7/27/2017 12:30:00 PM

Lab ID: 1707E46-001G Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS						Analyst: <b>TES</b>	
Calcium	34	0.078	1.0	mg/L	1	8/16/2017 3:33:23 PM	33360
Magnesium	6.0	0.25	1.0	mg/L	1	8/16/2017 3:33:23 PM	33360
SM2340B: HARDNESS						Analyst: TES	
Hardness (As CaCO3)	110	2.5	6.6	mg/L	1	8/16/2017	R45008

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank	
<b>C</b>	D	Sample Diluted Due to Matrix		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	Page 6 of 32	
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit	1 age 0 01 32	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified		

Lab Order: 1707E46

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 9/21/2017

CLIENT: AMAFCA Client Sample ID: Rio Grande-North-20170727

Project: CMC Collection Date: 7/27/2017 12:30:00 PM

**Lab ID:** 1707E46-001H **Matrix:** Aqueous

Analyses	Result	MDL	PQL	Qual Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS						Analyst: <b>JLF</b>	
Copper	0.0011	0.00030	0.0010	mg/L	1	8/3/2017 7:13:20 PM	B44712
Lead	ND	0.00017	0.00050	mg/L	1	8/2/2017 9:11:04 PM	D44683

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method	l Blank		
	D Sample Diluted Due to Matrix			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	Page 7 of 32		
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit	1 age 7 01 32		
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified			

Lab Order: 1707E46

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 9/21/2017

CLIENT: AMAFCA Client Sample ID: ABQRD-East

Project: CMC Collection Date: 7/28/2017 7:15:00 AM

Lab ID: 1707E46-002A Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E						Analyst: SMS		
E. Coli	1296	10.00	10.00		MPN/100	10	7/29/2017 3:29:00 PM	33077

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B Analyte detected in the ass		Blank			
	D Sample Diluted Due to Matrix		E	Value above quantitation range				
	Н	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	Page 8 of 32			
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit	1 age 0 01 32			
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified				

Lab Order: 1707E46

9/21/2017

#### Hall Environmental Analysis Laboratory, Inc. Date Reported:

Client Sample ID: Rio Grande-South-20170728 **CLIENT: AMAFCA** 

**Project: CMC** Collection Date: 7/28/2017 8:45:00 AM

Lab ID: 1707E46-003B Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8270C: SEMIVOLATILES							Analyst: <b>DAM</b>	
Benzo(a)pyrene	ND	4.0	10		μg/L	1	8/11/2017 6:03:09 PM	33127
Benzo(b)fluoranthene	ND	4.0	10		μg/L	1	8/11/2017 6:03:09 PM	33127
Benzo(g,h,i)perylene	ND	4.0	10		μg/L	1	8/11/2017 6:03:09 PM	33127
Benzo(k)fluoranthene	ND	4.4	10		μg/L	1	8/11/2017 6:03:09 PM	33127
Bis(2-ethylhexyl)phthalate	ND	4.8	10		μg/L	1	8/11/2017 6:03:09 PM	33127
Chrysene	ND	3.8	10		μg/L	1	8/11/2017 6:03:09 PM	33127
Dibenz(a,h)anthracene	ND	4.6	10		μg/L	1	8/11/2017 6:03:09 PM	33127
Dibenzofuran	ND	4.1	10		μg/L	1	8/11/2017 6:03:09 PM	33127
Indeno(1,2,3-cd)pyrene	ND	4.2	10		μg/L	1	8/11/2017 6:03:09 PM	33127
Pentachlorophenol	ND	4.9	20		μg/L	1	8/11/2017 6:03:09 PM	33127
Surr: 2-Fluorophenol	43.3	0	15-88		%Rec	1	8/11/2017 6:03:09 PM	33127
Surr: Phenol-d5	32.4	0	15-72.4		%Rec	1	8/11/2017 6:03:09 PM	33127
Surr: 2,4,6-Tribromophenol	60.3	0	15-117		%Rec	1	8/11/2017 6:03:09 PM	33127
Surr: Nitrobenzene-d5	72.7	0	33.5-120		%Rec	1	8/11/2017 6:03:09 PM	33127
Surr: 2-Fluorobiphenyl	66.2	0	26.5-109		%Rec	1	8/11/2017 6:03:09 PM	33127
Surr: 4-Terphenyl-d14	55.0	0	21.7-98.7		%Rec	1	8/11/2017 6:03:09 PM	33127

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

Oualifiers:	*	Value exceeds Maximum Contaminant Level.	В
•	D	Sample Diluted Due to Matrix	E
	Н	Holding times for preparation or analysis exceeded	J

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit % Recovery outside of range due to dilution or matrix Analyte detected in the associated Method Blank

Value above quantitation range

Analyte detected below quantitation limits

Sample pH Not In Range

Page 9 of 32

RL Reporting Detection Limit

Sample container temperature is out of limit as specified

Lab Order: 1707E46

9/21/2017

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

**AMAFCA** 

1707E46-003C

CMC

**CLIENT:** 

**Project:** 

Lab ID:

Client Sample ID: Rio Grande-South-20170728

**Collection Date:** 7/28/2017 8:45:00 AM

Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 1664B							Analyst: MAB	
N-Hexane Extractable Material	3.70	3.69	9.73	J	mg/L	1	8/1/2017	33094

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank		
	D	Sample Diluted Due to Matrix	E	Value above quantitation range		
	Н	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	Page 10 of 32	
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit	1 450 10 01 32	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified		

Lab Order: 1707E46

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 9/21/2017

CLIENT: AMAFCA Client Sample ID: Rio Grande-South-20170728

**Project:** CMC Collection Date: 7/28/2017 8:45:00 AM

Lab ID: 1707E46-003D Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. C						Analyst: SMS		
E. Coli	235.9	1.000	1.000		MPN/100	1	7/29/2017 3:29:00 PM	33077

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В			
	D	Sample Diluted Due to Matrix	E			
	Н	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	Page 11 of 32	
	PQL	Practical Quanitative Limit	RL Reporting Detection Limit		1 age 11 01 32	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified		

Lab Order: 1707E46

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 9/21/2017

CLIENT: AMAFCA Client Sample ID: Rio Grande-South-20170728

Project: CMC Collection Date: 7/28/2017 8:45:00 AM

**Lab ID:** 1707E46-003E **Matrix:** Aqueous

Analyses	Result	MDL	PQL	Qual Units	DF	Date Analyzed	Batch ID
SM5210B: BOD						Analyst: SMS	
Biochemical Oxygen Demand	2.0	2.0	2.0	mg/L	1	8/2/2017 3:49:00 PM	33070

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method	od 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	Page 12 of 32	
	PQL	Practical Quanitative Limit	RL Reporting Detection Limit		1 age 12 of 32	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified		

Date Reported:

Lab Order: 1707E46

9/21/2017

### Hall Environmental Analysis Laboratory, Inc.

CLIENT:AMAFCAClient Sample ID: Rio Grande-South-20170728Project:CMCCollection Date: 7/28/2017 8:45:00 AMLab ID:1707E46-003FMatrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: MRA	
Nitrogen, Nitrite (As N)	ND	0.0069	0.10		mg/L	1	7/28/2017 3:53:21 PM	R44608
Nitrogen, Nitrate (As N)	0.88	0.022	0.10		mg/L	1	7/28/2017 3:53:21 PM	R44608
SM 4500 NH3: AMMONIA							Analyst: CJS	
Nitrogen, Ammonia	ND	0.40	1.0		mg/L	1	8/2/2017 2:36:00 PM	R44684
SM4500-H+B: PH							Analyst: JRR	
рН	8.20			Н	pH units	1	7/31/2017 1:14:40 PM	R44651
<b>EPA METHOD 365.1: TOTAL PHOSPH</b>	IOROUS						Analyst: CJS	
Phosphorus, Total (As P)	0.33	0.010	0.010		mg/L	1	8/8/2017 1:10:00 PM	33215
SM2540C MOD: TOTAL DISSOLVED	SOLIDS						Analyst: SRM	
Total Dissolved Solids	248	11.8	20.0		mg/L	1	8/3/2017 12:07:00 PM	33122
SM 4500 NORG C: TKN							Analyst: smb	
Nitrogen, Kjeldahl, Total	0.84	0.44	1.0	J	mg/L	1	8/11/2017 11:11:00 AM	Л 33282
SM 2540D: TSS							Analyst: KS	
Suspended Solids	63	3.9	4.0		mg/L	1	8/3/2017 2:30:00 PM	33138

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Met	hod Blank	
	D	Sample Diluted Due to Matrix	E Value above quantitation range			
	Н	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	Page 13 of 32	
	PQL	Practical Quanitative Limit	uanitative Limit RL Reporting		1 age 13 01 32	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified		

Lab Order: 1707E46

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 9/21/2017

CLIENT: AMAFCA Client Sample ID: Rio Grande-South-20170728

Project: CMC Collection Date: 7/28/2017 8:45:00 AM

Lab ID: 1707E46-003G Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual Units	DF	Date Analyzed	Batch ID
EPA METHOD 200.7: METALS						Analyst: <b>TES</b>	
Calcium	40	0.078	1.0	mg/L	1	8/16/2017 3:35:11 PM	33360
Magnesium	7.4	0.25	1.0	mg/L	1	8/16/2017 3:35:11 PM	33360
SM2340B: HARDNESS						Analyst: TES	
Hardness (As CaCO3)	130	2.5	6.6	mg/L	1	8/16/2017	R45008

Oualifiers:	*	Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank		
<b>C</b>	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	Page 14 of 32
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit	1 age 14 01 32
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of la	mit as specified

Lab Order: 1707E46

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 9/21/2017

CLIENT: AMAFCA Client Sample ID: Rio Grande-South-20170728

**Project:** CMC Collection Date: 7/28/2017 8:45:00 AM

Lab ID: 1707E46-003H Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual Unit	s DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS						Analyst: <b>JLF</b>	
Copper	0.0012	0.00030	0.0010	mg/l	_ 1	8/3/2017 7:16:24 PM	B44712
Lead	ND	0.00017	0.00050	mg/l	_ 1	8/2/2017 9:14:07 PM	D44683

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	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	J Analyte detected below quantitation limits		
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	Page 15 of 32	
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit	1 age 13 of 32	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of l	imit as specified	

Lab Order: 1707E46

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 9/21/2017

CLIENT: AMAFCA Client Sample ID: Rio Grande-North-20170727 FIL

Project: CMC Collection Date: 7/27/2017 12:30:00 PM

Lab ID: 1707E46-004A Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 365.1: TOTAL PHO	SPHOROUS						Analyst: JRR	
Phosphorus, Total (As P)	0.025	0.010	0.010		mg/L	1	8/11/2017 12:57:10 PM	1 33306

Dissolved phosphorous - filtered sample

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank		
•	D	Sample Diluted Due to Matrix	E	Value above quantitation range		
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation	n limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	Page 16 of 32	
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit	1 age 10 01 32	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is ou	t of limit as specified	

Lab Order: 1707E46

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 9/21/2017

CLIENT: AMAFCA Client Sample ID: Rio Grande-South-20170728 FIL

Project: CMC Collection Date: 7/28/2017 8:45:00 AM

Lab ID: 1707E46-005A Matrix: Aqueous

Analyses	Result	MDL	PQL	Qual Units	DF	Date Analyzed	Batch ID
EPA METHOD 365.1: TOTAL PHOSPHOI	ROUS					Analyst: <b>JRR</b>	
Phosphorus, Total (As P)	0.25	0.010	0.010	mg/L	1	8/11/2017 12:58:40 PM	33306
Dissolved phosphorous - filtere	d						

Dissolved phosphorous - filtered sample

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank		
	D	Sample Diluted Due to Matrix	E	Value above quantitation range		
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation lim	its	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	Page 17 of 32	
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit	1 age 17 of 32	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of l	imit as specified	



### an artilate of The GEL Group INC

www.capefearanalytical.com

September 12, 2017

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

Re: Routine Analysis Work Order: 11143 SDG: 1707E46 PCB lab report for July 27-28, 2017 was reissued to provide a reporting format consistent with other PCB reports provided for this CMC monitoring. Reissued lab report follows this completed lab report.

Dear Mr. Freeman:

Cape Fear Analytical LLC (CFA) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on August 01, 2017. 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.

Cynde Larkins

Cynde Larkins Project Manager

Purchase Order: IDIQ Pricing

Enclosures

1707E46-0011 RIO GRANDE-NORTH-20170727

SAMPLE RESULTS - 01

ONE LAB, NATIONWIDE.

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Wet Chemistry by Method 410.4

Collected date/time: 07/27/17 12:30

×	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	
COD	19.9		10.0	1	08/01/2017 23:28	WG1004901

















1707E46-001J RIO GRANDE-NORTH-20170727

Wet Chemistry by Method 3500Cr C-2011

SAMPLE RESULTS - 02

ONE LAB. NATIONWIDE.

Collected date/time: 07/27/17 12:30

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	
Hexavalent Chromium	ND		0.000500	1	08/04/2017 14:31	WG1005004



















1707E46-0031 RIO GRANDE-NORTH-20170728

SAMPLE RESULTS - 03

ONE LAB. NATIONWIDE.

Collected date/time: 07/28/17 08:45

Wet Chemistry by Method 410.4

	Result	Qualifier	RDL	Dilution	Analysis	<u>Batch</u>
Analyte	mg/l		mg/l		date / time	
COD	15.0		10.0	1	08/01/2017 23:28	WG1004901



















1707E46-003J RIO GRANDE-NORTH-20170728

Collected date/time: 07/28/17 08:45

SAMPLE RESULTS - 04

ONE LAB. NATIONWIDE.

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Wet Chemistry by Method 3500Cr C-2011

A- 4-74-	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	
Hexavalent Chromium	ND		0.000500	1	08/04/2017 14:47	WG1006004



















### WG1006004

### QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE

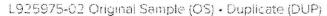
Wet Chemistry by Method 3500Cr C-2011

L925975-02,04

#### Method Blank (MB)

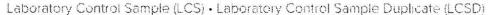
	08/04/17 13:17

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Hexavalent Chromium	LI.		0.00015	0.000500



(OS) L925975-02 08/04/17 14:31 • (DUP) R3238729-4 08/04/17 14:39

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/I	mg/l		%		%
Hexavalent Chromium	ND	0.000	1	0		20



(LCS) R3238729-2 08/04/17 13:31 • (LCSD) R3238729-3 08/04/17 13:42

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Hexavalent Chromium	0.00200	0.00200	0.00199	100	99	90-110			1	20

#### L926000-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L926000-03 08/04/17 15:28 • (MS) R3238729-5 08/04/17 15:36 • (MSD) R3238729-6 08/04/17 15:45

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	<b>RPD Limits</b>
Analyte	mg/I	mg/l	mg/l	mg/I	%	%		%			%	%
Hexavalent Chromium	0.0500	0.0120	0.0628	0.0630	101	102	1	90-110			0	20



PROJECT:

SDG: L925975 DATE/TIME: 08/07/17 11:59

### WG1004901

## QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE.

Wet Chemistry by Method 410.4

L925975-01,03

Method Blank (MB)

(MB) R3237807-1 08/01/17 23:26	(MB)	R3237807-1	08/01/17	23:26
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	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/I
COD	U		3	10.0





L926I02-01 Original Sample (OS) • Duplicate (DUP)

(OS) L926102-01	08/01/17 23:31 •	(DUP) R3237807-7	08/01/17 23:31
IUSI LUZUUZ-UI	U0/U1/1/ 23.31 •	IDUP R323/00/-/	U0/U1/1/ Z3.31

	Original Result	<b>DUP Result</b>	Dilution	DUP RPD	<b>DUP Qualifier</b>	<b>DUP RPD Limits</b>
Analyte	mg/l	mg/l		%		%
COD	10.5	11.0	1	5		20





Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) D3237807-2	08/01/17 23:26 -	(LCSD) R3237807-3	08/01/17 23:26

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	<b>RPD Limits</b>
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
COD	242	241	239	100	99	90-110			1	20





L925999-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L925999-01 08/01/17 23:28	<ul> <li>(MS) R3237807-5 08/01/17 23:29</li> </ul>	• (MSD) R3237807-6 08/01/17 23:29

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/I	mg/l	mg/I	%	%		%			%	%
COD	400	92.8	471	477	95	96	1	80-120			1	20

# GLOSSARY OF TERMS



#### Abbreviations and Definitions

SDG	Sample Delivery Group,
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDI, where applicable).
RPD	Relative Percent Difference.
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.
Rec.	Recovery.
Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

























#### **ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project:

1707E46

Pace Project No.:

30225841

Sample: 1707E46-001L Rio Grande-

Lab ID: 30225841001

Lab ID: 30225841002

Collected: 07/27/17 12:30

Matrix: Water Received: 08/01/17 09:55

North-PWS:

Site ID:

Sample Type:

**Parameters** 

Method

Act ± Unc (MDC) Carr Trac

Units

Analyzed

CAS No.

Qual

Gross Alpha

EPA 900.0

2.06 ± 1.60 (2.88) C:NA T:NA

pCi/L

08/16/17 08:36 12587-46-1

Sample: 1707E46-003L Rio Grande-

Received: 08/01/17 09:55

South-

Site ID:

Sample Type:

**Parameters** 

Method

Act ± Unc (MDC) Carr Trac

Collected: 07/28/17 08:45

Units

Analyzed

CAS No.

Gross Alpha

PWS:

EPA 900.0

2.15 ± 1.31 (1.90)

pCi/L

08/16/17 08:36 12587-46-1

Qual

C:NA T:NA

**REPORT OF LABORATORY ANALYSIS** 

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#### **QUALITY CONTROL - RADIOCHEMISTRY**

Project:

1707E46

Pace Project No.:

30225841

QC Batch:

267183

Analysis Method:

EPA 900.0

QC Batch Method:

EPA 900.0

Analysis Description:

900.0 Gross Alpha/Beta

Associated Lab Samples:

METHOD BLANK: 1315323

les: 30225841001, 30225841002

Matrix: Water

Associated Lab Samples:

30225841001, 30225841002

Parameter

Act ± Unc (MDC) Carr Trac

Units

Analyzed

Qualifiers

Gross Alpha

0.319 ± 0.853 (2.04) C:NA T:NA

pCi/L

08/16/17 08:35

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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#### **QUALIFIERS**

Project: 1707E46
Pace Project No.: 30225841

#### **DEFINITIONS**

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

**DUP - Sample Duplicate** 

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Date: 08/16/2017 02:08 PM

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1707E46** 

21-Sep-17

Client: AMAFCA
Project: CMC

Sample ID MB-33094 SampType: MBLK TestCode: EPA Method 1664B

Client ID: PBW Batch ID: 33094 RunNo: 44643

Prep Date: 8/1/2017 Analysis Date: 8/1/2017 SeqNo: 1414653 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-33094 SampType: LCS TestCode: EPA Method 1664B

Client ID: LCSW Batch ID: 33094 RunNo: 44643

Prep Date: 8/1/2017 Analysis Date: 8/1/2017 SeqNo: 1414654 Units: mg/L

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

N-Hexane Extractable Material 35.8 10.0 40.00 0 89.5 78 114

#### 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 Detection Limit
- W Sample container temperature is out of limit as specified

Analyte detected in the associated Method Blank

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **1707E46** 

J

Qual

21-Sep-17

Client: AMAFCA
Project: CMC

Sample ID MB-33360 SampType: MBLK TestCode: EPA Method 200.7: Metals

Client ID: PBW Batch ID: 33360 RunNo: 45008

Prep Date: **8/14/2017** Analysis Date: **8/16/2017** SeqNo: **1424221** 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-33360 SampType: LCSLL TestCode: EPA Method 200.7: Metals

Client ID: BatchQC Batch ID: 33360 RunNo: 45008

1.0

0.51

Prep Date: 8/14/2017 Analysis Date: 8/16/2017 SeqNo: 1424222 Units: mg/L

0.5000

LowLimit Analyte Result **PQL** SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Qual Calcium 0.50 1.0 0.5000 0 101 50 150

 Sample ID
 LCS-33360
 SampType:
 LCS
 TestCode:
 EPA Method 200.7: Metals

 Client ID:
 LCSW
 Batch ID:
 33360
 RunNo:
 45008

 Prep Date:
 8/14/2017
 Analysis Date:
 8/16/2017
 SeqNo:
 1424223
 Units: mg/L

0

103

50

150

SPK value SPK Ref Val %RPD %REC **RPDLimit** Analyte Result **PQL** LowLimit HighLimit Calcium 51 1.0 50.00 0 102 85 115 Magnesium 49 50.00 0 98.5 85 115 1.0

#### Qualifiers:

Magnesium

\* 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 Detection Limit

W Sample container temperature is out of limit as specified

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AMAFCA

**Client:** 

# Hall Environmental Analysis Laboratory, Inc.

WO#: **1707E46** 

21-Sep-17

Project:	CMC	A							
Sample ID	LCS	SampType: LCS		TestCode: E	PA 200.8: D	Dissolved Meta	als		
Client ID:	LCSW	Batch ID: D4468	33	RunNo: 4	14683				
Prep Date:		Analysis Date: 8/2/20	017	SeqNo: 1	413497	Units: mg/L			
Analyte		Result PQL SF	PK value SPK Ref	Val %REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead		0.012 0.00050	0.01250	92.4	85	115			
Sample ID	LLLCS	SampType: LCSLI	L	TestCode: E	PA 200.8: D	Dissolved Meta	als		
Client ID:	BatchQC	Batch ID: D4468	33	RunNo: 4	14683				
Prep Date:		Analysis Date: 8/2/20	017	SeqNo: 1	413500	Units: mg/L			
Analyte		Result PQL SF	PK value SPK Ref	Val %REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead		0.00048 0.00050 0.0	0005000	95.4	50	150			J
Sample ID	МВ	SampType: MBLK	(	TestCode: E	PA 200.8: D	Dissolved Meta	als		
Client ID:	PBW	Batch ID: D4468	33	RunNo: 4	14683				
Prep Date:		Analysis Date: 8/2/20	017	SeqNo: 1	413503	Units: mg/L			
Analyte		Result PQL SF	PK value SPK Ref	Val %REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead		ND 0.00050							
Sample ID	LCS	SampType: LCS		TestCode: E	PA 200.8: D	Dissolved Meta	als		
Client ID:	LCSW	Batch ID: <b>B4471</b>	12	RunNo: 4	14712				
Prep Date:		Analysis Date: 8/3/20	017	SeqNo: 1	414078	Units: mg/L			
Analyte		Result PQL SF	PK value SPK Ref	Val %REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper		0.024 0.0010	0.02500	94.3	85	115			
Sample ID	LLLCS	SampType: LCSLI	L	TestCode: E	PA 200.8: D	Dissolved Meta	als		
Client ID:	BatchQC	Batch ID: <b>B4471</b>	12	RunNo: 4	14712				
Prep Date:		Analysis Date: 8/3/20	017	SeqNo: 1	414079	Units: mg/L			
Analyte		Result PQL SF	PK value SPK Ref	Val %REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper		0.0014 0.0010 0	0.001000	144	50	150			
Sample ID	MB	SampType: MBLK	(	TestCode: E	PA 200.8: D	Dissolved Meta	als		
Client ID:	PBW	Batch ID: <b>B4471</b>	12	RunNo: 4	14712				
Prep Date:		Analysis Date: 8/3/20	017	SeqNo: 1	414080	Units: mg/L			
Analyte		Result PQL SF	PK value SPK Ref	Val %REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
_									

#### Qualifiers:

Copper

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded

0.0010

- 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 Detection Limit
- W Sample container temperature is out of limit as specified

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## Hall Environmental Analysis Laboratory, Inc.

WO#: 1707E46

**RPDLimit** 

Qual

21-Sep-17

**Client: AMAFCA Project: CMC** 

Sample ID MB SampType: MBLK TestCode: EPA Method 300.0: Anions

Client ID: PBW Batch ID: R44608 RunNo: 44608

Prep Date: Analysis Date: 7/28/2017 SeqNo: 1410086 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

Sample ID LCS SampType: LCS TestCode: EPA Method 300.0: Anions

Client ID: LCSW Batch ID: R44608 RunNo: 44608

Prep Date: Analysis Date: 7/28/2017 SeqNo: 1410087 Units: mg/L

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD Nitrogen, Nitrite (As N) 0.93 0.10 1.000 0 93.2 90 110 Nitrogen, Nitrate (As N) 2.500 0 96.7 90 2.4 0.10 110

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- POL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

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## Hall Environmental Analysis Laboratory, Inc.

62

100.0

Client: AMAFCA
Project: CMC

Surr: 4-Terphenyl-d14

Sample ID 1707e46-001bms SampType: MS TestCode: EPA Method 8270C: Semivolatiles RunNo: 44929 Client ID: Rio Grande-North-2 Batch ID: 33127 Analysis Date: 8/11/2017 Prep Date: 8/2/2017 SeqNo: 1421011 Units: µg/L Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Acenaphthene 10 100.0 65.5 18.1 108 66 0 120 59.4 4-Chloro-3-methylphenol 10 200.0 0 15 111 65.0 2-Chlorophenol 130 10 200.0 0 15 113 1,4-Dichlorobenzene 66 10 100.0 0 66.2 21 81.3 2,4-Dinitrotoluene 57 10 100.0 0 57.4 27.4 101 N-Nitrosodi-n-propylamine 74 10 100.0 0 73.7 24.9 107 4-Nitrophenol 77 10 200.0 0 38.6 15 62.2 Pentachlorophenol 100 20 200.0 0 51.5 15 96.9 Phenol 71 10 200.0 0 35.6 15 64.7 10 73.9 Pyrene 74 100.0 0 29.2 111 1,2,4-Trichlorobenzene 76 100.0 75.8 22.9 94.8 Surr: 2-Fluorophenol 94 46.8 200.0 15 88 73 Surr: Phenol-d5 200.0 36.7 15 72.4 Surr: 2,4,6-Tribromophenol 130 200.0 63.1 15 117 Surr: Nitrobenzene-d5 82 100.0 81.5 33.5 120 Surr: 2-Fluorobiphenyl 78 100.0 78.2 26.5 109

62.2

21.7

98.7

Sample ID 1707e46-001bmsd SampType: MSD TestCode: EPA Method 8270C: Semivolatiles										
Client ID: Rio Grande-North	-2 Batch	ID: <b>33</b> ′	127	R	tunNo: 4	4929				
Prep Date: 8/2/2017	Analysis Da	ate: <b>8/</b>	11/2017	S	SeqNo: 14	421012	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	60	10	100.0	0	60.0	18.1	108	8.80	30.5	
4-Chloro-3-methylphenol	130	10	200.0	0	62.9	15	111	5.66	50	
2-Chlorophenol	97	10	200.0	0	48.6	15	113	28.9	36.3	
1,4-Dichlorobenzene	46	10	100.0	0	46.3	21	81.3	35.4	42.1	
2,4-Dinitrotoluene	53	10	100.0	0	52.6	27.4	101	8.58	28.5	
N-Nitrosodi-n-propylamine	61	10	100.0	0	60.6	24.9	107	19.5	25.4	
4-Nitrophenol	42	10	200.0	0	21.1	15	62.2	58.4	50	R
Pentachlorophenol	93	20	200.0	0	46.5	15	96.9	10.2	50	
Phenol	57	10	200.0	0	28.5	15	64.7	22.3	46.1	
Pyrene	71	10	100.0	0	71.0	29.2	111	4.06	34.3	
1,2,4-Trichlorobenzene	61	10	100.0	0	60.6	22.9	94.8	22.3	43.6	
Surr: 2-Fluorophenol	67		200.0		33.6	15	88	0	0	
Surr: Phenol-d5	55		200.0		27.7	15	72.4	0	0	
Surr: 2,4,6-Tribromophenol	120		200.0		59.9	15	117	0	0	
Surr: Nitrobenzene-d5	64		100.0		64.0	33.5	120	0	0	
Surr: 2-Fluorobiphenyl	63		100.0		62.8	26.5	109	0	0	

#### 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 Detection Limit
- W Sample container temperature is out of limit as specified

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WO#:

1707E46

21-Sep-17

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1707E46

21-Sep-17

Client: AMAFCA
Project: CMC

Sample ID 1707e46-001bmsd SampType: MSD TestCode: EPA Method 8270C: Semivolatiles

Client ID: Rio Grande-North-2 Batch ID: 33127 RunNo: 44929

SampType: MBLK

Prep Date: **8/2/2017** Analysis Date: **8/11/2017** SeqNo: **1421012** Units: **µg/L** 

Analyte Result SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Surr: 4-Terphenyl-d14 56 100.0 55.6 21.7 98.7 0

Sample ID Ics-33127	SampType: LCS TestCode: EPA Method 8270C: Semivolatiles									
Client ID: LCSW	Batch	n ID: 33	127	RunNo: 44929						
Prep Date: 8/2/2017	Analysis D	ate: 8/	11/2017	S	SeqNo: 1	421015	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	71	10	100.0	0	70.8	41.2	98.9			
4-Chloro-3-methylphenol	160	10	200.0	0	78.6	29.1	111			
2-Chlorophenol	140	10	200.0	0	69.8	23.3	108			
1,4-Dichlorobenzene	66	10	100.0	0	65.6	29.4	84.5			
2,4-Dinitrotoluene	61	10	100.0	0	61.0	36.6	88.7			
N-Nitrosodi-n-propylamine	83	10	100.0	0	82.7	46.9	106			
4-Nitrophenol	100	10	200.0	0	52.2	15	74.7			
Pentachlorophenol	130	20	200.0	0	63.2	28.1	85.4			
Phenol	100	10	200.0	0	52.2	15	78.2			
Pyrene	89	10	100.0	0	89.0	44.4	96.8			
1,2,4-Trichlorobenzene	81	10	100.0	0	80.8	34.3	89			
Surr: 2-Fluorophenol	120		200.0		58.1	15	88			
Surr: Phenol-d5	110		200.0		54.1	15	72.4			
Surr: 2,4,6-Tribromophenol	150		200.0		74.5	15	117			
Surr: Nitrobenzene-d5	87		100.0		86.6	33.5	120			
Surr: 2-Fluorobiphenyl	76		100.0		76.5	26.5	109			
Surr: 4-Terphenyl-d14	66		100.0		66.5	21.7	98.7			

l '										
Client ID: PBW	Batch ID: 33127			F	4929					
Prep Date: 8/2/2017	Analysis D	ate: 8/	11/2017	9	SeqNo: 1	421016	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10	•			•		•		
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix

Sample ID mb-33127

- 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

TestCode: EPA Method 8270C: Semivolatiles

- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **1707E46** 

21-Sep-17

Client: AMAFCA
Project: CMC

Sample ID mb-33127 SampType: MBLK TestCode: EPA Method 8270C: Semivolatiles Client ID: **PBW** Batch ID: 33127 RunNo: 44929 Prep Date: 8/2/2017 Analysis Date: 8/11/2017 SeqNo: 1421016 Units: µg/L Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Benzoic acid 7.4 20 ND 10 Benzyl alcohol ND Bis(2-chloroethoxy)methane 10 Bis(2-chloroethyl)ether ND 10 Bis(2-chloroisopropyl)ether ND 10 Bis(2-ethylhexyl)phthalate ND 10 4-Bromophenyl phenyl ether ND 10 Butyl benzyl phthalate ND 10 Carbazole ND 10 ND 10 4-Chloro-3-methylphenol 4-Chloroaniline ND 10 ND 10 2-Chloronaphthalene 2-Chlorophenol ND 10 4-Chlorophenyl phenyl ether ND 10 ND 10 Chrysene Di-n-butyl phthalate ND 10 Di-n-octyl phthalate ND 10 Dibenz(a,h)anthracene ND 10 Dibenzofuran ND 10 ND 10 1.2-Dichlorobenzene 1,3-Dichlorobenzene ND 10 1.4-Dichlorobenzene ND 10 3,3´-Dichlorobenzidine ND 10 Diethyl phthalate ND 10 Dimethyl phthalate ND 10 2,4-Dichlorophenol ND 20 2,4-Dimethylphenol ND 10 4,6-Dinitro-2-methylphenol ND 20 2,4-Dinitrophenol ND 20 2,4-Dinitrotoluene ND 10 2.6-Dinitrotoluene ND 10 ND 10 Fluoranthene Fluorene ND 10 Hexachlorobenzene ND 10 Hexachlorobutadiene ND 10 Hexachlorocyclopentadiene ND 10 Hexachloroethane ND 10 Indeno(1,2,3-cd)pyrene ND 10 Isophorone ND 10

#### 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 Detection Limit
- W Sample container temperature is out of limit as specified

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# Hall Environmental Analysis Laboratory, Inc.

WO#: **1707E46** 

21-Sep-17

Client: AMAFCA
Project: CMC

Sample ID mb-33127	SampT	уре: МЕ	BLK	TestCode: EPA Method 8270C: Semivolatiles						
Client ID: PBW	Batch ID: 33127			R	tunNo: 44					
Prep Date: 8/2/2017	Analysis Da	ate: <b>8/</b>	11/2017	S	SeqNo: 14	<b>421016</b>	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	100		200.0		51.0	15	88			
Surr: Phenol-d5	90		200.0		44.9	15	72.4			
Surr: 2,4,6-Tribromophenol	130		200.0		66.9	15	117			
Surr: Nitrobenzene-d5	71		100.0		71.1	33.5	120			
Surr: 2-Fluorobiphenyl	65		100.0		65.3	26.5	109			
Surr: 4-Terphenyl-d14	59		100.0		59.2	21.7	98.7			

#### 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 Detection Limit
- W Sample container temperature is out of limit as specified

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## Hall Environmental Analysis Laboratory, Inc.

WO#: **1707E46** 

21-Sep-17

Client: AMAFCA
Project: CMC

Sample ID MB-33070 SampType: MBLK TestCode: SM5210B: BOD

Client ID: PBW Batch ID: 33070 RunNo: 44761

Prep Date: 7/28/2017 Analysis Date: 8/2/2017 SeqNo: 1415455 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 MB--33070 SampType: MBLK TestCode: SM5210B: BOD

Client ID: PBW Batch ID: 33070 RunNo: 44761

Prep Date: 7/28/2017 Analysis Date: 8/2/2017 SeqNo: 1415456 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-33070 SampType: LCS TestCode: SM5210B: BOD

Client ID: LCSW Batch ID: 33070 RunNo: 44761

Prep Date: 7/28/2017 Analysis Date: 8/2/2017 SeqNo: 1415457 Units: mg/L

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Biochemical Oxygen Demand 150 2.0 198.0 0 74.0 58.5 126

Sample ID LCSD-33070 SampType: LCSD TestCode: SM5210B: BOD

Client ID: LCSS02 Batch ID: 33070 RunNo: 44761

Prep Date: 7/28/2017 Analysis Date: 8/2/2017 SeqNo: 1415458 Units: mg/L

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Biochemical Oxygen Demand 150 2.0 198.0 0 74.7 58.5 126 1.02 34.6

#### 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

C 1 HN I D

Page 26 of 32

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1707E46** 

21-Sep-17

Client: AMAFCA
Project: CMC

Sample ID MB-33077 SampType: MBLK TestCode: SM 9223B Fecal Indicator: E. coli MPN

Client ID: PBW Batch ID: 33077 RunNo: 44737

Prep Date: 7/28/2017 Analysis Date: 7/29/2017 SeqNo: 1414707 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 Detection Limit

W Sample container temperature is out of limit as specified

Page 27 of 32

# Hall Environmental Analysis Laboratory, Inc.

WO#: **1707E46** 

21-Sep-17

Client: AMAFCA
Project: CMC

Sample ID MB SampType: MBLK TestCode: SM 4500 NH3: Ammonia

Client ID: PBW Batch ID: R44684 RunNo: 44684

Prep Date: Analysis Date: 8/2/2017 SeqNo: 1412888 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: R44684 RunNo: 44684

Prep Date: Analysis Date: 8/2/2017 SeqNo: 1412889 Units: mg/L

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Nitrogen, Ammonia 9.9 1.0 10.00 0 99.4 80 120

#### 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

D G 1 HN LD

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Page 28 of 32

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1707E46

21-Sep-17

**Client:** AMAFCA **Project: CMC** 

Sample ID MB-33215 SampType: MBLK TestCode: EPA Method 365.1: Total Phosphorous

Client ID: PBW Batch ID: 33215 RunNo: 44794

Prep Date: 8/7/2017 Analysis Date: 8/8/2017 SeqNo: 1416272 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-33215 SampType: LCS TestCode: EPA Method 365.1: Total Phosphorous

Client ID: LCSW Batch ID: 33215 RunNo: 44794

Units: mg/L Prep Date: 8/7/2017 Analysis Date: 8/8/2017 SeqNo: 1416273

SPK value SPK Ref Val %REC LowLimit %RPD **RPDLimit** Analyte Result PQL HighLimit Qual

Phosphorus, Total (As P) 0.24 0.010 0.2500 0 94.2 110

Sample ID MB-33306 SampType: MBLK TestCode: EPA Method 365.1: Total Phosphorous

Client ID: **PBW** Batch ID: 33306 RunNo: 44899

Prep Date: Analysis Date: 8/11/2017 SeqNo: 1419952 Units: mg/L 8/10/2017

SPK value SPK Ref Val %REC LowLimit Result **PQL** HighLimit %RPD **RPDLimit** Qual Analyte

Phosphorus, Total (As P) ND 0.010

Sample ID LCS-33306 SampType: LCS TestCode: EPA Method 365.1: Total Phosphorous

Client ID: LCSW Batch ID: 33306 RunNo: 44899

Prep Date: 8/10/2017 Analysis Date: 8/11/2017 SeqNo: 1419953 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 94.4 90 110

#### Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Η Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

POL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

Е Value above quantitation range

J Analyte detected below quantitation limits

Page 29 of 32

P Sample pH Not In Range

RLReporting Detection Limit

Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1707E46

21-Sep-17

**Client: AMAFCA Project: CMC** 

Sample ID MB-33122 SampType: MBLK TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: PBW Batch ID: 33122 RunNo: 44703

Prep Date: 8/1/2017 Analysis Date: 8/3/2017 SeqNo: 1413722 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-33122 SampType: LCS TestCode: SM2540C MOD: Total Dissolved Solids

Batch ID: 33122 Client ID: LCSW RunNo: 44703

Prep Date: 8/1/2017 Analysis Date: 8/3/2017 SeqNo: 1413723 Units: mg/L

Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Analyte Qual

Total Dissolved Solids 1020 20.0 1000 0 102 120

#### Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Η Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

В 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 Detection Limit

Sample container temperature is out of limit as specified

Page 30 of 32

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1707E46** 

21-Sep-17

Client: AMAFCA
Project: CMC

Sample ID MB-33282 SampType: MBLK TestCode: SM 4500 Norg C: TKN

Client ID: PBW Batch ID: 33282 RunNo: 44897

Prep Date: 8/9/2017 Analysis Date: 8/11/2017 SeqNo: 1419895 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-33282 SampType: LCS TestCode: SM 4500 Norg C: TKN

Client ID: LCSW Batch ID: 33282 RunNo: 44897

Prep Date: 8/9/2017 Analysis Date: 8/11/2017 SeqNo: 1419896 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.

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

Page 31 of 32

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1707E46** 

21-Sep-17

Client: AMAFCA
Project: CMC

Sample ID MB-33138 SampType: MBLK TestCode: SM 2540D: TSS

Client ID: PBW Batch ID: 33138 RunNo: 44710

Prep Date: **8/2/2017** Analysis Date: **8/3/2017** SeqNo: **1413945** 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-33138 SampType: LCS TestCode: SM 2540D: TSS

Client ID: LCSW Batch ID: 33138 RunNo: 44710

Prep Date: 8/2/2017 Analysis Date: 8/3/2017 SeqNo: 1413946 Units: mg/L

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Suspended Solids 87 4.0 91.10 0 95.5 84.63 120.75

#### 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

D G 1 HN LD

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

# Sample Log-In Check List

	websii	te: www.hallenvironmenta	t.com		
Client Name: AMAFCA	Work Orde	r Number: 1707E46		RcptNo:	1
Received By: Sophia Ca Completed By: Ashley Ga Reviewed By:		0:58:12 AM	Sophie Congres	a ,	
Chain of Custody					
1. Custody seals intact on s	ample bottles?	Yes 🗌	No 🗆	Not Present 🗹	
2. Is Chain of Custody comp	olete?	Yes 🗹	No 🗌	Not Present	
3. How was the sample deli	vered?	Client			
<u>Log In</u>					
4. Was an attempt made to	cool the samples?	Yes 🗸	No 🗆	na 🗆	
30_30	ed at a temperature of >0° C to 6	Approved		NA 🗆	
6. Sample(s) in proper cont	ainer(s)?	Yes 🔽	No 🗌		
7. Sufficient sample volume	for indicated test(s)?	Yes 🗹	No 🗆		
8. Are samples (except VOA	A and ONG) properly preserved?	Yes 🗹	No 🗌		
9. Was preservative added	to bottles?	Yes 🗌	No 🗹	NA 🗆	
10.VOA vials have zero head	dspace?	Yes 🗌	No 🗌	No VOA Vials 🗹	
11. Were any sample contain	ners received broken?	Yes 🗆	No 🗹	# of preserved	
12. Does paperwork match b (Note discrepancies on c		Yes 🗹	No 🗆	bottles checked for pH:	>12 unless noted
13. Are matrices correctly ide	entified on Chain of Custody?	Yes 🗹	No 🗆	Adjusted?	No
14. Is it clear what analyses w		Yes 🔽	No 🗆		
<ol> <li>Were all holding times at (If no, notify customer for</li> </ol>		Yes 🗸	No L	Checked by:	ZNO
pecial Handling (if ap	plicable)				
16, Was client notified of all o	discrepancies with this order?	Yes 🗀	No 🗆	NA 🗹	
Person Notified:	Alan Lewis	Date	7/28/2017		
By Whom:	Sophia Campuzano	Via: ☐ eMail ☐	Phone  Fax	✓ In Person	
Regarding:	High Temp				: 1 }
Client Instructions:	Proceed with analysis				
17. Additional remarks:					
18. Cooler Information Cooler No Temp °C  1 9.6	Condition   Seal Intact   Seal Good   Not Present	eal No   Seal Date	Signed By		

	hain-	of-Cu	stody Record	Turn-Around	Time:					L	A		E	NIV	/TE	20	NI N	ΛE	NT	- 1	
Client:	An	AFCA		Standard					5										TC		
				Project Name			-				www	v.hal	env	ronr	ment	al.co	m				
Mailing	Address:	2600	2 Prospect Ave		MC			49	01 H	awki	ins N	Æ -	Alb	uque	erqu	e, NI	M 87	109			
	ABa	NM	87/67	Project #:				Te	1. 50	5-34	5-39	975	F	ax	505-	345-	4107	7			
Phone	#:	505 8	784 22K			1						A	naly	sis	Req	uest		704			
	Package:		□ Level 4 (Full Validation)	Project Mana PATR	ger: IZK CH	AVEZ	TMB's (8021)	TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)			SIMS)		Anions (F,CI,NO <sub>3</sub> ,NO <sub>2</sub> ,PO <sub>4</sub> ,SO <sub>4</sub> )	PCB's						
Accredi				Sampler:			MB	Hd	0	÷	=	8270 8		102	3082			8	attached		9
□ NEL		□ Othe	r	On Ice:	X Yes	□ No	+	+	RO	418	504		LO	O.	18		8	2	3	8	6
□ EDD	(Type) _			Sample Tem	perature: 9.4	04	18	TBE	B (G	pot	pot	100	letal	S.	cide	(A)	>-	1	出	Phos	W.S.
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO.	BTEX + MTBE	BTEX + MTBE	<b>TPH 8015</b>	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or	RCRA 8 Metals	Anions (F,	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	E. Coli-num	See a	Diss	Air Bubbles (Vor N)
7/27/17	1230	Aa	Rio Grande-North-20	70727		-001								2					X		
7/28/17	0715	Aa				-002												X			
1/28/17	845	Aa	Rio Grande South-20	70728		-003													X		
7/27	1230	1	Rio Grande North 2		tered	-004														X	
01/28		1	Rio Grande South 2017			-005														4	
		\$	07/28/17																		
_											Ħ					П					
Date: 128 Date:	Time: 1047 Time:	Relinquish A L f Relinquish	AN COWSIS Ollyfor	Received by: Sipul Received by:	Co-	Date Time 07/28/17 1047 Date Time	1000	narks		io it	p o	app	ve ine	veo sqt	ron	400	CH - C	ent 281 201	17		

# Collaborative Monitoring Cooperative - Analyses List Attach to Chain of Custody

Analyte (Bold Indicates WQS)	CAS#	Fraction	Method #	MDL (µg/
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	<b>8270</b> D	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	8270D	0.1
Pentachlorophenol	87-86-5	Total	8270D	0.2
Benzidine	92-87-5	Total	8270D	0.1
Chemical Oxygen Demand	E1641638 <sup>2</sup>	Total	HACH	5100
Gross alpha (adjusted)	NA	Total	Method 900	0.1 pCi/L
Total Dissolved Solids	E16422222	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 - num			SM 9223B	
pH			SM 4500	
Phosphorus		Dissolved	365.1	100
Phosphorus		Total	365.1	100
Chromium IV		Total	3500Cr C-2011	100

# Appendix F - Minimum Quantification Levels (MQL's)

The following Minimum Quantification Levels (MQL's) are to be used for reporting pollutant data for NPDES permit applications and/or compliance reporting.

POLLUTANTS	MQL μg/l	POLLUTANTS	MQL μg/l
MI	ETALS, RADIOAG	CTIVITY, CYANIDE and CHLORINE	
Aluminum Antimony Arsenic Barium Beryllium Boron Cadmium Chromium Cobalt Copper Lead Mercury (*)	2.5 60 0.5 100 0.5 100 1 10 50 0.5 0.5 0.0005	Molybdenum Nickel Selenium Silver Thalllium Uranium Vanadium Zinc Cyanide Cyanide, weak acid dissociable Total Residual Chlorine	10 0.5 5 0.5 0.5 0.1 50 20 10 10 33
	0.005		
		DIOXIN	
2,3,7,8-TCDD	0.00001	9	
8	VOL	ATILE COMPOUNDS	
Acrolein Acrylonitrile Benzene Bromoform Carbon Tetrachloride Chlorobenzene Clorodibromomethane Chloroform Dichlorobromomethane 1,2-Dichloroethane 1,1-Dichloroethylene 1,2-Dichloropropane	50 20 10 10 2 10 10 50 10 10 10	1,3-Dichloropropylene Ethylbenzene Methyl Bromide Methylene Chloride 1,1,2,2-Tetrachloroethane Tetrachloroethylene Toluene 1,2-trans-Dichloroethylene 1,1,2-Trichloroethane Trichloroethylene Vinyl Chloride	10 10 50 20 10 10 10 10 10
	A	CID COMPOUNDS	
2-Chlorophenol 2,4-Dichlorophenol 2,4-Dimethylphenol 4,6-Dinitro-o-Cresol	10 10 10 50	2,4-Dinitrophenol Pentachlorophenol Phenol 2,4,6-Trichlorophenol	50 5 10 10



#### an affiliate of The GEL Group INC

www.capefearanalytical.com

November 02, 2017

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

Re: Routine Analysis Work Order: 11143 SDG: 1707E46

Dear Mr. Freeman:

Reissued Lab report for PCB testing of July 27-28, 2017 stormwater samples. Reissued to provide a consistent reporting format with previous CMC reporting.

Cape Fear Analytical, LLC (CFA) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on August 01, 2017. This revised data report has been prepared and reviewed in accordance with CFA's standard operating procedures. Refer to the fractional case narrative for revision details.

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.

Cyrole Larkins

Cynde Larkins Project Manager

Purchase Order: IDIQ Pricing

Enclosures

CHAIN OF CUSTODY RECORD PAGE: 1

1 OF: 1 Hall Environmental Analysis Laboratory

4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

SUB CC	ONTRATOR: Cape	SUB CONTRATOR: Cape Fear Analytical COMPANY:	Cape Fear Analytical	vtical	PHONE:	(910) 795-0421 FAX:
ADDRESS	3306 J	3306 Kitty Hawk Rd Ste 120		THE PROPERTY OF THE PROPERTY O	ACCOUNT #:	(CAC) TOO OTEL
CITY, S	TATE, ZIP. Wilm	CITY, STATE, ZIP: Wilmington, NC 28405				
,			BOTTLE		ŏ	
ITEM	SAMPLE	CLIENT SAMPLE ID	TYPE	MATRIX	DATE	ANALY ITCAL COMMENTS
	1707E46-001K	1 1707E46-001K Rio Grande-North-20170727		Aqueous	7/27/2017 12:30:00 PM	Aqueous   7/27/2017 12:30:00 PM   1   PCB CONGENERS PREP 1668
2	1707E46-003K	2 1707E46-003K Rio Grande-South-20170728		Aqueous	7/28/2017 8:45:00 AM	Aqueous 7/28/2017 8:45:00 AM 1 PCB CONGENERS PREP 1668

OFA WO#11/43

	2
CHAN	
00	5
/ O/KK	
LL	
TOL	2
SNA	
7	
203	

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:	Date:	7/28/2017	Time: 11:34 AM	Date: 7128/2017 Time: 11:34 AM Received By Andle Lillin	Lulina Date: Tune:	Time:	REPORT TRANSMITTAL DESIRED:
Relinquished By:	Date:		Time:	Received By:	Date;	Time:	☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE
Relinquished By:	Date:		Тіте:	Received By:	Date:	Tune:	FOR LAB USE ONLY
TAT:	Standard []		RUSH	Next BD	2nd BD 🔲 3rd BJ	3rd BD	Temp of samples U. Attempt to Cool ?
							Comments:

ENVIRONMENTAL

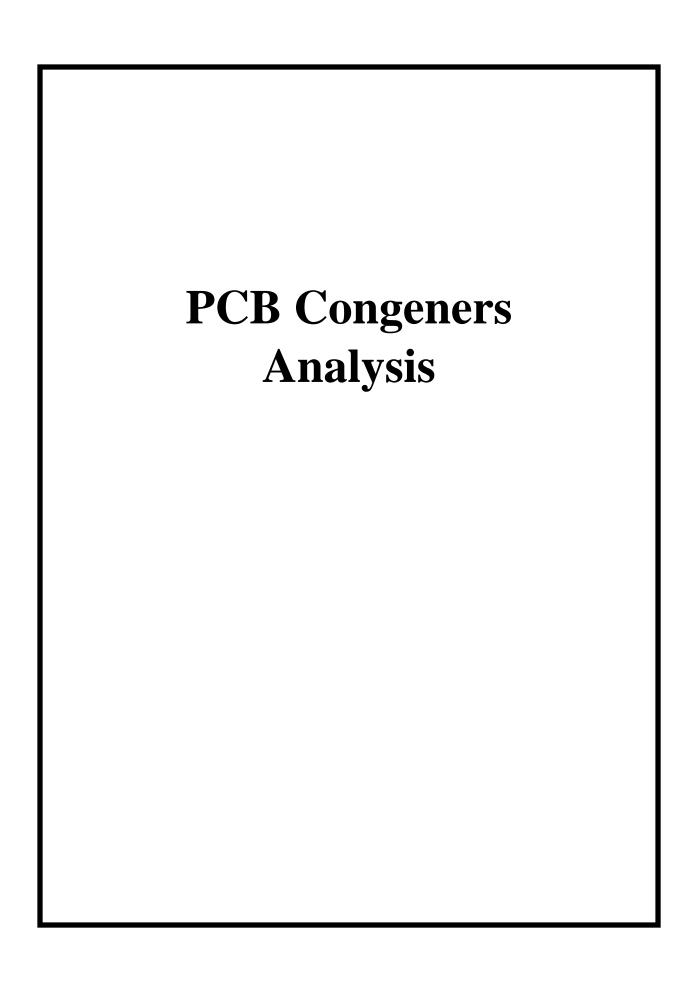
ANALYSIS LABORATORY

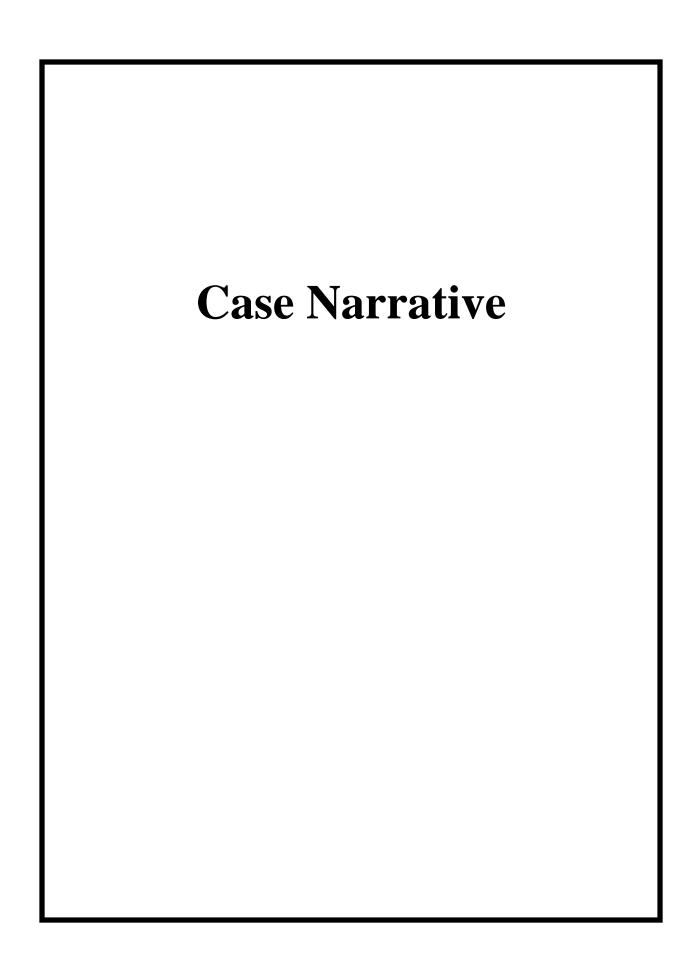
SAMPLE RECEIPT CHECKLIST Cape Fear Analytical Client: Work Order: Shipping Company: Date/Time Received: 01 AUG (7 Suspected Hazard Information Yes NA Νo DOE Site Sample Packages Yes NA No\* Shipped as DOT Hazardous? Screened < 0.5 mR/hr? Samples identified as Foreign Soil? Samples < 2x background? \* Notify RSO of any responses in this column immediately. Air Sample Receipt Specifics Yes NA Ŋo Air sample in shipment? Air Witness: Sample Receipt Criteria Yes NA No Comments/Qualifiers (required for Non-Conforming Items) Circle Applicable: Shipping containers received intact seals broken damaged container leaking container other(describe) 1 and sealed? Chain of Custody documents included 2 with shipment? Preservation Method: Samples requiring cold preservation ice bags) blue ice dry ice none other (describe) 3 3\_0°-2\_9=0.1°C

Sample IDs, containers affected:

Minimal visible folids within 0-6°C? Aqueous samples found to have visible 4 solids? Sample IDs, containers affected and pH observed: Samples requiring chemical 5 preservation at proper pH? If preservative added, Lot#: Sample IDs, containers affected: Samples requiring preservation have 6 no residual chlorine? If preservative added Lot# Sample IDs, tests affected: Samples received within holding time?

8	Sample IDs on COC match IDs on containers?	/	\		Sample IDs, containers affected:	
9	Date & time of COC match date & time on containers?	<b>/</b>			Sample IDs, containers affected:	
111		COL	7	/	List type and number of containers / Sample IDs, containers affected:  2 - ILWMA For sample	
11	COC form is properly signed in	/				
Con	nments:					
	Checklist performed	by: Ir	nitials:		Cf Date: 01AUG17	CF-UD-F-





# PCBC Case Narrative Hall Environmental Analysis Laboratory (HALL) SDG 1707E46 Work Order 11143

#### **Revision 1**

This data package has been revised to report results with J flags to the EDL, and report non-detects as ND.

