



DEPARTMENT OF TRANSPORTATION  
Fresno Area Express ♦ Fleet ♦ Handy Ride

**ADDENDUM NO. 4  
FACILITY UPGRADE PROJECT  
Bid File 3839**

**NOTICE TO ALL BIDDERS**

This Addendum is attached to and made a part of the above entitled specifications for the City of Fresno with a scheduled bid opening of **3:00 P.M. February 1, 2022**

All changes and or clarifications will appear in **bold underlined type**.

**Bid Item No. 24 Storm Water Filtration System Construction Revision**

The attached documents have been made part of the specification:

END OF ADDENDUM NO. 4

➤

City of Fresno

A handwritten signature in black ink that reads "Brian Cetti".

BRIAN CETTI

Capital Development Specialist

The bidder shall sign below indicating he/she has thoroughly read and understands the contents of this Addendum.

Signed: \_\_\_\_\_

Company: \_\_\_\_\_

This addendum is being distributed ONLINE only and will not be sent by U.S. Mail. The bidder shall submit a signed copy of this addendum with their bid.

Addenda to date: 4

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**Bid Item No. 24 - Stormwater Filtration System Construction**

This item shall include the procurement and installation of a structural stormwater best management practice (BMP) device on- or off-line of the existing 30" diameter RCP storm drain main in an approved location in the north end of the parking lot, downstream of all on-site storm drain inlets, with appropriate connecting pipes and structures for a complete installation. The contractor shall submit information on the selected system and the installation layout to the Engineer for approval. The structural BMP shall be able to handle a treatment flow of 4.73 cfs and a peak flow of 14.24 cfs from the approximately 29-acre stormwater management area. Recent analysis of sampled runoff from the site on 10/26/2021 indicates that the median particle size ( $D_{50}$ ) is 0.0469 mm or 46.877microns (mm). The structural BMP shall remove at least 80% of particulate matter  $D_{50}$  or greater in size and shall be able to reduce the Total Oils & Greases and Total Suspended Solids (TSS) to within the regulatory reporting limits (RL). Additionally, it is also desirable for the structural BMP to reduce the following key pollutants to within the regulatory reporting limit (RL): Aluminum, Lead, Nickel and Zinc. See table below for a summary of test results; the complete test results of the samples by BSK Associates (Report AEJ2678 dated 11/12/2021) is available for reference. Additional limited stormwater sampling data is also publicly available at the Waterboards' SMARTS website (<https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.xhtml>).

| <u>Analyte</u>            | <u>Result</u> | <u>RL</u>  | <u>Units</u> |
|---------------------------|---------------|------------|--------------|
| <u>Oils &amp; Greases</u> | <u>2.7</u>    | <u>5.0</u> | <u>mg/L</u>  |
| <u>TSS</u>                | <u>30</u>     | <u>5.0</u> | <u>mg/L</u>  |
| <u>Aluminum</u>           | <u>800</u>    | <u>50</u>  | <u>mg/L</u>  |
| <u>Lead</u>               | <u>4.0</u>    | <u>1.0</u> | <u>mg/L</u>  |
| <u>Nickel</u>             | <u>7.7</u>    | <u>1.0</u> | <u>mg/L</u>  |
| <u>Zinc</u>               | <u>370</u>    | <u>1.5</u> | <u>mg/L</u>  |

Full compensation for furnishing all labor, material, tools, and equipment for a complete installation shall be included in the lump sum unit price for this bid item.



BSK Associates Laboratory Fresno  
1414 Stanislaus St  
Fresno, CA 93706  
559-497-2888 (Main)

**AEJ2678**

**11/12/2021**

Invoice: AE25709

Larry Thompson  
Fresno Area Express  
2223 G Street  
Fresno, CA 93706

**RE: Report for AEJ2678 Storm Water**

Dear Larry Thompson,

Thank you for using BSK Associates for your analytical testing needs. In the following pages, you will find the test results for the samples submitted to our laboratory on 10/26/2021. The results have been approved for release by our Laboratory Director as indicated by the authorizing signature below.

The samples were analyzed for the test(s) indicated on the Chain of Custody (see attached) and the results relate only to the samples analyzed. BSK certifies that the testing was performed in accordance with the quality system requirements specified in the 2016 TNI Standard. Any deviations from this standard or from the method requirements for each test procedure performed will be annotated alongside the analytical result or noted in the Case Narrative. Unless otherwise noted, the sample results are reported on an "as received" basis.

This certificate of analysis shall not be reproduced except in full, without written approval of the laboratory.

If additional clarification of any information is required, please contact your Project Manager, Michelle Croft, at 559-497-2888.

Thank you again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,

A handwritten signature in black ink, appearing to read "S Maupas", written over a horizontal line.

Stephane Maupas, Project Manager



Accredited in Accordance with NELAP  
ORELAP #4021

**Case Narrative****Project and Report Details**

**Client:** Fresno Area Express  
**Report To:** Larry Thompson  
**Project #:** Stormwater Monitoring  
**Received:** 10/26/2021 - 09:04  
**Report Due:** 11/12/2021

**Invoice Details**

**Invoice To:** Fresno Area Express  
**Invoice Attn:** Larry Thompson  
**Project PO#:** -

**Sample Receipt Conditions**

**Cooler:** Default Cooler  
**Temperature on Receipt °C:** 0.9

Containers Intact  
COC/Labels Agree  
Received On Wet Ice  
Sample(s) arrived at lab on same day sampled.  
Packing Material - Bubble Wrap  
Sample(s) were received in temperature range.  
Initial receipt at BSK-FAL

**Cooler:** New Cooler  
**Temperature on Receipt °C:** 2.0

Containers Intact  
COC/Labels Agree  
Received On Wet Ice  
Sample(s) arrived at lab on same day sampled.  
Packing Material - Bubble Wrap  
Sample(s) were received in temperature range.  
Initial receipt at BSK-FAL

**Data Qualifiers**

**The following qualifiers have been applied to one or more analytical results:**

DP1.0 Sample Duplicate RPD exceeded the method acceptance limit. Concentration estimated.  
DP1.1 Sample Duplicate RPD exceeded method acceptance criteria.  
J Estimated value  
MS1.0 Matrix spike recoveries exceed control limits.

**Report Distribution**

| Recipient(s)   | Report Format | CC: |
|----------------|---------------|-----|
| Larry Thompson | FINAL.RPT     |     |

### Certificate of Analysis

**Sample ID:** AEJ2678-01  
**Sampled By:** David Real  
**Sample Description:** FAX Site

**Sample Date - Time:** 10/25/2021 - 19:45  
**Matrix:** Stormwater  
**Sample Type:** Grab

### BSK Associates Laboratory Fresno

#### General Chemistry

| Analyte                   | Method       | Result | MDL    | RL    | Units    | RL Mult | Batch   | Prepared       | Analyzed | Qual  |
|---------------------------|--------------|--------|--------|-------|----------|---------|---------|----------------|----------|-------|
| Ammonia as N              | EPA 350.1    | 1.2    | 0.065  | 0.10  | mg/L     | 1       | AEK0186 | 11/03/21       | 11/03/21 |       |
| Biochemical Oxygen Demand | SM 5210B     | 31     |        | 6.0   | mg/L     | 6       | AEJ1516 | 10/26/21 19:24 | 10/31/21 |       |
| Chemical Oxygen Demand    | SM 5220D     | 130    | 13     | 30    | mg/L     | 2       | AEJ1825 | 10/29/21       | 10/29/21 |       |
| Nitrate + Nitrite as N    | EPA 300.0    | 1.3    |        | 0.23  | mg/L     |         |         |                |          |       |
| Nitrate as N              | EPA 300.0    | 1.2    | 0.099  | 0.23  | mg/L     | 1       | AEJ1567 | 10/27/21 06:12 | 10/27/21 |       |
| Nitrite as N              | EPA 300.0    | 0.13   | 0.020  | 0.050 | mg/L     | 1       | AEJ1567 | 10/27/21 06:12 | 10/27/21 |       |
| Orthophosphate as P       | SM 4500-P E  | 0.062  | 0.0049 | 0.010 | mg/L     | 1       | AEJ1598 | 10/27/21 11:19 | 10/27/21 |       |
| pH (1)                    | SM 4500-H+ B | 6.6    |        | 0.0   | pH Units | 1       | AEJ1863 | 10/30/21 09:00 | 10/30/21 |       |
| pH Temperature in °C      |              | 21.9   |        |       |          |         |         |                |          |       |
| Total Suspended Solids    | SM 2540D     | 30     |        | 5.0   | mg/L     | 1       | AEK0047 | 11/01/21       | 11/01/21 | DP1.0 |

