

**GW – 028**

**Background  
Groundwater  
Investigation Report**

**PART 3 OF 9**

**September 2015**



# Chain of Custody Form

Page 1 of 1

COC ID: 41227

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1719669

| Customer Information |                               |            | ALS Project Manager:                  |                              |       |           | Work Order #: |                                          |   |   |   |   |   |   |   |   |      |  |  |
|----------------------|-------------------------------|------------|---------------------------------------|------------------------------|-------|-----------|---------------|------------------------------------------|---|---|---|---|---|---|---|---|------|--|--|
| Project Information  |                               |            | Parameter/Method Request for Analysis |                              |       |           |               |                                          |   |   |   |   |   |   |   |   |      |  |  |
| Purchase Order       |                               |            | Project Name                          | NAVATO REFINING              |       |           |               | A G-RO (VOCs Contingent)                 |   |   |   |   |   |   |   |   |      |  |  |
| Work Order           |                               |            | Project Number                        |                              |       |           |               | B DRO, Metals, Anions (SVOCs Contingent) |   |   |   |   |   |   |   |   |      |  |  |
| Company Name         | ARCADIS U.S.                  |            | Bill To Company                       | Yes                          |       |           |               | C                                        |   |   |   |   |   |   |   |   |      |  |  |
| Send Report To       | Pam Krueger                   |            | Invoice Attn.                         | PAM KRUEGER                  |       |           |               | D                                        |   |   |   |   |   |   |   |   |      |  |  |
| Address              | 2929 Briarpark Drive, Ste 300 |            | Address                               | 2929 Briarpark Dr. Suite 300 |       |           |               | E                                        |   |   |   |   |   |   |   |   |      |  |  |
| City/State/Zip       | Houston TX 77042              |            | City/State/Zip                        | Houston TX 77042             |       |           |               | F                                        |   |   |   |   |   |   |   |   |      |  |  |
| Phone                | (713) 953-4816                |            | Phone                                 | (713) 953-4816               |       |           |               | G                                        |   |   |   |   |   |   |   |   |      |  |  |
| Fax                  |                               |            | Fax                                   |                              |       |           |               | H                                        |   |   |   |   |   |   |   |   |      |  |  |
| e-Mail Address       | pam.krueger@arcadis-us.com    |            | e-Mail Address                        | pam.krueger@arcadis-us.com   |       |           |               | I                                        |   |   |   |   |   |   |   |   |      |  |  |
| No.                  | Sample Description            | Date       | Time                                  | Matrix                       | Pres. | # Bottles | A             | B                                        | C | D | E | F | G | H | I | J | Hold |  |  |
| 1                    | UG-MR-39.0-39.5               | 09/02/2014 | 1635                                  | Soil                         | -     | 3         | X             | X                                        |   |   |   |   |   |   |   |   | 01   |  |  |
| 2                    | DUP-1                         | 09/02/2014 | 1635                                  | Soil                         | -     | 3         | X             | X                                        |   |   |   |   |   |   |   |   | 02   |  |  |
| 3                    |                               |            |                                       |                              |       |           |               |                                          |   |   |   |   |   |   |   |   |      |  |  |
| 4                    |                               |            |                                       |                              |       |           |               |                                          |   |   |   |   |   |   |   |   |      |  |  |
| 5                    |                               |            |                                       |                              |       |           |               |                                          |   |   |   |   |   |   |   |   |      |  |  |
| 6                    |                               |            |                                       |                              |       |           |               |                                          |   |   |   |   |   |   |   |   |      |  |  |
| 7                    |                               |            |                                       |                              |       |           |               |                                          |   |   |   |   |   |   |   |   |      |  |  |
| 8                    |                               |            |                                       |                              |       |           |               |                                          |   |   |   |   |   |   |   |   |      |  |  |
| 9                    |                               |            |                                       |                              |       |           |               |                                          |   |   |   |   |   |   |   |   |      |  |  |
| 10                   |                               |            |                                       |                              |       |           |               |                                          |   |   |   |   |   |   |   |   |      |  |  |

|                                                                                               |  |                 |                           |                                         |                                                                                                                                                                                        |                               |  |                   |  |  |
|-----------------------------------------------------------------------------------------------|--|-----------------|---------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--|-------------------|--|--|
| Sampler(s): Please Print & Sign<br>Ben McKenna                                                |  |                 | Shipment Method:<br>Fedex |                                         | Required Turnaround Time:<br><input checked="" type="checkbox"/> STD 10 Wk Days <input type="checkbox"/> 5 Wk Days <input type="checkbox"/> 2 Wk Days <input type="checkbox"/> 24 Hour |                               |  | Results Due Date: |  |  |
| Relinquished by:<br>[Signature]                                                               |  | Date:<br>9/3/14 | Time:<br>1000             | Received by:                            |                                                                                                                                                                                        | Notes:                        |  |                   |  |  |
| Relinquished by:                                                                              |  | Date:           | Time:                     | Received by (Laboratory):               |                                                                                                                                                                                        | Cooler Temp.                  |  |                   |  |  |
| Logged by (Laboratory):                                                                       |  | Date:<br>9/4/14 | Time:<br>9:00             | Checked by (Laboratory):<br>[Signature] |                                                                                                                                                                                        | QC Package: (Check Box Below) |  |                   |  |  |
| Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035 |  |                 |                           |                                         |                                                                                                                                                                                        | Level II: Standard QC         |  |                   |  |  |
|                                                                                               |  |                 |                           |                                         |                                                                                                                                                                                        | Level III: Std QC + Raw Data  |  |                   |  |  |
|                                                                                               |  |                 |                           |                                         |                                                                                                                                                                                        | Level IV: SW846 CLP-Like      |  |                   |  |  |
|                                                                                               |  |                 |                           |                                         |                                                                                                                                                                                        | Other:                        |  |                   |  |  |

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.

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6 total

NCR

3.6  
JWS

## ESC Lab Sciences Non-Conformance Form

|                  |                  |              |                       |
|------------------|------------------|--------------|-----------------------|
| Login #: L719669 | Client: ARCADHTX | Date: 9/4/14 | Evaluated by: Scott C |
|------------------|------------------|--------------|-----------------------|

**Non-Conformance (check applicable items)**

| Sample Integrity               | x | Chain of Custody Clarification                   |                                                      |
|--------------------------------|---|--------------------------------------------------|------------------------------------------------------|
| Parameter(s) past holding time | x | Login Clarification Needed                       | <b>If Broken Container:</b>                          |
| Improper temperature           |   | Chain of custody is incomplete                   | Insufficient packing material around container       |
| Improper container type        |   | Please specify Metals requested.                 | Insufficient packing material inside cooler          |
| Improper preservation          |   | Please specify TCLP requested.                   | Improper handling by carrier (FedEx / UPS / Courier) |
| Insufficient sample volume.    |   | Received additional samples not listed on coc.   | Sample was frozen                                    |
| Sample is biphasic.            |   | Sample ids on containers do not match ids on coc | Container lid not intact                             |
| Vials received with headspace. |   | Trip Blank not received.                         | <b>If no Chain of Custody:</b>                       |
| Broken container               |   | Client did not "X" analysis.                     | Received by:                                         |
| Broken container:              |   | Chain of Custody is missing                      | Date/Time:                                           |
| Sufficient sample remains      |   |                                                  | Temp./Cont. Rec./pH:                                 |
|                                |   |                                                  | Carrier:                                             |
|                                |   |                                                  | Tracking#                                            |

**Login Comments: Please clarify metals and anions analysis**

Please analyze for: Anions = Cl, F, SO<sub>4</sub>, NO<sub>2</sub>, NO<sub>3</sub>

Metals = Al, As, Ba, B, Cd, Ca, Cr, Co, Fe, Pb, Mn, Mo, Ni, K, Se, Ag, Na, U, V, Zn (I think there is a "Navajo Metals" product).

|                     |                 |       |            |       |       |
|---------------------|-----------------|-------|------------|-------|-------|
| Client informed by: | Call            | Email | Voice Mail | Date: | Time: |
| TSR Initials:       | Client Contact: |       |            |       |       |

**Login Instructions:**

This E-mail and any attached files are confidential, and may be copyright protected. If you are not the addressee, any dissemination of this communication is strictly prohibited. If you have received this message in error, please contact the sender immediately and delete/destroy all information received.

**B.2**

Groundwater Analytical Data



## Quality Control Summary

### SDG: L712736

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,**

**October 17, 2014**

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#### **Sample Receiving and Handling**

All sample aliquots were received at the correct temperature, in the proper containers, and with the appropriate preservatives. All method specified holding times were met.

#### **Anions by Method 9056MOD**

##### **Laboratory Control Sample**

Samples L712736-01, -02, -03, -04, and -05 were analyzed in analytical batch WG734496. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Sample Duplicate Analysis**

For analytical batch WG734496 sample duplicate analysis was performed on sample L712736-02. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG734496 sample duplicate analysis was performed on sample L712727-01. The relative percent differences were within the method limits for target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG734496 matrix spike/matrix spike duplicate analysis was performed on sample L712737-01. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

##### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Total Dissolved Solids by Method 2540 C-2011**

##### **Laboratory Control Sample**

Samples L712736-01, -02, -03, -04, and -05 were analyzed in analytical batch WG734543. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Sample Duplicate Analysis**

For analytical batch WG734543 sample duplicate analysis was performed on sample L712736-05. The relative percent differences were within the method limits for target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

Precision for batch WG734543 was evaluated using the LCS/LCSD. The RPDs were within method limits.

##### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

## Quality Control Summary

### SDG: L712736

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,**

**October 17, 2014**

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#### **Cyanide by Method 9012B**

##### **Laboratory Control Sample**

Samples L712736-01, -02, -03, -04, and -05 were analyzed in analytical batch WG735726. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Sample Duplicate Analysis**

For analytical batch WG735726 sample duplicate analysis was performed on sample L712736-01. The relative percent difference exceeded the method limits for Cyanide.

For analytical batch WG735726 sample duplicate analysis was performed on sample L712786-01. The relative percent differences were within the method limits for target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG735726 matrix spike/matrix spike duplicate analysis was performed on sample L712736-05. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

##### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Mercury by Method 7470A**

##### **Laboratory Control Sample**

Samples L712736-01, -02, -03, -04, and -05 were analyzed in analytical batch WG736040. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch.

##### **Sample Duplicate Analysis**

For analytical batch WG736040 sample duplicate analysis was performed on sample L712736-01. The relative percent differences were within the method limits for target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG736040 matrix spike/matrix spike duplicate analysis was performed on sample L712736-01. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

##### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Trace Metals by Method 6020**

##### **Laboratory Control Sample**

Samples L712736-01, -02, -03, -04, and -05 were analyzed in analytical batch WG737003. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

## Quality Control Summary

### SDG: L712736

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,  
October 17, 2014**

Samples L712736-01, -02, -03, -04, and -05 were analyzed in analytical batch WG737007. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

#### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG737003 matrix spike/matrix spike duplicate analysis was performed on sample L712736-03. The matrix spike recoveries were below laboratory control limits for Calcium, Dissolved. The spike recoveries were within limits for the remaining target compounds reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

For analytical batch WG737007 matrix spike/matrix spike duplicate analysis was performed on sample L712736-05. The matrix spike recoveries were above laboratory control limits for Calcium. The spike recoveries were within limits for the remaining target compounds reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Volatile TPH by Method 8015D/GRO**

##### **Laboratory Control Sample**

Samples L712736-01, -02, -03, -04, and -05 were analyzed in analytical batch WG734527. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG734527 matrix spike/matrix spike duplicate analysis was performed on sample L711663-04. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

##### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Volatile Organic Compounds by Method 8260B**

##### **Laboratory Control Sample**

Samples L712736-01, -02, -03, -04, and -05 were analyzed in analytical batch WG734591. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG734591 matrix spike/matrix spike duplicate analysis was performed on sample L712736-01. The matrix spike recoveries were within laboratory control limits for all target analytes reported from this batch. The relative percent difference exceeded laboratory limits for 1,1-Dichloroethene.

## Quality Control Summary

### SDG: L712736

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,  
October 17, 2014**

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#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Semi-Volatile Organic Compounds by Method 8270 C**

##### **Laboratory Control Sample**

Samples L712736-01, -02, -03, -04, and -05 were analyzed in analytical batch WG734861. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

Precision for batch WG734861 was evaluated using the LCS/LCSD. The RPDs were within method limits.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Diesel Range Organics by Method 8015**

##### **Laboratory Control Sample**

Samples L712736-01, -02, -03, -04, and -05 were analyzed in analytical batch WG734853. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

Precision for batch WG734853 was evaluated using the LCS/LCSD. The RPDs were within method limits.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

Nancy F. McLain  
ESC Representative  
ESC Lab Sciences



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Est. 1970

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

## Report Summary

Monday October 20, 2014

Report Number: L712736

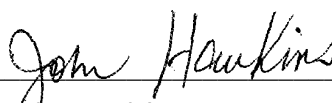
Samples Received: 07/30/14

Client Project: TX000836.0008.00004

Description: Navajo Refining Company - Artesia, NM

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

  
John Hawkins , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BI0041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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Est. 1970

# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712736-01

Sample ID : MW-55-0714-BG 22FT

Site ID :

Collected By : Teresa Mofield  
Collection Date : 07/28/14 18:15

Project # : TX000836.0008.00004

| Parameter             | Result  | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|---------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 290000  | 2600 | 50000  | ug/l  |           | 9056MOD | 07/30/14 | 50   |
| Fluoride              | 2000    | 9.9  | 100    | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Nitrate               | 7500    | 23.  | 100    | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Nitrite               | U       | 28.  | 100    | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Sulfate               | 2600000 | 3900 | 250000 | ug/l  |           | 9056MOD | 07/30/14 | 50   |
| Cyanide               | 2.1     | 1.8  | 5.0    | ug/l  | JP1       | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 4100000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/01/14 | 1    |
| Aluminum              | 110     | 2.0  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Aluminum, Dissolved   | 21.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Arsenic               | 5.1     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Arsenic, Dissolved    | 5.0     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Barium                | 12.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Barium, Dissolved     | 10.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Boron                 | 1200    | 1.5  | 20.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Boron, Dissolved      | 1400    | 1.5  | 20.    | ug/l  |           | 6020    | 08/20/14 | 1    |
| Cadmium               | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cadmium, Dissolved    | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Calcium               | 680000  | 460  | 10000  | ug/l  |           | 6020    | 08/14/14 | 10   |
| Calcium, Dissolved    | 630000  | 460  | 10000  | ug/l  |           | 6020    | 08/14/14 | 10   |
| Chromium              | 1.9     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Chromium, Dissolved   | 1.5     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Copper                | 0.94    | 0.52 | 1.0    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Copper, Dissolved     | 1.1     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cobalt                | 1.1     | 0.26 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cobalt, Dissolved     | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Iron                  | 67.     | 50.  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Iron, Dissolved       | U       | 50.  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Lead                  | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Lead, Dissolved       | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Manganese             | 120     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Manganese, Dissolved  | 28.     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Molybdenum            | 30.     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Molybdenum, Dissolved | 29.     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Nickel                | 5.6     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Nickel, Dissolved     | 3.8     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Potassium             | 1200    | 37.  | 1000   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Potassium, Dissolved  | 1400    | 37.  | 1000   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Selenium              | 20.     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Selenium, Dissolved   | 20.     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Silver                | U       | 0.31 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

MDL = Minimum Detection Limit = LOD = TRRP SDL

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 10/17/14 10:55 Revised: 10/20/14 12:22



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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712736-01

Sample ID : MW-55-0714-BG 22FT

Site ID :

Collected By : Teresa Mofield  
Collection Date : 07/28/14 18:15

Project # : TX000836.0008.00004

| Parameter                                           | Result | MDL   | RDL   | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|--------|-------|-------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U      | 0.31  | 0.50  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Sodium                                              | 240000 | 1100  | 10000 | ug/l   |           | 6020    | 08/14/14 | 10   |
| Sodium, Dissolved                                   | 220000 | 1100  | 10000 | ug/l   |           | 6020    | 08/14/14 | 10   |
| Uranium                                             | 42.    | 0.33  | 10.   | ug/l   |           | 6020    | 08/13/14 | 1    |
| Uranium, Dissolved                                  | 40.    | 0.33  | 10.   | ug/l   |           | 6020    | 08/13/14 | 1    |
| Vanadium                                            | 18.    | 0.18  | 1.0   | ug/l   |           | 6020    | 08/13/14 | 1    |
| Vanadium, Dissolved                                 | 19.    | 0.18  | 1.0   | ug/l   |           | 6020    | 08/13/14 | 1    |
| Zinc                                                | U      | 2.6   | 10.   | ug/l   |           | 6020    | 08/13/14 | 1    |
| Zinc, Dissolved                                     | U      | 2.6   | 10.   | ug/l   |           | 6020    | 08/13/14 | 1    |
| Mercury                                             | U      | 0.049 | 0.20  | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U      | 31.   | 100   | ug/l   |           | 8015D/G | 07/30/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 102.   |       |       | % Rec. |           | 8015D/G | 07/30/14 | 1    |
| Volatile Organics                                   |        |       |       |        |           |         |          |      |
| Benzene                                             | U      | 0.33  | 1.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| Carbon tetrachloride                                | U      | 0.38  | 1.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| Chloroform                                          | U      | 0.32  | 5.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| 1,2-Dibromoethane                                   | U      | 0.38  | 1.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| 1,1-Dichloroethane                                  | U      | 0.26  | 1.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| 1,2-Dichloroethane                                  | U      | 0.36  | 1.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| 1,1-Dichloroethene                                  | U      | 0.40  | 1.0   | ug/l   | J3        | 8260B   | 07/30/14 | 1    |
| Ethylbenzene                                        | U      | 0.38  | 1.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| Methylene Chloride                                  | U      | 1.0   | 5.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U      | 0.38  | 1.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U      | 0.58  | 1.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| Toluene                                             | U      | 0.78  | 5.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| 1,1,1-Trichloroethane                               | U      | 0.32  | 1.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| 1,1,2-Trichloroethane                               | U      | 0.38  | 1.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| Vinyl chloride                                      | U      | 0.26  | 1.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| o-Xylene                                            | U      | 0.34  | 1.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| m&p-Xylene                                          | U      | 0.72  | 2.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| Xylenes, Total                                      | U      | 1.1   | 3.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| Surrogate Recovery                                  |        |       |       |        |           |         |          |      |
| Toluene-d8                                          | 107.   |       |       | % Rec. |           | 8260B   | 07/30/14 | 1    |
| Dibromofluoromethane                                | 116.   |       |       | % Rec. |           | 8260B   | 07/30/14 | 1    |
| 4-Bromofluorobenzene                                | 99.1   |       |       | % Rec. |           | 8260B   | 07/30/14 | 1    |
| Diesel and Oil Ranges                               |        |       |       |        |           |         |          |      |
| C10-C28 Diesel Range                                | 170    | 22.   | 100   | ug/l   |           | 8015    | 08/01/14 | 1    |
| C28-C40 Oil Range                                   | 74.    | 12.   | 100   | ug/l   | J         | 8015    | 08/01/14 | 1    |

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

MDL = Minimum Detection Limit = LOD = TRRP SDL

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Est. 1970

# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : MW-55-0714-BG 22FT  
Collected By : Teresa Mofield  
Collection Date : 07/28/14 18:15

ESC Sample # : L712736-01

Site ID :

Project # : TX000836.0008.00004

| Parameter                         | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|-----------------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| Surrogate Recovery<br>o-Terphenyl | 101.   |      |     | % Rec. |           | 8015   | 08/01/14 | 1    |
| Base/Neutral Extractables         |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene                    | 0.36   | 0.34 | 1.0 | ug/l   | J         | 8270 C | 08/01/14 | 1    |
| 1-Methylnaphthalene               | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| 2-Methylnaphthalene               | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| Naphthalene                       | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| Surrogate Recovery                |        |      |     |        |           |        |          |      |
| 2-Fluorophenol                    | 45.4   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| Phenol-d5                         | 35.9   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| Nitrobenzene-d5                   | 44.6   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| 2-Fluorobiphenyl                  | 64.4   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| 2,4,6-Tribromophenol              | 71.3   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| p-Terphenyl-d14                   | 62.4   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712736-02

Sample ID : MW-55-0714-BG 22FT

Site ID :

Collected By : Teresa Mofield  
Collection Date : 07/28/14 09:15

Project # : TX000836.0008.00004

| Parameter             | Result  | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|---------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 390000  | 2600 | 50000  | ug/l  |           | 9056MOD | 07/31/14 | 50   |
| Fluoride              | 2400    | 9.9  | 100    | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Nitrate               | 820     | 23.  | 100    | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Nitrite               | U       | 28.  | 100    | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Sulfate               | 3100000 | 3900 | 250000 | ug/l  |           | 9056MOD | 07/31/14 | 50   |
| Cyanide               | U       | 1.8  | 5.0    | ug/l  |           | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 4900000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/01/14 | 1    |
| Aluminum              | 96.     | 2.0  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Aluminum, Dissolved   | 24.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Arsenic               | 3.2     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Arsenic, Dissolved    | 3.3     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Barium                | 8.5     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Barium, Dissolved     | 7.6     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Boron                 | 1800    | 1.5  | 20.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Boron, Dissolved      | 2100    | 1.5  | 20.    | ug/l  |           | 6020    | 08/20/14 | 1    |
| Cadmium               | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cadmium, Dissolved    | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Calcium               | 530000  | 460  | 10000  | ug/l  |           | 6020    | 08/14/14 | 10   |
| Calcium, Dissolved    | 550000  | 460  | 10000  | ug/l  |           | 6020    | 08/14/14 | 10   |
| Chromium              | 0.98    | 0.54 | 1.0    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Chromium, Dissolved   | 0.56    | 0.54 | 1.0    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Copper                | 1.5     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Copper, Dissolved     | 1.1     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cobalt                | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cobalt, Dissolved     | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Iron                  | 67.     | 50.  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Iron, Dissolved       | U       | 50.  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Lead                  | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Lead, Dissolved       | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Manganese             | 0.74    | 0.25 | 2.0    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Manganese, Dissolved  | 0.41    | 0.25 | 2.0    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Molybdenum            | 33.     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Molybdenum, Dissolved | 32.     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Nickel                | 1.1     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Nickel, Dissolved     | 1.2     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Potassium             | 370     | 37.  | 1000   | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Potassium, Dissolved  | 340     | 37.  | 1000   | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Selenium              | 7.9     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Selenium, Dissolved   | 8.7     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Silver                | U       | 0.31 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712736-02

Sample ID : MW-55-0714-BG 22FT

Site ID :

Collected By : Teresa Mofield  
Collection Date : 07/28/14 09:15

Project # : TX000836.0008.00004

| Parameter                                             | Result | MDL   | RDL   | Units  | Qualifier | Method  | Date     | Dil. |
|-------------------------------------------------------|--------|-------|-------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                     | U      | 0.31  | 0.50  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Sodium                                                | 240000 | 1100  | 10000 | ug/l   |           | 6020    | 08/14/14 | 10   |
| Sodium, Dissolved                                     | 240000 | 1100  | 10000 | ug/l   |           | 6020    | 08/14/14 | 10   |
| Uranium                                               | 190    | 0.33  | 10.   | ug/l   |           | 6020    | 08/13/14 | 1    |
| Uranium, Dissolved                                    | 190    | 0.33  | 10.   | ug/l   |           | 6020    | 08/13/14 | 1    |
| Vanadium                                              | 19.    | 0.18  | 1.0   | ug/l   |           | 6020    | 08/13/14 | 1    |
| Vanadium, Dissolved                                   | 19.    | 0.18  | 1.0   | ug/l   |           | 6020    | 08/13/14 | 1    |
| Zinc                                                  | 12.    | 2.6   | 10.   | ug/l   |           | 6020    | 08/13/14 | 1    |
| Zinc, Dissolved                                       | U      | 2.6   | 10.   | ug/l   |           | 6020    | 08/13/14 | 1    |
| Mercury                                               | U      | 0.049 | 0.20  | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                             | U      | 31.   | 100   | ug/l   |           | 8015D/G | 07/30/14 | 1    |
| Surrogate Recovery-%<br>a, a, a-Trifluorotoluene(FID) | 102.   |       |       | % Rec. |           | 8015D/G | 07/30/14 | 1    |
| Volatile Organics                                     |        |       |       |        |           |         |          |      |
| Benzene                                               | U      | 0.33  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Carbon tetrachloride                                  | U      | 0.38  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Chloroform                                            | U      | 0.32  | 5.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,2-Dibromoethane                                     | U      | 0.38  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1-Dichloroethane                                    | U      | 0.26  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,2-Dichloroethane                                    | U      | 0.36  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1-Dichloroethene                                    | U      | 0.40  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Ethylbenzene                                          | U      | 0.38  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Methylene Chloride                                    | U      | 1.0   | 5.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,1,2-Tetrachloroethane                             | U      | 0.38  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,2,2-Tetrachloroethane                             | U      | 0.58  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Toluene                                               | U      | 0.78  | 5.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,1-Trichloroethane                                 | U      | 0.32  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,2-Trichloroethane                                 | U      | 0.38  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Vinyl chloride                                        | U      | 0.26  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| o-Xylene                                              | U      | 0.34  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| m&p-Xylene                                            | U      | 0.72  | 2.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Xylenes, Total                                        | U      | 1.1   | 3.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Surrogate Recovery                                    |        |       |       |        |           |         |          |      |
| Toluene-d8                                            | 109.   |       |       | % Rec. |           | 8260B   | 07/31/14 | 1    |
| Dibromofluoromethane                                  | 107.   |       |       | % Rec. |           | 8260B   | 07/31/14 | 1    |
| 4-Bromofluorobenzene                                  | 100.   |       |       | % Rec. |           | 8260B   | 07/31/14 | 1    |
| Diesel and Oil Ranges                                 |        |       |       |        |           |         |          |      |
| C10-C28 Diesel Range                                  | 56.    | 22.   | 100   | ug/l   | J         | 8015    | 08/01/14 | 1    |
| C28-C40 Oil Range                                     | 35.    | 12.   | 100   | ug/l   | J         | 8015    | 08/01/14 | 1    |

U = ND (Not Detected)

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : MW-55-0714-BG 22FT  
Collected By : Teresa Mofield  
Collection Date : 07/28/14 09:15

ESC Sample # : L712736-02

Site ID :

Project # : TX000836.0008.00004

| Parameter                         | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|-----------------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| Surrogate Recovery<br>o-Terphenyl | 101.   |      |     | % Rec. |           | 8015   | 08/01/14 | 1    |
| Base/Neutral Extractables         |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene                    | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| 1-Methylnaphthalene               | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| 2-Methylnaphthalene               | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| Naphthalene                       | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| Surrogate Recovery                |        |      |     |        |           |        |          |      |
| 2-Fluorophenol                    | 53.2   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| Phenol-d5                         | 38.1   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| Nitrobenzene-d5                   | 48.0   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| 2-Fluorobiphenyl                  | 72.6   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| 2,4,6-Tribromophenol              | 77.1   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| p-Terphenyl-d14                   | 70.5   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

MDL = Minimum Detection Limit = LOD = TRRP SDL

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712736-03

Sample ID : MW-55-0714-BG 22FT

Site ID :

Collected By : Teresa Mofield  
Collection Date : 07/28/14 11:00

Project # : TX000836.0008.00004

| Parameter             | Result  | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|---------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 170000  | 1000 | 20000  | ug/l  |           | 9056MOD | 07/31/14 | 20   |
| Fluoride              | 1000    | 9.9  | 100    | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Nitrate               | 1900    | 23.  | 100    | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Nitrite               | U       | 28.  | 100    | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Sulfate               | 1200000 | 1500 | 100000 | ug/l  |           | 9056MOD | 07/31/14 | 20   |
| Cyanide               | U       | 1.8  | 5.0    | ug/l  |           | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 2100000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/01/14 | 1    |
| Aluminum              | 66.     | 2.0  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Aluminum, Dissolved   | 34.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Arsenic               | 0.63    | 0.25 | 1.0    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Arsenic, Dissolved    | 0.66    | 0.25 | 1.0    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Barium                | 15.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Barium, Dissolved     | 14.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Boron                 | 170     | 1.5  | 20.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Boron, Dissolved      | 180     | 1.5  | 20.    | ug/l  |           | 6020    | 08/20/14 | 1    |
| Cadmium               | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cadmium, Dissolved    | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Calcium               | 440000  | 460  | 10000  | ug/l  |           | 6020    | 08/14/14 | 10   |
| Calcium, Dissolved    | 440000  | 460  | 10000  | ug/l  | V         | 6020    | 08/14/14 | 10   |
| Chromium              | 2.0     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Chromium, Dissolved   | 1.8     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Copper                | U       | 0.52 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Copper, Dissolved     | 0.60    | 0.52 | 1.0    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Cobalt                | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cobalt, Dissolved     | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Iron                  | 100     | 50.  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Iron, Dissolved       | U       | 50.  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Lead                  | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Lead, Dissolved       | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Manganese             | 4.5     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Manganese, Dissolved  | 0.56    | 0.25 | 2.0    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Molybdenum            | 7.2     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Molybdenum, Dissolved | 7.1     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Nickel                | U       | 0.35 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Nickel, Dissolved     | 0.59    | 0.35 | 1.0    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Potassium             | 2200    | 37.  | 1000   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Potassium, Dissolved  | 2100    | 37.  | 1000   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Selenium              | 8.0     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Selenium, Dissolved   | 8.5     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Silver                | U       | 0.31 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |

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Est. 1970

# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712736-03

Sample ID : MW-55-0714-BG 22FT

Site ID :

Collected By : Teresa Mofield  
Collection Date : 07/28/14 11:00

Project # : TX000836.0008.00004

| Parameter                                           | Result | MDL   | RDL  | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|--------|-------|------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U      | 0.31  | 0.50 | ug/l   |           | 6020    | 08/13/14 | 1    |
| Sodium                                              | 80000  | 110   | 1000 | ug/l   |           | 6020    | 08/13/14 | 1    |
| Sodium, Dissolved                                   | 77000  | 110   | 1000 | ug/l   |           | 6020    | 08/13/14 | 1    |
| Uranium                                             | 4.0    | 0.33  | 10.  | ug/l   | J         | 6020    | 08/13/14 | 1    |
| Uranium, Dissolved                                  | 3.9    | 0.33  | 10.  | ug/l   | J         | 6020    | 08/13/14 | 1    |
| Vanadium                                            | 4.6    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Vanadium, Dissolved                                 | 4.4    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Zinc                                                | U      | 2.6   | 10.  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Zinc, Dissolved                                     | 5.6    | 2.6   | 10.  | ug/l   | J         | 6020    | 08/13/14 | 1    |
| Mercury                                             | U      | 0.049 | 0.20 | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U      | 31.   | 100  | ug/l   |           | 8015D/G | 07/30/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 102.   |       |      | % Rec. |           | 8015D/G | 07/30/14 | 1    |
| Volatile Organics                                   |        |       |      |        |           |         |          |      |
| Benzene                                             | U      | 0.33  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Carbon tetrachloride                                | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Chloroform                                          | U      | 0.32  | 5.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,2-Dibromoethane                                   | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1-Dichloroethane                                  | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,2-Dichloroethane                                  | U      | 0.36  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1-Dichloroethene                                  | U      | 0.40  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Ethylbenzene                                        | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Methylene Chloride                                  | U      | 1.0   | 5.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U      | 0.58  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Toluene                                             | U      | 0.78  | 5.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,1-Trichloroethane                               | U      | 0.32  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,2-Trichloroethane                               | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Vinyl chloride                                      | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| o-Xylene                                            | U      | 0.34  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| m&p-Xylene                                          | U      | 0.72  | 2.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Xylenes, Total                                      | U      | 1.1   | 3.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Surrogate Recovery                                  |        |       |      |        |           |         |          |      |
| Toluene-d8                                          | 102.   |       |      | % Rec. |           | 8260B   | 07/31/14 | 1    |
| Dibromofluoromethane                                | 106.   |       |      | % Rec. |           | 8260B   | 07/31/14 | 1    |
| 4-Bromofluorobenzene                                | 99.3   |       |      | % Rec. |           | 8260B   | 07/31/14 | 1    |
| Diesel and Oil Ranges                               |        |       |      |        |           |         |          |      |
| C10-C28 Diesel Range                                | U      | 22.   | 100  | ug/l   |           | 8015    | 08/01/14 | 1    |
| C28-C40 Oil Range                                   | U      | 12.   | 100  | ug/l   |           | 8015    | 08/01/14 | 1    |

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : MW-55-0714-BG 22FT  
Collected By : Teresa Mofield  
Collection Date : 07/28/14 11:00

ESC Sample # : L712736-03

Site ID :

Project # : TX000836.0008.00004

| Parameter                         | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|-----------------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| Surrogate Recovery<br>o-Terphenyl | 105.   |      |     | % Rec. |           | 8015   | 08/01/14 | 1    |
| Base/Neutral Extractables         |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene                    | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| 1-Methylnaphthalene               | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| 2-Methylnaphthalene               | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| Naphthalene                       | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| Surrogate Recovery                |        |      |     |        |           |        |          |      |
| 2-Fluorophenol                    | 48.2   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| Phenol-d5                         | 36.0   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| Nitrobenzene-d5                   | 49.6   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| 2-Fluorobiphenyl                  | 67.7   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| 2,4,6-Tribromophenol              | 71.8   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| p-Terphenyl-d14                   | 69.5   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712736-04

Sample ID : MW-55-0714-BG 22FT

Site ID :

Collected By : Teresa Mofield  
Collection Date : 07/28/14 15:00

Project # : TX000836.0008.00004

| Parameter             | Result | MDL  | RDL   | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|--------|------|-------|-------|-----------|---------|----------|------|
| Chloride              | 250    | 52.  | 1000  | ug/l  | J         | 9056MOD | 07/30/14 | 1    |
| Fluoride              | U      | 9.9  | 100   | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Nitrate               | U      | 23.  | 100   | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Nitrite               | U      | 28.  | 100   | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Sulfate               | U      | 77.  | 5000  | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Cyanide               | U      | 1.8  | 5.0   | ug/l  |           | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 5000   | 2800 | 10000 | ug/l  | J         | 2540 C- | 08/01/14 | 1    |
| Aluminum              | 21.    | 2.0  | 50.   | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Aluminum, Dissolved   | 14.    | 2.0  | 50.   | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Arsenic               | U      | 0.25 | 1.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Arsenic, Dissolved    | U      | 0.25 | 1.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Barium                | U      | 0.36 | 2.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Barium, Dissolved     | U      | 0.36 | 2.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Boron                 | 46.    | 1.5  | 20.   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Boron, Dissolved      | 60.    | 1.5  | 20.   | ug/l  |           | 6020    | 08/20/14 | 1    |
| Cadmium               | U      | 0.16 | 0.50  | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cadmium, Dissolved    | U      | 0.16 | 0.50  | ug/l  |           | 6020    | 08/13/14 | 1    |
| Calcium               | U      | 46.  | 1000  | ug/l  |           | 6020    | 08/13/14 | 1    |
| Calcium, Dissolved    | U      | 46.  | 1000  | ug/l  |           | 6020    | 08/13/14 | 1    |
| Chromium              | 0.60   | 0.54 | 1.0   | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Chromium, Dissolved   | U      | 0.54 | 1.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Copper                | 0.61   | 0.52 | 1.0   | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Copper, Dissolved     | U      | 0.52 | 1.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cobalt                | U      | 0.26 | 1.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cobalt, Dissolved     | U      | 0.26 | 1.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Iron                  | U      | 50.  | 50.   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Iron, Dissolved       | U      | 50.  | 50.   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Lead                  | U      | 0.24 | 1.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Lead, Dissolved       | U      | 0.24 | 1.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Manganese             | 0.38   | 0.25 | 2.0   | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Manganese, Dissolved  | U      | 0.25 | 2.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Molybdenum            | U      | 0.14 | 2.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Molybdenum, Dissolved | U      | 0.14 | 2.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Nickel                | U      | 0.35 | 1.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Nickel, Dissolved     | U      | 0.35 | 1.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Potassium             | 68.    | 37.  | 1000  | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Potassium, Dissolved  | 42.    | 37.  | 1000  | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Selenium              | 0.98   | 0.38 | 2.0   | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Selenium, Dissolved   | 0.87   | 0.38 | 2.0   | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Silver                | U      | 0.31 | 0.50  | ug/l  |           | 6020    | 08/13/14 | 1    |

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712736-04

Sample ID : MW-55-0714-BG 22FT

Site ID :

Collected By : Teresa Mofield  
Collection Date : 07/28/14 15:00

Project # : TX000836.0008.00004

| Parameter                                           | Result | MDL   | RDL  | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|--------|-------|------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | 1.5    | 0.31  | 0.50 | ug/l   |           | 6020    | 08/13/14 | 1    |
| Sodium                                              | 230    | 110   | 1000 | ug/l   | J         | 6020    | 08/13/14 | 1    |
| Sodium, Dissolved                                   | 220    | 110   | 1000 | ug/l   | J         | 6020    | 08/13/14 | 1    |
| Uranium                                             | U      | 0.33  | 10.  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Uranium, Dissolved                                  | U      | 0.33  | 10.  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Vanadium                                            | U      | 0.18  | 1.0  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Vanadium, Dissolved                                 | U      | 0.18  | 1.0  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Zinc                                                | U      | 2.6   | 10.  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Zinc, Dissolved                                     | U      | 2.6   | 10.  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Mercury                                             | U      | 0.049 | 0.20 | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U      | 31.   | 100  | ug/l   |           | 8015D/G | 07/30/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 102.   |       |      | % Rec. |           | 8015D/G | 07/30/14 | 1    |
| Volatile Organics                                   |        |       |      |        |           |         |          |      |
| Benzene                                             | U      | 0.33  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Carbon tetrachloride                                | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Chloroform                                          | U      | 0.32  | 5.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,2-Dibromoethane                                   | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1-Dichloroethane                                  | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,2-Dichloroethane                                  | U      | 0.36  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1-Dichloroethene                                  | U      | 0.40  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Ethylbenzene                                        | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Methylene Chloride                                  | U      | 1.0   | 5.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U      | 0.58  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Toluene                                             | U      | 0.78  | 5.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,1-Trichloroethane                               | U      | 0.32  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,2-Trichloroethane                               | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Vinyl chloride                                      | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| o-Xylene                                            | U      | 0.34  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| m&p-Xylene                                          | U      | 0.72  | 2.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Xylenes, Total                                      | U      | 1.1   | 3.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Surrogate Recovery                                  |        |       |      |        |           |         |          |      |
| Toluene-d8                                          | 103.   |       |      | % Rec. |           | 8260B   | 07/31/14 | 1    |
| Dibromofluoromethane                                | 106.   |       |      | % Rec. |           | 8260B   | 07/31/14 | 1    |
| 4-Bromofluorobenzene                                | 99.5   |       |      | % Rec. |           | 8260B   | 07/31/14 | 1    |
| Diesel and Oil Ranges                               |        |       |      |        |           |         |          |      |
| C10-C28 Diesel Range                                | 35.    | 22.   | 100  | ug/l   | J         | 8015    | 08/01/14 | 1    |
| C28-C40 Oil Range                                   | U      | 12.   | 100  | ug/l   |           | 8015    | 08/01/14 | 1    |

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

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Est. 1970

# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : MW-55-0714-BG 22FT  
Collected By : Teresa Mofield  
Collection Date : 07/28/14 15:00

ESC Sample # : L712736-04

Site ID :

Project # : TX000836.0008.00004

| Parameter                         | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|-----------------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| Surrogate Recovery<br>o-Terphenyl | 101.   |      |     | % Rec. |           | 8015   | 08/01/14 | 1    |
| Base/Neutral Extractables         |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene                    | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| 1-Methylnaphthalene               | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| 2-Methylnaphthalene               | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| Naphthalene                       | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| Surrogate Recovery                |        |      |     |        |           |        |          |      |
| 2-Fluorophenol                    | 48.2   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| Phenol-d5                         | 33.6   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| Nitrobenzene-d5                   | 50.1   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| 2-Fluorobiphenyl                  | 70.3   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| 2,4,6-Tribromophenol              | 77.2   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| p-Terphenyl-d14                   | 68.9   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712736-05