#### **Method/Analysis Information**

Product: PCB Congeners by EPA Method 1668A in Liquids

Analytical Method: EPA Method 1668A

Extraction Method: SW846 3520C

Analytical Batch Number: 35299 Clean Up Batch Number: 35298 Extraction Batch Number: 35297

#### Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA Method 1668A:

Sample ID	Client ID
11143001	1707E46-001K Rio Grande-North-20170727
11143002	1707E46-003K Rio Grande-South-20170728
12019228	Method Blank (MB)
12019229	Laboratory Control Sample (LCS)
12019230	Laboratory Control Sample Duplicate (LCSD)

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# 6.

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**

One surrogate recovered outside the acceptance limits. 12019230 (LCSD).

#### **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**

## **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**

#### **Nonconformance (NCR) Documentation**

A NCR was not required for this SDG.

#### **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.

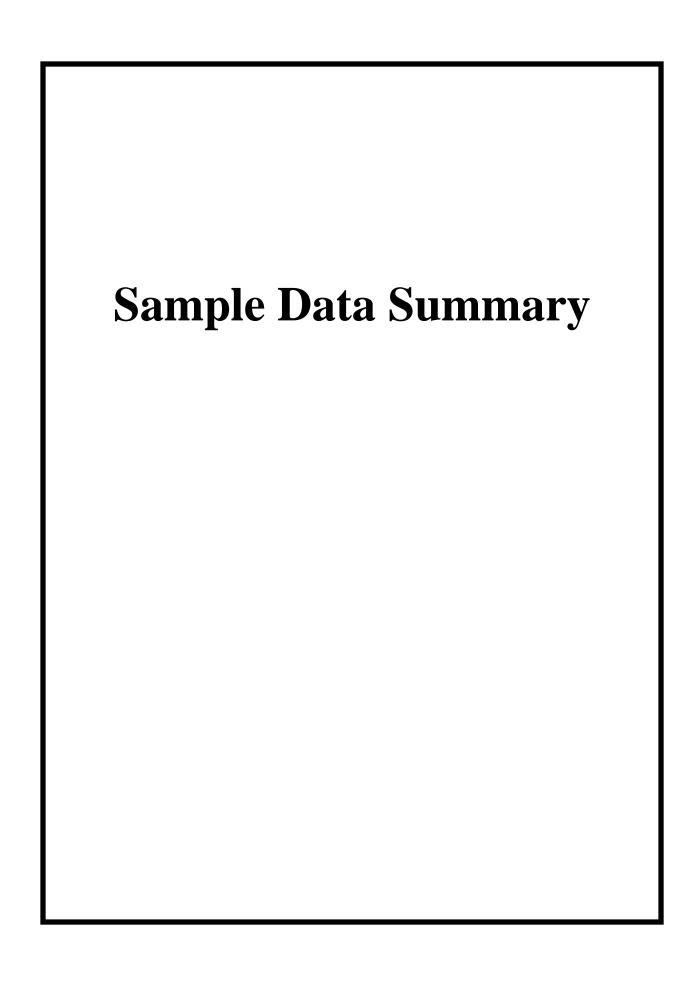
#### **System Configuration**

This analysis was performed on the following instrument configuration:

Instrument ID Instrument System Configuration Column ID Column Description
HRP791 1 PCB Analysis PCB Analysis SPB-Octyl 30m x 0.25mm, 0.25mm, 0.25mm

#### **Electronic Packaging Comment**

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted: Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative will include the data validator's signature and title. The signature page also includes the data qualifiers used in the fractional package. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.



# 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: 1707E46 CFA Work Order: 11143

#### 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
- 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: Heather Patterson

Date: 02 NOV 2017 Title: Group Leader

of 8

Page 1

As Received

**Prep Basis:** 

#### **PCB Congeners Certificate of Analysis Sample Summary**

1707E46 HALL001 **Project:** HALL00113 SDG Number: Client: 07/27/2017 12:30 11143001 WATER Lab Sample ID: **Date Collected:** Matrix: 1668A Water 08/01/2017 10:00 Date Received: **Client Sample:** 

**Client ID:** 1707E46-001K Rio Grande-North-2

Batch ID: Run Date: Data File: Prep Batch:	35299 08/13/2017 13:53 c12aug17a_2-11 35297	Method: Analyst: Prep Method:	EPA Method 1668A MLS SW846 3520C		Instrument: Dilution: Prep SOP Ref:	HRP791 1 CF-OA-E-001
Prep Date:	08-AUG-17	Prep Aliquot:	916.4 mL			
CAS No.	Parmname	Qual	Result	Units	EDL	PQL
2051-60-7	1-MoCB	U	ND	pg/L	8.16	21.8
2051-61-8	2-MoCB	U	ND	pg/L	7.75	21.8
2051-62-9	3-MoCB	U	ND	pg/L	6.55	21.8
13029-08-8	4-DiCB	U	ND	pg/L	27.7	21.8
16605-91-7	5-DiCB	U	ND	pg/L	16.7	21.8
25569-80-6	6-DiCB	U	ND	pg/L	13.6	21.8
33284-50-3	7-DiCB	U	ND	pg/L	15.0	21.8
34883-43-7	8-DiCB	U	ND	pg/L	12.5	21.8
34883-39-1	9-DiCB	U	ND	pg/L	16.1	21.8
33146-45-1	10-DiCB	U	ND	pg/L	15.7	21.8
2050-67-1	11-DiCB	J	47.1	pg/L	15.3	109
2974-92-7	12-DiCB	CU	ND	pg/L	14.6	43.6
2974-90-5	13-DiCB	C12				
34883-41-5	14-DiCB	U	ND	pg/L	14.6	21.8
2050-68-2	15-DiCB	U	ND	pg/L	14.2	21.8
38444-78-9	16-TrCB	U	ND	pg/L	6.48	21.8
37680-66-3	17-TrCB	U	ND	pg/L	6.70	21.8
37680-65-2	18-TrCB	CU	ND	pg/L	5.83	43.6
38444-73-4	19-TrCB	U	ND	pg/L	7.46	21.8
38444-84-7	20-TrCB	CJ	8.34	pg/L	4.87	43.6
55702-46-0	21-TrCB	CU	ND	pg/L	4.74	43.6
38444-85-8	22-TrCB	U	ND	pg/L	5.06	21.8
55720-44-0	23-TrCB	U	ND	pg/L	4.91	21.8
55702-45-9	24-TrCB	U	ND	pg/L	5.50	21.8
55712-37-3	25-TrCB	U	ND	pg/L	4.23	21.8
38444-81-4	26-TrCB	CU	ND	pg/L	4.71	43.6
38444-76-7	27-TrCB	U	ND	pg/L	5.00	21.8
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	8.25	21.8
38444-77-8	32-TrCB	U	ND	pg/L	4.58	21.8

#### **Comments:**

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

of 8

Page 2

As Received

#### PCB Congeners Certificate of Analysis Sample Summary

MLS

EPA Method 1668A

SDG Number:	1707E46	Client:	HALL001	Project:	HALL00113
Lab Sample ID:	11143001	<b>Date Collected:</b>	07/27/2017 12:30	Matrix:	WATER
Client Sample:	1668A Water	Date Received:	08/01/2017 10:00		

Method:

**Analyst:** 

Client ID: 1707E46-001K Rio Grande-North-2

Batch ID: 35299
Run Date: 08/13/2017 13:53
Data File: c12aug17a\_2-11

Data File: c12aug17a\_2-11 Prep Batch: 35297

Prep Method: SW846 3520C

Instrument: HRP791
Dilution: 1

**Prep Basis:** 

Prep SOP Ref: CF-OA-E-001

Prep Date:	08-AUG-17	Prep Aliquot:	916.4 mL			
CAS No.	Parmname	Qual	Result	Units	EDL	PQL
38444-86-9	33-TrCB	C21				
37680-68-5	34-TrCB	U	ND	pg/L	5.15	21.8
37680-69-6	35-TrCB	U	ND	pg/L	6.13	21.8
38444-87-0	36-TrCB	U	ND	pg/L	5.94	21.8
38444-90-5	37-TrCB	U	ND	pg/L	6.20	21.8
53555-66-1	38-TrCB	U	ND	pg/L	6.09	21.8
38444-88-1	39-TrCB	U	ND	pg/L	5.83	21.8
38444-93-8	40-TeCB	CU	ND	pg/L	4.54	43.6
52663-59-9	41-TeCB	U	ND	pg/L	5.70	21.8
36559-22-5	42-TeCB	U	ND	pg/L	4.63	21.8
70362-46-8	43-TeCB	U	ND	pg/L	5.67	21.8
41464-39-5	44-TeCB	CJ	6.63	pg/L	4.58	65.5
70362-45-7	45-TeCB	CU	ND	pg/L	3.38	43.6
41464-47-5	46-TeCB	U	ND	pg/L	3.43	21.8
2437-79-8	47-TeCB	C44				
70362-47-9	48-TeCB	U	ND	pg/L	4.93	21.8
41464-40-8	49-TeCB	CU	ND	pg/L	4.26	43.6
62796-65-0	50-TeCB	CU	ND	pg/L	3.21	43.6
68194-04-7	51-TeCB	C45				
35693-99-3	52-TeCB	U	ND	pg/L	5.00	21.8
41464-41-9	53-TeCB	C50				
15968-05-5	54-TeCB	U	ND	pg/L	2.36	21.8
74338-24-2	55-TeCB	U	ND	pg/L	3.88	21.8
41464-43-1	56-TeCB	U	ND	pg/L	4.04	21.8
70424-67-8	57-TeCB	U	ND	pg/L	3.84	21.8
41464-49-7	58-TeCB	U	ND	pg/L	4.06	21.8
74472-33-6	59-TeCB	CU	ND	pg/L	3.73	65.5
33025-41-1	60-TeCB	U	ND	pg/L	3.86	21.8
33284-53-6	61-TeCB	CU	ND	pg/L	7.31	87.3
54230-22-7	62-TeCB	C59				
74472-34-7	63-TeCB	U	ND	pg/L	3.62	21.8
52663-58-8	64-TeCB	U	ND	pg/L	3.60	21.8

#### **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.

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**HRP791** 

#### **PCB Congeners Certificate of Analysis Sample Summary**

SDG Number:	1707E46	Client:	HALL001	Project:	HALL00113
Lab Sample ID:	11143001	<b>Date Collected:</b>	07/27/2017 12:30	Matrix:	WATER
Client Sample:	1668A Water	Date Received:	08/01/2017 10:00		
Client ID:	1707E46-001K Rio Grande-North-2			Pren Basis:	As Received

**Batch ID:** 35299

Method: EPA Method 1668A Run Date: 08/13/2017 13:53 Analyst: MLS **Instrument:** Data File: c12aug17a\_2-11 Dilution:

Prep SOP Ref: CF-OA-E-001 SW846 3520C Prep Method: Prep Batch: 35297 916.4 mL **Prep Aliquot: Prep Date:** 08-AUG-17 CAS No. **EDL PQL Parmname** Qual Result Units 33284-54-7 65-TeCB C44 32598-10-0 66-TeCB J 4.50 pg/L 3.64 21.8 U 73575-53-8 67-TeCB ND pg/L 3.45 21.8 73575-52-7 U ND 68-TeCB pg/L 3.64 21.8 60233-24-1 69-TeCB C49 32598-11-1 70-TeCB C61 C40 41464-46-4 71-TeCB 41464-42-0 72-TeCB U ND pg/L 3.64 21.8 U 74338-23-1 73-TeCB ND pg/L 3.93 21.8 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 3.51 21.8 70362-49-1 78-TeCB U ND 3.34 21.8 pg/L U 41464-48-6 79-TeCB ND pg/L 3.16 21.8 pg/L 33284-52-5 80-TeCB U ND 3.36 21.8 70362-50-4 81-TeCB U ND 3.40 pg/L 21.8 U 52663-62-4 82-PeCB ND pg/L 3.47 21.8 U 60145-20-2 83-PeCB ND pg/L 4.10 21.8 U 21.8 52663-60-2 84-PeCB ND pg/L 3.95 65510-45-4 85-PeCB CU ND pg/L 2.73 65.5 55312-69-1 CJ 131 86-PeCB 4.50 pg/L 2.90 38380-02-8 87-PeCB C86 55215-17-3 88-PeCB CU ND pg/L 3.67 43.6 73575-57-2 89-PeCB U ND pg/L 3.80 21.8 CU 68194-07-0 90-PeCB ND pg/L 5.26 65.5 68194-05-8 91-PeCB C88 52663-61-3 92-PeCB U ND 21.8 pg/L 3.58 73575-56-1 93-PeCB CU ND pg/L 3.69 43.6

U

U

U

ND

ND

ND

pg/L

pg/L

pg/L

3.93

3.56

1.57

21.8

21.8

21.8

#### **Comments:**

73575-55-0

38379-99-6

73575-54-9

- Congener has coeluters. When Cxxx, refer to congener number xxx for data
- Value is estimated

94-PeCB

95-PeCB

96-PeCB

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

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#### **PCB** Congeners **Certificate of Analysis Sample Summary**

SDG Number Lab Sample I Client Sample	D: 11143001 e: 1668A Water	Client: Date Collected: Date Received:	HALL001 07/27/2017 12:30 08/01/2017 10:00		Project: Matrix:	HALL00113 WATER
Client ID: Batch ID: Run Date:	1707E46-001K Rio Grande-North-2 35299 08/13/2017 13:53	Method: Analyst:	EPA Method 1668A MLS		Prep Basis: Instrument: Dilution:	As Received HRP791
Data File: Prep Batch: Prep Date:	c12aug17a_2-11 35297 08-AUG-17	Prep Method: Prep Aliquot:	SW846 3520C 916.4 mL		Prep SOP Ref:	
CAS No.	Parmname	Qual	Result	Units	EDL	PQL
41464-51-1	97-PeCB	C86				
60233-25-2	98-PeCB	CU	ND	pg/L	3.75	43.6
38380-01-7	99-PeCB	U	ND	pg/L	3.30	21.8
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	3.43	21.8
56558-16-8	104-PeCB	U	ND	pg/L	1.62	21.8
32598-14-4	105-PeCB	U	ND	pg/L	2.68	21.8
70424-69-0	106-PeCB	U	ND	pg/L	2.58	21.8
70424-68-9	107-PeCB	U	ND	pg/L	2.55	21.8
70362-41-3	108-PeCB	CU	ND	pg/L	2.71	43.6
74472-35-8	109-PeCB	C86				
38380-03-9	110-PeCB	CJ	5.33	pg/L	2.55	43.6
39635-32-0	111-PeCB	U	ND	pg/L	2.51	21.8
74472-36-9	112-PeCB	U	ND	pg/L	2.60	21.8
68194-10-5	113-PeCB	C90				
74472-37-0	114-PeCB	U	ND	pg/L	2.84	21.8
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	4.34	21.8
56558-17-9	119-PeCB	C86				
68194-12-7	120-PeCB	U	ND	pg/L	2.29	21.8
56558-18-0	121-PeCB	U	ND	pg/L	2.79	21.8
76842-07-4	122-PeCB	U	ND	pg/L	2.77	21.8
65510-44-3	123-PeCB	U	ND	pg/L	2.77	21.8
70424-70-3	124-PeCB	C108				
74472-39-2	125-PeCB	C86				
57465-28-8	126-PeCB	U	ND	pg/L	2.68	21.8
39635-33-1	127-PeCB	U	ND	pg/L	2.51	21.8

CU

ND

pg/L

3.36

43.6

#### **Comments:**

38380-07-3

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

128-HxCB

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

of 8

Page 5

As Received

**HRP791** 

**Prep Basis:** 

**Instrument:** 

#### PCB Congeners Certificate of Analysis Sample Summary

MLS

EPA Method 1668A

1707E46 HALL001 HALL00113 SDG Number: Client: **Project:** 07/27/2017 12:30 11143001 WATER Lab Sample ID: **Date Collected:** Matrix: 1668A Water Date Received: 08/01/2017 10:00 **Client Sample:** 

Method:

**Analyst:** 

Client ID: 1707E46-001K Rio Grande-North-2

Batch ID: 35299
Run Date: 08/13/2017 13:53
Data File: c12aug17a\_2-11

 Prep Batch:
 35297
 Prep Method:
 SW846 35200

 Prep Date:
 08-AUG-17
 Prep Aliquot:
 916.4 mL

Prep Method: SW846 3520C Prep SOP Ref: CF-OA-E-001
Prep Aliquot: 916.4 mL

Ovel Possit Units EDI POL

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
55215-18-4	129-HxCB	CJ	9.43	pg/L	3.78	65.5
52663-66-8	130-HxCB	U	ND	pg/L	4.32	21.8
61798-70-7	131-HxCB	U	ND	pg/L	4.98	21.8
38380-05-1	132-HxCB	U	ND	pg/L	4.60	21.8
35694-04-3	133-HxCB	U	ND	pg/L	4.21	21.8
52704-70-8	134-HxCB	U	ND	pg/L	5.41	21.8
52744-13-5	135-HxCB	CU	ND	pg/L	3.14	43.6
38411-22-2	136-HxCB	U	ND	pg/L	2.49	21.8
35694-06-5	137-HxCB	U	ND	pg/L	4.02	21.8
35065-28-2	138-HxCB	C129				
56030-56-9	139-HxCB	CU	ND	pg/L	4.15	43.6
59291-64-4	140-HxCB	C139				
52712-04-6	141-HxCB	U	ND	pg/L	3.99	21.8
41411-61-4	142-HxCB	U	ND	pg/L	4.39	21.8
68194-15-0	143-HxCB	U	ND	pg/L	4.28	21.8
68194-14-9	144-HxCB	U	ND	pg/L	3.03	21.8
74472-40-5	145-HxCB	U	ND	pg/L	2.64	21.8
51908-16-8	146-HxCB	U	ND	pg/L	3.78	21.8
68194-13-8	147-HxCB	CJ	4.58	pg/L	4.19	43.6
74472-41-6	148-HxCB	U	ND	pg/L	3.03	21.8
38380-04-0	149-HxCB	C147				
68194-08-1	150-HxCB	U	ND	pg/L	2.53	21.8
52663-63-5	151-HxCB	C135				
68194-09-2	152-HxCB	U	ND	pg/L	2.47	21.8
35065-27-1	153-HxCB	CJ	8.53	pg/L	3.27	43.6
60145-22-4	154-HxCB	U	ND	pg/L	2.75	21.8
33979-03-2	155-HxCB	U	ND	pg/L	2.51	21.8
38380-08-4	156-HxCB	CU	ND	pg/L	3.64	43.6
69782-90-7	157-HxCB	C156				
74472-42-7	158-HxCB	U	ND	pg/L	2.75	21.8
39635-35-3	159-HxCB	U	ND	pg/L	2.79	21.8
41411-62-5	160-HxCB	U	ND	pg/L	3.12	21.8

#### **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.

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As Received

HRP791

**Prep Basis:** 

**Instrument:** 

of 8

PCB Congeners Certificate of Analysis Sample Summary

MLS

EPA Method 1668A

1707E46 HALL001 HALL00113 SDG Number: Client: **Project:** 11143001 07/27/2017 12:30 WATER Lab Sample ID: **Date Collected:** Matrix: 1668A Water Date Received: 08/01/2017 10:00 **Client Sample:** 

Method:

**Analyst:** 

Client ID: 1707E46-001K Rio Grande-North-2

Batch ID: 35299
Run Date: 08/13/2017 13:53
Data File: c12aug17a\_2-11

Data File: Prep Batch: Prep Date:	08/13/2017 13:53 c12aug17a_2-11 35297 08-AUG-17	Analyst:  Prep Method: Prep Aliquot:	SW846 3520C 916.4 mL		Dilution: Prep SOP Ref:	1 CF-OA-E-001	
CAS No.	Parmname	Qual	Result	Units	EDL	PQL	
74472-43-8	161-HxCB	U	ND	pg/L	3.06	21.8	
39635-34-2	162-HxCB	U	ND	pg/L	2.88	21.8	
74472-44-9	163-HxCB	C129					
74472-45-0	164-HxCB	U	ND	pg/L	3.08	21.8	
74472-46-1	165-HxCB	U	ND	pg/L	3.54	21.8	
41411-63-6	166-HxCB	C128					
52663-72-6	167-HxCB	U	ND	pg/L	2.71	21.8	
59291-65-5	168-HxCB	C153					
32774-16-6	169-HxCB	U	ND	pg/L	2.64	21.8	
35065-30-6	170-HpCB	J	4.87	pg/L	3.54	21.8	
52663-71-5	171-HpCB	CU	ND	pg/L	3.86	43.6	
52663-74-8	172-HpCB	U	ND	pg/L	3.73	21.8	
68194-16-1	173-HpCB	C171					
38411-25-5	174-HpCB	U	ND	pg/L	3.82	21.8	
40186-70-7	175-HpCB	U	ND	pg/L	2.95	21.8	
52663-65-7	176-HpCB	U	ND	pg/L	2.49	21.8	
52663-70-4	177-HpCB	U	ND	pg/L	3.93	21.8	
52663-67-9	178-HpCB	U	ND	pg/L	3.14	21.8	
52663-64-6	179-HpCB	U	ND	pg/L	2.47	21.8	
35065-29-3	180-HpCB	CJ	14.5	pg/L	3.10	43.6	
74472-47-2	181-HpCB	U	ND	pg/L	3.84	21.8	
60145-23-5	182-HpCB	U	ND	pg/L	2.95	21.8	
52663-69-1	183-HpCB	CU	ND	pg/L	3.69	43.6	
74472-48-3	184-HpCB	U	ND	pg/L	2.49	21.8	
52712-05-7	185-HpCB	C183					
74472-49-4	186-HpCB	U	ND	pg/L	2.64	21.8	
52663-68-0	187-HpCB	J	4.02	pg/L	2.92	21.8	
74487-85-7	188-HpCB	U	ND	pg/L	2.53	21.8	
39635-31-9	189-HpCB	U	ND	pg/L	3.43	21.8	
41411-64-7	190-НрСВ	U	ND	pg/L	2.77	21.8	

U

U

ND

ND

pg/L

pg/L

2.75

3.08

21.8

21.8

#### **Comments:**

74472-50-7

74472-51-8

- C Congener has coeluters. When Cxxx, refer to congener number xxx for data
- J Value is estimated

191-HpCB

192-HpCB

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

of 8

PCB Congeners Certificate of Analysis Sample Summary

SDG Number: 1707E46 Lab Sample ID: 11143001 Client Sample: 1668A Water

**Client ID:** 

**Batch ID:** 

1668A Water 1707E46-001K Rio Grande-North-2

35299

Run Date: 08/13/2017 13:53 Data File: c12aug17a\_2-11 Prep Batch: 35297

Prep Batch: 35297
Prep Date: 08-AUG-17

Client: HAI
Date Collected: 07/2
Date Received: 08/0

Method:

**Analyst:** 

HALL001 07/27/2017 12:30 08/01/2017 10:00

EPA Method 1668A MLS

Prep Method: SW846 3520C Prep Aliquot: 916.4 mL Project: Matrix:

**Prep Basis:** 

HALL00113 WATER

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As Received

Instrument: HRP791 Dilution: 1

Prep SOP Ref: CF-OA-E-001

rrep Date.	00-AUG-17	Trep Anquot.	710.7 IIIL			
CAS No.	Parmname	Qual	Result	Units	EDL	PQL
69782-91-8	193-HpCB	C180				
35694-08-7	194-OcCB	J	4.60	pg/L	3.56	21.8
52663-78-2	195-OcCB	U	ND	pg/L	3.99	21.8
42740-50-1	196-OcCB	U	ND	pg/L	2.95	21.8
33091-17-7	197-OcCB	CU	ND	pg/L	2.47	43.6
68194-17-2	198-OcCB	CU	ND	pg/L	3.08	43.6
52663-75-9	199-OcCB	C198				
52663-73-7	200-OcCB	C197				
40186-71-8	201-OcCB	U	ND	pg/L	2.49	21.8
2136-99-4	202-OcCB	U	ND	pg/L	2.86	21.8
52663-76-0	203-OcCB	U	ND	pg/L	2.88	21.8
74472-52-9	204-OcCB	U	ND	pg/L	2.49	21.8
74472-53-0	205-OcCB	U	ND	pg/L	3.01	21.8
40186-72-9	206-NoCB	U	ND	pg/L	3.58	21.8
52663-79-3	207-NoCB	U	ND	pg/L	3.10	21.8
52663-77-1	208-NoCB	U	ND	pg/L	3.03	21.8
2051-24-3	209-DeCB	U	ND	pg/L	3.60	21.8
1336-36-3	Total PCB Congeners	J	127	pg/L	7.29	21.8

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1-MoCB		1050	2180	pg/L	48.1	(15%-150%)
13C-3-MoCB		1220	2180	pg/L	56.0	(15%-150%)
13C-4-DiCB		1290	2180	pg/L	59.3	(25%-150%)
13C-15-DiCB		1690	2180	pg/L	77.2	(25%-150%)
13C-19-TrCB		1580	2180	pg/L	72.5	(25%-150%)
13C-37-TrCB		1840	2180	pg/L	84.1	(25%-150%)
13C-54-TeCB		1820	2180	pg/L	83.5	(25%-150%)
13C-77-TeCB		2580	2180	pg/L	118	(25%-150%)
13C-81-TeCB		2490	2180	pg/L	114	(25%-150%)
13C-104-PeCB		1820	2180	pg/L	83.5	(25%-150%)
13C-105-PeCB		2290	2180	pg/L	105	(25%-150%)
13C-114-PeCB		2230	2180	pg/L	102	(25%-150%)
13C-118-PeCB		2230	2180	pg/L	102	(25%-150%)
13C-123-PeCB		2250	2180	pg/L	103	(25%-150%)
13C-126-PeCB		2790	2180	pg/L	128	(25%-150%)
13C-155-HxCB		1360	2180	pg/L	62.2	(25%-150%)
13C-156-HxCB	C	4210	4360	pg/L	96.3	(25%-150%)
13C-157-HxCB	C156L					
13C-167-HxCB		2060	2180	pg/L	94.3	(25%-150%)
13C-169-HxCB		2440	2180	pg/L	112	(25%-150%)
13С-188-НрСВ		1210	2180	pg/L	55.4	(25%-150%)
13C-189-HpCB		1650	2180	pg/L	75.5	(25%-150%)

of 8

Page 8

As Received

**PCB Congeners Certificate of Analysis Sample Summary** 

1707E46 HALL001 HALL00113 SDG Number: Client: **Project:** 07/27/2017 12:30 11143001 WATER Lab Sample ID: **Date Collected:** Matrix: 1668A Water Date Received: 08/01/2017 10:00 **Client Sample:** 

1707E46-001K Rio Grande-North-2 **Client ID:** 

**Batch ID:** 35299

**Run Date:** 08/13/2017 13:53 Data File: c12aug17a\_2-11

35297 Prep Batch:

**Prep Date:** 08-AUG-17 Method: EPA Method 1668A

MLS

SW846 3520C **Prep Method:** 

916.4 mL

**Instrument: HRP791** 

Dilution:

**Prep Basis:** 

Prep SOP Ref: CF-OA-E-001

**Prep Aliquot:** CAS No. Units  $\mathbf{EDL}$ **PQL Parmname** Qual Result

**Analyst:** 

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
3C-202-OcCB		1430	2180	pg/L	65.7	(25%-150%)
13C-205-OcCB		2040	2180	pg/L	93.5	(25%-150%)
3C-206-NoCB		2330	2180	pg/L	107	(25%-150%)
3C-208-NoCB		1880	2180	pg/L	86.0	(25%-150%)
SC-209-DeCB		2430	2180	pg/L	112	(25%-150%)
C-28-TrCB		1710	2180	pg/L	78.4	(30%-135%)
3C-111-PeCB		2040	2180	pg/L	93.5	(30%-135%)
SC-178-HpCB		2100	2180	pg/L	96.0	(30%-135%)

#### **Comments:**

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

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

Page 1

As Received

**HRP791** 

of 8

PCB Congeners Certificate of Analysis Sample Summary

MLS

EPA Method 1668A

SDG Number: 1707E46 Client: HALL001 Project: HALL00113 07/28/2017 08:45 11143002 Lab Sample ID: **Date Collected:** WATER Matrix: 1668A Water 08/01/2017 10:00 Date Received: **Client Sample:** 

Method:

Analyst:

Client ID: 1707E46-003K Rio Grande-South-20

Batch ID: 35299 Run Date: 08/14/2017 00:19

Data File: c12aug17a\_3-9
Prep Batch: 35297

Prep Date: 08-AUG-17 Prep Aliquot: 906.1 mL

Prep Method: SW846 3520C Dilution: 1
Prep SOP Ref: CF-OA-E-001

**Prep Basis:** 

**Instrument:** 

**EDL PQL** CAS No. **Parmname** Qual Result Units 2051-60-7 1-MoCB U ND pg/L 5.56 22.1 U 2051-61-8 2-MoCB ND pg/L 5.23 22.1 U 2051-62-9 3-МоСВ ND pg/L 4.41 22.1 13029-08-8 U 22.1 4-DiCB ND pg/L 14.3 16605-91-7 U 5-DiCB ND pg/L 7.31 22.1 U 25569-80-6 6-DiCB ND pg/L 5.63 22.1 U pg/L 33284-50-3 7-DiCB ND 6.16 22.1 34883-43-7 8-DiCB U ND pg/L 4.90 22.1 U 34883-39-1 9-DiCB ND pg/L 6.58 22.1 33146-45-1 10-DiCB U ND pg/L 7.35 22.1 2050-67-1 11-DiCB U ND pg/L 48.4 110 CU 2974-92-7 12-DiCB ND pg/L 5.92 44.1 2974-90-5 13-DiCB C12 34883-41-5 14-DiCB U ND 6.00 22.1 pg/L U 2050-68-2 15-DiCB ND pg/L 5.56 22.1 pg/L 38444-78-9 16-TrCB U ND 3.47 22.1 37680-66-3 17-TrCB U ND 3.55 22.1 pg/L CU 37680-65-2 18-TrCB ND pg/L 4.52 44.1 38444-73-4 19-TrCB U ND pg/L 4.22 22.1 38444-84-7 CJ 20-TrCB 5.76 pg/L 2.38 44.1 21-TrCB 55702-46-0 CU ND pg/L 2.32 44.1 38444-85-8 U ND 2.38 22.1 22-TrCB pg/L 55720-44-0 23-TrCB U ND pg/L 2.47 22.1 U 55702-45-9 24-TrCB ND pg/L 2.83 22.1 25-TrCB U 55712-37-3 ND pg/L 2.10 22.1 CU pg/L 38444-81-4 26-TrCB ND 2.36 44.1 38444-76-7 27-TrCB U ND pg/L 2.58 22.1 7012-37-5 28-TrCB C20 15862-07-4 29-TrCB C26 35693-92-6 30-TrCB C18 16606-02-3 U 22.1 31-TrCB ND pg/L 4.68

U

ND

pg/L

2.34

22.1

#### **Comments:**

38444-77-8

- C Congener has coeluters. When Cxxx, refer to congener number xxx for data
- J Value is estimated

32-TrCB

 $U \quad \mbox{ Analyte was analyzed for, but not detected above the specified detection limit.} \\$ 

SDG Number:

Lab Sample ID:

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Page 2

As Received

HRP791

#### **PCB Congeners Certificate of Analysis Sample Summary**

MLS

HALL001 HALL00113 Client: **Project:** 07/28/2017 08:45 WATER **Date Collected:** Matrix: Date Received: 08/01/2017 10:00

EPA Method 1668A

**Client Sample:** Client ID: 1707E46-003K Rio Grande-South-20

**Batch ID:** 35299

1707E46

11143002

1668A Water

08/14/2017 00:19 **Run Date:** Data File: c12aug17a\_3-9

35297 **Prep Method:** Prep Batch: Prep Date: 08-AUG-17 Prep Aliquot: 906.1 mL

Method:

**Analyst:** 

Dilution: 1 Prep SOP Ref: CF-OA-E-001 SW846 3520C

**Prep Basis:** 

**Instrument:** 

Prep Date:	08-AUG-17	Prep Aliquot:	906.1 mL				
CAS No.	Parmname	Qual	Result	Units	EDL	PQL	
38444-86-9	33-TrCB	C21					
37680-68-5	34-TrCB	U	ND	pg/L	2.58	22.1	
37680-69-6	35-TrCB	U	ND	pg/L	3.47	22.1	
38444-87-0	36-TrCB	U	ND	pg/L	3.44	22.1	
38444-90-5	37-TrCB	U	ND	pg/L	3.40	22.1	
53555-66-1	38-TrCB	U	ND	pg/L	3.44	22.1	
38444-88-1	39-TrCB	U	ND	pg/L	3.38	22.1	
38444-93-8	40-TeCB	CU	ND	pg/L	3.55	44.1	
52663-59-9	41-TeCB	U	ND	pg/L	4.55	22.1	
36559-22-5	42-TeCB	U	ND	pg/L	3.82	22.1	
70362-46-8	43-TeCB	U	ND	pg/L	4.64	22.1	
41464-39-5	44-TeCB	CJ	7.73	pg/L	3.62	66.2	
70362-45-7	45-TeCB	CJ	2.45	pg/L	2.19	44.1	
41464-47-5	46-TeCB	U	ND	pg/L	2.32	22.1	
2437-79-8	47-TeCB	C44					
70362-47-9	48-TeCB	U	ND	pg/L	4.02	22.1	
41464-40-8	49-TeCB	CJ	3.93	pg/L	3.42	44.1	
62796-65-0	50-TeCB	CU	ND	pg/L	2.07	44.1	
68194-04-7	51-TeCB	C45					
35693-99-3	52-TeCB	J	8.45	pg/L	3.97	22.1	
41464-41-9	53-TeCB	C50					
15968-05-5	54-TeCB	U	ND	pg/L	1.52	22.1	
74338-24-2	55-TeCB	U	ND	pg/L	1.79	22.1	
41464-43-1	56-TeCB	U	ND	pg/L	1.90	22.1	
70424-67-8	57-TeCB	U	ND	pg/L	1.81	22.1	
41464-49-7	58-TeCB	U	ND	pg/L	1.92	22.1	
74472-33-6	59-TeCB	CU	ND	pg/L	2.94	66.2	
33025-41-1	60-TeCB	U	ND	pg/L	1.77	22.1	
33284-53-6	61-TeCB	CJ	7.33	pg/L	1.77	88.3	
54230-22-7	62-TeCB	C59					
74472-34-7	63-TeCB	U	ND	pg/L	1.68	22.1	
52663-58-8	64-TeCB	U	ND	pg/L	2.87	22.1	

#### **Comments:**

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

of 8

Page 3

2.54

1.13

pg/L

pg/L

22.1

22.1

#### PCB Congeners Certificate of Analysis Sample Summary

		Samp	ole Summary			
SDG Number Lab Sample I Client Sampl	ID: 11143002	Client: Date Collected: Date Received:	HALL001 07/28/2017 08:45 08/01/2017 10:00		Project: Matrix:	HALL00113 WATER
Client ID:	1707E46-003K Rio Grande-South-20				Prep Basis:	As Received
Batch ID: Run Date: Data File: Prep Batch:	35299 08/14/2017 00:19 c12aug17a_3-9 35297	Method: Analyst:	EPA Method 1668A MLS SW846 3520C 906.1 mL		Instrument: Dilution: Prep SOP Ref:	HRP791 1 CF-OA-E-001
Prep Date:	08-AUG-17	Prep Aliquot:				
CAS No.	Parmname	Qual	Result	Units	EDL	PQL
33284-54-7	65-TeCB	C44				
32598-10-0	66-TeCB	U	ND	pg/L	3.05	22.1
73575-53-8	67-TeCB	U	ND	pg/L	1.63	22.1
73575-52-7	68-TeCB	U	ND	pg/L	1.72	22.1
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	22.1
74338-23-1	73-TeCB	U	ND	pg/L	3.16	22.1
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	1.59	22.1
70362-49-1	78-TeCB	U	ND	pg/L	1.55	22.1
41464-48-6	79-TeCB	U	ND	pg/L	1.41	22.1
33284-52-5	80-TeCB	U	ND	pg/L	1.52	22.1
70362-50-4	81-TeCB	U	ND	pg/L	1.50	22.1
52663-62-4	82-PeCB	U	ND	pg/L	2.43	22.1
60145-20-2	83-PeCB	U	ND	pg/L	2.76	22.1
52663-60-2	84-PeCB	U	ND	pg/L	2.78	22.1
65510-45-4	85-PeCB	CU	ND	pg/L	1.90	66.2
55312-69-1	86-PeCB	CJ	5.85	pg/L	2.03	132
38380-02-8	87-PeCB	C86				
55215-17-3	88-PeCB	CU	ND	pg/L	2.63	44.1
73575-57-2	89-PeCB	U	ND	pg/L	2.63	22.1
68194-07-0	90-PeCB	CU	ND	pg/L	9.78	66.2
68194-05-8	91-PeCB	C88				
52663-61-3	92-PeCB	U	ND	pg/L	2.47	22.1
73575-56-1	93-PeCB	CU	ND	pg/L	2.65	44.1
73575-55-0	94-PeCB	U	ND	pg/L	2.94	22.1

J

U

7.50

ND

#### **Comments:**

38379-99-6

73575-54-9

- C Congener has coeluters. When Cxxx, refer to congener number xxx for data
- J Value is estimated

95-PeCB

96-PeCB

 $U \quad \mbox{ Analyte was analyzed for, but not detected above the specified detection limit.} \\$ 

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#### PCB Congeners Certificate of Analysis Sample Summary

SDG Number Lab Sample II Client Sample	D: 11143002	Client: Date Collected: Date Received:	HALL001 07/28/2017 08:45 08/01/2017 10:00		Project: Matrix:	HALL00113 WATER
Client ID:	1707E46-003K Rio Grande-South-20		ED. M. J. 146604		Prep Basis:	As Received
Batch ID: Run Date:	35299 08/14/2017 00:19	Method: Analyst:	EPA Method 1668A MLS		Instrument:	HRP791
Data File:	c12aug17a_3-9	•			Dilution:	1
Prep Batch: Prep Date:	35297 08-AUG-17	Prep Method: Prep Aliquot:	SW846 3520C 906.1 mL		Prep SOP Ref:	CF-OA-E-001
CAS No.	Parmname	Qual	Result	Units	EDL	PQL
41464-51-1	97-PeCB	C86				
60233-25-2	98-PeCB	CU	ND	pg/L	2.69	44.1
38380-01-7	99-PeCB	U	ND	pg/L	3.11	22.1
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	2.47	22.1
56558-16-8	104-PeCB	U	ND	pg/L	0.905	22.1
32598-14-4	105-PeCB	U	ND	pg/L	2.94	22.1
70424-69-0	106-PeCB	U	ND	pg/L	1.72	22.1
70424-68-9	107-PeCB	U	ND	pg/L	1.68	22.1
70362-41-3	108-PeCB	CU	ND	pg/L	1.85	44.1
74472-35-8	109-PeCB	C86				
38380-03-9	110-PeCB	CU	ND	pg/L	10.4	44.1
39635-32-0	111-PeCB	U	ND	pg/L	1.70	22.1
74472-36-9	112-PeCB	U	ND	pg/L	1.72	22.1
68194-10-5	113-PeCB	C90				
74472-37-0	114-PeCB	U	ND	pg/L	2.03	22.1
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	6.51	22.1
56558-17-9	119-PeCB	C86				
68194-12-7	120-PeCB	U	ND	pg/L	1.55	22.1
56558-18-0	121-PeCB	U	ND	pg/L	1.90	22.1
76842-07-4	122-PeCB	U	ND	pg/L	1.85	22.1
65510-44-3	123-PeCB	U	ND	pg/L	1.92	22.1
70424-70-3	124-PeCB	C108				
74472-39-2	125-PeCB	C86				
57465-28-8	126-PeCB	U	ND	pg/L	2.03	22.1
39635-33-1	127-PeCB	U	ND	pg/L	1.59	22.1

CU

ND

2.30

pg/L

44.1

#### **Comments:**

38380-07-3

- C Congener has coeluters. When Cxxx, refer to congener number xxx for data
- J Value is estimated

128-HxCB

 $U \quad \mbox{ Analyte was analyzed for, but not detected above the specified detection limit.} \\$ 

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44.1

22.1

22.1

22.1 44.1

22.1

22.1

44.1

22.1

22.1

22.1

#### PCB Congeners Certificate of Analysis Sample Summary

SDG Number: 1707E46 Client: HALL001 Project: HALL00113 11143002 07/28/2017 08:45 Lab Sample ID: **Date Collected:** WATER Matrix: 1668A Water 08/01/2017 10:00 Date Received: **Client Sample: Client ID:** 1707E46-003K Rio Grande-South-20 **Prep Basis:** As Received **Batch ID:** 35299 Method: EPA Method 1668A **HRP791** Run Date: 08/14/2017 00:19 Analyst: MLS **Instrument:** Data File: c12aug17a\_3-9 Dilution: Prep SOP Ref: CF-OA-E-001 SW846 3520C Prep Batch: 35297 **Prep Method: Prep Aliquot:** 906.1 mL **Prep Date:** 08-AUG-17 **EDL PQL** CAS No. **Parmname** Qual Result Units 55215-18-4 129-HxCB CJ 21.1 pg/L 2.58 66.2 130-HxCB U 52663-66-8 ND pg/L 2.94 22.1 U 61798-70-7 131-HxCB ND pg/L 3.44 22.1 38380-05-1 132-HxCB J 5.78 pg/L 3.29 22.1 35694-04-3 133-HxCB U ND pg/L 2.94 22.1 U 52704-70-8 134-HxCB ND pg/L 3.95 22.1 pg/L 52744-13-5 135-HxCB CJ 7.68 1.90 44.1 38411-22-2 136-HxCB U ND pg/L 2.03 22.1 35694-06-5 137-HxCB U ND pg/L 2.96 22.1 35065-28-2 138-HxCB C129 56030-56-9 139-HxCB CU ND 2.91 44.1 pg/L 59291-64-4 140-HxCB C139 52712-04-6 141-HxCB pg/L 22.1 J 4.55 2.67 41411-61-4 142-HxCB U ND 3.16 22.1 pg/L U 68194-15-0 143-HxCB ND pg/L 2.91 22.1 pg/L 68194-14-9 144-HxCB U ND 1.77 22.1 74472-40-5 145-HxCB U ND 22.1 pg/L 1.66 51908-16-8 146-HxCB J 3.24 pg/L 2.54 22.1

CJ

U

U

U

CJ

U

U

CJ

U

U

U

C156

C147

C135

16.0

ND

ND

ND

23.8

ND

ND

2.14

ND

ND

ND

pg/L

2.96

1.83

1.59

1.55

2.30

1.63

1.17

2.05

2.16

1.48

2.23

#### **Comments:**

68194-13-8

74472-41-6

38380-04-0

68194-08-1

52663-63-5

68194-09-2

35065-27-1

60145-22-4

33979-03-2

38380-08-4

69782-90-7

74472-42-7

39635-35-3

41411-62-5

147-HxCB

148-HxCB

149-HxCB

150-HxCB

151-HxCB

152-HxCB

153-HxCB

154-HxCB

155-HxCB

156-HxCB

157-HxCB

158-HxCB

159-HxCB

160-HxCB

- 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.

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As Received

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**PCB Congeners Certificate of Analysis Sample Summary** 

MLS

EPA Method 1668A

1707E46 HALL001 HALL00113 SDG Number: Client: **Project:** 07/28/2017 08:45 11143002 WATER Lab Sample ID: **Date Collected:** Matrix: 1668A Water 08/01/2017 10:00 Date Received: **Client Sample:** 

Method:

**Analyst:** 

**Client ID:** 1707E46-003K Rio Grande-South-20

**Batch ID:** 35299 08/14/2017 00:19 **Run Date:** Data File: c12aug17a\_3-9

SW846 3520C 35297 **Prep Method:** Prep Batch:

**Prep Aliquot:** 906.1 mL **Prep Date:** 08-AUG-17

Instrument:	HRP791	
Dilution:	1	

**Prep Basis:** 

Prep SOP Ref: CF-OA-E-001

Prep Date:	08-AUG-17	1	rrep Anquot:	900.1 IIIL				
CAS No.	I	Parmname	Qual	Result	Units	EDL	PQL	
74472-43-8	161-HxCB		U	ND	pg/L	2.14	22.1	
39635-34-2	162-HxCB		U	ND	pg/L	1.50	22.1	
74472-44-9	163-HxCB		C129					
74472-45-0	164-HxCB		U	ND	pg/L	2.05	22.1	
74472-46-1	165-HxCB		U	ND	pg/L	2.43	22.1	
41411-63-6	166-HxCB		C128					
52663-72-6	167-HxCB		U	ND	pg/L	1.55	22.1	
59291-65-5	168-HxCB		C153					
32774-16-6	169-HxCB		U	ND	pg/L	1.50	22.1	
35065-30-6	170-НрСВ		J	8.45	pg/L	2.38	22.1	
52663-71-5	171-НрСВ		CJ	2.87	pg/L	2.56	44.1	
52663-74-8	172-НрСВ		U	ND	pg/L	2.47	22.1	
68194-16-1	173-НрСВ		C171					
38411-25-5	174-НрСВ		J	7.50	pg/L	2.49	22.1	
40186-70-7	175-НрСВ		U	ND	pg/L	1.52	22.1	
52663-65-7	176-НрСВ		U	ND	pg/L	1.35	22.1	
52663-70-4	177-НрСВ		U	ND	pg/L	5.14	22.1	
52663-67-9	178-НрСВ		U	ND	pg/L	2.14	22.1	
52663-64-6	179-HpCB		U	ND	pg/L	3.38	22.1	
35065-29-3	180-НрСВ		CJ	24.1	pg/L	2.07	44.1	
74472-47-2	181-HpCB		U	ND	pg/L	2.52	22.1	
60145-23-5	182-НрСВ		U	ND	pg/L	1.52	22.1	
52663-69-1	183-НрСВ		CJ	6.91	pg/L	2.49	44.1	
74472-48-3	184-НрСВ		U	ND	pg/L	1.32	22.1	
52712-05-7	185-HpCB		C183					
74472-49-4	186-НрСВ		U	ND	pg/L	1.39	22.1	
52663-68-0	187-НрСВ		J	9.40	pg/L	1.52	22.1	
74487-85-7	188-НрСВ		U	ND	pg/L	1.24	22.1	
39635-31-9	189-HpCB		U	ND	pg/L	1.48	22.1	
41411-64-7	190-НрСВ		J	2.52	pg/L	1.85	22.1	
74472-50-7	191-НрСВ		U	ND	pg/L	1.83	22.1	
74472-51-8	192-HpCB		U	ND	pg/L	2.03	22.1	

#### **Comments:**

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

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As Received

**PCB Congeners Certificate of Analysis Sample Summary** 

1707E46 SDG Number: 11143002 Lab Sample ID: 1668A Water **Client Sample:** 

1707E46-003K Rio Grande-South-20

**Batch ID:** 35299 08/14/2017 00:19 **Run Date:** Data File: c12aug17a\_3-9

**Client ID:** 

35297 Prep Batch: **Prep Date:** 08-AUG-17

Client: **Date Collected:** Date Received:

Method:

**Analyst:** 

**Prep Method:** 

HALL001 07/28/2017 08:45 08/01/2017 10:00

EPA Method 1668A MLS

SW846 3520C

906.1 mL

**Project:** HALL00113 WATER Matrix:

HRP791 **Instrument:** 

**Prep Basis:** 

Dilution: 1 Prep SOP Ref: CF-OA-E-001

Prep Date:	08-AUG-17	Prep Aliquot:	906.1 mL		<b>P</b> =	
CAS No.	Parmname	Qual	Result	Units	EDL	PQL
69782-91-8	193-HpCB	C180				
35694-08-7	194-OcCB	J	5.92	pg/L	1.48	22.1
52663-78-2	195-OcCB	U	ND	pg/L	1.88	22.1
42740-50-1	196-OcCB	J	3.18	pg/L	1.63	22.1
33091-17-7	197-OcCB	CU	ND	pg/L	1.37	44.1
68194-17-2	198-OcCB	CJ	4.99	pg/L	1.70	44.1
52663-75-9	199-OcCB	C198				
52663-73-7	200-OcCB	C197				
40186-71-8	201-OcCB	U	ND	pg/L	1.37	22.1
2136-99-4	202-OcCB	U	ND	pg/L	1.50	22.1
52663-76-0	203-OcCB	J	3.93	pg/L	1.61	22.1
74472-52-9	204-OcCB	U	ND	pg/L	1.37	22.1
74472-53-0	205-OcCB	U	ND	pg/L	1.28	22.1
40186-72-9	206-NoCB	J	2.27	pg/L	1.41	22.1
52663-79-3	207-NoCB	U	ND	pg/L	1.19	22.1
52663-77-1	208-NoCB	U	ND	pg/L	1.13	22.1
2051-24-3	209-DeCB	U	ND	pg/L	2.30	22.1
1336-36-3	Total PCB Congeners	J	215)	pg/L	7.37	22.1

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1-MoCB		990	2210	pg/L	44.9	(15%-150%)
13C-3-MoCB		1200	2210	pg/L	54.3	(15%-150%)
13C-4-DiCB		1300	2210	pg/L	59.0	(25%-150%)
13C-15-DiCB		2240	2210	pg/L	101	(25%-150%)
13C-19-TrCB		1800	2210	pg/L	81.7	(25%-150%)
13C-37-TrCB		1980	2210	pg/L	89.6	(25%-150%)
13C-54-TeCB		1720	2210	pg/L	78.1	(25%-150%)
13C-77-TeCB		2570	2210	pg/L	117	(25%-150%)
13C-81-TeCB		2510	2210	pg/L	114	(25%-150%)
13C-104-PeCB		1880	2210	pg/L	85.3	(25%-150%)
13C-105-PeCB		2040	2210	pg/L	92.4	(25%-150%)
13C-114-PeCB		2040	2210	pg/L	92.4	(25%-150%)
13C-118-PeCB		2070	2210	pg/L	93.9	(25%-150%)
13C-123-PeCB		2100	2210	pg/L	95.3	(25%-150%)
13C-126-PeCB		2400	2210	pg/L	109	(25%-150%)
13C-155-HxCB		1600	2210	pg/L	72.3	(25%-150%)
13C-156-HxCB	C	3970	4410	pg/L	89.9	(25%-150%)
13C-157-HxCB	C156L					
13C-167-HxCB		1970	2210	pg/L	89.3	(25%-150%)
13C-169-HxCB		2260	2210	pg/L	102	(25%-150%)
13C-188-HpCB		1440	2210	pg/L	65.1	(25%-150%)
13C-189-HpCB		1670	2210	pg/L	75.6	(25%-150%)

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As Received

**PCB Congeners Certificate of Analysis Sample Summary** 

1707E46 HALL001 HALL00113 SDG Number: Client: **Project:** 07/28/2017 08:45 11143002 WATER Lab Sample ID: **Date Collected:** Matrix: 1668A Water Date Received: 08/01/2017 10:00 **Client Sample:** 

**Analyst:** 

**Prep Method:** 

**Prep Aliquot:** 

Qual

1707E46-003K Rio Grande-South-20 **Client ID:** 

**Parmname** 

**Batch ID:** 35299

08/14/2017 00:19 **Run Date:** 

Data File: c12aug17a\_3-9 35297 Prep Batch:

**Prep Date:** 08-AUG-17 Method: EPA Method 1668A

Result

MLS

SW846 3520C

906.1 mL

**Instrument:** HRP791 Dilution:

Prep SOP Ref: CF-OA-E-001

**PQL** 

 $\mathbf{EDL}$ 

**Prep Basis:** 

Units

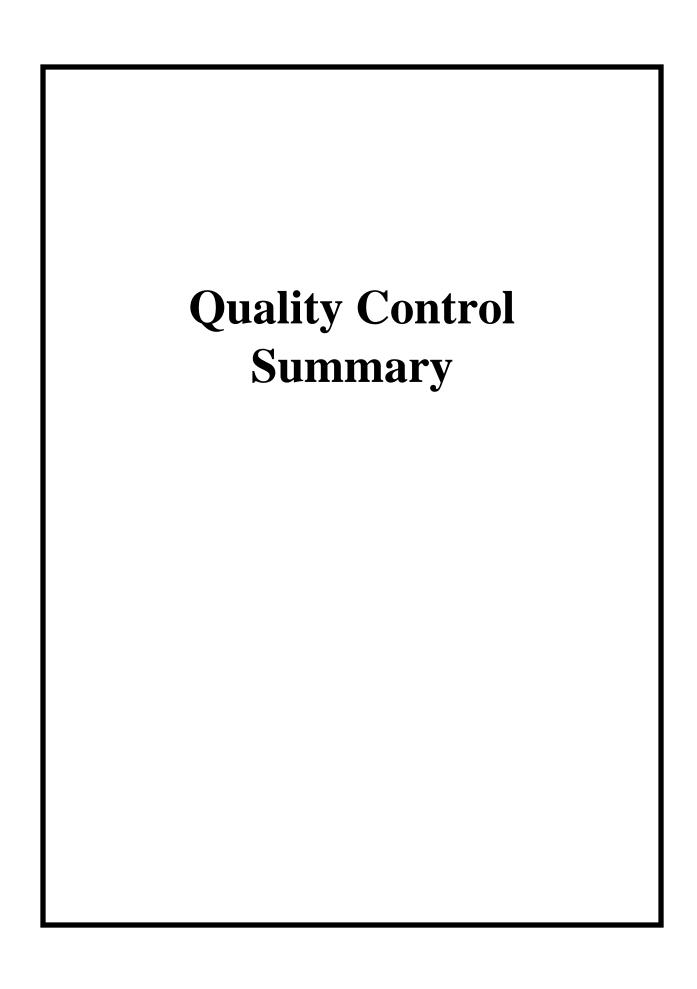
rrogate/Tracer recovery         Qual         Result         Nominal         Units         Recovery%         Acceptable Limits           C-202-OcCB         1570         2210         pg/L         71.3         (25%-150%)           C-205-OcCB         2040         2210         pg/L         92.3         (25%-150%)           C-206-NoCB         2340         2210         pg/L         106         (25%-150%)           C-208-NoCB         1940         2210         pg/L         87.8         (25%-150%)           C-209-DeCB         2440         2210         pg/L         110         (25%-150%)
C-205-OcCB 2040 2210 pg/L 92.3 (25%-150%) C-206-NoCB 2340 2210 pg/L 106 (25%-150%) C-208-NoCB 1940 2210 pg/L 87.8 (25%-150%)
C-206-NoCB 2340 2210 pg/L 106 (25%-150%) C-208-NoCB 1940 2210 pg/L 87.8 (25%-150%)
C-208-NoCB 1940 2210 pg/L 87.8 (25%-150%)
C-209-DeCB 2440 2210 pg/L 110 (25%-150%)
C-28-TrCB 1700 2210 pg/L 77.0 (30%-135%)
C-111-PeCB 1990 2210 pg/L 90.1 (30%-135%)
C-178-HpCB 2130 2210 pg/L 96.7 (30%-135%)

#### **Comments:**

CAS No.