#### Metals

| Analyte  | Method        | Result | MDL   | RL    | Units | RL Mult | Batch   | Prepared | Analyzed | Qual |
|----------|---------------|--------|-------|-------|-------|---------|---------|----------|----------|------|
| Aluminum | EPA 200.8 DRC | 800    | 23    | 50    | ug/L  | 10      | AEJ1716 | 10/28/21 | 11/02/21 |      |
| Cadmium  | EPA 200.8 DRC | 0.70   | 0.12  | 0.25  | ug/L  | 1       | AEJ1716 | 10/28/21 | 11/02/21 |      |
| Iron     | EPA 200.7     | 1.1    | 0.014 | 0.030 | mg/L  | 1       | AEJ1705 | 10/28/21 | 10/29/21 |      |
| Lead     | EPA 200.8 DRC | 4.0    | 0.046 | 0.10  | ug/L  | 1       | AEJ1716 | 10/28/21 | 11/02/21 |      |
| Mercury  | EPA 245.7     | ND     | 0.091 | 0.20  | ug/L  | 1       | AEJ1583 | 10/27/21 | 10/28/21 |      |
| Nickel   | EPA 200.8 DRC | 7.7    | 0.46  | 1.0   | ug/L  | 1       | AEJ1716 | 10/28/21 | 11/02/21 |      |
| Zinc     | EPA 200.8 DRC | 370    | 0.69  | 1.5   | ug/L  | 1       | AEJ1716 | 10/28/21 | 11/02/21 |      |

#### Organics

| Analyte                       | Method    | Result | MDL | RL  | Units | RL Mult | Batch   | Prepared | Analyzed | Qual |
|-------------------------------|-----------|--------|-----|-----|-------|---------|---------|----------|----------|------|
| <b>Oil and Grease (1664B)</b> |           |        |     |     |       |         |         |          |          |      |
| Total Oil & Grease            | EPA 1664B | 2.7    | 1.5 | 5.0 | mg/L  | 1       | AEK0159 | 11/02/21 | 11/03/21 | J    |

**BSK Associates Laboratory Fresno**  
**General Chemistry Quality Control Report**

| Analyte | Result | MDL | RL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Date Analyzed | Qual |
|---------|--------|-----|----|-------|-------------|---------------|------|-------------|-----|-----------|---------------|------|
|---------|--------|-----|----|-------|-------------|---------------|------|-------------|-----|-----------|---------------|------|

**EPA 300.0 - Quality Control**

**Batch: AEJ1567**
**Prepared: 10/27/2021**
**Prep Method: Method Specific Preparation**
**Analyst: IBZ**
**Blank (AEJ1567-BLK1)**

|              |    |       |       |      |  |  |  |  |  |  |          |  |
|--------------|----|-------|-------|------|--|--|--|--|--|--|----------|--|
| Nitrate as N | ND | 0.099 | 0.23  | mg/L |  |  |  |  |  |  | 10/27/21 |  |
| Nitrite as N | ND | 0.020 | 0.050 | mg/L |  |  |  |  |  |  | 10/27/21 |  |

**Blank Spike (AEJ1567-BS1)**

|              |      |       |       |      |     |  |    |        |  |  |          |  |
|--------------|------|-------|-------|------|-----|--|----|--------|--|--|----------|--|
| Nitrate as N | 21   | 0.099 | 0.23  | mg/L | 23  |  | 94 | 90-110 |  |  | 10/27/21 |  |
| Nitrite as N | 0.94 | 0.020 | 0.050 | mg/L | 1.0 |  | 94 | 90-110 |  |  | 10/27/21 |  |

**Matrix Spike (AEJ1567-MS1), Source: SEJ0406-01**

|              |      |       |       |      |      |     |    |        |  |  |          |  |
|--------------|------|-------|-------|------|------|-----|----|--------|--|--|----------|--|
| Nitrate as N | 14   | 0.099 | 0.23  | mg/L | 11   | 3.9 | 92 | 80-120 |  |  | 10/27/21 |  |
| Nitrite as N | 0.41 | 0.020 | 0.050 | mg/L | 0.50 | ND  | 82 | 75-125 |  |  | 10/27/21 |  |

**Matrix Spike Dup (AEJ1567-MSD1), Source: SEJ0406-01**

|              |      |       |       |      |      |     |    |        |   |    |          |  |
|--------------|------|-------|-------|------|------|-----|----|--------|---|----|----------|--|
| Nitrate as N | 14   | 0.099 | 0.23  | mg/L | 11   | 3.9 | 93 | 80-120 | 1 | 20 | 10/27/21 |  |
| Nitrite as N | 0.41 | 0.020 | 0.050 | mg/L | 0.50 | ND  | 82 | 75-125 | 1 | 20 | 10/27/21 |  |

**EPA 350.1 - Quality Control**

**Batch: AEK0186**
**Prepared: 11/3/2021**
**Prep Method: Method Specific Preparation**
**Analyst: CTD**
**Blank (AEK0186-BLK1)**

|              |    |       |      |      |  |  |  |  |  |  |          |  |
|--------------|----|-------|------|------|--|--|--|--|--|--|----------|--|
| Ammonia as N | ND | 0.065 | 0.10 | mg/L |  |  |  |  |  |  | 11/03/21 |  |
|--------------|----|-------|------|------|--|--|--|--|--|--|----------|--|

**Blank Spike (AEK0186-BS1)**

|              |     |       |      |      |     |  |    |        |  |  |          |  |
|--------------|-----|-------|------|------|-----|--|----|--------|--|--|----------|--|
| Ammonia as N | 3.9 | 0.065 | 0.10 | mg/L | 4.0 |  | 99 | 90-110 |  |  | 11/03/21 |  |
|--------------|-----|-------|------|------|-----|--|----|--------|--|--|----------|--|

**Blank Spike Dup (AEK0186-BSD1)**

|              |     |       |      |      |     |  |    |        |   |    |          |  |
|--------------|-----|-------|------|------|-----|--|----|--------|---|----|----------|--|
| Ammonia as N | 4.0 | 0.065 | 0.10 | mg/L | 4.0 |  | 99 | 90-110 | 0 | 20 | 11/03/21 |  |
|--------------|-----|-------|------|------|-----|--|----|--------|---|----|----------|--|

**Matrix Spike (AEK0186-MS1), Source: AEJ2694-01**

|              |     |       |      |      |     |    |    |        |  |  |          |  |
|--------------|-----|-------|------|------|-----|----|----|--------|--|--|----------|--|
| Ammonia as N | 3.9 | 0.065 | 0.10 | mg/L | 4.0 | ND | 97 | 90-110 |  |  | 11/03/21 |  |
|--------------|-----|-------|------|------|-----|----|----|--------|--|--|----------|--|

**Matrix Spike (AEK0186-MS2), Source: REJ0168-03**

|              |     |       |      |      |     |    |    |        |  |  |          |  |
|--------------|-----|-------|------|------|-----|----|----|--------|--|--|----------|--|
| Ammonia as N | 3.8 | 0.065 | 0.10 | mg/L | 4.0 | ND | 96 | 90-110 |  |  | 11/03/21 |  |
|--------------|-----|-------|------|------|-----|----|----|--------|--|--|----------|--|

**SM 2540D - Quality Control**

**Batch: AEK0047**
**Prepared: 11/1/2021**
**Prep Method: Method Specific Preparation**
**Analyst: SY**
**Blank (AEK0047-BLK1)**

|                        |    |  |     |      |  |  |  |  |  |  |          |  |
|------------------------|----|--|-----|------|--|--|--|--|--|--|----------|--|
| Total Suspended Solids | ND |  | 5.0 | mg/L |  |  |  |  |  |  | 11/01/21 |  |
|------------------------|----|--|-----|------|--|--|--|--|--|--|----------|--|

**Blank Spike (AEK0047-BS1)**

|                        |    |  |  |      |     |  |    |        |  |  |          |  |
|------------------------|----|--|--|------|-----|--|----|--------|--|--|----------|--|
| Total Suspended Solids | 88 |  |  | mg/L | 100 |  | 88 | 70-130 |  |  | 11/01/21 |  |
|------------------------|----|--|--|------|-----|--|----|--------|--|--|----------|--|

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

AEJ2678 FINAL 11122021 1507

**BSK Associates Laboratory Fresno**  
**General Chemistry Quality Control Report**

| Analyte | Result | MDL | RL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Date Analyzed | Qual |
|---------|--------|-----|----|-------|-------------|---------------|------|-------------|-----|-----------|---------------|------|
|---------|--------|-----|----|-------|-------------|---------------|------|-------------|-----|-----------|---------------|------|