Sample ID : MW-55-0714-BG 22FT

Site ID :

Collected By : Teresa Mofield  
Collection Date : 07/28/14 00:00

Project # : TX000836.0008.00004

| Parameter             | Result  | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|---------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 160000  | 1000 | 20000  | ug/l  |           | 9056MOD | 07/30/14 | 20   |
| Fluoride              | 1000    | 9.9  | 100    | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Nitrate               | 2300    | 23.  | 100    | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Nitrite               | U       | 28.  | 100    | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Sulfate               | 1200000 | 1500 | 100000 | ug/l  |           | 9056MOD | 07/30/14 | 20   |
| Cyanide               | U       | 1.8  | 5.0    | ug/l  |           | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 2100000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/01/14 | 1    |
| Aluminum              | 60.     | 2.0  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Aluminum, Dissolved   | 45.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Arsenic               | 0.66    | 0.25 | 1.0    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Arsenic, Dissolved    | 0.63    | 0.25 | 1.0    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Barium                | 15.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Barium, Dissolved     | 15.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Boron                 | 160     | 1.5  | 20.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Boron, Dissolved      | 190     | 1.5  | 20.    | ug/l  |           | 6020    | 08/20/14 | 1    |
| Cadmium               | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cadmium, Dissolved    | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Calcium               | 420000  | 460  | 10000  | ug/l  | V         | 6020    | 08/14/14 | 10   |
| Calcium, Dissolved    | 420000  | 460  | 10000  | ug/l  |           | 6020    | 08/14/14 | 10   |
| Chromium              | 1.7     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Chromium, Dissolved   | 1.5     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Copper                | U       | 0.52 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Copper, Dissolved     | U       | 0.52 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cobalt                | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cobalt, Dissolved     | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Iron                  | U       | 50.  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Iron, Dissolved       | U       | 50.  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Lead                  | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Lead, Dissolved       | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Manganese             | 3.8     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Manganese, Dissolved  | 3.7     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Molybdenum            | 7.4     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Molybdenum, Dissolved | 6.8     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Nickel                | U       | 0.35 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Nickel, Dissolved     | U       | 0.35 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Potassium             | 2100    | 37.  | 1000   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Potassium, Dissolved  | 2200    | 37.  | 1000   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Selenium              | 8.4     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Selenium, Dissolved   | 8.4     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Silver                | U       | 0.31 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712736-05

Sample ID : MW-55-0714-BG 22FT

Site ID :

Collected By : Teresa Mofield  
Collection Date : 07/28/14 00:00

Project # : TX000836.0008.00004

| Parameter                                           | Result | MDL   | RDL  | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|--------|-------|------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U      | 0.31  | 0.50 | ug/l   |           | 6020    | 08/13/14 | 1    |
| Sodium                                              | 78000  | 110   | 1000 | ug/l   |           | 6020    | 08/13/14 | 1    |
| Sodium, Dissolved                                   | 77000  | 110   | 1000 | ug/l   |           | 6020    | 08/13/14 | 1    |
| Uranium                                             | 4.0    | 0.33  | 10.  | ug/l   | J         | 6020    | 08/13/14 | 1    |
| Uranium, Dissolved                                  | 3.9    | 0.33  | 10.  | ug/l   | J         | 6020    | 08/13/14 | 1    |
| Vanadium                                            | 4.5    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Vanadium, Dissolved                                 | 4.4    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Zinc                                                | U      | 2.6   | 10.  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Zinc, Dissolved                                     | U      | 2.6   | 10.  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Mercury                                             | U      | 0.049 | 0.20 | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U      | 31.   | 100  | ug/l   |           | 8015D/G | 07/30/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 102.   |       |      | % Rec. |           | 8015D/G | 07/30/14 | 1    |
| Volatile Organics                                   |        |       |      |        |           |         |          |      |
| Benzene                                             | U      | 0.33  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Carbon tetrachloride                                | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Chloroform                                          | U      | 0.32  | 5.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,2-Dibromoethane                                   | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1-Dichloroethane                                  | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,2-Dichloroethane                                  | U      | 0.36  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1-Dichloroethene                                  | U      | 0.40  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Ethylbenzene                                        | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Methylene Chloride                                  | U      | 1.0   | 5.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U      | 0.58  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Toluene                                             | U      | 0.78  | 5.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,1-Trichloroethane                               | U      | 0.32  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,2-Trichloroethane                               | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Vinyl chloride                                      | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| o-Xylene                                            | U      | 0.34  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| m&p-Xylene                                          | U      | 0.72  | 2.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Xylenes, Total                                      | U      | 1.1   | 3.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Surrogate Recovery                                  |        |       |      |        |           |         |          |      |
| Toluene-d8                                          | 105.   |       |      | % Rec. |           | 8260B   | 07/31/14 | 1    |
| Dibromofluoromethane                                | 106.   |       |      | % Rec. |           | 8260B   | 07/31/14 | 1    |
| 4-Bromofluorobenzene                                | 99.6   |       |      | % Rec. |           | 8260B   | 07/31/14 | 1    |
| Diesel and Oil Ranges                               |        |       |      |        |           |         |          |      |
| C10-C28 Diesel Range                                | 24.    | 22.   | 100  | ug/l   | J         | 8015    | 08/01/14 | 1    |
| C28-C40 Oil Range                                   | U      | 12.   | 100  | ug/l   |           | 8015    | 08/01/14 | 1    |

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : MW-55-0714-BG 22FT  
Collected By : Teresa Mofield  
Collection Date : 07/28/14 00:00

ESC Sample # : L712736-05

Site ID :

Project # : TX000836.0008.00004

| Parameter                         | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|-----------------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| Surrogate Recovery<br>o-Terphenyl | 101.   |      |     | % Rec. |           | 8015   | 08/01/14 | 1    |
| Base/Neutral Extractables         |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene                    | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| 1-Methylnaphthalene               | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| 2-Methylnaphthalene               | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| Naphthalene                       | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| Surrogate Recovery                |        |      |     |        |           |        |          |      |
| 2-Fluorophenol                    | 49.5   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| Phenol-d5                         | 34.5   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| Nitrobenzene-d5                   | 51.2   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| 2-Fluorobiphenyl                  | 74.1   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| 2,4,6-Tribromophenol              | 67.7   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| p-Terphenyl-d14                   | 60.4   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |

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Attachment A  
List of Analytes with QC Qualifiers

| Sample Number | Work Group | Sample Type | Analyte              | Run ID   | Qualifier |
|---------------|------------|-------------|----------------------|----------|-----------|
| L712736-01    | WG734853   | SAMP        | C28-C40 Oil Range    | R2971125 | J         |
|               | WG735726   | SAMP        | Cyanide              | R2973005 | JP1       |
|               | WG734591   | SAMP        | 1,1-Dichloroethene   | R2972025 | J3        |
|               | WG734861   | SAMP        | Benzo(a)pyrene       | R2970974 | J         |
|               | WG737003   | SAMP        | Aluminum, Dissolved  | R2978051 | J         |
| L712736-02    | WG737007   | SAMP        | Copper               | R2978050 | J         |
|               | WG734853   | SAMP        | C10-C28 Diesel Range | R2971125 | J         |
|               | WG734853   | SAMP        | C28-C40 Oil Range    | R2971125 | J         |
|               | WG737003   | SAMP        | Aluminum, Dissolved  | R2978051 | J         |
|               | WG737007   | SAMP        | Chromium             | R2978050 | J         |
|               | WG737003   | SAMP        | Chromium, Dissolved  | R2978051 | J         |
|               | WG737007   | SAMP        | Manganese            | R2978050 | J         |
|               | WG737003   | SAMP        | Manganese, Dissolved | R2978051 | J         |
|               | WG737007   | SAMP        | Potassium            | R2978050 | J         |
|               | WG737003   | SAMP        | Potassium, Dissolved | R2978051 | J         |
| L712736-03    | WG737003   | SAMP        | Aluminum, Dissolved  | R2978051 | J         |
|               | WG737007   | SAMP        | Arsenic              | R2978050 | J         |
|               | WG737003   | SAMP        | Arsenic, Dissolved   | R2978051 | J         |
|               | WG737003   | SAMP        | Calcium, Dissolved   | R2978067 | V         |
|               | WG737003   | SAMP        | Copper, Dissolved    | R2978051 | J         |
|               | WG737003   | SAMP        | Manganese, Dissolved | R2978051 | J         |
|               | WG737003   | SAMP        | Nickel, Dissolved    | R2978051 | J         |
|               | WG737007   | SAMP        | Uranium              | R2978050 | J         |
|               | WG737003   | SAMP        | Uranium, Dissolved   | R2978051 | J         |
|               | WG737003   | SAMP        | Zinc, Dissolved      | R2978051 | J         |
| L712736-04    | WG734853   | SAMP        | C10-C28 Diesel Range | R2971125 | J         |
|               | WG734496   | SAMP        | Chloride             | R2970259 | J         |
|               | WG734543   | SAMP        | Dissolved Solids     | R2970905 | J         |
|               | WG737007   | SAMP        | Aluminum             | R2978050 | J         |
|               | WG737003   | SAMP        | Aluminum, Dissolved  | R2978051 | J         |
|               | WG737007   | SAMP        | Chromium             | R2978050 | J         |
|               | WG737007   | SAMP        | Copper               | R2978050 | J         |
|               | WG737007   | SAMP        | Manganese            | R2978050 | J         |
|               | WG737007   | SAMP        | Potassium            | R2978050 | J         |
|               | WG737003   | SAMP        | Potassium, Dissolved | R2978051 | J         |
|               | WG737007   | SAMP        | Selenium             | R2978050 | J         |
|               | WG737003   | SAMP        | Selenium, Dissolved  | R2978051 | J         |
|               | WG737007   | SAMP        | Sodium               | R2978050 | J         |
|               | WG737003   | SAMP        | Sodium, Dissolved    | R2978051 | J         |
|               | WG734853   | SAMP        | C10-C28 Diesel Range | R2971125 | J         |
| L712736-05    | WG737003   | SAMP        | Aluminum, Dissolved  | R2978051 | J         |
|               | WG737007   | SAMP        | Arsenic              | R2978050 | J         |
|               | WG737003   | SAMP        | Arsenic, Dissolved   | R2978051 | J         |
|               | WG737007   | SAMP        | Calcium              | R2978066 | V         |
|               | WG737007   | SAMP        | Uranium              | R2978050 | J         |
|               | WG737003   | SAMP        | Uranium, Dissolved   | R2978051 | J         |

Attachment B  
Explanation of QC Qualifier Codes

| Qualifier | Meaning                                                                                                 |
|-----------|---------------------------------------------------------------------------------------------------------|
| J         | (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.   |
| J3        | The associated batch QC was outside the established quality control range for precision.                |
| P1        | RPD value not applicable for sample concentrations less than 5 times the reporting limit.               |
| V         | (ESC) - Additional QC Info: The sample concentration is too high to evaluate accurate spike recoveries. |

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy** - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision** - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate** - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC** - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed  
10/20/14 at 12:23:09

TSR Signing Reports: 633  
R5 - Desired TAT

Add Copper to the metals analysis for all samples 10/13/14

Sample: L712736-01 Account: ARCADHTX Received: 07/30/14 09:00 Due Date: 10/20/14 00:00 RPT Date: 10/17/14 10:55  
Field Filtered. Added total/diss metals. AV 8/11  
Sample: L712736-02 Account: ARCADHTX Received: 07/30/14 09:00 Due Date: 08/19/14 00:00 RPT Date: 10/17/14 10:55  
Field Filtered. Added total/diss metals. AV 8/11. Sample ID amended per TSR email  
Sample: L712736-03 Account: ARCADHTX Received: 07/30/14 09:00 Due Date: 08/19/14 00:00 RPT Date: 10/17/14 10:55  
Field Filtered. Added total/diss metals. AV 8/11  
Sample: L712736-04 Account: ARCADHTX Received: 07/30/14 09:00 Due Date: 08/19/14 00:00 RPT Date: 10/17/14 10:55  
Field Filtered. Added total/diss metals. AV 8/11  
Sample: L712736-05 Account: ARCADHTX Received: 07/30/14 09:00 Due Date: 08/19/14 00:00 RPT Date: 10/17/14 10:55  
Field Filtered. Added total/diss metals. AV 8/11

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Anions by Method 9056MOD              |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG734496</b> |
| Analysis Date:   | 7/30/2014 12:15:00 PM                 | Analyst:               | 577             |
| Instrument ID:   | IC-10                                 |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Method Blank

| Analyte         | CAS        | RDL     | MDL       | Qualifier |
|-----------------|------------|---------|-----------|-----------|
| <b>Chloride</b> | 16887-00-6 | < 1.00  | < 0.0519  |           |
| <b>Fluoride</b> | 16984-48-8 | < 0.100 | < 0.00990 |           |
| <b>Nitrate</b>  | 14797-55-8 | < 0.100 | < 0.0227  |           |
| <b>Nitrite</b>  | 14797-65-0 | < 0.100 | < 0.0277  |           |
| <b>Sulfate</b>  | 14808-79-8 | < 5.00  | < 0.0774  |           |



## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |  |  |                        |                 |
|------------------|---------------------------------------|--|--|------------------------|-----------------|
| Test:            | Anions by Method 9056MOD              |  |  | Matrix:                | Water - mg/L    |
| Project No:      | TX000836.0008.00004                   |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM |  |  | <b>Analytic Batch:</b> | <b>WG734496</b> |
| Collection Date: | 7/28/2014                             |  |  | Analyst:               | 577             |
| Analysis Date:   | 7/30/2014 12:15:00 PM                 |  |  |                        |                 |
| Instrument ID:   | IC-10                                 |  |  |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |  |  |                        |                 |

#### Laboratory Control Sample (LCS)

| Analyte  | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------|-----|------------|--------|-------|----------------|------|
| Chloride | 1   | 40         | 39.707 | 99    | 90 - 110       |      |
| Fluoride | 1   | 8          | 7.988  | 100   | 90 - 110       |      |
| Nitrate  | 1   | 8          | 8.0677 | 101   | 90 - 110       |      |
| Nitrite  | 1   | 8          | 7.8614 | 98    | 90 - 110       |      |
| Sulfate  | 1   | 40         | 39.846 | 100   | 90 - 110       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte  | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------|-----|------------|--------|-------|----------------|------|
| Chloride | 1   | 40         | 40.219 | 101   | 90 - 110       |      |
| Fluoride | 1   | 8          | 8.1452 | 102   | 90 - 110       |      |
| Nitrate  | 1   | 8          | 8.1688 | 102   | 90 - 110       |      |
| Nitrite  | 1   | 8          | 8.0231 | 100   | 90 - 110       |      |
| Sulfate  | 1   | 40         | 40.401 | 101   | 90 - 110       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte  | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|----------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Chloride | 1   | 40    | 39.707 | 99    | 40.219 | 101   | 90 - 110       | 1          | 20                 |      |
| Fluoride | 1   | 8     | 7.988  | 100   | 8.1452 | 102   | 90 - 110       | 2          | 20                 |      |
| Nitrate  | 1   | 8     | 8.0677 | 101   | 8.1688 | 102   | 90 - 110       | 1          | 20                 |      |
| Nitrite  | 1   | 8     | 7.8614 | 98    | 8.0231 | 100   | 90 - 110       | 2          | 20                 |      |
| Sulfate  | 1   | 40    | 39.846 | 100   | 40.401 | 101   | 90 - 110       | 1          | 20                 |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |  |  |                        |                 |
|------------------|---------------------------------------|--|--|------------------------|-----------------|
| Test:            | Anions by Method 9056MOD              |  |  | Matrix:                | Water - mg/L    |
| Project No:      | TX000836.0008.00004                   |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM |  |  | <b>Analytic Batch:</b> | <b>WG734496</b> |
| Collection Date: | 7/28/2014                             |  |  | Analyst:               | 577             |
| Analysis Date:   | 7/30/2014 12:15:00 PM                 |  |  |                        |                 |
| Instrument ID:   | IC-10                                 |  |  |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |  |  |                        |                 |

#### Sample Duplicate

L712736-02

| Analyte  | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|----------|-----|---------------|------------|-------|-------|-----------|
| Chloride | 50  | 387.53        | 379.61     | 2     | 20    |           |
| Fluoride | 1   | 2.4176        | 2.55       | 5     | 20    |           |
| Nitrate  | 1   | 0.8229        | 0.8143     | 1     | 20    |           |
| Nitrite  | 1   | <0.0277       | <0.0277    |       | 20    |           |
| Sulfate  | 50  | 3096.0        | 2987.9     | 4     | 20    |           |

#### Sample Duplicate

L712727-01

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Nitrate | 1   | 1.0065        | 1.0636     | 6     | 20    |           |
| Nitrite | 1   | <0.0277       | <0.0277    |       | 20    |           |
| Sulfate | 5   | 194.48        | 197.60     | 2     | 20    |           |

#### Matrix Spike / Matrix Spike Duplicate

L712737-01

| Analyte | Dil | Spike Value | Sample MS | % Rec  | MSD | % Rec  | Control Limits | % Rec Qual | RPD | Control Limits | RPD Qual |
|---------|-----|-------------|-----------|--------|-----|--------|----------------|------------|-----|----------------|----------|
| Nitrate | 1   | 5           | 0.4263    | 5.4915 | 101 | 5.4749 | 101            | 80 - 120   | 0   | 20             |          |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Cyanide by Method 9012B               |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG735726</b> |
| Analysis Date:   | 8/7/2014 9:50:00 AM                   | Analyst:               | 578             |
| Instrument ID:   | LACHAT4                               |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Method Blank

| Analyte | CAS     | RDL       | MDL       | Qualifier |
|---------|---------|-----------|-----------|-----------|
| Cyanide | 57-12-5 | < 0.00500 | < 0.00180 |           |

#### Laboratory Control Sample (LCS)

| Analyte | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------|-----|------------|--------|-------|----------------|------|
| Cyanide | 1   | 0.1        | 0.0988 | 98.8  | 90 - 110       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------|-----|------------|--------|-------|----------------|------|
| Cyanide | 1   | 0.1        | 0.0996 | 99.6  | 90 - 110       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|---------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Cyanide | 1   | 0.1   | 0.0988 | 98.8  | 0.0996 | 99.6  | 90 - 110       | 0.81       | 20                 |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |  |  |                        |                 |
|------------------|---------------------------------------|--|--|------------------------|-----------------|
| Test:            | Cyanide by Method 9012B               |  |  | Matrix:                | Water - mg/L    |
| Project No:      | TX000836.0008.00004                   |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM |  |  | <b>Analytic Batch:</b> | <b>WG735726</b> |
| Collection Date: | 7/28/2014                             |  |  | Analyst:               | 578             |
| Analysis Date:   | 8/7/2014 9:50:00 AM                   |  |  |                        |                 |
| Instrument ID:   | LACHAT4                               |  |  |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |  |  |                        |                 |

#### Sample Duplicate

L712736-01

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Cyanide | 1   | 0.0021        | 0.0004     | 136   | 20    | P1        |

#### Sample Duplicate

L712786-01

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Cyanide | 1   | <0.0018       | <0.0018    |       | 20    |           |

#### Matrix Spike / Matrix Spike Duplicate

L712736-05

| Analyte | Dil | Spike Value | Sample | MS    | % Rec | MSD   | % Rec | Control Limits | % Rec Qual | RPD  | Control Limits | RPD Qual |
|---------|-----|-------------|--------|-------|-------|-------|-------|----------------|------------|------|----------------|----------|
| Cyanide | 1   | 0.2         | 0.0    | 0.194 | 97    | 0.189 | 94.5  | 90 - 110       |            | 2.61 | 20             |          |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                              |                        |                 |
|------------------|----------------------------------------------|------------------------|-----------------|
| Test:            | Total Dissolved Solids by Method 2540 C-2011 |                        |                 |
| Project No:      | TX000836.0008.00004                          | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM        | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                    | <b>Analytic Batch:</b> | <b>WG734543</b> |
| Analysis Date:   | 8/1/2014 3:19:00 PM                          | Analyst:               | 519             |
| Instrument ID:   | WETBAL2                                      |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05               |                        |                 |

#### Method Blank

| Analyte          | CAS     | RDL    | MDL    | Qualifier |
|------------------|---------|--------|--------|-----------|
| Dissolved Solids | DSOLIDS | < 10.0 | < 2.82 |           |

#### Laboratory Control Sample (LCS)

| Analyte          | Dil | True Value | Found | % Rec | Control Limits | Qual |
|------------------|-----|------------|-------|-------|----------------|------|
| Dissolved Solids | 1   | 8800       | 8720  | 99.1  | 85 - 115       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte          | Dil | True Value | Found | % Rec | Control Limits | Qual |
|------------------|-----|------------|-------|-------|----------------|------|
| Dissolved Solids | 1   | 8800       | 8690  | 98.8  | 85 - 115       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte          | Dil | Spike | LCS  | % Rec | LCSD | % Rec | Control Limits | % Rec Qual | Control RPD % RPD | Control RPD Limits | Control RPD Qual |
|------------------|-----|-------|------|-------|------|-------|----------------|------------|-------------------|--------------------|------------------|
| Dissolved Solids | 1   | 8800  | 8720 | 99.1  | 8690 | 98.8  | 85 - 115       | 0.34       | 5                 |                    |                  |



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## Quality Control Summary

**SDG: L712736**

**ARCADIS US - TX**

|                  |                                              |                        |                 |
|------------------|----------------------------------------------|------------------------|-----------------|
| Test:            | Total Dissolved Solids by Method 2540 C-2011 |                        |                 |
| Project No:      | TX000836.0008.00004                          | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM        | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                    | <b>Analytic Batch:</b> | <b>WG734543</b> |
| Analysis Date:   | 8/1/2014 3:19:00 PM                          | Analyst:               | 519             |
| Instrument ID:   | WETBAL2                                      |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05               |                        |                 |

### Sample Duplicate

L712736-05

| Analyte          | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|------------------|-----|---------------|------------|-------|-------|-----------|
| Dissolved Solids | 1   | 2105          | 2200       | 4.41  | 5     |           |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Mercury by Method 7470A               |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG736040</b> |
| Analysis Date:   | 8/8/2014 10:56:00 AM                  | Analyst:               | 572             |
| Instrument ID:   | CVAA3                                 | Prep Date:             | 8/7/2014        |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Method Blank

| Analyte | CAS       | RDL     | MDL      | Qualifier |
|---------|-----------|---------|----------|-----------|
| Mercury | 7439-97-6 | < 0.200 | < 0.0490 |           |

#### Laboratory Control Sample (LCS)

| Analyte | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------|-----|------------|--------|-------|----------------|------|
| Mercury | 1   | 3          | 3.0934 | 103   | 85 - 115       |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Mercury by Method 7470A               |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG736040</b> |
| Analysis Date:   | 8/8/2014 10:56:00 AM                  | Analyst:               | 572             |
| Instrument ID:   | CVAA3                                 | Prep Date:             | 8/7/2014        |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Sample Duplicate

L712736-01

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Mercury | 1   | <0.049        | <0.049     |       | 20    |           |

#### Serial Dilution

L712736-01

| Analyte | Dil | Sample Result | SD Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|-----------|-------|-------|-----------|
| Mercury | 5   | <0.049        | <0.245    |       | 10    |           |

#### Matrix Spike / Matrix Spike Duplicate

L712736-01

| Analyte | Dil | Spike Value | Sample MS | % Rec  | MSD | % Rec  | Control Limits | % Rec Qual | RPD | Control Limits | RPD Qual |
|---------|-----|-------------|-----------|--------|-----|--------|----------------|------------|-----|----------------|----------|
| Mercury | 1   | 3           | 0.0351    | 2.7974 | 92  | 2.9087 | 96             | 80 - 120   | 4   | 20             |          |



## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 8:52:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Method Blank

| Analyte              | CAS       | RDL     | MDL     | Qualifier |
|----------------------|-----------|---------|---------|-----------|
| Aluminum,Dissolved   | 7429-90-5 | < 50.0  | 6.48    |           |
| Arsenic,Dissolved    | 7440-38-2 | < 1.00  | < 0.250 |           |
| Barium,Dissolved     | 7440-39-3 | < 2.00  | < 0.360 |           |
| Boron,Dissolved      | 7440-42-8 | < 20.0  | < 1.5   |           |
| Cadmium,Dissolved    | 7440-43-9 | < 0.500 | < 0.160 |           |
| Calcium,Dissolved    | 7440-70-2 | < 1000  | < 46.0  |           |
| Chromium,Dissolved   | 7440-47-3 | < 1.00  | < 0.540 |           |
| Cobalt,Dissolved     | 7440-48-4 | < 1.00  | < 0.260 |           |
| Copper,Dissolved     | 7440-50-8 | < 1.00  | < 0.520 |           |
| Iron,Dissolved       | 7439-89-6 | < 50.0  | < 50.0  |           |
| Lead,Dissolved       | 7439-92-1 | < 1.00  | < 0.240 |           |
| Manganese,Dissolved  | 7439-96-5 | < 2.00  | < 0.250 |           |
| Molybdenum,Dissolved | 7439-98-7 | < 2.00  | < 0.140 |           |
| Nickel,Dissolved     | 7440-02-0 | < 1.00  | < 0.350 |           |
| Potassium,Dissolved  | 7440-09-7 | < 1000  | 46.5    |           |
| Selenium,Dissolved   | 7782-49-2 | < 2.00  | 0.596   |           |
| Silver,Dissolved     | 7440-22-4 | < 0.500 | < 0.310 |           |
| Sodium,Dissolved     | 7440-23-5 | < 1000  | < 110   |           |
| Uranium,Dissolved    | 7440-61-1 | < 10.0  | < 0.330 |           |
| Vanadium,Dissolved   | 7440-62-2 | < 1.00  | < 0.180 |           |
| Zinc,Dissolved       | 7440-66-6 | < 10.0  | < 2.56  |           |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:21:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Method Blank

| Analyte    | CAS       | RDL     | MDL     | Qualifier |
|------------|-----------|---------|---------|-----------|
| Aluminum   | 7429-90-5 | < 50.0  | 3.37    |           |
| Arsenic    | 7440-38-2 | < 1.00  | < 0.250 |           |
| Barium     | 7440-39-3 | < 2.00  | < 0.360 |           |
| Boron      | 7440-42-8 | < 20.0  | 2.52    |           |
| Cadmium    | 7440-43-9 | < 0.500 | < 0.160 |           |
| Calcium    | 7440-70-2 | < 1000  | < 46.0  |           |
| Chromium   | 7440-47-3 | < 1.00  | < 0.540 |           |
| Cobalt     | 7440-48-4 | < 1.00  | < 0.260 |           |
| Copper     | 7440-50-8 | < 1.00  | < 0.520 |           |
| Iron       | 7439-89-6 | < 50.0  | < 50.0  |           |
| Lead       | 7439-92-1 | < 1.00  | < 0.240 |           |
| Manganese  | 7439-96-5 | < 2.00  | < 0.250 |           |
| Molybdenum | 7439-98-7 | < 2.00  | < 0.140 |           |
| Nickel     | 7440-02-0 | < 1.00  | < 0.350 |           |
| Potassium  | 7440-09-7 | < 1000  | < 37.0  |           |
| Selenium   | 7782-49-2 | < 2.00  | 0.714   |           |
| Silver     | 7440-22-4 | < 0.500 | < 0.310 |           |
| Sodium     | 7440-23-5 | < 1000  | < 110   |           |
| Uranium    | 7440-61-1 | < 10.0  | < 0.330 |           |
| Vanadium   | 7440-62-2 | < 1.00  | < 0.180 |           |
| Zinc       | 7440-66-6 | < 10.0  | < 2.56  |           |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 8:52:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

### Laboratory Control Sample (LCS)

| Analyte              | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------------------|-----|------------|--------|-------|----------------|------|
| Aluminum,Dissolved   | 1   | 1110       | 1003.7 | 90    | 70 - 130       |      |
| Arsenic,Dissolved    | 1   | 111        | 98.223 | 88    | 85 - 115       |      |
| Barium,Dissolved     | 1   | 111        | 99.882 | 90    | 85 - 115       |      |
| Boron,Dissolved      | 1   | 111        | 112.24 | 101   | 70 - 130       |      |
| Cadmium,Dissolved    | 1   | 111        | 97.930 | 88    | 85 - 115       |      |
| Calcium,Dissolved    | 1   | 11100      | 10231  | 92    | 70 - 130       |      |
| Chromium,Dissolved   | 1   | 111        | 98.361 | 89    | 85 - 115       |      |
| Cobalt,Dissolved     | 1   | 111        | 99.060 | 89    | 85 - 115       |      |
| Copper,Dissolved     | 1   | 111        | 98.338 | 89    | 85 - 115       |      |
| Iron,Dissolved       | 1   | 1110       | 1004.8 | 91    | 85 - 115       |      |
| Lead,Dissolved       | 1   | 111        | 98.459 | 89    | 85 - 115       |      |
| Manganese,Dissolved  | 1   | 111        | 99.623 | 90    | 85 - 115       |      |
| Molybdenum,Dissolved | 1   | 111        | 102.26 | 92    | 85 - 115       |      |
| Nickel,Dissolved     | 1   | 111        | 99.430 | 90    | 85 - 115       |      |
| Potassium,Dissolved  | 1   | 11100      | 9852.2 | 89    | 70 - 130       |      |
| Selenium,Dissolved   | 1   | 111        | 97.620 | 88    | 85 - 115       |      |
| Silver,Dissolved     | 1   | 111        | 102.54 | 92    | 85 - 115       |      |
| Sodium,Dissolved     | 1   | 11100      | 9946.8 | 90    | 70 - 130       |      |
| Uranium,Dissolved    | 1   | 111        | 98.006 | 88    | 70 - 130       |      |
| Vanadium,Dissolved   | 1   | 111        | 98.601 | 89    | 85 - 115       |      |
| Zinc,Dissolved       | 1   | 111        | 97.672 | 88    | 85 - 115       |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 8:52:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte              | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------------------|-----|------------|--------|-------|----------------|------|
| Aluminum,Dissolved   | 1   | 1110       | 1018.2 | 92    | 70 - 130       |      |
| Arsenic,Dissolved    | 1   | 111        | 97.318 | 88    | 85 - 115       |      |
| Barium,Dissolved     | 1   | 111        | 100.90 | 91    | 85 - 115       |      |
| Boron,Dissolved      | 1   | 111        | 121.39 | 109   | 70 - 130       |      |
| Cadmium,Dissolved    | 1   | 111        | 97.919 | 88    | 85 - 115       |      |
| Calcium,Dissolved    | 1   | 11100      | 10287  | 93    | 70 - 130       |      |
| Chromium,Dissolved   | 1   | 111        | 99.150 | 89    | 85 - 115       |      |
| Cobalt,Dissolved     | 1   | 111        | 97.966 | 88    | 85 - 115       |      |
| Copper,Dissolved     | 1   | 111        | 97.303 | 88    | 85 - 115       |      |
| Iron,Dissolved       | 1   | 1110       | 989.32 | 89    | 85 - 115       |      |
| Lead,Dissolved       | 1   | 111        | 98.857 | 89    | 85 - 115       |      |
| Manganese,Dissolved  | 1   | 111        | 98.806 | 89    | 85 - 115       |      |
| Molybdenum,Dissolved | 1   | 111        | 101.17 | 91    | 85 - 115       |      |
| Nickel,Dissolved     | 1   | 111        | 98.464 | 89    | 85 - 115       |      |
| Potassium,Dissolved  | 1   | 11100      | 9946.2 | 90    | 70 - 130       |      |
| Selenium,Dissolved   | 1   | 111        | 97.783 | 88    | 85 - 115       |      |
| Silver,Dissolved     | 1   | 111        | 103.08 | 93    | 85 - 115       |      |
| Sodium,Dissolved     | 1   | 11100      | 9947.9 | 90    | 70 - 130       |      |
| Uranium,Dissolved    | 1   | 111        | 98.923 | 89    | 70 - 130       |      |
| Vanadium,Dissolved   | 1   | 111        | 100.05 | 90    | 85 - 115       |      |
| Zinc,Dissolved       | 1   | 111        | 95.954 | 86    | 85 - 115       |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 8:52:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte              | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|----------------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Aluminum,Dissolved   | 1   | 1110  | 1003.7 | 90    | 1018.2 | 92    | 70 - 130       | 1          | 20                 |      |
| Arsenic,Dissolved    | 1   | 111   | 98.223 | 88    | 97.318 | 88    | 85 - 115       | 1          | 20                 |      |
| Barium,Dissolved     | 1   | 111   | 99.882 | 90    | 100.90 | 91    | 85 - 115       | 1          | 20                 |      |
| Boron,Dissolved      | 1   | 111   | 112.24 | 101   | 121.39 | 109   | 70 - 130       | 8          | 20                 |      |
| Cadmium,Dissolved    | 1   | 111   | 97.930 | 88    | 97.919 | 88    | 85 - 115       | 0          | 20                 |      |
| Calcium,Dissolved    | 1   | 11100 | 10231  | 92    | 10287  | 93    | 70 - 130       | 1          | 20                 |      |
| Chromium,Dissolved   | 1   | 111   | 98.361 | 89    | 99.150 | 89    | 85 - 115       | 1          | 20                 |      |
| Cobalt,Dissolved     | 1   | 111   | 99.060 | 89    | 97.966 | 88    | 85 - 115       | 1          | 20                 |      |
| Copper,Dissolved     | 1   | 111   | 98.338 | 89    | 97.303 | 88    | 85 - 115       | 1          | 20                 |      |
| Iron,Dissolved       | 1   | 1110  | 1004.8 | 91    | 989.32 | 89    | 85 - 115       | 2          | 20                 |      |
| Lead,Dissolved       | 1   | 111   | 98.459 | 89    | 98.857 | 89    | 85 - 115       | 0          | 20                 |      |
| Manganese,Dissolved  | 1   | 111   | 99.623 | 90    | 98.806 | 89    | 85 - 115       | 1          | 20                 |      |
| Molybdenum,Dissolved | 1   | 111   | 102.26 | 92    | 101.17 | 91    | 85 - 115       | 1          | 20                 |      |
| Nickel,Dissolved     | 1   | 111   | 99.430 | 90    | 98.464 | 89    | 85 - 115       | 1          | 20                 |      |
| Potassium,Dissolved  | 1   | 11100 | 9852.2 | 89    | 9946.2 | 90    | 70 - 130       | 1          | 20                 |      |
| Selenium,Dissolved   | 1   | 111   | 97.620 | 88    | 97.783 | 88    | 85 - 115       | 0          | 20                 |      |
| Silver,Dissolved     | 1   | 111   | 102.54 | 92    | 103.08 | 93    | 85 - 115       | 1          | 20                 |      |
| Sodium,Dissolved     | 1   | 11100 | 9946.8 | 90    | 9947.9 | 90    | 70 - 130       | 0          | 20                 |      |
| Uranium,Dissolved    | 1   | 111   | 98.006 | 88    | 98.923 | 89    | 70 - 130       | 1          | 20                 |      |
| Vanadium,Dissolved   | 1   | 111   | 98.601 | 89    | 100.05 | 90    | 85 - 115       | 1          | 20                 |      |
| Zinc,Dissolved       | 1   | 111   | 97.672 | 88    | 95.954 | 86    | 85 - 115       | 2          | 20                 |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:21:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

### Laboratory Control Sample (LCS)

| Analyte    | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|------------|-----|------------|--------|-------|----------------|------|
| Aluminum   | 1   | 1110       | 996.26 | 90    | 70 - 130       |      |
| Arsenic    | 1   | 111        | 98.350 | 89    | 85 - 115       |      |
| Barium     | 1   | 111        | 99.041 | 89    | 85 - 115       |      |
| Boron      | 1   | 111        | 95.712 | 86    | 70 - 130       |      |
| Cadmium    | 1   | 111        | 97.570 | 88    | 85 - 115       |      |
| Calcium    | 1   | 11100      | 10367  | 93    | 70 - 130       |      |
| Chromium   | 1   | 111        | 99.555 | 90    | 85 - 115       |      |
| Cobalt     | 1   | 111        | 99.346 | 90    | 85 - 115       |      |
| Copper     | 1   | 111        | 98.356 | 89    | 85 - 115       |      |
| Iron       | 1   | 1110       | 1006.2 | 91    | 85 - 115       |      |
| Lead       | 1   | 111        | 99.458 | 90    | 85 - 115       |      |
| Manganese  | 1   | 111        | 99.817 | 90    | 85 - 115       |      |
| Molybdenum | 1   | 111        | 102.13 | 92    | 85 - 115       |      |
| Nickel     | 1   | 111        | 98.809 | 89    | 85 - 115       |      |
| Potassium  | 1   | 11100      | 10035  | 90    | 70 - 130       |      |
| Selenium   | 1   | 111        | 98.952 | 89    | 85 - 115       |      |
| Silver     | 1   | 111        | 102.07 | 92    | 85 - 115       |      |
| Sodium     | 1   | 11100      | 9954.8 | 90    | 70 - 130       |      |
| Uranium    | 1   | 111        | 99.328 | 89    | 70 - 130       |      |
| Vanadium   | 1   | 111        | 99.476 | 90    | 85 - 115       |      |
| Zinc       | 1   | 111        | 97.621 | 88    | 85 - 115       |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:21:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte    | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|------------|-----|------------|--------|-------|----------------|------|
| Aluminum   | 1   | 1110       | 993.16 | 89    | 70 - 130       |      |
| Arsenic    | 1   | 111        | 97.750 | 88    | 85 - 115       |      |
| Barium     | 1   | 111        | 99.868 | 90    | 85 - 115       |      |
| Boron      | 1   | 111        | 99.227 | 89    | 70 - 130       |      |
| Cadmium    | 1   | 111        | 98.035 | 88    | 85 - 115       |      |
| Calcium    | 1   | 11100      | 10214  | 92    | 70 - 130       |      |
| Chromium   | 1   | 111        | 98.612 | 89    | 85 - 115       |      |
| Cobalt     | 1   | 111        | 98.521 | 89    | 85 - 115       |      |
| Copper     | 1   | 111        | 98.232 | 88    | 85 - 115       |      |
| Iron       | 1   | 1110       | 997.20 | 90    | 85 - 115       |      |
| Lead       | 1   | 111        | 99.722 | 90    | 85 - 115       |      |
| Manganese  | 1   | 111        | 98.680 | 89    | 85 - 115       |      |
| Molybdenum | 1   | 111        | 101.31 | 91    | 85 - 115       |      |
| Nickel     | 1   | 111        | 99.048 | 89    | 85 - 115       |      |
| Potassium  | 1   | 11100      | 9851.6 | 89    | 70 - 130       |      |
| Selenium   | 1   | 111        | 97.828 | 88    | 85 - 115       |      |
| Silver     | 1   | 111        | 103.06 | 93    | 85 - 115       |      |
| Sodium     | 1   | 11100      | 9842.4 | 89    | 70 - 130       |      |
| Uranium    | 1   | 111        | 99.146 | 89    | 70 - 130       |      |
| Vanadium   | 1   | 111        | 99.101 | 89    | 85 - 115       |      |
| Zinc       | 1   | 111        | 96.746 | 87    | 85 - 115       |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:21:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte    | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control  | % Rec | Control RPD |             |
|------------|-----|-------|--------|-------|--------|-------|----------|-------|-------------|-------------|
|            |     |       |        |       |        |       | Limits   | Qual  | % RPD       | Limits Qual |
| Aluminum   | 1   | 1110  | 996.26 | 90    | 993.16 | 89    | 70 - 130 |       | 0           | 20          |
| Arsenic    | 1   | 111   | 98.350 | 89    | 97.750 | 88    | 85 - 115 |       | 1           | 20          |
| Barium     | 1   | 111   | 99.041 | 89    | 99.868 | 90    | 85 - 115 |       | 1           | 20          |
| Boron      | 1   | 111   | 95.712 | 86    | 99.227 | 89    | 70 - 130 |       | 4           | 20          |
| Cadmium    | 1   | 111   | 97.570 | 88    | 98.035 | 88    | 85 - 115 |       | 0           | 20          |
| Calcium    | 1   | 11100 | 10367  | 93    | 10214  | 92    | 70 - 130 |       | 1           | 20          |
| Chromium   | 1   | 111   | 99.555 | 90    | 98.612 | 89    | 85 - 115 |       | 1           | 20          |
| Cobalt     | 1   | 111   | 99.346 | 90    | 98.521 | 89    | 85 - 115 |       | 1           | 20          |
| Copper     | 1   | 111   | 98.356 | 89    | 98.232 | 88    | 85 - 115 |       | 0           | 20          |
| Iron       | 1   | 1110  | 1006.2 | 91    | 997.20 | 90    | 85 - 115 |       | 1           | 20          |
| Lead       | 1   | 111   | 99.458 | 90    | 99.722 | 90    | 85 - 115 |       | 0           | 20          |
| Manganese  | 1   | 111   | 99.817 | 90    | 98.680 | 89    | 85 - 115 |       | 1           | 20          |
| Molybdenum | 1   | 111   | 102.13 | 92    | 101.31 | 91    | 85 - 115 |       | 1           | 20          |
| Nickel     | 1   | 111   | 98.809 | 89    | 99.048 | 89    | 85 - 115 |       | 0           | 20          |
| Potassium  | 1   | 11100 | 10035  | 90    | 9851.6 | 89    | 70 - 130 |       | 2           | 20          |
| Selenium   | 1   | 111   | 98.952 | 89    | 97.828 | 88    | 85 - 115 |       | 1           | 20          |
| Silver     | 1   | 111   | 102.07 | 92    | 103.06 | 93    | 85 - 115 |       | 1           | 20          |
| Sodium     | 1   | 11100 | 9954.8 | 90    | 9842.4 | 89    | 70 - 130 |       | 1           | 20          |
| Uranium    | 1   | 111   | 99.328 | 89    | 99.146 | 89    | 70 - 130 |       | 0           | 20          |
| Vanadium   | 1   | 111   | 99.476 | 90    | 99.101 | 89    | 85 - 115 |       | 0           | 20          |
| Zinc       | 1   | 111   | 97.621 | 88    | 96.746 | 87    | 85 - 115 |       | 1           | 20          |



## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 8:52:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Serial Dilution

L712736-03

| Analyte              | Dil | Sample Result | SD Result | % RPD | Limit | Qualifier |
|----------------------|-----|---------------|-----------|-------|-------|-----------|
| Aluminum,Dissolved   | 5   | 34.176        | 42.113    | 23    | 10    |           |
| Arsenic,Dissolved    | 5   | 0.6592        | 0.7314    | 11    | 10    |           |
| Barium,Dissolved     | 5   | 14.446        | 15.500    | 7     | 10    |           |
| Boron,Dissolved      | 5   | 177.11        | 133.00    | 25    | 10    |           |
| Cadmium,Dissolved    | 5   | <0.16         | <0.8      |       | 10    |           |
| Chromium,Dissolved   | 5   | 1.7940        | 2.3170    | 29    | 10    |           |
| Cobalt,Dissolved     | 5   | <0.26         | <1.3      |       | 10    |           |
| Copper,Dissolved     | 5   | 0.5970        | 0.8092    | 36    | 10    |           |
| Iron,Dissolved       | 5   | <50           | <250      |       | 10    |           |
| Lead,Dissolved       | 5   | <0.24         | <1.2      |       | 10    |           |
| Manganese,Dissolved  | 5   | 0.5617        | 0.7880    | 40    | 10    |           |
| Molybdenum,Dissolved | 5   | 7.1002        | 7.4059    | 4     | 10    |           |
| Nickel,Dissolved     | 5   | 0.5948        | 1.2627    | 112   | 10    |           |
| Potassium,Dissolved  | 5   | 2121.2        | 2546.5    | 20    | 10    |           |
| Selenium,Dissolved   | 5   | 8.5181        | 11.105    | 30    | 10    |           |
| Silver,Dissolved     | 5   | <0.31         | <1.55     |       | 10    |           |
| Sodium,Dissolved     | 5   | 76826         | 86257     | 12    | 10    |           |
| Uranium,Dissolved    | 5   | 3.8706        | 4.2095    | 9     | 10    |           |
| Vanadium,Dissolved   | 5   | 4.3521        | 5.0052    | 15    | 10    |           |
| Zinc,Dissolved       | 5   | 5.6014        | 15.045    | 169   | 10    |           |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |  |  |                        |                 |
|------------------|---------------------------------------|--|--|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |  |  | Matrix:                | Water - ug/L    |
| Project No:      | TX000836.0008.00004                   |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM |  |  | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Collection Date: | 7/28/2014                             |  |  | Analyst:               | 664             |
| Analysis Date:   | 8/13/2014 8:52:00 PM                  |  |  | Prep Date:             | 8/13/2014       |
| Instrument ID:   | ICPMS8                                |  |  |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |  |  |                        |                 |

#### Matrix Spike / Matrix Spike Duplicate

L712736-03

| Analyte              | Dil | Spike Value | Sample | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD | Control Limits | RPD Qual |
|----------------------|-----|-------------|--------|--------|-------|--------|-------|----------------|------------|-----|----------------|----------|
| Aluminum,Dissolved   | 1   | 1110        | 34.176 | 1002.9 | 87    | 1010.6 | 88    | 70 - 130       |            | 1   | 20             |          |
| Arsenic,Dissolved    | 1   | 111         | 0.6592 | 99.516 | 89    | 99.864 | 89    | 75 - 125       |            | 0   | 20             |          |
| Barium,Dissolved     | 1   | 111         | 14.446 | 112.45 | 88    | 113.73 | 89    | 75 - 125       |            | 1   | 20             |          |
| Boron,Dissolved      | 1   | 111         | 177.11 | 309.50 | 119   | 302.59 | 113   | 70 - 130       |            | 2   | 20             |          |
| Cadmium,Dissolved    | 1   | 111         | 0.0124 | 96.715 | 87    | 98.129 | 88    | 75 - 125       |            | 1   | 20             |          |
| Calcium,Dissolved    | 10  | 1110        | 440108 | 426802 | 0     | 424358 | 0     | 70 - 130       | V          | 1   | 20             |          |
| Chromium,Dissolved   | 1   | 111         | 1.7940 | 99.050 | 88    | 100.73 | 89    | 75 - 125       |            | 2   | 20             |          |
| Cobalt,Dissolved     | 1   | 111         | 0.0684 | 96.642 | 87    | 97.498 | 88    | 75 - 125       |            | 1   | 20             |          |
| Copper,Dissolved     | 1   | 111         | 0.5970 | 96.852 | 87    | 97.576 | 87    | 75 - 125       |            | 1   | 20             |          |
| Iron,Dissolved       | 1   | 1110        | 10.818 | 986.47 | 88    | 1000.8 | 89    | 75 - 125       |            | 1   | 20             |          |
| Lead,Dissolved       | 1   | 111         | 0.0640 | 96.814 | 87    | 98.383 | 89    | 75 - 125       |            | 2   | 20             |          |
| Manganese,Dissolved  | 1   | 111         | 0.5617 | 98.699 | 88    | 99.453 | 89    | 75 - 125       |            | 1   | 20             |          |
| Molybdenum,Dissolved | 1   | 111         | 7.1002 | 106.40 | 89    | 107.37 | 90    | 75 - 125       |            | 1   | 20             |          |
| Nickel,Dissolved     | 1   | 111         | 0.5948 | 95.955 | 86    | 96.350 | 86    | 75 - 125       |            | 0   | 20             |          |
| Potassium,Dissolved  | 1   | 11100       | 2121.2 | 11861  | 88    | 11986  | 89    | 70 - 130       |            | 1   | 20             |          |
| Selenium,Dissolved   | 1   | 111         | 8.5181 | 102.14 | 84    | 102.01 | 84    | 75 - 125       |            | 0   | 20             |          |
| Silver,Dissolved     | 1   | 111         | 0.0182 | 93.673 | 84    | 98.998 | 89    | 75 - 125       |            | 6   | 20             |          |
| Sodium,Dissolved     | 1   | 11100       | 76826  | 86006  | 83    | 86588  | 88    | 70 - 130       |            | 1   | 20             |          |
| Uranium,Dissolved    | 1   | 111         | 3.8706 | 101.58 | 88    | 103.61 | 90    | 70 - 130       |            | 2   | 20             |          |
| Vanadium,Dissolved   | 1   | 111         | 4.3521 | 104.56 | 90    | 105.52 | 91    | 75 - 125       |            | 1   | 20             |          |
| Zinc,Dissolved       | 1   | 111         | 5.6014 | 94.599 | 80    | 95.177 | 81    | 75 - 125       |            | 1   | 20             |          |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 8:52:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

### Post Digest Spike

L712736-03

| Analyte              | Dil | Spike Value | Sample | Result | % Rec | Control Limits | Qualifier |
|----------------------|-----|-------------|--------|--------|-------|----------------|-----------|
| Aluminum,Dissolved   | 1   | 1110        | 34.176 | 1096.2 | 96    | 70-130         |           |
| Arsenic,Dissolved    | 1   | 111         | 0.6592 | 106.88 | 96    | 85-115         |           |
| Barium,Dissolved     | 1   | 111         | 14.446 | 121.48 | 96    | 85-115         |           |
| Boron,Dissolved      | 1   | 111         | 177.11 | 312.68 | 122   | 70-130         |           |
| Cadmium,Dissolved    | 1   | 111         | 0.0124 | 105.74 | 95    | 85-115         |           |
| Chromium,Dissolved   | 1   | 111         | 1.7940 | 107.41 | 95    | 85-115         |           |
| Cobalt,Dissolved     | 1   | 111         | 0.0684 | 104.18 | 94    | 85-115         |           |
| Copper,Dissolved     | 1   | 111         | 0.5970 | 104.28 | 93    | 85-115         |           |
| Iron,Dissolved       | 1   | 1110        | 10.818 | 1074.8 | 96    | 85-115         |           |
| Lead,Dissolved       | 1   | 111         | 0.0640 | 105.79 | 95    | 85-115         |           |
| Manganese,Dissolved  | 1   | 111         | 0.5617 | 106.47 | 95    | 85-115         |           |
| Molybdenum,Dissolved | 1   | 111         | 7.1002 | 113.22 | 96    | 85-115         |           |
| Nickel,Dissolved     | 1   | 111         | 0.5948 | 103.24 | 92    | 85-115         |           |
| Potassium,Dissolved  | 1   | 11100       | 2121.2 | 12538  | 94    | 70-130         |           |
| Selenium,Dissolved   | 1   | 111         | 8.5181 | 108.20 | 90    | 85-115         |           |
| Silver,Dissolved     | 1   | 111         | 0.0182 | 51.386 | 46    | 85-115         |           |
| Sodium,Dissolved     | 1   | 11100       | 76826  | 87520  | 96    | 70-130         |           |
| Uranium,Dissolved    | 1   | 111         | 3.8706 | 110.42 | 96    | 70-130         |           |
| Vanadium,Dissolved   | 1   | 111         | 4.3521 | 113.19 | 98    | 85-115         |           |
| Zinc,Dissolved       | 1   | 111         | 5.6014 | 105.30 | 90    | 85-115         |           |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:21:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Serial Dilution

L712736-05

| Analyte    | Dil | Sample Result | SD Result | % RPD | Limit | Qualifier |
|------------|-----|---------------|-----------|-------|-------|-----------|
| Aluminum   | 5   | 60.325        | 71.083    | 18    | 10    |           |
| Arsenic    | 5   | 0.6651        | 0.7167    | 8     | 10    |           |
| Barium     | 5   | 14.999        | 15.944    | 6     | 10    |           |
| Boron      | 5   | 157.19        | 173.81    | 11    | 10    |           |
| Cadmium    | 5   | <0.16         | <0.8      |       | 10    |           |
| Chromium   | 5   | 1.6723        | 2.3430    | 40    | 10    |           |
| Cobalt     | 5   | <0.26         | <1.3      |       | 10    |           |
| Copper     | 5   | <0.52         | <2.6      |       | 10    |           |
| Iron       | 5   | <50           | <250      |       | 10    |           |
| Lead       | 5   | <0.24         | <1.2      |       | 10    |           |
| Manganese  | 5   | 3.8046        | 4.0327    | 6     | 10    |           |
| Molybdenum | 5   | 7.4270        | 7.7612    | 4     | 10    |           |
| Nickel     | 5   | <0.35         | <1.75     |       | 10    |           |
| Potassium  | 5   | 2119.4        | 2392.8    | 13    | 10    |           |
| Selenium   | 5   | 8.4529        | 9.1170    | 8     | 10    |           |
| Silver     | 5   | <0.31         | <1.55     |       | 10    |           |
| Sodium     | 5   | 77721         | 82883     | 7     | 10    |           |
| Uranium    | 5   | 4.0052        | 4.2463    | 6     | 10    |           |
| Vanadium   | 5   | 4.4657        | 4.9237    | 10    | 10    |           |
| Zinc       | 5   | <2.56         | <12.8     |       | 10    |           |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:21:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Matrix Spike / Matrix Spike Duplicate

L712736-05

| Analyte    | Dil | Spike Value | Sample | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD | Control Limits | RPD |
|------------|-----|-------------|--------|--------|-------|--------|-------|----------------|------------|-----|----------------|-----|
| Aluminum   | 1   | 1110        | 60.325 | 1059.7 | 90    | 1044.9 | 89    | 70 - 130       |            | 1   | 20             |     |
| Arsenic    | 1   | 111         | 0.6651 | 100.78 | 90    | 100.60 | 90    | 75 - 125       |            | 0   | 20             |     |
| Barium     | 1   | 111         | 14.999 | 115.92 | 91    | 112.93 | 88    | 75 - 125       |            | 3   | 20             |     |
| Boron      | 1   | 111         | 157.19 | 250.19 | 84    | 251.60 | 85    | 70 - 130       |            | 1   | 20             |     |
| Cadmium    | 1   | 111         | 0.0164 | 98.897 | 89    | 97.395 | 88    | 75 - 125       |            | 2   | 20             |     |
| Calcium    | 10  | 1110        | 422811 | 499404 | 690   | 438033 | 137   | 70 - 130       | V          | 13  | 20             |     |
| Chromium   | 1   | 111         | 1.6723 | 101.42 | 90    | 100.92 | 89    | 75 - 125       |            | 0   | 20             |     |
| Cobalt     | 1   | 111         | 0.0882 | 99.160 | 89    | 98.269 | 88    | 75 - 125       |            | 1   | 20             |     |
| Copper     | 1   | 111         | 0.2252 | 99.403 | 89    | 98.926 | 89    | 75 - 125       |            | 0   | 20             |     |
| Iron       | 1   | 1110        | 41.965 | 1053.8 | 91    | 1054.9 | 91    | 75 - 125       |            | 0   | 20             |     |
| Lead       | 1   | 111         | 0.0924 | 100.13 | 90    | 98.885 | 89    | 75 - 125       |            | 1   | 20             |     |
| Manganese  | 1   | 111         | 3.8046 | 103.18 | 90    | 103.38 | 90    | 75 - 125       |            | 0   | 20             |     |
| Molybdenum | 1   | 111         | 7.4270 | 109.85 | 92    | 109.87 | 92    | 75 - 125       |            | 0   | 20             |     |
| Nickel     | 1   | 111         | 0.1748 | 97.974 | 88    | 97.444 | 88    | 75 - 125       |            | 1   | 20             |     |
| Potassium  | 1   | 11100       | 2119.4 | 12055  | 90    | 11848  | 88    | 70 - 130       |            | 2   | 20             |     |
| Selenium   | 1   | 111         | 8.4529 | 102.24 | 84    | 102.68 | 85    | 75 - 125       |            | 0   | 20             |     |
| Silver     | 1   | 111         | 0.0204 | 94.655 | 85    | 95.186 | 86    | 75 - 125       |            | 1   | 20             |     |
| Sodium     | 1   | 11100       | 77721  | 87339  | 87    | 87082  | 84    | 70 - 130       |            | 0   | 20             |     |
| Uranium    | 1   | 111         | 4.0052 | 106.27 | 92    | 104.32 | 90    | 70 - 130       |            | 2   | 20             |     |
| Vanadium   | 1   | 111         | 4.4657 | 106.18 | 92    | 105.19 | 91    | 75 - 125       |            | 1   | 20             |     |
| Zinc       | 1   | 111         | 1.1991 | 97.038 | 86    | 97.032 | 86    | 75 - 125       |            | 0   | 20             |     |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:21:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Post Digest Spike

L712736-05

| Analyte    | Dil | Spike Value | Sample | Result | % Rec | Control Limits | Qualifier |
|------------|-----|-------------|--------|--------|-------|----------------|-----------|
| Aluminum   | 1   | 1110        | 60.325 | 1096.7 | 93    | 70-130         |           |
| Arsenic    | 1   | 111         | 0.6651 | 103.93 | 93    | 85-115         |           |
| Barium     | 1   | 111         | 14.999 | 115.84 | 91    | 85-115         |           |
| Boron      | 1   | 111         | 157.19 | 275.36 | 106   | 70-130         |           |
| Cadmium    | 1   | 111         | 0.0164 | 100.06 | 90    | 85-115         |           |
| Chromium   | 1   | 111         | 1.6723 | 104.20 | 92    | 85-115         |           |
| Cobalt     | 1   | 111         | 0.0882 | 101.01 | 91    | 85-115         |           |
| Copper     | 1   | 111         | 0.2252 | 101.59 | 91    | 85-115         |           |
| Iron       | 1   | 1110        | 41.965 | 1072.2 | 93    | 85-115         |           |
| Lead       | 1   | 111         | 0.0924 | 101.91 | 92    | 85-115         |           |
| Manganese  | 1   | 111         | 3.8046 | 106.36 | 92    | 85-115         |           |
| Molybdenum | 1   | 111         | 7.4270 | 112.85 | 95    | 85-115         |           |
| Nickel     | 1   | 111         | 0.1748 | 100.25 | 90    | 85-115         |           |
| Potassium  | 1   | 11100       | 2119.4 | 12210  | 91    | 70-130         |           |
| Selenium   | 1   | 111         | 8.4529 | 104.50 | 87    | 85-115         |           |
| Silver     | 1   | 111         | 0.0204 | 34.135 | 31    | 85-115         |           |
| Sodium     | 1   | 11100       | 77721  | 85009  | 66    | 70-130         |           |
| Uranium    | 1   | 111         | 4.0052 | 107.69 | 93    | 70-130         |           |
| Vanadium   | 1   | 111         | 4.4657 | 109.21 | 94    | 85-115         |           |
| Zinc       | 1   | 111         | 1.1991 | 99.558 | 89    | 85-115         |           |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Volatile TPH by Method 8015D/GRO      |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG734527</b> |
| Analysis Date:   | 7/30/2014 7:20:00 PM                  | Analyst:               | 621             |
| Instrument ID:   | VOCGC12                               |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Method Blank

| Analyte                   | CAS       | RDL     | MDL      | Qualifier |
|---------------------------|-----------|---------|----------|-----------|
| TPH (GC/FID) Low Fraction | 8006-61-9 | < 0.100 | < 0.0314 |           |

#### Laboratory Control Sample (LCS)

| Analyte                   | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------------|-----|------------|--------|-------|----------------|------|
| TPH (GC/FID) Low Fraction | 1   | 5.5        | 6.0268 | 110   | 67 - 132       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte                   | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------------|-----|------------|--------|-------|----------------|------|
| TPH (GC/FID) Low Fraction | 1   | 5.5        | 6.2154 | 113   | 67 - 132       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte                   | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec | Control RPD | % RPD | Control RPD | Qual |
|---------------------------|-----|-------|--------|-------|--------|-------|----------------|-------|-------------|-------|-------------|------|
| TPH (GC/FID) Low Fraction | 1   | 5.5   | 6.0268 | 110   | 6.2154 | 113   | 67 - 132       | 3.08  | 20          |       |             |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Volatile TPH by Method 8015D/GRO      |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG734527</b> |
| Analysis Date:   | 7/30/2014 7:20:00 PM                  | Analyst:               | 621             |
| Instrument ID:   | VOCGC12                               |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

### Matrix Spike / Matrix Spike Duplicate

L711663-04

| Analyte                   | Dil | Spike Value | Sample | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD  | Control Limits | RPD |
|---------------------------|-----|-------------|--------|--------|-------|--------|-------|----------------|------------|------|----------------|-----|
| TPH (GC/FID) Low Fraction | 1   | 5.5         | 0.0    | 6.3333 | 115   | 5.9328 | 108   | 50 - 143       |            | 6.53 | 20             |     |



## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Volatile TPH by Method 8015D/GRO      |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG734527</b> |
| Analysis Date:   | 7/30/2014 7:20:00 PM                  | Analyst:               | 621             |
| Instrument ID:   | VOCGC12                               |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

### Surrogate Summary

#### Laboratory

| Sample ID      | Instrument | File ID | ppm   | % Rec | ppm   | % Rec |
|----------------|------------|---------|-------|-------|-------|-------|
| L712736-01     | VOCGC12    | 0730_50 | 0.204 | 102   |       |       |
| L712736-02     | VOCGC12    | 0730_51 | 0.205 | 102   |       |       |
| L712736-03     | VOCGC12    | 0730_52 | 0.204 | 102   |       |       |
| L712736-04     | VOCGC12    | 0730_53 | 0.204 | 102   |       |       |
| L712736-05     | VOCGC12    | 0730_54 | 0.203 | 102   |       |       |
| LCS WG734527   | VOCGC12    | 0730_39 | 0.201 | 100   | 0.208 | 104   |
| LCSD WG734527  | VOCGC12    | 0730_40 | 0.201 | 101   | 0.208 | 104   |
| MS WG734527    | VOCGC12    | 0730_41 | 0.202 | 101   | 0.209 | 104   |
| MSD WG734527   | VOCGC12    | 0730_42 | 0.203 | 102   | 0.208 | 104   |
| BLANK WG734527 | VOCGC12    | 0730_44 | 0.205 | 102   | 0.204 | 102   |

--A,A,A-TRIFLUOROTOLUENE(FID)

True Value: 0.2 ppm Limits: 62 - 128

--A,A,A-TRIFLUOROTOLUENE(PID)

True Value: 0.2 ppm Limits: 55 - 122

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                            |                        |                 |
|------------------|--------------------------------------------|------------------------|-----------------|
| Test:            | Volatile Organic Compounds by Method 8260B |                        |                 |
| Project No:      | TX000836.0008.00004                        | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM      | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                  | <b>Analytic Batch:</b> | <b>WG734591</b> |
| Analysis Date:   | 7/30/2014 11:56:00 PM                      | Analyst:               | 644             |
| Instrument ID:   | VOCMS25                                    |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05             |                        |                 |

#### Method Blank

| Analyte                          | CAS       | RDL       | MDL        | Qualifier |
|----------------------------------|-----------|-----------|------------|-----------|
| <b>1,1,1,2-Tetrachloroethane</b> | 630-20-6  | < 0.00100 | < 0.000385 |           |
| <b>1,1,1-Trichloroethane</b>     | 71-55-6   | < 0.00100 | < 0.000319 |           |
| <b>1,1,2,2-Tetrachloroethane</b> | 79-34-5   | < 0.00100 | < 0.000585 |           |
| <b>1,1,2-Trichloroethane</b>     | 79-00-5   | < 0.00100 | < 0.000383 |           |
| <b>1,1-Dichloroethane</b>        | 75-34-3   | < 0.00100 | < 0.000259 |           |
| <b>1,1-Dichloroethene</b>        | 75-35-4   | < 0.00100 | < 0.000398 |           |
| <b>1,2-Dibromoethane</b>         | 106-93-4  | < 0.00100 | < 0.000381 |           |
| <b>1,2-Dichloroethane</b>        | 107-06-2  | < 0.00100 | < 0.000361 |           |
| <b>Benzene</b>                   | 71-43-2   | < 0.00100 | < 0.000331 |           |
| <b>Carbon tetrachloride</b>      | 56-23-5   | < 0.00100 | < 0.000379 |           |
| <b>Chloroform</b>                | 67-66-3   | < 0.00500 | < 0.000324 |           |
| <b>Ethylbenzene</b>              | 100-41-4  | < 0.00100 | < 0.000384 |           |
| <b>m&amp;p-Xylenes</b>           | 1330-20-7 | < 0.00200 | < 0.000719 |           |
| <b>Methylene Chloride</b>        | 75-09-2   | < 0.00500 | < 0.00100  |           |
| <b>o-Xylene</b>                  | 95-47-6   | < 0.00100 | < 0.000341 |           |
| <b>Toluene</b>                   | 108-88-3  | < 0.00500 | < 0.000780 |           |
| <b>Vinyl chloride</b>            | 75-01-4   | < 0.00100 | < 0.000259 |           |
| <b>Xylenes, Total</b>            | 1330-20-7 | < 0.00300 | < 0.00106  |           |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                            |                        |                 |
|------------------|--------------------------------------------|------------------------|-----------------|
| Test:            | Volatile Organic Compounds by Method 8260B |                        |                 |
| Project No:      | TX000836.0008.00004                        | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM      | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                  | <b>Analytic Batch:</b> | <b>WG734591</b> |
| Analysis Date:   | 7/30/2014 11:56:00 PM                      | Analyst:               | 644             |
| Instrument ID:   | VOCMS25                                    |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05             |                        |                 |

### Laboratory Control Sample (LCS)

| Analyte                          | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------------------------------|-----|------------|--------|-------|----------------|------|
| <b>1,1,1,2-Tetrachloroethane</b> | 1   | 0.025      | 0.0234 | 93.7  | 74.2 - 124     |      |
| <b>1,1,1-Trichloroethane</b>     | 1   | 0.025      | 0.0246 | 98.6  | 73.2 - 123     |      |
| <b>1,1,2,2-Tetrachloroethane</b> | 1   | 0.025      | 0.0268 | 107   | 70.7 - 122     |      |
| <b>1,1,2-Trichloroethane</b>     | 1   | 0.025      | 0.0244 | 97.5  | 77.7 - 118     |      |
| <b>1,1-Dichloroethane</b>        | 1   | 0.025      | 0.0267 | 107   | 70.7 - 126     |      |
| <b>1,1-Dichloroethene</b>        | 1   | 0.025      | 0.0250 | 100   | 67.8 - 129     |      |
| <b>1,2-Dibromoethane</b>         | 1   | 0.025      | 0.0247 | 98.8  | 76.6 - 121     |      |
| <b>1,2-Dichloroethane</b>        | 1   | 0.025      | 0.0271 | 108   | 68.8 - 124     |      |
| <b>Benzene</b>                   | 1   | 0.025      | 0.0244 | 97.6  | 74.8 - 121     |      |
| <b>Carbon tetrachloride</b>      | 1   | 0.025      | 0.0240 | 96    | 70.2 - 123     |      |
| <b>Chloroform</b>                | 1   | 0.025      | 0.0233 | 93.1  | 76 - 121       |      |
| <b>Ethylbenzene</b>              | 1   | 0.025      | 0.0222 | 88.8  | 78.8 - 122     |      |
| <b>m&amp;p-Xylenes</b>           | 1   | 0.05       | 0.0468 | 93.6  | 78.8 - 121     |      |
| <b>Methylene Chloride</b>        | 1   | 0.025      | 0.0241 | 96.5  | 70.3 - 120     |      |
| <b>o-Xylene</b>                  | 1   | 0.025      | 0.0233 | 93    | 77.6 - 122     |      |
| <b>Toluene</b>                   | 1   | 0.025      | 0.0249 | 99.5  | 79.7 - 116     |      |
| <b>Vinyl chloride</b>            | 1   | 0.025      | 0.0271 | 108   | 65.9 - 128     |      |
| <b>Xylenes, Total</b>            | 1   | 0.075      | 0.0700 | 93.4  | 78.7 - 121     |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                            |                        |                 |
|------------------|--------------------------------------------|------------------------|-----------------|
| Test:            | Volatile Organic Compounds by Method 8260B |                        |                 |
| Project No:      | TX000836.0008.00004                        | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM      | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                  | <b>Analytic Batch:</b> | <b>WG734591</b> |
| Analysis Date:   | 7/30/2014 11:56:00 PM                      | Analyst:               | 644             |
| Instrument ID:   | VOCMS25                                    |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05             |                        |                 |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte                          | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------------------------------|-----|------------|--------|-------|----------------|------|
| <b>1,1,1,2-Tetrachloroethane</b> | 1   | 0.025      | 0.0237 | 94.9  | 74.2 - 124     |      |
| <b>1,1,1-Trichloroethane</b>     | 1   | 0.025      | 0.0261 | 104   | 73.2 - 123     |      |
| <b>1,1,2,2-Tetrachloroethane</b> | 1   | 0.025      | 0.0257 | 103   | 70.7 - 122     |      |
| <b>1,1,2-Trichloroethane</b>     | 1   | 0.025      | 0.0235 | 94.1  | 77.7 - 118     |      |
| <b>1,1-Dichloroethane</b>        | 1   | 0.025      | 0.0269 | 108   | 70.7 - 126     |      |
| <b>1,1-Dichloroethene</b>        | 1   | 0.025      | 0.0272 | 109   | 67.8 - 129     |      |
| <b>1,2-Dibromoethane</b>         | 1   | 0.025      | 0.0232 | 92.8  | 76.6 - 121     |      |
| <b>1,2-Dichloroethane</b>        | 1   | 0.025      | 0.0266 | 106   | 68.8 - 124     |      |
| <b>Benzene</b>                   | 1   | 0.025      | 0.0252 | 101   | 74.8 - 121     |      |
| <b>Carbon tetrachloride</b>      | 1   | 0.025      | 0.0256 | 102   | 70.2 - 123     |      |
| <b>Chloroform</b>                | 1   | 0.025      | 0.0240 | 96    | 76 - 121       |      |
| <b>Ethylbenzene</b>              | 1   | 0.025      | 0.0229 | 91.7  | 78.8 - 122     |      |
| <b>m&amp;p-Xylenes</b>           | 1   | 0.05       | 0.0464 | 92.8  | 78.8 - 121     |      |
| <b>Methylene Chloride</b>        | 1   | 0.025      | 0.0232 | 92.8  | 70.3 - 120     |      |
| <b>o-Xylene</b>                  | 1   | 0.025      | 0.0232 | 93    | 77.6 - 122     |      |
| <b>Toluene</b>                   | 1   | 0.025      | 0.0243 | 97.3  | 79.7 - 116     |      |
| <b>Vinyl chloride</b>            | 1   | 0.025      | 0.0289 | 116   | 65.9 - 128     |      |
| <b>Xylenes, Total</b>            | 1   | 0.075      | 0.0696 | 92.9  | 78.7 - 121     |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                            |                        |                 |
|------------------|--------------------------------------------|------------------------|-----------------|
| Test:            | Volatile Organic Compounds by Method 8260B |                        |                 |
| Project No:      | TX000836.0008.00004                        | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM      | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                  | <b>Analytic Batch:</b> | <b>WG734591</b> |
| Analysis Date:   | 7/30/2014 11:56:00 PM                      | Analyst:               | 644             |
| Instrument ID:   | VOCMS25                                    |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05             |                        |                 |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte                   | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control    | % Rec | Control RPD |             |
|---------------------------|-----|-------|--------|-------|--------|-------|------------|-------|-------------|-------------|
|                           |     |       |        |       |        |       | Limits     | Qual  | % RPD       | Limits Qual |
| 1,1,1,2-Tetrachloroethane | 1   | 0.025 | 0.0234 | 93.7  | 0.0237 | 94.9  | 74.2 - 124 |       | 1.33        | 20          |
| 1,1,1-Trichloroethane     | 1   | 0.025 | 0.0246 | 98.6  | 0.0261 | 104   | 73.2 - 123 |       | 5.79        | 20          |
| 1,1,2,2-Tetrachloroethane | 1   | 0.025 | 0.0268 | 107   | 0.0257 | 103   | 70.7 - 122 |       | 4.23        | 20          |
| 1,1,2-Trichloroethane     | 1   | 0.025 | 0.0244 | 97.5  | 0.0235 | 94.1  | 77.7 - 118 |       | 3.53        | 20          |
| 1,1-Dichloroethane        | 1   | 0.025 | 0.0267 | 107   | 0.0269 | 108   | 70.7 - 126 |       | 0.59        | 20          |
| 1,1-Dichloroethene        | 1   | 0.025 | 0.0250 | 100   | 0.0272 | 109   | 67.8 - 129 |       | 8.3         | 20          |
| 1,2-Dibromoethane         | 1   | 0.025 | 0.0247 | 98.8  | 0.0232 | 92.8  | 76.6 - 121 |       | 6.21        | 20          |
| 1,2-Dichloroethane        | 1   | 0.025 | 0.0271 | 108   | 0.0266 | 106   | 68.8 - 124 |       | 1.75        | 20          |
| Benzene                   | 1   | 0.025 | 0.0244 | 97.6  | 0.0252 | 101   | 74.8 - 121 |       | 3.28        | 20          |
| Carbon tetrachloride      | 1   | 0.025 | 0.0240 | 96    | 0.0256 | 102   | 70.2 - 123 |       | 6.48        | 20          |
| Chloroform                | 1   | 0.025 | 0.0233 | 93.1  | 0.0240 | 96    | 76 - 121   |       | 3.08        | 20          |
| Ethylbenzene              | 1   | 0.025 | 0.0222 | 88.8  | 0.0229 | 91.7  | 78.8 - 122 |       | 3.18        | 20          |
| m&p-Xylenes               | 1   | 0.05  | 0.0468 | 93.6  | 0.0464 | 92.8  | 78.8 - 121 |       | 0.81        | 20          |
| Methylene Chloride        | 1   | 0.025 | 0.0241 | 96.5  | 0.0232 | 92.8  | 70.3 - 120 |       | 3.91        | 20          |
| o-Xylene                  | 1   | 0.025 | 0.0233 | 93    | 0.0232 | 93    | 77.6 - 122 |       | 0.05        | 20          |
| Toluene                   | 1   | 0.025 | 0.0249 | 99.5  | 0.0243 | 97.3  | 79.7 - 116 |       | 2.22        | 20          |
| Vinyl chloride            | 1   | 0.025 | 0.0271 | 108   | 0.0289 | 116   | 65.9 - 128 |       | 6.45        | 20          |
| Xylenes, Total            | 1   | 0.075 | 0.0700 | 93.4  | 0.0696 | 92.9  | 78.7 - 121 |       | 0.56        | 20          |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                            |                        |                 |
|------------------|--------------------------------------------|------------------------|-----------------|
| Test:            | Volatile Organic Compounds by Method 8260B |                        |                 |
| Project No:      | TX000836.0008.00004                        | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM      | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                  | <b>Analytic Batch:</b> | <b>WG734591</b> |
| Analysis Date:   | 7/30/2014 11:56:00 PM                      | Analyst:               | 644             |
| Instrument ID:   | VOCMS25                                    |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05             |                        |                 |

#### Matrix Spike / Matrix Spike Duplicate

L712736-01

| Analyte                   | Dil | Spike Value | Sample | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD  | Control Limits | RPD Qual |
|---------------------------|-----|-------------|--------|--------|-------|--------|-------|----------------|------------|------|----------------|----------|
| 1,1,1,2-Tetrachloroethane | 1   | 0.025       | 0.0    | 0.0245 | 97.8  | 0.0243 | 97.1  | 64 - 128       |            | 0.8  | 20             |          |
| 1,1,1-Trichloroethane     | 1   | 0.025       | 0.0    | 0.0249 | 99.7  | 0.0263 | 105   | 58.7 - 134     |            | 5.36 | 20             |          |
| 1,1,2,2-Tetrachloroethane | 1   | 0.025       | 0.0    | 0.0281 | 112   | 0.0283 | 113   | 56 - 132       |            | 0.81 | 22.2           |          |
| 1,1,2-Trichloroethane     | 1   | 0.025       | 0.0    | 0.0245 | 97.8  | 0.0249 | 99.7  | 66.3 - 125     |            | 1.83 | 20             |          |
| 1,1-Dichloroethane        | 1   | 0.025       | 0.0    | 0.0245 | 98.1  | 0.0263 | 105   | 58.5 - 132     |            | 7.17 | 20             |          |
| 1,1-Dichloroethene        | 1   | 0.025       | 0.0    | 0.0228 | 91    | 0.0280 | 112   | 51.1 - 140     |            | 20.7 | 20.2           | J3       |
| 1,2-Dibromoethane         | 1   | 0.025       | 0.0    | 0.0245 | 98.2  | 0.0254 | 102   | 67.1 - 125     |            | 3.34 | 20             |          |
| 1,2-Dichloroethane        | 1   | 0.025       | 0.0    | 0.0240 | 96    | 0.0281 | 112   | 60 - 126       |            | 15.7 | 20             |          |
| Benzene                   | 1   | 0.025       | 0.0    | 0.0239 | 95.6  | 0.0254 | 102   | 54.3 - 133     |            | 6.22 | 20             |          |
| Carbon tetrachloride      | 1   | 0.025       | 0.0    | 0.0243 | 97.3  | 0.0258 | 103   | 55.7 - 134     |            | 6.01 | 20             |          |
| Chloroform                | 1   | 0.025       | 0.0    | 0.0218 | 87.1  | 0.0238 | 95    | 63 - 129       |            | 8.69 | 20             |          |
| Ethylbenzene              | 1   | 0.025       | 0.0    | 0.0237 | 94.7  | 0.0241 | 96.3  | 61.4 - 133     |            | 1.67 | 20             |          |
| m&p-Xylenes               | 1   | 0.05        | 0.0    | 0.0489 | 97.8  | 0.0473 | 94.7  | 61.7 - 133     |            | 3.29 | 20             |          |
| Methylene Chloride        | 1   | 0.025       | 0.0006 | 0.0223 | 86.7  | 0.0254 | 98.9  | 58.1 - 122     |            | 12.8 | 20             |          |
| o-Xylene                  | 1   | 0.025       | 0.0    | 0.0242 | 96.9  | 0.0239 | 95.7  | 63.3 - 130     |            | 1.32 | 20             |          |
| Toluene                   | 1   | 0.025       | 0.0    | 0.0258 | 103   | 0.0244 | 97.4  | 61.4 - 130     |            | 5.77 | 20             |          |
| Vinyl chloride            | 1   | 0.025       | 0.0    | 0.0244 | 97.5  | 0.0283 | 113   | 47.8 - 137     |            | 14.8 | 20             |          |
| Xylenes, Total            | 1   | 0.075       | 0.0    | 0.0731 | 97.5  | 0.0712 | 95    | 63.3 - 131     |            | 2.64 | 20             |          |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                            |                        |                 |
|------------------|--------------------------------------------|------------------------|-----------------|
| Test:            | Volatile Organic Compounds by Method 8260B |                        |                 |
| Project No:      | TX000836.0008.00004                        | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM      | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                  | <b>Analytic Batch:</b> | <b>WG734591</b> |
| Analysis Date:   | 7/30/2014 11:56:00 PM                      | Analyst:               | 644             |
| Instrument ID:   | VOCMS25                                    |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05             |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0730\_31

Analyzed: 07/30/14 203400

|                    | IS4      |      | IS2      |      | IS3      |      | IS1      |      |
|--------------------|----------|------|----------|------|----------|------|----------|------|
|                    | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| <b>12 Hr. Std</b>  | 315159   | 7.67 | 643764   | 4.13 | 106233   | 5.27 | 393546   | 3.81 |
| <b>Upper Limit</b> | 630000   | 8.17 | 1290000  | 4.63 | 212000   | 5.77 | 787000   | 4.31 |
| <b>Lower Limit</b> | 158000   | 7.17 | 322000   | 3.63 | 53100    | 4.77 | 197000   | 3.31 |
| Sample ID          | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| L712736-01         | 342819   | 7.67 | 668984   | 4.13 | 113140   | 5.27 | 416499   | 3.81 |
| L712736-02         | 311640   | 7.67 | 629718   | 4.12 | 104917   | 5.27 | 382256   | 3.80 |
| L712736-03         | 303500   | 7.67 | 611990   | 4.12 | 101009   | 5.27 | 376323   | 3.80 |
| L712736-04         | 316427   | 7.67 | 664557   | 4.12 | 108561   | 5.27 | 390048   | 3.80 |
| L712736-05         | 305760   | 7.67 | 614786   | 4.12 | 102711   | 5.27 | 375685   | 3.80 |
| MSD WG734591       | 332436   | 7.67 | 707484   | 4.12 | 115277   | 5.27 | 416531   | 3.80 |
| MS WG734591        | 323731   | 7.67 | 669594   | 4.12 | 112032   | 5.27 | 463330   | 3.80 |
| LCSD WG734591      | 320465   | 7.67 | 663686   | 4.12 | 110142   | 5.27 | 401806   | 3.80 |
| LCS WG734591       | 339593   | 7.67 | 683122   | 4.12 | 113483   | 5.27 | 413850   | 3.80 |
| BLANK WG734591     | 325908   | 7.67 | 707877   | 4.12 | 116400   | 5.27 | 421871   | 3.80 |