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

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



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# PCB Congeners Surrogate Recovery Report

SDG Number: 1707E46 Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
2019229	LCS for batch 35297	13C-1-MoCB		44.5	(15%-140%)
		13C-3-MoCB		51.5	(15%-140%)
		13C-4-DiCB		52.6	(30%-140%)
		13C-15-DiCB		69.2	(30%-140%)
		13C-19-TrCB		62.6	(30%-140%)
		13C-37-TrCB		77.7	(30%-140%)
		13C-54-TeCB		75.1	(30%-140%)
		13C-77-TeCB		110	(30%-140%)
		13C-81-TeCB		106	(30%-140%)
		13C-104-PeCB		68.5	(30%-140%)
		13C-105-PeCB		89.9	(30%-140%)
		13C-114-PeCB		88.8	(30%-140%)
		13C-118-PeCB		88.3	(30%-140%)
		13C-123-PeCB		89.1	(30%-140%)
		13C-126-PeCB		115	(30%-140%)
		13C-155-HxCB		49.6	(30%-140%)
		13C-156-HxCB	C	84.3	(30%-140%)
		13C-157-HxCB	C156L		
		13C-167-HxCB		80.4	(30%-140%)
		13C-169-HxCB		103	(30%-140%)
		13C-188-HpCB		40.6	(30%-140%)
		13C-189-HpCB		64.2	(30%-140%)
		13C-202-OcCB		50.0	(30%-140%)
		13C-205-OcCB		79.1	(30%-140%)
		13C-206-NoCB		92.4	(30%-140%)
		13C-208-NoCB		70.3	(30%-140%)
		13C-209-DeCB		96.1	(30%-140%)
		13C-28-TrCB		66.6	(40%-125%)
		13C-111-PeCB		81.2	(40%-125%)
		13C-178-HpCB		80.7	(40%-125%)
019230	LCSD for batch 35297	13C-1-MoCB		51.4	(15%-140%)
		13C-3-MoCB		59.6	(15%-140%)
		13C-4-DiCB		59.3	(30%-140%)
		13C-15-DiCB		75.9	(30%-140%)
		13C-19-TrCB		73.5	(30%-140%)
		13C-37-TrCB		79.5	(30%-140%)
		13C-54-TeCB		84.8	(30%-140%)
		13C-77-TeCB		113	(30%-140%)
		13C-81-TeCB		111	(30%-140%)
		13C-104-PeCB		81.5	(30%-140%)
		13C-105-PeCB		108	(30%-140%)
		13C-114-PeCB		107	(30%-140%)
		13C-118-PeCB		104	(30%-140%)
		13C-123-PeCB		106	(30%-140%)
		13C-126-PeCB		141 *	(30%-140%)
		13C-155-HxCB		57.1	(30%-140%)
		13C-156-HxCB	C	107	(30%-140%)
		13C-157-HxCB	C156L		
		13C-167-HxCB		100	(30%-140%)
		13C-169-HxCB		134	(30%-140%)
		13C-188-HpCB		41.2	(30%-140%)
		13C-189-HpCB		73.7	(30%-140%)

of 3

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# PCB Congeners Surrogate Recovery Report

SDG Number: 1707E46 Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
2019230	LCSD for batch 35297	13C-202-OcCB		52.7	(30%-140%)
		13C-205-OcCB		93.1	(30%-140%)
		13C-206-NoCB		110	(30%-140%)
		13C-208-NoCB		79.9	(30%-140%)
		13C-209-DeCB		116	(30%-140%)
		13C-28-TrCB		74.7	(40%-125%)
		13C-111-PeCB		93.2	(40%-125%)
		13C-178-HpCB		95.2	(40%-125%)
019228	MB for batch 35297	13C-1-MoCB		56.2	(15%-150%)
		13C-3-MoCB		61.6	(15%-150%)
		13C-4-DiCB		62.6	(25%-150%)
		13C-15-DiCB		84.6	(25%-150%)
		13C-19-TrCB		73.9	(25%-150%)
		13C-37-TrCB		95.7	(25%-150%)
		13C-54-TeCB		84.1	(25%-150%)
		13C-77-TeCB		130	(25%-150%)
		13C-81-TeCB		129	(25%-150%)
		13C-104-PeCB		80.5	(25%-150%)
		13C-105-PeCB		110	(25%-150%)
		13C-114-PeCB		107	(25%-150%)
		13C-118-PeCB		107	(25%-150%)
		13C-123-PeCB		108	(25%-150%)
		13C-126-PeCB		140	(25%-150%)
		13C-155-HxCB		58.5	(25%-150%)
		13C-156-HxCB	C	99.7	(25%-150%)
		13C-157-HxCB	C156L		
		13C-167-HxCB		96.2	(25%-150%)
		13C-169-HxCB		121	(25%-150%)
		13C-188-HpCB		46.8	(25%-150%)
		13C-189-HpCB		73.6	(25%-150%)
		13C-202-OcCB		58.3	(25%-150%)
		13C-205-OcCB		93.2	(25%-150%)
		13C-206-NoCB		109	(25%-150%)
		13C-208-NoCB		81.2	(25%-150%)
		13C-209-DeCB		113	(25%-150%)
		13C-28-TrCB		76.8	(30%-135%)
		13C-111-PeCB		96.9	(30%-135%)
		13C-178-HpCB		96.3	(30%-135%)
143001	1707E46-001K Rio Grande-North-20170727	13C-1-MoCB		48.1	(15%-150%)
		13C-3-MoCB		56.0	(15%-150%)
		13C-4-DiCB		59.3	(25%-150%)
		13C-15-DiCB		77.2	(25%-150%)
		13C-19-TrCB		72.5	(25%-150%)
		13C-37-TrCB		84.1	(25%-150%)
		13C-54-TeCB		83.5	(25%-150%)
		13C-77-TeCB		118	(25%-150%)
		13C-81-TeCB		114	(25%-150%)
		13C-104-PeCB		83.5	(25%-150%)
		13C-105-PeCB		105	(25%-150%)
		13C-114-PeCB		102	(25%-150%)
		13C-118-PeCB		102	(25%-150%)

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# PCB Congeners Surrogate Recovery Report

SDG Number: 1707E46 Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
11143001	1707E46-001K Rio Grande-North-20170727	13C-123-PeCB		103	(25%-150%)
		13C-126-PeCB		128	(25%-150%)
		13C-155-HxCB		62.2	(25%-150%)
		13C-156-HxCB	C	96.3	(25%-150%)
		13C-157-HxCB	C156L		
		13C-167-HxCB		94.3	(25%-150%)
		13C-169-HxCB		112	(25%-150%)
		13C-188-HpCB		55.4	(25%-150%)
		13C-189-HpCB		75.5	(25%-150%)
		13C-202-OcCB		65.7	(25%-150%)
		13C-205-OcCB		93.5	(25%-150%)
		13C-206-NoCB		107	(25%-150%)
		13C-208-NoCB		86.0	(25%-150%)
		13C-209-DeCB		112	(25%-150%)
		13C-28-TrCB		78.4	(30%-135%)
		13C-111-PeCB		93.5	(30%-135%)
		13C-178-HpCB		96.0	(30%-135%)
143002	1707E46-003K Rio Grande-South-20170728	13C-1-MoCB		44.9	(15%-150%)
		13C-3-MoCB		54.3	(15%-150%)
		13C-4-DiCB		59.0	(25%-150%)
		13C-15-DiCB		101	(25%-150%)
		13C-19-TrCB		81.7	(25%-150%)
		13C-37-TrCB		89.6	(25%-150%)
		13C-54-TeCB		78.1	(25%-150%)
		13C-77-TeCB		117	(25%-150%)
		13C-81-TeCB		114	(25%-150%)
		13C-104-PeCB		85.3	(25%-150%)
		13C-105-PeCB		92.4	(25%-150%)
		13C-114-PeCB		92.4	(25%-150%)
		13C-118-PeCB		93.9	(25%-150%)
		13C-123-PeCB		95.3	(25%-150%)
		13C-126-PeCB		109	(25%-150%)
		13C-155-HxCB		72.3	(25%-150%)
		13C-156-HxCB	С	89.9	(25%-150%)
		13C-157-HxCB	C156L		(== /* == = //)
		13C-167-HxCB		89.3	(25%-150%)
		13C-169-HxCB		102	(25%-150%)
		13C-188-HpCB		65.1	(25%-150%)
		13C-189-HpCB		75.6	(25%-150%)
		13C-202-OcCB		71.3	(25%-150%)
		13C-205-OcCB		92.3	(25%-150%)
		13C-206-NoCB		106	(25%-150%)
		13C-208-NoCB		87.8	(25%-150%)
		13C-209-DeCB		110	(25%-150%)
		13C-28-TrCB		77.0	(30%-135%)
		13C-111-PeCB		90.1	(30%-135%)
		13C-171-1 eCB 13C-178-HpCB		96.7	(30%-135%)

<sup>\*</sup> Recovery outside Acceptance Limits

<sup>#</sup> Column to be used to flag recovery values

D Sample Diluted

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#### **PCB Congeners**

# Quality Control Summary Spike Recovery Report

SDG Number: 1707E46 Sample Type: Laboratory Control Sample

Client ID: LCS for batch 35297 Matrix: WATER

**Lab Sample ID: 12019229** 

Instrument: HRP791 Analysis Date: 08/12/2017 14:59 Dilution: 1

Analyst: MLS Prep Batch ID:35297

Batch ID: 35299

		_	Amount Added		Spike Conc.	•	Acceptance	
CAS No.		Parmname	pg/L		pg/L	<b>%</b>	Limits	
2051-60-7	LCS	1-MoCB	500		469	93.9	50-150	
2051-62-9	LCS	3-MoCB	500		521	104	50-150	
13029-08-8	LCS	4-DiCB	500		444	88.7	50-150	
2050-68-2	LCS	15-DiCB	500		584	117	50-150	
38444-73-4	LCS	19-TrCB	500		475	95	50-150	
38444-90-5	LCS	37-TrCB	500		461	92.2	50-150	
15968-05-5	LCS	54-TeCB	1000		853	85.3	50-150	
32598-13-3	LCS	77-TeCB	1000		923	92.3	50-150	
70362-50-4	LCS	81-TeCB	1000		1000	100	50-150	
56558-16-8	LCS	104-PeCB	1000		863	86.3	50-150	
32598-14-4	LCS	105-PeCB	1000		1090	109	50-150	
74472-37-0	LCS	114-PeCB	1000		1050	105	50-150	
31508-00-6	LCS	118-PeCB	1000		1020	102	50-150	
65510-44-3	LCS	123-PeCB	1000		987	98.7	50-150	
57465-28-8	LCS	126-PeCB	1000		1080	108	50-150	
33979-03-2	LCS	155-HxCB	1000		941	94.1	50-150	
38380-08-4	LCS	156-HxCB	2000	C	2250	113	50-150	
69782-90-7	LCS	157-HxCB		C156				
52663-72-6	LCS	167-HxCB	1000		1150	115	50-150	
32774-16-6	LCS	169-HxCB	1000		1050	105	50-150	
74487-85-7	LCS	188-HpCB	1000		927	92.7	50-150	
39635-31-9	LCS	189-HpCB	1000		1090	109	50-150	
2136-99-4	LCS	202-OcCB	1500		1460	97.4	50-150	
74472-53-0	LCS	205-OcCB	1500		1430	95.5	50-150	
40186-72-9	LCS	206-NoCB	1500		1330	88.8	50-150	
52663-77-1	LCS	208-NoCB	1500		1460	97.7	50-150	
2051-24-3	LCS	209-DeCB	1500		1450	97	50-150	

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#### **PCB Congeners**

## Quality Control Summary Spike Recovery Report

SDG Number: 1707E46 Sample Type: Laboratory Control Sample Duplicate

Client ID: LCSD for batch 35297 Matrix: WATER

**Lab Sample ID: 12019230** 

Instrument: HRP791 Analysis Date: 08/12/2017 16:07 Dilution: 1

Analyst: MLS Prep Batch ID:35297

Batch ID: 35299

CAS No.		Parmname	Amount Added pg/L		Spike Conc. pg/L	Recovery	Acceptance Limits	RPD %	Acceptance Limits
2051-60-7	LCSD	1-MoCB	500		452	90.4	50-150	3.81	0-20
2051-62-9	LCSD	3-MoCB	500		528	106	50-150	1.35	0-20
13029-08-8	LCSD	4-DiCB	500		464	92.8	50-150	4.50	0-20
2050-68-2	LCSD	15-DiCB	500		673	135	50-150	14.1	0-20
38444-73-4	LCSD	19-TrCB	500		485	97	50-150	2.02	0-20
38444-90-5	LCSD	37-TrCB	500		468	93.5	50-150	1.42	0-20
15968-05-5	LCSD	54-TeCB	1000		901	90.1	50-150	5.54	0-20
32598-13-3	LCSD	77-TeCB	1000		948	94.8	50-150	2.67	0-20
70362-50-4	LCSD	81-TeCB	1000		1010	101	50-150	0.587	0-20
56558-16-8	LCSD	104-PeCB	1000		943	94.3	50-150	8.95	0-20
32598-14-4	LCSD	105-PeCB	1000		1100	110	50-150	0.303	0-20
74472-37-0	LCSD	114-PeCB	1000		1070	107	50-150	1.24	0-20
31508-00-6	LCSD	118-PeCB	1000		1030	103	50-150	0.671	0-20
65510-44-3	LCSD	123-PeCB	1000		985	98.5	50-150	0.172	0-20
57465-28-8	LCSD	126-PeCB	1000		1110	111	50-150	2.62	0-20
33979-03-2	LCSD	155-HxCB	1000		935	93.5	50-150	0.663	0-20
38380-08-4	LCSD	156-HxCB	2000	C	2260	113	50-150	0.0843	0-20
69782-90-7	LCSD	157-HxCB	(	C156					
52663-72-6	LCSD	167-HxCB	1000		1130	113	50-150	1.48	0-20
32774-16-6	LCSD	169-HxCB	1000		1060	106	50-150	0.252	0-20
74487-85-7	LCSD	188-НрСВ	1000		913	91.3	50-150	1.55	0-20
39635-31-9	LCSD	189-HpCB	1000		1090	109	50-150	0.0976	0-20
2136-99-4	LCSD	202-OcCB	1500		1460	97.6	50-150	0.242	0-20
74472-53-0	LCSD	205-OcCB	1500		1430	95.1	50-150	0.439	0-20
40186-72-9	LCSD	206-NoCB	1500		1330	88.7	50-150	0.101	0-20
52663-77-1	LCSD	208-NoCB	1500		1470	98.1	50-150	0.412	0-20
2051-24-3	LCSD	209-DeCB	1500		1440	96.1	50-150	0.950	0-20

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**Method Blank Summary** 

SDG Number: 1707E46 **Client ID:** 

MB for batch 35297

Client:

**Prep Date:** 

HALL001 Instrument ID: HRP791 08-AUG-17 Matrix: WATER Data File: c12aug17a-4 Analyzed: 08/12/17 17:15

Lab Sample ID: 12019228 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 35297	12019229	c12aug17a-2	08/12/17	1459	
02 LCSD for batch 35297	12019230	c12aug17a-3	08/12/17	1607	
03 1707E46-001K Rio Grande-North-20170727	11143001	c12aug17a_2-11	08/13/17	1353	
04 1707E46-003K Rio Grande-South-20170728	11143002	c12aug17a_3-9	08/14/17	0019	

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of 8

PCB Congeners Certificate of Analysis Sample Summary

SDG Number: 1707E46 Client: HALL001 Project: HALL00113 Lab Sample ID: 12019228 HALL001 Project: WATER

Client Sample: QC for batch 35297

Client ID: MB for batch 35297

Batch ID: 35299 Run Date: 08/12/2017 17:15

Data File: c12aug17a-4
Prep Batch: 35297

Prep Batch: 35297 Prep Date: 08-AUG-17 Pr

Method: EPA Method 1668A Analyst: MLS

Prep Method: SW846 3520C

Prep Basis: As Received

Instrument: HRP791

Dilution: 1 Prep SOP Ref: CF-OA-E-001

<b>Prep Date:</b>	08-AUG-17	Prep Aliquot:	1000 mL				
CAS No.	Parmname	Qual	Result	Units	EDL	PQL	
2051-60-7	1-MoCB	U	ND	pg/L	7.00	40.0	
2051-61-8	2-MoCB	U	ND	pg/L	7.02	40.0	
2051-62-9	3-MoCB	U	ND	pg/L	6.42	20.0	
13029-08-8	4-DiCB	U	ND	pg/L	41.3	40.0	
16605-91-7	5-DiCB	U	ND	pg/L	24.9	40.0	
25569-80-6	6-DiCB	U	ND	pg/L	20.3	20.0	
33284-50-3	7-DiCB	U	ND	pg/L	23.5	40.0	
34883-43-7	8-DiCB	U	ND	pg/L	19.1	40.0	
34883-39-1	9-DiCB	U	ND	pg/L	25.1	40.0	
33146-45-1	10-DiCB	U	ND	pg/L	23.9	40.0	
2050-67-1	11-DiCB	U	ND	pg/L	24.3	100	
2974-92-7	12-DiCB	CU	ND	pg/L	23.7	40.0	
2974-90-5	13-DiCB	C12					
34883-41-5	14-DiCB	U	ND	pg/L	23.2	40.0	
2050-68-2	15-DiCB	U	ND	pg/L	23.3	20.0	
38444-78-9	16-TrCB	U	ND	pg/L	7.84	20.0	
37680-66-3	17-TrCB	U	ND	pg/L	7.70	20.0	
37680-65-2	18-TrCB	CU	ND	pg/L	6.60	40.0	
38444-73-4	19-TrCB	U	ND	pg/L	8.52	40.0	
38444-84-7	20-TrCB	CU	ND	pg/L	5.58	40.0	
55702-46-0	21-TrCB	CU	ND	pg/L	5.36	40.0	
38444-85-8	22-TrCB	U	ND	pg/L	5.50	20.0	
55720-44-0	23-TrCB	U	ND	pg/L	5.68	20.0	
55702-45-9	24-TrCB	U	ND	pg/L	5.78	40.0	
55712-37-3	25-TrCB	U	ND	pg/L	4.86	20.0	
38444-81-4	26-TrCB	CU	ND	pg/L	5.40	40.0	
38444-76-7	27-TrCB	U	ND	pg/L	5.82	20.0	
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	4.98	20.0	
38444-77-8	32-TrCB	U	ND	pg/L	5.18	20.0	

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.

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Page 2

As Received

**HRP791** 

**PCB Congeners Certificate of Analysis Sample Summary** 

EPA Method 1668A

1707E46 HALL001 SDG Number: Client: Project: HALL00113 12019228 Lab Sample ID: WATER Matrix:

Method:

QC for batch 35297 **Client Sample:** 

**Client ID:** MB for batch 35297 **Batch ID:** 35299

Run Date: 08/12/2017 17:15 Data File: c12aug17a-4

Prep Batch: 35297 Prep Method: 1000 mL **Prep Aliquot:** 

Analyst: MLS Dilution: Prep SOP Ref: CF-OA-E-001 SW846 3520C

**Prep Basis:** 

**Instrument:** 

**Prep Date:** 08-AUG-17 **EDL PQL** CAS No. **Parmname** Qual Result Units 38444-86-9 33-TrCB C21 37680-68-5 34-TrCB U ND pg/L 5.86 20.0 U 37680-69-6 35-TrCB ND pg/L 6.32 40.0 38444-87-0 U 36-TrCB ND pg/L 5.90 20.0 37-TrCB U 38444-90-5 ND pg/L 6.38 20.0 U 53555-66-1 38-TrCB ND pg/L 6.14 20.0 U pg/L 38444-88-1 39-TrCB ND 6.00 20.0 38444-93-8 40-TeCB CU ND pg/L 5.78 40.0 52663-59-9 41-TeCB U ND pg/L 8.48 20.0 36559-22-5 42-TeCB U ND pg/L 6.26 20.0 70362-46-8 43-TeCB U ND pg/L 7.40 20.0 CU 41464-39-5 44-TeCB ND pg/L 6.06 60.0 70362-45-7 45-TeCB CU pg/L 40.0 ND 4.78 41464-47-5 46-TeCB U ND 4.80 20.0 pg/L 2437-79-8 C44 47-TeCB 70362-47-9 48-TeCB U ND pg/L 6.50 20.0 41464-40-8 49-TeCB CU ND 40.0 pg/L 5.66 62796-65-0 50-TeCB CU ND pg/L 4.40 40.0 68194-04-7 51-TeCB C45 35693-99-3 U 52-TeCB ND pg/L 6.58 20.0 41464-41-9 53-TeCB C50 15968-05-5 U ND 3.32 20.0 54-TeCB pg/L 74338-24-2 55-TeCB U ND pg/L 4.76 20.0 U 41464-43-1 56-TeCB ND pg/L 5.00 20.0 U 70424-67-8 57-TeCB ND pg/L 4.86 20.0 U 41464-49-7 58-TeCB ND pg/L 5.06 20.0 74472-33-6 59-TeCB CU ND pg/L 4.92 60.0 33025-41-1 60-TeCB U ND 4.72 20.0 pg/L 33284-53-6 61-TeCB CU ND pg/L 4.72 80.0 54230-22-7 62-TeCB C59 63-TeCB 74472-34-7 U 4.50 20.0 ND pg/L 52663-58-8 64-TeCB U ND pg/L 4.92 20.0

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

c12aug17a-4

Data File:

Report Date: November 2, 2017

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1 Prep SOP Ref: CF-OA-E-001

**PCB Congeners Certificate of Analysis Sample Summary** 

1707E46 Client: HALL001 HALL00113 SDG Number: **Project:** 12019228 WATER Lab Sample ID: Matrix: QC for batch 35297 **Client Sample:** Client ID: MB for batch 35297 **Prep Basis:** As Received **Batch ID:** 35299 Method: EPA Method 1668A 08/12/2017 17:15 **Instrument:** HRP791 **Run Date: Analyst:** MLS Dilution:

SW846 3520C 35297 **Prep Method:** Prep Batch:

Prep Date:	08-AUG-17	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	4.48	20.0
73575-53-8	67-TeCB	U	ND	pg/L	4.38	20.0
73575-52-7	68-TeCB	U	ND	pg/L	4.56	20.0
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	4.62	20.0
74338-23-1	73-TeCB	U	ND	pg/L	5.40	20.0
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	4.40	20.0
70362-49-1	78-TeCB	U	ND	pg/L	4.20	20.0
41464-48-6	79-TeCB	U	ND	pg/L	3.86	20.0
33284-52-5	80-TeCB	U	ND	pg/L	4.14	20.0
70362-50-4	81-TeCB	U	ND	pg/L	4.16	20.0
52663-62-4	82-PeCB	U	ND	pg/L	4.12	20.0
60145-20-2	83-PeCB	U	ND	pg/L	4.74	20.0
52663-60-2	84-PeCB	U	ND	pg/L	4.66	20.0
65510-45-4	85-PeCB	CU	ND	pg/L	3.30	60.0
55312-69-1	86-PeCB	CU	ND	pg/L	3.46	120
38380-02-8	87-PeCB	C86				
55215-17-3	88-PeCB	CU	ND	pg/L	4.40	40.0
73575-57-2	89-PeCB	U	ND	pg/L	4.42	20.0
68194-07-0	90-PeCB	CJ	4.18	pg/L	3.62	60.0
68194-05-8	91-PeCB	C88				
52663-61-3	92-PeCB	U	ND	pg/L	4.10	20.0
73575-56-1	93-PeCB	CU	ND	pg/L	4.42	40.0
73575-55-0	94-PeCB	U	ND	pg/L	4.76	20.0
38379-99-6	95-PeCB	U	ND	pg/L	4.28	20.0
73575-54-9	96-PeCB	U	ND	pg/L	2.80	20.0

- 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.

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### PCB Congeners Certificate of Analysis Sample Summary

		Samp	ne Summary			
SDG Number: Lab Sample ID:		Client:	HALL001		Project: Matrix:	HALL00113 WATER
Client Sample:	QC for batch 35297					
Client ID:	MB for batch 35297	25.0	ED4 M (1 11//04		Prep Basis:	As Received
Batch ID: Run Date:	35299 08/12/2017 17:15	Method: Analyst:	EPA Method 1668A MLS		Instrument:	HRP791
Data File:	c12aug17a-4	maryst.	WILD		Dilution:	1
Prep Batch:	35297	Prep Method:	SW846 3520C		Prep SOP Ref:	CF-OA-E-001
Prep Date:	08-AUG-17	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	4.50	40.0
38380-01-7 99-	-PeCB	U	ND	pg/L	3.80	20.0
39485-83-1 100	0-PeCB	C93				
37680-73-2	1-PeCB	C90				
68194-06-9 102	2-PeCB	C98				
60145-21-3 103	3-PeCB	U	ND	pg/L	4.06	20.0
56558-16-8 104	4-PeCB	U	ND	pg/L	2.70	20.0
32598-14-4 105	5-PeCB	U	ND	pg/L	3.52	20.0
70424-69-0 100	6-PeCB	U	ND	pg/L	3.20	20.0
70424-68-9 103	7-PeCB	U	ND	pg/L	3.20	20.0
70362-41-3 108	8-PeCB	CU	ND	pg/L	3.48	40.0
74472-35-8 109	9-PeCB	C86				
38380-03-9 110	0-PeCB	CU	ND	pg/L	3.02	40.0
39635-32-0 11	1-PeCB	U	ND	pg/L	2.88	20.0
74472-36-9 112	2-PeCB	U	ND	pg/L	2.94	20.0
68194-10-5 113	3-PeCB	C90				
74472-37-0 114	4-PeCB	U	ND	pg/L	3.66	20.0
74472-38-1 115	5-PeCB	C110				
18259-05-7 110	6-PeCB	C85				
68194-11-6 117	7-PeCB	C85				
31508-00-6 118	8-PeCB	U	ND	pg/L	3.46	20.0
56558-17-9 119	9-PeCB	C86				
68194-12-7 120	0-PeCB	U	ND	pg/L	2.66	20.0
56558-18-0 12	1-PeCB	U	ND	pg/L	3.24	20.0
76842-07-4 122	2-PeCB	U	ND	pg/L	3.50	20.0
65510-44-3 123	3-PeCB	U	ND	pg/L	3.60	20.0

C108

C86

U

U

CU

ND

ND

ND

pg/L

pg/L

pg/L

3.26

2.96

4.74

20.0

20.0

40.0

#### **Comments:**

70424-70-3

74472-39-2

57465-28-8

39635-33-1

38380-07-3

- C Congener has coeluters. When Cxxx, refer to congener number xxx for data
- J Value is estimated

124-PeCB

125-PeCB

126-PeCB

127-PeCB

128-HxCB

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

SDG Number:

Lab Sample ID:

1707E46

12019228

Report Date: November 2, 2017

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PCB Congeners Certificate of Analysis Sample Summary

Client: HALL001 Project: HALL00113
Matrix: WATER

Client Sample: QC for batch 35297

Client ID: MB for batch 35297 Prep Basis: As Received

Batch ID: 35299 Method: EPA Method 1668A
Run Date: 08/12/2017 17:15 Analyst: MLS Instrument: HRP791

Data File: c12aug17a-4
Prep Batch: 35297
Prep Date: 08-AUG-17
Prep Aliquot: 1000 mL
Dilution: 1
Prep SOP Ref: CF-OA-E-001

Prep Date:	08-AUG-17	Prep Aliquot:	1000 mL				
CAS No.	Parmname	Qual	Result	Units	EDL	PQL	
55215-18-4	129-HxCB	CJ	8.36	pg/L	5.34	60.0	
52663-66-8	130-HxCB	U	ND	pg/L	6.20	20.0	
61798-70-7	131-HxCB	U	ND	pg/L	7.22	20.0	
38380-05-1	132-HxCB	U	ND	pg/L	6.96	20.0	
35694-04-3	133-HxCB	U	ND	pg/L	6.26	20.0	
52704-70-8	134-HxCB	U	ND	pg/L	8.22	20.0	
52744-13-5	135-HxCB	CU	ND	pg/L	3.96	40.0	
38411-22-2	136-HxCB	U	ND	pg/L	3.14	20.0	
35694-06-5	137-HxCB	U	ND	pg/L	6.12	20.0	
35065-28-2	138-HxCB	C129					
56030-56-9	139-HxCB	CU	ND	pg/L	6.14	40.0	
59291-64-4	140-HxCB	C139					
52712-04-6	141-HxCB	U	ND	pg/L	5.54	20.0	
41411-61-4	142-HxCB	U	ND	pg/L	6.60	20.0	
68194-15-0	143-HxCB	U	ND	pg/L	6.22	20.0	
68194-14-9	144-HxCB	U	ND	pg/L	3.72	20.0	
74472-40-5	145-HxCB	U	ND	pg/L	3.36	20.0	
51908-16-8	146-HxCB	U	ND	pg/L	5.38	20.0	
68194-13-8	147-HxCB	CU	ND	pg/L	6.30	40.0	
74472-41-6	148-HxCB	U	ND	pg/L	4.04	20.0	
38380-04-0	149-HxCB	C147					
68194-08-1	150-HxCB	U	ND	pg/L	3.24	40.0	
52663-63-5	151-HxCB	C135					
68194-09-2	152-HxCB	U	ND	pg/L	3.20	20.0	
35065-27-1	153-HxCB	CJ	8.08	pg/L	4.82	40.0	
60145-22-4	154-HxCB	U	ND	pg/L	3.40	20.0	
33979-03-2	155-HxCB	U	ND	pg/L	3.06	20.0	
38380-08-4	156-HxCB	CU	ND	pg/L	4.76	40.0	
69782-90-7	157-HxCB	C156					
74472-42-7	158-HxCB	U	ND	pg/L	3.94	20.0	
39635-35-3	159-HxCB	U	ND	pg/L	3.64	20.0	
41411-62-5	160-HxCB	U	ND	pg/L	4.52	20.0	

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.

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### PCB Congeners Certificate of Analysis Sample Summary

MLS

EPA Method 1668A

SDG Number: 1707E46 Client: HALL001 Project: HALL00113 Lab Sample ID: 12019228 HALL001 Project: WATER

Method:

**Analyst:** 

Client Sample: QC for batch 35297

Client ID: MB for batch 35297 Batch ID: 35299

Run Date: 08/12/2017 17:15 Data File: c12aug17a-4

Prep Batch: 35297 Prep Method: SW846 3520C Prep Date: 08.4 I/G-17 Prep Aliquot: 1000 mL Prep Basis: As Received

Instrument: HRP791

Dilution: 1 Prep SOP Ref: CF-OA-E-001

Prep Date:	08-AUG-17	Prep Aliquot:	1000 mL				
CAS No.	Parmname	Qual	Result	Units	EDL	PQL	
74472-43-8	161-HxCB	U	ND	pg/L	4.52	20.0	
39635-34-2	162-HxCB	U	ND	pg/L	3.72	20.0	
74472-44-9	163-HxCB	C129					
74472-45-0	164-HxCB	U	ND	pg/L	4.24	20.0	
74472-46-1	165-HxCB	U	ND	pg/L	5.16	20.0	
41411-63-6	166-HxCB	C128					
52663-72-6	167-HxCB	U	ND	pg/L	3.68	20.0	
59291-65-5	168-HxCB	C153					
32774-16-6	169-HxCB	U	ND	pg/L	3.24	20.0	
35065-30-6	170-HpCB	U	ND	pg/L	4.62	40.0	
52663-71-5	171-HpCB	CU	ND	pg/L	5.10	40.0	
52663-74-8	172-HpCB	U	ND	pg/L	4.86	20.0	
68194-16-1	173-HpCB	C171					
38411-25-5	174-HpCB	U	ND	pg/L	5.16	20.0	
40186-70-7	175-HpCB	U	ND	pg/L	3.60	20.0	
52663-65-7	176-HpCB	U	ND	pg/L	3.12	20.0	
52663-70-4	177-HpCB	U	ND	pg/L	5.30	20.0	
52663-67-9	178-HpCB	U	ND	pg/L	3.84	20.0	
52663-64-6	179-HpCB	U	ND	pg/L	3.14	20.0	
35065-29-3	180-НрСВ	CJ	12.8	pg/L	4.06	40.0	
74472-47-2	181-HpCB	U	ND	pg/L	5.12	20.0	
60145-23-5	182-HpCB	U	ND	pg/L	3.58	40.0	
52663-69-1	183-НрСВ	CU	ND	pg/L	4.94	40.0	
74472-48-3	184-НрСВ	U	ND	pg/L	3.12	20.0	
52712-05-7	185-HpCB	C183					
74472-49-4	186-HpCB	U	ND	pg/L	3.30	20.0	
52663-68-0	187-HpCB	U	ND	pg/L	3.58	20.0	
74487-85-7	188-HpCB	U	ND	pg/L	3.30	20.0	
39635-31-9	189-HpCB	U	ND	pg/L	3.88	20.0	
41411-64-7	190-HpCB	U	ND	pg/L	3.58	20.0	
74472-50-7	191-HpCB	U	ND	pg/L	3.60	20.0	
74472-51-8	192-HpCB	U	ND	pg/L	4.02	20.0	

- 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.

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As Received

**HRP791** 

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**PCB Congeners Certificate of Analysis Sample Summary** 

1707E46 HALL001 HALL00113 SDG Number: Client: **Project:** 12019228 WATER Lab Sample ID: Matrix:

QC for batch 35297 **Client Sample:** 

**Client ID:** MB for batch 35297 **Batch ID:** 35299

08/12/2017 17:15 Run Date:

Data File: c12aug17a-4 35297 Prep Batch:

**Prep Aliquot:** 1000 mL **Prep Date:** 08-AUG-17

Method: EPA Method 1668A Analyst: MLS

SW846 3520C **Prep Method:** 

**Instrument:** Dilution: Prep SOP Ref: CF-OA-E-001

**Prep Basis:** 

CAS No. Units **EDL PQL Parmname** Qual Result 69782-91-8 193-HpCB C180 35694-08-7 194-OcCB 40.0 J 6.54 pg/L 3.64 U pg/L 52663-78-2 195-OcCB ND 4.04 20.0 42740-50-1 196-OcCB U ND 4.08 20.0 pg/L 197-OcCB CU 33091-17-7 ND pg/L 3.50 40.0 CJ 68194-17-2 198-OcCB 7.18 pg/L 4.28 40.0 52663-75-9 199-OcCB C198 52663-73-7 200-OcCB C197 U 40186-71-8 201-OcCB ND pg/L 3.52 20.0 2136-99-4 202-OcCB U ND pg/L 4.22 20.0 52663-76-0 203-OcCB J 5.54 pg/L 3.98 40.0 U 74472-52-9 204-OcCB ND pg/L 3.52 20.0 74472-53-0 205-OcCB U ND 2.94 20.0 pg/L pg/L 40186-72-9 206-NoCB U ND 3.20 20.0 52663-79-3 207-NoCB J 4.72 2.92 20.0 pg/L U 52663-77-1 208-NoCB ND pg/L 2.98 20.0 pg/L 2051-24-3 209-DeCB 4.82 2.64 20.0 Total PCB Congeners J 20.0 1336-36-3 62.2 pg/L 6.68

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits	
13C-1-MoCB		1120	2000	pg/L	56.2	(15%-150%)	
13C-3-MoCB		1230	2000	pg/L	61.6	(15%-150%)	
13C-4-DiCB		1250	2000	pg/L	62.6	(25%-150%)	
13C-15-DiCB		1690	2000	pg/L	84.6	(25%-150%)	
13C-19-TrCB		1480	2000	pg/L	73.9	(25%-150%)	
13C-37-TrCB		1910	2000	pg/L	95.7	(25%-150%)	
13C-54-TeCB		1680	2000	pg/L	84.1	(25%-150%)	
13C-77-TeCB		2600	2000	pg/L	130	(25%-150%)	
13C-81-TeCB		2570	2000	pg/L	129	(25%-150%)	
13C-104-PeCB		1610	2000	pg/L	80.5	(25%-150%)	
13C-105-PeCB		2200	2000	pg/L	110	(25%-150%)	
13C-114-PeCB		2140	2000	pg/L	107	(25%-150%)	
13C-118-PeCB		2130	2000	pg/L	107	(25%-150%)	
13C-123-PeCB		2170	2000	pg/L	108	(25%-150%)	
13C-126-PeCB		2800	2000	pg/L	140	(25%-150%)	
13C-155-HxCB		1170	2000	pg/L	58.5	(25%-150%)	
13C-156-HxCB	C	3990	4000	pg/L	99.7	(25%-150%)	
13C-157-HxCB	C156L						
13C-167-HxCB		1920	2000	pg/L	96.2	(25%-150%)	
13C-169-HxCB		2420	2000	pg/L	121	(25%-150%)	
13C-188-HpCB		936	2000	pg/L	46.8	(25%-150%)	
13C-189-HpCB		1470	2000	pg/L	73.6	(25%-150%)	

Cape Fear Analytical LLC

PCB Congeners Certificate of Analysis

Sample Summary

SDG Number: 1707E46 Client: HALL001 Lab Sample ID: 12019228 Project: HALL00113 Matrix: WATER

Report Date: November 2, 2017

of 8

Page 8

As Received

Client Sample: QC for batch 35297 Client ID: MB for batch 35297

Batch ID: MB for batch 35297

Run Date: 08/12/2017 17:15

Method: EPA Method 1668A Analyst: MLS

Instrument: HRP791

**Prep Basis:** 

 $\mathbf{EDL}$ 

Units

Data File: c12aug17a-4
Prep Batch: 35297

**Parmname** 

Prep Method: SW846 3520C Prep Aliquot: 1000 mL

Qual

Dilution: 1 Prep SOP Ref: CF-OA-E-001

**PQL** 

Prep Date: 08-AUG-17 Prep Aliquot: 1000 mL

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
3C-202-OcCB		1170	2000	pg/L	58.3	(25%-150%)
3C-205-OcCB		1860	2000	pg/L	93.2	(25%-150%)
3C-206-NoCB		2170	2000	pg/L	109	(25%-150%)
C-208-NoCB		1620	2000	pg/L	81.2	(25%-150%)
C-209-DeCB		2260	2000	pg/L	113	(25%-150%)
C-28-TrCB		1540	2000	pg/L	76.8	(30%-135%)
C-111-PeCB		1940	2000	pg/L	96.9	(30%-135%)
3C-178-HpCB		1930	2000	pg/L	96.3	(30%-135%)

Result

#### **Comments:**

CAS No.

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.

Page 1

 $\quad \text{of } 2$ 

**PCB Congeners Certificate of Analysis Sample Summary** 

EPA Method 1668A

HALL001 1707E46 Client: **Project:** HALL00113 SDG Number: 12019229 WATER Lab Sample ID: Matrix:

QC for batch 35297 **Client Sample:** 

LCS for batch 35297 **Client ID:** Batch ID: 35299

**Run Date:** 08/12/2017 14:59

Data File: c12aug17a-2 35297 **Prep Batch:** 

**Analyst:** MLS

Method:

**Prep Basis:** As Received

**Instrument:** HRP791 Dilution: 1

Prep Batch: Prep Date:	35297 08-AUG-17	Prep Method: Prep Aliquot:	SW846 3520C 1000 mL		Prep SOP Ref:	CF-OA-E-001
CAS No.	Parmname	Qual	Result	Units	EDL	PQL
2051-60-7	1-MoCB		469	pg/L	16.2	40.0
2051-62-9	3-MoCB		521	pg/L	13.1	20.0
13029-08-8	4-DiCB		444	pg/L	40.6	40.0
2050-68-2	15-DiCB		584	pg/L	26.5	20.0
38444-73-4	19-TrCB		475	pg/L	16.1	40.0
38444-90-5	37-TrCB		461	pg/L	15.2	20.0
15968-05-5	54-TeCB		853	pg/L	6.04	20.0
32598-13-3	77-TeCB		923	pg/L	17.4	20.0
70362-50-4	81-TeCB		1000	pg/L	17.1	20.0
56558-16-8	104-PeCB		863	pg/L	6.54	20.0
32598-14-4	105-PeCB		1090	pg/L	17.6	20.0
74472-37-0	114-PeCB		1050	pg/L	17.5	20.0
31508-00-6	118-PeCB		1020	pg/L	17.3	20.0
65510-44-3	123-PeCB		987	pg/L	17.6	20.0
57465-28-8	126-PeCB		1080	pg/L	16.5	20.0
33979-03-2	155-HxCB		941	pg/L	4.70	20.0
38380-08-4	156-HxCB	C	2250	pg/L	13.3	40.0
69782-90-7	157-HxCB	C156				
52663-72-6	167-HxCB		1150	pg/L	10.3	20.0
32774-16-6	169-HxCB		1050	pg/L	9.20	20.0
74487-85-7	188-HpCB		927	pg/L	5.48	20.0
39635-31-9	189-НрСВ		1090	pg/L	5.48	20.0
2136-99-4	202-OcCB		1460	pg/L	4.96	20.0
74472-53-0	205-OcCB		1430	pg/L	4.02	20.0
40186-72-9	206-NoCB		1330	pg/L	4.02	20.0
52663-77-1	208-NoCB		1460	pg/L	3.52	20.0
2051-24-3	209-DeCB		1450	pg/L	2.90	20.0

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits	
13C-1-MoCB		890	2000	pg/L	44.5	(15%-140%)	
13C-3-MoCB		1030	2000	pg/L	51.5	(15%-140%)	
13C-4-DiCB		1050	2000	pg/L	52.6	(30%-140%)	
13C-15-DiCB		1380	2000	pg/L	69.2	(30%-140%)	
13C-19-TrCB		1250	2000	pg/L	62.6	(30%-140%)	
13C-37-TrCB		1550	2000	pg/L	77.7	(30%-140%)	
13C-54-TeCB		1500	2000	pg/L	75.1	(30%-140%)	
13C-77-TeCB		2210	2000	pg/L	110	(30%-140%)	
13C-81-TeCB		2120	2000	pg/L	106	(30%-140%)	
13C-104-PeCB		1370	2000	pg/L	68.5	(30%-140%)	
13C-105-PeCB		1800	2000	pg/L	89.9	(30%-140%)	
13C-114-PeCB		1780	2000	pg/L	88.8	(30%-140%)	
13C-118-PeCB		1770	2000	pg/L	88.3	(30%-140%)	

Report Date: November 2, 2017 Page 2

of 2

**PCB Congeners Certificate of Analysis Sample Summary** 

MLS

 $1000 \ mL$ 

1707E46 SDG Number: 12019229 Lab Sample ID:

QC for batch 35297

**Parmname** 

**Client ID:** 

CAS No.

**Client Sample:** LCS for batch 35297

**Batch ID:** 35299

08/12/2017 14:59 **Run Date:** 

Data File: c12aug17a-2 **Prep Batch:** 35297

**Prep Date:** 08-AUG-17 Client:

Method:

**Analyst:** 

**Prep Method:** 

HALL001

EPA Method 1668A

SW846 3520C

**Project:** Matrix: HALL00113

WATER

**Prep Basis:** As Received

**Instrument:** HRP791

Dilution:

Prep SOP Ref: CF-OA-E-001

Prep Aliquot: **EDL PQL** Qual Result Units

urrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
3C-123-PeCB		1780	2000	pg/L	89.1	(30%-140%)
8C-126-PeCB		2310	2000	pg/L	115	(30%-140%)
8C-155-HxCB		993	2000	pg/L	49.6	(30%-140%)
BC-156-HxCB	C	3370	4000	pg/L	84.3	(30%-140%)
BC-157-HxCB	C156L					
SC-167-HxCB		1610	2000	pg/L	80.4	(30%-140%)
3C-169-HxCB		2060	2000	pg/L	103	(30%-140%)
C-188-HpCB		812	2000	pg/L	40.6	(30%-140%)
С-189-НрСВ		1280	2000	pg/L	64.2	(30%-140%)
C-202-OcCB		1000	2000	pg/L	50.0	(30%-140%)
C-205-OcCB		1580	2000	pg/L	79.1	(30%-140%)
C-206-NoCB		1850	2000	pg/L	92.4	(30%-140%)
C-208-NoCB		1410	2000	pg/L	70.3	(30%-140%)
C-209-DeCB		1920	2000	pg/L	96.1	(30%-140%)
C-28-TrCB		1330	2000	pg/L	66.6	(40%-125%)
C-111-PeCB		1620	2000	pg/L	81.2	(40%-125%)
-178-НрСВ		1610	2000	pg/L	80.7	(40%-125%)

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

of 2

**PCB Congeners Certificate of Analysis Sample Summary** 

1707E46 Client: HALL001 **Project:** HALL00113 SDG Number: 12019230 WATER Lab Sample ID: Matrix:

QC for batch 35297 **Client Sample:** 

**Client ID:** LCSD for batch 35297

**Batch ID:** 35299

08/12/2017 16:07 **Run Date:** Data File: c12aug17a-3

35297 Prep Batch: **Prep Date:** 08-AUG-17 Method: EPA Method 1668A **Analyst:** MLS

SW846 3520C **Prep Method: Prep Aliquot:** 1000 mL

**Prep Basis:** 

Page 1

As Received

**Instrument:** HRP791 Dilution:

Prep SOP Ref: CF-OA-E-001

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
2051-60-7	1-MoCB		452	pg/L	17.5	40.0
2051-62-9	3-МоСВ		528	pg/L	14.4	20.0
13029-08-8	4-DiCB		464	pg/L	38.9	40.0
2050-68-2	15-DiCB		673	pg/L	29.6	20.0
38444-73-4	19-TrCB		485	pg/L	14.8	40.0
38444-90-5	37-TrCB		468	pg/L	18.1	20.0
15968-05-5	54-TeCB		901	pg/L	8.04	20.0
32598-13-3	77-TeCB		948	pg/L	22.3	20.0
70362-50-4	81-TeCB		1010	pg/L	23.0	20.0
56558-16-8	104-PeCB		943	pg/L	9.18	20.0
32598-14-4	105-PeCB		1100	pg/L	20.1	20.0
74472-37-0	114-PeCB		1070	pg/L	20.1	20.0
31508-00-6	118-PeCB		1030	pg/L	20.6	20.0
65510-44-3	123-PeCB		985	pg/L	19.9	20.0
57465-28-8	126-PeCB		1110	pg/L	18.8	20.0
33979-03-2	155-HxCB		935	pg/L	6.88	20.0
38380-08-4	156-HxCB	C	2260	pg/L	19.7	40.0
69782-90-7	157-HxCB	C156				
52663-72-6	167-HxCB		1130	pg/L	15.4	20.0
32774-16-6	169-HxCB		1060	pg/L	12.8	20.0
74487-85-7	188-HpCB		913	pg/L	378	20.0
39635-31-9	189-HpCB		1090	pg/L	6.14	20.0
2136-99-4	202-OcCB		1460	pg/L	6.86	20.0
74472-53-0	205-OcCB		1430	pg/L	5.26	20.0
40186-72-9	206-NoCB		1330	pg/L	4.00	20.0
52663-77-1	208-NoCB		1470	pg/L	3.74	20.0
2051-24-3	209-DeCB		1440	pg/L	2.70	20.0

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1-MoCB		1030	2000	pg/L	51.4	(15%-140%)
13C-3-MoCB		1190	2000	pg/L	59.6	(15%-140%)
13C-4-DiCB		1190	2000	pg/L	59.3	(30%-140%)
13C-15-DiCB		1520	2000	pg/L	75.9	(30%-140%)
13C-19-TrCB		1470	2000	pg/L	73.5	(30%-140%)
13C-37-TrCB		1590	2000	pg/L	79.5	(30%-140%)
13C-54-TeCB		1700	2000	pg/L	84.8	(30%-140%)
13C-77-TeCB		2260	2000	pg/L	113	(30%-140%)
13C-81-TeCB		2230	2000	pg/L	111	(30%-140%)
13C-104-PeCB		1630	2000	pg/L	81.5	(30%-140%)
13C-105-PeCB		2170	2000	pg/L	108	(30%-140%)
13C-114-PeCB		2130	2000	pg/L	107	(30%-140%)
13C-118-PeCB		2070	2000	pg/L	104	(30%-140%)

of 2

Page 2

As Received

**PCB Congeners Certificate of Analysis Sample Summary** 

1707E46 SDG Number: Lab Sample ID:

12019230

Client:

HALL001

Project: **HALL00113** Matrix: WATER

**Prep Basis:** 

**EDL** 

Units

93.1

110

79.9

116

74.7

93.2

95.2

**Client Sample:** 

**Client ID:** 

**Batch ID:** 

Run Date:

CAS No.

QC for batch 35297

LCSD for batch 35297

**Parmname** 

35299

08/12/2017 16:07

Data File: c12aug17a-3 35297 Prep Batch:

Method: EPA Method 1668A Analyst:

Result

2000

2000

2000

2000

2000

2000

2000

pg/L

pg/L

pg/L

pg/L

pg/L

pg/L

pg/L

**Prep Method:** 

Qual

MLS

SW846 3520C

**HRP791 Instrument:** 

(30%-140%)

(30%-140%)

(30%-140%)

(30%-140%)

(40%-125%)

(40%-125%)

(40%-125%)

Dilution:

Prep SOP Ref: CF-OA-E-001

**PQL** 

1000 mL **Prep Aliquot: Prep Date:** 08-AUG-17

Surrogate/Tracer recovery Units Recovery% **Acceptable Limits** Qual Result Nominal 2110 2000 13C-123-PeCB pg/L 106 (30%-140%) 13C-126-PeCB 2830 2000 pg/L 141 (30%-140%) 13C-155-HxCB pg/L 1140 2000 57.1 (30%-140%) 13C-156-HxCB C 4270 4000 pg/L 107 (30%-140%) 13C-157-HxCB C156L 13C-167-HxCB 2000 2000 pg/L 100 (30%-140%) 13C-169-HxCB 2680 2000 pg/L 134 (30%-140%) 13C-188-HpCB 824 2000 pg/L 41.2 (30%-140%) 13С-189-НрСВ 1470 2000 73.7 (30%-140%) pg/L 13C-202-OcCB 1050 2000 52.7 (30%-140%) pg/L

1860

2200

1600

2330

1490

1860

1900

13С-178-НрСВ **Comments:** 

13C-205-OcCB

13C-206-NoCB

13C-208-NoCB

13C-209-DeCB

13C-28-TrCB

13C-111-PeCB

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



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

October 02, 2017

Patrick Chavez
AMAFCA
2600 Prospect Ave NE
Albuquerque, NM 87107

TEL: (505) 884-2215

FAX

Sept. 27, 2017 Rio Grande North - E. coli result

RE: CMC OrderNo.: 1709F09

### Dear Patrick Chavez:

Hall Environmental Analysis Laboratory received 1 sample(s) on 9/27/2017 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> 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 #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

andel

4901 Hawkins NE

Albuquerque, NM 87109

# **Analytical Report**

# Lab Order **1709F09**Date Reported: **10/2/2017**

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: AMAFCA Client Sample ID: Rio Grande-North-20170927

 Project:
 CMC
 Collection Date: 9/27/2017 12:00:00 PM

 Lab ID:
 1709F09-001
 Matrix: AQUEOUS
 Received Date: 9/27/2017 12:30:00 PM

Analyses	Result	PQL Qual	Units	DF	Date Analyzed
SM 9223B FECAL INDICATOR: E. COLI	MPN				Analyst: SMS
E. Coli	733	10.00	MPN/100mL	10	9/28/2017 6:51:00 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 Page 1 of 1
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



### Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

# Sample Log-In Check List

Clie	ent Name:	AMAFCA		Work C	Order Numb	er: 1709I	-09			ReptNo	p: <b>1</b>
Rece	eived By:	Anne Tho	me	9/27/2017	7 12:30:00	PM		Anne .	A	_	
Com	pleted By:	Anne Tho	me	9/27/2017	7 12:45:42	РМ		Ann. Ann.	11.		
Revi	iewed By:	A	0912711	7				Unia j	<i>,,</i>	-	
<u>Cha</u>	in of Cus	tod <u>y</u>									
1. (	Custody sea	ils intact on s	ample bottles?	>		Yes		No		Not Present 🗹	
2. 1	s Chain of C	Custody comp	lete?			Yes	✓	No		Not Present	
3. I	How was the	e sample deliv	/ered?			Clien	<u>t</u>				
Log	<u>ı In</u>										
4.	Was an atte	empt made to	cool the sam	oles?		Yes	V	No		NA 🗆	
5. V	Were all san	nples receive	d at a tempera	ature of >0° C				No		na 🗆	
6	Comple/a) is	n proper conta	ninor/a\2		Samples v	<u>vere colle</u> Yes		the same d	ay an	d chilled.	
0.	oampie(s) ii	i proper conta	allier(S)?			res	•	140			
7. 8	Sufficient sa	mple volume	for indicated t	est(s)?		Yes	<b>~</b>	No			
8. <i>F</i>	Are samples	(except VOA	and ONG) pr	operly preserve	ed?	Yes	✓	No			
9. v	Was preserv	ative added t	o bottles?			Yes		No	<b>✓</b>	NA 🗆	
10.\	/OA vials ha	ave zero head	space?			Yes		No		No VOA Vials ☑	
			ers received b	roken?		Yes		No	<b>Y</b>		
	•	•								# of preserved bottles checked	
12.0	Does paperv	vork match bo	ottle labels?			Yes	✓	No		for pH:	
			ain of custody	•		.,		N-		(<2 Adjusted?	or >12 unless noted)
		•	rumed on Cha rere requested	in of Custody?		Yes Yes	<b>∨</b>	No No		,	
		ing times abl	•	ır			<b>✓</b>	No	_	Checked by:	
			authorization.)	•							
_											
Spec	cial Hand	ling (if app	olicable)								
16. V	Vas client n	otified of all d	iscrepancies v	vith this order?		Yes		No		NA 🗹	<del></del> -,
	Person	Notified:			Date	T. T	*********	066464666666666666666666666666666666666	MANAGEMENT.		
	By Wh	om:	THE REAL PROPERTY OF THE PROPE		Via:	eMa	il [	Phone	Fax	☐ In Person	
	Regard	-									
	Client I	nstructions:									
17. /	Additional re	emarks:									
18. <u>c</u>	Cooler Info	_			=						
	Cooler No		Condition	Seal Intact	Seal No	Seal Da	ite	Signed E	Зу		
	1	17.9	Good	Not Present							

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ļ	<u> </u>	www.hallenvironmental.com	nerd	Fax 505-345-4107	Analysis Request						8081 Pesticio											
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	ПΓ		4901 Hawkins NE	Tel. 505-345-3975		(0)	JW /	′ O⊱	O / DI	ЯĐ)	12108 H9T					<u> </u>						
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Turn-Around Time:	∑ Standard	Project Na	CMC	Project #:		Project Manager:	— (ブ 大	5	Sampler:	Sample Temperature	Container Type and #	1 (716						·			Received by:	Received by:
Chain-of-Custody Record	Ŧ		00 Prospect AR		84-274S	email or Fax#: pchasta conafta. org	)	☐ Level 4 (Full Validation)	Jer	AAA.S	Sample Request ID	Riobarde North - 2017 1992)									hed bad	hed by:
1-of-C	AMAFCA		is: 2600		-432-20S	Pcha			□ Other		Matrix	3 40								-	Seimshed by	Relinquished by
Shair	¥		Mailing Address:		l i	or Fax#:	QA/QC Package:	ndard	Accreditation □ NELAP	□ EDD (Type)	Time	1200	_	-		<u>.</u>					Time: - 12.33	Time:
	Client:		Mailing		Phone #:	email	QA/QC	X Standard	Accreditati □ NELAP		Date	4-17-6									9/17/P	Date:



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

Sept. 27, 2017 Rio Grande at Alameda Pre-storm - E.