**SM 2540D - Quality Control**

**Batch: AEK0047**

Prepared: 11/1/2021

**Prep Method: Method Specific Preparation**

Analyst: SY

**Duplicate (AEK0047-DUP1), Source: AEJ2793-02**

|                        |      |  |     |      |  |      |  |  |    |    |          |  |
|------------------------|------|--|-----|------|--|------|--|--|----|----|----------|--|
| Total Suspended Solids | 1400 |  | 5.0 | mg/L |  | 1500 |  |  | 10 | 10 | 11/01/21 |  |
|------------------------|------|--|-----|------|--|------|--|--|----|----|----------|--|

**Duplicate (AEK0047-DUP2), Source: AEJ2678-01**

|                        |    |  |     |      |  |    |  |  |    |    |          |       |
|------------------------|----|--|-----|------|--|----|--|--|----|----|----------|-------|
| Total Suspended Solids | 18 |  | 5.0 | mg/L |  | 30 |  |  | 48 | 10 | 11/01/21 | DP1.1 |
|------------------------|----|--|-----|------|--|----|--|--|----|----|----------|-------|

**SM 4500-H+ B - Quality Control**

**Batch: AEJ1863**

Prepared: 10/30/2021

**Prep Method: Method Specific Preparation**

Analyst: CMH

**Duplicate (AEJ1863-DUP1), Source: AEJ2683-02**

|        |      |  |     |          |  |      |  |  |   |  |          |  |
|--------|------|--|-----|----------|--|------|--|--|---|--|----------|--|
| pH (1) | 8.36 |  | 0.0 | pH Units |  | 8.34 |  |  | 0 |  | 10/30/21 |  |
|--------|------|--|-----|----------|--|------|--|--|---|--|----------|--|

**SM 4500-P E - Quality Control**

**Batch: AEJ1598**

Prepared: 10/27/2021

**Prep Method: Method Specific Preparation**

Analyst: DXR

**Blank (AEJ1598-BLK1)**

|                     |    |        |       |      |  |  |  |  |  |  |          |  |
|---------------------|----|--------|-------|------|--|--|--|--|--|--|----------|--|
| Orthophosphate as P | ND | 0.0049 | 0.010 | mg/L |  |  |  |  |  |  | 10/27/21 |  |
|---------------------|----|--------|-------|------|--|--|--|--|--|--|----------|--|

**Blank Spike (AEJ1598-BS1)**

|                     |      |        |       |      |      |  |     |        |  |  |          |  |
|---------------------|------|--------|-------|------|------|--|-----|--------|--|--|----------|--|
| Orthophosphate as P | 0.20 | 0.0049 | 0.010 | mg/L | 0.20 |  | 101 | 90-110 |  |  | 10/27/21 |  |
|---------------------|------|--------|-------|------|------|--|-----|--------|--|--|----------|--|

**Blank Spike Dup (AEJ1598-BSD1)**

|                     |      |        |       |      |      |  |     |        |   |    |          |  |
|---------------------|------|--------|-------|------|------|--|-----|--------|---|----|----------|--|
| Orthophosphate as P | 0.21 | 0.0049 | 0.010 | mg/L | 0.20 |  | 103 | 90-110 | 2 | 20 | 10/27/21 |  |
|---------------------|------|--------|-------|------|------|--|-----|--------|---|----|----------|--|

**Matrix Spike (AEJ1598-MS1), Source: AEJ2784-01**

|                     |      |        |       |      |      |      |     |        |  |  |          |  |
|---------------------|------|--------|-------|------|------|------|-----|--------|--|--|----------|--|
| Orthophosphate as P | 0.23 | 0.0049 | 0.010 | mg/L | 0.10 | 0.12 | 110 | 80-120 |  |  | 10/27/21 |  |
|---------------------|------|--------|-------|------|------|------|-----|--------|--|--|----------|--|

**Matrix Spike Dup (AEJ1598-MSD1), Source: AEJ2784-01**

|                     |      |        |       |      |      |      |     |        |   |    |          |  |
|---------------------|------|--------|-------|------|------|------|-----|--------|---|----|----------|--|
| Orthophosphate as P | 0.24 | 0.0049 | 0.010 | mg/L | 0.10 | 0.12 | 113 | 80-120 | 1 | 20 | 10/27/21 |  |
|---------------------|------|--------|-------|------|------|------|-----|--------|---|----|----------|--|

**SM 5210B - Quality Control**

**Batch: AEJ1516**

Prepared: 10/26/2021

**Prep Method: Method Specific Preparation**

Analyst: BCB

**Blank (AEJ1516-BLK1)**

|                           |    |  |     |      |  |  |  |  |  |  |          |  |
|---------------------------|----|--|-----|------|--|--|--|--|--|--|----------|--|
| Biochemical Oxygen Demand | ND |  | 1.0 | mg/L |  |  |  |  |  |  | 10/31/21 |  |
|---------------------------|----|--|-----|------|--|--|--|--|--|--|----------|--|

**Blank Spike (AEJ1516-BS1)**

|                           |     |  |     |      |     |    |     |        |  |  |          |  |
|---------------------------|-----|--|-----|------|-----|----|-----|--------|--|--|----------|--|
| Biochemical Oxygen Demand | 210 |  | 1.0 | mg/L | 200 | ND | 105 | 85-115 |  |  | 10/31/21 |  |
|---------------------------|-----|--|-----|------|-----|----|-----|--------|--|--|----------|--|

**Duplicate (AEJ1516-DUP1), Source: AEJ2803-04**

|                           |       |  |      |      |  |       |  |  |   |    |          |  |
|---------------------------|-------|--|------|------|--|-------|--|--|---|----|----------|--|
| Biochemical Oxygen Demand | 13000 |  | 2000 | mg/L |  | 13000 |  |  | 1 | 10 | 10/31/21 |  |
|---------------------------|-------|--|------|------|--|-------|--|--|---|----|----------|--|

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

AEJ2678 FINAL 11122021 1507

**BSK Associates Laboratory Fresno**  
**General Chemistry Quality Control Report**

| Analyte | Result | MDL | RL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Date Analyzed | Qual |
|---------|--------|-----|----|-------|-------------|---------------|------|-------------|-----|-----------|---------------|------|
|---------|--------|-----|----|-------|-------------|---------------|------|-------------|-----|-----------|---------------|------|

**SM 5220D - Quality Control**

**Batch: AEJ1825**
**Prepared: 10/29/2021**
**Prep Method: Method Specific Preparation**
**Analyst: SEK**
**Blank (AEJ1825-BLK1)**

|                        |    |     |    |      |  |  |  |  |  |  |          |  |
|------------------------|----|-----|----|------|--|--|--|--|--|--|----------|--|
| Chemical Oxygen Demand | ND | 6.4 | 15 | mg/L |  |  |  |  |  |  | 10/29/21 |  |
|------------------------|----|-----|----|------|--|--|--|--|--|--|----------|--|

**Blank Spike (AEJ1825-BS1)**

|                        |    |    |    |      |     |  |    |        |  |  |          |  |
|------------------------|----|----|----|------|-----|--|----|--------|--|--|----------|--|
| Chemical Oxygen Demand | 85 | 13 | 30 | mg/L | 100 |  | 85 | 80-120 |  |  | 10/29/21 |  |
|------------------------|----|----|----|------|-----|--|----|--------|--|--|----------|--|

**Blank Spike Dup (AEJ1825-BSD1)**

|                        |    |    |    |      |     |  |    |        |   |    |          |  |
|------------------------|----|----|----|------|-----|--|----|--------|---|----|----------|--|
| Chemical Oxygen Demand | 86 | 13 | 30 | mg/L | 100 |  | 86 | 80-120 | 2 | 20 | 10/29/21 |  |
|------------------------|----|----|----|------|-----|--|----|--------|---|----|----------|--|

**Matrix Spike (AEJ1825-MS1), Source: AEJ2661-01**

|                        |     |    |    |      |     |    |     |        |  |  |          |  |
|------------------------|-----|----|----|------|-----|----|-----|--------|--|--|----------|--|
| Chemical Oxygen Demand | 100 | 13 | 30 | mg/L | 100 | ND | 100 | 80-120 |  |  | 10/29/21 |  |
|------------------------|-----|----|----|------|-----|----|-----|--------|--|--|----------|--|

**Matrix Spike Dup (AEJ1825-MSD1), Source: AEJ2661-01**

|                        |    |    |    |      |     |    |    |        |    |    |          |  |
|------------------------|----|----|----|------|-----|----|----|--------|----|----|----------|--|
| Chemical Oxygen Demand | 90 | 13 | 30 | mg/L | 100 | ND | 90 | 80-120 | 11 | 20 | 10/29/21 |  |
|------------------------|----|----|----|------|-----|----|----|--------|----|----|----------|--|