### Legend:

IS4 -- 1,4-DICHLOROBENZENE-D4  
IS2 -- 1,4-DIFLUOROBENZENE  
IS3 -- 2-BROMO-1-CHLOROPROPANE  
IS1 -- PENTAFLUOROBENZENE

## Quality Control Summary

**SDG: L712736**

**ARCADIS US - TX**

|                  |                                            |                        |                 |
|------------------|--------------------------------------------|------------------------|-----------------|
| Test:            | Volatile Organic Compounds by Method 8260B |                        |                 |
| Project No:      | TX000836.0008.00004                        | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM      | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                  | <b>Analytic Batch:</b> | <b>WG734591</b> |
| Analysis Date:   | 7/30/2014 11:56:00 PM                      | Analyst:               | 644             |
| Instrument ID:   | VOCMS25                                    |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05             |                        |                 |

## Surrogate Summary

|                |            | BFB     |        |       | DFM    |       | TD8    |       | TFT    |       |
|----------------|------------|---------|--------|-------|--------|-------|--------|-------|--------|-------|
| Laboratory     |            |         |        |       |        |       |        |       |        |       |
| Sample ID      | Instrument | File ID | ppm    | % Rec | ppm    | % Rec | ppm    | % Rec | ppm    | % Rec |
| L712736-01     | VOCMS25    | 0730_41 | 0.0396 | 99.1  | 0.0463 | 116   | 0.0430 | 107   |        |       |
| L712736-02     | VOCMS25    | 0730_42 | 0.0402 | 100   | 0.0428 | 107   | 0.0434 | 109   |        |       |
| L712736-03     | VOCMS25    | 0730_43 | 0.0397 | 99.3  | 0.0424 | 106   | 0.0409 | 102   |        |       |
| L712736-04     | VOCMS25    | 0730_44 | 0.0398 | 99.5  | 0.0425 | 106   | 0.0412 | 103   |        |       |
| L712736-05     | VOCMS25    | 0730_45 | 0.0398 | 99.6  | 0.0425 | 106   | 0.0420 | 105   |        |       |
| LCS WG734591   | VOCMS25    | 0730_32 | 0.0379 | 94.9  | 0.0415 | 104   | 0.0432 | 108   | 0.0400 | 99.9  |
| LCSD WG734591  | VOCMS25    | 0730_33 | 0.0379 | 94.7  | 0.0427 | 107   | 0.0418 | 105   | 0.0395 | 98.7  |
| MS WG734591    | VOCMS25    | 0730_35 | 0.0377 | 94.2  | 0.0401 | 100   | 0.0420 | 105   | 0.0398 | 99.5  |
| MSD WG734591   | VOCMS25    | 0730_36 | 0.0384 | 95.9  | 0.0427 | 107   | 0.0409 | 102   | 0.0384 | 96.0  |
| BLANK WG734591 | VOCMS25    | 0730_38 | 0.0391 | 97.7  | 0.0406 | 102   | 0.0415 | 104   | 0.0385 | 96.3  |

BFB --4-BROMOFLUOROBENZENE

True Value: 0.04 ppm Limits: 71 - 126

DFM --DIBROMOFLUOROMETHANE

True Value: 0.04 ppm Limits: 78.3 - 121

TD8 --TOLUENE-D8

True Value: 0.04 ppm Limits: 88.50 - 111

TFT --A,A,A-TRIFLUOROTOLUENE

True Value: 0.04 ppm Limits: 85 - 114



## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Diesel Range Organics by Method 8015  |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG734853</b> |
| Analysis Date:   | 8/1/2014 2:10:00 PM                   | Analyst:               | 546             |
| Instrument ID:   | SVGC27                                | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Method Blank

| Analyte                           | CAS | RDL     | MDL      | Qualifier |
|-----------------------------------|-----|---------|----------|-----------|
| C10-C28 Diesel Range              |     | < 0.100 | < 0.0222 |           |
| C28-C40 Oil Range                 |     | < 0.100 | < 0.0118 |           |
| Extractable Petroleum Hydrocarbon |     | < 0.100 | < 0.0330 |           |

#### Laboratory Control Sample (LCS)

| Analyte                           | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|-----------------------------------|-----|------------|--------|-------|----------------|------|
| Extractable Petroleum Hydrocarbon | 1   | 1.5        | 1.5553 | 104   | 70 - 130       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte                           | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|-----------------------------------|-----|------------|--------|-------|----------------|------|
| Extractable Petroleum Hydrocarbon | 1   | 1.5        | 1.6565 | 110   | 70 - 130       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte                           | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|-----------------------------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Extractable Petroleum Hydrocarbon | 1   | 1.5   | 1.5553 | 104   | 1.6565 | 110   | 70 - 130       | 6.3        | 20                 |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Diesel Range Organics by Method 8015  |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG734853</b> |
| Analysis Date:   | 8/1/2014 2:10:00 PM                   | Analyst:               | 546             |
| Instrument ID:   | SVGC27                                | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

### Surrogate Summary

o-Terphenyl

Laboratory

| Sample ID      | Instrument | File ID | ppm    | % Rec |
|----------------|------------|---------|--------|-------|
| L712736-01     | SVGC27     | 0801_09 | 0.0203 | 101   |
| L712736-02     | SVGC27     | 0801_10 | 0.0202 | 101   |
| L712736-03     | SVGC27     | 0801_11 | 0.0211 | 105   |
| L712736-04     | SVGC27     | 0801_12 | 0.0203 | 101   |
| L712736-05     | SVGC27     | 0801_13 | 0.0202 | 101   |
| BLANK WG734853 | SVGC27     | 0801_05 | 0.0203 | 101   |
| LCS WG734853   | SVGC27     | 0801_06 | 0.0202 | 101   |
| LCSD WG734853  | SVGC27     | 0801_07 | 0.0208 | 104   |

o-Terphenyl --O-TERPHENYL

True Value: 0.02 ppm Limits: 50 - 150

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                        | <b>Analytic Batch:</b> | <b>WG734861</b> |
| Analysis Date:   | 8/1/2014 9:44:00 AM                              | Analyst:               | 377             |
| Instrument ID:   | BNAMS19                                          | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05                   |                        |                 |

#### Method Blank

| Analyte                    | CAS     | RDL    | MDL     | Qualifier |
|----------------------------|---------|--------|---------|-----------|
| <b>1-Methylnaphthalene</b> | 90-12-0 | < 1.00 | < 0.330 |           |
| <b>2-Methylnaphthalene</b> | 91-57-6 | < 1.00 | < 0.311 |           |
| <b>Benzo(a)pyrene</b>      | 50-32-8 | < 1.00 | < 0.340 |           |
| <b>Naphthalene</b>         | 91-20-3 | < 1.00 | < 0.372 |           |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                        | <b>Analytic Batch:</b> | <b>WG734861</b> |
| Analysis Date:   | 8/1/2014 9:44:00 AM                              | Analyst:               | 377             |
| Instrument ID:   | BNAMS19                                          | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05                   |                        |                 |

#### Laboratory Control Sample (LCS)

| Analyte             | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------|-----|------------|--------|-------|----------------|------|
| 1-Methylnaphthalene | 1   | 25         | 19.452 | 77.8  | 34.7 - 102     |      |
| 2-Methylnaphthalene | 1   | 25         | 17.158 | 68.6  | 33.8 - 98.6    |      |
| Benzo(a)pyrene      | 1   | 25         | 18.367 | 73.5  | 45.6 - 106     |      |
| Naphthalene         | 1   | 25         | 16.322 | 65.3  | 32.2 - 101     |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte             | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------|-----|------------|--------|-------|----------------|------|
| 1-Methylnaphthalene | 1   | 25         | 18.228 | 72.9  | 34.7 - 102     |      |
| 2-Methylnaphthalene | 1   | 25         | 16.480 | 65.9  | 33.8 - 98.6    |      |
| Benzo(a)pyrene      | 1   | 25         | 18.404 | 73.6  | 45.6 - 106     |      |
| Naphthalene         | 1   | 25         | 15.512 | 62    | 32.2 - 101     |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte             | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|---------------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| 1-Methylnaphthalene | 1   | 25    | 19.452 | 77.8  | 18.228 | 72.9  | 34.7 - 102     | 6.5        | 24.9               |      |
| 2-Methylnaphthalene | 1   | 25    | 17.158 | 68.6  | 16.480 | 65.9  | 33.8 - 98.6    | 4.03       | 24.2               |      |
| Benzo(a)pyrene      | 1   | 25    | 18.367 | 73.5  | 18.404 | 73.6  | 45.6 - 106     | 0.2        | 20                 |      |
| Naphthalene         | 1   | 25    | 16.322 | 65.3  | 15.512 | 62    | 32.2 - 101     | 5.09       | 23.8               |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                        | <b>Analytic Batch:</b> | <b>WG734861</b> |
| Analysis Date:   | 8/1/2014 9:44:00 AM                              | Analyst:               | 377             |
| Instrument ID:   | BNAMS19                                          | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05                   |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0731B\_03

Analyzed: 08/01/14 052300

|                    | IS4      |      | ACE      |      | CHR      |       | NAP      |      |
|--------------------|----------|------|----------|------|----------|-------|----------|------|
|                    | Response | RT   | Response | RT   | Response | RT    | Response | RT   |
| <b>12 Hr. Std</b>  | 78985    | 5.40 | 244147   | 8.55 | 539874   | 13.07 | 344807   | 6.67 |
| <b>Upper Limit</b> | 158000   | 5.90 | 488000   | 9.05 | 1080000  | 13.57 | 690000   | 7.17 |
| <b>Lower Limit</b> | 39500    | 4.90 | 122000   | 8.05 | 270000   | 12.57 | 172000   | 6.17 |
| Sample ID          | Response | RT   | Response | RT   | Response | RT    | Response | RT   |
| L712736-01         | 87236    | 5.40 | 269108   | 8.55 | 661491   | 13.07 | 386192   | 6.67 |
| L712736-02         | 86605    | 5.40 | 260564   | 8.55 | 593109   | 13.07 | 388492   | 6.67 |
| L712736-03         | 88652    | 5.40 | 268476   | 8.55 | 604597   | 13.07 | 388722   | 6.67 |
| L712736-04         | 88286    | 5.40 | 254778   | 8.55 | 616733   | 13.07 | 371620   | 6.67 |
| L712736-05         | 86604    | 5.40 | 244231   | 8.55 | 600884   | 13.07 | 364143   | 6.67 |
| LCSD WG734861      | 85155    | 5.40 | 265277   | 8.55 | 577290   | 13.07 | 367830   | 6.67 |
| LCS WG734861       | 85606    | 5.40 | 243573   | 8.55 | 617458   | 13.07 | 351835   | 6.67 |
| BLANK WG734861     | 88226    | 5.40 | 245712   | 8.55 | 595577   | 13.07 | 371207   | 6.67 |

### Legend:

IS4 -- 1,4-Dichlorobenzene-d4

ACE -- Acenaphthene-d10

CHR -- Chrysene-d12

NAP -- Naphthalene-d8

PER -- Perylene-d12

PHEN -- Phenanthrene-d10

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                        | <b>Analytic Batch:</b> | <b>WG734861</b> |
| Analysis Date:   | 8/1/2014 9:44:00 AM                              | Analyst:               | 377             |
| Instrument ID:   | BNAMS19                                          | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05                   |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0731B\_03

Analyzed: 08/01/14 052300

|                    | IS4      |      | PER      |       | PHEN     |       |
|--------------------|----------|------|----------|-------|----------|-------|
|                    | Response | RT   | Response | RT    | Response | RT    |
| <b>12 Hr. Std</b>  | 78985    | 5.40 | 610232   | 14.94 | 462975   | 10.18 |
| <b>Upper Limit</b> | 158000   | 5.90 | 1220000  | 15.44 | 926000   | 10.68 |
| <b>Lower Limit</b> | 39500    | 4.90 | 305000   | 14.44 | 231000   | 9.68  |
| Sample ID          | Response | RT   | Response | RT    | Response | RT    |
| L712736-01         | 87236    | 5.40 | 787577   | 14.94 | 521368   | 10.18 |
| L712736-02         | 86605    | 5.40 | 676789   | 14.93 | 514344   | 10.18 |
| L712736-03         | 88652    | 5.40 | 686406   | 14.93 | 516260   | 10.18 |
| L712736-04         | 88286    | 5.40 | 707143   | 14.94 | 530268   | 10.18 |
| L712736-05         | 86604    | 5.40 | 684968   | 14.94 | 503454   | 10.18 |
| LCSD WG734861      | 85155    | 5.40 | 667823   | 14.93 | 493184   | 10.18 |
| LCS WG734861       | 85606    | 5.40 | 697647   | 14.93 | 490837   | 10.18 |
| BLANK WG734861     | 88226    | 5.40 | 681517   | 14.93 | 474757   | 10.18 |

### Legend:

IS4 -- 1,4-Dichlorobenzene-d4  
ACE -- Acenaphthene-d10  
CHR -- Chrysene-d12  
NAP -- Naphthalene-d8  
PER -- Perylene-d12  
PHEN -- Phenanthrene-d10

## Quality Control Summary

SDG: L712736

ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                        | <b>Analytic Batch:</b> | <b>WG734861</b> |
| Analysis Date:   | 8/1/2014 9:44:00 AM                              | Analyst:               | 377             |
| Instrument ID:   | BNAMS19                                          | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05                   |                        |                 |

## Surrogate Summary

|                |            | TBP              |        |       | FBP     |       | 2FP     |       | NBZ     |       |
|----------------|------------|------------------|--------|-------|---------|-------|---------|-------|---------|-------|
| Laboratory     |            |                  |        |       |         |       |         |       |         |       |
| Sample ID      | Instrument | File ID          | ppm    | % Rec | ppm     | % Rec | ppm     | % Rec | ppm     | % Rec |
| L712736-01     | BNAMS19    | 0731B_14         | 0.0143 | 71.3  | 0.00644 | 64.4  | 0.00908 | 45.4  | 0.00446 | 44.6  |
| L712736-02     | BNAMS19    | 0731B_15         | 0.0154 | 77.1  | 0.00726 | 72.6  | 0.0106  | 53.2  | 0.00480 | 48.0  |
| L712736-03     | BNAMS19    | 0731B_16         | 0.0144 | 71.8  | 0.00677 | 67.7  | 0.00963 | 48.2  | 0.00496 | 49.6  |
| L712736-04     | BNAMS19    | 0731B_17         | 0.0154 | 77.2  | 0.00703 | 70.3  | 0.00964 | 48.2  | 0.00501 | 50.1  |
| L712736-05     | BNAMS19    | 0731B_18         | 0.0135 | 67.7  | 0.00741 | 74.1  | 0.00990 | 49.5  | 0.00512 | 51.2  |
| LCS WG734861   | BNAMS19    | 0731B_05-20.0179 | 89.6   |       | 0.00701 | 70.1  | 0.0102  | 51.1  | 0.00511 | 51.1  |
| LCSD WG734861  | BNAMS19    | 0731B_06-20.0162 | 80.8   |       | 0.00646 | 64.6  | 0.0101  | 50.5  | 0.00467 | 46.7  |
| BLANK WG734861 | BNAMS19    | 0731B_07-20.0158 | 78.8   |       | 0.00751 | 75.1  | 0.0103  | 51.7  | 0.00516 | 51.6  |

TBP --2,4,6-TRIBROMOPHENOL

True Value: 0.02 ppm Limits: 11.2 - 130

FBP --2-FLUOROBIPHENYL

True Value: 0.01 ppm Limits: 29.5 - 131

2FP --2-FLUOROPHENOL

True Value: 0.02 ppm Limits: 10 - 77.9

NBZ --NITROBENZENE-D5

True Value: 0.01 ppm Limits: 21.8 - 123

TPH --P-TERPHENYL-D14

True Value: 0.01 ppm Limits: 29.3 - 137

PHL --PHENOL-D5

True Value: 0.02 ppm Limits: 5 - 70.1



YOUR LAB OF CHOICE

12065 Lebanon Rd  
Mt. Juliet, TN 37122  
(615) 758-5858  
(800) 767-5859  
Fax (615) 758-5859  
Tax I.D 62-0814289  
Est. 1970

## Quality Control Summary

SDG: L712736

ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C | Matrix:                | Water - ug/L    |
| Project No:      | TX000836.0008.00004                              | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM            | <b>Analytic Batch:</b> | <b>WG734861</b> |
| Collection Date: | 7/28/2014                                        | Analyst:               | 377             |
| Analysis Date:   | 8/1/2014 9:44:00 AM                              | Prep Date:             | 7/31/2014       |
| Instrument ID:   | BNAMS19                                          |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05                   |                        |                 |

## Surrogate Summary

|                |            |                   | TPH     |       | PHL     |       |
|----------------|------------|-------------------|---------|-------|---------|-------|
| Laboratory     |            |                   |         |       |         |       |
| Sample ID      | Instrument | File ID           | ppm     | % Rec | ppm     | % Rec |
| L712736-01     | BNAMS19    | 0731B_14          | 0.00624 | 62.4  | 0.00718 | 35.9  |
| L712736-02     | BNAMS19    | 0731B_15          | 0.00705 | 70.5  | 0.00761 | 38.1  |
| L712736-03     | BNAMS19    | 0731B_16          | 0.00695 | 69.5  | 0.00721 | 36.0  |
| L712736-04     | BNAMS19    | 0731B_17          | 0.00689 | 68.9  | 0.00673 | 33.6  |
| L712736-05     | BNAMS19    | 0731B_18          | 0.00604 | 60.4  | 0.00689 | 34.5  |
| LCS WG734861   | BNAMS19    | 0731B_05-20.00667 | 66.7    |       | 0.00733 | 36.7  |
| LCSD WG734861  | BNAMS19    | 0731B_06-20.00688 | 68.8    |       | 0.00715 | 35.7  |
| BLANK WG734861 | BNAMS19    | 0731B_07-20.00686 | 68.6    |       | 0.00777 | 38.9  |

TBP --2,4,6-TRIBROMOPHENOL

True Value: 0.02 ppm Limits: 11.2 - 130

FBP --2-FLUOROBIPHENYL

True Value: 0.01 ppm Limits: 29.5 - 131

2FP --2-FLUOROPHENOL

True Value: 0.02 ppm Limits: 10 - 77.9

NBZ --NITROBENZENE-D5

True Value: 0.01 ppm Limits: 21.8 - 123

TPH --P-TERPHENYL-D14

True Value: 0.01 ppm Limits: 29.3 - 137

PHL --PHENOL-D5

True Value: 0.02 ppm Limits: 5 - 70.1



# ARCADIS US - TX

2929 Briarpark Dr., Suite 300  
Houston, TX 77042

## Billing Information:

Attn: Accounts Payable  
630 Plaza Drive, Suite 600  
Highlands Ranch, CO 80129

Report to:  
Project Manager

Email To: pam.krueger@arcadis-us.com

Project  
Description: Navajo Refining Company - Artesia, NM

City/State  
Collected:

Phone: 713-953-4800  
Fax:

Client Project #  
TX000836.0008.00004

Lab Project #  
ARCADHTX-NAVAJO

Collected by (print):  
Eric Bergeron

Site/Facility ID #

P.O. #

Collected by (signature):

**Rush?** (Lab MUST Be Notified)

Date Results Needed

Immediately  
Packed on Ice N ☐ Y ☒

☐ Same Day .....200%  
☐ Next Day .....100%  
☐ Two Day .....50%  
☐ Three Day .....25%

Email? ☐ No ☒ Yes  
FAX? ☐ No ☐ Yes

No.  
of  
Cnts

| Sample ID | Comp/Grab | Matrix * | Depth | Date    | Time | No.<br>of<br>Cnts | **Cl,F,NO2,NO3,S04** 125mlHDPE-NoPres | 8270 100ml Amb NoPres | CN 250mlHDPEAmb-NaOH >10 | DROOROLVI 40mlAmb-HCl-BT | Diss. Metals (Field) 500mlHDPE-HNO3 <2 | GRO 40mlAmb HCl | RA226/RA228 1L-HDPE-Add HNO3 <2 | TDS 250mlHDPE-NoPres | Total Hg 500mlHDPE-HNO3 <2 | VB260 40mlAmb-HCl | Rem./Contaminant | Sample # (lab only) |
|-----------|-----------|----------|-------|---------|------|-------------------|---------------------------------------|-----------------------|--------------------------|--------------------------|----------------------------------------|-----------------|---------------------------------|----------------------|----------------------------|-------------------|------------------|---------------------|
| MW-SS     | 6         | DW       | 22'   | 7/28/14 | 1815 | 15                | X                                     | X                     | X                        | X                        | X                                      | X               | X                               | X                    | X                          | X                 | cd               |                     |
| NP-S      | 6         | GW       | 21'   | 7/29/14 | 0915 | 15                | X                                     | X                     | X                        | X                        | X                                      | X               | X                               | X                    | X                          | X                 | -02              |                     |
| MW-17     | 6         | GW       | 26'   | 7/29/14 | 1100 | 15                | X                                     | X                     | X                        | X                        | X                                      | X               | X                               | X                    | X                          | X                 | -03              |                     |
| EB-01     | 6         | GW       | -     | 7/28/14 | 1500 | 15                | X                                     | X                     | X                        | X                        | X                                      | X               | X                               | X                    | X                          | X                 | -04              |                     |
| DUP-01    | 6         | DW       |       |         |      | 15                | X                                     | X                     | X                        | X                        | X                                      | X               | X                               | X                    | X                          | X                 | -05              |                     |
|           |           | GW       |       |         |      | 2                 |                                       |                       |                          |                          |                                        |                 |                                 |                      |                            | X                 |                  |                     |
|           |           | GW       |       |         |      | 2                 |                                       |                       |                          |                          |                                        |                 |                                 |                      |                            | X                 |                  |                     |
|           |           | GW       |       |         |      | 2                 |                                       |                       |                          |                          |                                        |                 |                                 |                      |                            | X                 |                  |                     |

\* Matrix: SS - Soil GW - Groundwater WW - Waste Water DW - Drinking Water OT - Other

Remarks:\*\*\*\*Add Uranium (in house)\*\*\*\*

608971744437  
608971744390  
608971744010

pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_

Hold #

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Samples returned via: ☐ UPS

Condition: (lab use only)

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: 3.4 °C Bottles Received: 76+2TB

COC Seal Intact: ☐ Y ☐ N ☐ NA

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: 7/30/14 Time: 0900

pH Checked: 2.272 NCF:

65 of 65

Chain of Custody Page \_\_\_ of \_\_\_

**ESC**  
L.A.B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

12065 Lebanon Rd  
Mount Juliet, TN 37122  
Phone: 615-758-5858  
Phone: 800-767-5859  
Fax: 615-758-5859

L# L72736

**G127**

Acctnum: ARCADHTX  
Template: T95739  
Prelogin: P476834  
TSR: 633 - Pam Langford  
PB: 7.24 mg  
Shipped Via: FedEx Ground

## Quality Control Summary

### SDG: L712971

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,  
October 17, 2014**

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#### **Sample Receiving and Handling**

All sample aliquots were received at the correct temperature, in the proper containers, and with the appropriate preservatives. All method specified holding times were met.

#### **Anions by Method 9056MOD**

##### **Laboratory Control Sample**

Samples L712971-01, -02, -03, -04, -05, -06, -07, -08, and -09 were analyzed in analytical batch WG734733. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Sample L712971-04 was analyzed in analytical batch WG734962. The laboratory control sample associated with this sample was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Sample Duplicate Analysis**

For analytical batch WG734733 sample duplicate analysis was performed on sample L712971-09. The relative percent difference exceeded the method limits for Nitrate.

For analytical batch WG734733 sample duplicate analysis was performed on sample L712986-12. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG734962 sample duplicate analysis was performed on sample L712857-04. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG734962 sample duplicate analysis was performed on sample L713064-09. The relative percent differences were within the method limits for target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG734733 matrix spike/matrix spike duplicate analysis was performed on sample L712986-13. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

For analytical batch WG734962 matrix spike/matrix spike duplicate analysis was performed on sample L712968-05. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

##### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Total Dissolved Solids by Method 2540 C-2011**

##### **Laboratory Control Sample**

Samples L712971-01, -02, -03, and -08 were analyzed in analytical batch WG734812. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

## Quality Control Summary

### SDG: L712971

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,  
October 17, 2014**

Samples L712971-04, -05, -06, -07, and -09 were analyzed in analytical batch WG734813. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

#### **Sample Duplicate Analysis**

For analytical batch WG734812 sample duplicate analysis was performed on sample L712857-06. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG734813 sample duplicate analysis was performed on sample L712921-01. The relative percent differences were within the method limits for target analytes reported from this batch.

#### **Matrix Spike/Matrix Spike Duplicate**

Precision for batch WG734812 was evaluated using the LCS/LCSD. The RPDs were within method limits.

Precision for batch WG734813 was evaluated using the LCS/LCSD. The RPDs were within method limits.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Cyanide by Method 9012B**

##### **Laboratory Control Sample**

Samples L712971-01, -02, -03, -04, -05, -06, -07, -08, and -09 were analyzed in analytical batch WG735642. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

#### **Sample Duplicate Analysis**

For analytical batch WG735642 sample duplicate analysis was performed on sample L712971-02. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG735642 sample duplicate analysis was performed on sample L713011-02. The relative percent differences were within the method limits for target analytes reported from this batch.

#### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG735642 matrix spike/matrix spike duplicate analysis was performed on sample L712971-04. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Mercury by Method 7470A**

##### **Laboratory Control Sample**

Samples L712971-01, -02, -03, -04, -05, -06, -07, -08, and -09 were analyzed in analytical batch WG736040. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes

## Quality Control Summary

### SDG: L712971

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,**

**October 17, 2014**

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reported from this batch.

#### **Sample Duplicate Analysis**

For analytical batch WG736040 sample duplicate analysis was performed on sample L712736-01. The relative percent differences were within the method limits for target analytes reported from this batch.

#### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG736040 matrix spike/matrix spike duplicate analysis was performed on sample L712736-01. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Trace Metals by Method 6020**

##### **Laboratory Control Sample**

Samples L712971-01, -02, -03, -05, -06, -07, -08, and -09 were analyzed in analytical batch WG736270. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Sample L712971-04 was analyzed in analytical batch WG737003. The laboratory control sample associated with this sample was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Sample L712971-04 was analyzed in analytical batch WG737007. The laboratory control sample associated with this sample was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Samples L712971-01, -02, -03, -05, -06, -07, -08, and -09 were analyzed in analytical batch WG738505. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

#### **Matrix Spike/Matrix Spike Duplicate**

Precision for batch WG736270 was evaluated using the LCS/LCSD. The RPDs were within method limits.

For analytical batch WG737003 matrix spike/matrix spike duplicate analysis was performed on sample L712736-03. The matrix spike recoveries were below laboratory control limits for Calcium, Dissolved. The spike recoveries were within limits for the remaining target compounds reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

For analytical batch WG737007 matrix spike/matrix spike duplicate analysis was performed on sample L712736-05. The matrix spike recoveries were above laboratory control limits for Calcium. The spike recoveries were within limits for the remaining target compounds reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

## Quality Control Summary

### SDG: L712971

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,**

**October 17, 2014**

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For analytical batch WG738505 matrix spike/matrix spike duplicate analysis was performed on sample L712971-01. The matrix spike recoveries were above laboratory control limits for Boron, Calcium, and Sodium. The spike recoveries were within limits for the remaining target compounds reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch. Boron, did not meet the method limit criteria for the serial dilution. Calcium and Sodium did not meet the method limit criteria for the post digest spike.

#### **Blank Analysis**

For batch WG736270, the concentration of Silver, Dissolved was above the method reporting limit.

The remaining method blanks, initial calibration blank, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Volatile TPH by Method 8015D/GRO**

##### **Laboratory Control Sample**

Samples L712971-01, -02, -03, -04, -05, -06, -07, -08, and -09 were analyzed in analytical batch WG734878. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG734878 matrix spike/matrix spike duplicate analysis was performed on sample L712949-01. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Volatile Organic Compounds by Method 8260B**

##### **Laboratory Control Sample**

Samples L712971-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, and -13 were analyzed in analytical batch WG734780. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG734780 matrix spike/matrix spike duplicate analysis was performed on sample L712971-01. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

## Quality Control Summary

### SDG: L712971

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,  
October 17, 2014**

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#### Semi-Volatile Organic Compounds by Method 8270 C

##### **Laboratory Control Sample**

Samples L712971-01, -02, -03, and -08 were analyzed in analytical batch WG734919. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Samples L712971-04, -05, -06, -07, and -09 were analyzed in analytical batch WG734920. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

Precision for batch WG734919 was evaluated using the LCS/LCSD. The RPDs were within method limits.

Precision for batch WG734920 was evaluated using the LCS/LCSD. The RPDs were within method limits.

##### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### Diesel Range Organics by Method 8015

##### **Laboratory Control Sample**

Samples L712971-01, -02, -03, -04, -05, -06, -07, and -09 were analyzed in analytical batch WG734853. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Sample L712971-08 was analyzed in analytical batch WG735881. The laboratory control sample associated with this sample was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

Precision for batch WG734853 was evaluated using the LCS/LCSD. The RPDs were within method limits.

Precision for batch WG735881 was evaluated using the LCS/LCSD. The RPDs were within method limits.

##### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

Nancy F. McLain  
ESC Representative  
ESC Lab Sciences





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Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

## Report Summary

Monday October 20, 2014

Report Number: L712971

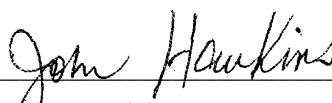
Samples Received: 07/31/14

Client Project: TX000836.0008.00004

Description: Navajo Refining Company - Artesia, NM

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

  
John Hawkins , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BI0041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-01

Sample ID : MW-12-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/29/14 15:30

Project # : TX000836.0008.00004

| Parameter             | Result  | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|---------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 1800000 | 2600 | 50000  | ug/l  |           | 9056MOD | 07/31/14 | 50   |
| Fluoride              | 1300    | 9.9  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrate               | 8900    | 23.  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrite               | U       | 28.  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Sulfate               | 3100000 | 3900 | 250000 | ug/l  |           | 9056MOD | 07/31/14 | 50   |
| Cyanide               | U       | 1.8  | 5.0    | ug/l  |           | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 7700000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/04/14 | 1    |
| Aluminum              | 10.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Aluminum, Dissolved   | 14.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/12/14 | 1    |
| Arsenic               | 1.9     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Arsenic, Dissolved    | 1.1     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Barium                | 20.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Barium, Dissolved     | 20.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Boron                 | 560     | 1.5  | 20.    | ug/l  | 01V       | 6020    | 08/21/14 | 1    |
| Boron, Dissolved      | 560     | 1.5  | 20.    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cadmium               | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cadmium, Dissolved    | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Calcium               | 740000  | 920  | 20000  | ug/l  | 01V       | 6020    | 08/21/14 | 20   |
| Calcium, Dissolved    | 750000  | 920  | 20000  | ug/l  |           | 6020    | 08/11/14 | 20   |
| Chromium              | 0.68    | 0.54 | 1.0    | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Chromium, Dissolved   | 1.2     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Copper                | 2.0     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Copper, Dissolved     | 2.0     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cobalt                | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cobalt, Dissolved     | 0.27    | 0.26 | 1.0    | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Iron                  | 980     | 50.  | 50.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Iron, Dissolved       | U       | 50.  | 50.    | ug/l  |           | 6020    | 08/12/14 | 1    |
| Lead                  | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Lead, Dissolved       | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Manganese             | 87.     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Manganese, Dissolved  | 130     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Molybdenum            | 5.0     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Molybdenum, Dissolved | 5.1     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Nickel                | 2.0     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Nickel, Dissolved     | 2.4     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Potassium             | 4700    | 37.  | 1000   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Potassium, Dissolved  | 5000    | 37.  | 1000   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Selenium              | 10.     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Selenium, Dissolved   | 9.4     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Silver                | U       | 0.31 | 0.50   | ug/l  |           | 6020    | 08/21/14 | 1    |

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

MDL = Minimum Detection Limit = LOD = TRRP SDL

Note:

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-01

Sample ID : MW-12-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/29/14 15:30

Project # : TX000836.0008.00004

| Parameter                                           | Result  | MDL   | RDL   | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|---------|-------|-------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U       | 0.31  | 0.50  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Sodium                                              | 1500000 | 2200  | 20000 | ug/l   | 01V       | 6020    | 08/21/14 | 20   |
| Sodium, Dissolved                                   | 1600000 | 2200  | 20000 | ug/l   |           | 6020    | 08/11/14 | 20   |
| Uranium                                             | 5.5     | 0.33  | 10.   | ug/l   | J         | 6020    | 08/22/14 | 1    |
| Uranium, Dissolved                                  | 5.8     | 0.33  | 10.   | ug/l   | J         | 6020    | 08/11/14 | 1    |
| Vanadium                                            | 2.1     | 0.18  | 1.0   | ug/l   |           | 6020    | 08/21/14 | 1    |
| Vanadium, Dissolved                                 | 1.6     | 0.18  | 1.0   | ug/l   |           | 6020    | 08/11/14 | 1    |
| Zinc                                                | 4.7     | 2.6   | 10.   | ug/l   | J         | 6020    | 08/21/14 | 1    |
| Zinc, Dissolved                                     | U       | 2.6   | 10.   | ug/l   |           | 6020    | 08/11/14 | 1    |
| Mercury                                             | U       | 0.049 | 0.20  | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U       | 31.   | 100   | ug/l   |           | 8015D/G | 07/31/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 101.    |       |       | % Rec. |           | 8015D/G | 07/31/14 | 1    |
| Volatile Organics                                   |         |       |       |        |           |         |          |      |
| Benzene                                             | U       | 0.33  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Carbon tetrachloride                                | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Chloroform                                          | U       | 0.32  | 5.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dibromoethane                                   | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethane                                  | U       | 0.26  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dichloroethane                                  | U       | 0.36  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethene                                  | U       | 0.40  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Ethylbenzene                                        | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Methylene Chloride                                  | U       | 1.0   | 5.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U       | 0.58  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Toluene                                             | U       | 0.78  | 5.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1-Trichloroethane                               | U       | 0.32  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2-Trichloroethane                               | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Vinyl chloride                                      | U       | 0.26  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| o-Xylene                                            | U       | 0.34  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| m&p-Xylene                                          | U       | 0.72  | 2.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Xylenes, Total                                      | U       | 1.1   | 3.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Surrogate Recovery                                  |         |       |       |        |           |         |          |      |
| Toluene-d8                                          | 99.7    |       |       | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Dibromofluoromethane                                | 102.    |       |       | % Rec. |           | 8260B   | 08/01/14 | 1    |
| 4-Bromofluorobenzene                                | 96.5    |       |       | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Diesel and Oil Ranges                               |         |       |       |        |           |         |          |      |
| C10-C28 Diesel Range                                | 25.     | 22.   | 100   | ug/l   | J         | 8015    | 08/01/14 | 1    |
| C28-C40 Oil Range                                   | U       | 12.   | 100   | ug/l   |           | 8015    | 08/01/14 | 1    |

U = ND (Not Detected)

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : MW-12-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/29/14 15:30

ESC Sample # : L712971-01

Site ID :

Project # : TX000836.0008.00004

| Parameter                         | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|-----------------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| Surrogate Recovery<br>o-Terphenyl | 98.2   |      |     | % Rec. |           | 8015   | 08/01/14 | 1    |
| Base/Neutral Extractables         |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene                    | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 1-Methylnaphthalene               | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 2-Methylnaphthalene               | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Naphthalene                       | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Surrogate Recovery                |        |      |     |        |           |        |          |      |
| 2-Fluorophenol                    | 42.3   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Phenol-d5                         | 36.7   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Nitrobenzene-d5                   | 68.7   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2-Fluorobiphenyl                  | 68.8   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2,4,6-Tribromophenol              | 82.8   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| p-Terphenyl-d14                   | 78.3   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

MDL = Minimum Detection Limit = LOD = TRRP SDL

Note:

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-02

Sample ID : MW-13-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/29/14 13:50

Project # : TX000836.0008.00004

| Parameter             | Result  | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|---------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 1700000 | 2600 | 50000  | ug/l  |           | 9056MOD | 07/31/14 | 50   |
| Fluoride              | 650     | 9.9  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrate               | 320     | 23.  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrite               | U       | 28.  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Sulfate               | 2500000 | 3900 | 250000 | ug/l  |           | 9056MOD | 07/31/14 | 50   |
| Cyanide               | U       | 1.8  | 5.0    | ug/l  |           | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 8800000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/04/14 | 1    |
| Aluminum              | 8.9     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Aluminum, Dissolved   | 13.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/12/14 | 1    |
| Arsenic               | 1.4     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Arsenic, Dissolved    | 1.0     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Barium                | 25.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Barium, Dissolved     | 23.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Boron                 | 640     | 1.5  | 20.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Boron, Dissolved      | 620     | 1.5  | 20.    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cadmium               | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cadmium, Dissolved    | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Calcium               | 830000  | 920  | 20000  | ug/l  |           | 6020    | 08/21/14 | 20   |
| Calcium, Dissolved    | 810000  | 920  | 20000  | ug/l  |           | 6020    | 08/11/14 | 20   |
| Chromium              | 0.77    | 0.54 | 1.0    | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Chromium, Dissolved   | 1.1     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Copper                | 1.2     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Copper, Dissolved     | 1.0     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cobalt                | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cobalt, Dissolved     | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Iron                  | 230     | 50.  | 50.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Iron, Dissolved       | 130     | 50.  | 50.    | ug/l  |           | 6020    | 08/12/14 | 1    |
| Lead                  | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Lead, Dissolved       | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Manganese             | 560     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Manganese, Dissolved  | 410     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Molybdenum            | 4.6     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Molybdenum, Dissolved | 4.1     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Nickel                | 1.5     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Nickel, Dissolved     | 1.3     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Potassium             | 5600    | 37.  | 1000   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Potassium, Dissolved  | 6100    | 37.  | 1000   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Selenium              | 0.69    | 0.38 | 2.0    | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Selenium, Dissolved   | 0.88    | 0.38 | 2.0    | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Silver                | U       | 0.31 | 0.50   | ug/l  |           | 6020    | 08/21/14 | 1    |

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-02

Sample ID : MW-13-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/29/14 13:50