October 02, 2017

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

FAX

OrderNo.: 1709F01

coli result

RE: ALAMEDA CMC

Dear Patrick Chavez:

Hall Environmental Analysis Laboratory received 1 sample(s) on 9/27/2017 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> 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 #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

andel

4901 Hawkins NE

Albuquerque, NM 87109

# **Analytical Report**

# Lab Order **1709F01**Date Reported: **10/2/2017**

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: AMAFCA Client Sample ID: ALAMEDA PRE STORM

 Project:
 ALAMEDA CMC
 Collection Date: 9/27/2017 10:30:00 AM

 Lab ID:
 1709F01-001
 Matrix: AQUEOUS
 Received Date: 9/27/2017 10:54:00 AM

Analyses	Result	PQL Qua	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI	MPN				Analy	st: SMS
E. Coli	218	10.00	MPN/100mL	10	9/28/2017 2:48:00 PM	M 34107

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

*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 1
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified
	D H ND	<ul> <li>D Sample Diluted Due to Matrix</li> <li>H Holding times for preparation or analysis exceeded</li> <li>ND Not Detected at the Reporting Limit</li> <li>PQL Practical Quanitative Limit</li> </ul>	D     Sample Diluted Due to Matrix     E       H     Holding times for preparation or analysis exceeded     J       ND     Not Detected at the Reporting Limit     P       PQL     Practical Quanitative Limit     RL



### Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name:	AMAFCA	Work Order Number	r: 1709F01		RcptNo:	1
Received By:	Sophia Campuzano	9/27/2017 10:54:00 A	М	Sophia Organ		
Completed By:	Sophia Campuzano	9/27/2017 11:08:14 A	м	Sophia Compu- Sophia Compu-		
Reviewed By:	ENM	9/27/17				
Chain of Cus	<u>tody</u>					
1. Custody sea	ls intact on sample bottles	?	Yes 🗌	No 🗌	Not Present	
2. Is Chain of C	Custody complete?		Yes 🗹	No 🗌	Not Present	
3. How was the	e sample delivered?		<u>Client</u>			
<u>Log In</u>						
4. Was an atte	mpt made to cool the sam	oles?	Yes 🗹	No 🗀	NA 🗀	
5. Were all sar	nples received at a temper	ature of >0° C to 6.0°C	Yes	No 🗹	NA $\square$	
<b>6</b> 0		Samples we		the same day an	d chilled.	
o. Sample(s) II	n proper container(s)?		Yes 🗹	No 🗀		
7. Sufficient sa	mple volume for indicated	rest(s)?	Yes 🗹	No 🗌		
8. Are samples	(except VOA and ONG) pa	operly preserved?	Yes 🗹	No 📙	_	
9. Was preserv	rative added to bottles?		Yes 🗌	No 🗹	NA 🗆	
10. VOA vials ha	ave zero headspace?		Yes 🗌	No 🗆	No VOA Vials 🗹	
11. Were any sa	ample containers received	oroken?	Yes 🗌	No 🗹	# of preserved	<del></del>
12 Dogs papers	vork match bottle labels?		Yes 🗹	No 🗆	bottles checked for pH:	
	pancies on chain of custod	<i>(</i> )	ies 💌	NO 🗆	· —	r >12 unless noted)
13. Are matrices	correctly identified on Cha	in of Custody?	Yes 🗸	No 🗆	Adjusted?	
14. Is it clear wh	at analyses were requested	1?	Yes 🗹	No 🗆		
	ling times able to be met? customer for authorization.	)	Yes 🗹	No 🗌	Checked by:	
	ling (if applicable)		_	_	_	
16. Was client no	otified of all discrepancies	with this order?	Yes 🗌	No 🗆	NA 🗹	٦
Person	Notified:	Date				
By Wh	om:	Via:	eMail	Phone  Fax	☐ In Person	
Regard	ling:					
Client I	nstructions:				THE PARTY OF THE P	
17. Additional re	emarks:					~
18. <u>Cooler Info</u>	<del></del> .		-			
Cooler No		<del>                                     </del>	Seal Date	Signed By		
11	13.3 Good	Not Present				

	.AL	SRY							(	N 10	· 人	Bubbles (	ηiΑ									<u> </u>	
	HALL ENVIRONMENTAL	ANALYSIS LABORATORY	www.hallenvironmental.com	- Albuqu	375 Fax 505-345-4107	Analysis Request	Ú†OS'	<sup>Ԡ</sup> Oc	102,1 2808	s 1, <sub>E</sub> O 3 \ s	tali ,N, de: ,)	18 (8310) 8 (8310) 8 (8310) 8 (8,Cl) 18 (8) (9) (9) (9) (9) (9) (9) (9) (9) (9) (9	)A 1A 08 28 28	<b>&gt;</b>									
i	YH I	A A	WWV	4901 Hawkins N	lei. 505-345-3975		luo s	SEO)	) Н91 Я0 \ (	814 980	9) 3)	TEX + MT TEX + MT TEX + MT	B IT								Kemarks:		
Turn-Around Time:	X Standard	<u></u>	ALAMOON CONC	Project #:		Project Manager:		73m62		A Test A MINO	S. String of the string	Container Preservative HEAL No Type and #								Received by:	- Con calcolo 1054	Received by: Date Time	
Chain-of-Custody Record	Client: Anateca - Conc		Mailing Address: 2600 Prosoure Ne NE	W. Bravenave, Non 87107	22 -h	email or Fax#: pchavez (a) anafrages	の:ede:	☐ Level 4 (Full Validation)	Other Other	□ EDD (Type)		Date Time Matrix Sample Request ID	9/27/17/0300 AD ALDMODA PRE STORM							Date: Time: Reliablished by: Re	11) 0:01	Vate: Time: Relinquished by:	

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.

((i ent Sea 09/21/17)

# Bernalillo WWTP E. coli WORKSHEET

Time of Sampling: 10 '00 M Time of Arrival: 10 '35 PM  Type of Sample: Grab Sample Instantaneous Flow: MGD  Exact Location: EFF WW River Flow  Hach m-ColiBlue 24 EPA Approved Method
Refrigerator Temperature: 4 °C (Samples must be stored at <6°C)
In Incubator:  Date: $9/27/17$ Time: $10.46$ Temp: $35.6$ °C  Out of Incubator:  Date: $9/28/17$ Time: $10.46$ Temp: $10.66$ Temp: $10.66$ Temp: $10.66$ °C $10.66$ Temp: $10.66$ Temp: $10.66$ °C $10.66$ Temp: $10.66$ Temp: $10.66$ °C

\*\*Formula: Calculate coliform density: Use all plates and filtered volumes that fall between the ideal range. Include duplicates and multiple dilutions.

Colonies/100 mL = (coliform colonies counted) X (100) mLs Sample filtered

\*\*Formula: If no plate falls in the ideal range, use all plates and filtered volumes not categorized as TNTC or Confluent Growth.

Colonies/100 mL = (Sum of colonies in all samples) X (100) Sum of volume (in mL) of all samples

(Use the worksheet below to calculate coliform density)

Sample	Volume	Blue Colonies
Blank I	100 mL	6
25	10m2 25 mt	1
50A	10m2 25 mt 20m2 50 mt	N
50B	20 mL 50 ml	T
100	50ml 100 mt.	C
Blank II	100 mL	8

Sampled By: Mark Woodon

Analyzed By: Mach Contains

IF: The total number of colonies exceeds 200 per membrane, or the colonies are too indistinct for accurate counting, or exceed 60 blue colonies, report the results as "Too Numerous to Count (TNTC)" Or "confluent growth" as applies.

\*\*Use plates that fall in the ideal range for Quantitative Determinations for e-coli (20-60)

E. coli Colonies Reported/100 mls





October 31, 2017

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

FAX

RE: CMC OrderNo.: 1709F81

Hall Environmental Analysis Laboratory

TEL: 505-345-3975 FAX: 505-345-4107

Sept. 27, 2017 Rio

28, 2017 Rio Grande

South results

Website: www.hallenvironmental.com

Grande North and Sept.

4901 Hawkins NE

Albuquerque, NM 87109

Dear Patrick Chavez:

Hall Environmental Analysis Laboratory received 5 sample(s) on 9/28/2017 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> 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 #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

andel

4901 Hawkins NE

Albuquerque, NM 87109

Field Data - Provided by DBS&A (field

notebook):

9/27/17 - Rio Grande North

 $DO = 7.13 \text{ mg/L}, pH = 7.83, Conductivity} =$ 

103.4 umhos/cm, and Temperature = 16.3°C

9/28/17 - Rio Grande South

 $DO = 7.23 \text{ mg/L}, pH = 7.92, Conductivity} =$ 

192.2 umhos/cm, and Temperature = 15.2°C

# Hall Environmental Analysis Laboratory, Inc.

Date Reported: 10/31/2017

CLIENT: AMAFCA Client Sample ID: Rio Grande-South-20170928

 Project:
 CMC
 Collection Date: 9/28/2017 9:00:00 AM

 Lab ID:
 1709F81-001
 Matrix: AQUEOUS
 Received Date: 9/28/2017 1:40:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: MRA	
Nitrogen, Nitrite (As N)	ND	0.034	0.50		mg/L	5	9/29/2017 10:01:11 AM	R46023
Nitrogen, Nitrate (As N)	0.46	0.11	0.50	J	mg/L	5	9/29/2017 10:01:11 AM	R46023
EPA METHOD 200.7: METALS							Analyst: pmf	
Calcium	80	0.078	1.0		mg/L	1	10/16/2017 6:38:36 PM	34381
Magnesium	15	0.25	1.0		mg/L	1	10/16/2017 6:38:36 PM	34381
EPA 200.8: DISSOLVED METALS							Analyst: <b>JLF</b>	
Copper	0.00098	0.00030	0.0010	J	mg/L	1	10/6/2017 8:08:32 PM	C46196
Lead	0.00047	0.00017	0.00050	J	mg/L	1	10/6/2017 8:08:32 PM	C46196
SM2340B: HARDNESS							Analyst: <b>pmf</b>	
Hardness (As CaCO3)	260	2.5	6.6		mg/L	1	10/17/2017	R46397
SM5210B: BOD							Analyst: SMS	
Biochemical Oxygen Demand	5.0	2.0	2.0		mg/L	1	10/4/2017 12:17:00 PM	34138
SM 9223B FECAL INDICATOR: E. COI	LI MPN						Analyst: SMS	
E. Coli	6131	10.00	10.00		MPN/100	10	9/29/2017 3:20:00 PM	34130
EPA METHOD 1664B							Analyst: dbf	
N-Hexane Extractable Material	ND	3.85	10.2		mg/L	1	10/4/2017 8:00:00 AM	34213
SM 4500 NH3: AMMONIA							Analyst: smb	
Nitrogen, Ammonia	ND	0.40	1.0		mg/L	1	10/16/2017 2:44:00 PM	R46385
SM4500-H+B: PH							Analyst: JRR	
рН	7.97			Н	pH units	1	10/2/2017 11:40:44 AM	R46061
EPA METHOD 365.1: TOTAL PHOSPH	IOROUS						Analyst: JRR	
Phosphorus, Total (As P)	0.74	0.050	0.050	D	mg/L	1	10/13/2017 9:28:00 AM	34388
SM2540C MOD: TOTAL DISSOLVED S	SOLIDS						Analyst: KS	
Total Dissolved Solids	260	118	200	D	mg/L	1	10/4/2017 8:51:00 PM	34208
SM 4500 NORG C: TKN							Analyst: smb	
Nitrogen, Kjeldahl, Total	1.7	0.88	2.0	JD	mg/L	1	10/17/2017 10:53:00 AM	Л 34412
SM 2540D: TSS							Analyst: <b>KS</b>	
Suspended Solids	810	20	20	D	mg/L	1	10/2/2017 4:41:00 PM	34153

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 Detection Limit

W Sample container temperature is out of limit as specified

Page 1 of 15

# Hall Environmental Analysis Laboratory, Inc.

Date Reported: 10/31/2017

CLIENT: AMAFCA Client Sample ID: Rio Grande-North-20170927

 Project:
 CMC
 Collection Date: 9/27/2017 12:00:00 PM

 Lab ID:
 1709F81-003
 Matrix: AQUEOUS
 Received Date: 9/28/2017 1:40:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: MRA	
Nitrogen, Nitrite (As N)	ND	0.034	0.50		mg/L	5	9/29/2017 10:26:00 AM	R46023
Nitrogen, Nitrate (As N)	0.20	0.11	0.50	J	mg/L	5	9/29/2017 10:26:00 AM	R46023
EPA METHOD 200.7: METALS							Analyst: pmf	
Calcium	40	0.078	1.0		mg/L	1	10/16/2017 6:40:14 PM	34381
Magnesium	9.0	0.25	1.0		mg/L	1	10/16/2017 6:40:14 PM	34381
EPA 200.8: DISSOLVED METALS							Analyst: JLF	
Copper	0.00095	0.00030	0.0010	J	mg/L	1	10/6/2017 8:14:39 PM	C46196
Lead	ND	0.00017	0.00050		mg/L	1	10/6/2017 8:14:39 PM	C46196
SM2340B: HARDNESS							Analyst: pmf	
Hardness (As CaCO3)	140	2.5	6.6		mg/L	1	10/17/2017	R46397
SM5210B: BOD							Analyst: SMS	
Biochemical Oxygen Demand	2.0	2.0	2.0		mg/L	1	10/4/2017 12:17:00 PM	34138
EPA METHOD 1664B							Analyst: dbf	
N-Hexane Extractable Material	ND	3.73	9.86		mg/L	1	10/4/2017 8:00:00 AM	34213
SM 4500 NH3: AMMONIA							Analyst: smb	
Nitrogen, Ammonia	ND	0.40	1.0		mg/L	1	10/16/2017 2:44:00 PM	R46385
SM4500-H+B: PH							Analyst: JRR	
рН	8.06			Н	pH units	1	10/2/2017 11:44:35 AM	R46061
EPA METHOD 365.1: TOTAL PHOSPHO	OROUS						Analyst: JRR	
Phosphorus, Total (As P)	0.28	0.050	0.050	D	mg/L	1	10/13/2017 9:29:00 AM	34388
SM2540C MOD: TOTAL DISSOLVED S	OLIDS						Analyst: KS	
Total Dissolved Solids	225	59.1	100	D	mg/L	1	10/4/2017 8:51:00 PM	34208
SM 4500 NORG C: TKN							Analyst: smb	
Nitrogen, Kjeldahl, Total	0.84	0.44	1.0	J	mg/L	1	10/17/2017 10:53:00 AM	Л 34412
SM 2540D: TSS							Analyst: KS	
Suspended Solids	260	7.9	8.0	D	mg/L	1	10/2/2017 4:41:00 PM	34153

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 Detection Limit

W Sample container temperature is out of limit as specified

Page 2 of 15

# **Analytical Report**

### Lab Order 1709F81

Date Reported: 10/31/2017

34388

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: AMAFCA Client Sample ID: Rio Grande-South-20170928 Filt

 Project:
 CMC
 Collection Date: 9/28/2017 9:00:00 AM

 Lab ID:
 1709F81-005
 Matrix: AQUEOUS
 Received Date: 9/28/2017 1:40:00 PM

Analyses Result MDL PQL Qual Units DF Date Analyzed Batch ID

EPA METHOD 365.1: TOTAL PHOSPHOROUS

Analyst: JRR

 PA METHOD 365.1: TOTAL PHOSPHOROUS
 Analyst: JRR

 Phosphorus, Total (As P)
 0.080
 0.010
 0.010
 mg/L
 1
 10/13/2017 9:34:00 AM

Dissolved phosphorous - filtered sample

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 Detection Limit
- W Sample container temperature is out of limit as specified

Page 3 of 15

# **Analytical Report**Lab Order **1709F81**

# Hall Environmental Analysis Laboratory, Inc.

Date Reported: 10/31/2017

CLIENT: AMAFCA Client Sample ID: Rio Grande-North-20170927 Filt

 Project:
 CMC
 Collection Date: 9/27/2017 12:00:00 PM

 Lab ID:
 1709F81-006
 Matrix: AQUEOUS
 Received Date: 9/28/2017 1:40:00 PM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	<b>Batch ID</b>
EPA METHOD 365.1: TOTAL PHOS	SPHOROUS						Analyst: JRR	
Phosphorus Total (As P)	0.029	0.010	0.010		ma/l	1	10/13/2017 9·35·00 AM	34388

Dissolved phosphorous - filtered sample

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 Detection Limit
- W Sample container temperature is out of limit as specified

Page 4 of 15

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9245 • email moscow@anateklabs.com 504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:

HALL ENVIRONMENTAL ANALYSIS LAB

Batch #:

171003037

Address:

Attn:

4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109

Project Name:

1709F81

ANDY FREEMAN

### **Analytical Results Report**

Sample Number

171003037-001

Sampling Date

9/28/2017

Date/Time Received 10/3/20172:05 PM

Client Sample ID Matrix

1709F81-001A / RIO GRANDE-SOUTH 20170928

Sampling Time 9:00 AM

Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Tetrahydrofuran	ND	ug/L	0.5	10/4/2017	SAT	EPA 8260C	

#### Surrogate Data

Sample Number 171003037-001			
Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260C	100.4	70-130
4-Bromofluorobenzene	EPA 8260C	96.8	70-130
Toluene d8	EPA 8260C	98.8	70-130

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Client:

HALL ENVIRONMENTAL ANALYSIS LAB

Batch #:

171003037

Address:

4901 HAWKINS NE SUITE D

**Project Name:** 

1709F81

Attn:

ALBUQUERQUE, NM 87109 **ANDY FREEMAN** 

### **Analytical Results Report**

Sample Number

171003037-004

Sampling Date 9/27/2017

ug/L

Date/Time Received

10/3/20172:05 PM

Client Sample ID

1709F81-003A / RIO GRANDE-NORTH-20170927

Sampling Time 12:00 PM

Matrix

Water

Comments

Units PQL **Analysis Date** 

**Analyst** 

Method Qualifier

Parameter Tetrahydrofuran

ND

Result

0.5

10/4/2017

SAT **EPA 8260C** 

**Surrogate Data** 

171003037-004 Sample Number **Surrogate Standard** 

1,2-Dichlorobenzene-d4 4-Bromofluorobenzene Toluene-d8

Method **EPA 8260C EPA 8260C EPA 8260C** 

**Percent Recovery** 102.8 96.0 98.8

**Control Limits** 70-130 70-130

70-130

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; NV:ID00013; OR:ID200001-002; WA:C595 Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0096; FL(NELAP): E871099

Monday, October 30, 2017 Page 2 of 3

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com 504 E Sprague Ste. D . Spokane WA 99202 . (509) 838-3999 - Fax (509) 838-4433 - email spokane@anateklabs.com

Client:

HALL ENVIRONMENTAL ANALYSIS LAB

Batch #:

171003037

Address:

4901 HAWKINS NE SUITE D

Project Name:

1709F81

Attn:

ALBUQUERQUE, NM 87109 ANDY FREEMAN

### **Analytical Results Report**

Sample Number

171003037-007

Sampling Date 9/27/2017

Date/Time Received

10/3/20172 05 PM

Client Sample ID

1709FB1-004A / TRIP BLANK

Sampling Time

Matrix

Water

2000	men	4-
∡om	men	1S

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Tetrahydrofuran	ND	ug/L	0.5	10/4/2017	SAT	EPA 8260C	

#### Surrogate Data

Sample Number	171003037-007			
Surrogate	Standard	Method	Percent Recovery	<b>Control Limits</b>
1,2-Dichlor	obenzene-d4	EPA 8260C	97.6	70-130
4-Bromoflu	orobenzene	EPA 8260C	97.2	70-130
Toluene-d8		EPA 8260C	99.2	70-130

Authorized Signature

Todd Taruscio, Lab Manager

MCL

EPA's Maximum Contaminant Level

ND POL Not Detected

Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory. The results reported relate only to the samples indicated. Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anaesk Labs (D: EPA:1000013; A2:0701; FL[NELAP] E87893; ID:1000013; MT:CERT0028; NM: ID:00013;NV:ID:00013; OR:ID:200001-002; WA:C595; Certifications held by Anaesk Labs WA: EPA:WA00189; ID:WA00189; WA:C585; MT:Cert0095; FL[NELAP]; E871099

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com 504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:

HALL ENVIRONMENTAL ANALYSIS LAB

Batch #:

171003037

Address:

4901 HAWKINS NE SUITE D

**Project Name:** 

1709F81

ALBUQUERQUE, NM 87109

Attn:

ANDY FREEMAN

**Analytical Results Report Quality Control Data** 

**Lab Control Sample** 

Parameter

**LCS Result** 

Units

LCS Spike %Rec

AR %Rec

**Prep Date** 

**Analysis Date** 

Tetrahydrofuran

8.11

ug/L

10

81.1

70-130

10/4/2017

10/4/2017

Method Blank

**Parameter** Tetrahydrofuran Result ND

Units ug/L

PQL 0.5

**Prep Date** 10/4/2017

**Analysis Date** 10/4/2017

AR

Acceptable Range

ND

Not Detected

PQL RPD Practical Quantitation Limit Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; NV:ID00013; OR:ID200001-002; WA:C595 Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Monday, October 30, 2017

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com 504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: Address: HALL ENVIRONMENTAL ANALYSIS LAB

4901 HAWKINS NE SUITE D

ALBUQUERQUE, NM 87109

Attn:

ANDY FREEMAN

Batch #:

171003037

**Project Name:** 

1709F81

### **Analytical Results Report**

Sample Number

171003037-002

Sampling Date

9/28/2017

Date/Time Received Extraction Date 10/3/20172:05 PM

10/3/2017

Client Sample ID Matrix

1709F81-001B / RIO GRANDE-SOUTH-20170928

Sampling Time 9:00 AM

Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
4,4-DDD	ND	ug/L	0.1	10/10/2017	MAH	EPA 608	
4,4-DDE	ND	ug/L	0.1	10/10/2017	MAH	EPA 608	
4,4-DDT	ND	ug/L	0.1	10/10/2017	MAH	EPA 608	
Aldrin	ND	ug/L	0.1	10/10/2017	MAH	EPA 608	
alpha-BHC	ND	ug/L	0.1	10/10/2017	MAH	EPA 608	
Aroclor 1016 (PCB-1016)	ND	ug/L	2	10/10/2017	MAH	EPA 608	
Aroclor 1221 (PCB-1221)	ND	ug/L	2	10/10/2017	MAH	EPA 608	
Aroclor 1232 (PCB-1232)	ND	ug/L	2	10/10/2017	MAH	EPA 608	
Aroclor 1242 (PCB-1242)	ND	ug/L	2	10/10/2017	MAH	EPA 608	
Aroclor 1248 (PCB-1248)	ND	ug/L	2	10/10/2017	MAH	EPA 608	
Aroclor 1254 (PCB-1254)	ND	ug/L	2	10/10/2017	MAH	EPA 608	
Aroclor 1260 (PCB-1260)	ND	ug/L	2	10/10/2017	MAH	EPA 608	
beta-BHC	ND	ug/L	0.1	10/10/2017	MAH	EPA 608	
Chlordane	ND	ug/L	1	10/10/2017	MAH	EPA 608	
delta-BHC	ND	ug/L	0.1	10/10/2017	MAH	EPA 608	
Dieldrin	ND	ug/L	0.1	10/10/2017	MAH	EPA 608	
Endosulfan I	ND	ug/L	0.1	10/10/2017	MAH	EPA 608	
Endosulfan II	ND	ug/L	0.1	10/10/2017	MAH	EPA 608	
Endosulfan sulfate	ND	ug/L	0.1	10/10/2017	MAH	EPA 608	
Endrin	ND	ug/L	0.1	10/10/2017	MAH	EPA 608	
Endrin aldehyde	ND	ug/L	0.1	10/10/2017	MAH	EPA 608	
Endrin ketone	ND	ug/L	0.1	10/10/2017	MAH	EPA 608	

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; NV:ID00013; OR:ID200001-002; WA:C595 Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Monday, October 30, 2017

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Client:

HALL ENVIRONMENTAL ANALYSIS LAB

171003037

Address:

4901 HAWKINS NE SUITE D

**Project Name:** 

Batch #:

1709F81

Attn:

ALBUQUERQUE, NM 87109 ANDY FREEMAN

**Analytical Results Report** 

Sample Number

171003037-002

Sampling Date 9/28/2017

Date/Time Received

10/3/20172:05 PM

Client Sample ID

1709F81-001B / RIO GRANDE-SOUTH-20170928

Sampling Time 9:00 AM

Extraction Date 10/3

10/3/2017

Matrix Comments

10/10/2017	MAH	EPA 608	
40/40/0047			
10/10/2017	MAH	EPA 608	
10/10/2017	MAH	EPA 608	
10/10/2017	MAH	EPA 608	
10/10/2017	MAH	EPA 608	
	10/10/2017 10/10/2017		

### **Surrogate Data**

	1999		etantesivies.
Samp	e	Nun	nber

171003037-002

Surrogate Standard

Method

EPA 608

Percent Recovery 97.0 Control Limits 30-130

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Client: Address: HALL ENVIRONMENTAL ANALYSIS LAB

4901 HAWKINS NE SUITE D

ALBUQUERQUE, NM 87109

Attn:

ANDY FREEMAN

Batch #:

171003037

**Project Name:** 

1709F81

### **Analytical Results Report**

Sample Number

171003037-005

Water

Sampling Date 9/27/2017

Sampling Time 12:00 PM

Date/Time Received

10/3/20172:05 PM

Client Sample ID

1709F81-003B / RIO GRANDE-NORTH-20170927

**Extraction Date** 

10/3/2017

Matrix Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
4,4-DDD	ND	ug/L	0.01	10/10/2017	MAH	EPA 608	
4,4-DDE	ND	ug/L	0.01	10/10/2017	MAH	EPA 608	
4,4-DDT	ND	ug/L	0.01	10/10/2017	MAH	EPA 608	
Aldrin	ND	ug/L	0.01	10/10/2017	MAH	EPA 608	
alpha-BHC	ND	ug/L	0.01	10/10/2017	MAH	EPA 608	
Aroclor 1016 (PCB-1016)	ND	ug/L	0.2	10/10/2017	MAH	EPA 608	
Aroclor 1221 (PCB-1221)	ND	ug/L	0.2	10/10/2017	MAH	EPA 608	
Aroclor 1232 (PCB-1232)	ND	ug/L	0.2	10/10/2017	MAH	EPA 608	
Aroclor 1242 (PCB-1242)	ND	ug/L	0.2	10/10/2017	MAH	EPA 608	
Aroclor 1248 (PCB-1248)	ND	ug/L	0.2	10/10/2017	MAH	EPA 608	
Aroclor 1254 (PCB-1254)	ND	ug/L	0.2	10/10/2017	MAH	EPA 608	
Aroclor 1260 (PCB-1260)	ND	ug/L	0.2	10/10/2017	MAH	EPA 608	
beta-BHC	ND	ug/L	0.01	10/10/2017	MAH	EPA 608	
Chlordane	ND	ug/L	0.1	10/10/2017	MAH	EPA 608	
delta-BHC	ND	ug/L	0.01	10/10/2017	MAH	EPA 608	
Dieldrin	ND	ug/L	0.01	10/10/2017	MAH	EPA 608	
Endosulfan I	ND	ug/L	0.01	10/10/2017	MAH	EPA 608	
Endosulfan II	ND	ug/L	0.01	10/10/2017	MAH	EPA 608	
Endosulfan sulfate	ND	ug/L	0.01	10/10/2017	MAH	EPA 608	
Endrin	ND	ug/L	0.01	10/10/2017	MAH	EPA 608	
Endrin aldehyde	ND	ug/L	0.01	10/10/2017	MAH	EPA 608	
Endrin ketone	ND	ug/L	0.01	10/10/2017	MAH	EPA 608	
gamma-BHC (Lindane)	ND	ug/L	0.01	10/10/2017	MAH	EPA 608	

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; NV:ID00013; OR:ID200001-002; WA:C595 Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Client:

HALL ENVIRONMENTAL ANALYSIS LAB

Batch #:

171003037

Address:

4901 HAWKINS NE SUITE D

Project Name:

1709F81

ALBUQUERQUE, NM 87109

Attn:

ANDY FREEMAN

### **Analytical Results Report**

Sample Number	171003037-005	Sampling Date	9/27/2017	Date/Time Received	10/3/20172:05 PM
Client Sample ID	1709F81-003B / RIO GF	RANDE-NORTH-20170927		Extraction Date	10/3/2017
Matrix	Water	Sampling Time	12:00 PM		

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Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Heptachlor	ND	ug/L	0.01	10/10/2017	MAH	EPA 608	
Heptachlor epoxide	ND	ug/L	0.01	10/10/2017	MAH	EPA 608	
Methoxychlor	ND	ug/L	0.01	10/10/2017	MAH	EPA 608	
Toxaphene	ND	ug/L	0.1	10/10/2017	MAH	EPA 608	

#### Surrogate Data

Sample Number	171003037-005				
Surrogate	Standard	Method	Percent Recovery	Control Limits	
DCB		EPA 608	59.6	30-130	

Authorized Signature

Todd Taruscio, Lab Manager

MCL

EPA's Maximum Contaminant Level

ND

Not Detected

POL

Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory. The results reported relate only to the samples indicated. Soil/solid results are reported on a dry-weight basis unless otherwise noted.

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Client: HALL ENVIRONMENTAL ANALYSIS LAB

Batch #: 171

171003037

4901 HAWKINS NE SUITE D

Project Name: 1709F81

ALBUQUERQUE, NM 87109

Attn: ANDY FREEMAN

Address:

## Analytical Results Report Quality Control Data

Lab Control Sample							
Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Endosulfan I	0.527	ug/L	0.5	105.4	30-130	10/3/2017	10/9/2017
4.4-DDE	0.524	ug/L	0.5	104.8	30-130	10/3/2017	10/9/2017
4.4-DDT	0.579	ug/L	0.5	115.8	30-130	10/3/2017	10/9/2017
Aldrin	0.491	ug/L	0.5	98.2	30-130	10/3/2017	10/9/2017
alpha-BHC	0.515	ug/L	0.5	103.0	30-130	10/3/2017	10/9/2017
Aroclor 1016 (PC8-1016)	4.94	ug/L	5	98.8	50-130	10/3/2017	10/9/2017
Aroclor 1260 (PCB-1260)	5.32	ug/L	5	106.4	50-130	10/3/2017	10/9/2017
beta-BHC	0.498	ug/L	0.5	99.6	30-130	10/3/2017	10/9/2017
4,4-DDD	0.520	ug/L	0.5	104.0	30-130	10/3/2017	10/9/2017
Dieldrin	0.524	ug/L	0.5	104.8	30-130	10/3/2017	10/9/2017
Methoxychlor	0.569	ug/L	0.5	113.8	30-130	10/3/2017	10/9/2017
Endosulfan II	0.534	ug/L	0.5	106.8	30-130	10/3/2017	10/9/2017
Endosulfan sulfate	0.527	ug/L	0.5	105.4	30-130	10/3/2017	10/9/2017
Endrin	0.535	ug/L	0.5	107.0	30-130	10/3/2017	10/9/2017
Endrin aldehyde	0.497	ug/L	0.5	99.4	30-130	10/3/2017	10/9/2017
Endrin ketone	0.552	ug/L	0.5	110.4	30-130	10/3/2017	10/9/2017
gamma-BHC (Lindane)	0.523	ug/L	0.5	104.6	30-130	10/3/2017	10/9/2017
Heptachlor	0.489	ug/L	0.5	97.8	30-130	10/3/2017	10/9/2017
Heptachlor epoxide	0.510	ug/L	0.5	102.0	30-130	10/3/2017	10/9/2017
delta-BHC	0.506	ug/L	0.5	101.2	30-130	10/3/2017	10/9/2017

Matrix Spike									
Sample Number	Parameter	Sample	MS	Daite	MS	1/ Pan	AR	Oran Data	Analysis Date
		Result	Result	Units	Spike	%Rec	%Rec	Prep Date	Analysis Date
170929007-002	Endosulfan II	ND	0.461	ug/L	0.5	92.2	30-150	10/3/2017	10/9/2017
170929007-002	4,4-DDE	ND	0.395	ug/L	0.5	79.0	30-150	10/3/2017	10/9/2017
170929007-002	4,4-DDT	ND	0.434	ug/L	0.5	86.8	30-150	10/3/2017	10/9/2017
170929007-002	Aldrin	ND	0.409	ug/L	0.5	81.8	30-150	10/3/2017	10/9/2017
170929007-002	alpha-BHC	ND	0.468	ug/L	0.5	93.6	30-150	10/3/2017	10/9/2017
170929007-002	beta-BHC	ND	0.468	ug/L	0.5	93.6	30-150	10/3/2017	10/9/2017
170929007-002	delta-BHC	ND	0.464	ug/L	0.5	92.8	30-150	10/3/2017	10/9/2017
170929007-002	4,4-DDD	ND	0.431	ug/L	0.5	86.2	30-150	10/3/2017	10/9/2017
170929007-002	Endosulfan I	ND	0.461	ug/L	0.5	92.2	30-150	10/3/2017	10/9/2017
170929007-002	Methoxychlor	ND	0.479	ug/L	0.5	95.8	30-150	10/3/2017	10/9/2017
170929007-002	Endosulfan sulfate	ND	0.455	ug/L	0.5	91.0	30-150	10/3/2017	10/9/2017
								100000000000000000000000000000000000000	

Comments

Certifications held by Analysk Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NW: ID00013; NV:ID00013; OR:ID200001-002; WA:C595 Certifications held by Analysk Labs WA: EPA WA00169; ID:WAD0169; WA:C585, MT:Cert0095; FL(NELAP): E871099

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171003037

Address:

4901 HAWKINS NE SUITE D

Project Name:

1709F81

Attn:

ALBUQUERQUE, NM 87109 ANDY FREEMAN

Analytical Results Report
Quality Control Data

Matrix Spike									
Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
170929007-002	Endrin	ND	0.464	ug/L	0.5	92.8	30-150	10/3/2017	10/9/2017
170929007-002	Endrin aldehyde	ND	0.435	ug/L	0.5	87.0	30-150	10/3/2017	10/9/2017
170929007-002	Endrin ketone	ND	0.475	ug/L	0.5	95.0	30-150	10/3/2017	10/9/2017
170929007-002	gamma-BHC (Lindane)	ND	0.478	ug/L	0.5	95.6	30-150	10/3/2017	10/9/2017
170929007-002	Heptachlor	ND	0.434	ug/L	0.5	86.8	30-150	10/3/2017	10/9/2017
170929007-002	Heptachlor epoxide	ND	0.454	ug/L	0.5	90.8	30-150	10/3/2017	10/9/2017
170929007-002	Dieldrin	ND	0.455	ug/L	0.5	91.0	30-150	10/3/2017	10/9/2017

Matrix Spike Duplicate								
	MSD		MSD			AR		
Parameter	Result	Units	Spike	%Rec	%RPD	%RPD	Prep Date	Analysis Date
Endosulfan II	0.471	ug/L	0.5	94.2	2.1	0-30	10/3/2017	10/9/2017
4,4-DDE	0.404	ug/L	0.5	80.8	2.3	0-30	10/3/2017	10/9/2017
4,4-DDT	0.441	ug/L	0.5	88.2	1.6	0-30	10/3/2017	10/9/2017
Aldrin	0.416	ug/L	0.5	83.2	1.7	0-30	10/3/2017	10/9/2017
alpha-BHC	0.470	ug/L	0.5	94.0	0.4	0-30	10/3/2017	10/9/2017
beta-BHC	0.475	ug/L	0.5	95.0	1.5	0-30	10/3/2017	10/9/2017
delta-BHC	0.474	ug/L	0.5	94.8	2.1	0-30	10/3/2017	10/9/2017
4,4-DDD	0.440	ug/L	0.5	88.0	2.1	0-30	10/3/2017	10/9/2017
Endosulfan I	0.470	ug/L	0.5	94.0	1.9	0-30	10/3/2017	10/9/2017
Methoxychlor	0.488	ug/L	0.5	97.2	1.5	0-30	10/3/2017	10/9/2017
Endosulfan sulfate	0.469	ug/L	0.5	93.8	3.0	0-30	10/3/2017	10/9/2017
Endrin	0.473	ug/L	0.5	94,6	1.9	0-30	10/3/2017	10/9/2017
Endrin aldehyde	0.445	ug/L	0.5	89.0	2.3	0.30	10/3/2017	10/9/2017
Endrin ketone	0.483	ug/L	0.5	96.6	1.7	0-30	10/3/2017	10/9/2017
gamma-BHC (Lindane)	0.483	ug/L	0.5	96.6	1.0	0-30	10/3/2017	10/9/2017
Heptachior	0.439	ug/L	0.5	87.8	1.1	0-30	10/3/2017	10/9/2017
Heptachlor epoxide	0.461	ug/L	0.5	92.2	1.5	0-30	10/3/2017	10/9/2017
Dieldrin	0.467	ug/L	0.5	93.4	2.6	0-30	10/3/2017	10/9/2017

Method Blank					
Parameter	Result	Units	PQL	Prep Date	Analysis Date
4,4-DDD	ND	ug/L	0.01	10/3/2017	10/9/2017
4,4-DDE	ND	ug/L	0.01	10/3/2017	10/9/2017
4,4-DDT	ND	ug/L	0.01	10/3/2017	10/9/2017
Aldrin	ND	ug/L	0.01	10/3/2017	10/9/2017
and the second s					

Comments:

Certifications hard by Analisk Labs ID: EPA (D00013; AZ 0701; FL(NELAP):E87693 ID:ID00013; MT:CERT0028; NM: ID00013; NV:IC00013; OR:ID200001-002; WA C595 Certifications hard by Analisk Labs WA: EPA:WA00169; ID:WA00169; WA

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Client:

HALL ENVIRONMENTAL ANALYSIS LAB

Batch #:

171003037

Address:

4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109

**Project Name:** 

1709F81

Attn:

ANDY FREEMAN

#### **Analytical Results Report Quality Control Data**

Method Blank					
Parameter	Result	Units	PQL	Prep Date	Analysis Date
alpha-BHC	ND	ug/L	0.01	10/3/2017	10/9/2017
Aroclor 1016 (PCB-1016)	ND	ug/L	0.2	10/3/2017	10/9/2017
Aroclor 1221 (PCB-1221)	ND	ug/L	0.2	10/3/2017	10/9/2017
Aroclor 1232 (PCB-1232)	ND	ug/L	0.2	10/3/2017	10/9/2017
Aroclor 1242 (PCB-1242)	ND	ug/L	0.2	10/3/2017	10/9/2017
Aroclor 1248 (PCB-1248)	ND	ug/L	0.2	10/3/2017	10/9/2017
Aroclor 1254 (PCB-1254)	ND	ug/L	0.2	10/3/2017	10/9/2017
Aroclor 1260 (PCB-1260)	ND	ug/L	0.2	10/3/2017	10/9/2017
beta-BHC	ND	ug/L.	0.01	10/3/2017	10/9/2017
Chlordane	ND	ug/L	0.1	10/3/2017	10/9/2017
delta-BHC	ND	ug/L	0.01	10/3/2017	10/9/2017
Dieldrin	ND	ug/L	0.01	10/3/2017	10/9/2017
Endosulfan I	ND	ug/L	0.01	10/3/2017	10/9/2017
Endosulfan II	ND	ug/L	0.01	10/3/2017	10/9/2017
Endosulfan sulfate	ND	ug/L	0.01	10/3/2017	10/9/2017
Endrin	ND	ug/L	0.01	10/3/2017	10/9/2017
Endrin aldehyde	ND	ug/L	0.01	10/3/2017	10/9/2017
Endrin ketone	ND	ug/L	0.01	10/3/2017	10/9/2017
gamma-BHC (Lindane)	ND	ug/L	0.01	10/3/2017	10/9/2017
Heptachlor	ND	ug/L	0.01	10/3/2017	10/9/2017
Heptachlor epoxide	ND	ug/L	0.01	10/3/2017	10/9/2017
Methoxychlor	ND	ug/L	0.01	10/3/2017	10/9/2017
Toxaphene	ND	ug/L	0.1	10/3/2017	10/9/2017

ND

Acceptable Range Not Detected

PQL

Practical Quantitation Limit

RPD

Relative Percentage Difference

#### Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; NV:ID00013; OR:ID200001-002; WA:C595 Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Client:

HALL ENVIRONMENTAL ANALYSIS LAB

Batch #:

171003037

Address:

4901 HAWKINS NE SUITE D

Project Name: 1

1709F81

Attn:

ALBUQUERQUE, NM 87109 ANDY FREEMAN

#### **Analytical Results Report**

 Sample Number
 171003037-002
 Sampling Date
 9/28/2017
 Date/Time Received
 10/3/20172:05 PM

 Client Sample ID
 1709F81-001B / RIO GRANDE-SOUTH-20170928
 Extraction Date
 10/5/2017

 Matrix
 Water
 Sampling Time
 9:00 AM

Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Benzidine	ND	ug/L	0.5	10/10/2017	HSW	EPA 8270D	
Benzo[a]anthracene	ND	ug/L	0.5	10/10/2017	HSW	EPA 8270D	
Benzo[a]pyrene	ND	ug/L	0.5	10/10/2017	HSW	EPA 8270D	
Benzo[b]fluoranthene	ND	ug/L	0.5	10/10/2017	HSW	EPA 8270D	
Benzo[k]fluoranthene	ND	ug/L	0.5	10/10/2017	HSW	EPA 8270D	
bis(2-Ethylhexyl)phthalate	ND	ug/L	0.5	10/10/2017	HSW	EPA 8270D	B1
Chrysene	ND	ug/L	0.5	10/10/2017	HSW	EPA 8270D	
Dibenz[a,h]anthracene	ND	ug/L	0.5	10/10/2017	HSW	EPA 8270D	
Dibenzofuran	ND	ug/L	0.5	10/10/2017	HSW	EPA 8270D	
Indeno[1,2,3-cd]pyrene	ND	ug/L	0.5	10/10/2017	HSW	EPA 8270D	
Pentachlorophenol	ND	ug/L	0.5	10/10/2017	HSW	EPA 8270D	

#### **Surrogate Data**

Sample Number 171003037-002		_	<u> </u>
Surrogate Standard	Method	Percent Recovery	<b>Control Limits</b>
2,4,6-Tribromophenol	EPA 8270D	79.4	43-120
2-Fluorobiphenyl	EPA 8270D	85.6	55-127
2-Fluorophenol	EPA 8270D	71.2	41-119
Nitrobenzene-d5	EPA 8270D	90.0	55-120
Phenol-d5	EPA 8270D	70.6	52-115
Terphenyl-d14	EPA 8270D	111.2	22-133

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; NV:ID00013; OR:ID200001-002; WA:C595 Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C595; MT:Cert0095; FL(NELAP): E871099

Monday, October 30, 2017 Page 1 of 2

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Client:

HALL ENVIRONMENTAL ANALYSIS LAB

Batch #:

171003037

Address:

4901 HAWKINS NE SUITE D

**Project Name:** 

1709F81

Attn:

ALBUQUERQUE, NM 87109

ANDY FREEMAN

#### **Analytical Results Report**

Sample Number

171003037-005

9/27/2017 Sampling Date

Date/Time Received

10/3/20172:05 PM

Client Sample ID

1709F81-003B / RIO GRANDE-NORTH-20170927

**Extraction Date** 

10/3/2017

Matrix

Water

Sampling Time 12:00 PM

Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Benzidine	ND	ug/L	0.5	10/5/2017	HSW	EPA 8270D	
Benzo[a]anthracene	ND	ug/L	0.5	10/5/2017	HSW	<b>EPA 8270D</b>	
Benzo[a]pyrene	ND	ug/L	0.5	10/5/2017	HSW	EPA 8270D	
Benzo[b]fluoranthene	ND	ug/L	0.5	10/5/2017	HSW	<b>EPA 8270D</b>	
Benzo[k]fluoranthene	ND	ug/L	0.5	10/5/2017	HSW	EPA 8270D	
bis(2-Ethylhexyl)phthalate	3.06	ug/L	0.5	10/5/2017	HSW	EPA 8270D	
Chrysene	ND	ug/L	0.5	10/5/2017	HSW	EPA 8270D	
Dibenz[a,h]anthracene	. ND	ug/L	0.5	10/5/2017	HSW	EPA 8270D	
Dibenzofuran	ND	ug/L	0.5	10/5/2017	HSW	EPA 8270D	
Indeno[1,2,3-cd]pyrene	ND	ug/L	0.5	10/5/2017	H\$W	EPA 8270D	
Pentachlorophenol	ND	ug/L	0.5	10/5/2017	H\$W	EPA 8270D	
		-					

#### **Surrogate Data**

Sample Number 171003037-005			
Surrogate Standard	Method	Percent Recovery	<b>Control Limits</b>
2,4,6-Tribromophenol	EPA 8270D	94.4	43-120
2-Fluorobiphenyl	EPA 8270D	94.4	55-127
2-Fluorophenol	EPA 8270D	78.6	41-119
Nitrobenzene-d5	EPA 8270D	90.4	55-120
Phenol-d5	EPA 8270D	83.6	52-115
Terphenyl-d14	EPA 8270D	108.4	22-133

**Authorized Signature** 

**B1** 

Target analyte detected in method blank at or above the method reporting limit

MCL

EPA's Maximum Contaminant Level

ND

Not Detected Practical Quantitation Limit

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Soil/solid results are reported on a dry-weight basis unless otherwise noted.

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Monday, October 30, 2017

Page 2 of 2

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Client:

HALL ENVIRONMENTAL ANALYSIS LAB

Batch #:

171003037

Address:

4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109 Project Name: 1

1709F81

Attn:

ANDY FREEMAN

# Analytical Results Report Quality Control Data

ab Control Sample								
Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date	
Pentachlorophenol	4.86	ug/L	5	97.2	22-138	10/5/2017	10/10/2017	
bis(2-Ethylhexyl)phthalate	4.76	ug/L	5	95.2	51-149	10/5/2017	10/10/2017	
Pentachlorophenol	8.93	ug/L	10	89.3	22-138	10/2/2017	10/5/2017	
bis(2-Ethylhexyl)phthalate	9.98	ug/L	10	99.8	51-149	10/2/2017	10/5/2017	

_ab Control Sample Duplicate								
Parameter	LCSD Result	Units	LCSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Pentachlorophenol	4.83	ug/L	5	96.6	0.6	0-47	10/5/2017	10/10/2017
bis(2-Ethylhexyl)phthalate	4.56	ug/L	5	91.2	4.3	0-50	10/5/2017	10/10/2017
Pentachlorophenol	7.83	ug/L	10	78.3	13.1	0-47	10/2/2017	10/5/2017
bis(2-Ethylhexyl)phthalate	10.5	ug/L	10	105.0	5.1	0-50	10/2/2017	10/5/2017

Method Blank					
Parameter	Result	Units	PQL	Prep Date	Analysis Date
Benzidine	ND	ug/L	0.5	10/5/2017	10/10/2017
Benzidine	ND	ug/L	0.5	10/2/2017	10/5/2017
Benzo[a]anthracene	ND	ug/L	0.5	10/2/2017	10/5/2017
Benzo[a]anthracene	ND	ug/L	0.5	10/5/2017	10/10/2017
Benzo[a]pyrene	ND	ug/L	0.5	10/2/2017	10/5/2017
Benzo[a]pyrene	ND	ug/L	0.5	10/5/2017	10/10/2017
Benzo[b]fluoranthene	ND	ug/L	0.5	10/2/2017	10/5/2017
Benzo[b]fluoranthene	ND	ug/L	0.5	10/5/2017	10/10/2017
Benzo[k]fluoranthene	ND	ug/L	0.5	10/5/2017	10/10/2017
Benzo[k]fluoranthene	ND	ug/L	0.5	10/2/2017	10/5/2017
bis(2-Ethylhexyl)phthalate	0.57	ug/L	0.5	10/5/2017	10/10/2017
bis(2-Ethylhexyl)phthalate	ND	ug/L	0.5	10/2/2017	10/5/2017
Chrysene	ND	ug/L	0.5	10/2/2017	10/5/2017
Chrysene	ND	ug/L	0.5	10/5/2017	10/10/2017
Dibenz[a,h]anthracene	ND	ug/L	0.5	10/2/2017	10/5/2017
Dibenz[a,h]anthracene	ND	ug/L	0.5	10/5/2017	10/10/2017
Dibenzofuran	ND	ug/L	0.5	10/2/2017	10/5/2017
Dibenzofuran	ND	ug/L	0.5	10/5/2017	10/10/2017

#### Comments

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; NV:ID00013; OR:ID200001-002; WA:C595 Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Client:

HALL ENVIRONMENTAL ANALYSIS LAB

Batch #:

171003037

Address:

4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109 Project Name:

1709F81

Attn:

ANDY FREEMAN

Analytical Results Report

Quality Control Data

Method Blank							
Parameter	Result	Units	PQL	Prep Date	Analysis Date		
Indeno[1,2,3-cd]pyrene	ND	ug/L	0.5	10/2/2017	10/5/2017		
Indeno[1,2,3-cd]pyrene	ND	ug/L	0.5	10/5/2017	10/10/2017		
Pentachlorophenol	ND	ug/L	0.5	10/5/2017	10/10/2017		
Pentachlorophenol	ND	ug/L	0.5	10/2/2017	10/5/2017		

AR Acceptable Range ND Not Detected

PQL Practical Quantitation Limit
RPD Relative Percentage Difference

#### Comments:

Monday, October 30, 2017 Page 2 of 2

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Client:

HALL ENVIRONMENTAL ANALYSIS LAB

Batch #:

171003037

Address:

4901 HAWKINS NE SUITE D

Project Name:

1709F81

Attn:

ALBUQUERQUE, NM 87109 ANDY FREEMAN

#### **Analytical Results Report**

Sample Number

171003037-003

**Sampling Date** 9/28/2017

Units

mg/L

Date/Time Received 10/3/2017

2:05 PM

Client Sample ID

1709F81-001I / RIO GRANDE-SOUTH-20170928

Sampling Time 9:00 AM

Matrix

Comments

Parameter Result COD 36.2

PQL

**Analysis Date** 10/25/2017 7:05:00 PM

Analyst KAE

Method

Page 1 of 1

Qualifier **EPA 410.4** 

Sample Number

171003037-006

9/27/2017 **Sampling Date** 

Date/Time Received 10/3/2017 2:05 PM

Client Sample ID

1709F81-003I / RIO GRANDE-NORTH-20170927

Sampling Time 12:00 PM

Matrix

Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
COD	20.5	mg/L	5	10/25/2017 7:05:00 PM	KAE	EPA 410.4	

**Authorized Signature** 

Todd Taruscio, Lab Manager

MCL

EPA's Maximum Contaminant Level

ND PQL Not Detected Practical Quantitation Limit

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The results reported relate only to the samples indicated.

Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; NV:ID00013; OR:ID200001-002; WA:C595 Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Monday, October 30, 2017

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Client:

HALL ENVIRONMENTAL ANALYSIS LAB

Batch #:

171003037

Address:

4901 HAWKINS NE SUITE D

Project Name:

1709F81

Attn:

ALBUQUERQUE, NM 87109

ANDY FREEMAN

Analytical Results Report

Quality Control Data

Lab Control Samp	ole					•					
Parameter		LCS Result	Unit	s LCSS	Spike	%Rec	AR %	6Rec	Prep	Date .	Analysis Date
COD		94.4	mg/l	_ 10	0	94.4	90-	110	10/25	/2017	10/25/2017
Matrix Spike		# VS	- (486) - 100	441722 hc		47	et Northwester	~	DC. V. 184	•	
Sample Number Pa	rameter		Sample Result	MS Result	Units	•	M\$ Spike	%Rec	AR %Rec	Pren Date	Analysis Date
171010049-001 CC	transfer for the contract of t		6.95	102	mg/L		100		80-120	10/25/2017	
Matrix Spike Dupl	icate	And an analysis of the second second		12000000000				NAC SO			· · · · · · · · · · · · · · · · · · ·
Parameter		MSD Result	Units	MSD Spike	%R	oc	%RPD	AR %RPD	Dro	p Date	Analysis Date
COD		101	mg/L	100	94.		1.0	0-15		25/2017	10/25/2017
Method Blank									0.00		
Parameter			Re	sult	Un	its		PQL	Pr	ep Date	Analysis Date
COD			<	5	mg	g/L		5		25/2017	10/25/2017
Duplicate		<u> </u>									
Sample Number Par	ramatar		Sample	Duplicate Result	11.	nits	%RPI	AR		ep Date	Analysis Data
171011019-001 CO			Result <5	5.93		nnts ng/L	0.0	0-20		ер Date /25/2017	Analysis Date 10/25/2017

AR

Acceptable Range

ND POI Not Detected

RPD

Practical Quantitation Limit Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; NV:ID00013; OR:ID200001-002; WA:C595 Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Monday, October 30, 2017

1709F81-001J RIO GRANDE-SOUTH-20170928

# SAMPLE RESULTS - 01

ONE LAB. NATIONWIDE.

Collected date/time: 09/28/17 09:00

Wet Chemistry by Method 3500Cr C-2011

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	
Hexavalent Chromium	ND		0.000500	1	10/03/2017 20:27	WG1026374

















1709F81-003J RIO GRANDE-NORTH-20170927

# SAMPLE RESULTS - 02

ONE LAB. NATIONWIDE.

\*

Collected date/time: 09/28/17 12:00

Wet Chemistry by Method 3500Cr C-2011

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/I		mg/l		date / time	
Hexavalent Chromium	ND		0.000500	1	10/03/2017 20:35	WG1026874

















#### WG1026874

#### QUALITY CONTROL SUMMARY

GNE LAB MATIONWIDE

Method Blank (MB)

(MB)	R3254	611-1	10/03/17	15:23

Wet Chemistry by Method 3500Cr C-2011

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/L		mg/l	mg/l
Hexavalent Chromium	U		0.00015	0.000500







(OS) L939889-01	10/03/17 17:07	· (DUP) R3254611-8	10/03/17 17:16
-----------------	----------------	--------------------	----------------

	Original Result	DUP Result	Dilution	DUP RPD	<b>DUP Qualifier</b>	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Hexavalent Chromium	ND	0.000182	1	0		20







#### (OS) L940315-01 10/03/17 19:51 • (DUP) R3254611-11 10/03/17 20:02

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







#### Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

		A MARI MARKADA A	4 00 1 4 00 10 00 a 10 a 10
(LCS) R3254611-5	10/03/17 15:32	<ul> <li>(LCSD) R3254611-6</li> </ul>	10/03/17 15:40

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec	Rec. Limits	LCS Gualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	56			1/2	%
Hexavalent Chromium	0.00200	0.00189	0.00183	95	91	90-110			4	20

#### L940091-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(05) 1 940091-03	10/03/17 18:37	(MS) P3254811-9	10/03/17 18:45	(MSD) R3254611-10	10/03/17 18:53

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/li	mg/l	mg/l	mg/l	%	%		%			%	96
Hexavalen; Chromium	0.0500	ND	0.0330	0.0498	65	100	1	90-110	JG	JS.	41	20

#### L940318-01 Original Sample (OS) • Matrix Spike (MS)

(OS) (O(0)219-01	10/03/27/20:11	<ul> <li>(MS) R3254611-12</li> </ul>	10/02/17 20:19

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/l	mg/l	mg/l	%		%	
Hexavalen: Chromium	0.0500	ND	0.0488	98	1	90-110	

DATE/TIME:

10/04/17 13:18



#### 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.

# ---

#### 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
J	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, 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.
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.



#### Description

J3

The associated batch QC was cutside the established quality control range for precision

J6

The sample matrix interfered with the ability to make any accurate determination; spike value is low.



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an attilate of The GEL Group (NO

October 26, 2017

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

Re: Routine Analysis Work Order: 11458 SDG: 1709F81

Dear Mr. Freeman:

Cape Fear Analytical LLC (CFA) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 06, 2017. 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.

Cyrole Larkins

Cynde Larkins Project Manager

Purchase Order: IDIQ Pricing

Enclosures



### CHAIN OF CUSTODY RECORD

AGE:	OF:
1	1

Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquergne, NM 87109 TEL: 305-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

SUB CC	NIRATOR Cape	Fear Analytical COMPANY	Cape Fear Analytic	cal	PHONE	(910) 795-0421	FAX
ADDRE	3306	Kitty Hawk Rd Ste 120			ACCOUNT		EMAIL
CITY, S	YATE, ZIP: Wilm	ington, NC 28405					
ПЕМ	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION	CANTAINEES	ANALYTICAL COMMENTS
1	1709F81-001K	Rio Grande-South-20170928	i. to	Aqueous	9/28/2017 9:00:00 AM	1 PCB CONGENERS F	REP 1668
2	1709F81-003K	Rio Grande-North-20170927	Aprile.	Aqueous	9/27/2017 12:00:00 PM	1 PCB CONGENERS F	REP 1668
		·	Ix Ite	9/17			CFA WOHI1458

Consideration /	) Dute:	Time	Received By	D		INCOME. THE LIPETER INTERIOR.
ed in	977977	8:52.4	M. Come Declar		17 Time 0 946	REPORT TRANSMITTAL DESIRED:  HARDCOPY (estes doil) I VAX EMAII. ONLINE
Conquisted By	Date	Time:	Roceived By	Date	Tirae	FOR LAB USE ONLY
dinquished By	Date	Time:	Received By	Date	Yime	Temp of samples 1, 3 T Attempt to Cool?