**BSK Associates Laboratory Fresno**
**Metals Quality Control Report**

| Analyte | Result | MDL | RL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Date Analyzed | Qual |
|---------|--------|-----|----|-------|-------------|---------------|------|-------------|-----|-----------|---------------|------|
|---------|--------|-----|----|-------|-------------|---------------|------|-------------|-----|-----------|---------------|------|

**EPA 200.7 - Quality Control**
**Batch: AEJ1705**
**Prepared: 10/28/2021**
**Prep Method: EPA 200.2**
**Analyst: MDS**
**Blank (AEJ1705-BLK2)**

|      |    |       |       |      |  |  |  |  |  |  |          |  |
|------|----|-------|-------|------|--|--|--|--|--|--|----------|--|
| Iron | ND | 0.014 | 0.030 | mg/L |  |  |  |  |  |  | 10/29/21 |  |
|------|----|-------|-------|------|--|--|--|--|--|--|----------|--|

**Blank Spike (AEJ1705-BS2)**

|      |      |       |       |      |      |  |     |        |  |  |          |  |
|------|------|-------|-------|------|------|--|-----|--------|--|--|----------|--|
| Iron | 0.20 | 0.014 | 0.030 | mg/L | 0.20 |  | 100 | 85-115 |  |  | 10/29/21 |  |
|------|------|-------|-------|------|------|--|-----|--------|--|--|----------|--|

**Blank Spike Dup (AEJ1705-BSD2)**

|      |      |       |       |      |      |  |     |        |   |    |          |  |
|------|------|-------|-------|------|------|--|-----|--------|---|----|----------|--|
| Iron | 0.20 | 0.014 | 0.030 | mg/L | 0.20 |  | 101 | 85-115 | 1 | 20 | 10/29/21 |  |
|------|------|-------|-------|------|------|--|-----|--------|---|----|----------|--|

**Matrix Spike (AEJ1705-MS3), Source: AEJ2661-01**

|      |      |       |       |      |      |      |    |        |  |  |          |                  |
|------|------|-------|-------|------|------|------|----|--------|--|--|----------|------------------|
| Iron | 0.87 | 0.014 | 0.030 | mg/L | 0.20 | 0.99 | NR | 70-130 |  |  | 10/29/21 | MS1.0 <b>Low</b> |
|------|------|-------|-------|------|------|------|----|--------|--|--|----------|------------------|

**Matrix Spike (AEJ1705-MS4), Source: AEJ2661-03**

|      |     |       |       |      |      |     |    |        |  |  |          |                  |
|------|-----|-------|-------|------|------|-----|----|--------|--|--|----------|------------------|
| Iron | 1.1 | 0.014 | 0.030 | mg/L | 0.20 | 1.1 | 32 | 70-130 |  |  | 10/29/21 | MS1.0 <b>Low</b> |
|------|-----|-------|-------|------|------|-----|----|--------|--|--|----------|------------------|

**Matrix Spike Dup (AEJ1705-MSD3), Source: AEJ2661-01**

|      |      |       |       |      |      |      |    |        |   |    |          |                  |
|------|------|-------|-------|------|------|------|----|--------|---|----|----------|------------------|
| Iron | 0.82 | 0.014 | 0.030 | mg/L | 0.20 | 0.99 | NR | 70-130 | 7 | 20 | 10/29/21 | MS1.0 <b>Low</b> |
|------|------|-------|-------|------|------|------|----|--------|---|----|----------|------------------|

**Matrix Spike Dup (AEJ1705-MSD4), Source: AEJ2661-03**

|      |     |       |       |      |      |     |    |        |    |    |          |                  |
|------|-----|-------|-------|------|------|-----|----|--------|----|----|----------|------------------|
| Iron | 1.0 | 0.014 | 0.030 | mg/L | 0.20 | 1.1 | NR | 70-130 | 12 | 20 | 10/29/21 | MS1.0 <b>Low</b> |
|------|-----|-------|-------|------|------|-----|----|--------|----|----|----------|------------------|

**EPA 200.8 DRC - Quality Control**
**Batch: AEJ1716**
**Prepared: 10/28/2021**
**Prep Method: EPA 200.2 DRC**
**Analyst: PSK**
**Blank (AEJ1716-BLK1)**

|          |    |       |      |      |  |  |  |  |  |  |          |  |
|----------|----|-------|------|------|--|--|--|--|--|--|----------|--|
| Aluminum | ND | 2.3   | 5.0  | ug/L |  |  |  |  |  |  | 11/02/21 |  |
| Cadmium  | ND | 0.12  | 0.25 | ug/L |  |  |  |  |  |  | 11/02/21 |  |
| Lead     | ND | 0.046 | 0.10 | ug/L |  |  |  |  |  |  | 11/02/21 |  |
| Nickel   | ND | 0.46  | 1.0  | ug/L |  |  |  |  |  |  | 11/02/21 |  |
| Zinc     | ND | 0.69  | 1.5  | ug/L |  |  |  |  |  |  | 11/02/21 |  |

**Blank Spike (AEJ1716-BS1)**

|          |    |       |      |      |    |  |     |        |  |  |          |  |
|----------|----|-------|------|------|----|--|-----|--------|--|--|----------|--|
| Aluminum | 56 | 2.3   | 5.0  | ug/L | 50 |  | 112 | 85-115 |  |  | 11/02/21 |  |
| Cadmium  | 46 | 0.12  | 0.25 | ug/L | 50 |  | 91  | 85-115 |  |  | 11/02/21 |  |
| Lead     | 47 | 0.046 | 0.10 | ug/L | 50 |  | 94  | 85-115 |  |  | 11/02/21 |  |
| Nickel   | 49 | 0.46  | 1.0  | ug/L | 50 |  | 99  | 85-115 |  |  | 11/02/21 |  |
| Zinc     | 46 | 0.69  | 1.5  | ug/L | 50 |  | 92  | 85-115 |  |  | 11/02/21 |  |

**Blank Spike Dup (AEJ1716-BSD1)**

|          |    |       |      |      |    |  |     |        |   |    |          |  |
|----------|----|-------|------|------|----|--|-----|--------|---|----|----------|--|
| Aluminum | 53 | 2.3   | 5.0  | ug/L | 50 |  | 107 | 85-115 | 5 | 20 | 11/02/21 |  |
| Cadmium  | 48 | 0.12  | 0.25 | ug/L | 50 |  | 97  | 85-115 | 6 | 20 | 11/02/21 |  |
| Lead     | 49 | 0.046 | 0.10 | ug/L | 50 |  | 99  | 85-115 | 5 | 20 | 11/02/21 |  |
| Nickel   | 51 | 0.46  | 1.0  | ug/L | 50 |  | 101 | 85-115 | 3 | 20 | 11/02/21 |  |
| Zinc     | 47 | 0.69  | 1.5  | ug/L | 50 |  | 94  | 85-115 | 2 | 20 | 11/02/21 |  |

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

AEJ2678 FINAL 11122021 1507

**BSK Associates Laboratory Fresno**
**Metals Quality Control Report**

| Analyte | Result | MDL | RL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Date Analyzed | Qual |
|---------|--------|-----|----|-------|-------------|---------------|------|-------------|-----|-----------|---------------|------|
|---------|--------|-----|----|-------|-------------|---------------|------|-------------|-----|-----------|---------------|------|

**EPA 200.8 DRC - Quality Control**
**Batch: AEJ1716**
**Prepared: 10/28/2021**
**Prep Method: EPA 200.2 DRC**
**Analyst: PSK**
**Matrix Spike (AEJ1716-MS1), Source: AEJ2634-05**

|          |      |       |      |      |    |      |     |        |  |  |          |                   |
|----------|------|-------|------|------|----|------|-----|--------|--|--|----------|-------------------|
| Aluminum | 2300 | 12    | 25   | ug/L | 50 | 1900 | 652 | 70-130 |  |  | 11/02/21 | MS1.0 <b>High</b> |
| Cadmium  | 46   | 0.12  | 0.25 | ug/L | 50 | ND   | 93  | 70-130 |  |  | 11/02/21 |                   |
| Lead     | 52   | 0.046 | 0.10 | ug/L | 50 | 4.7  | 94  | 70-130 |  |  | 11/02/21 |                   |
| Nickel   | 53   | 0.46  | 1.0  | ug/L | 50 | 3.6  | 99  | 70-130 |  |  | 11/02/21 |                   |
| Zinc     | 130  | 0.69  | 1.5  | ug/L | 50 | 89   | 80  | 70-130 |  |  | 11/02/21 |                   |