Project # : TX000836.0008.00004

| Parameter                                           | Result  | MDL   | RDL   | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|---------|-------|-------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U       | 0.31  | 0.50  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Sodium                                              | 1300000 | 2200  | 20000 | ug/l   |           | 6020    | 08/21/14 | 20   |
| Sodium, Dissolved                                   | 1300000 | 2200  | 20000 | ug/l   |           | 6020    | 08/11/14 | 20   |
| Uranium                                             | 7.0     | 0.33  | 10.   | ug/l   | J         | 6020    | 08/22/14 | 1    |
| Uranium, Dissolved                                  | 6.8     | 0.33  | 10.   | ug/l   | J         | 6020    | 08/11/14 | 1    |
| Vanadium                                            | 4.5     | 0.18  | 1.0   | ug/l   |           | 6020    | 08/21/14 | 1    |
| Vanadium, Dissolved                                 | 4.0     | 0.18  | 1.0   | ug/l   |           | 6020    | 08/11/14 | 1    |
| Zinc                                                | 2.8     | 2.6   | 10.   | ug/l   | J         | 6020    | 08/21/14 | 1    |
| Zinc, Dissolved                                     | U       | 2.6   | 10.   | ug/l   |           | 6020    | 08/11/14 | 1    |
| Mercury                                             | U       | 0.049 | 0.20  | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U       | 31.   | 100   | ug/l   |           | 8015D/G | 07/31/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 100.    |       |       | % Rec. |           | 8015D/G | 07/31/14 | 1    |
| Volatile Organics                                   |         |       |       |        |           |         |          |      |
| Benzene                                             | U       | 0.33  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Carbon tetrachloride                                | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Chloroform                                          | U       | 0.32  | 5.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dibromoethane                                   | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethane                                  | U       | 0.26  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dichloroethane                                  | U       | 0.36  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethene                                  | U       | 0.40  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Ethylbenzene                                        | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Methylene Chloride                                  | U       | 1.0   | 5.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U       | 0.58  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Toluene                                             | U       | 0.78  | 5.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1-Trichloroethane                               | U       | 0.32  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2-Trichloroethane                               | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Vinyl chloride                                      | U       | 0.26  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| o-Xylene                                            | U       | 0.34  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| m&p-Xylene                                          | U       | 0.72  | 2.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Xylenes, Total                                      | U       | 1.1   | 3.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Surrogate Recovery                                  |         |       |       |        |           |         |          |      |
| Toluene-d8                                          | 101.    |       |       | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Dibromofluoromethane                                | 103.    |       |       | % Rec. |           | 8260B   | 08/01/14 | 1    |
| 4-Bromofluorobenzene                                | 98.6    |       |       | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Diesel and Oil Ranges                               |         |       |       |        |           |         |          |      |
| C10-C28 Diesel Range                                | 45.     | 22.   | 100   | ug/l   | J         | 8015    | 08/01/14 | 1    |
| C28-C40 Oil Range                                   | 18.     | 12.   | 100   | ug/l   | J         | 8015    | 08/01/14 | 1    |

U = ND (Not Detected)

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : MW-13-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/29/14 13:50

ESC Sample # : L712971-02

Site ID :

Project # : TX000836.0008.00004

| Parameter                         | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|-----------------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| Surrogate Recovery<br>o-Terphenyl | 103.   |      |     | % Rec. |           | 8015   | 08/01/14 | 1    |
| Base/Neutral Extractables         |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene                    | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 1-Methylnaphthalene               | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 2-Methylnaphthalene               | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Naphthalene                       | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Surrogate Recovery                |        |      |     |        |           |        |          |      |
| 2-Fluorophenol                    | 29.1   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Phenol-d5                         | 21.1   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Nitrobenzene-d5                   | 65.5   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2-Fluorobiphenyl                  | 67.7   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2,4,6-Tribromophenol              | 92.3   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| p-Terphenyl-d14                   | 78.6   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-03

Sample ID : MW-25-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/29/14 17:30

Project # : TX000836.0008.00004

| Parameter             | Result   | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|----------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 4200000  | 2600 | 50000  | ug/l  |           | 9056MOD | 07/31/14 | 50   |
| Fluoride              | 930      | 9.9  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrate               | 5200     | 23.  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrite               | U        | 28.  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Sulfate               | 3100000  | 3900 | 250000 | ug/l  |           | 9056MOD | 07/31/14 | 50   |
| Cyanide               | U        | 1.8  | 5.0    | ug/l  |           | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 12000000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/04/14 | 1    |
| Aluminum              | 16.      | 2.0  | 50.    | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Aluminum, Dissolved   | 13.      | 2.0  | 50.    | ug/l  | J         | 6020    | 08/12/14 | 1    |
| Arsenic               | 5.0      | 0.25 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Arsenic, Dissolved    | 5.0      | 0.25 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Barium                | 25.      | 0.36 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Barium, Dissolved     | 21.      | 0.36 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Boron                 | 220      | 1.5  | 20.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Boron, Dissolved      | 230      | 1.5  | 20.    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cadmium               | U        | 0.16 | 0.50   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cadmium, Dissolved    | U        | 0.16 | 0.50   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Calcium               | 1100000  | 2300 | 50000  | ug/l  |           | 6020    | 08/21/14 | 50   |
| Calcium, Dissolved    | 1200000  | 2300 | 50000  | ug/l  |           | 6020    | 08/11/14 | 50   |
| Chromium              | 0.66     | 0.54 | 1.0    | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Chromium, Dissolved   | 0.90     | 0.54 | 1.0    | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Copper                | 1.3      | 0.52 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Copper, Dissolved     | 1.1      | 0.52 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cobalt                | 8.0      | 0.26 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cobalt, Dissolved     | 0.46     | 0.26 | 1.0    | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Iron                  | U        | 50.  | 50.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Iron, Dissolved       | U        | 50.  | 50.    | ug/l  |           | 6020    | 08/12/14 | 1    |
| Lead                  | U        | 0.24 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Lead, Dissolved       | U        | 0.24 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Manganese             | 2900     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Manganese, Dissolved  | 130      | 0.25 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Molybdenum            | 14.      | 0.14 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Molybdenum, Dissolved | 15.      | 0.14 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Nickel                | 4.4      | 0.35 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Nickel, Dissolved     | 3.0      | 0.35 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Potassium             | 6500     | 37.  | 1000   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Potassium, Dissolved  | 7200     | 37.  | 1000   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Selenium              | 6.7      | 0.38 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Selenium, Dissolved   | 5.6      | 0.38 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Silver                | U        | 0.31 | 0.50   | ug/l  |           | 6020    | 08/21/14 | 1    |

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-03

Sample ID : MW-25-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/29/14 17:30

Project # : TX000836.0008.00004

| Parameter                                           | Result  | MDL   | RDL   | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|---------|-------|-------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U       | 0.31  | 0.50  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Sodium                                              | 2200000 | 5500  | 50000 | ug/l   |           | 6020    | 08/21/14 | 50   |
| Sodium, Dissolved                                   | 2600000 | 5500  | 50000 | ug/l   |           | 6020    | 08/11/14 | 50   |
| Uranium                                             | 11.     | 0.33  | 10.   | ug/l   |           | 6020    | 08/22/14 | 1    |
| Uranium, Dissolved                                  | 11.     | 0.33  | 10.   | ug/l   |           | 6020    | 08/11/14 | 1    |
| Vanadium                                            | 12.     | 0.18  | 1.0   | ug/l   |           | 6020    | 08/21/14 | 1    |
| Vanadium, Dissolved                                 | 9.9     | 0.18  | 1.0   | ug/l   |           | 6020    | 08/11/14 | 1    |
| Zinc                                                | U       | 2.6   | 10.   | ug/l   |           | 6020    | 08/21/14 | 1    |
| Zinc, Dissolved                                     | U       | 2.6   | 10.   | ug/l   |           | 6020    | 08/11/14 | 1    |
| Mercury                                             | U       | 0.049 | 0.20  | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U       | 31.   | 100   | ug/l   |           | 8015D/G | 08/01/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 101.    |       |       | % Rec. |           | 8015D/G | 08/01/14 | 1    |
| Volatile Organics                                   |         |       |       |        |           |         |          |      |
| Benzene                                             | U       | 0.33  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Carbon tetrachloride                                | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Chloroform                                          | U       | 0.32  | 5.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dibromoethane                                   | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethane                                  | U       | 0.26  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dichloroethane                                  | U       | 0.36  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethene                                  | U       | 0.40  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Ethylbenzene                                        | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Methylene Chloride                                  | U       | 1.0   | 5.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U       | 0.58  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Toluene                                             | U       | 0.78  | 5.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1-Trichloroethane                               | U       | 0.32  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2-Trichloroethane                               | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Vinyl chloride                                      | U       | 0.26  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| o-Xylene                                            | U       | 0.34  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| m&p-Xylene                                          | U       | 0.72  | 2.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Xylenes, Total                                      | U       | 1.1   | 3.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Surrogate Recovery                                  |         |       |       |        |           |         |          |      |
| Toluene-d8                                          | 104.    |       |       | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Dibromofluoromethane                                | 101.    |       |       | % Rec. |           | 8260B   | 08/01/14 | 1    |
| 4-Bromofluorobenzene                                | 97.4    |       |       | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Diesel and Oil Ranges                               |         |       |       |        |           |         |          |      |
| C10-C28 Diesel Range                                | 120     | 22.   | 100   | ug/l   |           | 8015    | 08/01/14 | 1    |
| C28-C40 Oil Range                                   | 16.     | 12.   | 100   | ug/l   | J         | 8015    | 08/01/14 | 1    |

U = ND (Not Detected)

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : MW-25-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/29/14 17:30

ESC Sample # : L712971-03

Site ID :

Project # : TX000836.0008.00004

| Parameter                         | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|-----------------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| Surrogate Recovery<br>o-Terphenyl | 103.   |      |     | % Rec. |           | 8015   | 08/01/14 | 1    |
| Base/Neutral Extractables         |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene                    | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 1-Methylnaphthalene               | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 2-Methylnaphthalene               | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Naphthalene                       | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Surrogate Recovery                |        |      |     |        |           |        |          |      |
| 2-Fluorophenol                    | 49.2   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Phenol-d5                         | 41.4   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Nitrobenzene-d5                   | 68.5   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2-Fluorobiphenyl                  | 68.8   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2,4,6-Tribromophenol              | 90.9   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| p-Terphenyl-d14                   | 73.2   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |

U = ND (Not Detected)

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Est. 1970

# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-04

Sample ID : MW-136-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/30/14 08:10

Project # : TX000836.0008.00004

| Parameter             | Result  | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|---------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 270000  | 2600 | 50000  | ug/l  |           | 9056MOD | 08/02/14 | 50   |
| Fluoride              | 1600    | 9.9  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrate               | 470     | 23.  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrite               | 30.     | 28.  | 100    | ug/l  | J         | 9056MOD | 07/31/14 | 1    |
| Sulfate               | 2300000 | 3900 | 250000 | ug/l  |           | 9056MOD | 08/02/14 | 50   |
| Cyanide               | U       | 1.8  | 5.0    | ug/l  |           | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 3400000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/04/14 | 1    |
| Aluminum              | 4800    | 2.0  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Aluminum, Dissolved   | 31.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Arsenic               | 2.0     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Arsenic, Dissolved    | 1.5     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Barium                | 100     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Barium, Dissolved     | 30.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Boron                 | 540     | 1.5  | 20.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Boron, Dissolved      | 720     | 1.5  | 20.    | ug/l  |           | 6020    | 08/20/14 | 1    |
| Cadmium               | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cadmium, Dissolved    | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Calcium               | 740000  | 460  | 10000  | ug/l  |           | 6020    | 08/14/14 | 10   |
| Calcium, Dissolved    | 710000  | 460  | 10000  | ug/l  |           | 6020    | 08/14/14 | 10   |
| Chromium              | 5.2     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Chromium, Dissolved   | U       | 0.54 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Copper                | 3.6     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Copper, Dissolved     | 1.3     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cobalt                | 4.1     | 0.26 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cobalt, Dissolved     | 2.2     | 0.26 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Iron                  | 2700    | 50.  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Iron, Dissolved       | U       | 50.  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Lead                  | 2.1     | 0.24 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Lead, Dissolved       | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Manganese             | 340     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Manganese, Dissolved  | 220     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Molybdenum            | 10.     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Molybdenum, Dissolved | 8.7     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Nickel                | 6.7     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Nickel, Dissolved     | 3.2     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Potassium             | 5000    | 37.  | 1000   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Potassium, Dissolved  | 3700    | 37.  | 1000   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Selenium              | 3.7     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Selenium, Dissolved   | 4.5     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Silver                | U       | 0.31 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-04

Sample ID : MW-136-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/30/14 08:10

Project # : TX000836.0008.00004

| Parameter                                           | Result | MDL   | RDL  | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|--------|-------|------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U      | 0.31  | 0.50 | ug/l   |           | 6020    | 08/13/14 | 1    |
| Sodium                                              | 81000  | 110   | 1000 | ug/l   |           | 6020    | 08/13/14 | 1    |
| Sodium, Dissolved                                   | 84000  | 110   | 1000 | ug/l   |           | 6020    | 08/13/14 | 1    |
| Uranium                                             | 63.    | 0.33  | 10.  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Uranium, Dissolved                                  | 62.    | 0.33  | 10.  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Vanadium                                            | 15.    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Vanadium, Dissolved                                 | 12.    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Zinc                                                | 51.    | 2.6   | 10.  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Zinc, Dissolved                                     | 18.    | 2.6   | 10.  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Mercury                                             | U      | 0.049 | 0.20 | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U      | 31.   | 100  | ug/l   |           | 8015D/G | 08/01/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 101.   |       |      | % Rec. |           | 8015D/G | 08/01/14 | 1    |
| Volatile Organics                                   |        |       |      |        |           |         |          |      |
| Benzene                                             | U      | 0.33  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Carbon tetrachloride                                | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Chloroform                                          | U      | 0.32  | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dibromoethane                                   | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethane                                  | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dichloroethane                                  | U      | 0.36  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethene                                  | U      | 0.40  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Ethylbenzene                                        | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Methylene Chloride                                  | U      | 1.0   | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U      | 0.58  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Toluene                                             | U      | 0.78  | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1-Trichloroethane                               | U      | 0.32  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2-Trichloroethane                               | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Vinyl chloride                                      | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| o-Xylene                                            | U      | 0.34  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| m&p-Xylene                                          | U      | 0.72  | 2.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Xylenes, Total                                      | U      | 1.1   | 3.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Surrogate Recovery                                  |        |       |      |        |           |         |          |      |
| Toluene-d8                                          | 102.   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Dibromofluoromethane                                | 101.   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| 4-Bromofluorobenzene                                | 98.6   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Diesel and Oil Ranges                               |        |       |      |        |           |         |          |      |
| C10-C28 Diesel Range                                | 280    | 22.   | 100  | ug/l   |           | 8015    | 08/01/14 | 1    |
| C28-C40 Oil Range                                   | 20.    | 12.   | 100  | ug/l   | J         | 8015    | 08/01/14 | 1    |

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : MW-136-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/30/14 08:10

ESC Sample # : L712971-04

Site ID :

Project # : TX000836.0008.00004

| Parameter                         | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|-----------------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| Surrogate Recovery<br>o-Terphenyl | 95.1   |      |     | % Rec. |           | 8015   | 08/01/14 | 1    |
| Base/Neutral Extractables         |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene                    | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 1-Methylnaphthalene               | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 2-Methylnaphthalene               | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Naphthalene                       | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Surrogate Recovery                |        |      |     |        |           |        |          |      |
| 2-Fluorophenol                    | 46.2   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Phenol-d5                         | 35.7   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Nitrobenzene-d5                   | 50.0   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2-Fluorobiphenyl                  | 74.5   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2,4,6-Tribromophenol              | 92.2   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| p-Terphenyl-d14                   | 73.3   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |

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October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-05

Sample ID : UG-1-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/30/14 09:45

Project # : TX000836.0008.00004

| Parameter             | Result  | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|---------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 77000   | 52.  | 1000   | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Fluoride              | 610     | 9.9  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrate               | 6600    | 23.  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrite               | 29.     | 28.  | 100    | ug/l  | J         | 9056MOD | 07/31/14 | 1    |
| Sulfate               | 1100000 | 1500 | 100000 | ug/l  |           | 9056MOD | 07/31/14 | 20   |
| Cyanide               | U       | 1.8  | 5.0    | ug/l  |           | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 2800000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/04/14 | 1    |
| Aluminum              | 410     | 2.0  | 50.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Aluminum, Dissolved   | 12.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/12/14 | 1    |
| Arsenic               | 1.5     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Arsenic, Dissolved    | 1.4     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Barium                | 14.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Barium, Dissolved     | 11.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Boron                 | 460     | 1.5  | 20.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Boron, Dissolved      | 510     | 1.5  | 20.    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cadmium               | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cadmium, Dissolved    | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Calcium               | 490000  | 460  | 10000  | ug/l  |           | 6020    | 08/21/14 | 10   |
| Calcium, Dissolved    | 520000  | 460  | 10000  | ug/l  |           | 6020    | 08/11/14 | 10   |
| Chromium              | 1.7     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Chromium, Dissolved   | 1.8     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Copper                | 1.6     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Copper, Dissolved     | 1.1     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cobalt                | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cobalt, Dissolved     | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Iron                  | 200     | 50.  | 50.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Iron, Dissolved       | U       | 50.  | 50.    | ug/l  |           | 6020    | 08/12/14 | 1    |
| Lead                  | 0.43    | 0.24 | 1.0    | ug/l  | J         | 6020    | 08/22/14 | 1    |
| Lead, Dissolved       | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Manganese             | 17.     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Manganese, Dissolved  | 11.     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Molybdenum            | 4.7     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Molybdenum, Dissolved | 4.9     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Nickel                | 1.2     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Nickel, Dissolved     | 1.2     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Potassium             | 1800    | 37.  | 1000   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Potassium, Dissolved  | 1900    | 37.  | 1000   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Selenium              | 6.0     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Selenium, Dissolved   | 5.2     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Silver                | U       | 0.31 | 0.50   | ug/l  |           | 6020    | 08/21/14 | 1    |

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2929 Briarpark Dr., Suite 300  
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October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : UG-1-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/30/14 09:45

ESC Sample # : L712971-05

Site ID :

Project # : TX000836.0008.00004

| Parameter                                           | Result | MDL   | RDL  | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|--------|-------|------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U      | 0.31  | 0.50 | ug/l   |           | 6020    | 08/11/14 | 1    |
| Sodium                                              | 85000  | 110   | 1000 | ug/l   |           | 6020    | 08/21/14 | 1    |
| Sodium, Dissolved                                   | 88000  | 110   | 1000 | ug/l   |           | 6020    | 08/11/14 | 1    |
| Uranium                                             | 17.    | 0.33  | 10.  | ug/l   |           | 6020    | 08/22/14 | 1    |
| Uranium, Dissolved                                  | 18.    | 0.33  | 10.  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Vanadium                                            | 11.    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/21/14 | 1    |
| Vanadium, Dissolved                                 | 11.    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Zinc                                                | 5.5    | 2.6   | 10.  | ug/l   | J         | 6020    | 08/21/14 | 1    |
| Zinc, Dissolved                                     | 3.8    | 2.6   | 10.  | ug/l   | J         | 6020    | 08/11/14 | 1    |
| Mercury                                             | U      | 0.049 | 0.20 | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U      | 31.   | 100  | ug/l   |           | 8015D/G | 08/01/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 101.   |       |      | % Rec. |           | 8015D/G | 08/01/14 | 1    |
| Volatile Organics                                   |        |       |      |        |           |         |          |      |
| Benzene                                             | U      | 0.33  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Carbon tetrachloride                                | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Chloroform                                          | U      | 0.32  | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dibromoethane                                   | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethane                                  | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dichloroethane                                  | U      | 0.36  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethene                                  | U      | 0.40  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Ethylbenzene                                        | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Methylene Chloride                                  | U      | 1.0   | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U      | 0.58  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Toluene                                             | U      | 0.78  | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1-Trichloroethane                               | U      | 0.32  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2-Trichloroethane                               | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Vinyl chloride                                      | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| o-Xylene                                            | U      | 0.34  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| m&p-Xylene                                          | U      | 0.72  | 2.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Xylenes, Total                                      | U      | 1.1   | 3.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Surrogate Recovery                                  |        |       |      |        |           |         |          |      |
| Toluene-d8                                          | 104.   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Dibromofluoromethane                                | 102.   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| 4-Bromofluorobenzene                                | 97.3   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Diesel and Oil Ranges                               |        |       |      |        |           |         |          |      |
| C10-C28 Diesel Range                                | 59.    | 22.   | 100  | ug/l   | J         | 8015    | 08/02/14 | 1    |
| C28-C40 Oil Range                                   | 41.    | 12.   | 100  | ug/l   | J         | 8015    | 08/02/14 | 1    |

U = ND (Not Detected)

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Est. 1970

# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : UG-1-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/30/14 09:45

ESC Sample # : L712971-05

Site ID :

Project # : TX000836.0008.00004

| Parameter                         | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|-----------------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| Surrogate Recovery<br>o-Terphenyl | 104.   |      |     | % Rec. |           | 8015   | 08/02/14 | 1    |
| Base/Neutral Extractables         |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene                    | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 1-Methylnaphthalene               | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 2-Methylnaphthalene               | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Naphthalene                       | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Surrogate Recovery                |        |      |     |        |           |        |          |      |
| 2-Fluorophenol                    | 51.4   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Phenol-d5                         | 35.6   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Nitrobenzene-d5                   | 54.9   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2-Fluorobiphenyl                  | 74.0   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2,4,6-Tribromophenol              | 83.5   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| p-Terphenyl-d14                   | 72.5   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-06

Sample ID : UG-3R-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/30/14 11:20

Project # : TX000836.0008.00004

| Parameter             | Result  | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|---------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 44000   | 52.  | 1000   | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Fluoride              | 660     | 9.9  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrate               | 1000    | 23.  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrite               | U       | 28.  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Sulfate               | 1400000 | 1500 | 100000 | ug/l  |           | 9056MOD | 07/31/14 | 20   |
| Cyanide               | U       | 1.8  | 5.0    | ug/l  |           | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 2200000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/04/14 | 1    |
| Aluminum              | 170     | 2.0  | 50.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Aluminum, Dissolved   | 12.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/12/14 | 1    |
| Arsenic               | 1.4     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Arsenic, Dissolved    | 1.3     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Barium                | 17.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Barium, Dissolved     | 16.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Boron                 | 330     | 1.5  | 20.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Boron, Dissolved      | 300     | 1.5  | 20.    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cadmium               | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cadmium, Dissolved    | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Calcium               | 490000  | 460  | 10000  | ug/l  |           | 6020    | 08/21/14 | 10   |
| Calcium, Dissolved    | 460000  | 460  | 10000  | ug/l  |           | 6020    | 08/11/14 | 10   |
| Chromium              | 1.2     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Chromium, Dissolved   | 1.4     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Copper                | U       | 0.52 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Copper, Dissolved     | 0.57    | 0.52 | 1.0    | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Cobalt                | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cobalt, Dissolved     | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Iron                  | 100     | 50.  | 50.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Iron, Dissolved       | U       | 50.  | 50.    | ug/l  |           | 6020    | 08/12/14 | 1    |
| Lead                  | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Lead, Dissolved       | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Manganese             | 4.0     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Manganese, Dissolved  | 0.34    | 0.25 | 2.0    | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Molybdenum            | 2.5     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Molybdenum, Dissolved | 2.6     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Nickel                | 0.90    | 0.35 | 1.0    | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Nickel, Dissolved     | 1.0     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Potassium             | 1800    | 37.  | 1000   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Potassium, Dissolved  | 1800    | 37.  | 1000   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Selenium              | 3.2     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Selenium, Dissolved   | 3.1     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Silver                | U       | 0.31 | 0.50   | ug/l  |           | 6020    | 08/21/14 | 1    |

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-06

Sample ID : UG-3R-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/30/14 11:20

Project # : TX000836.0008.00004

| Parameter                                           | Result | MDL   | RDL  | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|--------|-------|------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U      | 0.31  | 0.50 | ug/l   |           | 6020    | 08/11/14 | 1    |
| Sodium                                              | 46000  | 110   | 1000 | ug/l   |           | 6020    | 08/21/14 | 1    |
| Sodium, Dissolved                                   | 47000  | 110   | 1000 | ug/l   |           | 6020    | 08/11/14 | 1    |
| Uranium                                             | 15.    | 0.33  | 10.  | ug/l   |           | 6020    | 08/22/14 | 1    |
| Uranium, Dissolved                                  | 15.    | 0.33  | 10.  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Vanadium                                            | 9.2    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/21/14 | 1    |
| Vanadium, Dissolved                                 | 9.4    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Zinc                                                | U      | 2.6   | 10.  | ug/l   |           | 6020    | 08/21/14 | 1    |
| Zinc, Dissolved                                     | U      | 2.6   | 10.  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Mercury                                             | U      | 0.049 | 0.20 | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U      | 31.   | 100  | ug/l   |           | 8015D/G | 08/01/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 101.   |       |      | % Rec. |           | 8015D/G | 08/01/14 | 1    |
| Volatile Organics                                   |        |       |      |        |           |         |          |      |
| Benzene                                             | U      | 0.33  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Carbon tetrachloride                                | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Chloroform                                          | U      | 0.32  | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dibromoethane                                   | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethane                                  | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dichloroethane                                  | U      | 0.36  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethene                                  | U      | 0.40  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Ethylbenzene                                        | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Methylene Chloride                                  | U      | 1.0   | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U      | 0.58  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Toluene                                             | U      | 0.78  | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1-Trichloroethane                               | U      | 0.32  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2-Trichloroethane                               | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Vinyl chloride                                      | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| o-Xylene                                            | U      | 0.34  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| m&p-Xylene                                          | U      | 0.72  | 2.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Xylenes, Total                                      | U      | 1.1   | 3.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Surrogate Recovery                                  |        |       |      |        |           |         |          |      |
| Toluene-d8                                          | 102.   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Dibromofluoromethane                                | 97.7   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| 4-Bromofluorobenzene                                | 97.2   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Diesel and Oil Ranges                               |        |       |      |        |           |         |          |      |
| C10-C28 Diesel Range                                | 58.    | 22.   | 100  | ug/l   | J         | 8015    | 08/02/14 | 1    |
| C28-C40 Oil Range                                   | 38.    | 12.   | 100  | ug/l   | J         | 8015    | 08/02/14 | 1    |

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : UG-3R-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/30/14 11:20

ESC Sample # : L712971-06

Site ID :

Project # : TX000836.0008.00004

| Parameter                         | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|-----------------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| Surrogate Recovery<br>o-Terphenyl | 106.   |      |     | % Rec. |           | 8015   | 08/02/14 | 1    |
| Base/Neutral Extractables         |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene                    | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 1-Methylnaphthalene               | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 2-Methylnaphthalene               | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Naphthalene                       | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Surrogate Recovery                |        |      |     |        |           |        |          |      |
| 2-Fluorophenol                    | 51.0   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Phenol-d5                         | 35.5   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Nitrobenzene-d5                   | 49.3   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2-Fluorobiphenyl                  | 68.9   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2,4,6-Tribromophenol              | 77.9   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| p-Terphenyl-d14                   | 67.1   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-07

Sample ID : UG-2-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/30/14 12:50

Project # : TX000836.0008.00004

| Parameter             | Result  | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|---------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 73000   | 52.  | 1000   | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Fluoride              | 1600    | 9.9  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrate               | 3200    | 23.  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrite               | 57.     | 28.  | 100    | ug/l  | J         | 9056MOD | 07/31/14 | 1    |
| Sulfate               | 1200000 | 1500 | 100000 | ug/l  |           | 9056MOD | 07/31/14 | 20   |
| Cyanide               | 2.9     | 1.8  | 5.0    | ug/l  | J         | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 2200000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/04/14 | 1    |
| Aluminum              | 54.     | 2.0  | 50.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Aluminum, Dissolved   | 14.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/12/14 | 1    |
| Arsenic               | 2.0     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Arsenic, Dissolved    | 1.8     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Barium                | 14.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Barium, Dissolved     | 13.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Boron                 | 380     | 1.5  | 20.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Boron, Dissolved      | 340     | 1.5  | 20.    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cadmium               | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cadmium, Dissolved    | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Calcium               | 420000  | 460  | 10000  | ug/l  |           | 6020    | 08/21/14 | 10   |
| Calcium, Dissolved    | 380000  | 460  | 10000  | ug/l  |           | 6020    | 08/11/14 | 10   |
| Chromium              | 1.0     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Chromium, Dissolved   | 3.1     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Copper                | 0.96    | 0.52 | 1.0    | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Copper, Dissolved     | 0.73    | 0.52 | 1.0    | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Cobalt                | 3.4     | 0.26 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cobalt, Dissolved     | 2.6     | 0.26 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Iron                  | 93.     | 50.  | 50.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Iron, Dissolved       | U       | 50.  | 50.    | ug/l  |           | 6020    | 08/12/14 | 1    |
| Lead                  | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Lead, Dissolved       | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Manganese             | 180     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Manganese, Dissolved  | 170     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Molybdenum            | 32.     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Molybdenum, Dissolved | 28.     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Nickel                | 41.     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Nickel, Dissolved     | 36.     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Potassium             | 1900    | 37.  | 1000   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Potassium, Dissolved  | 1800    | 37.  | 1000   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Selenium              | 1.8     | 0.38 | 2.0    | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Selenium, Dissolved   | 2.4     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Silver                | U       | 0.31 | 0.50   | ug/l  |           | 6020    | 08/21/14 | 1    |

U = ND (Not Detected)

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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : UG-2-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/30/14 12:50

ESC Sample # : L712971-07

Site ID :

Project # : TX000836.0008.00004

| Parameter                                           | Result | MDL   | RDL  | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|--------|-------|------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U      | 0.31  | 0.50 | ug/l   |           | 6020    | 08/11/14 | 1    |
| Sodium                                              | 95000  | 110   | 1000 | ug/l   |           | 6020    | 08/21/14 | 1    |
| Sodium, Dissolved                                   | 90000  | 110   | 1000 | ug/l   |           | 6020    | 08/11/14 | 1    |
| Uranium                                             | 25.    | 0.33  | 10.  | ug/l   |           | 6020    | 08/22/14 | 1    |
| Uranium, Dissolved                                  | 23.    | 0.33  | 10.  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Vanadium                                            | 8.6    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/21/14 | 1    |
| Vanadium, Dissolved                                 | 8.9    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Zinc                                                | 12.    | 2.6   | 10.  | ug/l   |           | 6020    | 08/21/14 | 1    |
| Zinc, Dissolved                                     | 10.    | 2.6   | 10.  | ug/l   | J         | 6020    | 08/11/14 | 1    |
| Mercury                                             | U      | 0.049 | 0.20 | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U      | 31.   | 100  | ug/l   |           | 8015D/G | 08/01/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 102.   |       |      | % Rec. |           | 8015D/G | 08/01/14 | 1    |
| Volatile Organics                                   |        |       |      |        |           |         |          |      |
| Benzene                                             | U      | 0.33  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Carbon tetrachloride                                | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Chloroform                                          | U      | 0.32  | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dibromoethane                                   | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethane                                  | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dichloroethane                                  | U      | 0.36  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethene                                  | U      | 0.40  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Ethylbenzene                                        | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Methylene Chloride                                  | U      | 1.0   | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U      | 0.58  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Toluene                                             | U      | 0.78  | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1-Trichloroethane                               | U      | 0.32  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2-Trichloroethane                               | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Vinyl chloride                                      | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| o-Xylene                                            | U      | 0.34  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| m&p-Xylene                                          | U      | 0.72  | 2.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Xylenes, Total                                      | U      | 1.1   | 3.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Surrogate Recovery                                  |        |       |      |        |           |         |          |      |
| Toluene-d8                                          | 104.   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Dibromofluoromethane                                | 102.   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| 4-Bromofluorobenzene                                | 97.0   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Diesel and Oil Ranges                               |        |       |      |        |           |         |          |      |
| C10-C28 Diesel Range                                | 66.    | 22.   | 100  | ug/l   | J         | 8015    | 08/02/14 | 1    |
| C28-C40 Oil Range                                   | 64.    | 12.   | 100  | ug/l   | J         | 8015    | 08/02/14 | 1    |

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : UG-2-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/30/14 12:50

ESC Sample # : L712971-07

Site ID :

Project # : TX000836.0008.00004

| Parameter                         | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|-----------------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| Surrogate Recovery<br>o-Terphenyl | 103.   |      |     | % Rec. |           | 8015   | 08/02/14 | 1    |
| Base/Neutral Extractables         |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene                    | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/07/14 | 1    |
| 1-Methylnaphthalene               | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/07/14 | 1    |
| 2-Methylnaphthalene               | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/07/14 | 1    |
| Naphthalene                       | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/07/14 | 1    |
| Surrogate Recovery                |        |      |     |        |           |        |          |      |
| 2-Fluorophenol                    | 50.8   |      |     | % Rec. |           | 8270 C | 08/07/14 | 1    |
| Phenol-d5                         | 38.5   |      |     | % Rec. |           | 8270 C | 08/07/14 | 1    |
| Nitrobenzene-d5                   | 73.7   |      |     | % Rec. |           | 8270 C | 08/07/14 | 1    |
| 2-Fluorobiphenyl                  | 85.4   |      |     | % Rec. |           | 8270 C | 08/07/14 | 1    |
| 2,4,6-Tribromophenol              | 79.5   |      |     | % Rec. |           | 8270 C | 08/07/14 | 1    |
| p-Terphenyl-d14                   | 78.4   |      |     | % Rec. |           | 8270 C | 08/07/14 | 1    |

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-08

Sample ID : EB-02-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/29/14 18:35

Project # : TX000836.0008.00004

| Parameter             | Result | MDL  | RDL   | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|--------|------|-------|-------|-----------|---------|----------|------|
| Chloride              | 280    | 52.  | 1000  | ug/l  | J         | 9056MOD | 07/31/14 | 1    |
| Fluoride              | U      | 9.9  | 100   | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrate               | U      | 23.  | 100   | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrite               | U      | 28.  | 100   | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Sulfate               | 440    | 77.  | 5000  | ug/l  | J         | 9056MOD | 07/31/14 | 1    |
| Cyanide               | U      | 1.8  | 5.0   | ug/l  |           | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 7000   | 2800 | 10000 | ug/l  | JT4       | 2540 C- | 08/04/14 | 1    |
| Aluminum              | 10.    | 2.0  | 50.   | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Aluminum, Dissolved   | 13.    | 2.0  | 50.   | ug/l  | J         | 6020    | 08/12/14 | 1    |
| Arsenic               | U      | 0.25 | 1.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Arsenic, Dissolved    | U      | 0.25 | 1.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Barium                | U      | 0.36 | 2.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Barium, Dissolved     | U      | 0.36 | 2.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Boron                 | 50.    | 1.5  | 20.   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Boron, Dissolved      | 37.    | 1.5  | 20.   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cadmium               | U      | 0.16 | 0.50  | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cadmium, Dissolved    | U      | 0.16 | 0.50  | ug/l  |           | 6020    | 08/11/14 | 1    |
| Calcium               | U      | 46.  | 1000  | ug/l  |           | 6020    | 08/21/14 | 1    |
| Calcium, Dissolved    | 120    | 46.  | 1000  | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Chromium              | 0.71   | 0.54 | 1.0   | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Chromium, Dissolved   | 0.92   | 0.54 | 1.0   | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Copper                | U      | 0.52 | 1.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Copper, Dissolved     | U      | 0.52 | 1.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cobalt                | U      | 0.26 | 1.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cobalt, Dissolved     | U      | 0.26 | 1.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Iron                  | U      | 50.  | 50.   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Iron, Dissolved       | U      | 50.  | 50.   | ug/l  |           | 6020    | 08/12/14 | 1    |
| Lead                  | U      | 0.24 | 1.0   | ug/l  |           | 6020    | 08/22/14 | 1    |
| Lead, Dissolved       | U      | 0.24 | 1.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Manganese             | U      | 0.25 | 2.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Manganese, Dissolved  | U      | 0.25 | 2.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Molybdenum            | U      | 0.14 | 2.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Molybdenum, Dissolved | U      | 0.14 | 2.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Nickel                | U      | 0.35 | 1.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Nickel, Dissolved     | U      | 0.35 | 1.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Potassium             | U      | 37.  | 1000  | ug/l  |           | 6020    | 08/21/14 | 1    |
| Potassium, Dissolved  | 70.    | 37.  | 1000  | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Selenium              | U      | 0.38 | 2.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Selenium, Dissolved   | U      | 0.38 | 2.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Silver                | U      | 0.31 | 0.50  | ug/l  |           | 6020    | 08/21/14 | 1    |

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-08

Sample ID : EB-02-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/29/14 18:35

Project # : TX000836.0008.00004

| Parameter                                           | Result | MDL   | RDL  | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|--------|-------|------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U      | 0.31  | 0.50 | ug/l   |           | 6020    | 08/11/14 | 1    |
| Sodium                                              | 660    | 110   | 1000 | ug/l   | J         | 6020    | 08/21/14 | 1    |
| Sodium, Dissolved                                   | 400    | 110   | 1000 | ug/l   | J         | 6020    | 08/11/14 | 1    |
| Uranium                                             | U      | 0.33  | 10.  | ug/l   |           | 6020    | 08/22/14 | 1    |
| Uranium, Dissolved                                  | U      | 0.33  | 10.  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Vanadium                                            | U      | 0.18  | 1.0  | ug/l   |           | 6020    | 08/21/14 | 1    |
| Vanadium, Dissolved                                 | U      | 0.18  | 1.0  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Zinc                                                | U      | 2.6   | 10.  | ug/l   |           | 6020    | 08/21/14 | 1    |
| Zinc, Dissolved                                     | U      | 2.6   | 10.  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Mercury                                             | U      | 0.049 | 0.20 | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U      | 31.   | 100  | ug/l   |           | 8015D/G | 08/01/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 104.   |       |      | % Rec. |           | 8015D/G | 08/01/14 | 1    |
| Volatile Organics                                   |        |       |      |        |           |         |          |      |
| Benzene                                             | U      | 0.33  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Carbon tetrachloride                                | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Chloroform                                          | U      | 0.32  | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dibromoethane                                   | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethane                                  | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dichloroethane                                  | U      | 0.36  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethene                                  | U      | 0.40  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Ethylbenzene                                        | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Methylene Chloride                                  | U      | 1.0   | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U      | 0.58  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Toluene                                             | U      | 0.78  | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1-Trichloroethane                               | U      | 0.32  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2-Trichloroethane                               | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Vinyl chloride                                      | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| o-Xylene                                            | U      | 0.34  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| m&p-Xylene                                          | U      | 0.72  | 2.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Xylenes, Total                                      | U      | 1.1   | 3.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Surrogate Recovery                                  |        |       |      |        |           |         |          |      |
| Toluene-d8                                          | 104.   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Dibromofluoromethane                                | 100.   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| 4-Bromofluorobenzene                                | 97.2   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Diesel and Oil Ranges                               |        |       |      |        |           |         |          |      |
| C10-C28 Diesel Range                                | 50.    | 22.   | 100  | ug/l   | J         | 8015    | 08/07/14 | 1    |
| C28-C40 Oil Range                                   | U      | 12.   | 100  | ug/l   |           | 8015    | 08/07/14 | 1    |

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : EB-02-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/29/14 18:35

ESC Sample # : L712971-08

Site ID :

Project # : TX000836.0008.00004

| Parameter                         | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|-----------------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| Surrogate Recovery<br>o-Terphenyl | 102.   |      |     | % Rec. |           | 8015   | 08/07/14 | 1    |
| Base/Neutral Extractables         |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene                    | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 1-Methylnaphthalene               | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 2-Methylnaphthalene               | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Naphthalene                       | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Surrogate Recovery                |        |      |     |        |           |        |          |      |
| 2-Fluorophenol                    | 58.4   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Phenol-d5                         | 45.8   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Nitrobenzene-d5                   | 75.9   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2-Fluorobiphenyl                  | 82.2   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2,4,6-Tribromophenol              | 108.   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| p-Terphenyl-d14                   | 79.2   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |

U = ND (Not Detected)

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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-09

Sample ID : EB-03-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/30/14 14:00