#### SAMPLE RECEIPT CHECKLIST

Cape Fear Analytical Client: Work Order: Shipping Company: Date/Time Received: Suspected Hazard Information Yes NA **DOE Site Sample Packages** Yes NA No\* No Shipped as DOT Hazardous? Screened < 0.5 mR/hr? Samples identified as Foreign Soil? 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 Comments/Qualifiers (required for Non-Conforming Items) Yes NA No Circle Applicable: Shipping containers received intact seals broken damaged container leaking container other(describe) and sealed? Chain of Custody documents included with shipment? Preservation Method: Samples requiring cold preservation ample IDs, containers affected: Visuble 2001cds (c/2) within 0-6°C? Aqueous samples found to have visible in both samples.

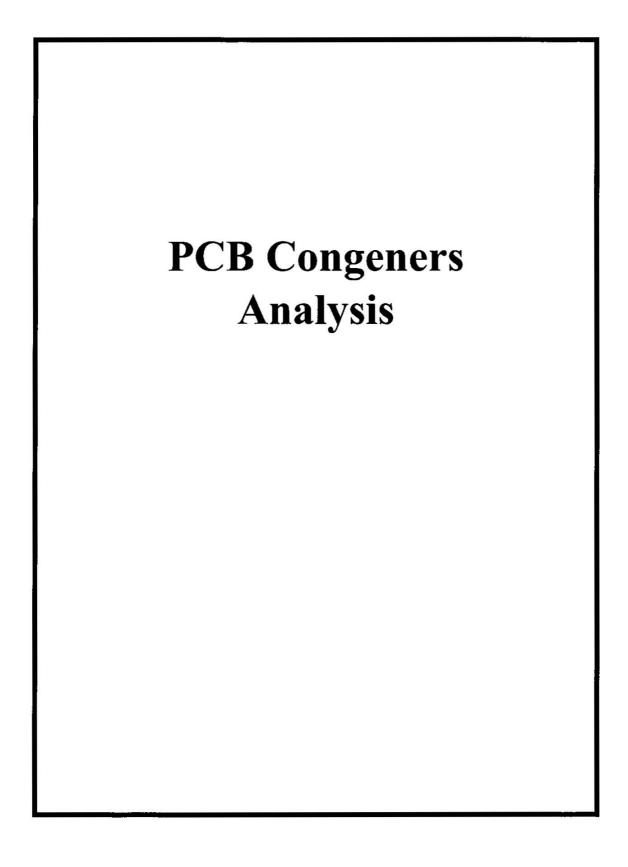
Intainers offected and pH observed:

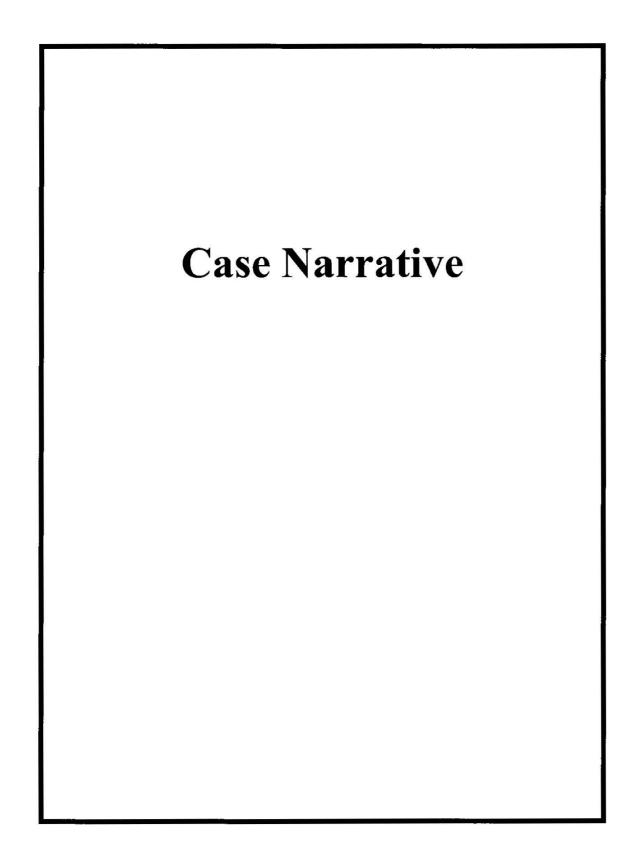
pH = 4 on all jail. solids? Samples requiring chemical preservation at proper pH? Samples requiring preservation have no residual chlorine? f preservative added, Lot#: Sample IDs, tests affected: 7 Samples received within holding time? Sample IDs. containers affected: Sample IDs on COC match IDs on containers? Sample IDs, containers affected: Date & time of COC match date & time on containers? List type and number of containers / Sample IDs, containers affected: Number of containers received match - ILW.MA DEL simple 10 number indicated on COC? COC form is properly signed in relinquished/received sections? Comments:

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Checklist performed by: Initials: \_

060CT17





# PCBC Case Narrative Hall Environmental Analysis Laboratory (HALL) SDG 1709F81 Work Order 11458

#### Method/Analysis Information

Product: Method 1668C HRMS Aqueous Analysis

Analytical Method: EPA Method 1668C

Extraction Method: SW846 3520C

Analytical Batch Number: 36029 Clean Up Batch Number: 35955 Extraction Batch Number: 35954

#### Sample Analysis

The following samples were analyzed using the analytical protocol as established in EPA Method 1668C:

Sample ID	Client ID
11458001	1709F81-001K Rio Grande-South-21070928
11458002	1709F81-003K Rio Grande-North-20170927
12019813	Method Blank (MB)
12019814	Laboratory Control Sample (LCS)
12019815	Laboratory Control Sample Duplicate (LCSD)

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# 6.

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

#### **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.

#### Miscellancous Information

#### Nonconformance (NCR) Documentation

A NCR was not required for this SDG.

#### 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.

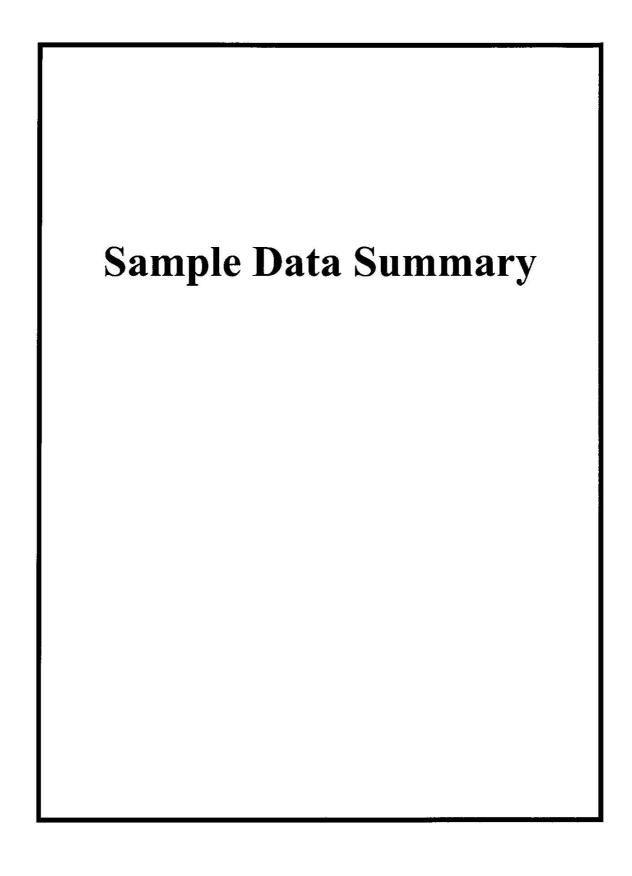
#### System Configuration

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, 0.25mm

#### **Electronic Packaging Comment**

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted: Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative will include the data validator's signature and title. The signature page also includes the data qualifiers used in the fractional package. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.



#### 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: 1709F81 CFA Work Order: 11458

#### 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
- 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: Jeath attison Name: Heather Patterson

Date: 26 OCT 2017 Title: Group Leader

Report Date:

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October 26, 2017

of 8

PCB Congeners
Certificate of Analysis
Sample Summary

SDG Numbe Lab Sample Client Sampl Client ID: Batch ID: Run Date: Data File: Prep Batch:	ID: 11458001 le: 1668C Water 1709F81-001K Rio Grande-South-210 36029 10/21/2017 10:46 d21oct17a-4 35954	Client: Date Collected: Date Received:  Method: Analyst:  Prep Method:	HALL001 09/28/2017 09:00 10/06/2017 09:46 EPA Method 1668C MJC SW846 3520C		Project: Matrix: Prep Basis: Instrument: Dilution: Prep SOP Ref:	HALL00117 WATER  As Received  HRP875 1 CF-OA-E-001
Prep Date: CAS No.	17-OCT-17	Prep Aliquot:	879 mL Result	Units	EDL	POL
2051-60-7	Parmname 1-MoCB	Qual	ND	pg/L	3.30	PQL 22.8
2051-61-8	2-MoCB	U	ND	pg/L	2.34	22.8
2051-62-9	3-МоСВ	J	2.94	pg/L	2.28	22.8
13029-08-8	4-DiCB	U	ND	pg/L	8.40	22.8
16605-91-7	5-DiCB	U	ND	pg/L	8.69	22.8
25569-80-6	6-DiCB	U	ND	pg/L	7.08	22.8
33284-50-3	7-DiCB	U	ND	pg/L	7.42	22.8
34883-43-7	8-DiCB	U	ND	pg/L	6.28	22.8
34883-39-1	9-DiCB	υ	ND	pg/L	8.05	22.8
33146-45-1	10-DiCB	υ	ND	pg/L	4.62	22.8
2050-67-1	11-DiCB		116	pg/L	8.01	114
2974-92-7	12-DiCB	CU	ND	pg/L	7.83	45.5
2974-90-5	13-DiCB	C12				
34883-41-5	14-DiCB	Ú	ND	pg/L	7.53	22.8
2050-68-2	15-DiCB	U	ND	pg/L	7.53	22.8
38444-78-9	16-TrCB	J	2.98	pg/L	2.84	22.8
37680-66-3	17-TrCB	J	3.96	pg/L	2.73	22.8
37680-65-2	18-TrCB	CJ	6.46	pg/L	2.21	45.5
38444-73-4	19-TrCB	U	ND	pg/L	3.96	22.8
38444-84-7	20-TrCB	CJ	14.9	pg/L	1.87	45.5
55702-46-0	21-TrCB	CJ	5.32	pg/L	1.77	45.5
38444-85-8	22-TrCB	J	6.99	pg/L	1.89	22.8
55720-44-0	23-TrCB	υ	ND	pg/L	1.87	22.8
55702-45-9	24-TrCB	U	ND	pg/L	1.96	22.8
55712-37-3	25-TrCB	U	ND	pg/L	1.64	22.8
38444-81-4	26-TrCB	CJ	2.03	pg/L	1.82	45.5
38444-76-7	27-TrCB	U	ND	pg/L	1.93	22.8
7012-37-5	28-TrCB	C20				
15862-07-4	29-ТгСВ	C26				
35693-92-6	30-TrCB	C18				
16606-02-3	31-TrCB	U	ND	pg/L	8.94	22.8
38444-77-8	32-TrCB	J	2.28	pg/L	1.73	22.8

- 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.

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#### PCB Congeners Certificate of Analysis Sample Summary

SDG Number: Lab Sample IE Client Sample: Client ID: Batch ID: Run Date: Data File: Prep Batch: Prep Date:	): 11458001	Client: Date Collected: Date Received: Method: Analyst: Prep Method: Prep Aliquot:	HALL001 09/28/2017 09:00 10/06/2017 09:46 EPA Method 1668C MJC SW846 3520C 879 mL		Project: Matrix:  Prep Basis: Instrument: Dilution: Prep SOP Ref:	HALL00117 WATER  As Received  HRP875 1 CF-OA-E-001
CAS No.	Parmname	Qual	Result	Units	EDL	PQL
38444-86-9 3	33-TrCB	C21				
37680-68-5 3	34-TrCB	U	ND	pg/L	1.93	22.8
37680-69-6 3	35-TrCB	J	4.32	pg/L	3.09	22.8
38444-87-0 3	66-TrCB	υ	ND	pg/L	2.75	22.8
38444-90-5 3	37-TrCB	J	8.69	pg/L	2.87	22.8
53555-66-1 3	88-TrCB	U	ND	pg/L	2.84	22.8
38444-88-1 3	9-ТтСВ	U	ND	pg/L	2.75	22.8
38444-93-8 4	0-TeCB	CJ	6.51	pg/L	4.12	45.5
52663-59-9 4	11-TcCB	U	ND	pg/L	4.44	22.8
36559-22-5 4	2-TcCB	υ	ND	pg/L	4.53	22.8
70362-46-8 4	3-TeCB	υ	ND	pg/L	5.42	22.8
41464-39-5 4	4-TeCB	C1	21.0	pg/L	3.91	68.3
70362-45-7 4	5-TeCB	CJ	2.62	pg/L	1.41	45.5
41464-47-5 4	6-TeCB	U	ND	pg/L	1.46	22.8
2437-79-8 4	7-TeCB	C44				
70362-47-9 4	8-TeCB	υ	ND	pg/L	4.21	22.8
41464-40-8 4	9-TeCB	CJ	8.71	pg/L	3.69	45.5
62796-65-0 5	0-TeCB	CU	ND	pg/L	1.77	45.5
68194-04-7 5	1-TeCB	C45				
35693-99-3 5	2-TeCB	J	20.7	pg/L	3.91	22.8
41464-41-9 5	3-теСВ	C50				
15968-05-5 5	4-TeCB	U	ND	pg/L	1.27	22.8
74338-24-2 5	5-TeCB	U	ND	pg/L	2.53	22.8
41464-43-1 5	6-TcCB	J	9.06	pg/L	2.64	22.8
70424-67-8 5	7-TeCB	υ	ND	pg/L	2.43	22.8
41464-49-7 5	8-TeCB	υ	ND	pg/L	2.41	22.8
74472-33-6 5	9-TeCB	CU	ND	pg/L	3.16	68.3
33025-41-1 6	0-TeCB	J	5.01	pg/L	2.48	22.8
33284-53-6 6	1-TeCB	CJ	32.4	pg/L	2.41	91.0
54230-22-7 6	2-TeCB	C59				
74472-34-7 6.	3-TeCB	U	ND	pg/L	2.32	22.8
52663-58-8 6-	4-TeCB	1	7.76	pg/L	3.07	22.8

- 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.

SDG Number:

Lab Sample ID:

Client Sample:

Report Date: Page 3

As Received

October 26, 2017

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#### **PCB** Congeners Certificate of Analysis Sample Summary

HALL001 Project: HALL00117 Date Collected: 09/28/2017 09:00 WATER Matrix: 10/06/2017 09:46

Client ID: 1709F81-001K Rio Grande-South-210

1709F81

11458001

1668C Water

Batch ID: 36029 Run Date: 10/21/2017 10:46 d21oct17a-4 Data File: Prep Batch:

Method: EPA Method 1668C Analyst: MJC

Instrument: HRP875 Dilution:

Prep Basis:

Prep SOP Ref: CF-OA-E-001 35954 Prep Method: SW846 3520C

Client:

Date Received:

Prep Batch: Prep Date:	35954 17-OCT-17	Prep Method: Prep Aliquot:	879 mL	ļ	rrep SOF Rei:	Cr-OA-E-WI
CAS No.	Parmname	Qual	Result	Units	EDL	PQL
33284-54-7	65-TeCB	C44				
32598-10-0	66-TeCB	:J:	13.4	pg/L	2.37	22.8
73575-53-8	67-TeCB	U	ND	pg/L	2.25	22.8
73575-52-7	68-TeCB	Ŭ	ND	pg/L	2.23	22.8
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	2.30	22.8
74338-23-1	73-TeCB	U	ND	pg/L	3.23	22.8
32690-93-0	74-TcCB	C61				
32598-12-2	75-TeCB	C59				
70362-48-0	76-TeCB	C61				
32598-13-3	77-TeCB	U	ND	pg/L	5.46	22.8
70362-49-1	78-TeCB	U	ND	pg/L	2.43	22.8
41464-48-6	79-TeCB	U	ND	pg/L	2.16	22.8
33284-52-5	80-TeCB	U	ND	pg/L	2.07	22.8
70362-50-4	81-TeCB	U	ND	pg/L	2.28	22.8
52663-62-4	82-PeCB	U	ND	pg/L	4.48	22.8
60145-20-2	83-PeCB	U	ND	pg/L	3.89	22.8
52663-60-2	84-PeCB	J	8.21	pg/L	4.19	22.8
65510-45-4	85-PeCB	CJ	8.40	pg/L	3.00	68.3
55312-69-1	86-PeCB	CJ	28.3	pg/L	3.19	137
38380-02-8	87-PeCB	C86				
55215-17-3	88-PcCB	CJ	4.62	pg/L	3.78	45.5
73575-57-2	89-PcCB	U	ND	pg/L	3.94	22.8
68194-07-0	90-PcCB	C1	33.0	pg/L	3.12	68.3
68194-05-8	91-PeCB	C88				
52663-61-3	92-PcCB	J	6.37	pg/L	3.64	22.8
73575-56-1	93-PeCB	CU	ND	pg/L	3.66	45.5
73575-55-0	94-PeCB	υ	ND	pg/L	4.07	22.8
38379-99-6	95-PeCB		23.8	pg/L	3.66	22.8
73575-54-9	96-PeCB	υ	ND	pg/L	0.865	22.8

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

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#### **PCB** Congeners Certificate of Analysis Sample Summary

SDG Number: 1709F81 Lab Sample ID: 11458001		Client: Date Collected: Date Received:	HALL001 09/28/2017 09:00		Project: Matrix;	HALL00117 WATER
	ient Sample: 1668C Water		10/06/2017 09:46			
Client ID:	1709F81-001K Rio Grande-South-210		DD   11   11   11   11   11   11   11		Prep Basis:	As Received
Batch ID: Run Date:	36029 10/21/2017 10:46	Method: Analyst:	EPA Method 1668C MJC		Instrument:	HRP875
Data File:	d21oct17a-4	Analyst:	MIC		Dilution:	1
Prep Batch:	35954	Prep Method:	SW846 3520C		Prep SOP Ref:	CF-OA-E-001
Prep Date:	17-OCT-17	Prep Aliquot:	879 mL			
CAS No.	Parmname	Qual	Result	Units	EDL	PQL
41464-51-1	97-PeCB	C86				
60233-25-2	98-PeCB	CU	ND	pg/L	3.94	45.5
38380-01-7	99-PeCB	J	12.0	pg/L	3.28	22.8
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	3.37	22.8
56558-16-8	104-PeCB	υ	ND	pg/L	0.887	22.8
32598-14-4	105-PeCB	J	16.6	pg/L	2.00	22.8
70424-69-0	106-PeCB	υ	ND	pg/L	1.84	22.8
70424-68-9	107-PeCB	J	2.84	pg/L	1.59	22.8
70362-41-3	108-PeCB	CJ	2.00	pg/L	1.84	45.5
74472-35-8	109-PeCB	C86				
38380-03-9	110-PeCB	C	49.1	pg/L	2.96	45.5
39635-32-0	111-PeCB	U	ND	pg/L	2.80	22.8
74472-36-9	112-PeCB	U	ND	pg/L	2.71	22.8
68194-10-5	113-PeCB	C90				
74472-37-0	114-PcCB	U	ND	pg/L	1.93	22.8
74472-38-1	115-PcCB	C110				
18259-05-7	116-PeCB	C85				
68194-11-6	117-PeCB	C85				
31508-00-6	118-PcCB		34.3	pg/L	1.89	22.8
56558-17-9	119-PcCB	C86				
68194-12-7	120-PeCB	U	ND	pg/L	2.66	22.8
56558-18-0	121-PeCB	U	ND	pg/L	2.84	22.8
76842-07-4	122-PeCB	U	ND	pg/L	1.93	22.8
65510-44-3	123-PeCB	U	ND	pg/L	1.84	22.8
70424-70-3	124-PeCB	C108				
74472-39-2	125-PeCB	C86				
57465-28-8	126-PeCB	U	ND	pg/L	2.23	22.8
39635-33-1	127-PeCB	U	ND	pg/L	1.89	22.8
38380-07-3	128-HxCB	CJ	11.0	pg/L	2.66	45.5

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

SDG Number:

Lab Sample ID: Client Sample:

Client 1D:

Batch ID:

1709F81

11458001

36029

1668C Water

1709F81-001K Rio Grande-South-210

Report Date: Page 5

As Received

October 26, 2017

of 8

#### **PCB** Congeners Certificate of Analysis Sample Summary

Client:

Date Collected:

Date Received:

HALL001

09/28/2017 09:00

10/06/2017 09:46

HALL00117 Project: WATER Matrix:

Prep Basis:

Method:	EPA Method 1668C		
Analyst:	MJC	Instrument:	HRP875
₹.		Dilution:	1
100 100 100 100	C11/0// 2520C	Dan COD Date	OF OA F M

Batch ID: Run Date: Data File: Prep Batch: Prep Date:	36029 10/21/2017 10:46 d21oct17a-4 35954 17-OCT-17	Method: Analyst: Prep Method: Prep Aliquot:	EPA Method 1668C MJC SW846 3520C 879 mL		Instrument: Dilution: Prep SOP Ref:	HRP875 1 CF-OA-E-001 PQL	
CAS No.	Parmname	Qual	Result	Units	EDL		
55215-18-4	129-HxCB	С	75.9	pg/L	2.75	68.3	
52663-66-8	130-HxCB	U	ND	pg/L	3.82	22.8	
61798-70-7	131-HxCB	U	ND	pg/L	3.39	22.8	
38380-05-1	132-HxCB	J	20.4	pg/L	3.30	22.8	
35694-04-3	133-HxCB	U	ND	pg/L	3.07	22.8	
52704-70-8	134-HxCB	U	ND	pg/L	3.41	22.8	
52744-13-5	135-HxCB	CJ	19.8	pg/L	1.57	45.5	
38411-22-2	136-HxCB	J	6.21	pg/L	1.14	22.8	
35694-06-5	137-HxCB	J	3.34	pg/L	3.07	22.8	
35065-28-2	138-HxCB	C129					
56030-56-9	139-HxCB	CU	ND	pg/L	2.84	45.5	
59291-64-4	140-HxCB	C139					
52712-04-6	141-HxCB	J	12.7	pg/L	3.19	22.8	
41411-61-4	142-HxCB	υ	ND	pg/L	3.44	22.8	
68194-15-0	143-HxCB	U	ND	pg/L	3.34	22.8	
68194-14-9	144-HxCB	J	3.05	pg/L	1.52	22.8	
74472-40-5	145-HxCB	U	ND	pg/L	1.21	22.8	
51908-16-8	146-HxCB	J	8.76	pg/L	2.50	22.8	
68194-13-8	147-HxCB	CJ	40.7	pg/L	2.91	45.5	
74472-41-6	148-HxCB	U	ND	pg/L	1.59	22.8	
38380-04-0	149-HxCB	C147					
68194-08-1	150-HxCB	U	ND	pg/L	1.18	22.8	
52663-63-5	151-HxCB	C135					
68194-09-2	152-HxCB	U	ND	pg/L	1.11	22.8	
35065-27-1	153-HxCB	C	56.4	pg/L	2.32	45.5	
60145-22-4	154-HxCB	υ	ND	pg/L	1.37	22.8	
33979-03-2	155-HxCB	υ	ND	pg/L	1.18	22.8	
38380-08-4	156-HxCB	CJ	9.35	pg/L	2.05	45.5	
69782-90-7	157-HxCB	C156					
74472-42-7	158-HxCB	1	7.39	pg/L	2.09	22.8	
39635-35-3	159-HxCB	υ	ND	pg/L	1.62	22.8	
41411-62-5	160-HxCB	υ	ND	pg/L	2.62	22.8	

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

1709F81

11458001

36029

1668C Water

10/21/2017 10:46

1709F81-001K Rio Grande-South-210

SDG Number:

Lab Sample ID:

Client Sample:

Client ID:

Batch ID:

Run Date:

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#### **PCB** Congeners Certificate of Analysis **Sample Summary**

MJC

Client:

Method:

Analyst:

Date Collected:

Date Received:

HALL001

09/28/2017 09:00

10/06/2017 09:46

EPA Method 1668C

Project: HALL00117 Matrix: WATER

Prep Basis:

As Received

Instrument:

HRP875

Data File: Prep Batch:	d21oct17a-4 35954	Prep Method	Prep Method: SW846 3520C			1 CF-OA-E-001	
Prep Date:	17-OCT-17	Prep Aliquot:	879 mL		Prep SOP Ref:		
CAS No.	Parmname	Qual	Result	Units	EDL	PQL	
74472-43-8	161-HxCB	Ü	ND	pg/L	2.32	22.8	
39635-34-2	162-HxCB	U	ND	pg/L	1.66	22.8	
74472-44-9	163-HxCB	C129					
74472-45-0	164-HxCB	Ĵ	4.55	pg/L	2.28	22.8	
74472-46-1	165-HxCB	U	ND	pg/L	2.48	22.8	
41411-63-6	166-HxCB	C128					
52663-72-6	167-HxCB	J	3.59	pg/L	1.59	22.8	
59291-65-5	168-HxCB	C153					
32774-16-6	169-HxCB	U	ND	pg/L	1.73	22.8	
35065-30-6	170-HpCB	Ĵ	19.6	pg/L	2.46	22.8	
52663-71-5	171-HpCB	C1	6.12	pg/L	2.41	45.5	
52663-74-8	172-HpCB	J	3.73	pg/L	2.41	22.8	
68194-16-1	173-HpCB	C171					
38411-25-5	174-HpCB	»J	20.8	pg/L	2.37	22.8	
40186-70-7	175-HpCB	υ	ND	pg/L	1.25	22.8	
52663-65-7	176-НрСВ	J	2.57	pg/L	0.978	22.8	
52663-70-4	177-НрСВ	J	12.8	pg/L	2.32	22.8	
52663-67-9	178-НрСВ	, J	4.41	pg/L	1.34	22.8	
52663-64-6	179-НрСВ	1	7.17	pg/L	0.956	22.8	
35065-29-3	180-HpCB	C	47.6	pg/L	1.96	45.5	
74472-47-2	181-HpCB	U	ND	pg/L	2.23	22.8	
60145-23-5	182-HpCB	U	ND	pg/L	1.25	22.8	
52663-69-1	183-HpCB	CJ	14.1	pg/L	2.23	45.5	
74472-48-3	184-HpCB	U	ND	pg/L	0.956	22.8	
52712-05-7	185-HpCB	C183					
74472-49-4	186-HpCB	U	ND	pg/L	1.02	22.8	
52663-68-0	187-HpCB		23.8	pg/L	1.21	22.8	
74487-85-7	188-HpCB	U	ND	pg/L	1.00	22.8	
39635-31-9	189-HpCB	U	ND	pg/L	1.34	22.8	
41411-64-7	190-HpCB	1	4.82	pg/L	1.84	22.8	
74472-50-7	191-HpCB	υ	ND	pg/L	1.71	22.8	
74472-51-8	192-HpCB	υ	ND	pg/L	1.98	22.8	

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

Report Date: October 26, 2017 Page 7

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PCB Congeners
Certificate of Analysis
Sample Summary

Sample Summary										
	SDG Number: 1709F81 Lab Sample ID: 11458001		001	Client: Date Collected:	HALL001 09/28/2017 09:00		Project: Matrix:	HALL00117 WATER		
	Client Sampl		C Water	Date Received:	10/06/2017 09:46					
	Client ID:		81-001K Rio Grande-South-210				Prep Basis:	As Received		
	Batch ID: Run Date:	36029	/ <b>20</b> 17 10:46	Method:	EPA Method 1668C		T	IID DOTE		
	Data File:		t17a-4	Analyst:	MJC		Instrument: Dilution:	HRP875		
	Prep Batch:	35954		Prep Method:	SW846 3520C		Prep SOP Ref:	CF-OA-E-001		
	Prep Date:	17-00		Prep Aliquot:	879 mL					
	CAS No.		Parmname	Qual	Result	Units	EDL	PQL		
	69782-91-8	193-HpCB		C180						
	35694-08-7	194-OcCB		J	9.87	pg/L	1.32	22.8		
	52663-78-2	195-OcCB		Ţ	3.91	pg/L	1.41	22.8		
	42740-50-1	196-OcCB		ĵĹ,	4.10	pg/L	1.55	22.8		
	33091-17-7	197-OcCB		CJ	2.64	pg/L	1.18	45.5		
	68194-17-2	198-OcCB		CJ	12.6	pg/L	1.62	45.5		
	52663-75-9	199-OcCB		C198						
	52663-73-7	200-OcCB		C197						
	40186-71-8	201-OcCB		J	1.68	pg/L	1.16	22.8		
	2136-99-4	202-OcCB		J	2.68	pg/L	1.30	22.8		
	52663-76-0	203-OcCB		J	6.26	pg/L	1.48	22.8		
	74472-52-9	204-OcCB		U	ND	pg/L	1.18	22.8		
	74472-53-0	205-OcCB		1	1.11	pg/L	1.02	22.8		
	40186-72-9	206-NoCB		1	5.85	pg/L	1.84	22.8		
	52663-79-3	207-NoCB		U	ND	pg/L	1.46	22.8		
	52663-77-1	208-NoCB		J	2.64	pg/L	1.37	22.8		
	2051-24-3	209-DeCB		J	5.05	pg/L	1.55	22.8		
	1336-36-3	Total PCB C	ongeners	J	1040	pg/L	7.60	22.8		

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1-MoCB		1320	2280	pg/L	57.8	(5%-145%)
13C-3-MoCB		1510	2280	pg/L	66.6	(5%-145%)
13C-4-DiCB		1650	2280	pg/L	72.4	(5%-145%)
13C-15-DiCB		3200	2280	pg/L	141	(5%-145%)
13C-19-TrCB		2460	2280	pg/L	108	(5%-145%)
13C-37-TrCB		2290	2280	pg/L	101	(5%-145%)
13C-54-TeCB		1410	2280	pg/L	62.2	(5%-145%)
13C-77-TeCB		2380	2280	pg/L	104	(10%-145%)
13C-81-TeCB		2350	2280	pg/L	103	(10%-145%)
13C-104-PeCB		1860	2280	pg/L	81.6	(10%-145%)
13C-105-PeCB		1940	2280	pg/L	85.5	(10%-145%)
13C-114-PeCB		1870	2280	pg/L	82.4	(10%-145%)
13C-118-PeCB		1860	2280	pg/L	81.7	(10%-145%)
13C-123-PeCB		1950	2280	pg/L	85.7	(10%-145%)
13C-126-PeCB		1980	2280	pg/L	87.1	(10%-145%)
13C-155-HxCB		1860	2280	pg/L	81.9	(10%-145%)
13C-156-HxCB	C	3640	4550	pg/L	79.9	(10%-145%)
13C-157-HxCB	C156L					
13C-167-HxCB		1900	2280	pg/L	83.3	(10%-145%)
13C-169-HxCB		2010	2280	pg/L	88.3	(10%-145%)
13C-188-HpCB		1740	2280	pg/L	76.4	(10%-145%)
13C-189-HpCB		1750	2280	pg/L	77.0	(10%-145%)

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#### PCB Congeners Certificate of Analysis Sample Summary

SDG Number:	1709F81	Client:	HALL001		Project:	HALL00117
Lab Sample ID:	11458001	Date Collected:	09/28/2017 09:00		Matrix:	WATER
Client Sample:	1668C Water	Date Received:	10/06/2017 09:46			
Client ID:	1709F81-001K Rio Grande-South-210				Prep Basis:	As Received
Batch ID:	36029	Method:	EPA Method 1668C			
Run Date:	10/21/2017 10:46	Analyst:	MJC		Instrument:	HRP875
Data File:	d21oct17a-4				Dilution:	1
Prep Batch:	35954	Prep Method:	SW846 3520C		Prep SOP Ref:	CF-OA-E-001
Prep Date:	17-OCT-17	Prep Aliquot:	879 mL			
CAS No.	Parmname	Qual	Result	Units	EDL	PQL

CAS No.	Parmname		Qual	Result		Units	EDL	PQL
Surrogate/Tracer recover	у	Qual	Result	Nominal	Units	Recovery%	Accept	able Limits
3C-202-OcCB			1690	2280	pg/L	74.2	(10%	<b>%-145%</b> )
3C-205-OcCB			2210	2280	pg/L	97.3	(10%	%-145%)
3C-206-NoCB			2400	2280	pg/L	105	(10%	%-145%)
3C-208-NoCB			2050	2280	pg/L	89.9	(10%	%-145%)
C-209-DeCB			2310	2280	pg/L	102	(10%	%-145%)
C-28-TrCB			1310	2280	pg/L	57.4	(5%	-145%)
C-111-PeCB			2020	2280	pg/L	88.9	(10%	%-145%)
С-178-НрСВ			2070	2280	pg/L	91.1	(10%	%-145%)

- 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

HALL001

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HALL00117

Project:

Lab Sample ID: 09/28/2017 12:00 11458002 Date Collected: Matrix: WATER 10/06/2017 09:46 1668C Water Date Received: Client Sample: Client ID: 1709F81-003K Rio Grande-North-20 Prep Basis: As Received Batch ID: EPA Method 1668C 36029 Method: Run Date: 10/21/2017 11:55 Analyst: MJC Instrument: HRP875 Dilution: Data File: d21oct17a-5 Prep SOP Ref: CF-OA-E-001 Prep Batch: 35954 Prep Method: SW846 3520C 946.6 mL Prep Aliquot: Prep Date: 17-OCT-17

Client:

p Date.		1881 B				
CAS No.	Parmname	Qual	Result	Units	EDL	PQL
2051-60-7	1-MoCB	Ü	ND	pg/L	2.01	21.1
2051-61-8	2-MoCB	U	ND	pg/L	3.15	21.1
2051-62-9	3-MoCB	υ	ND	pg/L	2.07	21.1
13029-08-8	4-DiCB	υ	ND	pg/L	9.04	21.1
16605-91-7	5-DiCB	υ	ND	pg/L	9.93	21.1
25569-80-6	6-DiCB	U	ND	pg/L	8.09	21.1
33284-50-3	7-DiCB	υ	ND	pg/L	8.47	21.1
34883-43-7	8-DiCB	υ	ND	pg/L	7.16	21.1
34883-39-1	9-DiCB	U	ND	pg/L	9.19	21.1
3146-45-1	10-DiCB	U	ND	pg/L	5.26	21.1
050-67-1	11-DiCB		120	pg/L	9.15	106
974-92-7	12-DiCB	CU	ND	pg/L	8.94	42.3
974-90-5	13-DiCB	C12				
4883-41-5	14-DiCB	U	ND	pg/L	8.62	21.1
)50-68-2	15-DiCB	U	ND	pg/L	8.73	21.1
444-78-9	16-TrCB	U	ND	pg/L	3.66	21.1
680-66-3	17-TrCB	J	3.59	pg/L	3.53	21.1
7680-65-2	18-TrCB	Cl	5.60	pg/L	2.85	42.3
444-73-4	19-TrCB	U	ND	pg/L	4.25	21.1
444-84-7	20-TrCB	C1	8.60	pg/L	2.41	42.3
702-46-0	21-TrCB	CU	ND	pg/L	3.34	42.3
144-85-8	22-TrCB	U	ND	pg/L	4.50	21.1
720-44-0	23-TrCB	U	ND	pg/L	2.41	21.1
5702-45-9	24-TrCB	υ	ND	pg/L	2.51	21.1
5712-37-3	25-TrCB	U	ND	pg/L	2.11	21.1
3444-81-4	26-TrCB	CU	ND	pg/L	2.35	42.3
444-76-7	27-TrCB	U	ND	pg/L	2.49	21.1
12-37-5	28-TrCB	C20		5 140 300 300 5		
862-07-4	29-TrCB	C26				
693-92-6	30-TrCB	C18				
6606-02-3	31-TrCB	U	ND	pg/L	4.67	21.1
8444-77-8	32-TrCB	U	ND	pg/L	2.22	21.1
				A.50		

#### Comments:

SDG Number:

1709F81

- 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.

Report Date:

October 26, 2017

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#### PCB Congeners Certificate of Analysis Sample Summary

SDG Numbe Lab Sample Client Samp Client ID: Batch ID: Run Date: Data File: Prep Batch: Prep Date:	ID: 11458002 le: 1668C Water 1709F81-003K Rio Grande-North-20 36029 10/21/2017 11:55 d21oct17a-5 35954 17-OCT-17	Client: Date Collected: Date Received: Method: Analyst: Prep Method: Prep Aliquot:	HALL001 09/28/2017 12:00 10/06/2017 09:46 EPA Method 1668C MJC SW846 3520C 946.6 mL		Project: Matrix: Prep Basis: Instrument: Dilution: Prep SOP Ref:	
CAS No.	Parmname	Qual	Result	Units	EDL	PQL
38444-86-9	33-TrCB	C21				
37680-68-5	34-TrCB	U	ND	pg/L	2.49	21.1
37680-69-6	35-TrCB	υ	ND	pg/L	4.58	21.1
38444-87-0 38444-90-5	36-TrCB	U U	ND	pg/L	2.79	21.1
53555-66-1	37-TrCB	U	ND ND	pg/L	3.11	21.1 21.1
38444-88-1	38-TrCB 39-TrCB	U	ND ND	pg/L	2.89	21.1
38444-93-8	40-TeCB	CU	ND	pg/L	2.81 3.82	42.3
52663-59-9	41-TeCB	U	ND ND	pg/L	4.12	21.1
36559-22-5	42-TeCB	U	ND	pg/L pg/L	4.12	21.1
70362-46-8	43-TeCB	U	ND	pg/L pg/L	5.03	21.1
41464-39-5	44-TeCB	CI	9.74	pg/L pg/L	3.63	63.4
70362-45-7	45-TeCB	Cì	2.07	pg/L	1.77	42.3
41464-47-5	46-TeCB	U	ND	pg/L	1.84	21.1
2437-79-8	47-TeCB	C44	.100	15~	5.150.1	
70362-47-9	48-TeCB	υ	ND	pg/L	3.91	21.1
41464-40-8	49-TeCB	CU	ND	pg/L	3.42	42.3
62796-65-0	50-TeCB	CU	ND	pg/L	1.65	42.3
68194-04-7	51-TeCB	C45				
35693-99-3	52-TeCB	J	5.94	pg/L	3.63	21.1
41464-41-9	53-TcCB	C50				
15968-05-5	54-TcCB	U	ND	pg/L	1.37	21.1
74338-24-2	55-TeCB	U	ND	pg/L	2.43	21.1
41464-43-l	56-TeCB	U	ND	pg/L	3.08	21.1
70424-67-8	57-TeCB	U	ND	pg/L	2.32	21.1
41464-49-7	58-TeCB	U	ND	pg/L	2.32	21.1
74472-33-6	59-TeCB	CU	ND	pg/L	2.92	63.4
33025-41-1	60-TeCB	υ	ND	pg/L	2.39	21.1
33284-53-6	61-TeCB	CJ	8.85	pg/L	2.32	84.5
54230-22-7	62-TeCB	C59				
74472-34-7	63-TeCB	U	ND	pg/L	2.24	21.1
52663-58-8	64-TeCB	U	ND	pg/L	2.83	21.1

- 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.

SDG Number:

1709F81

Report Date:

HALL00117

Project:

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#### PCB Congeners Certificate of Analysis Sample Summary

Client:

HALL001

-		ID:	11458002	Date Collected:	09/28/2017 12:00		Matrix:	WATER		
	Client Sampl			Date Received: 10/06/2017 09:46						
	Client ID:					Prep Basis:		As Received		
	Batch ID:		36029 10/21/2017 11:55	Method:	EPA Method 1668C		Instruments	uppeze		
	Run Date: Data File:		d21oct17a-5	Analyst:	MJC		Instrument: Dilution:	HRP875		
	Prep Batch:		35954	Prep Method:	SW846 3520C		Prep SOP Ref:			
	Prep Date:		17-OCT-17	Prep Aliquot:	946.6 mL					
	CAS No.		Parmname	Qual	Result	Units	EDL	PQL		
	33284-54-7	65-To	eCB	C44						
	32598-10-0	66-T	сСВ	J	4.08	pg/L	2.28	21.1		
	73575-53-8	67-T	сСВ	U	ND	pg/L	2.18	21.1		
	73575-52-7	68-T	eCB	U	ND	pg/L	2.16	21.1		
	60233-24-1	69-To	eCB	C49						
	32598-11-1	70-Te	сВ	C61						
	41464-46-4	71-Te	CB	C40						
	41464-42-0	72-Te	eCB	U	ND	pg/L	2.22	21.1		
	74338-23-1	73-Te	eCB	U	ND	pg/L	3.00	21.1		
	32690-93-0	74-Te	:CB	C61						
	32598-12-2	75-Tc	:CB	C59						
	70362-48-0	76-Te	:CB	C61						
	32598-13-3	77-Te	сB	υ	ND	pg/L	2.41	21.1		
	70362-49-1	78-Te	:CB	υ	ND	pg/L	2.35	21.1		
	41464-48-6	79-Te	CB	U	ND	pg/L	2.09	21.1		
	33284-52-5	80-Te	CB	U	ND	pg/L	1.99	21.1		
	70362-50-4	81-Te	СВ	U	ND	pg/L	2.32	21.1		
	52663-62-4	82-Pe	CB	U	ND	pg/L	2.26	21.1		
	60145-20-2	83-Pe	СВ	U	ND	pg/L	2.07	21.1		
	52663-60-2	84-Pc	СВ	U	ND	pg/L	2.24	21.1		
	65510-45-4	85-Pc	СВ	CU	ND	pg/L	1.61	63.4		
	55312-69-1	86-Pe	СВ	C1	4.10	pg/L	1.69	127		
	38380-02-8	87-Pc	СВ	C86						
	55215-17-3	88-Pe	СВ	CU	ND	pg/L	2.01	42.3		
	73575-57-2	89-Pe	СВ	υ	ND	pg/L	2.09	21.1		
	68194-07-0	90-Pe	СВ	CU	ND	pg/L	3.40	63.4		
	68194-05-8	91-Pe	СВ	C88		nitrodesc.				
	52663-61-3	92-Pe	СВ	U	ND	pg/L	1.94	21.1		
	73575-56-1	93-Pe	СВ	CU	ND	pg/L	1.94	42.3		
	73575-55-0	94-Pe	СВ	U	ND	pg/L	2.18	21.1		
	38379-99-6	95-Pe	СВ	J	3.00	pg/L	1.96	21.1		
	73575-54-9	96-Pe	СВ	U	ND	pg/L	1.01	21.1		
						1,77,000				

- 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.

Report Date: O

October 26, 2017

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PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number: Lab Sample ID: Client Sample:		1709F81 11458002 1668C Water	Client: Date Collected: Date Received:	e Collected: 09/28/2017 12:00		Project: Matrix:	HALL00117 WATER
Client ID:		1709F81-003K Rio Grande-North-20				Prep Basis:	As Received
Batch ID: Run Date:		36029 10/21/2017 11:55	Method: Analyst:	EPA Method 1668C MJC		Instrument:	HRP875
Data File:		d21oct17a-5	Amulyan			Dilution:	The second secon
Prep Batch:		35954	Prep Method:	SW846 3520C		Prep SOP Ref:	CF-OA-E-001
Prep Date:		17-OCT-17	Prep Aliquot:	946.6 mL			
CAS No.		Parmname	Qual	Result	Units	EDL	PQL
41464-51-1		PeCB	C86				
60233-25-2		PeCB	CU	ND	pg/L	2.09	42.3
38380-01-7		PeCB	U	ND	pg/L	1.73	21.1
39485-83-1		-PeCB	C93				
37680-73-2		-PeCB	C90				
68194-06-9		-PeCB	C98	Time:			
60145-21-3		-PeCB	U	ND	pg/L	1.80	21.1
56558-16-8		-PeCB	U	ND	pg/L	1.06	21.1
32598-14-4		-PeCB	J	1.90	pg/L	1.86	21.1
70424-69-0		-PeCB	U	ND	pg/L	1.69	21.1
70424-68-9		-PeCB	ບ CU	ND	pg/L	1.46	21.1
70362-41-3 74472-35-8		-PcCB -PeCB	C86	ND	pg/L	1.71	42.3
38380-03-9			CI	4.19		1.56	42.3
39635-32-0		-PeCB -PeCB	U	4.18 ND	pg/L	1.56 1.48	21.1
74472-36-9		-PeCB	ប	ND	pg/L pg/L	1.44	21.1
68194-10-5		-PeCB	C90	ND	PB/L	1.44	21.1
74472-37-0		-PeCB	U	ND	pg/L	1.84	21.1
74472-38-1		-PeCB	C110	N.B	Por	1.01	
18259-05-7		-PeCB	C85				
68194-11-6		-РеСВ	C85				
31508-00-6		-PeCB	1	2.66	pg/L	1.71	21.1
56558-17-9		-PeCB	C86	2173	P6 -	2226	
68194-12-7		-PeCB	υ	ND	pg/L	1.42	21.1
56558-18-0		-PeCB	υ	ND	pg/L	1.52	21.1
76842-07-4		-PeCB	υ	ND	pg/L	1.80	21.1
65510-44-3		-PeCB	U	ND	pg/L	1.69	21.1
70424-70-3		-РеСВ	C108		a.e.		
74472-39-2		-PeCB	C86				
57465-28-8		-PeCB	U	ND	pg/L	2.05	21.1
39635-33-1		-PeCB	U	ND	pg/L	1.75	21.1
38380-07-3		-НхСВ	CU	ND	pg/L	1.75	42.3
					85.79		

- 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.

Report Date:

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#### PCB Congeners Certificate of Analysis Sample Summary

1709F81 HALL001 HALL00117 SDG Number: Client: Project: 09/28/2017 12:00 Lab Sample ID: 11458002 Date Collected: Matrix: WATER 1668C Water 10/06/2017 09:46 Date Received: Client Sample: 1709F81-003K Rio Grande-North-20 Client ID: Prep Basis: As Received Batch ID: 36029 Method: EPA Method 1668C Run Date: 10/21/2017 11:55 Analyst: MJC Instrument: HRP875 d21oct17a-5 Dilution: Data File: Prep SOP Ref: CF-OA-E-001 SW846 3520C Prep Batch: 35954 Prep Method: Prep Aliquot: 946.6 mL 17-OCT-17 Prep Date: CAS No. Qual Result Units **EDL** PQL Parmname 55215-18-4 6.15 1.82 63.4 129-HxCB pg/L CJ 52663-66-8 130-HxCB U ND pg/L 2.18 21.1 61798-70-7 131-HxCB U ND 2.24 21.1 pg/L 21.1 38380-05-1 132-HxCB U ND pg/L 2.18 ND 2.03 21.1 U pg/L 35694-04-3 133-HxCB U ND 2.26 21.1 52704-70-8 134-HxCB pg/L 52744-13-5 135-HxCB CJ2.01 pg/L 1.29 42.3 0.930 21.1 38411-22-2 136-HxCB U ND pg/L U ND 21.1 35694-06-5 2.03 137-HxCB pg/L C129 35065-28-2 138-HxCB 56030-56-9 139-HxCB CU ND pg/L 1.88 42.3 C139 59291-64-4 140-HxCB U 2.09 21.1 52712-04-6 141-HxCB ND pg/L U ND 2.28 21.1 41411-61-4 142-HxCB pg/L 68194-15-0 143-HxCB U ND pg/L 2.20 21.1 68194-14-9 U ND 1.25 21.1 144-HxCB pg/L 74472-40-5 145-HxCB U ND 0.993 21.1 pg/L 21.1 U ND 146-HxCB 1.67 51908-16-8 pg/L 42.3 68194-13-8 147-HxCB CU ND pg/L 4.20 74472-41-6 148-HxCB U ND 1.29 21.1 pg/L 38380-04-0 C147 149-HxCB 0.951 21.1 ND 68194-08-1 150-HxCB U pg/L 52663-63-5 151-HxCB C135 68194-09-2 ND 0.909 21.1 152-HxCB pg/L 35065-27-1 CJ 4.06 1.54 42.3 153-HxCB pg/L 60145-22-4 154-HxCB ND 1.10 21.1 U pg/L 33979-03-2 155-HxCB U ND pg/L 0.951 21.1 38380-08-4 156-HxCB CU ND pg/L 1.65 42.3 69782-90-7 157-HxCB C156 U ND 1.39 21.1 74472-42-7 158-HxCB pg/L

ND

ND

U

U

1.33

1.73

pg/L

pg/L

21.1

21.1

# 41411-62-5 Comments:

39635-35-3

- C Congener has coeluters. When Cxxx, refer to congener number xxx for data
- J Value is estimated

159-HxCB

160-HxCB

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

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#### PCB Congeners Certificate of Analysis Sample Summary

SDG Numbe Lab Sample Client Sampl Client ID:	ID: 11458002	Client: HALL001 Date Collected: 09/28/2017 12:00 Date Received: 10/06/2017 09:46			Project: Matrix: Prep Basis:	HALL00117 WATER As Received
Batch ID: Run Date: Data File: Prep Batch: Prep Date:	36029 10/21/2017 11:55 d21oct17a-5 35954 17-OCT-17	Method: Analyst: Prep Method: Prep Aliquot:	EPA Method 1668C MJC SW846 3520C 946.6 mL		Instrument: Dilution: Prep SOP Ref:	HRP875 1 CF-OA-E-001
CAS No.	Parmname	Qual	Result	Units	EDL	PQL
74472-43-8	161-HxCB	U	ND	pg/L	1.54	21.1
39635-34-2	162-HxCB	U	ND	pg/L	1.35	21.1
74472-44-9	163-HxCB	C129				
74472-45-0	164-HxCB	υ	ND	pg/L	1.50	21.1
74472-46-1	165-HxCB	υ	ND	pg/L	1.65	21.1
41411-63-6	166-HxCB	C128				
52663-72-6	167-HxCB	U	ND	pg/L	1.27	21.1
59291-65-5	168-HxCB	C153				
32774-16-6	169-HxCB	U	ND	pg/L	1.48	21.1
35065-30-6	170-HpCB	U	ND	pg/L	2.20	21.1
52663-71-5	171-HpCB	cu	ND	pg/L	2.16	42.3
52663-74-8	172-HpCB	υ	ND	pg/L	2.16	21.1
68194-16-1	173-НрСВ	C171			5100-0133	nie w
38411-25-5	174-НрСВ	υ	ND	pg/L	2.28	21.1
40186-70-7	175-НрСВ	υ	ND	pg/L	1.42	21.1
52663-65-7	176-HpCB	U	ND	pg/L	1.12	21.1
52663-70-4	177-HpCB	Ü	ND	pg/L	2.07	21.1
52663-67-9	178-HpCB	U	ND	pg/L	1.50	21.1
52663-64-6	179-HpCB	U	ND	pg/L	1.08	21.1
35065-29-3	180-HpCB	cı	3.74	pg/L	1.75	42.3
74472-47-2	181-HpCB	U U	ND	pg/L	1.99	21.1
60145-23-5	182-HpCB	CU	ND ND	pg/L	1.39	21.1 42.3
52663-69-1	183-HpCB	U	ND	pg/L		21.1
74472-48-3 52712-05-7	184-HpCB 185-HpCB	C183	ND	pg/L	1.10	21.1
74472-49-4	186-HpCB	U	ND	20/1	1.16	21.1
52663-68-0	187-HpCB	J	1.99	pg/L pg/L	1.16	21.1
74487-85-7	188-HpCB	U	ND	pg/L pg/L	1.12	21.1
39635-31-9	189-HpCB	U	ND	pg/L pg/L	1.42	21.1
41411-64-7	190-HpCB	υ	ND	pg/L	1.65	21.1
74472-50-7	191-HpCB	υ	ND	pg/L	1.54	21.1
74472-51-8	192-HpCB	υ	ND	pg/L pg/L	1.77	21.1
	.,,	ř		P		

- 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.