**Matrix Spike (AEJ1716-MS2), Source: AEJ2701-01**

|          |      |      |      |      |    |      |     |        |  |  |          |                   |
|----------|------|------|------|------|----|------|-----|--------|--|--|----------|-------------------|
| Aluminum | 330  | 6.9  | 15   | ug/L | 50 | 240  | 178 | 70-130 |  |  | 11/02/21 | MS1.0 <b>High</b> |
| Cadmium  | 52   | 0.36 | 0.75 | ug/L | 50 | ND   | 104 | 70-130 |  |  | 11/02/21 |                   |
| Lead     | 53   | 0.14 | 0.30 | ug/L | 50 | 1.8  | 102 | 70-130 |  |  | 11/02/21 |                   |
| Nickel   | 62   | 1.4  | 3.0  | ug/L | 50 | 14   | 98  | 70-130 |  |  | 11/02/21 |                   |
| Zinc     | 1300 | 2.1  | 4.5  | ug/L | 50 | 1400 | NR  | 70-130 |  |  | 11/02/21 | MS1.0 <b>Low</b>  |

**Matrix Spike Dup (AEJ1716-MSD1), Source: AEJ2634-05**

|          |      |       |      |      |    |      |     |        |   |    |          |                   |
|----------|------|-------|------|------|----|------|-----|--------|---|----|----------|-------------------|
| Aluminum | 2200 | 12    | 25   | ug/L | 50 | 1900 | 570 | 70-130 | 2 | 20 | 11/02/21 | MS1.0 <b>High</b> |
| Cadmium  | 47   | 0.12  | 0.25 | ug/L | 50 | ND   | 93  | 70-130 | 1 | 20 | 11/02/21 |                   |
| Lead     | 53   | 0.046 | 0.10 | ug/L | 50 | 4.7  | 96  | 70-130 | 2 | 20 | 11/02/21 |                   |
| Nickel   | 54   | 0.46  | 1.0  | ug/L | 50 | 3.6  | 101 | 70-130 | 2 | 20 | 11/02/21 |                   |
| Zinc     | 130  | 0.69  | 1.5  | ug/L | 50 | 89   | 89  | 70-130 | 4 | 20 | 11/02/21 |                   |

**Matrix Spike Dup (AEJ1716-MSD2), Source: AEJ2701-01**

|          |      |      |      |      |    |      |     |        |   |    |          |                   |
|----------|------|------|------|------|----|------|-----|--------|---|----|----------|-------------------|
| Aluminum | 360  | 6.9  | 15   | ug/L | 50 | 240  | 241 | 70-130 | 9 | 20 | 11/02/21 | MS1.0 <b>High</b> |
| Cadmium  | 49   | 0.36 | 0.75 | ug/L | 50 | ND   | 98  | 70-130 | 6 | 20 | 11/02/21 |                   |
| Lead     | 51   | 0.14 | 0.30 | ug/L | 50 | 1.8  | 99  | 70-130 | 3 | 20 | 11/02/21 |                   |
| Nickel   | 58   | 1.4  | 3.0  | ug/L | 50 | 14   | 90  | 70-130 | 7 | 20 | 11/02/21 |                   |
| Zinc     | 1200 | 2.1  | 4.5  | ug/L | 50 | 1400 | NR  | 70-130 | 6 | 20 | 11/02/21 | MS1.0 <b>Low</b>  |

**EPA 245.7 - Quality Control**
**Batch: AEJ1583**
**Prepared: 10/27/2021**
**Prep Method: EPA 245.7**
**Analyst: SAB**
**Blank (AEJ1583-BLK1)**

|         |    |       |      |      |  |  |  |  |  |  |          |  |
|---------|----|-------|------|------|--|--|--|--|--|--|----------|--|
| Mercury | ND | 0.091 | 0.20 | ug/L |  |  |  |  |  |  | 10/28/21 |  |
|---------|----|-------|------|------|--|--|--|--|--|--|----------|--|

**Blank (AEJ1583-BLK2)**

|         |    |       |      |      |  |  |  |  |  |  |          |  |
|---------|----|-------|------|------|--|--|--|--|--|--|----------|--|
| Mercury | ND | 0.091 | 0.20 | ug/L |  |  |  |  |  |  | 10/28/21 |  |
|---------|----|-------|------|------|--|--|--|--|--|--|----------|--|

**Matrix Spike (AEJ1583-MS1), Source: AEJ2672-01**

|         |      |       |      |      |      |    |    |        |  |  |          |  |
|---------|------|-------|------|------|------|----|----|--------|--|--|----------|--|
| Mercury | 0.73 | 0.091 | 0.20 | ug/L | 0.80 | ND | 91 | 63-111 |  |  | 10/28/21 |  |
|---------|------|-------|------|------|------|----|----|--------|--|--|----------|--|

**Matrix Spike (AEJ1583-MS2), Source: AEJ2672-02**

|         |      |       |      |      |      |    |    |        |  |  |          |  |
|---------|------|-------|------|------|------|----|----|--------|--|--|----------|--|
| Mercury | 0.76 | 0.091 | 0.20 | ug/L | 0.80 | ND | 95 | 63-111 |  |  | 10/28/21 |  |
|---------|------|-------|------|------|------|----|----|--------|--|--|----------|--|

**Matrix Spike Dup (AEJ1583-MSD1), Source: AEJ2672-01**

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

AEJ2678 FINAL 11122021 1507

**BSK Associates Laboratory Fresno**
**Metals Quality Control Report**

| Analyte | Result | MDL | RL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Date Analyzed | Qual |
|---------|--------|-----|----|-------|-------------|---------------|------|-------------|-----|-----------|---------------|------|
|---------|--------|-----|----|-------|-------------|---------------|------|-------------|-----|-----------|---------------|------|

**EPA 245.7 - Quality Control**
**Batch: AEJ1583**
**Prepared: 10/27/2021**
**Prep Method: EPA 245.7**
**Analyst: SAB**
**Matrix Spike Dup (AEJ1583-MSD1), Source: AEJ2672-01**

|         |      |       |      |      |      |    |    |        |   |    |          |
|---------|------|-------|------|------|------|----|----|--------|---|----|----------|
| Mercury | 0.73 | 0.091 | 0.20 | ug/L | 0.80 | ND | 91 | 63-111 | 0 | 18 | 10/28/21 |
|---------|------|-------|------|------|------|----|----|--------|---|----|----------|

**Matrix Spike Dup (AEJ1583-MSD2), Source: AEJ2672-02**

|         |      |       |      |      |      |    |    |        |   |    |          |
|---------|------|-------|------|------|------|----|----|--------|---|----|----------|
| Mercury | 0.75 | 0.091 | 0.20 | ug/L | 0.80 | ND | 94 | 63-111 | 1 | 18 | 10/28/21 |
|---------|------|-------|------|------|------|----|----|--------|---|----|----------|

**BSK Associates Laboratory Fresno**
**Organics Quality Control Report**

| Analyte | Result | MDL | RL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Date Analyzed | Qual |
|---------|--------|-----|----|-------|-------------|---------------|------|-------------|-----|-----------|---------------|------|
|---------|--------|-----|----|-------|-------------|---------------|------|-------------|-----|-----------|---------------|------|

**EPA 1664B - Quality Control**
**Batch: AEK0159**

Prepared: 11/2/2021

**Prep Method: EPA 1664**

Analyst: AMR

**Blank (AEK0159-BLK1)**

|                    |    |     |     |      |  |  |  |  |  |  |          |  |
|--------------------|----|-----|-----|------|--|--|--|--|--|--|----------|--|
| Total Oil & Grease | ND | 1.5 | 5.0 | mg/L |  |  |  |  |  |  | 11/03/21 |  |
|--------------------|----|-----|-----|------|--|--|--|--|--|--|----------|--|

**Blank Spike (AEK0159-BS1)**

|                    |    |     |     |      |    |  |    |        |  |  |          |  |
|--------------------|----|-----|-----|------|----|--|----|--------|--|--|----------|--|
| Total Oil & Grease | 35 | 1.5 | 5.0 | mg/L | 40 |  | 86 | 78-114 |  |  | 11/03/21 |  |
|--------------------|----|-----|-----|------|----|--|----|--------|--|--|----------|--|

**Blank Spike Dup (AEK0159-BSD1)**

|                    |    |     |     |      |    |  |    |        |   |    |          |  |
|--------------------|----|-----|-----|------|----|--|----|--------|---|----|----------|--|
| Total Oil & Grease | 34 | 1.5 | 5.0 | mg/L | 40 |  | 86 | 78-114 | 0 | 18 | 11/03/21 |  |
|--------------------|----|-----|-----|------|----|--|----|--------|---|----|----------|--|

**Matrix Spike (AEK0159-MS1), Source: AEJ2688-02**

|                    |    |     |     |      |    |    |    |        |  |  |          |  |
|--------------------|----|-----|-----|------|----|----|----|--------|--|--|----------|--|
| Total Oil & Grease | 31 | 1.5 | 5.0 | mg/L | 38 | ND | 82 | 78-114 |  |  | 11/03/21 |  |
|--------------------|----|-----|-----|------|----|----|----|--------|--|--|----------|--|