Project # : TX000836.0008.00004

| Parameter             | Result | MDL  | RDL   | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|--------|------|-------|-------|-----------|---------|----------|------|
| Chloride              | 1800   | 52.  | 1000  | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Fluoride              | 77.    | 9.9  | 100   | ug/l  | J         | 9056MOD | 07/31/14 | 1    |
| Nitrate               | 46.    | 23.  | 100   | ug/l  | JP1       | 9056MOD | 07/31/14 | 1    |
| Nitrite               | U      | 28.  | 100   | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Sulfate               | 1800   | 77.  | 5000  | ug/l  | J         | 9056MOD | 07/31/14 | 1    |
| Cyanide               | U      | 1.8  | 5.0   | ug/l  |           | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 17000  | 2800 | 10000 | ug/l  | T4        | 2540 C- | 08/04/14 | 1    |
| Aluminum              | 11.    | 2.0  | 50.   | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Aluminum, Dissolved   | 19.    | 2.0  | 50.   | ug/l  | J         | 6020    | 08/12/14 | 1    |
| Arsenic               | U      | 0.25 | 1.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Arsenic, Dissolved    | U      | 0.25 | 1.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Barium                | 2.3    | 0.36 | 2.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Barium, Dissolved     | 2.5    | 0.36 | 2.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Boron                 | 77.    | 1.5  | 20.   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Boron, Dissolved      | 68.    | 1.5  | 20.   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cadmium               | U      | 0.16 | 0.50  | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cadmium, Dissolved    | U      | 0.16 | 0.50  | ug/l  |           | 6020    | 08/11/14 | 1    |
| Calcium               | 34000  | 46.  | 1000  | ug/l  |           | 6020    | 08/21/14 | 1    |
| Calcium, Dissolved    | 34000  | 46.  | 1000  | ug/l  |           | 6020    | 08/11/14 | 1    |
| Chromium              | 0.67   | 0.54 | 1.0   | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Chromium, Dissolved   | 0.85   | 0.54 | 1.0   | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Copper                | 1.0    | 0.52 | 1.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Copper, Dissolved     | 0.93   | 0.52 | 1.0   | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Cobalt                | U      | 0.26 | 1.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cobalt, Dissolved     | U      | 0.26 | 1.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Iron                  | U      | 50.  | 50.   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Iron, Dissolved       | U      | 50.  | 50.   | ug/l  |           | 6020    | 08/12/14 | 1    |
| Lead                  | U      | 0.24 | 1.0   | ug/l  |           | 6020    | 08/22/14 | 1    |
| Lead, Dissolved       | U      | 0.24 | 1.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Manganese             | 0.31   | 0.25 | 2.0   | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Manganese, Dissolved  | 0.50   | 0.25 | 2.0   | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Molybdenum            | 0.32   | 0.14 | 2.0   | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Molybdenum, Dissolved | 0.31   | 0.14 | 2.0   | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Nickel                | U      | 0.35 | 1.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Nickel, Dissolved     | U      | 0.35 | 1.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Potassium             | 390    | 37.  | 1000  | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Potassium, Dissolved  | 440    | 37.  | 1000  | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Selenium              | U      | 0.38 | 2.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Selenium, Dissolved   | 0.58   | 0.38 | 2.0   | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Silver                | U      | 0.31 | 0.50  | ug/l  |           | 6020    | 08/21/14 | 1    |

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Est. 1970

# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-09

Sample ID : EB-03-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/30/14 14:00

Project # : TX000836.0008.00004

| Parameter                                           | Result | MDL   | RDL  | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|--------|-------|------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U      | 0.31  | 0.50 | ug/l   |           | 6020    | 08/11/14 | 1    |
| Sodium                                              | 28000  | 110   | 1000 | ug/l   |           | 6020    | 08/21/14 | 1    |
| Sodium, Dissolved                                   | 28000  | 110   | 1000 | ug/l   |           | 6020    | 08/11/14 | 1    |
| Uranium                                             | U      | 0.33  | 10.  | ug/l   |           | 6020    | 08/22/14 | 1    |
| Uranium, Dissolved                                  | U      | 0.33  | 10.  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Vanadium                                            | 0.43   | 0.18  | 1.0  | ug/l   | J         | 6020    | 08/21/14 | 1    |
| Vanadium, Dissolved                                 | 0.41   | 0.18  | 1.0  | ug/l   | J         | 6020    | 08/11/14 | 1    |
| Zinc                                                | 8.3    | 2.6   | 10.  | ug/l   | J         | 6020    | 08/21/14 | 1    |
| Zinc, Dissolved                                     | 8.6    | 2.6   | 10.  | ug/l   | J         | 6020    | 08/11/14 | 1    |
| Mercury                                             | U      | 0.049 | 0.20 | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U      | 31.   | 100  | ug/l   |           | 8015D/G | 08/01/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 106.   |       |      | % Rec. |           | 8015D/G | 08/01/14 | 1    |
| Volatile Organics                                   |        |       |      |        |           |         |          |      |
| Benzene                                             | U      | 0.33  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Carbon tetrachloride                                | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Chloroform                                          | U      | 0.32  | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dibromoethane                                   | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethane                                  | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dichloroethane                                  | U      | 0.36  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethene                                  | U      | 0.40  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Ethylbenzene                                        | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Methylene Chloride                                  | U      | 1.0   | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U      | 0.58  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Toluene                                             | U      | 0.78  | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1-Trichloroethane                               | U      | 0.32  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2-Trichloroethane                               | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Vinyl chloride                                      | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| o-Xylene                                            | U      | 0.34  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| m&p-Xylene                                          | U      | 0.72  | 2.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Xylenes, Total                                      | U      | 1.1   | 3.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Surrogate Recovery                                  |        |       |      |        |           |         |          |      |
| Toluene-d8                                          | 103.   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Dibromofluoromethane                                | 101.   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| 4-Bromofluorobenzene                                | 99.5   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Diesel and Oil Ranges                               |        |       |      |        |           |         |          |      |
| C10-C28 Diesel Range                                | U      | 22.   | 100  | ug/l   |           | 8015    | 08/02/14 | 1    |
| C28-C40 Oil Range                                   | 21.    | 12.   | 100  | ug/l   | J         | 8015    | 08/02/14 | 1    |

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Est. 1970

# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : EB-03-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/30/14 14:00

ESC Sample # : L712971-09

Site ID :

Project # : TX000836.0008.00004

| Parameter                         | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|-----------------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| Surrogate Recovery<br>o-Terphenyl | 104.   |      |     | % Rec. |           | 8015   | 08/02/14 | 1    |
| Base/Neutral Extractables         |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene                    | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/07/14 | 1    |
| 1-Methylnaphthalene               | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/07/14 | 1    |
| 2-Methylnaphthalene               | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/07/14 | 1    |
| Naphthalene                       | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/07/14 | 1    |
| Surrogate Recovery                |        |      |     |        |           |        |          |      |
| 2-Fluorophenol                    | 54.2   |      |     | % Rec. |           | 8270 C | 08/07/14 | 1    |
| Phenol-d5                         | 40.7   |      |     | % Rec. |           | 8270 C | 08/07/14 | 1    |
| Nitrobenzene-d5                   | 72.2   |      |     | % Rec. |           | 8270 C | 08/07/14 | 1    |
| 2-Fluorobiphenyl                  | 82.0   |      |     | % Rec. |           | 8270 C | 08/07/14 | 1    |
| 2,4,6-Tribromophenol              | 73.0   |      |     | % Rec. |           | 8270 C | 08/07/14 | 1    |
| p-Terphenyl-d14                   | 74.1   |      |     | % Rec. |           | 8270 C | 08/07/14 | 1    |

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-10

Sample ID : TRIP BLANK

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/30/14 00:00

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| Volatile Organics         |        |      |     |        |           |        |          |      |
| Benzene                   | U      | 0.33 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Carbon tetrachloride      | U      | 0.38 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Chloroform                | U      | 0.32 | 5.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,2-Dibromoethane         | U      | 0.38 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1-Dichloroethane        | U      | 0.26 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,2-Dichloroethane        | U      | 0.36 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1-Dichloroethene        | U      | 0.40 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Ethylbenzene              | U      | 0.38 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Methylene Chloride        | U      | 1.0  | 5.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane | U      | 0.38 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane | U      | 0.58 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Toluene                   | U      | 0.78 | 5.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,1-Trichloroethane     | U      | 0.32 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,2-Trichloroethane     | U      | 0.38 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Vinyl chloride            | U      | 0.26 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| o-Xylene                  | U      | 0.34 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| m&p-Xylene                | U      | 0.72 | 2.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Xylenes, Total            | U      | 1.1  | 3.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| Toluene-d8                | 100.   |      |     | % Rec. |           | 8260B  | 08/01/14 | 1    |
| Dibromofluoromethane      | 98.8   |      |     | % Rec. |           | 8260B  | 08/01/14 | 1    |
| 4-Bromofluorobenzene      | 95.8   |      |     | % Rec. |           | 8260B  | 08/01/14 | 1    |

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# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-11

Sample ID : TRIP BLANK

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/30/14 00:00

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| Volatile Organics         |        |      |     |        |           |        |          |      |
| Benzene                   | U      | 0.33 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Carbon tetrachloride      | U      | 0.38 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Chloroform                | U      | 0.32 | 5.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,2-Dibromoethane         | U      | 0.38 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1-Dichloroethane        | U      | 0.26 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,2-Dichloroethane        | U      | 0.36 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1-Dichloroethene        | U      | 0.40 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Ethylbenzene              | U      | 0.38 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Methylene Chloride        | U      | 1.0  | 5.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane | U      | 0.38 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane | U      | 0.58 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Toluene                   | U      | 0.78 | 5.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,1-Trichloroethane     | U      | 0.32 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,2-Trichloroethane     | U      | 0.38 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Vinyl chloride            | U      | 0.26 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| o-Xylene                  | U      | 0.34 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| m&p-Xylene                | U      | 0.72 | 2.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Xylenes, Total            | U      | 1.1  | 3.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| Toluene-d8                | 99.5   |      |     | % Rec. |           | 8260B  | 08/01/14 | 1    |
| Dibromofluoromethane      | 101.   |      |     | % Rec. |           | 8260B  | 08/01/14 | 1    |
| 4-Bromofluorobenzene      | 97.8   |      |     | % Rec. |           | 8260B  | 08/01/14 | 1    |

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

MDL = Minimum Detection Limit = LOD = TRRP SDL

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 10/17/14 10:55 Revised: 10/20/14 12:37



12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-12

Sample ID : TRIP BLANK

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/30/14 00:00

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| Volatile Organics         |        |      |     |        |           |        |          |      |
| Benzene                   | U      | 0.33 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Carbon tetrachloride      | U      | 0.38 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Chloroform                | U      | 0.32 | 5.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,2-Dibromoethane         | U      | 0.38 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1-Dichloroethane        | U      | 0.26 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,2-Dichloroethane        | U      | 0.36 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1-Dichloroethene        | U      | 0.40 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Ethylbenzene              | U      | 0.38 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Methylene Chloride        | U      | 1.0  | 5.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane | U      | 0.38 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane | U      | 0.58 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Toluene                   | U      | 0.78 | 5.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,1-Trichloroethane     | U      | 0.32 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,2-Trichloroethane     | U      | 0.38 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Vinyl chloride            | U      | 0.26 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| o-Xylene                  | U      | 0.34 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| m&p-Xylene                | U      | 0.72 | 2.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Xylenes, Total            | U      | 1.1  | 3.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| Toluene-d8                | 99.6   |      |     | % Rec. |           | 8260B  | 08/01/14 | 1    |
| Dibromofluoromethane      | 98.3   |      |     | % Rec. |           | 8260B  | 08/01/14 | 1    |
| 4-Bromofluorobenzene      | 98.3   |      |     | % Rec. |           | 8260B  | 08/01/14 | 1    |

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

MDL = Minimum Detection Limit = LOD = TRRP SDL

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Est. 1970

# REPORT OF ANALYSIS

Project Manager  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

October 20, 2014

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-13

Sample ID : TRIP BLANK

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/30/14 00:00

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| Volatile Organics         |        |      |     |        |           |        |          |      |
| Benzene                   | U      | 0.33 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Carbon tetrachloride      | U      | 0.38 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Chloroform                | U      | 0.32 | 5.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,2-Dibromoethane         | U      | 0.38 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1-Dichloroethane        | U      | 0.26 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,2-Dichloroethane        | U      | 0.36 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1-Dichloroethene        | U      | 0.40 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Ethylbenzene              | U      | 0.38 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Methylene Chloride        | U      | 1.0  | 5.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane | U      | 0.38 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane | U      | 0.58 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Toluene                   | U      | 0.78 | 5.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,1-Trichloroethane     | U      | 0.32 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,2-Trichloroethane     | U      | 0.38 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Vinyl chloride            | U      | 0.26 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| o-Xylene                  | U      | 0.34 | 1.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| m&p-Xylene                | U      | 0.72 | 2.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Xylenes, Total            | U      | 1.1  | 3.0 | ug/l   |           | 8260B  | 08/01/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| Toluene-d8                | 101.   |      |     | % Rec. |           | 8260B  | 08/01/14 | 1    |
| Dibromofluoromethane      | 98.8   |      |     | % Rec. |           | 8260B  | 08/01/14 | 1    |
| 4-Bromofluorobenzene      | 97.4   |      |     | % Rec. |           | 8260B  | 08/01/14 | 1    |

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

MDL = Minimum Detection Limit = LOD = TRRP SDL

Note:

The reported analytical results relate only to the sample submitted.

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Attachment A  
List of Analytes with QC Qualifiers

| Sample Number | Work Group | Sample Type | Analyte              | Run ID   | Qualifier |
|---------------|------------|-------------|----------------------|----------|-----------|
| L712971-01    | WG734853   | SAMP        | C10-C28 Diesel Range | R2971125 | J         |
|               | WG738505   | SAMP        | Aluminum             | R2979145 | J         |
|               | WG736270   | SAMP        | Aluminum, Dissolved  | R2977948 | J         |
|               | WG738505   | SAMP        | Boron                | R2979145 | 01V       |
|               | WG738505   | SAMP        | Calcium              | R2979145 | 01V       |
|               | WG738505   | SAMP        | Chromium             | R2979145 | J         |
|               | WG736270   | SAMP        | Cobalt, Dissolved    | R2977938 | J         |
|               | WG738505   | SAMP        | Sodium               | R2979145 | 01V       |
|               | WG738505   | SAMP        | Uranium              | R2979734 | J         |
|               | WG736270   | SAMP        | Uranium, Dissolved   | R2977938 | J         |
|               | WG738505   | SAMP        | Zinc                 | R2979145 | J         |
|               | WG734853   | SAMP        | C10-C28 Diesel Range | R2971125 | J         |
|               | WG734853   | SAMP        | C28-C40 Oil Range    | R2971125 | J         |
|               | WG738505   | SAMP        | Aluminum             | R2979145 | J         |
| L712971-02    | WG736270   | SAMP        | Aluminum, Dissolved  | R2977948 | J         |
|               | WG738505   | SAMP        | Chromium             | R2979145 | J         |
|               | WG738505   | SAMP        | Selenium             | R2979145 | J         |
|               | WG736270   | SAMP        | Selenium, Dissolved  | R2977938 | J         |
|               | WG738505   | SAMP        | Uranium              | R2979734 | J         |
|               | WG736270   | SAMP        | Uranium, Dissolved   | R2977938 | J         |
|               | WG738505   | SAMP        | Zinc                 | R2979145 | J         |
|               | WG734853   | SAMP        | C28-C40 Oil Range    | R2971125 | J         |
|               | WG738505   | SAMP        | Aluminum             | R2979145 | J         |
|               | WG736270   | SAMP        | Aluminum, Dissolved  | R2977948 | J         |
|               | WG738505   | SAMP        | Chromium             | R2979145 | J         |
|               | WG736270   | SAMP        | Chromium, Dissolved  | R2977938 | J         |
|               | WG736270   | SAMP        | Cobalt, Dissolved    | R2977938 | J         |
|               | WG734853   | SAMP        | C28-C40 Oil Range    | R2971125 | J         |
| L712971-03    | WG734733   | SAMP        | Nitrite              | R2970638 | J         |
|               | WG737003   | SAMP        | Aluminum, Dissolved  | R2978051 | J         |
|               | WG734853   | SAMP        | C10-C28 Diesel Range | R2971782 | J         |
|               | WG734853   | SAMP        | C28-C40 Oil Range    | R2971782 | J         |
| L712971-04    | WG734733   | SAMP        | Nitrite              | R2970638 | J         |
|               | WG736270   | SAMP        | Aluminum, Dissolved  | R2977948 | J         |
|               | WG738505   | SAMP        | Lead                 | R2979734 | J         |
|               | WG738505   | SAMP        | Zinc                 | R2979145 | J         |
| L712971-05    | WG736270   | SAMP        | Zinc, Dissolved      | R2977938 | J         |
|               | WG734853   | SAMP        | C10-C28 Diesel Range | R2971782 | J         |
|               | WG734853   | SAMP        | C28-C40 Oil Range    | R2971782 | J         |
|               | WG736270   | SAMP        | Aluminum, Dissolved  | R2977948 | J         |
| L712971-06    | WG738505   | SAMP        | Copper               | R2979145 | J         |
|               | WG736270   | SAMP        | Copper, Dissolved    | R2977938 | J         |
|               | WG736270   | SAMP        | Manganese, Dissolved | R2977938 | J         |
|               | WG738505   | SAMP        | Nickel               | R2979145 | J         |
| L712971-07    | WG734853   | SAMP        | C10-C28 Diesel Range | R2971782 | J         |
|               | WG734853   | SAMP        | C28-C40 Oil Range    | R2971782 | J         |
|               | WG735642   | SAMP        | Cyanide              | R2973129 | J         |
|               | WG734733   | SAMP        | Nitrite              | R2970638 | J         |
| L712971-08    | WG736270   | SAMP        | Aluminum, Dissolved  | R2977948 | J         |
|               | WG738505   | SAMP        | Copper               | R2979145 | J         |
|               | WG736270   | SAMP        | Copper, Dissolved    | R2977938 | J         |
|               | WG738505   | SAMP        | Selenium             | R2979145 | J         |
| L712971-09    | WG736270   | SAMP        | Zinc, Dissolved      | R2977938 | J         |
|               | WG735881   | SAMP        | C10-C28 Diesel Range | R2973566 | J         |
|               | WG734733   | SAMP        | Chloride             | R2970638 | J         |
|               | WG734733   | SAMP        | Sulfate              | R2970638 | J         |
| L712971-09    | WG734812   | SAMP        | Dissolved Solids     | R2971954 | JT4       |
|               | WG738505   | SAMP        | Aluminum             | R2979145 | J         |
|               | WG736270   | SAMP        | Aluminum, Dissolved  | R2977948 | J         |
|               | WG736270   | SAMP        | Calcium, Dissolved   | R2977938 | J         |
|               | WG738505   | SAMP        | Chromium             | R2979145 | J         |
|               | WG736270   | SAMP        | Chromium, Dissolved  | R2977938 | J         |
|               | WG736270   | SAMP        | Potassium, Dissolved | R2977938 | J         |
|               | WG738505   | SAMP        | Sodium               | R2979145 | J         |
|               | WG736270   | SAMP        | Sodium, Dissolved    | R2977938 | J         |
|               | WG734853   | SAMP        | C28-C40 Oil Range    | R2971782 | J         |
|               | WG734733   | SAMP        | Fluoride             | R2970638 | J         |
|               | WG734733   | SAMP        | Nitrate              | R2970638 | JP1       |
|               | WG734733   | SAMP        | Sulfate              | R2970638 | J         |
|               | WG734813   | SAMP        | Dissolved Solids     | R2971948 | T4        |

Attachment A  
List of Analytes with QC Qualifiers

| Sample Number | Work Group | Sample Type | Analyte              | Run ID   | Qualifier |
|---------------|------------|-------------|----------------------|----------|-----------|
|               | WG738505   | SAMP        | Aluminum             | R2979145 | J         |
|               | WG736270   | SAMP        | Aluminum,Dissolved   | R2977948 | J         |
|               | WG738505   | SAMP        | Chromium             | R2979145 | J         |
|               | WG736270   | SAMP        | Chromium,Dissolved   | R2977938 | J         |
|               | WG736270   | SAMP        | Copper,Dissolved     | R2977938 | J         |
|               | WG738505   | SAMP        | Manganese            | R2979145 | J         |
|               | WG736270   | SAMP        | Manganese,Dissolved  | R2977938 | J         |
|               | WG738505   | SAMP        | Molybdenum           | R2979145 | J         |
|               | WG736270   | SAMP        | Molybdenum,Dissolved | R2977938 | J         |
|               | WG738505   | SAMP        | Potassium            | R2979145 | J         |
|               | WG736270   | SAMP        | Potassium,Dissolved  | R2977938 | J         |
|               | WG736270   | SAMP        | Selenium,Dissolved   | R2977938 | J         |
|               | WG738505   | SAMP        | Vanadium             | R2979145 | J         |
|               | WG736270   | SAMP        | Vanadium,Dissolved   | R2977938 | J         |
|               | WG738505   | SAMP        | Zinc                 | R2979145 | J         |
|               | WG736270   | SAMP        | Zinc,Dissolved       | R2977938 | J         |



Attachment B  
Explanation of QC Qualifier Codes

| Qualifier | Meaning                                                                                                                                               |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| J         | (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.                                                 |
| 01        | (ESC) The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference. |
| P1        | RPD value not applicable for sample concentrations less than 5 times the reporting limit.                                                             |
| T4        | (ESC) - Additional method/sample information: QNS - Quantity Not Sufficient                                                                           |
| V         | (ESC) - Additional QC Info: The sample concentration is too high to evaluate accurate spike recoveries.                                               |

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy** - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision** - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate** - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC** - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed  
10/20/14 at 12:37:03

TSR Signing Reports: 633

Add Copper to the metals analysis for all samples 10/13/14

Sample: L712971-01 Account: ARCADHTX Received: 07/31/14 09:00 Due Date: 10/17/14 00:00 RPT Date: 10/17/14 10:55  
Field Filtered. Added total/diss metals. AV 8/11  
Sample: L712971-02 Account: ARCADHTX Received: 07/31/14 09:00 Due Date: 10/17/14 00:00 RPT Date: 10/17/14 10:55  
Field Filtered. Added total/diss metals. AV 8/11  
Sample: L712971-03 Account: ARCADHTX Received: 07/31/14 09:00 Due Date: 10/17/14 00:00 RPT Date: 10/17/14 10:55  
Field Filtered. Added total/diss metals. AV 8/11  
Sample: L712971-04 Account: ARCADHTX Received: 07/31/14 09:00 Due Date: 10/17/14 00:00 RPT Date: 10/17/14 10:55  
Field Filtered. Added total/diss metals. AV 8/11  
Sample: L712971-05 Account: ARCADHTX Received: 07/31/14 09:00 Due Date: 10/17/14 00:00 RPT Date: 10/17/14 10:55  
Field Filtered. Added total/diss metals. AV 8/11  
Sample: L712971-06 Account: ARCADHTX Received: 07/31/14 09:00 Due Date: 10/17/14 00:00 RPT Date: 10/17/14 10:55  
Field Filtered. Added total/diss metals. AV 8/11  
Sample: L712971-07 Account: ARCADHTX Received: 07/31/14 09:00 Due Date: 10/17/14 00:00 RPT Date: 10/17/14 10:55  
Field Filtered. Added total/diss metals. AV 8/11  
Sample: L712971-08 Account: ARCADHTX Received: 07/31/14 09:00 Due Date: 10/17/14 00:00 RPT Date: 10/17/14 10:55  
Field Filtered. Added total/diss metals. AV 8/11  
Sample: L712971-09 Account: ARCADHTX Received: 07/31/14 09:00 Due Date: 10/17/14 00:00 RPT Date: 10/17/14 10:55  
Field Filtered. Added total/diss metals. AV 8/11  
Sample: L712971-10 Account: ARCADHTX Received: 07/31/14 09:00 Due Date: 10/17/14 00:00 RPT Date: 10/17/14 10:55  
Field Filtered. Added total/diss metals. AV 8/11  
Sample: L712971-11 Account: ARCADHTX Received: 07/31/14 09:00 Due Date: 10/17/14 00:00 RPT Date: 10/17/14 10:55  
Field Filtered. Added total/diss metals. AV 8/11  
Sample: L712971-12 Account: ARCADHTX Received: 07/31/14 09:00 Due Date: 10/17/14 00:00 RPT Date: 10/17/14 10:55  
Field Filtered. Added total/diss metals. AV 8/11  
Sample: L712971-13 Account: ARCADHTX Received: 07/31/14 09:00 Due Date: 10/17/14 00:00 RPT Date: 10/17/14 10:55  
Field Filtered. Added total/diss metals. AV 8/11

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                    |                        |                 |
|------------------|----------------------------------------------------|------------------------|-----------------|
| Test:            | Anions by Method 9056MOD                           |                        |                 |
| Project No:      | TX000836.0008.00004                                | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM              | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                          | <b>Analytic Batch:</b> | <b>WG734733</b> |
| Analysis Date:   | 7/31/2014 12:23:00 PM                              | Analyst:               | 577             |
| Instrument ID:   | IC-10                                              |                        |                 |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -08, -09 |                        |                 |

#### Method Blank

| Analyte         | CAS        | RDL     | MDL       | Qualifier |
|-----------------|------------|---------|-----------|-----------|
| <b>Chloride</b> | 16887-00-6 | < 1.00  | < 0.0519  |           |
| <b>Fluoride</b> | 16984-48-8 | < 0.100 | < 0.00990 |           |
| <b>Nitrate</b>  | 14797-55-8 | < 0.100 | < 0.0227  |           |
| <b>Nitrite</b>  | 14797-65-0 | < 0.100 | < 0.0277  |           |
| <b>Sulfate</b>  | 14808-79-8 | < 5.00  | < 0.0774  |           |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Anions by Method 9056MOD              |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG734962</b> |
| Analysis Date:   | 8/2/2014 12:06:00 PM                  | Analyst:               | 577             |
| Instrument ID:   | IC-9                                  |                        |                 |
| Sample Numbers:  | L712971-04                            |                        |                 |

#### Method Blank

| Analyte         | CAS        | RDL     | MDL       | Qualifier |
|-----------------|------------|---------|-----------|-----------|
| <b>Chloride</b> | 16887-00-6 | < 1.00  | < 0.0519  |           |
| Fluoride        | 16984-48-8 | < 0.100 | < 0.00990 |           |
| <b>Sulfate</b>  | 14808-79-8 | < 5.00  | < 0.0774  |           |

#### Laboratory Control Sample (LCS)

| Analyte         | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|-----------------|-----|------------|--------|-------|----------------|------|
| <b>Chloride</b> | 1   | 40         | 39.947 | 100   | 90 - 110       |      |
| Fluoride        | 1   | 8          | 8.0078 | 100   | 90 - 110       |      |
| <b>Sulfate</b>  | 1   | 40         | 39.911 | 100   | 90 - 110       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte         | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|-----------------|-----|------------|--------|-------|----------------|------|
| <b>Chloride</b> | 1   | 40         | 39.967 | 100   | 90 - 110       |      |
| Fluoride        | 1   | 8          | 8.0039 | 100   | 90 - 110       |      |
| <b>Sulfate</b>  | 1   | 40         | 39.921 | 100   | 90 - 110       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte         | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec | Control RPD |
|-----------------|-----|-------|--------|-------|--------|-------|----------------|-------|-------------|
| <b>Chloride</b> | 1   | 40    | 39.947 | 100   | 39.967 | 100   | 90 - 110       | 0     | 20          |
| Fluoride        | 1   | 8     | 8.0078 | 100   | 8.0039 | 100   | 90 - 110       | 0     | 20          |
| <b>Sulfate</b>  | 1   | 40    | 39.911 | 100   | 39.921 | 100   | 90 - 110       | 0     | 20          |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                    |  |  |                        |                 |
|------------------|----------------------------------------------------|--|--|------------------------|-----------------|
| Test:            | Anions by Method 9056MOD                           |  |  | Matrix:                | Water - mg/L    |
| Project No:      | TX000836.0008.00004                                |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM              |  |  | <b>Analytic Batch:</b> | <b>WG734733</b> |
| Collection Date: | 7/29/2014                                          |  |  | Analyst:               | 577             |
| Analysis Date:   | 7/31/2014 12:23:00 PM                              |  |  |                        |                 |
| Instrument ID:   | IC-10                                              |  |  |                        |                 |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -08, -09 |  |  |                        |                 |

#### Laboratory Control Sample (LCS)

| Analyte  | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------|-----|------------|--------|-------|----------------|------|
| Chloride | 1   | 40         | 40.457 | 101   | 90 - 110       |      |
| Fluoride | 1   | 8          | 8.225  | 103   | 90 - 110       |      |
| Nitrate  | 1   | 8          | 8.2397 | 103   | 90 - 110       |      |
| Nitrite  | 1   | 8          | 8.1027 | 101   | 90 - 110       |      |
| Sulfate  | 1   | 40         | 40.826 | 102   | 90 - 110       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte  | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------|-----|------------|--------|-------|----------------|------|
| Chloride | 1   | 40         | 40.414 | 101   | 90 - 110       |      |
| Fluoride | 1   | 8          | 8.2562 | 103   | 90 - 110       |      |
| Nitrate  | 1   | 8          | 8.2243 | 103   | 90 - 110       |      |
| Nitrite  | 1   | 8          | 8.103  | 101   | 90 - 110       |      |
| Sulfate  | 1   | 40         | 40.624 | 102   | 90 - 110       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte  | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|----------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Chloride | 1   | 40    | 40.457 | 101   | 40.414 | 101   | 90 - 110       | 0          | 20                 |      |
| Fluoride | 1   | 8     | 8.225  | 103   | 8.2562 | 103   | 90 - 110       | 0          | 20                 |      |
| Nitrate  | 1   | 8     | 8.2397 | 103   | 8.2243 | 103   | 90 - 110       | 0          | 20                 |      |
| Nitrite  | 1   | 8     | 8.1027 | 101   | 8.103  | 101   | 90 - 110       | 0          | 20                 |      |
| Sulfate  | 1   | 40    | 40.826 | 102   | 40.624 | 102   | 90 - 110       | 0          | 20                 |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                    |  |  |                        |                 |
|------------------|----------------------------------------------------|--|--|------------------------|-----------------|
| Test:            | Anions by Method 9056MOD                           |  |  | Matrix:                | Water - mg/L    |
| Project No:      | TX000836.0008.00004                                |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM              |  |  | <b>Analytic Batch:</b> | <b>WG734733</b> |
| Collection Date: | 7/29/2014                                          |  |  | Analyst:               | 577             |
| Analysis Date:   | 7/31/2014 12:23:00 PM                              |  |  |                        |                 |
| Instrument ID:   | IC-10                                              |  |  |                        |                 |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -08, -09 |  |  |                        |                 |

#### Sample Duplicate

L712971-09

| Analyte  | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|----------|-----|---------------|------------|-------|-------|-----------|
| Chloride | 1   | 1.7924        | 1.679      | 7     | 20    |           |
| Fluoride | 1   | 0.0772        | 0.0802     | 4     | 20    |           |
| Nitrate  | 1   | 0.0458        | 0.0988     | 73    | 20    | P1        |
| Nitrite  | 1   | <0.0277       | <0.0277    |       | 20    |           |
| Sulfate  | 1   | 1.8168        | 2.0101     | 10    | 20    |           |

#### Sample Duplicate

L712986-12

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Nitrate | 1   | 3.3499        | 3.348      | 0     | 20    |           |

#### Matrix Spike / Matrix Spike Duplicate

L712986-13

| Analyte | Dil | Spike Value | Sample MS | % Rec  | MSD | % Rec  | Control Limits | % Rec Qual | RPD | Control Limits | RPD Qual |
|---------|-----|-------------|-----------|--------|-----|--------|----------------|------------|-----|----------------|----------|
| Nitrate | 1   | 5           | 0.8978    | 5.9156 | 100 | 5.8927 | 100            | 80 - 120   | 0   | 20             |          |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |  |  |                        |                 |
|------------------|---------------------------------------|--|--|------------------------|-----------------|
| Test:            | Anions by Method 9056MOD              |  |  | Matrix:                | Water - mg/L    |
| Project No:      | TX000836.0008.00004                   |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM |  |  | <b>Analytic Batch:</b> | <b>WG734962</b> |
| Collection Date: | 7/29/2014                             |  |  | Analyst:               | 577             |
| Analysis Date:   | 8/2/2014 12:06:00 PM                  |  |  |                        |                 |
| Instrument ID:   | IC-9                                  |  |  |                        |                 |
| Sample Numbers:  | L712971-04                            |  |  |                        |                 |

#### Sample Duplicate

L712857-04

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Sulfate | 5   | 250.76        | 243.62     | 3     | 20    |           |

#### Sample Duplicate

L713064-09

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Sulfate | 5   | 210.90        | 205.18     | 3     | 20    |           |

#### Matrix Spike / Matrix Spike Duplicate

L712968-05

| Analyte  | Dil | Spike Value | Sample | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD | Control Limits | RPD Qual |
|----------|-----|-------------|--------|--------|-------|--------|-------|----------------|------------|-----|----------------|----------|
| Chloride | 1   | 50          | 15.907 | 65.129 | 98    | 65.061 | 98    | 80 - 120       |            | 0   | 20             |          |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                    |                        |                 |
|------------------|----------------------------------------------------|------------------------|-----------------|
| Test:            | Cyanide by Method 9012B                            |                        |                 |
| Project No:      | TX000836.0008.00004                                | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM              | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                          | <b>Analytic Batch:</b> | <b>WG735642</b> |
| Analysis Date:   | 8/7/2014 12:55:00 PM                               | Analyst:               | 578             |
| Instrument ID:   | LACHAT4                                            |                        |                 |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -08, -09 |                        |                 |

#### Method Blank

| Analyte | CAS     | RDL       | MDL       | Qualifier |
|---------|---------|-----------|-----------|-----------|
| Cyanide | 57-12-5 | < 0.00500 | < 0.00180 |           |

#### Laboratory Control Sample (LCS)

| Analyte | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------|-----|------------|--------|-------|----------------|------|
| Cyanide | 1   | 0.1        | 0.0996 | 99.6  | 90 - 110       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte | Dil | True Value | Found | % Rec | Control Limits | Qual |
|---------|-----|------------|-------|-------|----------------|------|
| Cyanide | 1   | 0.1        | 0.102 | 102   | 90 - 110       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte | Dil | Spike | LCS    | % Rec | LCSD  | % Rec | Control Limits | % Rec Qual | Control RPD | % RPD Limits | Qual |
|---------|-----|-------|--------|-------|-------|-------|----------------|------------|-------------|--------------|------|
| Cyanide | 1   | 0.1   | 0.0996 | 99.6  | 0.102 | 102   | 90 - 110       | 2.38       | 20          |              |      |



## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                    |  |  |                        |                 |
|------------------|----------------------------------------------------|--|--|------------------------|-----------------|
| Test:            | Cyanide by Method 9012B                            |  |  | Matrix:                | Water - mg/L    |
| Project No:      | TX000836.0008.00004                                |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM              |  |  | <b>Analytic Batch:</b> | <b>WG735642</b> |
| Collection Date: | 7/29/2014                                          |  |  | Analyst:               | 578             |
| Analysis Date:   | 8/7/2014 12:55:00 PM                               |  |  |                        |                 |
| Instrument ID:   | LACHAT4                                            |  |  |                        |                 |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -08, -09 |  |  |                        |                 |

#### Sample Duplicate

L712971-02

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Cyanide | 1   | <0.0018       | <0.0018    |       | 20    |           |

#### Sample Duplicate

L713011-02

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Cyanide | 1   | 0.0           | 0.0033     | 0     | 20    |           |

#### Matrix Spike / Matrix Spike Duplicate

L712971-04

| Analyte | Dil | Spike Value | Sample | MS    | % Rec | MSD  | % Rec | Control Limits | % Rec Qual | RPD  | Control Limits | RPD Qual |
|---------|-----|-------------|--------|-------|-------|------|-------|----------------|------------|------|----------------|----------|
| Cyanide | 1   | 0.2         | 0.0    | 0.197 | 98.5  | 0.19 | 95    | 90 - 110       |            | 3.62 | 20             |          |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                              |                        |                 |
|------------------|----------------------------------------------|------------------------|-----------------|
| Test:            | Total Dissolved Solids by Method 2540 C-2011 |                        |                 |
| Project No:      | TX000836.0008.00004                          | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM        | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                    | <b>Analytic Batch:</b> | <b>WG734812</b> |
| Analysis Date:   | 8/4/2014 2:38:00 PM                          | Analyst:               | 36              |
| Instrument ID:   | WETBAL1                                      |                        |                 |
| Sample Numbers:  | L712971-01, -02, -03, -08                    |                        |                 |

#### Method Blank

| Analyte          | CAS     | RDL    | MDL    | Qualifier |
|------------------|---------|--------|--------|-----------|
| Dissolved Solids | DSOLIDS | < 10.0 | < 2.82 |           |

#### Laboratory Control Sample (LCS)

| Analyte          | Dil | True Value | Found | % Rec | Control Limits | Qual |
|------------------|-----|------------|-------|-------|----------------|------|
| Dissolved Solids | 1   | 8800       | 8730  | 99.2  | 85 - 115       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte          | Dil | True Value | Found | % Rec | Control Limits | Qual |
|------------------|-----|------------|-------|-------|----------------|------|
| Dissolved Solids | 1   | 8800       | 8770  | 99.7  | 85 - 115       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte          | Dil | Spike | LCS  | % Rec | LCSD | % Rec | Control Limits | % Rec Qual | Control RPD % RPD | Control RPD Limits | Control RPD Qual |
|------------------|-----|-------|------|-------|------|-------|----------------|------------|-------------------|--------------------|------------------|
| Dissolved Solids | 1   | 8800  | 8730 | 99.2  | 8770 | 99.7  | 85 - 115       | 0.46       | 5                 |                    |                  |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                              |                        |                 |
|------------------|----------------------------------------------|------------------------|-----------------|
| Test:            | Total Dissolved Solids by Method 2540 C-2011 |                        |                 |
| Project No:      | TX000836.0008.00004                          | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM        | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                    | <b>Analytic Batch:</b> | <b>WG734813</b> |
| Analysis Date:   | 8/4/2014 2:23:00 PM                          | Analyst:               | 36              |
| Instrument ID:   | WETBAL1                                      |                        |                 |
| Sample Numbers:  | L712971-04, -05, -06, -07, -09               |                        |                 |

#### Method Blank

| Analyte          | CAS     | RDL    | MDL    | Qualifier |
|------------------|---------|--------|--------|-----------|
| Dissolved Solids | DSOLIDS | < 10.0 | < 2.82 |           |

#### Laboratory Control Sample (LCS)

| Analyte          | Dil | True Value | Found | % Rec | Control Limits | Qual |
|------------------|-----|------------|-------|-------|----------------|------|
| Dissolved Solids | 1   | 8800       | 8820  | 100   | 85 - 115       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte          | Dil | True Value | Found | % Rec | Control Limits | Qual |
|------------------|-----|------------|-------|-------|----------------|------|
| Dissolved Solids | 1   | 8800       | 8770  | 99.7  | 85 - 115       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte          | Dil | Spike | LCS  | % Rec | LCSD | % Rec | Control Limits | % Rec Qual | Control RPD % RPD | Control RPD Limits | Control RPD Qual |
|------------------|-----|-------|------|-------|------|-------|----------------|------------|-------------------|--------------------|------------------|
| Dissolved Solids | 1   | 8800  | 8820 | 100   | 8770 | 99.7  | 85 - 115       | 0.57       | 5                 |                    |                  |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                              |                        |                 |
|------------------|----------------------------------------------|------------------------|-----------------|
| Test:            | Total Dissolved Solids by Method 2540 C-2011 |                        |                 |
| Project No:      | TX000836.0008.00004                          | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM        | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                    | <b>Analytic Batch:</b> | <b>WG734812</b> |
| Analysis Date:   | 8/4/2014 2:38:00 PM                          | Analyst:               | 36              |
| Instrument ID:   | WETBAL1                                      |                        |                 |
| Sample Numbers:  | L712971-01, -02, -03, -08                    |                        |                 |

### Sample Duplicate

L712857-06

| Analyte          | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|------------------|-----|---------------|------------|-------|-------|-----------|
| Dissolved Solids | 1   | 2695          | 2710       | 0.56  | 5     |           |