Report Date:

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PCB Congeners
Certificate of Analysis
Sample Summary

SDG Number: 1709F81 Client: HALL001 Project: HALL00117 09/28/2017 12:00 11458002 Matrix: Lab Sample ID: Date Collected: WATER 1668C Water 10/06/2017 09:46 Date Received: Client Sample: Client ID: 1709F81-003K Rio Grande-North-20 Prep Basis: As Received Batch ID: 36029 EPA Method 1668C Method: Run Date: 10/21/2017 11:55 Analyst: MJC Instrument: **HRP875** Data File: d21oct17a-5 Dilution: SW846 3520C Prep SOP Ref: CF-OA-E-001 Prep Batch: 35954 Prep Method: Prep Date: 17-OCT-17 Prep Aliquot: 946.6 mL CAS No. **EDL** Parmname Qual Result Units PQL 69782-91-8 C180 193-НрСВ 35694-08-7 194-OcCB t 2.89 1.50 21.1 pg/L 52663-78-2 195-OcCB U ND pg/L 1.58 21.1 42740-50-1 196-OcCB U ND pg/L 1.39 21.1 pg/L 33091-17-7 197-OcCB CU ND 1.08 42.3 68194-17-2 198-OcCB CJ 2.30 42.3 pg/L 1.46 52663-75-9 199-OcCB C198 52663-73-7 200-OcCB C197 40186-71-8 201-OcCB U ND pg/L 1.06 21.1 2136-99-4 202-OcCB U ND 21.1 pg/L 1.16 52663-76-0 ND 203-OcCB υ pg/L 1.33 21.1 74472-52-9 204-OcCB U ND pg/L 1.06 21.1 74472-53-0 205-OcCB U ND 1.18 21.1 pg/L 40186-72-9 206-NoCB Ü ND 1.84 21.1 pg/L 52663-79-3 207-NoCB U ND 1.44 21.1 pg/L U 52663-77-1 208-NoCB ND pg/L 1.33 21.1 2051-24-3 209-DeCB 1.96 pg/L 1.31 21.1

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1-MoCB		1030	2110	pg/L	48.8	(5%-145%)
13C-3-MoCB		1190	2110	pg/L	56.3	(5%-145%)
I3C-4-DiCB		1350	2110	pg/L	64.0	(5%-145%)
13C-15-DiCB		2320	2110	pg/L	110	(5%-145%)
13C-19-TrCB		1930	2110	pg/L	91.3	(5%-145%)
13C-37-TrCB		1880	2110	pg/L	89.1	(5%-145%)
13C-54-TeCB		1390	2110	pg/L	66.0	(5%-145%)
13C-77-TeCB		1930	2110	pg/L	91.2	(10%-145%)
13C-81-TeCB		1920	2110	pg/L	91.0	(10%-145%)
13C-104-PeCB		1700	2110	pg/L	80.4	(10%-145%)
13C-105-PeCB		1740	2110	pg/L	82.4	(10%-145%)
13C-114-PeCB		1690	2110	pg/L	79.8	(10%-145%)
13C-118-PeCB		1690	2110	pg/L	80.2	(10%-145%)
13C-123-PeCB		1770	2110	pg/L	83.9	(10%-145%)
13C-126-PeCB		1730	2110	pg/L	82.1	(10%-145%)
13C-155-HxCB		1660	2110	pg/L	78.6	(10%-145%)
13C-156-HxCB	C	3210	4230	pg/L	76.0	(10%-145%)
13C-157-HxCB	C156L					
13C-167-HxCB		1670	2110	pg/L	79.1	(10%-145%)
13C-169-HxCB		1690	2110	pg/L	80.2	(10%-145%)
13C-188-HpCB		1610	2110	pg/L	76.2	(10%-145%)
13C-189-HpCB		1530	2110	pg/L	72.2	(10%-145%)

210

7.06

pg/L

21.1

1336-36-3

Total PCB Congeners

Report Date:

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### **PCB Congeners** Certificate of Analysis Sample Summary

SDG Number:	1709F81
Lab Sample ID:	11458002
Client Sample:	1668C Water
Client ID:	1709F81-003K Rio Grande-North-20

36029-

10/21/2017 11:55

Client: Date Collected: Date Received:

Method:

Analyst:

HALL001 09/28/2017 12:00 10/06/2017 09:46

EPA Method 1668C

Project: Matrix:

HALL00117

WATER

Prep Basis:

As Received

Instrument:

HRP875

Dilution:

Prep SOP Ref: CF-OA-E-001

Data File: d21oct17a-5 35954 Prep Batch: Prep Date:

Prep Method: 17-OCT-17 Prep Aliquot:

SW846 3520C

**MJC** 

946.6 mL

Units EDL POL

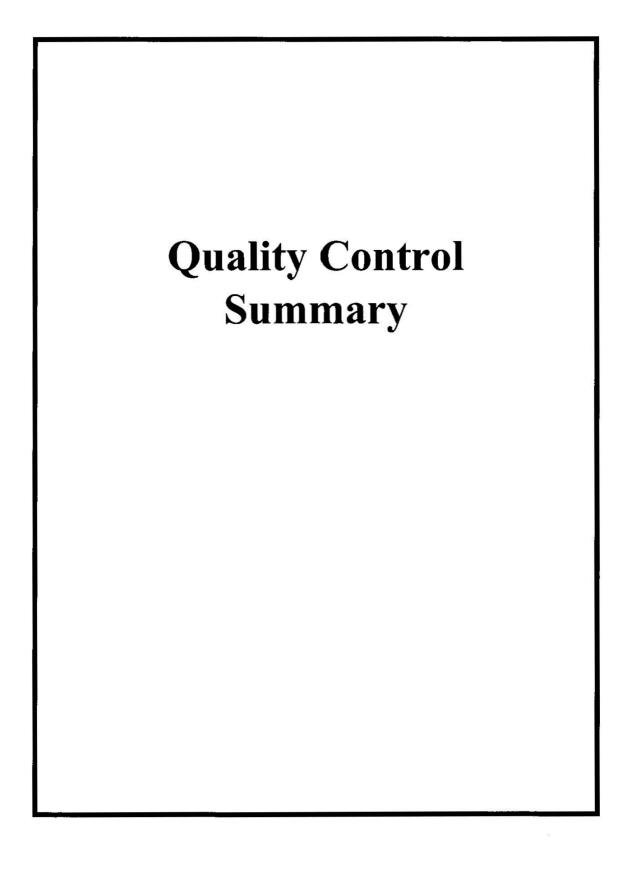
CAS No. Parmname		Qual	Result		Units	EDL	PQL
urrogate/Tracer recovery Q	)ual	Result	Nominal	Units	Recovery%	Accepta	able Limits
3C-202-OcCB		1570	2110	pg/L	74.2	(10%	<b>6-145%</b> )
C-205-OcCB		1930	2110	pg/L	91.3	(10%	n-145%)
3C-206-NoCB		2090	2110	pg/L	99.0	(10%	6-145%)
C-208-NoCB		1770	2110	pg/L	83.6	(10%	6-145%)
-209-DeCB		2020	2110	pg/L	95.6	(10%	6-145%)
C-28-TrCB		1340	2110	pg/L	63.3	(5%	-145%)
C-111-PeCB		1810	2110	pg/L	85.6	(10%	6-145%)
-178-HpCB		1840	2110	pg/L	87.0	(10%	6-145%)

#### Comments:

Batch ID:

Run Date:

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



### Report Date: October 26, 2017

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## PCB Congeners Surrogate Recovery Report

SDG Number: 1709F81 Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
1458001	1709F81-001K Rio Grande-South-21070928	13C-1-MoCB		57.8	(5%-145%)
		13C-3-MoCB		66.6	(5%-145%)
		13C-4-DiCB		72.4	(5%-145%)
		13C-15-DiCB		141	(5%-145%)
		13C-19-TrCB		108	(5%-145%)
		13C-37-TrCB		101	(5%-145%)
		13C-54-TeCB		62.2	(5%-145%)
		13C-77-TeCB		104	(10%-145%)
		13C-81-TeCB		103	(10%-145%)
		13C-104-PeCB		81.6	(10%-145%)
		13C-105-PeCB		85.5	(10%-145%)
		13C-114-PeCB		82.4	(10%-145%)
		13C-118-PeCB		81.7	(10%-145%)
		13C-123-PeCB		85.7	(10%-145%)
		13C-126-PeCB		87.1	(10%-145%)
		13C-155-HxCB		81.9	(10%-145%)
		13C-156-HxCB	C	79.9	(10%-145%)
		13C-157-HxCB	C156L		
		13C-167-HxCB		83.3	(10%-145%)
		13C-169-HxCB		88.3	(10%-145%)
		13C-188-HpCB		76.4	(10%-145%)
		13C-189-HpCB		77.0	(10%-145%)
		13C-202-OcCB		74.2	(10%-145%)
		13C-205-OcCB		97.3	(10%-145%)
		13C-206-NoCB		105	(10%-145%)
		13C-208-NoCB		89.9	(10%-145%)
		13C-209-DeCB		102	(10%-145%)
		13C-28-TrCB		57.4	(5%-145%)
		13C-111-PeCB		88.9	(10%-145%)
		13C-178-HpCB		91.1	(10%-145%)
158002	1709F81-003K Rio Grande-North-20170927	13C-1-MoCB		48.8	(5%-145%)
		13C-3-MoCB		56.3	(5%-145%)
		13C-4-DiCB		64.0	(5%-145%)
		13C-15-DiCB		110	(5%-145%)
		13C-19-TrCB		91.3	(5%-145%)
		13C-37-TrCB		89.1	(5%-145%)
		13C-54-TeCB		66.0	(5%-145%)
		13C-77-TeCB		91.2	(10%-145%)
		13C-81-TeCB		91.0	(10%-145%)
		13C-104-PeCB		80.4	(10%-145%)
		13C-105-PeCB		82.4	(10%-145%)
		13C-114-PeCB		79.8	(10%-145%)
		13C-118-PeCB		80.2	(10%-145%)
		13C-123-PeCB		83.9	(10%-145%)
		13C-126-PeCB		82.1	(10%-145%)
		13C-155-HxCB		78.6	(10%-145%)
		13C-156-HxCB	C	76.0	(10%-145%)
		13C-157-HxCB	C156L		
		13C-167-HxCB		79.1	(10%-145%)
		13C-169-HxCB		80.2	(10%-145%)
		13C-188-HpCB		76.2	(10%-145%)
		13C-189-HpCB		72.2	(10%-145%)

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# PCB Congeners

### **Surrogate Recovery Report**

SDG Number: 1709F81 Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
1458002	1709F81-003K Rio Grande-North-20170927	13C-202-OcCB		74.2	(10%-145%)
		13C-205-OcCB		91.3	(10%-145%)
		13C-206-NoCB		99.0	(10%-145%)
		13C-208-NoCB		83.6	(10%-145%)
		13C-209-DeCB		95.6	(10%-145%)
		13C-28-TrCB		63.3	(5%-145%)
		13C-111-PeCB		85.6	(10%-145%)
		13C-178-HpCB		87.0	(10%-145%)
2019814	LCS for batch 35954	13C-1-MoCB		47.4	(15%-145%)
.2017017		13C-3-MoCB		57.8	(15%-145%)
		13C-4-DiCB		66.6	(15%-145%)
		13C-15-DiCB		104	(15%-145%)
		13C-19-TrCB		91.0	(15%-145%)
		13C-37-TrCB		103	(15%-145%)
		13C-54-TeCB		64.0	(15%-145%)
		13C-77-TeCB		120	(40%-145%)
		13C-81-TeCB		119	(40%-145%)
		13C-104-PeCB		81.3	(40%-145%)
		13C-105-PeCB		86.9	(40%-145%)
		13C-114-PeCB		84.9	(40%-145%)
		13C-118-PeCB		84.3	(40%-145%)
		13C-123-PeCB		89.1	(40%-145%)
		13C-126-PeCB		87.7	(40%-145%)
		13C-155-HxCB		82.9	(40%-145%)
		13C-156-HxCB	С	82.8	(40%-145%)
		13C-157-HxCB	C156L	02.0	(40/0-145/0)
		13C-167-HxCB	CIDOL	86.0	(40%-145%)
		13C-169-HxCB		90.6	(40%-145%)
		13C-188-HpCB		78.8	
		13С-189-НрСВ		78.5	(40%-145%)
		13C-202-OcCB		79.8	(40%-145%)
					(40%-145%)
		13C-205-OcCB		100	(40%-145%)
		13C-206-NoCB		115	(40%-145%)
		13C-208-NoCB		96.2	(40%-145%)
		13C-209-DeCB		113	(40%-145%)
		13C-28-TrCB		59.9	(15%-145%)
		13C-111-PeCB 13C-178-HpCB		94.9 100	(40%-145%) (40%-145%)
010015	LCSD C - L - L 2004	120114 05		12.5	
019815	LCSD for batch 35954	13C-1-MoCB		46.1	(15%-145%)
		13C-3-MoCB		53.2	(15%-145%)
		13C-4-DiCB		64.3	(15%-145%)
		13C-15-DiCB		97.5	(15%-145%)
		13C-19-TrCB		88.7	(15%-145%)
		13C-37-TrCB		99.2	(15%-145%)
		13C-54-TeCB		67.1	(15%-145%)
		13C-77-TeCB		120	(40%-145%)
		13C-81-TeCB		119	(40%-145%)
		13C-104-PeCB		77.7	(40%-145%)
		13C-105-PeCB		86.4	(40%-145%)
		13C-114-PeCB		83.7	(40%-145%)
		13C-118-PeCB		84.5	(40%-145%)

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(10%-145%)

(10%-145%)

96.5

98.0

### **PCB Congeners Surrogate Recovery Report**

SDG Number: 1709F81 Matrix Type: LIQUID

Recovery Acceptance QUAL Sample ID **Client ID** Surrogate (%) Limits 12019815 LCSD for batch 35954 13C-123-PeCB 86.7 (40%-145%) 13C-126-PeCB 89.4 (40%-145%) 13C-155-HxCB (40%-145%) 78.0 13C-156-HxCB C 78.8 (40%-145%) 13C-157-HxCB C156L 13C-167-HxCB 81.1 (40%-145%) 88.1 (40%-145%) 13C-169-HxCB 13C-188-HpCB 73.5 (40%-145%) 13C-189-HpCB 74.6 (40%-145%) 13C-202-OcCB 74.0 (40%-145%) 13C-205-OcCB 97.9 (40%-145%) 13C-206-NoCB 111 (40%-145%) 13C-208-NoCB 91.6 (40%-145%) 13C-209-DeCB 110 (40%-145%) 13C-28-TrCB 63.3 (15%-145%) 13C-111-PeCB 92.0 (40%-145%) 13C-178-HpCB 95.7 (40%-145%) 12019813 MB for batch 35954 13C-1-MoCB 52.1 (5%-145%) 13C-3-MoCB 57.8 (5%-145%) 13C-4-DiCB 68.8 (5%-145%) 13C-15-DiCB 113 (5%-145%) 95.5 13C-19-TrCB (5%-145%) 13C-37-TrCB 106 (5%-145%) 13C-54-TeCB 67.5 (5%-145%) 13C-77-TeCB 125 (10%-145%) 13C-81-TeCB 127 (10%-145%) 13C-104-PeCB 78.2 (10%-145%) 13C-105-PeCB 87.3 (10%-145%) 13C-114-PeCB 84.8 (10%-145%) 13C-118-PeCB 84.5 (10%-145%) 13C-123-PeCB 88.7 (10%-145%) 13C-126-PeCB 89.2 (10%-145%) (10%-145%) 13C-155-HxCB 82.0 13C-156-HxCB C 80.0 (10%-145%) C156L 13C-157-HxCB 13C-167-HxCB 82.2 (10%-145%) 13C-169-HxCB 89.5 (10%-145%) 13C-188-HpCB 75.4 (10%-145%) 13C-189-HpCB 75.7 (10%-145%) 13C-202-OcCB 75.9 (10%-145%) 13C-205-OcCB 97.6 (10%-145%) 13C-206-NoCB 111 (10%-145%) 13C-208-NoCB 93.4 (10%-145%) 13C-209-DeCB 112 (10%-145%) 13C-28-TrCB 61.5 (5%-145%)

13C-111-PeCB

13C-178-HpCB

<sup>\*</sup> Recovery outside Acceptance Limits # Column to be used to flag recovery values D Sample Diluted

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### **PCB** Congeners

### **Quality Control Summary** Spike Recovery Report

Matrix:

1709F81 SDG Number:

Sample Type: Laboratory Control Sample

Client ID:

LCS for batch 35954

WATER

Lab Sample ID: 12019814

Analysis Date: 10/23/2017 09:59

Dilution: 1

Instrument: HRP875 Analyst: MLS

Prep Batch ID:35954

Batch ID: 36029

_			Date	11 ID. 30	029	
CAS No.		Parmname	Amount Added pg/L	Spike Conc. pg/L	Recovery	Acceptance Limits
2051-60-7	LCS	1-MoCB	500	464	92.7	60-135
2051-62-9	LCS	3-МоСВ	500	495	99	60-135
13029-08-8	LCS	4-DiCB	500	470	93.9	60-135
2050-68-2	LCS	15-DiCB	500	559	112	60-135
38444-73-4	LCS	19-TrCB	500	489	97.7	60-135
38444-90-5	LCS	37-TrCB	500	499	99.9	60-135
15968-05-5	LCS	54-TeCB	1000	957	95.7	60-135
32598-13-3	LCS	77-TeCB	1000	927	92.7	60-135
70362-50-4	LCS	81-TeCB	1000	1030	103	60-135
56558-16-8	LCS	104-PeCB	1000	1010	101	60-135
32598-14-4	LCS	105-PeCB	1000	1130	113	60-135
74472-37-0	LCS	114-PeCB	1000	1020	102	60-135
31508-00-6	LCS	118-PeCB	1000	1000	100	60-135
65510-44-3	LCS	123-PeCB	1000	993	99.3	60-135
57465-28-8	LCS	126-PeCB	1000	1110	111	60-135
33979-03-2	LCS	155-HxCB	1000	1150	115	60-135
38380-08-4	LCS	156-HxCB	2000	2260	113	60-135
69782-90-7	LCS	157-HxCB	•	C156		
52663-72-6	LCS	167-HxCB	1000	1140	114	60-135
32774-16-6	LCS	169-HxCB	1000	1080	108	60-135
74487-85-7	LCS	188-HpCB	1000	1000	100	60-135
39635-31-9	LCS	189-HpCB	1000	1040	104	60-135
2136-99-4	LCS	202-OcCB	1500	1510	100	60-135
74472-53-0	LCS	205-OcCB	1500	1410	94.3	60-135
40186-72-9	LCS	206-NoCB	1500	1390	92.4	60-135
52663-77-1	LCS	208-NoCB	1500	1520	101	60-135
2051-24-3	LCS	209-DeCB	1500	1580	105	60-135

of 2

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### **PCB** Congeners

**Quality Control Summary** Spike Recovery Report

Matrix:

1709F81 SDG Number:

LCSD for batch 35954

Lab Sample ID: 12019815 Instrument:

Client ID:

HRP875

Analyst: MLS

Analysis Date: 10/23/2017 11:08

WATER

Sample Type: Laboratory Control Sample Duplicate

Dilution: 1

Prep Batch ID:35954

Batch ID: 36029

			Amount		Spike				
			Added		Conc.	Recovery	Acceptance	RPD	Acceptance
CAS No.		Parmname	pg/L		pg/L	%	Limits	%	Limits
2051-60-7	LCSD	I-MoCB	500		445	89	60-135	4.11	0-30
2051-62-9	LCSD	3-MoCB	500		517	103	60-135	4.22	0-30
13029-08-8	LCSD	4-DiCB	500		471	94.2	60-135	0.332	0-30
2050-68-2	LCSD	15-DiCB	500		548	110	60-135	1.98	0.30
38444-73-4	LCSD	19-TrCB	500		486	97.2	60-135	0.505	0-30
38444-90-5	LCSD	37-TrCB	500		496	99.2	60-135	0.683	0-30
15968-05-5	LCSD	S4-TeCB	1000		956	95.6	60-135	0.128	0-30
32598-13-3	LCSD	77-TeCB	1000		908	90.8	60-135	2.08	0-30
70362-50-4	LCSD	81-TeCB	1000		1010	101	60-135	1.59	0-20
56558-16-8	LCSD	104-PeCB	1000		987	98.7	60-135	1.94	0-30
32598-14-4	LCSD	105-PeCB	1000		1100	110	60-135	3.21	0-30
74472-37-0	LCSD	L14-PcCB	1000		998	99.8	60-135	2.23	0-30
31508-00-5	LCSD	18-PeCB	1000		964	96.4	60-135	3.71	0-30
65510-44-3	LCSD	123-PeCB	1000		970	97	60-135	2.27	0-30
57465-28-8	LCSD	126-PeCB	1000		1070	107	60-135	3.21	0-30
32979-03-2	LCSD	155-HxCB	1000		1090	109	60-135	5.84	0-30
38380-08-4	LCSD	156-HxCB	2000	C	2180	109	60-135	3.67	0-30
69782-90-7	LCSD	157-HxCB		C156					
52663-72-6	LCSD	167-HXLB	000		1120	112	50-135	1.94	0.30
32774-16-6	LCSD	169-HxCB	:000		1060	106	60-135	1.87	0.30
74487-85-7	LCSD	188-HpCB	1000		982	98.2	60-135	1.77	0-30
39635-31-9	LCSD	189-HoCB	.000		1033	103	50-135	0.740	0-30
2136-99-4	LCSD	202-OeCB	1.500		1480	98.7	60-135	1.69	0-30
74472-53-0	LCSD	205-OcCB	1500		1380	91.8	60-135	2.66	0-30
40185-72-9	LCSD	206-NoCB	1500		1360	90.9	60-135	1.62	0.30
52663-77-1	LCSD	208-NoCB	1500		1510	101	60-135	0.398	0.30
2051-24-3	LCSD	209-DeCB	1500		1550	(03	60-135	1.65	0-30

Report Date:

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Page 1

**Method Blank Summary** 

SDG Number: Client ID:

1709F81

Lab Sample ID: 12019813

MB for batch 35954

Client:

HALL001

Matrix:

WATER

Data File: d23oct17a-4

Prep Date:

17-OCT-17

Analyzed: 10/23/17 12:18

Column:

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

Instrument ID: HRP875

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed	
01	1709F81-001K Rio Grande-South-21070928	11458001	d21oct17a-4	10/21/17	1046	300
02	1709F81-003K Rio Grande-North-20170927	11458002	d21oct17a-5	10/21/17	1155	
03	LCS for batch 35954	12019814	d23oct17a-2	10/23/17	0959	
04	LCSD for batch 35954	12019815	d23oct17a-3	10/23/17	1108	

20.0

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### PCB Congeners Certificate of Analysis Sample Summary

			,			
SDG Numbe		Client:	HALL001		Project:	HALL00117
Lab Sample	0.00 0 1 1 1 2 2 2 2 2 4				Matrix:	WATER
Client Samp						
Client ID: Batch ID:	MB for batch 35954 36029	Method:	EPA Method 1668C		Prep Basis:	As Received
Run Date:	10/23/2017 12:18	Analyst:	MLS		Instrument:	HRP875
Data File:	d23oct17a-4	,0,000000 <b>/</b> 00000	\$267 <del>77</del> 552/		Dilution:	1
Prep Batch:	35954	Prep Method:	SW846 3520C		Prep SOP Ref:	CF-OA-E-001
Prep Date:	17-OCT-17	Prep Aliquot:	1000 mL			
CAS No.	Parmname	Qual	Result	Units	EDL	PQL
2051-60-7	I-MoCB	U	ND	pg/L	2.44	20.0
2051-61-8	2-MoCB	U	ND	pg/L	2.82	20.0
2051-62-9	3-MoCB	U	ND	pg/L	2.72	20.0
13029-08-8	4-DiCB	υ	ND	pg/L	11.5	20.0
16605-91-7	5-DiCB	U	ND	pg/L	11.5	20.0
25569-80-6	6-DiCB	U	ND	pg/L	9.38	20.0
33284-50-3	7-DiCB	U	ND	pg/L	9.82	20.0
34883-43-7	8-DiCB	υ	ND	pg/L	8.54	20.0
34883-39-1	9-DiCB	U	ND	pg/L	10.6	20.0
33146-45-1	10-DiCB	U	ND	pg/L	7.22	20.0
2050-67-1	11-DiCB	U	ND	pg/L	10.5	100
2974-92-7	12-DíCB	CU	ND	pg/L	10.4	40.0
2974-90-5	13-DiCB	C12				
34883-41-5	14-DíCB	U	ND	pg/L	9.84	20.0
2050-68-2	15-DiCB	U	ND	pg/L	10.8	20.0
38444-78-9	16-ТтСВ	U	ND	pg/L	2.86	20.0
37680-66-3	17-TrCB	U	ND	pg/L	2.78	20.0
37680-65-2	18-TrCB	CU	ND	pg/L	2.26	40.0
38444-73-4	19-TrCB	U	ND	pg/L	4.30	20.0
38444-84-7	20-TrCB	CJ	2.48	pg/L	1.86	40.0
55702-46-0	21-TrCB	CU	ND	pg/L	1.84	40.0
38444-85-8	22-TrCB	U	ND	pg/L	1.92	20.0
55720-44-0	23-TrCB	U	ND	pg/L	1.92	20.0
55702-45-9	24-TrCB	υ	ND	pg/L	1.98	20.0
55712-37-3	25-TrCB	U	ND	pg/L	1.66	20.0
38444-81-4	26-TrCB	CU	ND	pg/L	1.86	40.0
38444-76-7	27-TrCB	υ	ND	pg/L	1.98	20.0
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	2.34	20.0
	80 LD808	222	110		100	20.0

ND

pg/L

1.76

## 38444-77-8 Comments:

32-TrCB

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.

1709F81

12019813

QC for batch 35954

SDG Number:

Lab Sample ID:

Client Sample: Client ID:

Report Date: Page 2

As Received

20.0

October 26, 2017

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### **PCB** Congeners Certificate of Analysis Sample Summary

HALL001

Project: HALL00117 WATER Matrix:

MB for batch 35954 Prep Basis:

Client:

Batch ID: EPA Method 1668C 36029 Method: Run Date: 10/23/2017 12:18 MLS Analyst:

Instrument: HRP875

Data File: Prep Batch: Prep Date:	d23oct17a-4 35954 17-OCT-17	Prep Method: Prep Aliquot:	SW846 3520C 1000 mL		Dilution: Prep SOP Ref:	1 CF-OA-E-001
CAS No.	Parmname	Qual	Result	Units	EDL	PQL
38444-86-9	33-TrCB	C2I				
37680-68-5	34-TrCB	U	ND	pg/L	1.96	20.0
37680-69-6	35-TrCB	U	ND	pg/L	2.42	20.0
38444-87-0	36-TrCB	U	ND	pg/L	2.10	20.0
38444-90-5	37-TrCB	U	ND	pg/L	2.12	20.0
53555-66-1	38-TrCB	υ	ND	pg/L	2.24	20.0
38444-88-1	39-TrCB	U	ND	pg/L	2.10	20.0
38444-93-8	40-TeCB	CU	ND	pg/L	2.88	40.0
52663-59-9	41-TeCB	U	ND	pg/L	3.22	20.0
36559-22-5	42-TeCB	υ	ND	pg/L	3.22	20.0
70362-46-8	43-TeCB	U	ND	pg/L	3.88	20.0
41464-39-5	44-TeCB	Cl	4.44	pg/L	2.84	60.0
70362-45-7	45-TeCB	CU	ND	pg/L	1.40	40.0
41464-47-5	46-TeCB	U	ND	pg/L	1.42	20.0
2437-79-8	47-TeCB	C44				
70362-47-9	48-TcCB	U	ND	pg/L	3.02	20.0
41464-40-8	49-TeCB	CU	ND	pg/L	2.60	40.0
62796-65-0	50-TeCB	CU	ND	pg/L	1.30	40.0
68194-04-7	51-TeCB	C45				
35693-99-3	52-TeCB	J	3.06	pg/L	2.78	20.0
41464-41-9	53-TeCB	C50				
15968-05-5	54-TeCB	υ	ND	pg/L	1.56	20.0
74338-24-2	55-TeCB	U	ND	pg/L	2.30	20.0
41464-43-1	56-TeCB	U	ND	pg/L	2.28	20.0
70424-67-8	57-TeCB	U	ND	pg/L	2.08	20.0
41464-49-7	58-TeCB	U	ND	pg/L	2.06	20.0
74472-33-6	59-TeCB	CU	ND	pg/L	2.26	60.0
33025-41-1	60-TeCB	U	ND	pg/L	2.20	20.0
33284-53-6	61-TeCB	CJ	4.76	pg/L	2.06	80.0
54230-22-7	62-TeCB	C59				
74472-34-7	63-TeCB	υ	ND	pg/L	1.94	20.0

U

ND

pg/L

2.24

## 52663-58-8 Comments:

- Congener has coeluters. When Cxxx, refer to congener number xxx for data
- Value is estimated

64-TeCB

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

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### **PCB** Congeners Certificate of Analysis Sample Summary

	SDG Number Lab Sample I Client Sampl	D:	1709F81 12019813 QC for batch 35954	Client;	HALL001		Project: Matrix:	HALL00117 WATER
Client ID:			MB for batch 35954	nore me nor			Prep Basis:	As Received
	Batch ID: Run Date:		36029 10/23/2017 12:18	Method: Analyst:	EPA Method 1668C MLS		Instrument:	HRP875
	Data File:		d23oct17a-4	549			Dilution:	1
	Prep Batch: Prep Date:		35954 17-OCT-17	Prep Method: Prep Aliquot:	SW846 3520C 1000 mL		Prep SOP Ref:	CF-OA-E-001
	CAS No.		Parmname	Qual	Result	Units	EDL	PQL
	33284-54-7	65-T		C44	Kesuk	Cuito		
	32598-10-0	66-T		υ	ND	pg/L	1.92	20.0
	73575-53-8	67- <b>T</b>		U	ND	pg/L	1.88	20.0
	73575-52-7	68-T	еСВ	υ	ND	pg/L	1.92	20.0
	60233-24-1	69-T		C49				
	32598-11-1	70-T	еСВ	C61				
	41464-46-4	71-T	eCB	C40				
	41464-42-0	72-T	eCB	υ	ND	pg/L	1.96	20.0
	74338-23-1	73-T	eCB	U	ND	pg/L	2.32	20.0
	32690-93-0	74-T	eCB	C61				
	32598-12-2	75-T	eCB	C59				
	70362-48-0	76-T	eCB	C61				
	32598-13-3	77- <b>T</b>	eCB	J	2.36	pg/L	1.82	20.0
	70362-49-1	78-T	eCB	υ	ND	pg/L	2.16	20.0
	41464-48-6	79-T	eCB	U	ND	pg/L	1.90	20.0
	33284-52-5	80-T	еСВ	U	ND	pg/L	1.88	20.0
	70362-50-4	81-T	еСВ	U	ND	pg/L	1.76	20.0
	52663-62-4	82-P	eCB	U	ND	pg/L	2.18	20.0
	60145-20-2	83-P	eCB	U	ND	pg/L	2.16	20.0
	52663-60-2	84-P	еСВ	υ	ND	pg/L	2.14	20.0
	65510-45-4	85-P	еСВ	CU	ND	pg/L	1.62	60.0
	55312-69-1	86-P	eCB	CU	ND	pg/L	3.76	120
	38380-02-8	87-P	еСВ	C86				
	55215-17-3	88-P	eCB	CU	ND	pg/L	1.96	40.0
	73575-57-2	89-P	eCB	U	ND	pg/L	2.00	20.0
	68194-07-0	90-P	eCB	CJ	2.78	pg/L	1.70	60.0
	68194-05-8	91-P	eCB	C88				
	52663-61-3	92-P	eCB	U	ND	pg/L	1.96	20.0
	73575-56-1	93-P	eCB	CU	ND	pg/L	1.88	40.0
	73575-55-0	94-P	eCB	U	ND	pg/L	2.10	20.0
	38379-99-6	95-P	еСВ	U	ND	pg/L	1.90	20.0
	73575-54-9	96-P	еСВ	υ	ND	pg/L	0.720	20.0

### Comments:

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

Value is estimated

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

1709F81

SDG Number:

of 8

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HALL00117

Project:

### PCB Congeners Certificate of Analysis Sample Summary

HALL001

Client:

Lab Sample Client Samp Client ID: Batch ID: Run Date: Data File: Prep Batch: Prep Date:	ID: 12019813	Method: Analyst: Prep Method: Prep Aliquot:	EPA Method 1668C MLS SW846 3520C 1000 mL		Matrix:  Prep Basis:  Instrument: Dilution: Prep SOP Ref:	WATER  As Received  HRP875 1 CF-OA-E-001
CAS No.		Qual	Result	Units	EDL	PQL
41464-51-1	Parmname 97-PeCB	C86	Result	Units	EDL	ryc
60233-25-2	98-PeCB	CU	ND	pg/L	2.00	40.0
38380-01-7	99-PeCB	U	ND	pg/L	1.66	20.0
39485-83-1	100-PcCB	C93		PEC	1.00	20.0
37680-73-2	101-PeCB	C90				
68194-06-9	102-PeCB	C98				
60145-21-3	103-PeCB	U	ND	pg/L	1.76	20.0
56558-16-8	104-PeCB	U	ND	pg/L	0.800	20.0
32598-14-4	105-PeCB	U	ND	pg/L	1.80	20.0
70424-69-0	106-PeCB	U	ND	pg/L	1.88	20.0
70424-68-9	107-PeCB	U	ND	pg/L	1.52	20.0
70362-41-3	108-PeCB	CU	ND	pg/L	1.74	40.0
74472-35-8	109-PeCB	C86				
38380-03-9	110-PeCB	CJ	1.76	pg/L	1.54	40.0
39635-32-0	111-PeCB	U	ND	pg/L	1.44	20.0
74472-36-9	112-PeCB	U	ND	pg/L	1.62	20.0
68194-10-5	113-PeCB	C90				
74472-37-0	114-PcCB	U	ND	pg/L	1.76	20.0
74472-38-1	115-PeCB	C110				
18259-05-7	116-PcCB	C85				
68194-11-6	117-PcCB	C85				
31508-00-6	118-PcCB	U	ND	pg/L	1.68	20.0
56558-17-9	119-PeCB	C86				
68194-12-7	120-PeCB	U	ND	pg/L	1.40	20.0
56558-18-0	121-PeCB	U	ND	pg/L	1.48	20.0
76842-07-4	122-PeCB	U	ND	pg/L	1.82	20.0
65510-44-3	123-PeCB	υ	ND	pg/L	1.66	20.0
70424-70-3	124-PeCB	C108				
74472-39-2	125-PeCB	C86	N/CES	1921	0.20	
57465-28-8	126-PeCB	U	ND	pg/L	1.96	20.0
39635-33-1	127-PeCB	U	ND	pg/L	1.74	20.0
38380-07-3	128-HxCB	CU	ND	pg/L	1.92	40.0

### 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.

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### **PCB** Congeners Certificate of Analysis Sample Summary

SDG Number	r: 1709F81		Client:	HALL001		Project:	HALL00117		
Lab Sample						Matrix:	WATER		
Client Sampl		atch 35954							
Client ID:		atch 35954		PD 4 M 4 - 1 1//00		Prep Basis:	As Received		
Batch ID: Run Date:	36029 10/23/201	7 12:18	Method: Analyst:	EPA Method 1668C MLS		Instrument:	HRP875		
Data File:	d23oct17		Analyst.	WES		Dilution:	1		
Prep Batch:	35954		Prep Method:	SW846 3520C		Prep SOP Ref:	CF-OA-E-001		
Prep Date:	17-OCT-	17	Prep Aliquot:	1000 mL					
CAS No.		Рагтлате	Qual	Result	Units	EDL	PQL		
55215-18-4	129-HxCB		CJ	2.58	pg/L	2.00	60.0		
52663-66-8	130-HxCB		U	ND	pg/L	2.40	20.0		
61798-70-7	131-HxCB		U	ND	pg/L	2.58	20.0		
38380-05-1	132-HxCB		U	ND	pg/L	2.42	20.0		
35694-04-3	133-HxCB		υ	ND	pg/L	2.26	20.0		
52704-70-8	134-HxCB		υ	ND	pg/L	2.62	20.0		
52744-13-5	135-HxCB		CU	ND	pg/L	1.08	40.0		
38411-22-2	136-HxCB		U	ND	pg/L	0.800	20.0		
35694-06-5	137-HxCB		U	ND	pg/L	2.02	20.0		
35065-28-2	138-HxCB		C129						
56030-56-9	139-HxCB		CU	ND	pg/L	2.08	40.0		
59291-64-4	140-HxCB		C139						
52712-04-6	141-HxCB		υ	ND	pg/L	2.26	20.0		
41411-61-4	142-HxCB		U	ND	pg/L	2.56	20.0		
68194-15-0	143-HxCB		U	ND	pg/L	2.44	20.0		
68194-14-9	144-HxCB		U	ND	pg/L	1.02	20.0		
74472-40-5	145-HxCB		U	ND	pg/L	0.840	20.0		
51908-16-8	146-HxCB		U	ND	pg/L	1.76	20.0		
68194-13-8	147-HxCB		CU	ND	pg/L	2.14	40.0		
74472-41-6	148-HxCB		U	ND	pg/L	1.06	20.0		
38380-04-0	149-HxCB		C147						
68194-08-I	150-HxCB		U	ND	pg/L	0.820	20.0		
52663-63-5	151-HxCB		C135						
68194-09-2	152-HxCB		U	ND	pg/L	0.800	20.0		
35065-27-1	153-HxCB		CU	ND	pg/L	1.70	40.0		
60145-22-4	154-HxCB		U	ND	pg/L	0.920	20.0		
33979-03-2	155-HxCB		υ	ND	pg/L	0.760	20.0		
38380-08-4	156-HxCB		CJ	2.20	pg/L	1.34	40.0		
69782-90-7	157-HxCB		C156						
74472-42-7	158-HxCB		U	ND	pg/L	1.52	20.0		
39635-35-3	159-HxCB		U	ND	pg/L	1.06	20.0		

ND

1.92

pg/L

20.0

## 41411-62-5 Comments:

- C Congener has coeluters. When Cxxx, refer to congener number xxx for data
- Value is estimated

160-HxCB

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

SDG Number:

Batch ID:

Run Date:

Data File:

1709F81

36029

10/23/2017 12:18

d23oct17a-4

Report Date:

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### **PCB** Congeners Certificate of Analysis Sample Summary

MLS

HALL001

EPA Method 1668C

Lab Sample ID: 12019813 Matrix: QC for batch 35954 Client Sample: MB for batch 35954 Client ID: Method:

Analyst:

Client:

Project:

HALL00117 WATER

Prep Basis: As Received

HRP875 Instrument:

Dilution:

Data File: Prep Batch: Prep Date:	d23oct17a-4 35954 17-OCT-17	Prep Method: Prep Aliquot:	SW846 3520C 1000 mL		Dilution: Prep SOP Ref:	1 CF-OA-E-001	
CAS No.	Parmname	Qual	Result	Units	EDL	PQL	
74472-43-8	161-HxCB	Ù	ND	pg/L	1.72	20.0	
39635-34-2	162-HxCB	U	ND	pg/L	1.06	20.0	
74472-44-9	163-HxCB	C129					
74472-45-0	164-HxCB	U	ND	pg/L	1.74	20.0	
74472-46-1	165-HxCB	U	ND	pg/L	1.84	20.0	
41411-63-6	166-HxCB	C128					
52663-72-6	167-HxCB	U	ND	pg/L	1.02	20.0	
59291-65-5	168-HxCB	C153					
32774-16-6	169-HxCB	U	ND	pg/L	1.12	20.0	
35065-30-6	170-HpCB	U	ND	pg/L	1.42	20.0	
52663-71-5	171-HpCB	CU	ND	pg/L	1.46	40.0	
52663-74-8	172-HpCB	U	ND	pg/L	1.44	20.0	
68194-16-1	173-HpCB	C171					
38411-25-5	174-HpCB	U	ND	pg/L	1.42	20.0	
40186-70-7	175-HpCB	U	ND	pg/L	1.28	20.0	
52663-65-7	176-НрСВ	υ	ND	pg/L	1.00	20.0	
52663-70-4	177-HpCB	υ	ND	pg/L	1.44	20.0	
52663-67-9	178-HpCB	U	ND	pg/L	1.34	20.0	
52663-64-6	179-HpCB	U	ND	pg/L	1.00	20.0	
35065-29-3	180-HpCB	CU	ND	pg/L	1.16	40.0	
74472-47-2	181-HpCB	U	ND	pg/L	1.38	20.0	
60145-23-5	182-HpCB	U	ND	pg/L	1.24	20.0	
52663-69-1	183-HpCB	cu	ND	pg/L	1.34	40.0	
74472-48-3	184-HpCB	U	ND	pg/L	0.960	20.0	
52712-05-7	185-HpCB	C183					
74472-49-4	186-HpCB	U	ND	pg/L	1.04	20.0	
52663-68-0	187-НрСВ	U	ND	pg/L	1.22	20.0	
74487-85-7	188-HpCB	U	ND	pg/L	1.02	20.0	
39635-31-9	189-HpCB	U	ND	pg/L	1.22	20.0	
41411-64-7	190-HpCB	U	ND	pg/L	1.08	20.0	

U

υ

ND

ND

pg/L

pg/L

1.06

1.18

20.0

20.0

## 74472-51-8 Comments:

74472-50-7

191-HpCB

192-HpCB

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.

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PCB Congeners
Certificate of Analysis
Sample Summary

Certificate of Analysis Sample Summary											
SDG Number: Lab Sample II		Clie	nt:	HALL001			Project: Matrix:	HALL00117 WATER			
Client Sample Client ID:	MB for batch 35954						Prep Basis:	As Received			
Batch ID: Run Date:	36029 10/23/2017 12:18		hod: lyst:	EPA Meth MLS	od 1668C		Instrument:	HRP875			
Data File: Prep Batch: Prep Date:	d23oct17a-4 35954 17-OCT-17		Method: Aliquot:	SW846 35 1000 mL	20C		Dilution: Prep SOP Ref:	1 CF-OA-E-001			
CAS No.	Parmname	,	Qual	Result		Units	EDL	PQL			
69782-91-8	193-НрСВ		C180								
35694-08-7	194-OcCB		U	ND		pg/L	1.38	20.0			
52663-78-2	195-OcCB		U	ND		pg/L	1.32	20.0			
42740-50-1	196-OcCB		U	ND		pg/L	1.16	20.0			
	197-OcCB		CU	ND		pg/L	0.920	40.0			
	198-OcCB		CU	ND		pg/L	1.22	40.0			
	199-OcCB		C198								
	200-OcCB		C197	VD			0.000	20.0			
	201-OcCB 202-OcCB		U U	ND		pg/L	0.900	20.0 20.0			
	203-OcCB		U	ND ND		pg/L pg/L	0.980 1.16	20.0			
	204-OcCB		U	ND		pg/L pg/L	0.900	20.0			
	205-OcCB		U	ND		pg/L	0.980	20.0			
	206-NoCB		U	ND		pg/L	1.30	20.0			
52663-79-3	207-NoCB		U	ND		pg/L	0.980	20.0			
52663-77-1	208-NoCB		U	ND		pg/L	0.920	20.0			
2051-24-3	209-DeCB		J	1.66		pg/L	0.960	20.0			
1336-36-3	Total PCB Congeners		J	28.1		pg/L	6.68	20.0			
Surrogate/Tra	cer recovery	Qual	Result	Nominal	Units	Recovery%	S -0.7000 -0.000				
13C-1-MoCB			1040	2000	pg/L	52.1	(5%-145				
13C-3-MoCB			1160	2000	pg/L	57.8	(5%-145				
13C-4-DiCB			1380	2000	pg/L	68.8	(5%-145				
13C-15-DiCB			2260	2000	pg/L	113	(5%-145				
13C-19-TrCB			1910	2000	pg/L	95.5	(5%-145				
13C-37-TrCB			2120 1350	2000	pg/L	106 67.5	(5%-145				
13C-54-TeCB 13C-77-TeCB			2500	2000	pg/L pg/L	125	(5%-145 (10%-14				
13C-81-TeCB			2530	2000	pg/L pg/L	127	(10%-14				
13C-104-PeCB			1560	2000	pg/L	78.2	(10%-14				
13C-105-PeCB			1750	2000	pg/L	87.3	(10%-14				
13C-114-PeCB			1700	2000	pg/L	84.8	(10%-14				
13C-118-PcCB			1690	2000	pg/L	84.5	(10%-14				
13C-123-PeCB			1770	2000	pg/L	88.7	(10%-14				
13C-126-PeCB			1780	2000	pg/L	89.2	(10%-14				
13C-155-HxCB			1640	2000	pg/L	82.0	(10%-14				
13C-156-HxCB		C	3200	4000	pg/L	80.0	(10%-14				
13C-157-HxCB		C156L			e=						
13C-167-HxCB		5	1640	2000	pg/L	82.2	(10%-14	5%)			
13C-169-HxCB			1790	2000	pg/L	89.5	(10%-14	5%)			
13С-188-НрСВ			1510	2000	pg/L	75.4	(10%-14	5%)			
13C-189-HpCB			1510	2000	pg/L	75.7	(10%-14	5%)			

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### **PCB** Congeners Certificate of Analysis Sample Summary

Lab Sample ID:	12019813
Client Sample:	QC for batch 35954
CU ID	MAD 6 b . 4-1 15054

1709F81

Client: HALL001 Project: Matrix:

Prep Basis:

HALL00117 WATER

Client ID:

SDG Number:

MB for batch 35954 36029

Method: Analyst: EPA Method 1668C

As Received

Batch ID: Run Date: Data File:

10/23/2017 12:18 d23oct17a-4

Prep Method:

MLS SW846 3520C Instrument: Dilution: Prep SOP Ref:

HRP875 CF-OA-E-001

Prep Batch: Prep Date:

35954 17-OCT-17

**Prep Aliquot:** 

1000 mL

CAS No.	Parmname		Qual	Result		Units	EDL	PQL
Surrogate/Tracer recovery		Qual	Result	Nominal	Units	Recovery%	Accepta	ble Limits
13C-202-OcCB			1520	2000	pg/L	75.9	(10%	-145%)
13C-205-OcCB			1950	2000	pg/L	97.6	(10%	-145%)
13C-206-NoCB			2220	2000	pg/L	111	(10%	-145%)
13C-208-NoCB			1870	2000	pg/L	93.4	(10%	-145%)
13C-209-DeCB			2230	2000	pg/L	112	(10%	-145%)
13C-28-TrCB			1230	2000	pg/L	61.5	(5%	145%)
13C-111-PeCB			1930	2000	pg/L	96.5	(10%	-145%)
13C-178-HpCB			1960	2000	pg/L	98.0	(10%	-145%)

#### Comments:

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

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Page 1

PCB Congeners Certificate of Analysis Sample Summary

					cate of Ana de Summa				
SDG Numbe		09F81 019814	Client	-	HALL001	, ,		Project: Matrix:	HALL00117 WATER
Client Samp		C for batch 35954					Duan Dacio	As Donahund	
Client ID: Batch ID:		CS for batch 35954 029	Metho	od:	EPA Meth	od 1668C		Prep Basis:	As Received
Run Date: Data File:		/23/2017 09:59 /3oct17a-2	Analy	st:	MLS			Instrument: Dilution:	HRP875
Prep Batch: Prep Date:	35	954 -OCT-17	-	Method: Aliquot:	SW846 35 1000 mL	20C		Prep SOP Ref:	
CAS No.		Parmname	Q	ual	Result		Units	EDL	PQL
2051-60-7	1-MoCE	3		**	464		pg/L	5.28	20.0
2051-62-9	3-MoCE	3			495		pg/L	5.58	20.0
13029-08-8	4-DiCB				470		pg/L	14.2	20.0
2050-68-2	15-DiCI				559		pg/L	15.3	20.0
38444-73-4	19-TrCI				489		pg/L	6.64	20.0
38444-90-5	37-TrCE				499		pg/L	12.2	20.0
15968-05-5	54-TeCI				957		pg/L	2.48	20.0
32598-13-3	77-TeCl				927		pg/L	9.12	20.0
70362-50-4	81-TeCl				1030		pg/L	8.74	20.0
56558-16-8	104-PeC				1010		pg/L	1.54	20.0
32598-14-4	105-PeC				1130		pg/L	9.62	20.0
74472-37-0	114-PeC				1020		pg/L	9.20	20.0
31508-00-6	118-PcC				1000		pg/L	8.90	20.0
65510-44-3	123-PeC				993		pg/L	8.78	20.0
57465-28-8	126-PeC				1110		pg/L	10.7	20.0
33979-03-2	155-Hx(				1150		pg/L	1.16	20.0
38380-08-4	156-Hx0			С	2260		pg/L	7.66	40.0
69782-90-7	157-Hx0			C156					20.0
52663-72-6	167-Hx(				1140		pg/L	5.82	20.0
32774-16-6	169-Hx(				1080		pg/L	6.60	20.0
74487-85-7	188-Нр				1000		pg/L	2.02	20.0
39635-31-9	189-Hp0				1040		pg/L	2.86	20.0
2136-99-4	202-Oc0				1510		pg/L	1.64	20.0
74472-53-0	205-Oct				1410		pg/L	2.98	20.0
40186-72-9	206-No(				1390		pg/L	2.12	20.0
52663-77-1	208-No				1520		pg/L	1.52	20.0
2051-24-3	209-De0	.8			1580		pg/L	1.18	20.0
Surrogate/Ti	racer rec	covery	Qual	Result	Nominal	Units	Recovery%	% Acceptable	Limits
13C-1-MoCB				947	2000	pg/L	47.4	(15%-14	5%)
13C-3-MoCB				1160	2000	pg/L	57.8	(15%-14	5%)
13C-4-DiCB				1330	2000	pg/L	66.6	(15%-14	5%)
13C-15-DiCB				2090	2000	pg/L	104	(15%-14	5%)
13C-19-TrCB				1820	2000	pg/L	91.0	(15%-14	
13C-37-TrCB				2050	2000	pg/L	103	(15%-14	
13C-54-TeCB				1280	2000	pg/L	64.0	(15%-14	
13C-77-TeCB				2400	2000	pg/L	120	(40%-14	
13C-81-TeCB				2390	2000	pg/L	119	(40%-14	
13C-104-PeCB				1630	2000	pg/L pg/L	81.3	(40%-14	
13C-104-FCCB	9			1030	2000	PR. L	01.5	(4070-14	274)

pg/L

pg/L

pg/L

86.9

84.9

84.3

(40%-145%)

(40%-145%)

(40%-145%)

2000

2000

2000

1740

1700

1690

13C-105-PeCB

13C-114-PeCB

13C-118-PeCB

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of 2

**PCB** Congeners Certificate of Analysis Sample Summary

MLS

1000 mL

SDG Number: 1709F81 12019814

Client ID:

Batch ID:

Lab Sample ID: Client Sample:

QC for batch 35954 LCS for batch 35954

36029 10/23/2017 09:59 Run Date:

Data File: d23oct17a-2 Prep Batch: 35954 Prep Date: 17-OCT-17

Client:

HALL001

EPA Method 1668C

SW846 3520C

Project: HALL00117 WATER

Matrix:

Prep Basis:

As Received

HRP875 Instrument:

Dilution: Prep SOP Ref: CF-OA-E-001

Prep Aliquot: CAS No. Units **EDL** PQL Qual Result Parmname

Prep Method:

Method:

Analyst:

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
3C-123-PeCB		1780	2000	pg/L	89.1	(40%-145%)
3C-126-PeCB		1750	2000	pg/L	87.7	(40%-145%)
3C-155-HxCB		1660	2000	pg/L	82.9	(40%-145%)
3C-156-HxCB	C	3310	4000	pg/L	82.8	(40%-145%)
3C-157-HxCB	C156L					
3C-167-HxCB		1720	2000	pg/L	86.0	(40%-145%)
3C-169-HxCB		1810	2000	pg/L	90.6	(40%-145%)
3C-188-HpCB		1580	2000	pg/L	78.8	(40%-145%)
3C-189-HpCB		1570	2000	pg/L	78.5	(40%-145%)
3C-202-OcCB		1600	2000	pg/L	79.8	(40%-145%)
3C-205-OeCB		2000	2000	pg/L	100	(40%-145%)
3C-206-NoCB		2290	2000	pg/L	115	(40%-145%)
3C-208-NoCB		1920	2000	pg/L	96.2	(40%-145%)
3C-209-DeCB		2260	2000	pg/L	113	(40%-145%)
3C-28-TrCB		1200	2000	pg/L	59.9	(15%-145%)
3C-111-PeCB		1900	2000	pg/L	94.9	(40%-145%)
3C-178-HpCB		2000	2000	pg/L	100	(40%-145%)

### Comments:

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

of 2

**PCB** Congeners Certificate of Analysis Sample Summary

MLS

HALL001

SDG Number: 1709F81 12019815 Lab Sample ID: QC for batch 35954 Client Sample: Client ID:

LCSD for batch 35954

Batch ID: 36029 10/23/2017 11:08 Run Date: Data File: d23oct17a-3 35954 Prep Batch:

Method: Analyst:

Prep Method:

Client:

EPA Method 1668C

SW846 3520C 1000 mL

Project: HALL00117 WATER Matrix:

Prep Basis: As Received

HRP875 Instrument: Dilution: Prep SOP Ref: CF-OA-E-001

Prep Date:	17-OCT-17	Prep Aliquot:	1000 mL				
CAS No.	Parmname	Qual	Result	Units	EDL	PQL	
2051-60-7	I-MoCB		445	pg/L	4.36	20.0	_
2051-62-9	3-MoCB		517	pg/L	4.92	20.0	
13029-08-8	4-DiCB		471	pg/L	12.5	20.0	
2050-68-2	15-DiCB		548	pg/L	15.0	20.0	
38444-73-4	19-TrCB		486	pg/L	6.98	20.0	
38444-90-5	37-TrCB		496	pg/L	14.4	20.0	
15968-05-5	54-TeCB		956	pg/L	2.84	20.0	
32598-13-3	77-TeCB		908	pg/L	6.82	20.0	
70362-50-4	81-TeCB		1010	pg/L	6.24	20.0	
56558-16-8	104-PeCB		987	pg/L	1.24	20.0	
32598-14-4	105-PeCB		1100	pg/L	8.90	20.0	
74472-37-0	114-PeCB		998	pg/L	8.62	20.0	
31508-00-6	118-PeCB		964	pg/L	7.94	20.0	
65510-44-3	123-PeCB		970	pg/L	8.44	20.0	
57465-28-8	126-PeCB		1070	pg/L	9.98	20.0	
33979-03-2	155-HxCB		1090	pg/L	1.08	20.0	
38380-08-4	156-HxCB	C	2180	pg/L	6.16	40.0	
69782-90-7	157-HxCB	C156					
52663-72-6	167-HxCB		1120	pg/L	4.50	20.0	
32774-16-6	169-HxCB		1060	pg/L	5.22	20.0	
74487-85-7	188-HpCB		982	pg/L	1.50	20.0	
39635-31-9	189-HpCB		1030	pg/L	2.92	20.0	
2136-99-4	202-OcCB		1480	pg/L	2.04	20.0	
74472-53-0	205-OcCB		1380	pg/L	2.14	20.0	
40186-72-9	206-NoCB		1360	pg/L	3.42	20.0	
52663-77-1	208-NoCB		1510	pg/L	2.44	20.0	
2051-24-3	209-DeCB		1550	pg/L	1.22	20.0	

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits	
13C-1-MoCB		922	2000	pg/L	46.1	(15%-145%)	
13C-3-MoCB		1060	2000	pg/L	53.2	(15%-145%)	
13C-4-DiCB		1290	2000	pg/L	64.3	(15%-145%)	
13C-15-DiCB		1950	2000	pg/L	97.5	(15%-145%)	
13C-19-TrCB		1770	2000	pg/L	88.7	(15%-145%)	
13C-37-TrCB		1980	2000	pg/L	99.2	(15%-145%)	
13C-54-TeCB		1340	2000	pg/L	67.1	(15%-145%)	
13C-77-TeCB		2400	2000	pg/L	120	(40%-145%)	
13C-81-TeCB		2390	2000	pg/L	119	(40%-145%)	
13C-104-PcCB		1550	2000	pg/L	77.7	(40%-145%)	
13C-105-PcCB		1730	2000	pg/L	86.4	(40%-145%)	
13C-114-PeCB		1670	2000	pg/L	83.7	(40%-145%)	
13C-118-PeCB		1690	2000	pg/L	84.5	(40%-145%)	

of 2

**PCB Congeners** Certificate of Analysis Sample Summary

SDG Number: 1709F81

Lab Sample ID: 12019815 Client Sample: QC for batch 35954

36029

Client:

HALL001

Project:

HALL00117

Matrix:

Prep Basis:

WATER

As Received

HRP875

Instrument:

Dilution:

Prep SOP Ref: CF-OA-E-001

Data File: Prep Batch: Prep Date: CAS No.