## Certificate of Analysis

### Notes:

- The Chain of Custody document and Sample Integrity Sheet are part of the analytical report.
- Any remaining sample(s) for testing will be disposed of according to BSK's sample retention policy unless other arrangements are made in advance.
- All positive results for EPA Methods 504.1 and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed.
- Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- J-value is equivalent to DNQ (Detected, not quantified) which is a trace value. A trace value is an analyte detected between the MDL and the laboratory reporting limit. This result is of an unknown data quality and is only qualitative (estimated). Baseline noise, calibration curve extrapolation below the lowest calibrator, method blank detections, and integration artifacts can all produce apparent DNQ values, which contribute to the un-reliability of these values.
- (1) - Residual chlorine and pH analysis have a 15 minute holding time for both drinking and waste water samples as defined by the EPA and 40 CFR 136. Waste water and ground water (monitoring well) samples must be field filtered to meet the 15 minute holding time for dissolved metals.
- Field tests are outside the scope of laboratory accreditation and there is no certification available for field testing.
- Summations of analytes (i.e. Total Trihalomethanes) may appear to add individual amounts incorrectly, due to rounding of analyte values occurring before or after the total value is calculated, as well as rounding of the total value.
- RL Multiplier is the factor used to adjust the reporting limit (RL) due to variations in sample preparation procedures and dilutions required for matrix interferences.
- Due to the subjective nature of the Threshold Odor Method, all characterizations of the detected odor are the opinion of the panel of analysts. The characterizations can be found in Standard Methods 2170B Figure 2170:1.
- The MCLs provided in this report (if applicable) represent the primary MCLs for that analyte.
- (2) - Formerly known as Bis(2-Chloroisopropyl) ether.

### Definitions

|        |                           |          |                                |          |  |
|--------|---------------------------|----------|--------------------------------|----------|--|
| mg/L:  | Milligrams/Liter (ppm)    | MDL:     | Method Detection Limit         | MDA95:   | Min. Detected Activity   |
| mg/Kg: | Milligrams/Kilogram (ppm) | RL:      | Reporting Limit: DL x Dilution | MPN:     | Most Probable Number   |
| µg/L:  | Micrograms/Liter (ppb)    | ND:      | None Detected below MRL/MDL    | CFU:     | Colony Forming Unit  |
| µg/Kg: | Micrograms/Kilogram (ppb) | pCi/L:   | PicoCuries per Liter           | Absent:  | Less than 1 CFU/100mLs   |
| %:     | Percent                   | RL Mult: | RL Multiplier                  | Present: | 1 or more CFU/100mLs   |
| NR:    | Non-Reportable            | MCL:     | Maximum Contaminant Limit      | U:       | The analyte was not detected at or above the reported sample quantitation limit. |

**Please see the individual Subcontract Lab's report for applicable certifications.**

**BSK is not accredited under the NELAP program for the following parameters:**

**\*\*NA\*\***

## Certificate of Analysis

**Certifications:** Please refer to our website for a copy of our Accredited Fields of Testing under each certification.

### Fresno

|                            |               |                         |          |
|----------------------------|---------------|-------------------------|----------|
| State of California - ELAP | 1180          | State of Hawaii         | 4021     |
| Los Angeles CSD            | 9254479       | NELAP certified         | 4021-018 |
| State of Nevada            | CA000792022-1 | State of Oregon - NELAP | 4021-018 |
| EPA - UCMR4                | CA00079       | State of Washington     | C997-21a |

### Sacramento

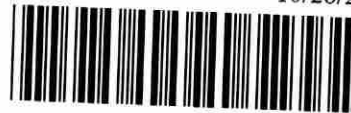
|                            |      |
|----------------------------|------|
| State of California - ELAP | 2435 |
|----------------------------|------|

### San Bernardino

|                            |          |                         |          |
|----------------------------|----------|-------------------------|----------|
| State of California - ELAP | 2993     | Los Angeles CSD         | 9254478  |
| NELAP certified            | 4119-006 | State of Oregon - NELAP | 4119-006 |

### Vancouver

|                     |              |                         |              |
|---------------------|--------------|-------------------------|--------------|
| NELAP certified     | WA100008-014 | State of Oregon - NELAP | WA100008-014 |
| State of Washington | C824-21      |                         |              |



10

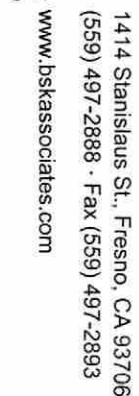
# Sample Integrity

BSK Bottles: Yes NoPage 1 of 1

|  |  |                  |   |  |              |                    |
|--|--|------------------|---|--|--------------|--------------------|
| COC Info   | Was temperature within range?<br>Chemistry $\leq 6^{\circ}\text{C}$ Micro $< 8^{\circ}\text{C}$                                | <u>Yes</u> No NA | Were correct containers and preservatives received for the tests requested? | <u>Yes</u> No NA   |              |                    |
|  | If samples were taken today, is there evidence that chilling has begun?  | Yes No <u>NA</u> | Bubbles Present VOAs (524.2/TTHM/TCP)?<br>TB Received? (Check Method Below) | Yes No <u>NA</u><br>Yes No <u>NA</u>   |              |                    |
|  | Did all bottles arrive unbroken and intact?  | <u>Yes</u> No    | Was a sufficient amount of sample received?                                 | <u>Yes</u> No  |              |                    |
|  | Did all bottle labels agree with COC?  | <u>Yes</u> No    | Do samples have a hold time <72 hours?                                      | <u>Yes</u> No  |              |                    |
|  | Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?   | Yes <u>NA</u>    | Was PM notified of discrepancies?<br>PM: _____ By/Time: _____               | Yes No <u>NA</u>   |              |                    |
| Bottles Received<br><small>means preservation/chlorine checks are either N/A or are performed in the lab</small> | 250ml(A) 500ml(B) 1Liter(C) 40mlVOA(V) 125ml(D)  | Checks*          | Passed?   | <u>1</u>   |              |                    |
|  | Bacti Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>  | —                | —   |  |              |                    |
|  | None (P) White Cap   | —                | —   | <u>1G, 2A</u>  |              |                    |
|  | Cr6 (P) Lt. Green Label/Blue Cap NH <sub>4</sub> OH(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> DW                          | Cl, pH > 8       | P F   |  |              |                    |
|  | Cr6 (P) Pink Label/Blue Cap NH <sub>4</sub> OH(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> WW                               | pH 9.3-9.7       | P F   |  |              |                    |
|  | Cr6 (P) Black Label/Blue Cap NH <sub>4</sub> OH(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> 7199<br>***24 HOUR HOLD TIME*** | pH 9.0-9.5       | P F   |  |              |                    |
|  | HNO <sub>3</sub> (P) Red Cap or HCl (R) Purple Cap/Lt. Blue Label  | —                | —   | <u>1B, 1A*</u>   |              |                    |
|  | H <sub>2</sub> SO <sub>4</sub> (P) or (AG) Yellow Cap/Label  | pH < 2           | (P) F   | <u>1A, 1A*</u>   |              |                    |
|  | NaOH (P) Green Cap   | Cl, pH > 10      | P F   |  |              |                    |
|  | NaOH + ZnAc (P)  | pH > 9           | P F   |  |              |                    |
|  | Dissolved Oxygen 300ml (g)   | —                | —   |  |              |                    |
|  | None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270   | —                | —   |  |              |                    |
|  | HCl (AG) Lt. Blue Label O&G, Diesel, TCP   | —                | —   | <u>2C</u>  |              |                    |
|  | Ascorbic, EDTA, KH <sub>2</sub> Ct (AG) Pink Label 525   | —                | —   |  |              |                    |
|  | Na <sub>2</sub> SO <sub>3</sub> 250mL (AG) Neon Green Label 515  | —                | —   |  |              |                    |
|  | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 1 Liter (Brown P) 549  | —                | —   |  |              |                    |
|  | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (AG) Blue Label 548, THM, 524  | —                | —   |  |              |                    |
|  | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (CG) Blue Label 504, 505, 547  | —                | —   |  |              |                    |
|  | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> + MCAA (CG) Orange Label 531   | pH < 3           | P F   |  |              |                    |
|  | NH <sub>4</sub> Cl (AG) Purple Label 552   | —                | —   |  |              |                    |
|  | EDA (P) or (AG) Brown Label DBPs   | —                | —   |  |              |                    |
|  | HCL (CG) 524.2, BTEX, Gas, MTBE, 8260/624  | —                | —   |  |              |                    |
|  | Buffer pH 4 (CG)   | —                | —   |  |              |                    |
|  | H <sub>3</sub> PO <sub>4</sub> (CG) Salmon Label   | —                | —   |  |              |                    |
|  | Trizma - EPA 537.1 - Field Blank Required  | —                | —   |  |              |                    |
|  | Other: <u>1/2 gallon w/ none</u>   | —                | —   | <u>2</u>   |              |                    |
|  | Asbestos 1L (P) w/ Foil / LL Metals Bottle   | —                | —   |  |              |                    |
|  | Bottled Water  | —                | —   |  |              |                    |
| Clear Glass 125mL / 250mL / 500mL / 1 Liter  | —  | —                |   |  |              |                    |
| Solids: Brass / Steel / Plastic Bag  | —  | —                |   |  |              |                    |
| Split  | Container  | Preservative     | Date/Time/Initials  | Container  | Preservative | Date/Time/Initials |
|  | S P  |                  |   | S P  |              |                    |
|  | S P  |                  |   | S P  |              |                    |
| Comments   | *Preservation check completed by lab performing analysis.  |                  |   | ✓ Indicates Blanks Received<br>504 ___ 524.2 ___ TTHM ___ 537.1 ___ TCP ___<br>✓ MS/MSD Received Method: _____ |              |                    |