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## Quality Control Summary

**SDG: L712971**

**ARCADIS US - TX**

|                  |                                              |                        |                 |
|------------------|----------------------------------------------|------------------------|-----------------|
| Test:            | Total Dissolved Solids by Method 2540 C-2011 |                        |                 |
| Project No:      | TX000836.0008.00004                          | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM        | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                    | <b>Analytic Batch:</b> | <b>WG734813</b> |
| Analysis Date:   | 8/4/2014 2:23:00 PM                          | Analyst:               | 36              |
| Instrument ID:   | WETBAL1                                      |                        |                 |
| Sample Numbers:  | L712971-04, -05, -06, -07, -09               |                        |                 |

### Sample Duplicate

L712921-01

| Analyte          | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|------------------|-----|---------------|------------|-------|-------|-----------|
| Dissolved Solids | 1   | 216           | 218        | 0.92  | 5     |           |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                    |                        |                 |
|------------------|----------------------------------------------------|------------------------|-----------------|
| Test:            | Mercury by Method 7470A                            |                        |                 |
| Project No:      | TX000836.0008.00004                                | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM              | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                          | <b>Analytic Batch:</b> | <b>WG736040</b> |
| Analysis Date:   | 8/8/2014 11:29:00 AM                               | Analyst:               | 572             |
| Instrument ID:   | CVAA3                                              | Prep Date:             | 8/7/2014        |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -08, -09 |                        |                 |

#### Method Blank

| Analyte | CAS       | RDL     | MDL      | Qualifier |
|---------|-----------|---------|----------|-----------|
| Mercury | 7439-97-6 | < 0.200 | < 0.0490 |           |

#### Laboratory Control Sample (LCS)

| Analyte | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------|-----|------------|--------|-------|----------------|------|
| Mercury | 1   | 3          | 3.0934 | 103   | 85 - 115       |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                    |                        |                 |
|------------------|----------------------------------------------------|------------------------|-----------------|
| Test:            | Mercury by Method 7470A                            |                        |                 |
| Project No:      | TX000836.0008.00004                                | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM              | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                          | <b>Analytic Batch:</b> | <b>WG736040</b> |
| Analysis Date:   | 8/8/2014 11:29:00 AM                               | Analyst:               | 572             |
| Instrument ID:   | CVAA3                                              | Prep Date:             | 8/7/2014        |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -08, -09 |                        |                 |

#### Sample Duplicate

L712736-01

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Mercury | 1   | <0.049        | <0.049     |       | 20    |           |

#### Serial Dilution

L712736-01

| Analyte | Dil | Sample Result | SD Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|-----------|-------|-------|-----------|
| Mercury | 5   | <0.049        | <0.245    |       | 10    |           |

#### Matrix Spike / Matrix Spike Duplicate

L712736-01

| Analyte | Dil | Spike Value | Sample MS | % Rec  | MSD | % Rec  | Control Limits | % Rec Qual | RPD | Control Limits | RPD Qual |
|---------|-----|-------------|-----------|--------|-----|--------|----------------|------------|-----|----------------|----------|
| Mercury | 1   | 3           | 0.0351    | 2.7974 | 92  | 2.9087 | 96             | 80 - 120   | 4   | 20             |          |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                               |                        |                 |
|------------------|-----------------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020                   |                        |                 |
| Project No:      | TX000836.0008.00004                           | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM         | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                     | <b>Analytic Batch:</b> | <b>WG736270</b> |
| Analysis Date:   | 8/11/2014 12:13:00 PM                         | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                        | Prep Date:             | 8/8/2014        |
| Sample Numbers:  | L712971-01, -02, -03, -05, -06, -07, -08, -09 |                        |                 |

#### Method Blank

| Analyte              | CAS       | RDL     | MDL     | Qualifier |
|----------------------|-----------|---------|---------|-----------|
| Aluminum,Dissolved   | 7429-90-5 | < 50.0  | 3.12    |           |
| Arsenic,Dissolved    | 7440-38-2 | < 1.00  | < 0.250 |           |
| Barium,Dissolved     | 7440-39-3 | < 2.00  | < 0.360 |           |
| Boron,Dissolved      | 7440-42-8 | < 20.0  | < 1.5   |           |
| Cadmium,Dissolved    | 7440-43-9 | < 0.500 | < 0.160 |           |
| Calcium,Dissolved    | 7440-70-2 | < 1000  | 48.8    |           |
| Chromium,Dissolved   | 7440-47-3 | < 1.00  | < 0.540 |           |
| Cobalt,Dissolved     | 7440-48-4 | < 1.00  | < 0.260 |           |
| Copper,Dissolved     | 7440-50-8 | < 1.00  | < 0.520 |           |
| Iron,Dissolved       | 7439-89-6 | < 50.0  | < 50.0  |           |
| Lead,Dissolved       | 7439-92-1 | < 1.00  | < 0.240 |           |
| Manganese,Dissolved  | 7439-96-5 | < 2.00  | < 0.250 |           |
| Molybdenum,Dissolved | 7439-98-7 | < 2.00  | < 0.140 |           |
| Nickel,Dissolved     | 7440-02-0 | < 1.00  | < 0.350 |           |
| Potassium,Dissolved  | 7440-09-7 | < 1000  | 49.8    |           |
| Selenium,Dissolved   | 7782-49-2 | < 2.00  | 0.604   |           |
| Silver,Dissolved     | 7440-22-4 | 3.16    | 3.16    | B         |
| Sodium,Dissolved     | 7440-23-5 | < 1000  | < 110   |           |
| Uranium,Dissolved    | 7440-61-1 | < 10.0  | < 0.330 |           |
| Vanadium,Dissolved   | 7440-62-2 | < 1.00  | < 0.180 |           |
| Zinc,Dissolved       | 7440-66-6 | < 10.0  | < 2.56  |           |



## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 9:07:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

#### Method Blank

| Analyte              | CAS       | RDL     | MDL     | Qualifier |
|----------------------|-----------|---------|---------|-----------|
| Aluminum,Dissolved   | 7429-90-5 | < 50.0  | 6.48    |           |
| Arsenic,Dissolved    | 7440-38-2 | < 1.00  | < 0.250 |           |
| Barium,Dissolved     | 7440-39-3 | < 2.00  | < 0.360 |           |
| Boron,Dissolved      | 7440-42-8 | < 20.0  | < 1.5   |           |
| Cadmium,Dissolved    | 7440-43-9 | < 0.500 | < 0.160 |           |
| Calcium,Dissolved    | 7440-70-2 | < 1000  | < 46.0  |           |
| Chromium,Dissolved   | 7440-47-3 | < 1.00  | < 0.540 |           |
| Cobalt,Dissolved     | 7440-48-4 | < 1.00  | < 0.260 |           |
| Copper,Dissolved     | 7440-50-8 | < 1.00  | < 0.520 |           |
| Iron,Dissolved       | 7439-89-6 | < 50.0  | < 50.0  |           |
| Lead,Dissolved       | 7439-92-1 | < 1.00  | < 0.240 |           |
| Manganese,Dissolved  | 7439-96-5 | < 2.00  | < 0.250 |           |
| Molybdenum,Dissolved | 7439-98-7 | < 2.00  | < 0.140 |           |
| Nickel,Dissolved     | 7440-02-0 | < 1.00  | < 0.350 |           |
| Potassium,Dissolved  | 7440-09-7 | < 1000  | 46.5    |           |
| Selenium,Dissolved   | 7782-49-2 | < 2.00  | 0.596   |           |
| Silver,Dissolved     | 7440-22-4 | < 0.500 | < 0.310 |           |
| Sodium,Dissolved     | 7440-23-5 | < 1000  | < 110   |           |
| Uranium,Dissolved    | 7440-61-1 | < 10.0  | < 0.330 |           |
| Vanadium,Dissolved   | 7440-62-2 | < 1.00  | < 0.180 |           |
| Zinc,Dissolved       | 7440-66-6 | < 10.0  | < 2.56  |           |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:36:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

#### Method Blank

| Analyte    | CAS       | RDL     | MDL     | Qualifier |
|------------|-----------|---------|---------|-----------|
| Aluminum   | 7429-90-5 | < 50.0  | 3.37    |           |
| Arsenic    | 7440-38-2 | < 1.00  | < 0.250 |           |
| Barium     | 7440-39-3 | < 2.00  | < 0.360 |           |
| Boron      | 7440-42-8 | < 20.0  | 2.52    |           |
| Cadmium    | 7440-43-9 | < 0.500 | < 0.160 |           |
| Calcium    | 7440-70-2 | < 1000  | < 46.0  |           |
| Chromium   | 7440-47-3 | < 1.00  | < 0.540 |           |
| Cobalt     | 7440-48-4 | < 1.00  | < 0.260 |           |
| Copper     | 7440-50-8 | < 1.00  | < 0.520 |           |
| Iron       | 7439-89-6 | < 50.0  | < 50.0  |           |
| Lead       | 7439-92-1 | < 1.00  | < 0.240 |           |
| Manganese  | 7439-96-5 | < 2.00  | < 0.250 |           |
| Molybdenum | 7439-98-7 | < 2.00  | < 0.140 |           |
| Nickel     | 7440-02-0 | < 1.00  | < 0.350 |           |
| Potassium  | 7440-09-7 | < 1000  | < 37.0  |           |
| Selenium   | 7782-49-2 | < 2.00  | 0.714   |           |
| Silver     | 7440-22-4 | < 0.500 | < 0.310 |           |
| Sodium     | 7440-23-5 | < 1000  | < 110   |           |
| Uranium    | 7440-61-1 | < 10.0  | < 0.330 |           |
| Vanadium   | 7440-62-2 | < 1.00  | < 0.180 |           |
| Zinc       | 7440-66-6 | < 10.0  | < 2.56  |           |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

Test: Trace Metals by Method 6020  
Project No: TX000836.0008.00004  
Project: Navajo Refining Company - Artesia, NM  
Collection Date: 7/29/2014  
Analysis Date: 8/21/2014 11:17:00 AM  
Instrument ID: ICPMS8  
Sample Numbers: L712971-01, -02, -03, -05, -06, -07, -08, -09

Matrix: Water - ug/L  
EPA ID: TN00003  
**Analytic Batch: WG738505**  
Analyst: 664  
Prep Date: 8/20/2014

#### Method Blank

| Analyte    | CAS       | RDL     | MDL     | Qualifier |
|------------|-----------|---------|---------|-----------|
| Aluminum   | 7429-90-5 | < 50.0  | < 2.00  |           |
| Arsenic    | 7440-38-2 | < 1.00  | < 0.250 |           |
| Barium     | 7440-39-3 | < 2.00  | < 0.360 |           |
| Boron      | 7440-42-8 | < 20.0  | < 1.5   |           |
| Cadmium    | 7440-43-9 | < 0.500 | < 0.160 |           |
| Calcium    | 7440-70-2 | < 1000  | < 46.0  |           |
| Chromium   | 7440-47-3 | < 1.00  | < 0.540 |           |
| Cobalt     | 7440-48-4 | < 1.00  | < 0.260 |           |
| Copper     | 7440-50-8 | < 1.00  | < 0.520 |           |
| Iron       | 7439-89-6 | < 50.0  | < 50.0  |           |
| Lead       | 7439-92-1 | < 1.00  | < 0.240 |           |
| Manganese  | 7439-96-5 | < 2.00  | < 0.250 |           |
| Molybdenum | 7439-98-7 | < 2.00  | < 0.140 |           |
| Nickel     | 7440-02-0 | < 1.00  | < 0.350 |           |
| Potassium  | 7440-09-7 | < 1000  | < 37.0  |           |
| Selenium   | 7782-49-2 | < 2.00  | < 0.380 |           |
| Silver     | 7440-22-4 | < 0.500 | < 0.310 |           |
| Sodium     | 7440-23-5 | < 1000  | < 110   |           |
| Uranium    | 7440-61-1 | < 10.0  | < 0.330 |           |
| Vanadium   | 7440-62-2 | < 1.00  | < 0.180 |           |
| Zinc       | 7440-66-6 | < 10.0  | < 2.56  |           |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                               |                        |                 |
|------------------|-----------------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020                   |                        |                 |
| Project No:      | TX000836.0008.00004                           | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM         | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                     | <b>Analytic Batch:</b> | <b>WG736270</b> |
| Analysis Date:   | 8/11/2014 12:13:00 PM                         | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                        | Prep Date:             | 8/8/2014        |
| Sample Numbers:  | L712971-01, -02, -03, -05, -06, -07, -08, -09 |                        |                 |

#### Laboratory Control Sample (LCS)

| Analyte              | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------------------|-----|------------|--------|-------|----------------|------|
| Aluminum,Dissolved   | 1   | 1110       | 1096.5 | 99    | 70 - 130       |      |
| Arsenic,Dissolved    | 1   | 111        | 108.82 | 98    | 85 - 115       |      |
| Barium,Dissolved     | 1   | 111        | 108.88 | 98    | 85 - 115       |      |
| Boron,Dissolved      | 1   | 111        | 116.52 | 105   | 70 - 130       |      |
| Cadmium,Dissolved    | 1   | 111        | 106.83 | 96    | 85 - 115       |      |
| Calcium,Dissolved    | 1   | 11100      | 11621  | 105   | 70 - 130       |      |
| Chromium,Dissolved   | 1   | 111        | 111.74 | 101   | 85 - 115       |      |
| Cobalt,Dissolved     | 1   | 111        | 110.58 | 100   | 85 - 115       |      |
| Copper,Dissolved     | 1   | 111        | 109.78 | 99    | 85 - 115       |      |
| Iron,Dissolved       | 1   | 1110       | 1146.1 | 103   | 85 - 115       |      |
| Lead,Dissolved       | 1   | 111        | 109.12 | 98    | 85 - 115       |      |
| Manganese,Dissolved  | 1   | 111        | 111.49 | 100   | 85 - 115       |      |
| Molybdenum,Dissolved | 1   | 111        | 113.87 | 103   | 85 - 115       |      |
| Nickel,Dissolved     | 1   | 111        | 110.63 | 100   | 85 - 115       |      |
| Potassium,Dissolved  | 1   | 11100      | 11406  | 103   | 70 - 130       |      |
| Selenium,Dissolved   | 1   | 111        | 106.89 | 96    | 85 - 115       |      |
| Silver,Dissolved     | 1   | 111        | 94.134 | 85    | 85 - 115       |      |
| Sodium,Dissolved     | 1   | 11100      | 11363  | 102   | 70 - 130       |      |
| Uranium,Dissolved    | 1   | 111        | 107.75 | 97    | 70 - 130       |      |
| Vanadium,Dissolved   | 1   | 111        | 110.99 | 100   | 85 - 115       |      |
| Zinc,Dissolved       | 1   | 111        | 106.51 | 96    | 85 - 115       |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                               |                        |                 |
|------------------|-----------------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020                   |                        |                 |
| Project No:      | TX000836.0008.00004                           | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM         | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                     | <b>Analytic Batch:</b> | <b>WG736270</b> |
| Analysis Date:   | 8/11/2014 12:13:00 PM                         | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                        | Prep Date:             | 8/8/2014        |
| Sample Numbers:  | L712971-01, -02, -03, -05, -06, -07, -08, -09 |                        |                 |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte              | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------------------|-----|------------|--------|-------|----------------|------|
| Aluminum,Dissolved   | 1   | 1110       | 1111.8 | 100   | 70 - 130       |      |
| Arsenic,Dissolved    | 1   | 111        | 110.71 | 100   | 85 - 115       |      |
| Barium,Dissolved     | 1   | 111        | 109.30 | 98    | 85 - 115       |      |
| Boron,Dissolved      | 1   | 111        | 121.83 | 110   | 70 - 130       |      |
| Cadmium,Dissolved    | 1   | 111        | 108.51 | 98    | 85 - 115       |      |
| Calcium,Dissolved    | 1   | 11100      | 12007  | 108   | 70 - 130       |      |
| Chromium,Dissolved   | 1   | 111        | 113.65 | 102   | 85 - 115       |      |
| Cobalt,Dissolved     | 1   | 111        | 112.63 | 101   | 85 - 115       |      |
| Copper,Dissolved     | 1   | 111        | 111.45 | 100   | 85 - 115       |      |
| Iron,Dissolved       | 1   | 1110       | 1158.0 | 104   | 85 - 115       |      |
| Lead,Dissolved       | 1   | 111        | 111.49 | 100   | 85 - 115       |      |
| Manganese,Dissolved  | 1   | 111        | 113.43 | 102   | 85 - 115       |      |
| Molybdenum,Dissolved | 1   | 111        | 114.72 | 103   | 85 - 115       |      |
| Nickel,Dissolved     | 1   | 111        | 111.85 | 101   | 85 - 115       |      |
| Potassium,Dissolved  | 1   | 11100      | 11748  | 106   | 70 - 130       |      |
| Selenium,Dissolved   | 1   | 111        | 108.74 | 98    | 85 - 115       |      |
| Silver,Dissolved     | 1   | 111        | 96.662 | 87    | 85 - 115       |      |
| Sodium,Dissolved     | 1   | 11100      | 11605  | 105   | 70 - 130       |      |
| Uranium,Dissolved    | 1   | 111        | 110.19 | 99    | 70 - 130       |      |
| Vanadium,Dissolved   | 1   | 111        | 113.73 | 102   | 85 - 115       |      |
| Zinc,Dissolved       | 1   | 111        | 108.05 | 97    | 85 - 115       |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

Test: Trace Metals by Method 6020  
Project No: TX000836.0008.00004  
Project: Navajo Refining Company - Artesia, NM  
Collection Date: 7/29/2014  
Analysis Date: 8/11/2014 12:13:00 PM  
Instrument ID: ICPMS8  
Sample Numbers: L712971-01, -02, -03, -05, -06, -07, -08, -09

Matrix: Water - ug/L  
EPA ID: TN00003  
**Analytic Batch: WG736270**  
Analyst: 664  
Prep Date: 8/8/2014

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte              | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|----------------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Aluminum,Dissolved   | 1   | 1110  | 1096.5 | 99    | 1111.8 | 100   | 70 - 130       | 1          | 20                 |      |
| Arsenic,Dissolved    | 1   | 111   | 108.82 | 98    | 110.71 | 100   | 85 - 115       | 2          | 20                 |      |
| Barium,Dissolved     | 1   | 111   | 108.88 | 98    | 109.30 | 98    | 85 - 115       | 0          | 20                 |      |
| Boron,Dissolved      | 1   | 111   | 116.52 | 105   | 121.83 | 110   | 70 - 130       | 4          | 20                 |      |
| Cadmium,Dissolved    | 1   | 111   | 106.83 | 96    | 108.51 | 98    | 85 - 115       | 2          | 20                 |      |
| Calcium,Dissolved    | 1   | 11100 | 11621  | 105   | 12007  | 108   | 70 - 130       | 3          | 20                 |      |
| Chromium,Dissolved   | 1   | 111   | 111.74 | 101   | 113.65 | 102   | 85 - 115       | 2          | 20                 |      |
| Cobalt,Dissolved     | 1   | 111   | 110.58 | 100   | 112.63 | 101   | 85 - 115       | 2          | 20                 |      |
| Copper,Dissolved     | 1   | 111   | 109.78 | 99    | 111.45 | 100   | 85 - 115       | 2          | 20                 |      |
| Iron,Dissolved       | 1   | 1110  | 1146.1 | 103   | 1158.0 | 104   | 85 - 115       | 1          | 20                 |      |
| Lead,Dissolved       | 1   | 111   | 109.12 | 98    | 111.49 | 100   | 85 - 115       | 2          | 20                 |      |
| Manganese,Dissolved  | 1   | 111   | 111.49 | 100   | 113.43 | 102   | 85 - 115       | 2          | 20                 |      |
| Molybdenum,Dissolved | 1   | 111   | 113.87 | 103   | 114.72 | 103   | 85 - 115       | 1          | 20                 |      |
| Nickel,Dissolved     | 1   | 111   | 110.63 | 100   | 111.85 | 101   | 85 - 115       | 1          | 20                 |      |
| Potassium,Dissolved  | 1   | 11100 | 11406  | 103   | 11748  | 106   | 70 - 130       | 3          | 20                 |      |
| Selenium,Dissolved   | 1   | 111   | 106.89 | 96    | 108.74 | 98    | 85 - 115       | 2          | 20                 |      |
| Silver,Dissolved     | 1   | 111   | 94.134 | 85    | 96.662 | 87    | 85 - 115       | 3          | 20                 |      |
| Sodium,Dissolved     | 1   | 11100 | 11363  | 102   | 11605  | 105   | 70 - 130       | 2          | 20                 |      |
| Uranium,Dissolved    | 1   | 111   | 107.75 | 97    | 110.19 | 99    | 70 - 130       | 2          | 20                 |      |
| Vanadium,Dissolved   | 1   | 111   | 110.99 | 100   | 113.73 | 102   | 85 - 115       | 2          | 20                 |      |
| Zinc,Dissolved       | 1   | 111   | 106.51 | 96    | 108.05 | 97    | 85 - 115       | 1          | 20                 |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 9:07:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

### Laboratory Control Sample (LCS)

| Analyte              | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------------------|-----|------------|--------|-------|----------------|------|
| Aluminum,Dissolved   | 1   | 1110       | 1003.7 | 90    | 70 - 130       |      |
| Arsenic,Dissolved    | 1   | 111        | 98.223 | 88    | 85 - 115       |      |
| Barium,Dissolved     | 1   | 111        | 99.882 | 90    | 85 - 115       |      |
| Boron,Dissolved      | 1   | 111        | 112.24 | 101   | 70 - 130       |      |
| Cadmium,Dissolved    | 1   | 111        | 97.930 | 88    | 85 - 115       |      |
| Calcium,Dissolved    | 1   | 11100      | 10231  | 92    | 70 - 130       |      |
| Chromium,Dissolved   | 1   | 111        | 98.361 | 89    | 85 - 115       |      |
| Cobalt,Dissolved     | 1   | 111        | 99.060 | 89    | 85 - 115       |      |
| Copper,Dissolved     | 1   | 111        | 98.338 | 89    | 85 - 115       |      |
| Iron,Dissolved       | 1   | 1110       | 1004.8 | 91    | 85 - 115       |      |
| Lead,Dissolved       | 1   | 111        | 98.459 | 89    | 85 - 115       |      |
| Manganese,Dissolved  | 1   | 111        | 99.623 | 90    | 85 - 115       |      |
| Molybdenum,Dissolved | 1   | 111        | 102.26 | 92    | 85 - 115       |      |
| Nickel,Dissolved     | 1   | 111        | 99.430 | 90    | 85 - 115       |      |
| Potassium,Dissolved  | 1   | 11100      | 9852.2 | 89    | 70 - 130       |      |
| Selenium,Dissolved   | 1   | 111        | 97.620 | 88    | 85 - 115       |      |
| Silver,Dissolved     | 1   | 111        | 102.54 | 92    | 85 - 115       |      |
| Sodium,Dissolved     | 1   | 11100      | 9946.8 | 90    | 70 - 130       |      |
| Uranium,Dissolved    | 1   | 111        | 98.006 | 88    | 70 - 130       |      |
| Vanadium,Dissolved   | 1   | 111        | 98.601 | 89    | 85 - 115       |      |
| Zinc,Dissolved       | 1   | 111        | 97.672 | 88    | 85 - 115       |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 9:07:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte              | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------------------|-----|------------|--------|-------|----------------|------|
| Aluminum,Dissolved   | 1   | 1110       | 1018.2 | 92    | 70 - 130       |      |
| Arsenic,Dissolved    | 1   | 111        | 97.318 | 88    | 85 - 115       |      |
| Barium,Dissolved     | 1   | 111        | 100.90 | 91    | 85 - 115       |      |
| Boron,Dissolved      | 1   | 111        | 121.39 | 109   | 70 - 130       |      |
| Cadmium,Dissolved    | 1   | 111        | 97.919 | 88    | 85 - 115       |      |
| Calcium,Dissolved    | 1   | 11100      | 10287  | 93    | 70 - 130       |      |
| Chromium,Dissolved   | 1   | 111        | 99.150 | 89    | 85 - 115       |      |
| Cobalt,Dissolved     | 1   | 111        | 97.966 | 88    | 85 - 115       |      |
| Copper,Dissolved     | 1   | 111        | 97.303 | 88    | 85 - 115       |      |
| Iron,Dissolved       | 1   | 1110       | 989.32 | 89    | 85 - 115       |      |
| Lead,Dissolved       | 1   | 111        | 98.857 | 89    | 85 - 115       |      |
| Manganese,Dissolved  | 1   | 111        | 98.806 | 89    | 85 - 115       |      |
| Molybdenum,Dissolved | 1   | 111        | 101.17 | 91    | 85 - 115       |      |
| Nickel,Dissolved     | 1   | 111        | 98.464 | 89    | 85 - 115       |      |
| Potassium,Dissolved  | 1   | 11100      | 9946.2 | 90    | 70 - 130       |      |
| Selenium,Dissolved   | 1   | 111        | 97.783 | 88    | 85 - 115       |      |
| Silver,Dissolved     | 1   | 111        | 103.08 | 93    | 85 - 115       |      |
| Sodium,Dissolved     | 1   | 11100      | 9947.9 | 90    | 70 - 130       |      |
| Uranium,Dissolved    | 1   | 111        | 98.923 | 89    | 70 - 130       |      |
| Vanadium,Dissolved   | 1   | 111        | 100.05 | 90    | 85 - 115       |      |
| Zinc,Dissolved       | 1   | 111        | 95.954 | 86    | 85 - 115       |      |



## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 9:07:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte              | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|----------------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Aluminum,Dissolved   | 1   | 1110  | 1003.7 | 90    | 1018.2 | 92    | 70 - 130       | 1          | 20                 |      |
| Arsenic,Dissolved    | 1   | 111   | 98.223 | 88    | 97.318 | 88    | 85 - 115       | 1          | 20                 |      |
| Barium,Dissolved     | 1   | 111   | 99.882 | 90    | 100.90 | 91    | 85 - 115       | 1          | 20                 |      |
| Boron,Dissolved      | 1   | 111   | 112.24 | 101   | 121.39 | 109   | 70 - 130       | 8          | 20                 |      |
| Cadmium,Dissolved    | 1   | 111   | 97.930 | 88    | 97.919 | 88    | 85 - 115       | 0          | 20                 |      |
| Calcium,Dissolved    | 1   | 11100 | 10231  | 92    | 10287  | 93    | 70 - 130       | 1          | 20                 |      |
| Chromium,Dissolved   | 1   | 111   | 98.361 | 89    | 99.150 | 89    | 85 - 115       | 1          | 20                 |      |
| Cobalt,Dissolved     | 1   | 111   | 99.060 | 89    | 97.966 | 88    | 85 - 115       | 1          | 20                 |      |
| Copper,Dissolved     | 1   | 111   | 98.338 | 89    | 97.303 | 88    | 85 - 115       | 1          | 20                 |      |
| Iron,Dissolved       | 1   | 1110  | 1004.8 | 91    | 989.32 | 89    | 85 - 115       | 2          | 20                 |      |
| Lead,Dissolved       | 1   | 111   | 98.459 | 89    | 98.857 | 89    | 85 - 115       | 0          | 20                 |      |
| Manganese,Dissolved  | 1   | 111   | 99.623 | 90    | 98.806 | 89    | 85 - 115       | 1          | 20                 |      |
| Molybdenum,Dissolved | 1   | 111   | 102.26 | 92    | 101.17 | 91    | 85 - 115       | 1          | 20                 |      |
| Nickel,Dissolved     | 1   | 111   | 99.430 | 90    | 98.464 | 89    | 85 - 115       | 1          | 20                 |      |
| Potassium,Dissolved  | 1   | 11100 | 9852.2 | 89    | 9946.2 | 90    | 70 - 130       | 1          | 20                 |      |
| Selenium,Dissolved   | 1   | 111   | 97.620 | 88    | 97.783 | 88    | 85 - 115       | 0          | 20                 |      |
| Silver,Dissolved     | 1   | 111   | 102.54 | 92    | 103.08 | 93    | 85 - 115       | 1          | 20                 |      |
| Sodium,Dissolved     | 1   | 11100 | 9946.8 | 90    | 9947.9 | 90    | 70 - 130       | 0          | 20                 |      |
| Uranium,Dissolved    | 1   | 111   | 98.006 | 88    | 98.923 | 89    | 70 - 130       | 1          | 20                 |      |
| Vanadium,Dissolved   | 1   | 111   | 98.601 | 89    | 100.05 | 90    | 85 - 115       | 1          | 20                 |      |
| Zinc,Dissolved       | 1   | 111   | 97.672 | 88    | 95.954 | 86    | 85 - 115       | 2          | 20                 |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:36:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

### Laboratory Control Sample (LCS)

| Analyte    | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|------------|-----|------------|--------|-------|----------------|------|
| Aluminum   | 1   | 1110       | 996.26 | 90    | 70 - 130       |      |
| Arsenic    | 1   | 111        | 98.350 | 89    | 85 - 115       |      |
| Barium     | 1   | 111        | 99.041 | 89    | 85 - 115       |      |
| Boron      | 1   | 111        | 95.712 | 86    | 70 - 130       |      |
| Cadmium    | 1   | 111        | 97.570 | 88    | 85 - 115       |      |
| Calcium    | 1   | 11100      | 10367  | 93    | 70 - 130       |      |
| Chromium   | 1   | 111        | 99.555 | 90    | 85 - 115       |      |
| Cobalt     | 1   | 111        | 99.346 | 90    | 85 - 115       |      |
| Copper     | 1   | 111        | 98.356 | 89    | 85 - 115       |      |
| Iron       | 1   | 1110       | 1006.2 | 91    | 85 - 115       |      |
| Lead       | 1   | 111        | 99.458 | 90    | 85 - 115       |      |
| Manganese  | 1   | 111        | 99.817 | 90    | 85 - 115       |      |
| Molybdenum | 1   | 111        | 102.13 | 92    | 85 - 115       |      |
| Nickel     | 1   | 111        | 98.809 | 89    | 85 - 115       |      |
| Potassium  | 1   | 11100      | 10035  | 90    | 70 - 130       |      |
| Selenium   | 1   | 111        | 98.952 | 89    | 85 - 115       |      |
| Silver     | 1   | 111        | 102.07 | 92    | 85 - 115       |      |
| Sodium     | 1   | 11100      | 9954.8 | 90    | 70 - 130       |      |
| Uranium    | 1   | 111        | 99.328 | 89    | 70 - 130       |      |
| Vanadium   | 1   | 111        | 99.476 | 90    | 85 - 115       |      |
| Zinc       | 1   | 111        | 97.621 | 88    | 85 - 115       |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:36:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte    | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|------------|-----|------------|--------|-------|----------------|------|
| Aluminum   | 1   | 1110       | 993.16 | 89    | 70 - 130       |      |
| Arsenic    | 1   | 111        | 97.750 | 88    | 85 - 115       |      |
| Barium     | 1   | 111        | 99.868 | 90    | 85 - 115       |      |
| Boron      | 1   | 111        | 99.227 | 89    | 70 - 130       |      |
| Cadmium    | 1   | 111        | 98.035 | 88    | 85 - 115       |      |
| Calcium    | 1   | 11100      | 10214  | 92    | 70 - 130       |      |
| Chromium   | 1   | 111        | 98.612 | 89    | 85 - 115       |      |
| Cobalt     | 1   | 111        | 98.521 | 89    | 85 - 115       |      |
| Copper     | 1   | 111        | 98.232 | 88    | 85 - 115       |      |
| Iron       | 1   | 1110       | 997.20 | 90    | 85 - 115       |      |
| Lead       | 1   | 111        | 99.722 | 90    | 85 - 115       |      |
| Manganese  | 1   | 111        | 98.680 | 89    | 85 - 115       |      |
| Molybdenum | 1   | 111        | 101.31 | 91    | 85 - 115       |      |
| Nickel     | 1   | 111        | 99.048 | 89    | 85 - 115       |      |
| Potassium  | 1   | 11100      | 9851.6 | 89    | 70 - 130       |      |
| Selenium   | 1   | 111        | 97.828 | 88    | 85 - 115       |      |
| Silver     | 1   | 111        | 103.06 | 93    | 85 - 115       |      |
| Sodium     | 1   | 11100      | 9842.4 | 89    | 70 - 130       |      |
| Uranium    | 1   | 111        | 99.146 | 89    | 70 - 130       |      |
| Vanadium   | 1   | 111        | 99.101 | 89    | 85 - 115       |      |
| Zinc       | 1   | 111        | 96.746 | 87    | 85 - 115       |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:36:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte    | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Aluminum   | 1   | 1110  | 996.26 | 90    | 993.16 | 89    | 70 - 130       | 0          | 20                 |      |
| Arsenic    | 1   | 111   | 98.350 | 89    | 97.750 | 88    | 85 - 115       | 1          | 20                 |      |
| Barium     | 1   | 111   | 99.041 | 89    | 99.868 | 90    | 85 - 115       | 1          | 20                 |      |
| Boron      | 1   | 111   | 95.712 | 86    | 99.227 | 89    | 70 - 130       | 4          | 20                 |      |
| Cadmium    | 1   | 111   | 97.570 | 88    | 98.035 | 88    | 85 - 115       | 0          | 20                 |      |
| Calcium    | 1   | 11100 | 10367  | 93    | 10214  | 92    | 70 - 130       | 1          | 20                 |      |
| Chromium   | 1   | 111   | 99.555 | 90    | 98.612 | 89    | 85 - 115       | 1          | 20                 |      |
| Cobalt     | 1   | 111   | 99.346 | 90    | 98.521 | 89    | 85 - 115       | 1          | 20                 |      |
| Copper     | 1   | 111   | 98.356 | 89    | 98.232 | 88    | 85 - 115       | 0          | 20                 |      |
| Iron       | 1   | 1110  | 1006.2 | 91    | 997.20 | 90    | 85 - 115       | 1          | 20                 |      |
| Lead       | 1   | 111   | 99.458 | 90    | 99.722 | 90    | 85 - 115       | 0          | 20                 |      |
| Manganese  | 1   | 111   | 99.817 | 90    | 98.680 | 89    | 85 - 115       | 1          | 20                 |      |
| Molybdenum | 1   | 111   | 102.13 | 92    | 101.31 | 91    | 85 - 115       | 1          | 20                 |      |
| Nickel     | 1   | 111   | 98.809 | 89    | 99.048 | 89    | 85 - 115       | 0          | 20                 |      |
| Potassium  | 1   | 11100 | 10035  | 90    | 9851.6 | 89    | 70 - 130       | 2          | 20                 |      |
| Selenium   | 1   | 111   | 98.952 | 89    | 97.828 | 88    | 85 - 115       | 1          | 20                 |      |
| Silver     | 1   | 111   | 102.07 | 92    | 103.06 | 93    | 85 - 115       | 1          | 20                 |      |
| Sodium     | 1   | 11100 | 9954.8 | 90    | 9842.4 | 89    | 70 - 130       | 1          | 20                 |      |
| Uranium    | 1   | 111   | 99.328 | 89    | 99.146 | 89    | 70 - 130       | 0          | 20                 |      |
| Vanadium   | 1   | 111   | 99.476 | 90    | 99.101 | 89    | 85 - 115       | 0          | 20                 |      |
| Zinc       | 1   | 111   | 97.621 | 88    | 96.746 | 87    | 85 - 115       | 1          | 20                 |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                               |                        |                 |
|------------------|-----------------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020                   |                        |                 |
| Project No:      | TX000836.0008.00004                           | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM         | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                     | <b>Analytic Batch:</b> | <b>WG738505</b> |
| Analysis Date:   | 8/21/2014 11:17:00 AM                         | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                        | Prep Date:             | 8/20/2014       |
| Sample Numbers:  | L712971-01, -02, -03, -05, -06, -07, -08, -09 |                        |                 |

### Laboratory Control Sample (LCS)

| Analyte    | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|------------|-----|------------|--------|-------|----------------|------|
| Aluminum   | 1   | 1110       | 1120.7 | 101   | 70 - 130       |      |
| Arsenic    | 1   | 111        | 114.46 | 103   | 85 - 115       |      |
| Barium     | 1   | 111        | 114.35 | 103   | 85 - 115       |      |
| Boron      | 1   | 111        | 114.63 | 103   | 70 - 130       |      |
| Cadmium    | 1   | 111        | 113.18 | 102   | 85 - 115       |      |
| Calcium    | 1   | 11100      | 12322  | 111   | 70 - 130       |      |
| Chromium   | 1   | 111        | 111.98 | 101   | 85 - 115       |      |
| Cobalt     | 1   | 111        | 115.98 | 104   | 85 - 115       |      |
| Copper     | 1   | 111        | 115.15 | 104   | 85 - 115       |      |
| Iron       | 1   | 1110       | 1200.5 | 108   | 85 - 115       |      |
| Lead       | 1   | 111        | 112.74 | 102   | 85 - 115       |      |
| Manganese  | 1   | 111        | 118.06 | 106   | 85 - 115       |      |
| Molybdenum | 1   | 111        | 115.38 | 104   | 85 - 115       |      |
| Nickel     | 1   | 111        | 115.66 | 104   | 85 - 115       |      |
| Potassium  | 1   | 11100      | 11652  | 105   | 70 - 130       |      |
| Selenium   | 1   | 111        | 113.30 | 102   | 85 - 115       |      |
| Silver     | 1   | 111        | 115.59 | 104   | 85 - 115       |      |
| Sodium     | 1   | 11100      | 11579  | 104   | 70 - 130       |      |
| Uranium    | 1   | 111        | 111.82 | 101   | 70 - 130       |      |
| Vanadium   | 1   | 111        | 113.95 | 103   | 85 - 115       |      |
| Zinc       | 1   | 111        | 114.06 | 103   | 85 - 115       |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                               |                        |                 |
|------------------|-----------------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020                   |                        |                 |
| Project No:      | TX000836.0008.00004                           | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM         | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                     | <b>Analytic Batch:</b> | <b>WG738505</b> |
| Analysis Date:   | 8/21/2014 11:17:00 AM                         | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                        | Prep Date:             | 8/20/2014       |
| Sample Numbers:  | L712971-01, -02, -03, -05, -06, -07, -08, -09 |                        |                 |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte    | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|------------|-----|------------|--------|-------|----------------|------|
| Aluminum   | 1   | 1110       | 1125.6 | 101   | 70 - 130       |      |
| Arsenic    | 1   | 111        | 115.18 | 104   | 85 - 115       |      |
| Barium     | 1   | 111        | 117.66 | 106   | 85 - 115       |      |
| Boron      | 1   | 111        | 118.30 | 107   | 70 - 130       |      |
| Cadmium    | 1   | 111        | 114.72 | 103   | 85 - 115       |      |
| Calcium    | 1   | 11100      | 12477  | 112   | 70 - 130       |      |
| Chromium   | 1   | 111        | 112.04 | 101   | 85 - 115       |      |
| Cobalt     | 1   | 111        | 116.39 | 105   | 85 - 115       |      |
| Copper     | 1   | 111        | 116.60 | 105   | 85 - 115       |      |
| Iron       | 1   | 1110       | 1201.3 | 108   | 85 - 115       |      |
| Lead       | 1   | 111        | 109.92 | 99    | 85 - 115       |      |
| Manganese  | 1   | 111        | 119.97 | 108   | 85 - 115       |      |
| Molybdenum | 1   | 111        | 115.55 | 104   | 85 - 115       |      |
| Nickel     | 1   | 111        | 116.43 | 105   | 85 - 115       |      |
| Potassium  | 1   | 11100      | 11731  | 106   | 70 - 130       |      |
| Selenium   | 1   | 111        | 113.86 | 103   | 85 - 115       |      |
| Silver     | 1   | 111        | 117.14 | 106   | 85 - 115       |      |
| Sodium     | 1   | 11100      | 11673  | 105   | 70 - 130       |      |
| Uranium    | 1   | 111        | 108.63 | 98    | 70 - 130       |      |
| Vanadium   | 1   | 111        | 114.22 | 103   | 85 - 115       |      |
| Zinc       | 1   | 111        | 115.33 | 104   | 85 - 115       |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

Test: Trace Metals by Method 6020  
Project No: TX000836.0008.00004  
Project: Navajo Refining Company - Artesia, NM  
Collection Date: 7/29/2014  
Analysis Date: 8/21/2014 11:17:00 AM  
Instrument ID: ICPMS8  
Sample Numbers: L712971-01, -02, -03, -05, -06, -07, -08, -09