Client ID:

Batch ID:

Run Date:

10/23/2017 11:08 d23oct17a-3

LCSD for batch 35954

35954 17-OCT-17

Prep Method: Prep Aliquot:

Method:

Analyst:

SW846 3520C

EPA Method 1668C

1000 mL

MLS

Result Units EDL

CAS No.	Parmname		Qual	Result		Units	EDL	PQL	
Surrogate/Tracer recovery		Qual	Result	Nominal	Units	Recovery%	Accept	able Limits	
13C-123-PeCB			1730	2000	pg/L	86.7	(409	%-145%)	
13C-126-PeCB			1790	2000	pg/L	89.4	(40%	%-145%)	
13C-155-HxCB			1560	2000	pg/L	78.0	(40	%-145%)	
13C-156-HxCB		C	3150	4000	pg/L	78.8	(40%	%-145%)	
13C-157-HxCB		C156L							
13C-167-HxCB			1620	2000	pg/L	81.1	(40%	<b>%-145%</b> )	
13C-169-HxCB			1760	2000	pg/L	88.1	(409	%-145%)	
13C-188-HpCB			1470	2000	pg/L	73.5	(409	%-I45%)	
13C-189-HpCB			1490	2000	pg/L	74.6	(40%	%-145%)	
13C-202-OeCB			1480	2000	pg/L	74.0	(409	%-145%)	
13C-205-OcCB			1960	2000	pg/L	97.9	(40%	%-145%)	
13C-206-NoCB			2220	2000	pg/L	111	(409	<b>%-145%</b> )	
13C-208-NoCB			1830	2000	pg/L	91.6	(40%	/a-145%)	
13C-209-DeCB			2200	2000	pg/L	110	(40%	<b>%-145%</b> )	
13C-28-TrCB			1270	2000	pg/L	63.3	(159	%-145%)	
13C-111-PeCB			1840	2000	pg/L	92.0	(409	%-145%)	
13C-178-HpCB			1910	2000	pg/L	95.7	(409	%-145%)	

### Comments:

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





### **ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project:

1709F81

Pace Project No.: 30231771

South-

Sample: 1709F81-001L Rio Grande-

Lab ID: 30231771001

Collected: 09/28/17 09:00 Received: 10/03/17 10:10 Matrix: Water

PWS:

Site ID:

Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
1 diameters	Metriod	Actions (MDO) can mac	Office			
Gross Alpha	EPA 900.0	22.8 ± 5.05 (1.97) C:NA T:NA	pCi/L	10/05/17 19:17	12587-46-1	
Adjusted Gross Alpha	EPA 900.0	20.9 ± NA (NA) C:NA T:NA	pCi/L	10/24/17 12:57		
Total Uranium	ASTM D5174-97	2.87 ± 0.119 (0.193) C:NA T:NA	ug/L	10/23/17 14:05	7440-61-1	

Sample: 1709F81-003L Rio Grande-

Lab ID: 30231771002

Collected: 09/27/17 12:00 Received: 10/03/17 10:10

North-PWS:

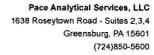
Site ID:

Sample Type:

Method Act ± Unc (MDC) Carr Trac **Parameters** Units Analyzed CAS No. Qual EPA 900.0 4.27 ± 1.42 (1.48) 10/05/17 19:17 12587-46-1 Gross Alpha pCi/L C:NA T:NA EPA 900.0 Adjusted Gross Alpha 2.91 ± NA (NA) pCi/L 10/24/17 12:57 C:NA T:NA ASTM D5174-97 2.01 ± 0.084 (0.193) **Total Uranium** ug/L 10/23/17 14:17 7440-61-1 C:NA T:NA

### REPORT OF LABORATORY ANALYSIS

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#### **QUALITY CONTROL - RADIOCHEMISTRY**

Project:

1709F81

Pace Project No.:

30231771

QC Batch:

274298

Analysis Method:

ASTM D5174-97

QC Batch Method:

ASTM D5174-97

Analysis Description:

D5174.97 Total Uranium KPA

Associated Lab Samples: 30231771001, 30231771002

METHOD BLANK: 1349015

Matrix: Water

Associated Lab Samples:

30231771001, 30231771002

Parameter

Act ± Unc (MDC) Carr Trac

Units

Analyzed

Qualifiers

Total Uranium

0.085 ± 0.005 (0.193) C:NA T:NA

ug/L

10/10/17 16:39

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#### QUALITY CONTROL - RADIOCHEMISTRY

Project:

1709F81

30231771

QC Batch:

274175

Analysis Method:

EPA 900.0

QC Batch Method:

Pace Project No.:

EPA 900.0

Analysis Description:

900.0 Gross Alpha/Beta

Associated Lab Samples:

es: 30231771001, 30231771002

Matrix: Water

METHOD BLANK: 1348495 Associated Lab Samples: 3

30231771001, 30231771002

Parameter

Act ± Unc (MDC) Carr Trac

Units

Analyzed

Qualifiers

Gross Alpha

0.027 ± 0.617 (1.66) C:NA T:NA

pCi/L

10/06/17 09:05

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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#### **QUALIFIERS**

Project: 1709F81 Pace Project No.: 30231771

#### **DEFINITIONS**

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

**DUP - Sample Duplicate** 

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Date: 10/24/2017 12:59 PM

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1709F81** 

31-Oct-17

Client: AMAFCA
Project: CMC

Sample ID MB-34213 SampType: MBLK TestCode: EPA Method 1664B

Client ID: PBW Batch ID: 34213 RunNo: 46101

Prep Date: 10/4/2017 Analysis Date: 10/4/2017 SeqNo: 1466493 Units: mg/L

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

N-Hexane Extractable Material ND 10.0 Silica Gel Treated N-Hexane Extrac ND 10.0

Sample ID LCS-34213 SampType: LCS TestCode: EPA Method 1664B

Client ID: LCSW Batch ID: 34213 RunNo: 46101

Prep Date: 10/4/2017 Analysis Date: 10/4/2017 SeqNo: 1466494 Units: mg/L

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual N-Hexane Extractable Material 33.4 10.0 40.00 0 83.5 78 114 20.00 0 67.0 64 Silica Gel Treated N-Hexane Extrac 13.4 10.0 132

#### 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 Detection Limit
- W Sample container temperature is out of limit as specified

Page 5 of 15

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1709F81

31-Oct-17

**Client: AMAFCA Project: CMC** 

Sample ID MB-34381 SampType: MBLK TestCode: EPA Method 200.7: Metals

Client ID: **PBW** Batch ID: 34381 RunNo: 46397

Analysis Date: 10/16/2017 Prep Date: 10/12/2017 SeqNo: 1478148 Units: mg/L

Analyte **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual

Calcium ND 1.0 ND Magnesium 1.0

Sample ID LLLCS-34381 SampType: LCSLL TestCode: EPA Method 200.7: Metals

Client ID: **BatchQC** Batch ID: 34381 RunNo: 46397

Analysis Date: 10/16/2017 SeqNo: 1478149 Prep Date: 10/12/2017 Units: mg/L

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Calcium 0.55 1.0 0.5000 0 109 50 150 0.55 Magnesium 0.5000 0 50 150 J

111

Sample ID LCS-34381 SampType: LCS TestCode: EPA Method 200.7: Metals

Client ID: LCSW Batch ID: 34381 RunNo: 46397

1.0

Prep Date: 10/12/2017 Analysis Date: 10/16/2017 SeqNo: 1478150 Units: mg/L

SPK value SPK Ref Val %RPD **RPDLimit** %REC Analyte Result **PQL** LowLimit HighLimit Qual Calcium 50 1.0 50.00 0 99.2 85 115 Magnesium 50 50.00 0 100 85 115 1.0

#### Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Holding times for preparation or analysis exceeded Η

ND Not Detected at the Reporting Limit

POL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

Е Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RLReporting Detection Limit

W Sample container temperature is out of limit as specified Page 6 of 15

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1709F81** 

31-Oct-17

Client: AMAFCA
Project: CMC

Sample ID 1709F81-001HLLMS SampType: MS TestCode: EPA 200.8: Dissolved Metals

Client ID: Rio Grande-South-2 Batch ID: C46196 RunNo: 46196

Prep Date: Analysis Date: 10/6/2017 SeqNo: 1470679 Units: mg/L

 Analyte
 Result
 PQL
 SPK value
 SPK Ref Val
 %REC
 LowLimit
 HighLimit
 %RPD
 RPDLimit
 Qual

 Copper
 0.023
 0.0010
 0.02500
 0.0009846
 89.4
 70
 130

 Copper
 0.023
 0.0010
 0.02500
 0.0009846
 89.4
 70
 130

 Lead
 0.013
 0.00050
 0.01250
 0.0004747
 97.5
 70
 130

Sample ID LCS SampType: LCS TestCode: EPA 200.8: Dissolved Metals

Client ID: LCSW Batch ID: C46196 RunNo: 46196

Prep Date: Analysis Date: 10/6/2017 SeqNo: 1470730 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 94.1 85 115

Lead 0.012 0.00050 0.01250 0 95.8 85 115

Sample ID LLLCS SampType: LCSLL TestCode: EPA 200.8: Dissolved Metals

Client ID: BatchQC Batch ID: C46196 RunNo: 46196

Prep Date: Analysis Date: 10/6/2017 SeqNo: 1470734 Units: mg/L

SPK value SPK Ref Val %REC LowLimit %RPD **RPDLimit** Qual Analyte Result PQL HighLimit Copper 0.0010 0.001000 0 93.9 50 150 0.00048 0.00050 0.0005000 0 96.7 50 150 J Lead

Sample ID MB SampType: MBLK TestCode: EPA 200.8: Dissolved Metals

Client ID: PBW Batch ID: C46196 RunNo: 46196

Prep Date: Analysis Date: 10/6/2017 SeqNo: 1470738 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

### 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

Reporting Detection Limit

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL

W Sample container temperature is out of limit as specified

Page 7 of 15

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1709F81** 

31-Oct-17

Client: AMAFCA
Project: CMC

Sample ID MB SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBW Batch ID: R46023 RunNo: 46023

Prep Date: Analysis Date: 9/29/2017 SeqNo: 1463151 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

Sample ID LCS SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSW Batch ID: R46023 RunNo: 46023

Prep Date: Analysis Date: 9/29/2017 SeqNo: 1463152 Units: mg/L

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Nitrogen, Nitrite (As N) 0.98 0.10 1.000 0 98.3 90 110 Nitrogen, Nitrate (As N) 2.500 0 101 90 2.5 0.10 110

#### 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 Detection Limit
- W Sample container temperature is out of limit as specified

Page 8 of 15

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1709F81** 

31-Oct-17

Client: AMAFCA
Project: CMC

Sample ID MB-34138 SampType: MBLK TestCode: SM5210B: BOD

Client ID: PBW Batch ID: 34138 RunNo: 46131

Prep Date: 9/29/2017 Analysis Date: 10/4/2017 SeqNo: 1467584 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 MB--34138 SampType: MBLK TestCode: SM5210B: BOD

Client ID: PBW Batch ID: 34138 RunNo: 46131

Prep Date: 9/29/2017 Analysis Date: 10/4/2017 SeqNo: 1467585 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-34138 SampType: LCS TestCode: SM5210B: BOD

Client ID: LCSW Batch ID: 34138 RunNo: 46131

Prep Date: 9/29/2017 Analysis Date: 10/4/2017 SeqNo: 1467586 Units: mg/L

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Biochemical Oxygen Demand 150 2.0 198.0 0 75.4 60.3 136

Sample ID LCSD-34138 SampType: LCSD TestCode: SM5210B: BOD

Client ID: LCSS02 Batch ID: 34138 RunNo: 46131

Prep Date: 9/29/2017 Analysis Date: 10/4/2017 SeqNo: 1467587 Units: mg/L

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Biochemical Oxygen Demand 180 2.0 198.0 0 90.8 60.3 136 18.5 39.3

#### 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 Detection Limit

W Sample container temperature is out of limit as specified

Page 9 of 15

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1709F81** 

31-Oct-17

Client: AMAFCA
Project: CMC

Sample ID MB-34130 SampType: MBLK TestCode: SM 9223B Fecal Indicator: E. coli MPN

Client ID: PBW Batch ID: 34130 RunNo: 46014

Prep Date: 9/28/2017 Analysis Date: 9/29/2017 SeqNo: 1462872 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 Detection Limit

W Sample container temperature is out of limit as specified

Page 10 of 15

# Hall Environmental Analysis Laboratory, Inc.

WO#: **1709F81** 

31-Oct-17

Client: AMAFCA
Project: CMC

Sample ID MB SampType: MBLK TestCode: SM 4500 NH3: Ammonia

Client ID: PBW Batch ID: R46385 RunNo: 46385

Prep Date: Analysis Date: 10/16/2017 SeqNo: 1477737 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: R46385 RunNo: 46385

Prep Date: Analysis Date: 10/16/2017 SeqNo: 1477738 Units: mg/L

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Nitrogen, Ammonia 9.8 1.0 10.00 0 98.0 80 120

#### 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 Detection Limit
- W Sample container temperature is out of limit as specified

Page 11 of 15

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1709F81

31-Oct-17

**Client:** AMAFCA **Project: CMC** 

Sample ID MB-34388 SampType: MBLK TestCode: EPA Method 365.1: Total Phosphorous

Client ID: PBW Batch ID: 34388 RunNo: 46373

Prep Date: 10/12/2017 Analysis Date: 10/13/2017 SeqNo: 1477407 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-34388 SampType: LCS TestCode: EPA Method 365.1: Total Phosphorous

Client ID: LCSW Batch ID: 34388 RunNo: 46373

Units: mg/L Prep Date: 10/12/2017 Analysis Date: 10/13/2017 SeqNo: 1477408

SPK value SPK Ref Val %REC LowLimit %RPD **RPDLimit** Analyte Result PQL HighLimit Qual

Phosphorus, Total (As P) 0.25 0.010 0.2500 0 100 110

Sample ID 1709F81-003FMS SampType: MS TestCode: EPA Method 365.1: Total Phosphorous

Client ID: **Rio Grande-North-2** Batch ID: 34388 RunNo: 46373

Prep Date: 10/12/2017 Analysis Date: 10/13/2017 SeqNo: 1477413 Units: mg/L

%REC %RPD Result **PQL** SPK value SPK Ref Val LowLimit HighLimit **RPDLimit** Qual Analyte

Phosphorus, Total (As P) 0.050 1.250 0.2770 D

Sample ID 1709F81-003FMSD SampType: MSD TestCode: EPA Method 365.1: Total Phosphorous

Client ID: Batch ID: 34388 RunNo: 46373 **Rio Grande-North-2** 

Prep Date: 10/12/2017 Analysis Date: 10/13/2017 SeqNo: 1477414 Units: mg/L

Analyte Result **PQL** SPK value SPK Ref Val %REC I owl imit HighLimit %RPD **RPDLimit** Qual Phosphorus, Total (As P) 96.6 1.5 0.050 1.250 0.2770 90 110 1.32 20 D

#### Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Η Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

POL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

Е Value above quantitation range

J Analyte detected below quantitation limits

Page 12 of 15

P Sample pH Not In Range

RLReporting Detection Limit

Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1709F81

31-Oct-17

**Client: AMAFCA Project: CMC** 

Sample ID MB-34208 SampType: MBLK TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: PBW Batch ID: 34208 RunNo: 46103

Prep Date: 10/3/2017 Analysis Date: 10/4/2017 SeqNo: 1466592 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-34208 SampType: LCS TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: LCSW Batch ID: 34208 RunNo: 46103

Prep Date: 10/3/2017 Analysis Date: 10/4/2017 SeqNo: 1466593 Units: mg/L

Result **RPDLimit PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD Analyte Qual

Total Dissolved Solids 1020 20.0 1000 0 102 120

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- В 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 Detection Limit
- Sample container temperature is out of limit as specified

Page 13 of 15

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1709F81** 

31-Oct-17

Client: AMAFCA
Project: CMC

Sample ID MB-34412 SampType: MBLK TestCode: SM 4500 Norg C: TKN

Client ID: PBW Batch ID: 34412 RunNo: 46404

Prep Date: 10/14/2017 Analysis Date: 10/17/2017 SeqNo: 1478457 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-34412 SampType: LCS TestCode: SM 4500 Norg C: TKN

Client ID: LCSW Batch ID: 34412 RunNo: 46404

Prep Date: 10/14/2017 Analysis Date: 10/17/2017 SeqNo: 1478458 Units: mg/L

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Nitrogen, Kjeldahl, Total 10 1.0 10.00 0 102 80 120

#### 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 Detection Limit

W Sample container temperature is out of limit as specified

Page 14 of 15

# Hall Environmental Analysis Laboratory, Inc.

WO#: **1709F81** 

31-Oct-17

Client: AMAFCA
Project: CMC

Sample ID MB-34153 SampType: MBLK TestCode: SM 2540D: TSS

Client ID: PBW Batch ID: 34153 RunNo: 46033

Prep Date: 9/29/2017 Analysis Date: 10/2/2017 SeqNo: 1463367 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-34153 SampType: LCS TestCode: SM 2540D: TSS

Client ID: LCSW Batch ID: 34153 RunNo: 46033

Prep Date: 9/29/2017 Analysis Date: 10/2/2017 SeqNo: 1463368 Units: mg/L

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Suspended Solids 96 4.0 91.10 0 105 84.63 120.75

#### 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 Detection Limit

W Sample container temperature is out of limit as specified

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

# Sample Log-In Check List

Client Name: AMAFCA	Work Order Number:	1709F81		RcptNo:	1
Received By: Jackie Bolte	9/28/2017 1:40:00 PM		Jahr Bell		
Completed By: Anne Thorne	9/28/2017 2:31:10 PM		Jake Bell Own Hom	<u> </u>	
Reviewed By: 10 09/29/17			Charle Ji Com	- "	
Chain of Custody					
1. Custody seals intact on sample bottles?	\$1	Yes 🗌	No 🗆	Not Present	
2. Is Chain of Custody complete?		Yes 🗹	No 🗌	Not Present	
3. How was the sample delivered?	76	Client			
<u>Log In</u>					
4. Was an attempt made to cool the samples	5?	Yes 🗹	No 🗌	NA 🗆	
5. Were all samples received at a temperature	re of >0° C to 6.0°C	Yes 🗹	No 🗆	NA 🗆	
6. Sample(s) in proper container(s)?	8	Approved Yes 🔽	by client. No		
7. Sufficient sample volume for indicated test	(s)?	Yes 🗹	No 🗌	a	
8. Are samples (except VOA and ONG) prope	erly preserved?	Yes 🗸	No 🗌	250	
9. Was preservative added to bottles?		Yes 🗌	No 🔽	NA 🗌	
10.VOA vials have zero headspace?		Yes 🗸	No 🗌	No VOA Vials	
11. Were any sample containers received broken	ken?	Yes	No 🗹	# of preserved	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🔽	No 🗆	bottles checked for pH:	r>12 unless noted)
13. Are matrices correctly identified on Chain of	of Custody?	Yes 🗸	No 🗆	Adjusted?	
14. Is it clear what analyses were requested?	<b>-</b>	Yes 🗸	No 🗆		88
15. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹	No 🗆	Checked by:	A-09/2911
, ,					
Special Handling (if applicable)					
16. Was client notified of all discrepancies with	this order?	Yes 🗆	No 🗆	NA 🗹	127
Person Notified:	Date			20	
By Whom:	Via:	eMail	Phone  Fax	In Person	
Regarding:  Client Instructions:			en legenden der de des des des des des des des des des		
,					<u>}</u>
17. Additional remarks:					
1	Seal Intact   Seal No   Sot Present	eal Date	Signed By	,	

# Collaborative Monitoring Cooperative - Analyses List Attach to Chain of Custody

Analye (Bojo indicates WoS)		Pacion.	a line i blodice vieta s	(10) (10)
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	8270D	0.1
Pentachlorophenol	87-86-5	Total	8270D	0.2
Benzidine	92-87-5	Total	8270D	0.1
Chemical Oxygen Demand	E1641638 <sup>2</sup>	Total	HACH	5100
Gross alpha (adjusted)	NA	Total	Method 900	0.1 pCi/L
Total Dissolved Solids	E16422222	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 - num			SM 9223B	
рH	1		SM 4500	Y
Phosphorus		Dissolved	365.1	100
Phosphorus		Total	365.1	100
Chromium IV		Total	3500Cr C-2011	100

C	hain-	of-Cu	stody Record	Turn-Around	Time:	×				\$K!	-											
Client:	AM	AFC	A	Standard	□ Rush	S		L	07000												TAL OR'	
XI				Project Name															17	•	JIC	
Mailing	Address	26	00 Prospect		MC				40	04 LI			/.hall IE -						7100			
		باسم	00	Project #:		· ·										-						
Phone :	#· X	84-	2215						16	91. 50	5-34	5-39				505-: Requ			<i>(</i>		100	- 70
email o	r Fax#: 🗸	r have	20amatia. org	Project Mana	ider.				3	0		7	T		_				1	43		$\top$
	Package:	CEUT		0-1	. 6/	1 .		)21)	ou	MR					S,	S			3	shet		
□ Stan			□ Level 4 (Full Validation)	Patr	ick (	nau	42	TMB's (8021)	TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)			SIMS)		Anions (F,CI,NO <sub>3</sub> ,NO <sub>2</sub> ,PO <sub>4</sub> ,SO <sub>4</sub> )	PCB's			どジ	4		
Accredi				Sampler:				MB	표		=	=	02		Q Q	3082			Ĵ	-		9
□ NEL	AP	□ Othe	r	On Ice:	CANADA SING SING SING SING SING SING SING SING	.□ No	1	+	+	8	18	9	r 8270	(0)	og o	8/8		(¥)	,	4 Hache		\frac{1}{2}
□ EDD	(Type)			Sample Tem	perature:	5.8	14 mm 上海 15 mm	BE.	BE	ő.	po 4	b	0 or	etals	Z	ide	F	>		#		≥
Date			and the state of t	Container	Preservative		Marie San	+ MTBE	+ MTBE	15E	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310	RCRA 8 Metals	(F,	8081 Pesticides / 8082	8260B (VOA)	8270 (Semi-VOA)	100.	7		Air Bubbles (Y or N)
<i>L</i> Date	Time	Matrix	Sample Request ID	Type and #	Type	HE	AL No.	X	X	180	3	8	L'S	R.	ons	<u>-</u>	B)	3) 0.	II	Sign		Ba
28			*	j.	109/23/17	1709	€81	втех	BTEX	TP	프		PA	RC	Ani	808	826	827	4.	V		Air
4/17	0900	AQ	Rio Grande - Sout Rio Grande - Nort Trip Black	6-2017	0928	7005	701												X	×		
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																			. 10			

# Appendix F - Minimum Quantification Levels (MQL's)

The following Minimum Quantification Levels (MQL's) are to be used for reporting pollutant data for NPDES permit applications and/or compliance reporting.

POLLUTANTS	MQL μg/l	POLLUTANTS	MQL μg/l
	METALS, RADIOAC	CTIVITY, CYANIDE and CHLORINE	
Aluminum Antimony Arsenic Barium Beryllium Boron Cadmium Chromium Cobalt Copper Lead	2.5 60 0.5 100 0.5 100 1 10 50 0.5 0.5 0.5	Molybdenum Nickel Selenium Silver Thalllium Uranium Vanadium Zinc Cyanide Cyanide, weak acid dissociable Total Residual Chlorine	10 0.5 5 0.5 0.5 0.1 50 20 10 10 33
Mercury (*)	0.0005		
	, 0.00D	DIOXIN	
2,3,7,8-TCDD	0.00001		
2,5,7,5 1022		ATILE COMPOUNDS	
A and late			10
Acrolein Acrylonitrile	50 20	1,3-Dichloropropylene Ethylbenzene	10 10
Benzene	10	Methyl Bromide	50
Bromoform	10	Methylene Chloride	20
Carbon Tetrachloride	2	1,1,2,2-Tetrachloroethane	10
Chlorobenzene	10	Tetrachloroethylene	10
Clorodibromomethane	10	Toluene	10
Chloroform	50	1,2-trans-Dichloroethylene	10
Dichlorobromomethane		1,1,2-Trichloroethane	10
1,2-Dichloroethane	10	Trichloroethylene	10
1,1-Dichloroethylene	10	Vinyl Chloride	10
1,2-Dichloropropane	10	, ng 1 cmonto	
	AC	CID COMPOUNDS	
2-Chlorophenol	10	2,4-Dinitrophenol	50
2,4-Dichlorophenol	10	Pentachlorophenol	5
2,4-Dimethylphenol	10	Phenol	10
4,6-Dinitro-o-Cresol	50	2,4,6-Trichlorophenol	10
.,			220000



October 02, 2017

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

FAX

RE: CMC

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

Pre-storm Rio Grnade South - Isleta Dam location

OrderNo.: 1709F32

## Dear Patrick Chavez:

Hall Environmental Analysis Laboratory received 1 sample(s) on 9/27/2017 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> 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 #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

andel

4901 Hawkins NE

Albuquerque, NM 87109

# **Analytical Report**

# Lab Order **1709F32**

Date Reported: 10/2/2017

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: AMAFCA Client Sample ID: Isleta Dam

 Project:
 CMC
 Collection Date: 9/27/2017 12:00:00 PM

 Lab ID:
 1709F32-001
 Matrix: AQUEOUS
 Received Date: 9/27/2017 3:00:00 PM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. C	OLI MPN				Analy	st: SMS
E. Coli	2359	10.00	MPN/100mL	10	9/28/2017 6:51:00 PM	1 34113

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

*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 1
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified
	D H ND	<ul> <li>D Sample Diluted Due to Matrix</li> <li>H Holding times for preparation or analysis exceeded</li> <li>ND Not Detected at the Reporting Limit</li> <li>PQL Practical Quanitative Limit</li> </ul>	D     Sample Diluted Due to Matrix     E       H     Holding times for preparation or analysis exceeded     J       ND     Not Detected at the Reporting Limit     P       PQL     Practical Quanitative Limit     RL



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name:	AMAFCA	Work Order Num	nber: 1709F32		RcptNo:	1
Received By:	Erin Melendrez	9/27/2017 3:00:00		MMC Sopher Corps	-	
Completed By:	Sophia Campuzano ENM	9/27/2017 3:27:13 9/27/17@ 153		Sophie Compen-	-	
Chain of Cus	<u>tody</u>					
1. Custody sea	als intact on sample bottle	s?	Yes 🗌	No 🗌	Not Present 🗹	
2. Is Chain of C	Custody complete?		Yes 🗹	No 🗌	Not Present	
3. How was the	e sample delivered?		Client			
<u>Log In</u>						
4. Was an atte	empt made to cool the sa	mples?	Yes 🔽	No 🗆	NA 🗆	
5. Were all sar	mples received at a temp	erature of >0° C to 6.0°C	Yes 🗌	No 🗹	NA 🗆	
6 Sample/s) is	n proper container(c)?	Samples	were collected the	same day and No 🏻	<u>l chilled.</u>	
o. Sample(s) II	n proper container(s)?		res 💌	NO L		
7. Sufficient sa	mple volume for indicate	d test(s)?	Yes 🗹	No 🗌		
8. Are samples	(except VOA and ONG)	properly preserved?	Yes 🗹	No 🗌		
9. Was preserv	vative added to bottles?		Yes 🗌	No 🗹	NA 🗆	
10.VOA vials ha	ave zero headspace?		Yes 🗌	No 🗌	No VOA Vials 🗹	
11. Were any sa	ample containers receive	d broken?	Yes 🗆	No 🗹	# -5	
40 -					# of preserved bottles checked	
	vork match bottle labels? pancies on chain of custo	idv)	Yes 🗸	No 📖	for pH: (<2 o	>12 unless noted)
	correctly identified on C		Yes 🗹	No 🗆	Adjusted?	· · · · · · · · · · · · · · · · · · ·
	at analyses were reques	<del>-</del>	Yes 🗹	No 🗆	_	
	ding times able to be met		Yes 🗹	No 🗆	Checked by:	
(If no, notify	customer for authorization	n.)		L		
0	W CC C L - L					
	lling (if applicable)		🖂			
16. Was client n	otified of all discrepancie	s with this order?	Yes 📙	No L	NA 🔽	1
Persor	n Notified:	Dat	te:			
By Wh	o <b>m</b> :	Via	: eMail F	Phone 🗌 Fax	☐ In Person	
Regard	ding:					
Client	Instructions:					
17. Additional re	emarks:					
18. <u>Cooler Info</u>	o Temp ºC Conditio	The transfer of section of contract to the contract to the	Seal Date	Signed By		
1	7.1 Good	Not Present	\$ 100 mm m m m m m m m m m m m m m m m m			



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

Pre-storm results for multiple

locations

October 02, 2017

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

FAX

RE: E Coli Study OrderNo.: 1709F30

## Dear Patrick Chavez:

Hall Environmental Analysis Laboratory received 3 sample(s) on 9/27/2017 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> 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 #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

andel

4901 Hawkins NE

Albuquerque, NM 87109

## **Analytical Report**

**DF** Date Analyzed

**Batch ID** 

**Batch ID** 

Lab Order: 1709F30

Hall Environmental Analysis Laboratory, Inc. Date Reported: 10/2/2017

**CLIENT: AMAFCA** Lab Order: 1709F30

Project: E Coli Study

Analyses

Lab ID: 1709F30-001 **Collection Date:** 9/27/2017 1:20:00 PM

Client Sample ID: ABQ-RD-EAST Matrix: AQUEOUS

Result

SM 9223B FECAL INDICATOR: E. COLI MPN Analyst: SMS

E. Coli 10.00 MPN/100mL 10 9/28/2017 6:51:00 PM 34113 1565

**PQL Qual Units** 

**PQL Qual Units** 

Collection Date: 9/27/2017 1:30:00 PM Lab ID: 1709F30-002

Client Sample ID: ABQ-RC-I25 Matrix: AQUEOUS Result

**DF Date Analyzed Analyses** 

SM 9223B FECAL INDICATOR: E. COLI MPN Analyst: SMS E. Coli 1723 10.00 MPN/100mL 10 9/28/2017 6:51:00 PM 34113

Lab ID: 1709F30-003 **Collection Date:** 9/27/2017 12:50:00 PM

Matrix: AQUEOUS Client Sample ID: ABQ-DD-WEST

**DF** Date Analyzed **POL Qual Units** Analyses Result **Batch ID** 

SM 9223B FECAL INDICATOR: E. COLI MPN Analyst: SMS

E. Coli 1.000 9/28/2017 6:51:00 PM 34113 82.3 MPN/100mL

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
- Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Value above quantitation range Ε
- Analyte detected below quantitation limits Page 1 of 1
- P Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified



#### Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name:	AMAFCA	Work Order Num	nber: 1709F30		RcptNo:	1
Received By:	Erin Melendrez	9/27/2017 3:00:00	РМ	UNA.	-	
Completed By:	Sophia Campuzano	9/27/2017 3:22:59	РМ	Sophia Carpen	_	
Reviewed By:	ENM	9/27/17@	535	<i>v</i> , <i>-</i> ,		
Chain of Cus	<u>stody</u>		_			
1. Custody sea	als intact on sample bottles	?	Yes 📙	No 📖	Not Present 🗹	
2. Is Chain of	Custody complete?		Yes 🗹	No 🗀	Not Present	
3. How was the	e sample delivered?		<u>Client</u>			
<u>Log In</u>						
4. Was an atte	empt made to cool the sam	ples?	Yes 🗹	No 🗌	NA 🗌	
5. Were all sa	mples received at a tempe	rature of >0° C to 6.0°C	Yes 🗌	No 🗹	na 🗆	
	•		were collected the		l chilled.	
6. Sample(s) i	in proper container(s)?		Yes 🗹	No 🗌		
7. Sufficient sa	ample volume for indicated	test(s)?	Yes 🗹	No 🗌		
8. Are samples	s (except VOA and ONG) p	roperly preserved?	Yes 🗹	No 🗆		
9. Was preser	vative added to bottles?		Yes 🗌	No 🗹	NA $\square$	
10.VOA vials h	ave zero headspace?		Yes	No 🗌	No VOA Vials	
11. Were any s	ample containers received	broken?	Yes	No 🗹		
					# of preserved bottles checked	
	work match bottle labels?		Yes 🗹	No 🗆	for pH:	. 40
	epancies on chain of custoo				(<2 or Adjusted?	>12 unless noted)
	s correctly identified on Ch	· ·	Yes 🗹	No □	, tajabiba	
	hat analyses were requeste		Yes 🗹	No □ No □	Checked by:	
	lding times able to be met?  customer for authorization		Yes 🗹	ן בו או	Oncoacu by	
<u>Special Hand</u>	dling (if applicable)		_		_	
16. Was client r	notified of all discrepancies	with this order?	Yes 🗔	No 🗔	NA 🗹	ı
Perso	n Notified:	Dat	te:			
By Wi	hom:	Via	: 🗌 eMail 🗍 F	Phone 🔲 Fax	☐ In Person	
Regar	rding:					
Client	Instructions:					
17. Additional r	remarks:					
18. <u>Cooler Info</u> Cooler N	CONTRACTOR CONTRACTOR AND ADDRESS OF CONTRACTOR CONTRAC	Seal Intact   Seal No	Seal Date	Signed By		
1	7.1 Good	Not Present		יייייייייייייייייייייייייייייייייייייי		

	HALL ENVIKONMENTAL ANALYSISTABORATORY	mental com	Albuquerque, NM 87109	Fax 505-345-4107	Analysis Request			/ 8082 (م	/O^ (° səp	AOV) 808 (VOA) 409 -im-S) 07 ام الالالا	308 28 728	×	~	X						
	ANALYST	www.hallenvironmental.com	4901 Hawkins NE - Albuqu		na		(SWI	(1.81 (1.40 8 0728	d 50 or or	H (Methoo ortheM) H ootheM) B Wethoo Ores (8310 Ores (84910 Ores (FCI	TP ED Aq RC									=
			490	<u>-F</u>						EX + MTE					 				Remarks:	
Turn-Around Time:	□ Standard □ Rush	Name:	E.col; 54.64	Project #:		Project-Manager:	Patride Chaver	Sampler: X Yes No	Temperature: 7.	ner Preservative HEAL No.	TOVESD	100-	700-	-003					Received by Date Time R	Received by: Date Time
stody Record	Client: AMAFCA		Mailing Address:		Phone #:	email or Fax#:	QA/QC Package:   □ Standard  □ Level 4 (Full Validation)	Accreditation	□ EDD (Type)	Matrix Sample Request ID	ENM9/27/17	4/27 11:20 AO ABB-RD-EAST	4/27 11:30 \ ABQ-AC-IZSS	4/27 12:50 I ARR-00-URST					 Pate: Time: Relinquished by: R	Date: Time: Relinquished by: Date Time

# ATTACHMENT 2 FY 2018 WET SEASON COMPLETED DATA VERIFICATION AND VALIDATION FORMS

٩tt	achment 1.1 Water Quality Sam <sub>l</sub>	ole Data Verificat	tion and Validation W	/orksheet	
Yea Pro V& Dat	idy Name: <u>Compliance Monitoriants: FY 2018 (July 2017 – Wet Sea</u> Dject Coordinator: <u>For Data Revi</u> on V Reviewer: <u>SJG</u> Tacovered by this worksheet: <u>Ri</u> orsion of Verification/Validation P	ison Sample) ew and Reportin io Grande North	g – SJG, BHI – 7/27/17 and 7/28/17		
	p 1: Verify Field Data Are all Field Data forms present a	nd complete?	lYes □No		
٠.	7 to all 1 lold Data lolling present al	na complete:	1100 🗀 110		
f y	es, proceed; if no, attempt to locate	e missing forms, t	hen indicate any rema	ining missing forms and a	ction taken
	Missing Field Data Forms	Actio	n Taken		
Γοί	tal number of occurrences: 0				
	Are station name and ID, and sam				□No
ту	es, proceed; if no, indicate errors in Station and Parameter	Action Take			
	Station and Farameter	Action rake	ii ite-verilled	:	
		<del> </del>			
Γοί	tal number of occurrences: <u>0</u>				
	Are field data on forms consistent es, proceed; if no, indicate errors in			re-verify.	
	Station	Sampling Date	Parameter(s) Corrected	Re-verified?	
					-
		1		1	1

Total number of occurrences: <u>0</u>

Stati	ion/RID	Sampling Date	RID Corrected	Re-verified?		
al number of o	ccurrences: 0		<u> </u>			
				⊠ Ste	Completed Initials: SJG	<u> Date: 10</u>
	a Deliverables question been deliv	ered? ⊠ Yes □	No			
Have all data in	question been deliv	n missing data (sam	ples or blanks) or att		ble RIDs highlighted. Conta	ıct data soı
Have all data in	question been deliv	n missing data (sam	ples or blanks) or att		ble RIDs highlighted. Conta	act data sou
Have all data in s, proceed; if n indicate action	question been delivo, indicate RIDs with taken. Complete thi	n missing data (sam s step upon receipt Missing	ples or blanks) or att of all missing data. Date of Initial	ach report with appl  Date Missing  Data Were	ble RIDs highlighted. Conta	act data so

listed in the reportable compounds tables.

	RID	Submittal Date	Missing Incorrect Paramete	t Action Taken	Re-verified?			
					⊠ Ste	p 2 Completed	<i>Initials:</i> SJG	Date: 10/26/17
*No		able – no flow data p		MC sample collection lation spreadsheet and o	correct errors.			
	S	Station	Sampling Date	Flow data missing or incorrect?				
Tot	al number of o	occurrences: 0						
B.	Identify incorre	ct or missing dischar	ge measureme	ents, correct errors in da	tabase and re-verify.			
	S	Station	Sampling Date	Flow data missing or incorrect?	Re-verified?			
Tot	al number of o	occurrences: <u>0</u>				Applicable p 3 Completed	Initials: SJG	<b>Date:</b> 10/26/17
 <u>Ste</u>	p 4: Verify An	alytical Results for	Missing Inform	mation or Questionable	e Results			
We	re any results v	with missing/question	able information	on 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	<u>7/27/17</u>	Lab report provides Dissolved Phosphorous results as "Total Phosphorous" for "filtered sample".	Notified AMAFCA of this and verified with HEAL. BHI added note to the lab report.
Rio Grande North	7/27/17	Tetrahydrofuran not found along numerical results.	Analytical notes state that Tetrahydrofuran was not included in the list of reportable compounds. Compound was not detected.
Rio Grande North	7/27/17	Benzidine and Dieldrin not found along numerical results.	Analytical notes state that Benzidine and Dieldrin were not included in the list of reportable compounds. Compounds were not detected.

\*Note – HEAL Lab report order numbers – 1707E46 and 1707E07

Total number of occurrences: 3

Step 4 Completed Initials: SJG Date: 10/26/17

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.

**Date:** 10/26/17

RID	Sample Date	Parameter	[Blank ]	[Sample ]	Validatio n Code/Fla g Applied	Code/Flag verified in database?		
*See validation pro		ne which associated data	need to	be flagged	and include	on <i>Validation</i>	Codes	Form.
					$\boxtimes$	] Step 5 Com	pleted	Initials: SJG
•	lolding Times Viol submitted that did	ations not meet specified holdir	g 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?*

<sup>\*</sup>See validation procedures to determine which associated data need to be flagged.

Total number of occurrences:  $\underline{0}$ 

⊠ Step 6 Completed	Initials: SJG	Date: 10/26/17

# 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.

<sup>\*</sup>Note – Lab reports lists pH with hold time flag. Database uses field data reported pH, so this is hold time is not applicable.

RID Pairs	Replicate or Duplicate?	Sample Date	Parameter	RPD	Validation Code/Flag Applied	Code/Flag verified in database applied?*

<sup>\*</sup>See validation procedures to determine which associated data need to be flagged.

Total number of occurrences: <u>0</u>	⊠ Step 7 Completed	Initials: SJG	Date: 10/26/17
***********************************	*******		

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

Data Verifier/Validator Signature

10/26/17

#### **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 <u>copies</u> of ALL *Data Verification and Validation Worksheets* and attachments associated with the study to the Quality Assurance Officer and retain <u>originals</u> 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.	В
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	Н
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	

٩tt	achment 1.1 Water Quality Sam	ple Data Verifica	tion and Validation W	/orksheet	
rea Pro /& Dat	oldy Name: <u>Compliance Monitorials</u> : <u>FY 2018 (July 2017 – Wet Secondect Coordinator: For Data Revolution For Data Revolution Supplied to Covered by this worksheet: Revolution of Verification/Validation For</u>	ason Sample) iew and Reportin io Grande South	g – SJG, BHI – 7/28/17		
<u>Ste</u>	e <mark>p 1: Verify Field Data</mark> Are all Field Data forms present a	and complete?	IVos □No		
٦.	Are all Fleid Data forms present a	ina compiete?	Yes ∐ No		
f y	es, proceed; if no, attempt to locat	te missing forms, t	hen indicate any rema	ining missing forms and actio	n taken.
	Missing Field Data Forms	Actio	n Taken		
Γοί	tal number of occurrences: 0				
	Are station name and ID, and san es, proceed; if no, indicate errors				] No
•	Station and Parameter	Action Take			
		l <del></del>			
Γοί	tal number of occurrences: 0				
Э.	Are field data on forms consistent	t with database? [	☑ Yes  ☐ No		
f y	es, proceed; if no, indicate errors	identified, correct	errors in database and	I re-verify.	
	Station	Sampling Date	Parameter(s) Corrected	Re-verified?	
		<del> </del>	<u> </u>		
		1		1	

Total number of occurrences: <u>0</u>

Stati	on/RID	Sampling F	RID Corrected	Re-verified?			
		Date '					
Total number of o	ccurrences: 0						
				⊠ Ste	1 Completed	Initials: SJG	Date: 10/26/17
	a Deliverables  question been delive	ered?⊠Yes □□	No				
A. Have all data in If yes, proceed; if n	question been deliverables question been deliverables o, indicate RIDs with taken. Complete this Submittal Date	missing data (sam	oles or blanks) or atta	Date Missing Data Were	able RIDs high	ilighted. Contact	data source
A. Have all data in  If yes, proceed; if n and indicate action	question been delive o, indicate RIDs with taken. Complete this	missing data (samps step upon receipt of Missing	oles or blanks) or atta of all missing data.  Date of Initial	Date Missing	able RIDs high	ilighted. Contact	data source
A. Have all data in  If yes, proceed; if n and indicate action	question been deliver o, indicate RIDs with taken. Complete this Submittal Date	missing data (samps step upon receipt of Missing	oles or blanks) or atta of all missing data.  Date of Initial	Date Missing Data Were	able RIDs high	ilighted. Contact	data source

	RID	Submittal Date	Missing of Incorrect Paramete	Action Ta	iken Re-vi	erified?			
ļ							]		
						⊠ Ster	2 Completed	Initials: SJG	Date: 10/26/17
*No		w Data able – no flow data ct or missing data or				s.			
	S	tation	Sampling Date	Flow data missi or incorrect?	ng				
Tot	al number of c	occurrences: <u>0</u>							
B.	Identify incorre	ct or missing discha	rge measureme	nts, correct errors i	in database and	re-verify.			
	S	tation	Sampling Date	Flow data missi or incorrect?	ng Re-ver	rified?			
Tot	al number of o	occurrences: <u>0</u>					applicable o 3 Completed	Initials: SJG	<b>Date:</b> 10/26/17
 Ste	p 4: Verify Ana	alytical Results for	Missing Inforr	nation or Question	nable Results				
We	re any results v	vith missing/question	nable informatio	n identified? ⊠ Ye	s 🗌 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	7/28/17	Lab report provides Dissolved Phosphorous results as "Total Phosphorous" for "filtered sample".	Notified AMAFCA of this and verified with HEAL. BHI added note to the lab report.
Rio Grande South	7/28/17	Hexavalent Chromium and COD for Rio Grande South incorrectly labeled in lab report as Rio Grande North	Confirmed lab results and monitoring location with HEAL. BHI added note to the lab report.
Rio Grande South	7/28/17	Tetrahydrofuran not found along numerical results.	Analytical notes state that Tetrahydrofuran was not included in the list of reportable compounds. Compound was not detected.
Rio Grande South	7/28/17	Benzidine and Dieldrin not found along numerical results.	Analytical notes state that Benzidine and Dieldrin were not included in the list of reportable compounds. Compounds were not detected.

\*Note – HEAL Lab report order number – 1707E46

Total number of occurrences: 1

Step 4 Completed Initials: SJG Date: 10/26/17

Step 5: Validate Blanks Results

Were any analytes of concern detected in blank samples? \( \text{Yes} \) 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 pro	ocedures to determi	ne which associated data	need to	be flagged	and include	on Validation

Codes Form

See valida	alion procedure	es to determine	willen asso	cialed dala i	need to be mag	ged and include on va	iluation Codes	FOIIII.	
Total num	ber of occurre	ences: <u>0</u>							
						⊠ Step	5 Completed	Initials: SJG	Date: 10/26/17
		g Times Violat itted that did no	ions	cified holding		es 🛭 No			
officer or P	Program Manag		est to add ap			he database save these to database. Complete			
RID	Sample Date	Parameter	[Blank]	[Sample]	Validation Code/Flag Applied	Code/Flag verified in database to ALL associated data?*			
*Note – La						ged. ted pH, so this is hold t	ime is not appli	icable.	
						⊠ Step	6 Completed	Initials: SJG	Date: 10/26/17
Were any r  Yes  If no, proce officer or P	replicate/duplic ⊠ No eed; if yes, list⊣ Program Manag		itted outside ed to have v est to add ap	of the estate	es applied in t	limit of 20%? he database save these to database. Complete			

RID Pairs	Replicate or Duplicate?	Sample Date	Parameter	RPD	Validation Code/Flag Applied	Code/Flag verified in database applied?*
<u></u>	<u></u>					

<sup>\*</sup>See RGN Form.

Total number of occurrences: <u>0</u>	⊠ Step 7 Completed	Initials: SJG	Date: 10/26/17
************************************	*******		

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

Data Verifier/Validator Signature

10/26/17

#### **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 <u>copies</u> of ALL *Data Verification and Validation Worksheets* and attachments associated with the study to the Quality Assurance Officer and retain <u>originals</u> 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.	В
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	Н
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	

Att	achment 1.1 Water Quality Sam	ple Data Verifica	tion and Validation V	Vorksheet	
Yea Pro V& Da	udy Name: <u>Compliance Monitori</u> ar: <u>FY 2018 (Sept 2017 – Wet Se</u> oject Coordinator: <u>For Data Revi</u> V Reviewer: <u>SJG</u> ta covered by this worksheet: <u>R</u> rsion of Verification/Validation F	ason Sample) ew and Reportin io Grande North	g – SJG, BHI – 9/27/17 and 9/28/1	<u>7</u>	
	ep 1: Verify Field Data Are all Field Data forms present a	nd complete?	]Yes □ No		
If y	es, proceed; if no, attempt to locat	e missing forms, t	hen indicate any rema	aining missing forms and a	ction taken
	Missing Field Data Forms	Actio	n Taken	]	
В.	tal number of occurrences: 0  Are station name and ID, and sam				□No
If y	es, proceed; if no, indicate errors i				
	Station and Parameter	Action Take	n Re-verified	<del>!?</del>	
				-	
				-	
To	tal number of occurrences: 0	<u> </u>			
	Are field data on forms consistent es, proceed; if no, indicate errors i	_	_	d re-verify.	
	Station	Sampling Date	Parameter(s) Corrected	Re-verified?	
					-

Total number of occurrences: <u>0</u>

Sta	tion/RID	Sampling Date	RID Corrected	Re-verified?			
number of o	occurrences: 0				J		
				⊠ Ste	o 1 Completed	Initials: SJG	Date: 1
2: Verify Dat	ta Deliverables						
	ta <b>Deliverables</b> n question been deliv	ered?⊠Yes □	No				
ave all data ir , proceed; if r		n missing data (sam	ples or blanks) or att	ach report with appl	cable RIDs high	nlighted. Contac	t data so
ave all data ir , proceed; if r	n question been deliveno, indicate RIDs with	n missing data (sam	ples or blanks) or att	ach report with appl Date Missing Data Were Received	cable RIDs high	nlighted. Contac	t data so
ave all data ir , proceed; if r	n question been deliveno, indicate RIDs with a taken. Complete this	n missing data (sam s step upon receipt Missing	ples or blanks) or atta of all missing data. Date of Initial	Date Missing Data Were	cable RIDs high	ilighted. Contac	t data so

	RID	Submittal Date	Missing of Incorrect Parameter	Action Taken	Re-verified?			
						]		
					⊠ Ste <sub>l</sub>	2 Completed	Initials: SJG	Date: <u>12/27/17</u>
Sto	p 3: Verify Flo	w Data						
*No	te – Not Applic	able – no flow data p	orovided with Cl	MC sample collection				
AI	dentify incorre	ct or missing data on	the flow calcula	ation spreadsheet and o	correct errors.			
	S	tation	Sampling Date	Flow data missing or incorrect?				
-			Date					
	· <u>·</u>							
Tota	al number of c	occurrences: <u>0</u>						
B. I	dentify incorre	ct or missing dischar	ge measureme	nts, correct errors in da	tabase and re-verify.			
Γ			Sampling	Flow data missing	D :: 10	1		
	S	tation	Date	or incorrect?	Re-verified?			
Tota	al number of o	occurrences: 0			Not A	applicable		
		<u>-</u>					Initials: SJG	Date: 12/27/17
 Stei	p 4: Verify Ana			nation or Questionable	e Results			
	<del>-</del>	-	-	_	_			
vvei	e any results v	vith missing/question	abie illioillialioi	i identilied? M res	∐ 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	е	Actio	n Taken					
	Rio Grande North	9/27/17	Lab report provides Dissolved Phosphorous	a	Notified AMAFCA of this and verified with HEAL. BHI added note to the lab report.		<u>3HI</u>				
			results as "Total Phosphorous" for "filtered sample".		idded note t	o ine iab rep	oort.				
	Note – HEAL Lab report order numbers – 1709F09 (E. coli on 9/27/17) and 1709F81(remaining parameters)  Fotal number of occurrences: 1  Step 4 Completed Initials: SJG Date: 12/27/17										
	Step 4 Completed Initials: <u>S3G</u> Date: <u>12/27/17</u>										
We If n	Step 5: Validate Blanks Results Were any analytes of concern detected in blank samples?  Yes  No  f 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 [E	Blank ]	[Sample	Validatio n Code/Fla g Applied	Code/Flag verified in database?	- -			
					<u> </u>			1			
*Se	e validation pr	ocedures to determin	ne which associated data ne	eed to	be flagged	and include	on <i>Validation</i>	n Codes	Form.		
Tot	al number of	occurrences: 0									
	Step 5 Completed Initials: SJG Date: 12/27/17										
										. <u>500</u>	<u>,,</u>
		Holding Times Viola s submitted that did r	ations not meet specified holding t	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?*

<sup>\*</sup>See validation procedures to determine which associated data need to be flagged.

Total number of occurrences: 0

	Step 6 Completed	<i>Initials:</i> SJG	Date: 12/27/17
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 f	forward to QA
officer or Program Manager with a request to add appropriate validation codes to database	. Complete this step after	verifying that v	√alidation
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?*

<sup>\*</sup>See validation procedures to determine which associated data need to be flagged.

Total number of occurrences: 0			
<del>-</del>	Step 7 Completed	Initials: SJG	Date: 12/27/17
*******************	*********		

After all of the above steps have been completed, save and print the worksheet, attach all applicable supplemental information and sign below.

<sup>\*</sup>Note – Lab reports lists pH with hold time flag. Database uses field data reported pH, so this is hold time is not applicable.

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

Data Verifier/Validator Signature

12/27/17

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 <u>copies</u> 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.	В
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	Н
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	

Att	achment 1.1 Water Quality Samp	ole Data Verificat	tion and Validation W	/orksheet	
Yea Pro V& Da	idy Name: <u>Compliance Monitorir</u> ar: <u>FY 2018 (Sept 2017 – Wet Sea</u> oject Coordinator: <u>For Data Revie</u> V Reviewer: <u>SJG</u> ta covered by this worksheet: <u>Ri</u> rsion of Verification/Validation P	ison Sample) ew and Reportin o Grande South	g – SJG, BHI – 9/28/17		
	e <b>p 1: Verify Field Data</b> Are all Field Data forms present ar	nd complete?	Yes □ No		
If y	es, proceed; if no, attempt to locate	e missing forms, t	hen indicate any rema	ining missing forms and a	ction taken
	Missing Field Data Forms	Actio	n Taken		
To	tal number of occurrences: 0				
B. If y	Are station name and ID, and sames, proceed; if no, indicate errors in Station and Parameter	pling date and tin dentified, correct of Action Take	errors in database and	re-verify.	□No
C.	tal number of occurrences: 0  Are field data on forms consistent es, proceed; if no, indicate errors ic			re-verify.	
	Station	Sampling Date	Parameter(s) Corrected	Re-verified?	_
		1		I	1

Total number of occurrences: <u>0</u>

	tion/RID	Sampling	RID Corrected	Re-verified?	1
		Date	THE CONTROLLED		<u> </u> 
					]
otal number of c	occurrences: 0				
				⊠ Ste	p 1 Completed Initials: SJG Date: 12/2
tep 2: Verify Dat	a Deliverables				
	guestion been deliver	ered? X Yes	No		
	•				
				ach report with appl	icable RIDs highlighted. Contact data sour
na indicate action	taken. Complete this	s step upon receipt	of all missing data.		
			1	D ( M)	٦
		Missing	Data of Initial	Date Missing	
RID	Submittal Date	Missing	Date of Initial	Date Missing Data Were	
	Submittal Date	Missing Data/Parameters	Date of Initial Verification		
	Submittal Date			Data Were	<u> </u> 
	Submittal Date			Data Were	
				Data Were	

	RID	Submittal Date	Missing of Incorrect Parameter	Action Taken	Re-verified?			
						]		
					⊠ Ste <sub>l</sub>	2 Completed	Initials: SJG	Date: <u>12/27/17</u>
Stai	p 3: Verify Flo	w Data						
*No	te – Not Applic	able – no flow data p	orovided with Cl	MC sample collection				
AI	dentify incorre	ct or missing data on	the flow calcula	ation spreadsheet and o	correct errors.			
	S	tation	Sampling Date	Flow data missing or incorrect?				
-			Date					
	· <u>·</u>							
Tota	al number of o	occurrences: 0						
B. I	dentify incorre	ct or missing dischar	ge measureme	nts, correct errors in da	tabase and re-verify.			
Γ			Sampling	Flow data missing	D :: 10	1		
	S	tation	Date	or incorrect?	Re-verified?			
Tota	al number of o	occurrences: 0			Not A	applicable		
		<u>-</u>					Initials: SJG	Date: 12/27/17
 Stei	p 4: Verify Ana			nation or Questionable	e Results			
	<del>-</del>	-	-	_	_			
vvei	e any results v	vith missing/question	abie illioillialioi	i identilied ( M res	∐ 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).

Action Taken

Missing or Questionable

Information/Results

Sample Date

RID

ļ			IIIIOIIIIalioii/Itesults	,					
	Rio Grande	9/28/17	Lab report provides	<u>N</u>	Notified AMA	AFCA of this			
	South		Dissolved Phosphorous	s a	nd verified	with HEAL. E	вні		
			results as "Total			to the lab rep			
			Phosphorous" for "filtered						
			sample".						
*Nc	to _ HEAL La	b report order numb	·						
		occurrences: 1	ei – 1709i 01						
101	ai iiuiiibei Oi	occurrences. <u>1</u>				$\square$	Stan 4 Cam	pleted Initials: SJG Da	to: 12/27/17
							Step 4 Com	pieted illitiais: 536 Da	ite: <u>12/27/17</u>
		Blanks Results			<b>-</b>				
We	re any analyte	s of concern detecte	ed in blank samples? 🔲 `	Yes ⊵	☑ No				
								ts as an excel file and forw	
offic	er or Program	n Manager, with a re	quest to add appropriate v	alidatior	n codes to c	latabase. Co	mplete this s	step after verifying that valid	dation
cod	es have been	added to database	correctly.				•		
			,						
						Validatio	Code/Flag	1	
				[Blank	[Sample	n	verified in		
	RID	Sample Date	Parameter	1	1	Code/Fla	database?		
				1	J	g Applied	*		
-						g Applied		-	
_		<del> </del>							
L_		<u> </u>			<u> </u>			1 _	
*Se	e validation pr	ocedures to determi	ne which associated data	need to	be flagged	and include	on <i>Validatioi</i>	n Codes Form.	
Tot	al number of	occurrences: 0							
		_							
						$\boxtimes$	Step 5 Con	npleted <i>Initials:</i> SJG <i>D</i> a	4 40/07/47
									i <b>te:</b> 12/27/17
							. <u>-</u>	· —	ite: <u>12/27/17</u>
Ste	n 6· Validate	Holding Times Viol	ations				· -	·	i <b>te:</b> <u>12/27/17</u>
		Holding Times Violes submitted that did	ations not meet specified holding	times?	□Ves		·	· —	ite: <u>12/27/17</u>

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?*

<sup>\*</sup>See validation procedures to determine which associated data need to be flagged.

Total number of occurrences: 0

	⊠ Step 6 Completed	Initials: SJG	Date: 12/27/17
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 officer or Program Manager with a request to add appropriate validation codes to database. 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:	<u>0</u>	⊠ Step 7 Completed	Initials: SJG	<b>Date:</b> 12/27/17
	*******************	*******		

After all of the above steps have been completed, save and print the worksheet, attach all applicable supplemental information and sign below.

<sup>\*</sup>Note – Lab reports lists pH with hold time flag. Database uses field data reported pH, so this is hold time is not applicable.