Scanned: [Signature]

Rush/Short HT Page: \_\_\_\_\_ Time: \_\_\_\_\_



☒ Turnaround Time Request  
Standard - 10 business days

|                                     |                             |
|-------------------------------------|-----------------------------|
| <input checked="" type="checkbox"/> | Standard - 10 business days |
| <input type="checkbox"/>            | Rush (Surcharge may apply)  |
| Date needed: _____                  |                             |

|         |           |            |
|---------|-----------|------------|
| AEJ2678 | Fresn1393 | 10/26/2021 |
|---------|-----------|------------|



Page 14 of 18

[illegible]





**Petroleum Services Division**  
3437 Landco Dr.  
Bakersfield, California 93308  
Tel: 661-325-5657  
Fax: 661-325-5808  
www.corelab.com

November 9, 2021

Michelle Croft  
BSK Associates  
1414 Stanislaus St  
Fresno, CA 93706

Subject: Laser Particle Size Analysis  
Project: AEJ2678  
CL File No: 2105850

Dear Ms. Croft,

The attached file presents the final laser particle size determination results performed on the one water samples submitted from your project #AEJ2678.

Appropriate ASTM, EPA or API methodologies were used for this project and SOP's are available upon request. The sample remnants from this project will be retained for thirty days and then disposed of unless otherwise requested.

Thank you for this opportunity to be of service to BSK Associates. Please do not hesitate to contact us at (661-325-5657) if you have any questions regarding these results or if we can be of any additional service.

Sincerely,  
Core Laboratories

Chris Florence  
Sr. Core Analyst

The analyses, opinions or interpretations contained in this report are based upon observations and material supplied by the client for whose exclusive and confidential use this report has been made. The interpretations or opinions expressed represent the best judgment of Core Laboratories. Core Laboratories assumes no responsibility and makes no warranty or representations, expressed or implied, as to the productivity, proper operations or profitability, however, of any oil, gas, coal or other mineral, property, well or sand in connection with which such report is used or relied upon for any reason whatsoever.



## LASER PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D422/D4464M)

Petroleum Services

Company: BSK Associates

Project Number: AEJ2678

CL File No.: 2105850

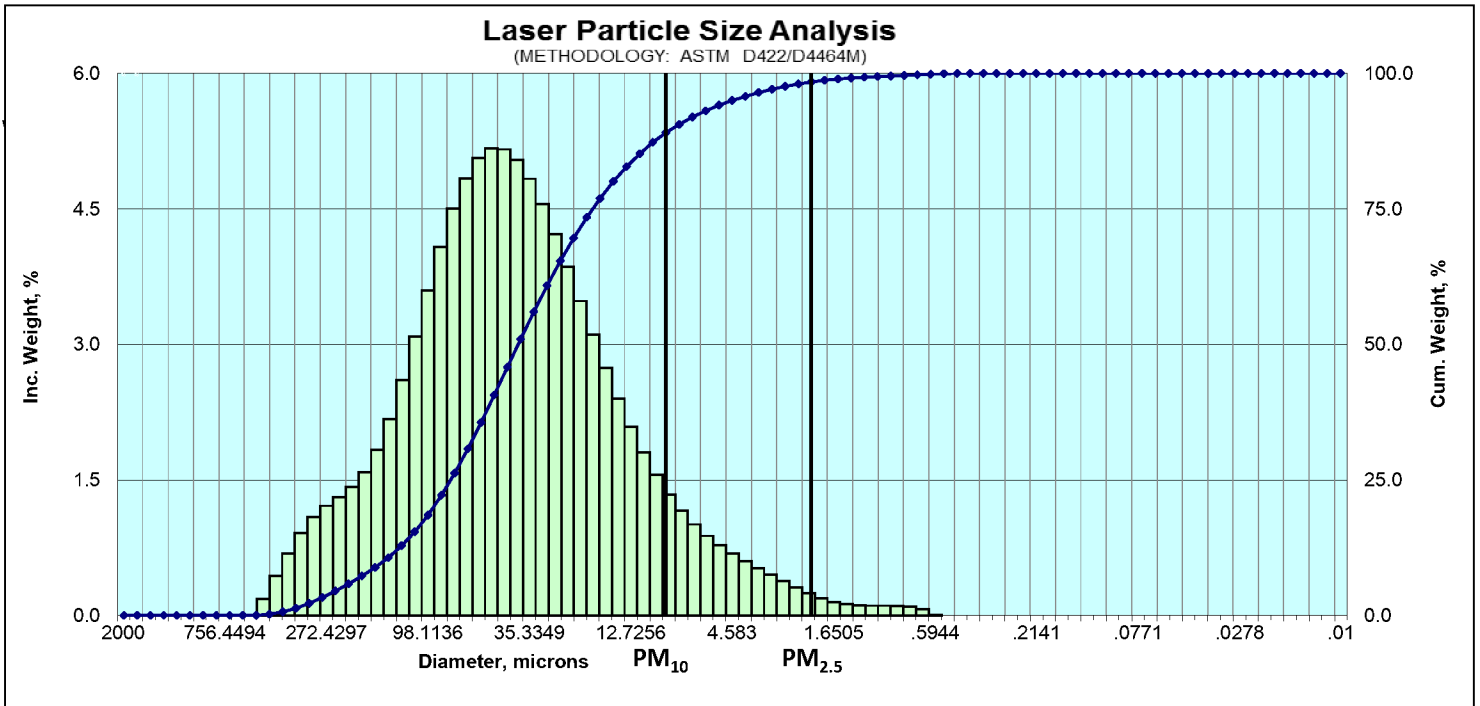
Date: 11/9/2021

| Sample ID | Matrix | Median Particle Size, <sup>(1)</sup> |         | PM <sub>10</sub> <sup>(2)</sup> |        | PM <sub>2.5</sub> <sup>(3)</sup> |        |
|-----------|--------|--------------------------------------|---------|---------------------------------|--------|----------------------------------|--------|
|           |        | mm                                   | microns | % ≤                             | % >    | % ≤                              | % >    |
| FAX Site  | Water  | 0.0469                               | 46.877  | 9.553                           | 90.447 | 1.360                            | 98.640 |

<sup>(1)</sup>50 percentile

<sup>(2)</sup>PM<sub>10</sub> = 10 micron particulate matter

<sup>(3)</sup>PM<sub>2.5</sub> = 2.5 micron particulate matter



| Particle Size Distribution |         |          |        |           |             |          |        |
|----------------------------|---------|----------|--------|-----------|-------------|----------|--------|
| Diameter                   |         | Weight % |        | Diameter  |             | Weight % |        |
| [microns]                  | [in.]   | [Inc.]   | [Cum.] | [microns] | [in.]       | [Inc.]   | [Cum.] |
| 2000.0                     | 0.07874 | 0.000    | 0.00   | 4.583     | 0.000180434 | 0.682    | 96.45  |
| 1848.7                     | 0.07278 | 0.000    | 0.00   | 4.034     | 0.00015881  | 0.601    | 97.05  |
| 1627.1                     | 0.06406 | 0.000    | 0.00   | 3.550     | 0.000139778 | 0.524    | 97.58  |
| 1432.1                     | 0.05638 | 0.000    | 0.00   | 3.125     | 0.000123026 | 0.451    | 98.03  |
| 1260.5                     | 0.04963 | 0.000    | 0.00   | 2.750     | 0.000108282 | 0.379    | 98.41  |
| 1109.4                     | 0.04368 | 0.000    | 0.00   | 2.421     | 9.5305E-05  | 0.308    | 98.71  |
| 976.5                      | 0.03844 | 0.000    | 0.00   | 2.131     | 8.38832E-05 | 0.242    | 98.96  |
| 859.4                      | 0.03384 | 0.000    | 0.00   | 1.875     | 7.38302E-05 | 0.188    | 99.14  |
| 756.45                     | 0.02978 | 0.000    | 0.00   | 1.651     | 6.4982E-05  | 0.147    | 99.29  |
| 665.79                     | 0.02621 | 0.000    | 0.00   | 1.453     | 5.71943E-05 | 0.122    | 99.41  |
| 586.00                     | 0.02307 | 0.004    | 0.00   | 1.279     | 5.03399E-05 | 0.110    | 99.52  |
| 515.77                     | 0.02031 | 0.182    | 0.19   | 1.1254    | 4.43069E-05 | 0.106    | 99.63  |
| 453.96                     | 0.01787 | 0.435    | 0.62   | 0.9905    | 3.8997E-05  | 0.106    | 99.73  |
| 399.55                     | 0.01573 | 0.686    | 1.31   | 0.8718    | 3.43234E-05 | 0.104    | 99.84  |
| 351.67                     | 0.01385 | 0.912    | 2.22   | 0.7673    | 3.02099E-05 | 0.092    | 99.93  |
| 309.52                     | 0.01219 | 1.087    | 3.31   | 0.6754    | 2.65894E-05 | 0.068    | 100.00 |
| 272.43                     | 0.01073 | 1.212    | 4.52   | 0.5944    | 2.34028E-05 | 0.001    | 100.00 |
| 239.78                     | 0.00944 | 1.310    | 5.83   | 0.5232    | 2.05981E-05 | 0.000    | 100.00 |
| 211.04                     | 0.00831 | 1.421    | 7.25   | 0.4605    | 1.81295E-05 | 0.000    | 100.00 |
| 185.75                     | 0.00731 | 1.584    | 8.83   | 0.4053    | 1.59568E-05 | 0.000    | 100.00 |
| 163.49                     | 0.00644 | 1.831    | 10.66  | 0.3567    | 1.40445E-05 | 0.000    | 100.00 |
| 143.90                     | 0.00567 | 2.173    | 12.84  | 0.3140    | 1.23613E-05 | 0.000    | 100.00 |
| 126.65                     | 0.00499 | 2.602    | 15.44  | 0.2763    | 1.08799E-05 | 0.000    | 100.00 |
| 111.47                     | 0.00439 | 3.090    | 18.53  | 0.2432    | 9.57598E-06 | 0.000    | 100.00 |
| 98.11                      | 0.00386 | 3.596    | 22.12  | 0.2141    | 8.42835E-06 | 0.000    | 100.00 |
| 86.36                      | 0.00340 | 4.080    | 26.20  | 0.1884    | 7.41827E-06 | 0.000    | 100.00 |
| 76.01                      | 0.00299 | 4.504    | 30.71  | 0.1658    | 6.52921E-06 | 0.000    | 100.00 |
| 66.90                      | 0.00263 | 4.838    | 35.55  | 0.1460    | 5.74673E-06 | 0.000    | 100.00 |
| 58.88                      | 0.00232 | 5.063    | 40.61  | 0.1285    | 5.05803E-06 | 0.000    | 100.00 |
| 51.82                      | 0.00204 | 5.170    | 45.78  | 0.1131    | 4.45185E-06 | 0.000    | 100.00 |
| 45.61                      | 0.00180 | 5.160    | 50.94  | 0.0995    | 3.91831E-06 | 0.000    | 100.00 |
| 40.15                      | 0.00158 | 5.042    | 55.98  | 0.0876    | 3.4487E-06  | 0.000    | 100.00 |
| 35.33                      | 0.00139 | 4.833    | 60.81  | 0.0771    | 3.03539E-06 | 0.000    | 100.00 |
| 31.100                     | 0.00122 | 4.552    | 65.37  | 0.0679    | 2.67161E-06 | 0.000    | 100.00 |
| 27.373                     | 0.00108 | 4.221    | 69.59  | 0.0597    | 2.35146E-06 | 0.000    | 100.00 |
| 24.092                     | 0.00095 | 3.857    | 73.44  | 0.0526    | 2.06965E-06 | 0.000    | 100.00 |
| 21.205                     | 0.00083 | 3.480    | 76.92  | 0.0463    | 1.82161E-06 | 0.000    | 100.00 |
| 18.664                     | 0.00073 | 3.104    | 80.03  | 0.0407    | 1.60331E-06 | 0.000    | 100.00 |
| 16.427                     | 0.00065 | 2.741    | 82.77  | 0.0358    | 1.41114E-06 | 0.000    | 100.00 |
| 14.458                     | 0.00057 | 2.399    | 85.17  | 0.0315    | 1.24205E-06 | 0.000    | 100.00 |
| 12.726                     | 0.00050 | 2.085    | 87.25  | 0.0278    | 1.09319E-06 | 0.000    | 100.00 |
| 11.201                     | 0.00044 | 1.803    | 89.06  | 0.0244    | 9.62165E-07 | 0.000    | 100.00 |
| 9.858                      | 0.00039 | 1.554    | 90.61  | 0.0215    | 8.4685E-07  | 0.000    | 100.00 |
| 8.677                      | 0.00034 | 1.340    | 91.95  | 0.0189    | 7.45354E-07 | 0.000    | 100.00 |
| 7.637                      | 0.00030 | 1.158    | 93.11  | 0.0167    | 6.56024E-07 | 0.000    | 100.00 |
| 6.722                      | 0.00026 | 1.006    | 94.12  | 0.0147    | 5.77402E-07 | 0.000    | 100.00 |
| 5.916                      | 0.00023 | 0.880    | 95.00  | 0.0129    | 5.08228E-07 | 0.000    | 100.00 |
| 5.207                      | 0.00021 | 0.774    | 95.77  | 0.0114    | 4.47323E-07 | 0.000    | 100.00 |

| Sorting Statistics (Folk) |                   |        |        |
|---------------------------|-------------------|--------|--------|
| Parameter                 | Trask             | Inman  | Folk   |
| Median                    |                   |        |        |
| (in)                      | 0.0018            | 0.0018 | 0.0018 |
| (mm)                      | 0.0469            | 0.0469 | 0.0469 |
| Mean                      |                   |        |        |
| (in)                      | 0.0022            | 0.0017 | 0.0018 |
| (mm)                      | 0.0564            | 0.0437 | 0.0447 |
| Sorting                   | Poor              |        |        |
|                           | 1.986             | 1.504  | 1.580  |
| Skewness                  | Near symmetrical  |        |        |
|                           | 0.966             | 0.169  | 0.080  |
| Kurtosis                  | Lepokurtic        |        |        |
|                           | 0.207             | 0.818  | 1.132  |
| Percentile<br>[Weight, %] | Particle Diameter |        |        |
|                           | [in.]             | [mm]   | [phi]  |
| 5                         | 0.0103            | 0.2615 | 1.9350 |
| 10                        | 0.0068            | 0.1724 | 2.5365 |
| 16                        | 0.0049            | 0.1240 | 3.0117 |
| 25                        | 0.0035            | 0.0900 | 3.4744 |
| 40                        | 0.0024            | 0.0601 | 4.0567 |
| 50                        | 0.0018            | 0.0469 | 4.4150 |
| 70                        | 0.0011            | 0.0270 | 5.2085 |
| 75                        | 0.0009            | 0.0228 | 5.4541 |
| 84                        | 0.0006            | 0.0154 | 6.0194 |
| 90                        | 0.0004            | 0.0104 | 6.5898 |
| 95                        | 0.0002            | 0.0059 | 7.4023 |



SUBCONTRACT ORDER

AEJ2678

SENDING LABORATORY:

BSK Associates Laboratory Fresno  
1414 Stanislaus St  
Fresno, CA 93706  
Phone: 559-497-2888  
Fax: 559-485-6935  
Project Manager: Michelle Croft  
E-mail: mcroft@bskassociates.com

RECEIVING LABORATORY:

Core Lab  
3437 Landco Dr.  
Bakersfield, CA 93308  
Phone: (661) 325-5657  
Fax: (661) 325-5808  
Turnaround (Days): Standard  
QC Deliverables: I Std III IV

| Sample ID  | Samp Desc                    | Comments                 | Sample Date      |
|------------|------------------------------|--------------------------|------------------|
| AEJ2678-01 | FAX Site                     | Client Matrix Stormwater | 10/25/2021 19:45 |
|            | Lab Matrix: Water            |                          |                  |
|            | Analysis: (2) 1/2 gal w NONE |                          |                  |
|            | EXT-Particle Size by LPSA    | add 75 micron cutoff     |                  |

Released By

Date

Received By

Date

Released By

Date

Received By

Date