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

Data Verifier/Validator Signature

12/27/17

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 <u>copies</u> 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.	В
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	Н
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 3**

DOCUMENTATION FROM DBS&A RELATED TO SEPTEMBER 27-28, 2017, SAMPLE COLLECTION AND GROSS ALPHA ANALYTICAL RESULT



# Engineering **Spatial Data Advanced Technologies**

Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335

www.bhinc.com

voice: 505.823.1000 facsimile: 505.798.7988

toll free: 800.877.5332

# MEMORANDUM

DATE:

July 3, 2018

TO:

Jerry Lovato, PE, AMAFCA

Patrick Chavez, PE, AMAFCA

FROM:

Craig Hoover, PE

Sarah Ganley, PE

SUBJECT:

CMC Wet Season, Wet Weather Stormwater Monitoring

Data Verification, Analysis Results Database, and Reporting FY 2018 Dry Season (November 1, 2017 to June 30, 2018)

Task 28 Memo

### Notification of In-Stream Water Quality Exceedances

No CMC samples were able to be collected in the FY 2018 dry season (November 1, 2017 to June 30, 2018). Therefore, there are no in-stream water quality exceedances to report for the Compliance Monitoring Cooperative (CMC) monitoring program.

#### 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) 2018 (July 1, 2017 to June 30, 2018). 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 Watershed Based Municipal Separate Storm Sewer System (MS4) Permit, NPDES Permit No. NMR04A000 ("WSB MS4 Permit").

As identified in the CMC Monitoring Plan, the WSB MS4 Permit requires 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 with at least three (3) events in the wet season and two (2) events in the dry season. Four (4) samples were collected in FY 2017 toward the WSB MS4 Permit requirements three (3) in the wet season and one (1) in the dry season. In addition, two (2) samples were collected during the FY 2018 wet season (July 1, 2017 to October 31, 2017); reporting for these samples is in the February 2, 2018, CMC Wet Season, Wet Weather Stormwater Monitoring Memo. No CMC samples were able to be collected in the FY 2018 dry season (November 1, 2017 to June 30, 2018). Therefore, one (1) dry season storm event remains to be sampled by the CMC

CMC Wet Season, Wet Weather Stormwater Monitoring FY 2018 Dry Season (November 1, 2017 to June 30, 2018) Task 28 Memo July 3, 2018 Page 2

to meet WSB MS4 Permit requirements. The CMC samples obtained to date are summarized in Table 1 below:

Table 1: CMC Sample Summary Compared to WSB MS4 Requirements

No. of Storm Events Required to Sample	CMC-WSB MS4 Permit Required Samples per Season	FY (Date) Sample Obtained at Rio Grande North and Rio Grande South
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	Remaining Sample for CMC to Obtain
6	Any Season	FY 2018 (Wet Season - 7/27/2017)
7	Any Season	FY 2018 (Wet Season - 9/27/2017)

### Stormwater Quality Database for CMC

As stated previously, there were no qualifying storm events sampled for the CMC during the FY 2018 dry season, wet weather monitoring. However, some details were added to the CMC Excel database regarding the Water Quality Criterion. This updated database is included with this memo.

#### **Data Entry for Discharge Monitoring Reports**

As required in the WSB MS4 Permit, verified stormwater quality data must be submitted annually to the EPA using electronic Discharge Monitoring Report (DMR) forms. Data from the DMRs are uploaded to a comprehensive nation-wide database that contains discharge data for facilities and other point sources that discharge directly to receiving streams. For this Task, BHI has completed data entry related to the EPA CMC DMRs for the FY 2018 wet season. DMRs with this data are due to EPA on December 1, 2018, and these forms will be submitted to EPA by AMAFCA as the delegated data entry member for the CMC.

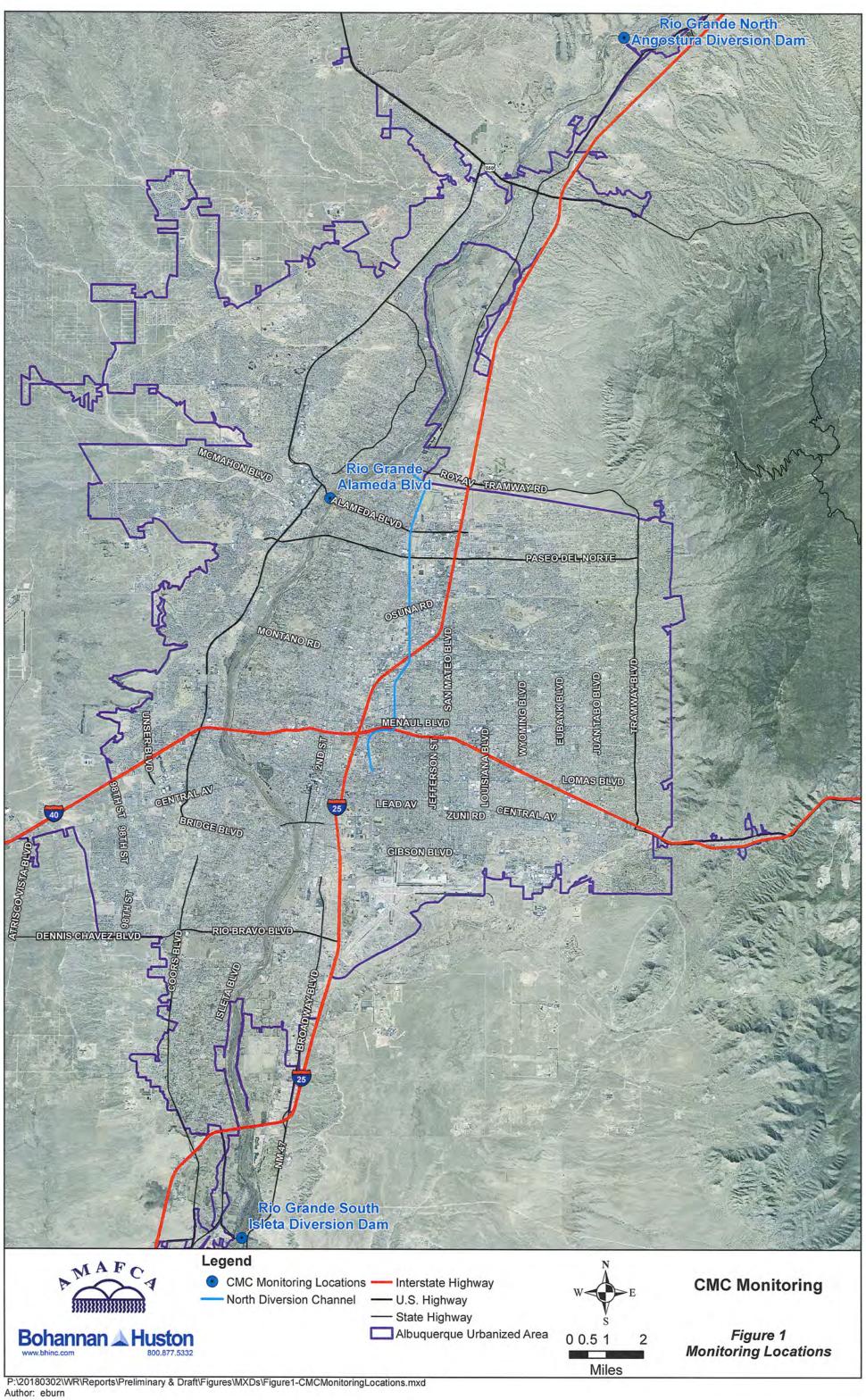
#### Conclusions and Planning

To summarize:

- With the two FY 2018 wet season samples, six (6) of the seven (7) required samples in the WSB MS4 Permit Wet Weather Monitoring section have been obtained. The CMC has met the required WSB MS4 Permit minimum of three (3) events during the wet season.
- Only one (1) dry season sample remains to be obtained to meet the WSB MS4 Permit requirements for the CMC members.

#### SG/le

Spreadsheet Included Separately: Excel CMC Spreadsheet updated with water quality criterion details.



Permit Permit #:

Major:

NMR04A016

External Outfall

Permittee: ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY (AMAFCA)

2600 PROSPECT AVENUE NE Permittee Address:

ALBUQUERQUE, NM 87107

Facility Location:

Facility:

ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL (AMAFCA)

2600 PROSPECT AVENUE NE ALBUQUERQUE, NM 87107

Permitted Feature:

001

No

Discharge: 001-W

RIO GRANDE (NORTH) - WET SEASON

Report Dates & Status

Monitoring Period: From 07/01/17 to 10/31/17

**DMR Due Date:** 12/01/18

Status: **NetDMR Validated** 

**Considerations for Form Completion** 

SEASONAL MONITORING PERIODS ARE: WET SEASON = JULY 1-OCT. 31 & DRY SEASON = NOV. 1-JUNE 30. SEPARATE DMRS REQUIRED FOR EACH SEASON. DMRS TO BE SUBMITTED DUE DEC. 1ST, FOLLOWING END OF MONIT. PERIOD. PERMIT REQUIRES A MIN. OF 7 EVENTS PER LOC. PER PERMIT TERM (3 WET SEASON, 2 DRY SEASON & 2 PERMITTEE'S CHOICE).

**Principal Executive Officer** 

First Name: Jerry Title:

1 - Effluent Gross

**Executive Engineer** 

Sample

Permit Req.

Telephone:

505-884-2215

Req Mon DAILY MX

28 - ug/L

03/PT - Three Per Permit Term CP - COMPOS

**Last Name:** Lovato

34230 Benzo[b]fluoranthene

Form NODI: Parameter	Manitorina Lacati	ion Coccer #	Param NOD		Quantity or Leading			Overlier on Commen	tration			# of Ev Eroqueney of Analysis	Comple True			
Parameter Code Name	Monitoring Locati	ion Season #	Param. NOD		Quantity or Loading  Qualifier 1 Value 1 Qualifier 2 Value 2 Uni	ite Qualifior	1 Value 1 Qual	Quality or Concer Value 2	Qualifier	3 Value 3	Units	# of Ex. Frequency of Analysis	Sample Typ			
Name				Sample	Qualifier 1 value 1 Qualifier 2 value 2 011	=	23.47 =	23.47	= Qualifier	23.47	04 - deg C	03/PT - Three Per Permit Tern	m GR - GRAB			
0010 Temperature, water deg. centigrade	1 - Effluent Gross	0		Permit Reg.			Req Mon DAILY MN	Req Mon DAILY AV		Reg Mon DAILY MX	04 - deg C	03/PT - Three Per Permit Term				
oo to remperature, water deg. certiigrade	1 - Lilidelit Oloss	U		Value NODI			Red MOUDAIET MIN	Red MOII DAILT AV		Red MOLLET MX	04 - deg 0	03/11 - Tillee Fel Fellilli Telli	II OK - OKAD			
				Sample			=	247	_	247	11 - umho/cm	03/PT - Three Per Permit Tern	n GR - GRAB			
0094 Conductivity	1 - Effluent Gross	0		Permit Reg.				Req Mon DAILY AV		Reg Mon DAILY MX	11 - umho/cm	03/PT - Three Per Permit Term				
,				Value NODI												
				Sample		=	6.73 =	6.73			19 - mg/L	03/PT - Three Per Permit Tern	n GR - GRAB			
0300 Oxygen, dissolved [DO]	1 - Effluent Gross	0		Permit Req.			Req Mon DAILY MN	Req Mon DAILY AV			19 - mg/L	03/PT - Three Per Permit Tern	m GR - GRAB			
				Value NODI			·									
				Sample			<	2	<	2	19 - mg/L	03/PT - Three Per Permit Tern	m CP - COMPC			
0310 BOD, 5-day, 20 deg. C	1 - Effluent Gross	0		Permit Req.				Req Mon DAILY AV		Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Tern	n CP - COMPC			
				Value NODI												
				Sample			=	19.9	=	19.9	19 - mg/L	03/PT - Three Per Permit Tern	n CP - COMPC			
0340 Oxygen demand, chem. [high level] [COD]	1 - Effluent Gross	0		Permit Req.				Req Mon DAILY AV		Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Tern	n CP - COMPC			
						Value NODI										
				Sample		=	7.37		=	7.37	12 - SU	03/PT - Three Per Permit Tern	m GR - GRAB			
0400 pH	1 - Effluent Gross	Gross 0		Permit Req.			Req Mon MINIMUM			Req Mon MAXIMUM	12 - SU	03/PT - Three Per Permit Term	m GR - GRAB			
				Value NODI												
				Sample			=	32	=	32	19 - mg/L	03/PT - Three Per Permit Term	m CP - COMPO			
0530 Solids, total suspended	1 - Effluent Gross	ent Gross 0	uent Gross 0 -	Effluent Gross 0	ent Gross 0		Permit Req.				Req Mon DAILY AV		Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term	m CP - COMPO
							Value NODI									
				Sample			=	5.17	=	5.17	19 - mg/L	03/PT - Three Per Permit Term	m CP - COMPC			
0556 Oil & Grease	1 - Effluent Gross	ffluent Gross 0	s 0		Permit Req.				Req Mon DAILY AV		Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Tern	n CP - COMPO		
				Value NODI												
				Sample												
0625 Nitrogen, Kjeldahl, total [as N]	1 - Effluent Gross	0		Permit Req.				Req Mon DAILY AV		Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Tern	n CP - COMPC			
				Value NODI				B - Below Detection Limit/No Detection	1	B - Below Detection Limit/No De	etection					
				Sample			=	0.05	=	0.05	19 - mg/L	03/PT - Three Per Permit Tern				
0630 Nitrite + Nitrate total [as N]	1 - Effluent Gross	0		Permit Req.				Req Mon DAILY AV		Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Tern	n CP - COMPC			
				Value NODI												
				Sample			=	0.062	=	0.062	19 - mg/L	03/PT - Three Per Permit Tern				
Phosphorus, total [as P]	1 - Effluent Gross	0		Permit Req.				Req Mon DAILY AV		Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Tern	n CP - COMPO			
				Value NODI												
				Sample			=	0.025	=	0.025	19 - mg/L	03/PT - Three Per Permit Tern				
0666 Phosphorus, dissolved	1 - Effluent Gross	0		Permit Req.				Req Mon DAILY AV		Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Tern	n CP - COMPC			
				Value NODI												
				Sample												
032 Chromium, hexavalent [as Cr]	1 - Effluent Gross	0		Permit Req.				Req Mon DAILY AV		Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Tern	n CP - COMPO			
				Value NODI				B - Below Detection Limit/No Detection		B - Below Detection Limit/No De						
				Sample			=	1.1	=	1.1	28 - ug/L	03/PT - Three Per Permit Tern				
040 Copper, dissolved [as Cu]	1 - Effluent Gross	0	-	Permit Req.				Req Mon DAILY AV		Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Tern	n CP - COMPO			
				Value NODI												
				Sample						5 11 51111/111/	- "		00.000			
1049 Lead, dissolved [as Pb]	1 - Effluent Gross	0		Permit Req.				Req Mon DAILY AV		Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Tern	n CP - COMPO			
				Value NODI				B - Below Detection Limit/No Detection	ו	B - Below Detection Limit/No De	etection					

Req Mon DAILY AV

		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Limit/N	o Detection	
		Sample					
34242 Benzo[k]fluoranthene	1 - Effluent Gross 0	Permit Req.		Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term   CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Limit/N	o Detection	
		Sample					
34247 Benzo[a]pyrene	1 - Effluent Gross 0	Permit Req.		Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Limit/N	o Detection	
		Sample					
34320 Chrysene	1 - Effluent Gross 0	Permit Req.		Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Limit/N	o Detection	
		Sample					
34403 Indeno[1,2,3-cd]pyrene	1 - Effluent Gross 0	Permit Req.		Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Limit/N	o Detection	
		Sample					
34526 Benzo[a]anthracene	1 - Effluent Gross 0	Permit Req.		Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Limit/N		
		Sample					
34556 Dibenz[a,h]anthracene	1 - Effluent Gross 0	Permit Req.		Reg Mon DAILY AV	Reg Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Limit/N		
		Sample					
39032 Pentachlorophenol	1 - Effluent Gross 0	Permit Req.		Reg Mon DAILY AV	Reg Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
·		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Limit/N		
		Sample	_	5.5	= 5.5	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
39100 Di[2-ethylhexyl] phthalate [DEHP]	1 - Effluent Gross 0	Permit Reg.		Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
oc roo bije omymonyij pilanalato (beli ii j		Value NODI		1104 111011 271121 711	rtoq mon 27 m21 m/x	20 09/2	
		Sample					
39120 Benzidine	1 - Effluent Gross 0	Permit Reg.		Reg Mon DAILY AV	Reg Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
oo 120 Bonziano	1 Emaon Grood	Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Limit/N		
		Sample		B Bolow Betection Elimitate Betection	B Below Beteetien Einnight	o Beteetion	
39380 Dieldrin	1 - Effluent Gross 0	Permit Reg.		Reg Mon DAILY AV	Reg Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
Dicidiiii	1 Emach Gross	Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Limit/N		CONT 1 THREE FEIT CHILL TEHR OF CONTROL
		Sample	=	0.0000001	= 0.0000001	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
39516 Polychlorinated biphenyls [PCBs]	1 - Effluent Gross 0	Permit Reg.	<u> </u>	Req Mon DAILY AV	Reg Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
393 To Polychilothiated Diphenyis [PCBs]	1 - Ellidelit Gloss 0	Value NODI		Req MOIT DAILT AV	Red MOII DAILT MIX	19 - Hig/L	03/F1 - Tillee Fel Fellill Tellil CF - COMF03
		Sample	=	20	= 20	3Z - CFU/100mL	02/DT Three Day Dayreit Tayre CD CDAD
51040 E. coli	4. Effluent Cross 0		=		= 20 Reg Mon DAILY MX	3Z - CFU/100mL	03/PT - Three Per Permit Term GR - GRAB
51040 E. COII	1 - Effluent Gross 0	Permit Req.		Req Mon DA GEOAV	Red Moll DAILT MX	32 - CF0/100IIIL	03/PT - Three Per Permit Term GR - GRAB
		Value NODI		404	404	40	20/PT There Ber Berneit Terre OR COMPON
700050 111 4 4 1 11 1 1	4 577 40	Sample	=	181	= 181	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
70295 Solids, total dissolved	1 - Effluent Gross 0	Permit Req.		Req Mon DAILY AV	Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		0.00	0.00	47 0:4	00/DT TI D D "IT OD 00MD00
		Sample	=	2.06	= 2.06	17 - pCi/L	03/PT - Three Per Permit Term CP - COMPOS
80029 Alpha gross radioactivity	1 - Effluent Gross 0	r ormit rtoq.		Req Mon DAILY AV	Req Mon DAILY MX	17 - pCi/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI					
		Sample					
81302 Dibenzofuran	1 - Effluent Gross 0	Permit Req.		Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Limit/N	o Detection	
		Sample					
81607 Tetrahydrofuran	1 - Effluent Gross 0	Permit Req.		Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Limit/N	o Detection	

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

#### **Edit Check Errors**

No errors.

#### Comments

Wet Season Sample Date: 07/27/2017. This data applies to the CMC. EPA has approved this process for CMC members that delegate authority to AMAFCA. DMR data applies to following permits: NMR04A001; NMR04A002; NMR04A003; NMR04A004; NMR04A006; NMR04A007; NMR04A008; NMR04A013; NMR04A013; NMR04A016.

#### Attachments

No attachments.

Report Last Saved By

ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY (AMAFCA)

User: SGANLEYBHI
Name: Sarah Ganley
E-Mail: sganley@bhinc.com

Date/Time: 2018-03-29 09:30 (Time Zone: -05:00)

Report Last Signed By

Permit Permit #:

Major:

NMR04A016

Permittee: ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY (AMAFCA)

Permittee Address:

2600 PROSPECT AVENUE NE ALBUQUERQUE, NM 87107

Facility Location:

Facility:

ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL (AMAFCA)

2600 PROSPECT AVENUE NE ALBUQUERQUE, NM 87107

Permitted Feature:

002

No

External Outfall

Discharge: 002-W

RIO GRANDE (SOUTH) - WET SEASON

Report Dates & Status

Monitoring Period: From 07/01/17 to 10/31/17

**DMR Due Date:** 12/01/18

Status:

**NetDMR Validated** 

**Considerations for Form Completion** 

SEASONAL MONITORING PERIODS ARE: WET SEASON = JULY 1-OCT. 31 & DRY SEASON = NOV. 1-JUNE 30. SEPARATE DMRS REQUIRED FOR EACH SEASON. DMRS TO BE SUBMITTED DUE DEC. 1ST, FOLLOWING END OF MONIT. PERIOD. PERMIT REQUIRES A MIN. OF 7 EVENTS PER LOC. PER PERMIT TERM (3 WET SEASON, 2 DRY SEASON & 2 PERMITTEE'S CHOICE).

**Principal Executive Officer** 

First Name: Jerry Title:

**Executive Engineer** 

Telephone:

505-884-2215

Last Name: Lovato

No Data Indicator (NODI)

Parameter	Monitoring Locati	on Season # Param. NO	DI	Quantity or Loading				Quality or	Concentration			# of Ex. Frequency of Analysis Sample Typ
Code Name	mornitoring Locati	on ocason # 1 arani. No		Qualifier 1 Value 1 Qualifier 2 Value 2 U	nite Ouglifior 1	Value 1	Qualifier 2	Value 2	Qualifie	3 Value 3	Units	" or Ex. Trequency of Analysis Sample Typ
Name			Comple	Qualifier I value I Qualifier 2 value 2 0		23.6		23.6	= Qualifie	23.6		03/PT - Three Per Permit Term GR - GRAB
0040 Tempo return water des continuede	1 Effluent Cross		Sample						=		04 - deg C	
0010 Temperature, water deg. centigrade	1 - Effluent Gross	0	Permit Req			Req Mon DAILY MN	IN I	Req Mon DAILY AV		Req Mon DAILY MX	04 - deg C	03/PT - Three Per Permit Term GR - GRAB
			Value NOD					204		004	44	03/PT - Three Per Permit Term GR - GRAB
1000 A O and the state of the	4 - F## 0		Sample					361 Bar Mar BAll V AV	=	361	11 - umho/cm	
0094 Conductivity	1 - Effluent Gross	0	Permit Req					Req Mon DAILY AV		Req Mon DAILY MX	11 - umho/cm	03/PT - Three Per Permit Term GR - GRAB
			Value NOD			2.0		0.0			40//	OO/DT Three Day Daywell Target OD ODAD
00000 O	4 - F## 0		Sample			6.8		6.8			19 - mg/L	03/PT - Three Per Permit Term GR - GRAB
0300 Oxygen, dissolved [DO]	1 - Effluent Gross	0	Permit Req		l l	Req Mon DAILY MI	N I	Req Mon DAILY AV			19 - mg/L	03/PT - Three Per Permit Term GR - GRAB
			Value NOD					•			10 "	00/DT TI D D "IT OD 00MD0
2010 DOD 5 1 20 1 2	. 500		Sample					2	=	2	19 - mg/L	03/PT - Three Per Permit Term CP - COMPC
0310 BOD, 5-day, 20 deg. C	1 - Effluent Gross	0	Permit Req					Req Mon DAILY AV		Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPC
			Value NOD									
			Sample					15	=	15	19 - mg/L	03/PT - Three Per Permit Term CP - COMPC
0340 Oxygen demand, chem. [high level] [COD]	1 - Effluent Gross	0	Permit Req				ļ.	Req Mon DAILY AV		Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPC
			Value NOD									
			Sample			8.13			=	8.13	12 - SU	03/PT - Three Per Permit Term GR - GRAB
00400 pH	1 - Effluent Gross	0	Permit Req		F	Req Mon MINIMUM	Л			Req Mon MAXIMUM	12 - SU	03/PT - Three Per Permit Term GR - GRAB
			Value NOD									
			Sample					63	=	63	19 - mg/L	03/PT - Three Per Permit Term CP - COMPO
00530 Solids, total suspended	1 - Effluent Gross	ffluent Gross 0	Permit Req				I	Req Mon DAILY AV		Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPC
			Value NOD									
			Sample					3.7	=	3.7	19 - mg/L	03/PT - Three Per Permit Term CP - COMPO
00556 Oil & Grease	1 - Effluent Gross	0	Permit Req					Req Mon DAILY AV		Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPO
			Value NOD									
			Sample				= (	0.84	=	0.84	19 - mg/L	03/PT - Three Per Permit Term CP - COMPO
00625 Nitrogen, Kjeldahl, total [as N]	1 - Effluent Gross	Effluent Gross 0	<b>Permit Req</b>				I	Req Mon DAILY AV		Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPO
			Value NOD									
			Sample				= (	0.88	=	0.88	19 - mg/L	03/PT - Three Per Permit Term CP - COMPO
00630 Nitrite + Nitrate total [as N]	1 - Effluent Gross		Permit Req				l l	Req Mon DAILY AV		Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPO
			Value NOD									
			Sample				= (	0.33	=	0.33	19 - mg/L	03/PT - Three Per Permit Term CP - COMPO
00665 Phosphorus, total [as P]	1 - Effluent Gross	0	Permit Req					Req Mon DAILY AV		Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPO
			Value NOD									
			Sample				= (	0.25	=	0.25	19 - mg/L	03/PT - Three Per Permit Term CP - COMPO
00666 Phosphorus, dissolved	1 - Effluent Gross	0	Permit Req				i	Req Mon DAILY AV		Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPO
·			Value NOD									
			Sample									
01032 Chromium, hexavalent [as Cr]	1 - Effluent Gross	0	Permit Req					Reg Mon DAILY AV		Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPO
, , ,			Value NOD					B - Below Detection Limit/No I	Detection	B - Below Detection Limit/No [		
			Sample					1.2	=	1.2	28 - ug/L	03/PT - Three Per Permit Term CP - COMPO
01040 Copper, dissolved [as Cu]	1 - Effluent Gross	0	Permit Req					Req Mon DAILY AV		Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPO
			Value NOD					- 1				
			Sample									
01049 Lead, dissolved [as Pb]	1 - Effluent Gross	0	Permit Req					Reg Mon DAILY AV		Reg Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPO
	. Lindon Oross		Value NOD					B - Below Detection Limit/No I	Detection	B - Below Detection Limit/No [	_	CONTRACTOR
			Sample					2 2001 2010011011 EIIIII(1101	20000011	2 2010 ii 2010011011 Elittil/NO E	. 0.000011	
0.4220 Daniel hillingraphs	4 F#Incit O		Permit Req					Reg Mon DAILY AV		Reg Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPO
34230 Benzo[b]fluoranthene	1 - Effluent Gross	0	i ennit Keq					INCH MOIT DAILT AV		TOOL MOUT DAILT MIX	20 - ug/L	OOT 1 - THEE FET FEITHLE TEITH OF - CONIPO

		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Lim	it/No Detection	
		Sample					
34242 Benzo[k]fluoranthene	1 - Effluent Gross 0	Permit Req.		Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term   CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Lim	it/No Detection	
		Sample					
34247 Benzo[a]pyrene	1 - Effluent Gross 0	Permit Req.		Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Lim	it/No Detection	
		Sample					
34320 Chrysene	1 - Effluent Gross 0	Permit Req.		Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Lim	it/No Detection	
		Sample					
34403 Indeno[1,2,3-cd]pyrene	1 - Effluent Gross 0	Permit Req.		Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Lim	it/No Detection	
		Sample					
34526 Benzo[a]anthracene	1 - Effluent Gross 0	Permit Req.		Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Lim	it/No Detection	
		Sample					
34556 Dibenz[a,h]anthracene	1 - Effluent Gross 0	Permit Req.		Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Lim	it/No Detection	
		Sample					
39032 Pentachlorophenol	1 - Effluent Gross 0	Permit Req.		Reg Mon DAILY AV	Reg Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Lim	it/No Detection	
		Sample					
39100 Di[2-ethylhexyl] phthalate [DEHP]	1 - Effluent Gross 0	Permit Reg.		Req Mon DAILY AV	Reg Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
, , , , , , , , , , , , , , , , , , , ,		Value NODI		B - Below Detection Limit/No Detection	'		
		Sample					
39120 Benzidine	1 - Effluent Gross 0	Permit Reg.		Reg Mon DAILY AV	Reg Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	'		
		Sample					
39380 Dieldrin	1 - Effluent Gross 0	Permit Reg.		Reg Mon DAILY AV	Reg Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
210141111	- Lindon Gross	Value NODI		B - Below Detection Limit/No Detection		-	99,1 1,11100 1 01 1 0111111 01 1 00 1 1 00 1 1 1
		Sample	=	0.000002	= 0.000002	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
39516 Polychlorinated biphenyls [PCBs]	1 - Effluent Gross 0	Permit Reg.	-	Req Mon DAILY AV	Reg Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
oco to i olyomormated siphertyle (i oso)	1 Emaon Grood	Value NODI		rtoq Mon Bruzi 7tt	red men Brief mr	10 mg/L	CONT PRINCE OF COMMETCH OF COMMETCH
		Sample	=	235.9	= 235.9	3Z - CFU/100mL	03/PT - Three Per Permit Term GR - GRAB
51040 E. coli	1 - Effluent Gross 0	Permit Reg.		Reg Mon DA GEOAV	Reg Mon DAILY MX	3Z - CFU/100mL	03/PT - Three Per Permit Term GR - GRAB
31040 L. COII	1 - Ellidelit Gloss 0	Value NODI		INEQ MOIT DA GEGAV	Red MOLDAIET MX	32 - CI 6/100IIIE	OST 1 - Three Fer Fernik Term OK - GKAB
		Sample	<u> </u>	248	= 248	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
70295 Solids, total dissolved	1 - Effluent Gross 0	Permit Req.	=	Req Mon DAILY AV	Req Mon DAILY MX		03/PT - Three Per Permit Term CP - COMPOS
70295 Solids, total dissolved	1 - Ellident Gloss 0	Value NODI		Red Mon Dail FAV	Red MOII DAILT MX	19 - mg/L	03/FT - Tillee Fel Fellilli Tellil CF - COMFOS
				2.45	2.45	47 ~0://	02/DT Three Day Dayresit Town CD COMDOC
00000 Alaba maaaa madia aatiisita	4. Efficient Occasion	Sample	=	2.15	= 2.15	17 - pCi/L	03/PT - Three Per Permit Term CP - COMPOS
80029 Alpha gross radioactivity	1 - Effluent Gross 0	r ormit rtoq.		Req Mon DAILY AV	Req Mon DAILY MX	17 - pCi/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI					
04000 Dib 6	4. Efficient Occasion	Sample		Day May DAH WAW	Daw Mary DAILY ANY	00	00/DT Than Boar Board's Town 02, 000 1000
81302 Dibenzofuran	1 - Effluent Gross 0	Permit Req.		Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Lim	IVINO Detection	
		Sample					
81607 Tetrahydrofuran	1 - Effluent Gross 0	Permit Req.		Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Lim	It/No Detection	

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

#### **Edit Check Errors**

No errors.

#### Comments

Wet Season Sample Date: 07/28/2017. This data applies to the CMC. EPA has approved this process for CMC members that delegate authority to AMAFCA. DMR data applies to following permits: NMR04A001; NMR04A002; NMR04A003; NMR04A004; NMR04A006; NMR04A007; NMR04A008; NMR04A010; NMR04A013; NMR04A013; NMR04A016.

#### Attachments

No attachments.

Report Last Saved By

ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY (AMAFCA)

User: SGANLEYBHI
Name: Sarah Ganley
E-Mail: sganley@bhinc.com

Date/Time: 2018-03-29 12:01 (Time Zone: -05:00)

Report Last Signed By

Permit Permit #:

Major:

NMR04A016

Permittee: ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY (AMAFCA)

2600 PROSPECT AVENUE NE Permittee Address:

ALBUQUERQUE, NM 87107

Facility Location:

Facility:

ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL (AMAFCA)

2600 PROSPECT AVENUE NE ALBUQUERQUE, NM 87107

Permitted Feature:

001 External Outfall

No

Discharge: 001-WA

RIO GRANDE (NORTH) - WET SEASON

Report Dates & Status

Monitoring Period: From 07/01/17 to 10/31/17

**DMR Due Date:** 12/01/18

Status: **NetDMR Validated** 

**Considerations for Form Completion** 

SEASONAL MONITORING PERIODS ARE: WET SEASON = JULY 1-OCT. 31 & DRY SEASON = NOV. 1-JUNE 30. SEPARATE DMRS REQUIRED FOR EACH SEASON. DMRS TO BE SUBMITTED DUE DEC. 1ST, FOLLOWING END OF MONIT. PERIOD. PERMIT REQUIRES A MIN. OF 7 EVENTS PER LOC. PER PERMIT TERM (3 WET SEASON, 2 DRY SEASON & 2 PERMITTEE'S CHOICE).

Principal Executive Officer

First Name: Jerry Title: **Executive Engineer**  Telephone: 505-884-2215

**Last Name:** Lovato

No Data Indicator (NODI) Form NODI:

	Parameter	<b>Monitoring Location Se</b>	ason # Param. NODI		Quantity or Loading		Quality or (	Concentration			# of Ex. Frequency of Analysis Sample Type		
Code	Name				Qualifier 1 Value 1 Qualifier 2 Value 2 Ur	nits Qualifier 1	Value 1	Qualifier 2	2 Value 2	Qualifier 3	Value 3	Units	
				Sample			16.3	=	16.3	=	16.3	04 - deg C	03/PT - Three Per Permit Term GR - GRAB
00010 Ter	mperature, water deg. centigrade	1 - Effluent Gross 0		Permit Req		I	Req Mon DAILY MN	V	Reg Mon DAILY AV		Reg Mon DAILY MX	04 - deg C	03/PT - Three Per Permit Term GR - GRAB
				Value NOD									
				Sample				=	103.4	=	103.4	11 - umho/cm	03/PT - Three Per Permit Term GR - GRAB
00094 Co	nductivity	1 - Effluent Gross 0		Permit Reg					Reg Mon DAILY AV		Reg Mon DAILY MX	11 - umho/cm	03/PT - Three Per Permit Term GR - GRAB
	•			Value NOD									
				Sample		= 7	7.13	=	7.13			19 - mg/L	03/PT - Three Per Permit Term GR - GRAB
00300 Ox	ygen, dissolved [DO]	1 - Effluent Gross 0		Permit Req			Req Mon DAILY MN	V	Reg Mon DAILY AV			19 - mg/L	03/PT - Three Per Permit Term GR - GRAB
'				Value NOD									
				Sample				=	2	=	2	19 - mg/L	03/PT - Three Per Permit Term CP - COMPO
00310 BO	DD, 5-day, 20 deg. C	1 - Effluent Gross 0		Permit Req					Req Mon DAILY AV		Reg Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPO
	, , ,			Value NOD									
				Sample				_	20.5	=	20.5	19 - mg/L	03/PT - Three Per Permit Term CP - COMPO
00340 Ox	ygen demand, chem. [high level] [COD]	1 - Effluent Gross 0		Permit Req					Reg Mon DAILY AV		Reg Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPO
00340 Oxygen demand, chem. [mgm level] [C	ygen domand, enom. [mgn level] [ee2]	DJ 1 - Ellidelit Gloss 0		Value NOD					Troop Mon Bruz 1 7.0		rtoq mon 27 ti21 tilix	10 mg/L	GOTT THIS TOTT CHIM TOTH OF COMM C
				Sample		= -	7.83			=	7.83	12 - SU	03/PT - Three Per Permit Term GR - GRAB
00400 pH		1 - Effluent Gross 0		Permit Req			Req Mon MINIMUM	1			Reg Mon MAXIMUM	12 - SU	03/PT - Three Per Permit Term GR - GRAB
50 100 pi i		1 Emacin Gloss		Value NOD			rtoq mon mintimon	•			red men in cancer	12 00	SOFT THIS TOTAL TOTAL SECTIONS
				Sample				_	260	=	260	19 - mg/L	03/PT - Three Per Permit Term CP - COMPO
10530 Sal	lids, total suspended	1 - Effluent Gross 0		Permit Req				-	Reg Mon DAILY AV	<u>-</u>	Reg Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPO
30330 301	iids, totai susperided			Value NOD					INCH MOIT BAILT AV		Red MOIL DAIL LINIX	19 - Hig/L	03/11 - Three Ferriennic Ferri Cr - Colvil O
				Sample									
00556 0:1	& Grease	1 - Effluent Gross 0		Permit Req					Reg Mon DAILY AV		Reg Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPO
00330 OII	& Grease			Value NOD					B - Below Detection Limit/No D	otoction	B - Below Detection Limit/No I		03/11 - Three Ferriennic Ferri Cr - Colvil O
				Sample					0.84	_	0.84	19 - mg/L	03/PT - Three Per Permit Term CP - COMPO
00625 Ni+	rogen, Kjeldahl, total [as N]	1 - Effluent Gross 0		Permit Req				_	Reg Mon DAILY AV	-	Reg Mon DAILY MX		03/PT - Three Per Permit Term CP - COMPO
00023 IVIII	rogen, rijeldani, total [as rij	1 - Ellidelit Gloss 0		Value NOD					Red MOIL DAIL LAN		Red MOLI DAILT MY	19 - mg/L	03/F1 - Tillee Fel Fellill Tellil CF - COMFO
				Sample				_	0.2	=	0.2	10. mg/l	03/PT - Three Per Permit Term CP - COMPO
00630 Ni+	rito I Nitroto total [op NI]	1 - Effluent Gross 0		Permit Req				-	Reg Mon DAILY AV	=	Reg Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPO
00030 14111	rite + Nitrate total [as N]			Value NOD					Req Mon DAILT AV		Red MOII DAILT MY	19 - mg/L	03/PT - Tillee Per Permit Term CP - COMPO
									0.20		0.00	40	02/DT Three Day Boyneit Town CD COMBO
0000E Dh.	conhamic total [co.D]	4 Efficient Cross		Sample				=	0.28	=	0.28	19 - mg/L	03/PT - Three Per Permit Term CP - COMPO
J0665 P110	osphorus, total [as P]	1 - Effluent Gross 0		Permit Req					Req Mon DAILY AV		Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPO
				Value NOD					0.000		0.000	40 //	00/DT There Ber Berneit Terre OB COMBO
00000 DI-	and and discounting	4		Sample				=	0.029	=	0.029	19 - mg/L	03/PT - Three Per Permit Term CP - COMPO
J0666 P110	osphorus, dissolved	1 - Effluent Gross 0	0	Permit Req					Req Mon DAILY AV		Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPO
				Value NOD									
04000 01				Sample					D. M. DAHAYAY		D. M. DAWANA	00 #	ON THE RESERVE OF COMPO
J1032 Chi	romium, hexavalent [as Cr]	1 - Effluent Gross 0		Permit Req					Req Mon DAILY AV		Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPO
				Value NOD					B - Below Detection Limit/No D		B - Below Detection Limit/No I		COURT TI D. D. V.T. OR COMPO
		4 577		Sample				=	0.95	=	0.95	28 - ug/L	03/PT - Three Per Permit Term CP - COMPO
J1040 Co	pper, dissolved [as Cu]	1 - Effluent Gross 0		Permit Req					Req Mon DAILY AV		Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPO
				Value NOD									
		. 500		Sample					B. M. BAHLYAY		D. M. BAHLYING	00 "	00/PT TI D D 11 T 00 T 11 T 1
)1049 Lea	ad, dissolved [as Pb]	1 - Effluent Gross 0		Permit Req					Req Mon DAILY AV		Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPO
				Value NOD					B - Below Detection Limit/No D	etection	B - Below Detection Limit/No I	Detection	
				Sample									
34230 Ber	nzo[b]fluoranthene	1 - Effluent Gross 0		Permit Req					Req Mon DAILY AV		Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPO

		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Limit/No	Detection	
		Sample					
34242 Benzo[k]fluoranthene	1 - Effluent Gross 0	Permit Req.		Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term   CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Limit/No	Detection	
		Sample					
34247 Benzo[a]pyrene	1 - Effluent Gross 0	Permit Req.		Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Limit/No	Detection	
		Sample					
34320 Chrysene	1 - Effluent Gross 0	Permit Req.		Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Limit/No	Detection	
		Sample					
34403 Indeno[1,2,3-cd]pyrene	1 - Effluent Gross 0	Permit Req.		Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Limit/No	Detection	
		Sample					
34526 Benzo[a]anthracene	1 - Effluent Gross 0	Permit Req.		Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Limit/No	Detection	
		Sample					
34556 Dibenz[a,h]anthracene	1 - Effluent Gross 0	Permit Reg.		Reg Mon DAILY AV	Reg Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Limit/No		
		Sample					
39032 Pentachlorophenol	1 - Effluent Gross 0	Permit Req.		Reg Mon DAILY AV	Reg Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Limit/No		
	1 - Effluent Gross 0	Sample	_		= 3.06	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
39100 Di[2-ethylhexyl] phthalate [DEHP]		Permit Reg.		Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
oc roo bije omymonyij pilanalato (beli ii j		Value NODI		1.04 11.01. 27.121 7.0	1.64	_5 dg/_	
		Sample					
39120 Benzidine	1 - Effluent Gross 0	Permit Reg.		Reg Mon DAILY AV	Reg Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
oo 120 Bonziano		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Limit/No		
		Sample		B Below Betection Elimity to Betection	B Below Betection Elimitate	Detection	
39380 Dieldrin	1 - Effluent Gross 0	Permit Req.		Req Mon DAILY AV	Reg Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
59500 Dielarin	1 - Ellidelit Gloss 0	Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Limit/No	-	03/11 - Three Ferr enfilt ferm Cr - COWN 03
		Sample	=		= 0.0000002	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
39516 Polychlorinated biphenyls [PCBs]	1 - Effluent Gross 0	Permit Req.	F	Req Mon DAILY AV	Reg Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
393 To Polychilothiated Diphenyis [PCBs]	1 - Ellidelit Gloss 0	Value NODI		Red MOII DAILT AV	Red MOII DAILT MX	19 - Hig/L	03/F1 - Tillee Fel Fellill Tellil CF - COMF03
		Sample	_	733	= 733	3Z - CFU/100mL	02/DT Three Day Dayreit Tayre CD CDAD
51040 E. coli	4. Effluent Cross 0		=		= 733 Reg Mon DAILY MX	3Z - CFU/100mL	03/PT - Three Per Permit Term GR - GRAB
51040 E. COII	1 - Effluent Gross 0	Permit Req.		Req Mon DA GEOAV	Red MOII DAILT MY	32 - CF0/100IIIL	03/PT - Three Per Permit Term GR - GRAB
		Value NODI		005	005	40	20/PT There Ber Berneit Terre OR COMPON
700050 111 4 4 1 11 1 1	4 577 40	Sample	=		= 225	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
70295 Solids, total dissolved	1 - Effluent Gross 0	Permit Req.		Req Mon DAILY AV	Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		2.24	2.24	47 0:4	00/DT TI D D "IT OD 00MD00
		Sample	=	= 14 1	= 2.91	17 - pCi/L	03/PT - Three Per Permit Term CP - COMPOS
80029 Alpha gross radioactivity	1 - Effluent Gross 0	r ormit rtoq.		Req Mon DAILY AV	Req Mon DAILY MX	17 - pCi/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI					
		Sample					
81302 Dibenzofuran	1 - Effluent Gross 0	Permit Req.		Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Limit/No	Detection	
		Sample					
81607 Tetrahydrofuran	1 - Effluent Gross 0	Permit Req.		Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		B - Below Detection Limit/No Detection	B - Below Detection Limit/No	Detection	

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

#### **Edit Check Errors**

No errors.

#### Comments

Wet Season Sample Date: 09/27/2017. This data applies to the CMC. EPA has approved this process for CMC members that delegate authority to AMAFCA. DMR data applies to following permits: NMR04A001; NMR04A002; NMR04A003; NMR04A004; NMR04A006; NMR04A007; NMR04A008; NMR04A013; NMR04A013; NMR04A016.

#### Attachments

No attachments.

Report Last Saved By

ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY (AMAFCA)

User: SGANLEYBHI
Name: Sarah Ganley
E-Mail: sganley@bhinc.com

Date/Time: 2018-03-29 10:02 (Time Zone: -05:00)

Report Last Signed By

Permit Permit #:

Major:

NMR04A016

ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY (AMAFCA) Permittee:

No **Permittee Address:**  2600 PROSPECT AVENUE NE ALBUQUERQUE, NM 87107

**Facility Location:** 

Facility:

ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL (AMAFCA)

28 - ug/L

28 - ug/L

28 - ug/L

03/PT - Three Per Permit Term CP - COMPOS

03/PT - Three Per Permit Term CP - COMPOS

03/PT - Three Per Permit Term CP - COMPOS

ALBUQUERQUE, NM 87107

2600 PROSPECT AVENUE NE

Permitted Feature:

002 External Outfall Discharge: 002-WA

RIO GRANDE (SOUTH) - WET SEASON

Report Dates & Status

Monitoring Period: From 07/01/17 to 10/31/17

**DMR Due Date:** 12/01/18 Status: **NetDMR Validated** 

**Considerations for Form Completion** 

SEASONAL MONITORING PERIODS ARE: WET SEASON = JULY 1-OCT. 31 & DRY SEASON = NOV. 1-JUNE 30. SEPARATE DMRS REQUIRED FOR EACH SEASON. DMRS TO BE SUBMITTED DUE DEC. 1ST, FOLLOWING END OF MONIT. PERIOD. PERMIT REQUIRES A MIN. OF 7 EVENTS PER LOC. PER PERMIT TERM (3 WET SEASON, 2 DRY SEASON & 2 PERMITTEE'S CHOICE).

**Principal Executive Officer** 

First Name: Jerry Title: **Executive Engineer** 

Sample

Permit Reg.

Value NODI Sample Permit Req. Telephone: 505-884-2215

0.47

Req Mon DAILY MX

Req Mon DAILY MX

**Last Name** 

01049 Lead, dissolved [as Pb]

34230 Benzo[b]fluoranthene

1 - Effluent Gross

1 - Effluent Gross

Last Haille.	Lovalo																
No Data Inc	dicator (NODI)																
Form NODI	: <del>-</del>																
	Parameter	Monitoring Location	on Season	# Param. NOD	)I		Quantity or Loa	ading				Quality or C	Concentration			# of Ex. Frequency of Analys	sis Sample Type
Code	Name					Qualifier 1	Value 1 Qualifier	er 2 Value 2 U	nits Qualifier	1 Value 1	Qualifier 2	Value 2	Qualifier 3	Value 3	Units		
					Sample				=	15.2	=	15.2	=	15.2	04 - deg C	03/PT - Three Per Permit	Term GR - GRAB
00010 Temperature, water deg. centigrade	1 - Effluent Gross	0		Permit Req	-				Req Mon DAILY MN	1	Req Mon DAILY AV		Req Mon DAILY MX	04 - deg C	03/PT - Three Per Permit	Term GR - GRAB	
					Value NOD	I											
					Sample						=	192.2	=	192.2	11 - umho/cm	03/PT - Three Per Permit	Term GR - GRAB
00094 Conducti	ivity	1 - Effluent Gross	0		Permit Req							Req Mon DAILY AV		Req Mon DAILY MX	11 - umho/cm	03/PT - Three Per Permit	Term GR - GRAB
					Value NOD	I											
					Sample				=	7.23	-	7.23			19 - mg/L	03/PT - Three Per Permit	Term GR - GRAB
00300 Oxygen,	dissolved [DO]	1 - Effluent Gross	0		Permit Req					Req Mon DAILY MN	ı	Req Mon DAILY AV			19 - mg/L	03/PT - Three Per Permit	Term GR - GRAB
					Value NOD	I											
					Sample						=	5	=	5	19 - mg/L	03/PT - Three Per Permit	Term CP - COMPOS
00310 BOD, 5-0	day, 20 deg. C	1 - Effluent Gross	0		Permit Req							Req Mon DAILY AV		Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit	Term CP - COMPOS
					Value NOD	1											
					Sample						=	36.2	=	36.2	19 - mg/L	03/PT - Three Per Permit	Term CP - COMPOS

			Va	lue NODI						
	1 - Effluent Gross			Sample	=	7.23 =	7.23		19 - mg/L	03/PT - Three Per Permit Term GR - GRAB
00300 Oxygen, dissolved [DO]		0	Pe	rmit Req.		Req Mon DAILY MN	Req Mon DAILY AV		19 - mg/L	03/PT - Three Per Permit Term GR - GRAB
			Va	lue NODI						
00310 BOD, 5-day, 20 deg. C			5	Sample		=	5 =	5	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
	1 - Effluent Gross	0	Pe	rmit Req.			Req Mon DAILY AV	Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
			Va	lue NODI						
				Sample		=	36.2 =	36.2	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
00340 Oxygen demand, chem. [high level] [COD]	1 - Effluent Gross	0	Pe	rmit Req.			Req Mon DAILY AV	Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
			Va	lue NODI						
				Sample	=	7.92	=	7.92	12 - SU	03/PT - Three Per Permit Term GR - GRAB
00400 pH	1 - Effluent Gross	0	Pe	rmit Req.		Req Mon MINIMUM		Req Mon MAXIMUM	12 - SU	03/PT - Three Per Permit Term GR - GRAB
			Va	lue NODI						
	1 - Effluent Gross			Sample		=	810 =	810	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
00530 Solids, total suspended		0	Pe	rmit Req.			Req Mon DAILY AV	Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
			Va	lue NODI						
00556 Oil & Grease	1 - Effluent Gross			Sample						
		0	Pe	rmit Req.			Req Mon DAILY AV	Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
			Va	lue NODI			B - Below Detection Limit/No Detection	B - Below Detection Limit/No	Detection	
	1 - Effluent Gross			Sample		=	1.7 =	1.7	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
00625 Nitrogen, Kjeldahl, total [as N]		0	Pe	rmit Req.			Req Mon DAILY AV	Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
			Va	lue NODI						
	1 - Effluent Gross		\$	Sample		=	0.46 =	0.46	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
00630 Nitrite + Nitrate total [as N]		0	Pe	rmit Req.			Req Mon DAILY AV	Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
			Va	lue NODI						
	1 - Effluent Gross			Sample		=	0.74 =	0.74	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
00665 Phosphorus, total [as P]		ss 0	Pe	rmit Req.			Req Mon DAILY AV	Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
			Va	lue NODI						
			5	Sample		=	0.08 =	0.08	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
00666 Phosphorus, dissolved	1 - Effluent Gross	ross 0	Pe	rmit Req.			Req Mon DAILY AV	Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
			Va	lue NODI						
		Gross 0		Sample						
01032 Chromium, hexavalent [as Cr]	1 - Effluent Gross		Pe	rmit Req.			Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
			Va	lue NODI			B - Below Detection Limit/No Detection	B - Below Detection Limit/No	Detection	
				Sample		=	0.98 =	0.98	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
01040 Copper, dissolved [as Cu]	1 - Effluent Gross	0	Pe	rmit Req.			Req Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
			Va	lue NODI						

0.47

Req Mon DAILY AV

Req Mon DAILY AV

		Value NODI	B .	- Below Detection Limit/No Detection	B - Below Detection Limit/I	No Detection	
		Sample					
34242 Benzo[k]fluoranthene	1 - Effluent Gross 0	Permit Req.	Re	eq Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI	B	- Below Detection Limit/No Detection	B - Below Detection Limit/I	No Detection	
34247 Benzo[a]pyrene		Sample					
	1 - Effluent Gross 0	Permit Req.	Re	eq Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI	B ·	- Below Detection Limit/No Detection	B - Below Detection Limit/I	No Detection	
		Sample					
34320 Chrysene	1 - Effluent Gross 0	Permit Req.	Re	eq Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI	B -	- Below Detection Limit/No Detection	B - Below Detection Limit/I	No Detection	
		Sample					
34403 Indeno[1,2,3-cd]pyrene	1 - Effluent Gross 0	Permit Req.	Re	eq Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI	В	- Below Detection Limit/No Detection	B - Below Detection Limit/l	No Detection	
		Sample					
34526 Benzo[a]anthracene	1 - Effluent Gross 0	Permit Req.	Re	eq Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI	В	- Below Detection Limit/No Detection	B - Below Detection Limit/l		
		Sample					
34556 Dibenz[a,h]anthracene	1 - Effluent Gross 0	Permit Reg.	Re	eq Mon DAILY AV	Reg Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI	В	- Below Detection Limit/No Detection	B - Below Detection Limit/l		
		Sample					
39032 Pentachlorophenol	1 - Effluent Gross 0	Permit Reg.	Re	eq Mon DAILY AV	Reg Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI		- Below Detection Limit/No Detection	B - Below Detection Limit/l		
	1 - Effluent Gross 0	Sample					
39100 Di[2-ethylhexyl] phthalate [DEHP]		Permit Reg.	Re	eq Mon DAILY AV	Reg Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
oc roo bije omymonyij pilanalato (beli ii j		Value NODI		- Below Detection Limit/No Detection	B - Below Detection Limit/I		
		Sample		Deleti Detection Elimitate Detection	Delett Detection Emilia	IO DOTOCIONI	
39120 Benzidine	1 - Effluent Gross 0	Permit Reg.	Re	eq Mon DAILY AV	Reg Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
oo 120 Bonziano		Value NODI		- Below Detection Limit/No Detection	B - Below Detection Limit/I		
		Sample		Below Betection Elimity to Betection	B Below Betection Entitle	40 Detection	
39380 Dieldrin	1 - Effluent Gross 0	Permit Reg.	P.	eq Mon DAILY AV	Reg Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
59500 Dielarin	1 - Ellidelit Gloss 0	Value NODI		- Below Detection Limit/No Detection	B - Below Detection Limit/I		03/11 - Three Ferr enfilt ferm Cr - COWN 03
		Sample		000001	= 0.000001	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
39516 Polychlorinated biphenyls [PCBs]	1 - Effluent Gross 0 -	Permit Reg.		eq Mon DAILY AV	Reg Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
393 To Polychilothiated Diphenyis [PCBs]	1 - Ellidelit Gloss 0	Value NODI	I/CE	EN MON DAILT AV	Red MOIT DAILT MX	19 - IIIg/∟	03/F1 - Tillee Fel Fellill Tellil CF - COMF03
		Sample	= 61	24	= 6131	3Z - CFU/100mL	02/DT Three Der Dermit Term CD CDAD
51040 E. coli	4. Effluent Cross 0				= 6131 Reg Mon DAILY MX	3Z - CFU/100mL	03/PT - Three Per Permit Term GR - GRAB
51040 E. COII	1 - Effluent Gross 0	Permit Req.	, re	eq Mon DA GEOAV	Red MOII DAILT MX	32 - CF0/100IIIL	03/PT - Three Per Permit Term GR - GRAB
		Value NODI		0	000	10 //	20/PT There Ber Berneit Terre OR COMPON
70005 0 11 1 1 1 1 1	4 577 40	Sample	= 26		= 260	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
70295 Solids, total dissolved	1 - Effluent Gross 0	Permit Req.	Ke	eq Mon DAILY AV	Req Mon DAILY MX	19 - mg/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI			00.0	47 0:0	00/DT TI D D "IT OD 00MD00
		Sample	= 20		= 20.9	17 - pCi/L	03/PT - Three Per Permit Term CP - COMPOS
80029 Alpha gross radioactivity	1 - Effluent Gross 0	r ornine reoq.	Re	eq Mon DAILY AV	Req Mon DAILY MX	17 - pCi/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI					
		Sample				- "	
81302 Dibenzofuran	1 - Effluent Gross 0	Permit Req.		eq Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI	В	- Below Detection Limit/No Detection	B - Below Detection Limit/l	No Detection	
		Sample					
81607 Tetrahydrofuran	1 - Effluent Gross 0	Permit Req.		eq Mon DAILY AV	Req Mon DAILY MX	28 - ug/L	03/PT - Three Per Permit Term CP - COMPOS
		Value NODI	B -	- Below Detection Limit/No Detection	B - Below Detection Limit/I	No Detection	

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

#### **Edit Check Errors**

No errors.

#### Comments

Wet Season Sample Date: 09/28/2017. This data applies to the CMC. EPA has approved this process for CMC members that delegate authority to AMAFCA. DMR data applies to following permits: NMR04A001; NMR04A002; NMR04A003; NMR04A004; NMR04A006; NMR04A007; NMR04A008; NMR04A010; NMR04A013; NMR04A013; NMR04A016.

#### Attachments

No attachments.

Report Last Saved By

ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY (AMAFCA)

User: SGANLEYBHI
Name: Sarah Ganley
E-Mail: sganley@bhinc.com

Date/Time: 2018-03-29 12:05 (Time Zone: -05:00)

Report Last Signed By