Matrix: Water - ug/L  
EPA ID: TN00003  
**Analytic Batch: WG738505**  
Analyst: 664  
Prep Date: 8/20/2014

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte    | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Aluminum   | 1   | 1110  | 1120.7 | 101   | 1125.6 | 101   | 70 - 130       | 0          | 20                 |      |
| Arsenic    | 1   | 111   | 114.46 | 103   | 115.18 | 104   | 85 - 115       | 1          | 20                 |      |
| Barium     | 1   | 111   | 114.35 | 103   | 117.66 | 106   | 85 - 115       | 3          | 20                 |      |
| Boron      | 1   | 111   | 114.63 | 103   | 118.30 | 107   | 70 - 130       | 3          | 20                 |      |
| Cadmium    | 1   | 111   | 113.18 | 102   | 114.72 | 103   | 85 - 115       | 1          | 20                 |      |
| Calcium    | 1   | 11100 | 12322  | 111   | 12477  | 112   | 70 - 130       | 1          | 20                 |      |
| Chromium   | 1   | 111   | 111.98 | 101   | 112.04 | 101   | 85 - 115       | 0          | 20                 |      |
| Cobalt     | 1   | 111   | 115.98 | 104   | 116.39 | 105   | 85 - 115       | 0          | 20                 |      |
| Copper     | 1   | 111   | 115.15 | 104   | 116.60 | 105   | 85 - 115       | 1          | 20                 |      |
| Iron       | 1   | 1110  | 1200.5 | 108   | 1201.3 | 108   | 85 - 115       | 0          | 20                 |      |
| Lead       | 1   | 111   | 112.74 | 102   | 109.92 | 99    | 85 - 115       | 3          | 20                 |      |
| Manganese  | 1   | 111   | 118.06 | 106   | 119.97 | 108   | 85 - 115       | 2          | 20                 |      |
| Molybdenum | 1   | 111   | 115.38 | 104   | 115.55 | 104   | 85 - 115       | 0          | 20                 |      |
| Nickel     | 1   | 111   | 115.66 | 104   | 116.43 | 105   | 85 - 115       | 1          | 20                 |      |
| Potassium  | 1   | 11100 | 11652  | 105   | 11731  | 106   | 70 - 130       | 1          | 20                 |      |
| Selenium   | 1   | 111   | 113.30 | 102   | 113.86 | 103   | 85 - 115       | 0          | 20                 |      |
| Silver     | 1   | 111   | 115.59 | 104   | 117.14 | 106   | 85 - 115       | 1          | 20                 |      |
| Sodium     | 1   | 11100 | 11579  | 104   | 11673  | 105   | 70 - 130       | 1          | 20                 |      |
| Uranium    | 1   | 111   | 111.82 | 101   | 108.63 | 98    | 70 - 130       | 3          | 20                 |      |
| Vanadium   | 1   | 111   | 113.95 | 103   | 114.22 | 103   | 85 - 115       | 0          | 20                 |      |
| Zinc       | 1   | 111   | 114.06 | 103   | 115.33 | 104   | 85 - 115       | 1          | 20                 |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 9:07:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

#### Serial Dilution

L712736-03

| Analyte              | Dil | Sample Result | SD Result | % RPD | Limit | Qualifier |
|----------------------|-----|---------------|-----------|-------|-------|-----------|
| Aluminum,Dissolved   | 5   | 34.176        | 42.113    | 23    | 10    |           |
| Arsenic,Dissolved    | 5   | 0.6592        | 0.7314    | 11    | 10    |           |
| Barium,Dissolved     | 5   | 14.446        | 15.500    | 7     | 10    |           |
| Boron,Dissolved      | 5   | 177.11        | 133.00    | 25    | 10    |           |
| Cadmium,Dissolved    | 5   | <0.16         | <0.8      |       | 10    |           |
| Chromium,Dissolved   | 5   | 1.7940        | 2.3170    | 29    | 10    |           |
| Cobalt,Dissolved     | 5   | <0.26         | <1.3      |       | 10    |           |
| Copper,Dissolved     | 5   | 0.5970        | 0.8092    | 36    | 10    |           |
| Iron,Dissolved       | 5   | <50           | <250      |       | 10    |           |
| Lead,Dissolved       | 5   | <0.24         | <1.2      |       | 10    |           |
| Manganese,Dissolved  | 5   | 0.5617        | 0.7880    | 40    | 10    |           |
| Molybdenum,Dissolved | 5   | 7.1002        | 7.4059    | 4     | 10    |           |
| Nickel,Dissolved     | 5   | 0.5948        | 1.2627    | 112   | 10    |           |
| Potassium,Dissolved  | 5   | 2121.2        | 2546.5    | 20    | 10    |           |
| Selenium,Dissolved   | 5   | 8.5181        | 11.105    | 30    | 10    |           |
| Silver,Dissolved     | 5   | <0.31         | <1.55     |       | 10    |           |
| Sodium,Dissolved     | 5   | 76826         | 86257     | 12    | 10    |           |
| Uranium,Dissolved    | 5   | 3.8706        | 4.2095    | 9     | 10    |           |
| Vanadium,Dissolved   | 5   | 4.3521        | 5.0052    | 15    | 10    |           |
| Zinc,Dissolved       | 5   | 5.6014        | 15.045    | 169   | 10    |           |



## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 9:07:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

#### Matrix Spike / Matrix Spike Duplicate

L712736-03

| Analyte              | Dil | Spike Value | Sample | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD | Control Limits | RPD |
|----------------------|-----|-------------|--------|--------|-------|--------|-------|----------------|------------|-----|----------------|-----|
| Aluminum,Dissolved   | 1   | 1110        | 34.176 | 1002.9 | 87    | 1010.6 | 88    | 70 - 130       |            | 1   | 20             |     |
| Arsenic,Dissolved    | 1   | 111         | 0.6592 | 99.516 | 89    | 99.864 | 89    | 75 - 125       |            | 0   | 20             |     |
| Barium,Dissolved     | 1   | 111         | 14.446 | 112.45 | 88    | 113.73 | 89    | 75 - 125       |            | 1   | 20             |     |
| Boron,Dissolved      | 1   | 111         | 177.11 | 309.50 | 119   | 302.59 | 113   | 70 - 130       |            | 2   | 20             |     |
| Cadmium,Dissolved    | 1   | 111         | 0.0124 | 96.715 | 87    | 98.129 | 88    | 75 - 125       |            | 1   | 20             |     |
| Calcium,Dissolved    | 10  | 1110        | 440108 | 426802 | 0     | 424358 | 0     | 70 - 130       | V          | 1   | 20             |     |
| Chromium,Dissolved   | 1   | 111         | 1.7940 | 99.050 | 88    | 100.73 | 89    | 75 - 125       |            | 2   | 20             |     |
| Cobalt,Dissolved     | 1   | 111         | 0.0684 | 96.642 | 87    | 97.498 | 88    | 75 - 125       |            | 1   | 20             |     |
| Copper,Dissolved     | 1   | 111         | 0.5970 | 96.852 | 87    | 97.576 | 87    | 75 - 125       |            | 1   | 20             |     |
| Iron,Dissolved       | 1   | 1110        | 10.818 | 986.47 | 88    | 1000.8 | 89    | 75 - 125       |            | 1   | 20             |     |
| Lead,Dissolved       | 1   | 111         | 0.0640 | 96.814 | 87    | 98.383 | 89    | 75 - 125       |            | 2   | 20             |     |
| Manganese,Dissolved  | 1   | 111         | 0.5617 | 98.699 | 88    | 99.453 | 89    | 75 - 125       |            | 1   | 20             |     |
| Molybdenum,Dissolved | 1   | 111         | 7.1002 | 106.40 | 89    | 107.37 | 90    | 75 - 125       |            | 1   | 20             |     |
| Nickel,Dissolved     | 1   | 111         | 0.5948 | 95.955 | 86    | 96.350 | 86    | 75 - 125       |            | 0   | 20             |     |
| Potassium,Dissolved  | 1   | 11100       | 2121.2 | 11861  | 88    | 11986  | 89    | 70 - 130       |            | 1   | 20             |     |
| Selenium,Dissolved   | 1   | 111         | 8.5181 | 102.14 | 84    | 102.01 | 84    | 75 - 125       |            | 0   | 20             |     |
| Silver,Dissolved     | 1   | 111         | 0.0182 | 93.673 | 84    | 98.998 | 89    | 75 - 125       |            | 6   | 20             |     |
| Sodium,Dissolved     | 1   | 11100       | 76826  | 86006  | 83    | 86588  | 88    | 70 - 130       |            | 1   | 20             |     |
| Uranium,Dissolved    | 1   | 111         | 3.8706 | 101.58 | 88    | 103.61 | 90    | 70 - 130       |            | 2   | 20             |     |
| Vanadium,Dissolved   | 1   | 111         | 4.3521 | 104.56 | 90    | 105.52 | 91    | 75 - 125       |            | 1   | 20             |     |
| Zinc,Dissolved       | 1   | 111         | 5.6014 | 94.599 | 80    | 95.177 | 81    | 75 - 125       |            | 1   | 20             |     |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 9:07:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

### Post Digest Spike

L712736-03

| Analyte              | Dil | Spike Value | Sample | Result | % Rec | Control Limits | Qualifier |
|----------------------|-----|-------------|--------|--------|-------|----------------|-----------|
| Aluminum,Dissolved   | 1   | 1110        | 34.176 | 1096.2 | 96    | 70-130         |           |
| Arsenic,Dissolved    | 1   | 111         | 0.6592 | 106.88 | 96    | 85-115         |           |
| Barium,Dissolved     | 1   | 111         | 14.446 | 121.48 | 96    | 85-115         |           |
| Boron,Dissolved      | 1   | 111         | 177.11 | 312.68 | 122   | 70-130         |           |
| Cadmium,Dissolved    | 1   | 111         | 0.0124 | 105.74 | 95    | 85-115         |           |
| Chromium,Dissolved   | 1   | 111         | 1.7940 | 107.41 | 95    | 85-115         |           |
| Cobalt,Dissolved     | 1   | 111         | 0.0684 | 104.18 | 94    | 85-115         |           |
| Copper,Dissolved     | 1   | 111         | 0.5970 | 104.28 | 93    | 85-115         |           |
| Iron,Dissolved       | 1   | 1110        | 10.818 | 1074.8 | 96    | 85-115         |           |
| Lead,Dissolved       | 1   | 111         | 0.0640 | 105.79 | 95    | 85-115         |           |
| Manganese,Dissolved  | 1   | 111         | 0.5617 | 106.47 | 95    | 85-115         |           |
| Molybdenum,Dissolved | 1   | 111         | 7.1002 | 113.22 | 96    | 85-115         |           |
| Nickel,Dissolved     | 1   | 111         | 0.5948 | 103.24 | 92    | 85-115         |           |
| Potassium,Dissolved  | 1   | 11100       | 2121.2 | 12538  | 94    | 70-130         |           |
| Selenium,Dissolved   | 1   | 111         | 8.5181 | 108.20 | 90    | 85-115         |           |
| Silver,Dissolved     | 1   | 111         | 0.0182 | 51.386 | 46    | 85-115         |           |
| Sodium,Dissolved     | 1   | 11100       | 76826  | 87520  | 96    | 70-130         |           |
| Uranium,Dissolved    | 1   | 111         | 3.8706 | 110.42 | 96    | 70-130         |           |
| Vanadium,Dissolved   | 1   | 111         | 4.3521 | 113.19 | 98    | 85-115         |           |
| Zinc,Dissolved       | 1   | 111         | 5.6014 | 105.30 | 90    | 85-115         |           |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:36:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

#### Serial Dilution

L712736-05

| Analyte    | Dil | Sample Result | SD Result | % RPD | Limit | Qualifier |
|------------|-----|---------------|-----------|-------|-------|-----------|
| Aluminum   | 5   | 60.325        | 71.083    | 18    | 10    |           |
| Arsenic    | 5   | 0.6651        | 0.7167    | 8     | 10    |           |
| Barium     | 5   | 14.999        | 15.944    | 6     | 10    |           |
| Boron      | 5   | 157.19        | 173.81    | 11    | 10    |           |
| Cadmium    | 5   | <0.16         | <0.8      |       | 10    |           |
| Chromium   | 5   | 1.6723        | 2.3430    | 40    | 10    |           |
| Cobalt     | 5   | <0.26         | <1.3      |       | 10    |           |
| Copper     | 5   | <0.52         | <2.6      |       | 10    |           |
| Iron       | 5   | <50           | <250      |       | 10    |           |
| Lead       | 5   | <0.24         | <1.2      |       | 10    |           |
| Manganese  | 5   | 3.8046        | 4.0327    | 6     | 10    |           |
| Molybdenum | 5   | 7.4270        | 7.7612    | 4     | 10    |           |
| Nickel     | 5   | <0.35         | <1.75     |       | 10    |           |
| Potassium  | 5   | 2119.4        | 2392.8    | 13    | 10    |           |
| Selenium   | 5   | 8.4529        | 9.1170    | 8     | 10    |           |
| Silver     | 5   | <0.31         | <1.55     |       | 10    |           |
| Sodium     | 5   | 77721         | 82883     | 7     | 10    |           |
| Uranium    | 5   | 4.0052        | 4.2463    | 6     | 10    |           |
| Vanadium   | 5   | 4.4657        | 4.9237    | 10    | 10    |           |
| Zinc       | 5   | <2.56         | <12.8     |       | 10    |           |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:36:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

#### Matrix Spike / Matrix Spike Duplicate

L712736-05

| Analyte    | Dil | Spike Value | Sample | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD | Control Limits | RPD |
|------------|-----|-------------|--------|--------|-------|--------|-------|----------------|------------|-----|----------------|-----|
| Aluminum   | 1   | 1110        | 60.325 | 1059.7 | 90    | 1044.9 | 89    | 70 - 130       |            | 1   | 20             |     |
| Arsenic    | 1   | 111         | 0.6651 | 100.78 | 90    | 100.60 | 90    | 75 - 125       |            | 0   | 20             |     |
| Barium     | 1   | 111         | 14.999 | 115.92 | 91    | 112.93 | 88    | 75 - 125       |            | 3   | 20             |     |
| Boron      | 1   | 111         | 157.19 | 250.19 | 84    | 251.60 | 85    | 70 - 130       |            | 1   | 20             |     |
| Cadmium    | 1   | 111         | 0.0164 | 98.897 | 89    | 97.395 | 88    | 75 - 125       |            | 2   | 20             |     |
| Calcium    | 10  | 1110        | 422811 | 499404 | 690   | 438033 | 137   | 70 - 130       | V          | 13  | 20             |     |
| Chromium   | 1   | 111         | 1.6723 | 101.42 | 90    | 100.92 | 89    | 75 - 125       |            | 0   | 20             |     |
| Cobalt     | 1   | 111         | 0.0882 | 99.160 | 89    | 98.269 | 88    | 75 - 125       |            | 1   | 20             |     |
| Copper     | 1   | 111         | 0.2252 | 99.403 | 89    | 98.926 | 89    | 75 - 125       |            | 0   | 20             |     |
| Iron       | 1   | 1110        | 41.965 | 1053.8 | 91    | 1054.9 | 91    | 75 - 125       |            | 0   | 20             |     |
| Lead       | 1   | 111         | 0.0924 | 100.13 | 90    | 98.885 | 89    | 75 - 125       |            | 1   | 20             |     |
| Manganese  | 1   | 111         | 3.8046 | 103.18 | 90    | 103.38 | 90    | 75 - 125       |            | 0   | 20             |     |
| Molybdenum | 1   | 111         | 7.4270 | 109.85 | 92    | 109.87 | 92    | 75 - 125       |            | 0   | 20             |     |
| Nickel     | 1   | 111         | 0.1748 | 97.974 | 88    | 97.444 | 88    | 75 - 125       |            | 1   | 20             |     |
| Potassium  | 1   | 11100       | 2119.4 | 12055  | 90    | 11848  | 88    | 70 - 130       |            | 2   | 20             |     |
| Selenium   | 1   | 111         | 8.4529 | 102.24 | 84    | 102.68 | 85    | 75 - 125       |            | 0   | 20             |     |
| Silver     | 1   | 111         | 0.0204 | 94.655 | 85    | 95.186 | 86    | 75 - 125       |            | 1   | 20             |     |
| Sodium     | 1   | 11100       | 77721  | 87339  | 87    | 87082  | 84    | 70 - 130       |            | 0   | 20             |     |
| Uranium    | 1   | 111         | 4.0052 | 106.27 | 92    | 104.32 | 90    | 70 - 130       |            | 2   | 20             |     |
| Vanadium   | 1   | 111         | 4.4657 | 106.18 | 92    | 105.19 | 91    | 75 - 125       |            | 1   | 20             |     |
| Zinc       | 1   | 111         | 1.1991 | 97.038 | 86    | 97.032 | 86    | 75 - 125       |            | 0   | 20             |     |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:36:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

### Post Digest Spike

L712736-05

| Analyte    | Dil | Spike Value | Sample | Result | % Rec | Control Limits | Qualifier |
|------------|-----|-------------|--------|--------|-------|----------------|-----------|
| Aluminum   | 1   | 1110        | 60.325 | 1096.7 | 93    | 70-130         |           |
| Arsenic    | 1   | 111         | 0.6651 | 103.93 | 93    | 85-115         |           |
| Barium     | 1   | 111         | 14.999 | 115.84 | 91    | 85-115         |           |
| Boron      | 1   | 111         | 157.19 | 275.36 | 106   | 70-130         |           |
| Cadmium    | 1   | 111         | 0.0164 | 100.06 | 90    | 85-115         |           |
| Chromium   | 1   | 111         | 1.6723 | 104.20 | 92    | 85-115         |           |
| Cobalt     | 1   | 111         | 0.0882 | 101.01 | 91    | 85-115         |           |
| Copper     | 1   | 111         | 0.2252 | 101.59 | 91    | 85-115         |           |
| Iron       | 1   | 1110        | 41.965 | 1072.2 | 93    | 85-115         |           |
| Lead       | 1   | 111         | 0.0924 | 101.91 | 92    | 85-115         |           |
| Manganese  | 1   | 111         | 3.8046 | 106.36 | 92    | 85-115         |           |
| Molybdenum | 1   | 111         | 7.4270 | 112.85 | 95    | 85-115         |           |
| Nickel     | 1   | 111         | 0.1748 | 100.25 | 90    | 85-115         |           |
| Potassium  | 1   | 11100       | 2119.4 | 12210  | 91    | 70-130         |           |
| Selenium   | 1   | 111         | 8.4529 | 104.50 | 87    | 85-115         |           |
| Silver     | 1   | 111         | 0.0204 | 34.135 | 31    | 85-115         |           |
| Sodium     | 1   | 11100       | 77721  | 85009  | 66    | 70-130         |           |
| Uranium    | 1   | 111         | 4.0052 | 107.69 | 93    | 70-130         |           |
| Vanadium   | 1   | 111         | 4.4657 | 109.21 | 94    | 85-115         |           |
| Zinc       | 1   | 111         | 1.1991 | 99.558 | 89    | 85-115         |           |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

Test: Trace Metals by Method 6020  
Project No: TX000836.0008.00004  
Project: Navajo Refining Company - Artesia, NM  
Collection Date: 7/29/2014  
Analysis Date: 8/21/2014 11:17:00 AM  
Instrument ID: ICPMS8  
Sample Numbers: L712971-01, -02, -03, -05, -06, -07, -08, -09

Matrix: Water - ug/L  
EPA ID: TN00003  
**Analytic Batch: WG738505**  
Analyst: 664  
Prep Date: 8/20/2014

#### Serial Dilution

L712971-01

| Analyte    | Dil | Sample Result | SD Result | % RPD | Limit | Qualifier |
|------------|-----|---------------|-----------|-------|-------|-----------|
| Aluminum   | 5   | 10.030        | -11.87    | 218   | 10    |           |
| Arsenic    | 5   | 1.9059        | 2.1950    | 15    | 10    |           |
| Barium     | 5   | 20.597        | 23.448    | 14    | 10    |           |
| Boron      | 5   | 557.71        | 690.48    | 24    | 10    | O1        |
| Cadmium    | 5   | <0.16         | <0.8      |       | 10    |           |
| Calcium    | 100 | 738098        | 770665    | 4     | 10    |           |
| Chromium   | 5   | 0.6757        | 1.5683    | 132   | 10    |           |
| Cobalt     | 5   | <0.26         | <1.3      |       | 10    |           |
| Copper     | 5   | 1.9598        | 2.7362    | 40    | 10    |           |
| Iron       | 5   | 975.41        | 1077.4    | 10    | 10    |           |
| Lead       | 5   | <0.24         | <1.2      |       | 10    |           |
| Manganese  | 5   | 87.184        | 99.785    | 14    | 10    |           |
| Molybdenum | 5   | 5.0294        | 5.9009    | 17    | 10    |           |
| Nickel     | 5   | 2.0193        | 2.4324    | 20    | 10    |           |
| Potassium  | 5   | 4704.2        | 5598.3    | 19    | 10    |           |
| Selenium   | 5   | 10.285        | 10.537    | 2     | 10    |           |
| Silver     | 5   | <0.31         | <1.55     |       | 10    |           |
| Sodium     | 100 | 1494552       | 1589540   | 6     | 10    |           |
| Uranium    | 5   | 5.5265        | 5.4142    | 2     | 10    |           |
| Vanadium   | 5   | 2.0713        | 2.5100    | 21    | 10    |           |
| Zinc       | 5   | 4.6938        | 4.7182    | 1     | 10    |           |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

Test: Trace Metals by Method 6020  
Project No: TX000836.0008.00004  
Project: Navajo Refining Company - Artesia, NM  
Collection Date: 7/29/2014  
Analysis Date: 8/21/2014 11:17:00 AM  
Instrument ID: ICPMS8  
Sample Numbers: L712971-01, -02, -03, -05, -06, -07, -08, -09

Matrix: Water - ug/L  
EPA ID: TN00003  
**Analytic Batch: WG738505**  
Analyst: 664  
Prep Date: 8/20/2014

#### Matrix Spike / Matrix Spike Duplicate

L712971-01

| Analyte    | Dil | Spike Value | Sample  | MS      | % Rec | MSD     | % Rec | Control Limits | % Rec Qual | RPD | Control Limits | RPD |
|------------|-----|-------------|---------|---------|-------|---------|-------|----------------|------------|-----|----------------|-----|
| Aluminum   | 1   | 1110        | 10.030  | 1113.7  | 99    | 1103.9  | 99    | 70 - 130       |            | 1   | 20             |     |
| Arsenic    | 1   | 111         | 1.9059  | 118.93  | 105   | 117.97  | 105   | 75 - 125       |            | 1   | 20             |     |
| Barium     | 1   | 111         | 20.597  | 135.33  | 103   | 137.48  | 105   | 75 - 125       |            | 2   | 20             |     |
| Boron      | 1   | 111         | 557.71  | 703.86  | 132   | 716.53  | 143   | 70 - 130       | V          | 2   | 20             |     |
| Cadmium    | 1   | 111         | 0.0756  | 112.00  | 101   | 112.27  | 101   | 75 - 125       |            | 0   | 20             |     |
| Calcium    | 20  | 555         | 738098  | 773268  | 317   | 832120  | 847   | 70 - 130       | V          | 7   | 20             |     |
| Chromium   | 1   | 111         | 0.6757  | 108.91  | 98    | 109.11  | 98    | 75 - 125       |            | 0   | 20             |     |
| Cobalt     | 1   | 111         | 0.2440  | 115.13  | 104   | 113.88  | 102   | 75 - 125       |            | 1   | 20             |     |
| Copper     | 1   | 111         | 1.9598  | 113.39  | 100   | 112.71  | 100   | 75 - 125       |            | 1   | 20             |     |
| Iron       | 1   | 1110        | 975.41  | 2104.3  | 102   | 2107.1  | 102   | 75 - 125       |            | 0   | 20             |     |
| Lead       | 1   | 111         | 0.1214  | 105.70  | 95    | 103.51  | 93    | 75 - 125       |            | 2   | 20             |     |
| Manganese  | 1   | 111         | 87.184  | 204.14  | 105   | 203.63  | 105   | 75 - 125       |            | 0   | 20             |     |
| Molybdenum | 1   | 111         | 5.0294  | 119.44  | 103   | 119.30  | 103   | 75 - 125       |            | 0   | 20             |     |
| Nickel     | 1   | 111         | 2.0193  | 113.10  | 100   | 111.92  | 99    | 75 - 125       |            | 1   | 20             |     |
| Potassium  | 1   | 11100       | 4704.2  | 16046   | 102   | 16336   | 105   | 70 - 130       |            | 2   | 20             |     |
| Selenium   | 1   | 111         | 10.285  | 124.99  | 103   | 120.64  | 99    | 75 - 125       |            | 4   | 20             |     |
| Silver     | 1   | 111         | 0.0829  | 112.90  | 102   | 113.02  | 102   | 75 - 125       |            | 0   | 20             |     |
| Sodium     | 20  | 555         | 1494552 | 1532622 | 343   | 1657351 | 1467  | 70 - 130       | V          | 8   | 20             |     |
| Uranium    | 1   | 111         | 5.5265  | 113.01  | 97    | 110.75  | 95    | 70 - 130       |            | 2   | 20             |     |
| Vanadium   | 1   | 111         | 2.0713  | 115.87  | 103   | 115.80  | 102   | 75 - 125       |            | 0   | 20             |     |
| Zinc       | 1   | 111         | 4.6938  | 110.54  | 95    | 110.75  | 96    | 75 - 125       |            | 0   | 20             |     |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                               |                        |                 |
|------------------|-----------------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020                   |                        |                 |
| Project No:      | TX000836.0008.00004                           | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM         | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                     | <b>Analytic Batch:</b> | <b>WG738505</b> |
| Analysis Date:   | 8/21/2014 11:17:00 AM                         | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                        | Prep Date:             | 8/20/2014       |
| Sample Numbers:  | L712971-01, -02, -03, -05, -06, -07, -08, -09 |                        |                 |

#### Post Digest Spike

L712971-01

| Analyte    | Dil | Spike Value | Sample  | Result  | % Rec | Control Limits | Qualifier |
|------------|-----|-------------|---------|---------|-------|----------------|-----------|
| Aluminum   | 1   | 1110        | 10.030  | 1036.1  | 92    | 70-130         |           |
| Arsenic    | 1   | 111         | 1.9059  | 107.64  | 95    | 85-115         |           |
| Barium     | 1   | 111         | 20.597  | 128.33  | 97    | 85-115         |           |
| Boron      | 1   | 111         | 557.71  | 673.65  | 104   | 70-130         |           |
| Cadmium    | 1   | 111         | 0.0756  | 104.05  | 94    | 85-115         |           |
| Calcium    | 20  | 11100       | 738098  | 810897  | 33    | 70-130         | O1        |
| Chromium   | 1   | 111         | 0.6757  | 104.03  | 93    | 85-115         |           |
| Cobalt     | 1   | 111         | 0.2440  | 104.44  | 94    | 85-115         |           |
| Copper     | 1   | 111         | 1.9598  | 102.64  | 91    | 85-115         |           |
| Iron       | 1   | 1110        | 975.41  | 1975.2  | 90    | 85-115         |           |
| Lead       | 1   | 111         | 0.1214  | 97.428  | 88    | 85-115         |           |
| Manganese  | 1   | 111         | 87.184  | 190.04  | 93    | 85-115         |           |
| Molybdenum | 1   | 111         | 5.0294  | 109.47  | 94    | 85-115         |           |
| Nickel     | 1   | 111         | 2.0193  | 103.02  | 91    | 85-115         |           |
| Potassium  | 1   | 11100       | 4704.2  | 15625   | 98    | 70-130         |           |
| Selenium   | 1   | 111         | 10.285  | 111.57  | 91    | 85-115         |           |
| Silver     | 1   | 111         | 0.0829  | 97.963  | 88    | 85-115         |           |
| Sodium     | 20  | 11100       | 1494552 | 1609133 | 52    | 70-130         | O1        |
| Uranium    | 1   | 111         | 5.5265  | 105.90  | 90    | 70-130         |           |
| Vanadium   | 1   | 111         | 2.0713  | 109.58  | 97    | 85-115         |           |
| Zinc       | 1   | 111         | 4.6938  | 103.11  | 89    | 85-115         |           |



## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                    |                        |                 |
|------------------|----------------------------------------------------|------------------------|-----------------|
| Test:            | Volatile TPH by Method 8015D/GRO                   |                        |                 |
| Project No:      | TX000836.0008.00004                                | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM              | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                          | <b>Analytic Batch:</b> | <b>WG734878</b> |
| Analysis Date:   | 7/31/2014 10:36:00 PM                              | Analyst:               | 621             |
| Instrument ID:   | VOCGC4                                             |                        |                 |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -08, -09 |                        |                 |

#### Method Blank

| Analyte                   | CAS       | RDL     | MDL      | Qualifier |
|---------------------------|-----------|---------|----------|-----------|
| TPH (GC/FID) Low Fraction | 8006-61-9 | < 0.100 | < 0.0314 |           |

#### Laboratory Control Sample (LCS)

| Analyte                   | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------------|-----|------------|--------|-------|----------------|------|
| TPH (GC/FID) Low Fraction | 1   | 5.5        | 5.9875 | 109   | 67 - 132       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte                   | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------------|-----|------------|--------|-------|----------------|------|
| TPH (GC/FID) Low Fraction | 1   | 5.5        | 6.0094 | 109   | 67 - 132       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte                   | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec | Control RPD | % RPD | Control RPD | Qual |
|---------------------------|-----|-------|--------|-------|--------|-------|----------------|-------|-------------|-------|-------------|------|
| TPH (GC/FID) Low Fraction | 1   | 5.5   | 5.9875 | 109   | 6.0094 | 109   | 67 - 132       | 0.37  | 20          |       |             |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                    |                        |                 |
|------------------|----------------------------------------------------|------------------------|-----------------|
| Test:            | Volatile TPH by Method 8015D/GRO                   |                        |                 |
| Project No:      | TX000836.0008.00004                                | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM              | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                          | <b>Analytic Batch:</b> | <b>WG734878</b> |
| Analysis Date:   | 7/31/2014 10:36:00 PM                              | Analyst:               | 621             |
| Instrument ID:   | VOCGC4                                             |                        |                 |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -08, -09 |                        |                 |

### Matrix Spike / Matrix Spike Duplicate

L712949-01

| Analyte                   | Dil | Spike Value | Sample | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD  | Control Limits | RPD |
|---------------------------|-----|-------------|--------|--------|-------|--------|-------|----------------|------------|------|----------------|-----|
| TPH (GC/FID) Low Fraction | 1   | 5.5         | 0.0195 | 7.3483 | 133   | 7.2878 | 132   | 50 - 143       |            | 0.83 | 20             |     |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                    |                        |                 |
|------------------|----------------------------------------------------|------------------------|-----------------|
| Test:            | Volatile TPH by Method 8015D/GRO                   |                        |                 |
| Project No:      | TX000836.0008.00004                                | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM              | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                          | <b>Analytic Batch:</b> | <b>WG734878</b> |
| Analysis Date:   | 7/31/2014 10:36:00 PM                              | Analyst:               | 621             |
| Instrument ID:   | VOCGC4                                             |                        |                 |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -08, -09 |                        |                 |

### Surrogate Summary

#### Laboratory

| Sample ID      | Instrument | File ID | ppm   | % Rec |
|----------------|------------|---------|-------|-------|
| L712971-01     | VOCGC4     | 0731_49 | 0.202 | 101   |
| L712971-02     | VOCGC4     | 0731_50 | 0.200 | 100   |
| L712971-03     | VOCGC4     | 0731_55 | 0.201 | 101   |
| L712971-04     | VOCGC4     | 0731_56 | 0.202 | 101   |
| L712971-05     | VOCGC4     | 0731_57 | 0.202 | 101   |
| L712971-06     | VOCGC4     | 0731_58 | 0.202 | 101   |
| L712971-07     | VOCGC4     | 0731_59 | 0.205 | 102   |
| L712971-08     | VOCGC4     | 0731_60 | 0.208 | 104   |
| L712971-09     | VOCGC4     | 0731_61 | 0.212 | 106   |
| LCS WG734878   | VOCGC4     | 0731_35 | 0.207 | 103   |
| LCSD WG734878  | VOCGC4     | 0731_36 | 0.208 | 104   |
| MS WG734878    | VOCGC4     | 0731_37 | 0.209 | 105   |
| MSD WG734878   | VOCGC4     | 0731_38 | 0.210 | 1052  |
| BLANK WG734878 | VOCGC4     | 0731_40 | 0.201 | 101   |

--A,A,A-TRIFLUOROTOLUENE(FID)

True Value: 0.2 ppm Limits: 62 - 128

--A,A,A-TRIFLUOROTOLUENE(PID)

True Value: 0.2 ppm Limits: 55 - 122

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

Test: Volatile Organic Compounds by Method 8260B  
 Project No: TX000836.0008.00004 Matrix: Water - mg/L  
 Project: Navajo Refining Company - Artesia, NM EPA ID: TN00003  
 Collection Date: 7/29/2014 Analytic Batch: **WG734780**  
 Analysis Date: 8/1/2014 1:17:00 AM Analyst: 644  
 Instrument ID: VOCMS2  
 Sample Numbers: L712971-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13

#### Method Blank

| Analyte                          | CAS       | RDL       | MDL        | Qualifier |
|----------------------------------|-----------|-----------|------------|-----------|
| <b>1,1,1,2-Tetrachloroethane</b> | 630-20-6  | < 0.00100 | < 0.000385 |           |
| <b>1,1,1-Trichloroethane</b>     | 71-55-6   | < 0.00100 | < 0.000319 |           |
| <b>1,1,2,2-Tetrachloroethane</b> | 79-34-5   | < 0.00100 | < 0.000585 |           |
| <b>1,1,2-Trichloroethane</b>     | 79-00-5   | < 0.00100 | < 0.000383 |           |
| <b>1,1-Dichloroethane</b>        | 75-34-3   | < 0.00100 | < 0.000259 |           |
| <b>1,1-Dichloroethene</b>        | 75-35-4   | < 0.00100 | < 0.000398 |           |
| <b>1,2-Dibromoethane</b>         | 106-93-4  | < 0.00100 | < 0.000381 |           |
| <b>1,2-Dichloroethane</b>        | 107-06-2  | < 0.00100 | < 0.000361 |           |
| <b>Benzene</b>                   | 71-43-2   | < 0.00100 | < 0.000331 |           |
| <b>Carbon tetrachloride</b>      | 56-23-5   | < 0.00100 | < 0.000379 |           |
| <b>Chloroform</b>                | 67-66-3   | < 0.00500 | < 0.000324 |           |
| <b>Ethylbenzene</b>              | 100-41-4  | < 0.00100 | < 0.000384 |           |
| <b>m&amp;p-Xylenes</b>           | 1330-20-7 | < 0.00200 | < 0.000719 |           |
| <b>Methylene Chloride</b>        | 75-09-2   | < 0.00500 | < 0.00100  |           |
| <b>o-Xylene</b>                  | 95-47-6   | < 0.00100 | < 0.000341 |           |
| <b>Toluene</b>                   | 108-88-3  | < 0.00500 | < 0.000780 |           |
| <b>Vinyl chloride</b>            | 75-01-4   | < 0.00100 | < 0.000259 |           |
| <b>Xylenes, Total</b>            | 1330-20-7 | < 0.00300 | < 0.00106  |           |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

Test: Volatile Organic Compounds by Method 8260B  
 Project No: TX000836.0008.00004 Matrix: Water - mg/L  
 Project: Navajo Refining Company - Artesia, NM EPA ID: TN00003  
 Collection Date: 7/29/2014 **Analytic Batch: WG734780**  
 Analysis Date: 8/1/2014 1:17:00 AM Analyst: 644  
 Instrument ID: VOCMS2  
 Sample Numbers: L712971-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13

### Laboratory Control Sample (LCS)

| Analyte                          | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------------------------------|-----|------------|--------|-------|----------------|------|
| <b>1,1,1,2-Tetrachloroethane</b> | 1   | 0.025      | 0.0270 | 108   | 74.2 - 124     |      |
| <b>1,1,1-Trichloroethane</b>     | 1   | 0.025      | 0.0225 | 90.2  | 73.2 - 123     |      |
| <b>1,1,2,2-Tetrachloroethane</b> | 1   | 0.025      | 0.0207 | 83    | 70.7 - 122     |      |
| <b>1,1,2-Trichloroethane</b>     | 1   | 0.025      | 0.0218 | 87.1  | 77.7 - 118     |      |
| <b>1,1-Dichloroethane</b>        | 1   | 0.025      | 0.0256 | 103   | 70.7 - 126     |      |
| <b>1,1-Dichloroethene</b>        | 1   | 0.025      | 0.0265 | 106   | 67.8 - 129     |      |
| <b>1,2-Dibromoethane</b>         | 1   | 0.025      | 0.0217 | 86.6  | 76.6 - 121     |      |
| <b>1,2-Dichloroethane</b>        | 1   | 0.025      | 0.0215 | 85.8  | 68.8 - 124     |      |
| <b>Benzene</b>                   | 1   | 0.025      | 0.0227 | 91    | 74.8 - 121     |      |
| <b>Carbon tetrachloride</b>      | 1   | 0.025      | 0.0233 | 93.2  | 70.2 - 123     |      |
| <b>Chloroform</b>                | 1   | 0.025      | 0.0245 | 98.2  | 76 - 121       |      |
| <b>Ethylbenzene</b>              | 1   | 0.025      | 0.0239 | 95.7  | 78.8 - 122     |      |
| <b>m&amp;p-Xylenes</b>           | 1   | 0.05       | 0.0495 | 99.1  | 78.8 - 121     |      |
| <b>Methylene Chloride</b>        | 1   | 0.025      | 0.0233 | 93    | 70.3 - 120     |      |
| <b>o-Xylene</b>                  | 1   | 0.025      | 0.0255 | 102   | 77.6 - 122     |      |
| <b>Toluene</b>                   | 1   | 0.025      | 0.0227 | 90.6  | 79.7 - 116     |      |
| <b>Vinyl chloride</b>            | 1   | 0.025      | 0.0245 | 97.8  | 65.9 - 128     |      |
| <b>Xylenes, Total</b>            | 1   | 0.075      | 0.0750 | 100   | 78.7 - 121     |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

Test: Volatile Organic Compounds by Method 8260B  
 Project No: TX000836.0008.00004 Matrix: Water - mg/L  
 Project: Navajo Refining Company - Artesia, NM EPA ID: TN00003  
 Collection Date: 7/29/2014 **Analytic Batch: WG734780**  
 Analysis Date: 8/1/2014 1:17:00 AM Analyst: 644  
 Instrument ID: VOCMS2  
 Sample Numbers: L712971-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte                   | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------------|-----|------------|--------|-------|----------------|------|
| 1,1,1,2-Tetrachloroethane | 1   | 0.025      | 0.0268 | 107   | 74.2 - 124     |      |
| 1,1,1-Trichloroethane     | 1   | 0.025      | 0.0227 | 90.8  | 73.2 - 123     |      |
| 1,1,2,2-Tetrachloroethane | 1   | 0.025      | 0.0202 | 80.7  | 70.7 - 122     |      |
| 1,1,2-Trichloroethane     | 1   | 0.025      | 0.0219 | 87.7  | 77.7 - 118     |      |
| 1,1-Dichloroethane        | 1   | 0.025      | 0.0255 | 102   | 70.7 - 126     |      |
| 1,1-Dichloroethene        | 1   | 0.025      | 0.0254 | 102   | 67.8 - 129     |      |
| 1,2-Dibromoethane         | 1   | 0.025      | 0.0218 | 87    | 76.6 - 121     |      |
| 1,2-Dichloroethane        | 1   | 0.025      | 0.0211 | 84.3  | 68.8 - 124     |      |
| Benzene                   | 1   | 0.025      | 0.0225 | 90.1  | 74.8 - 121     |      |
| Carbon tetrachloride      | 1   | 0.025      | 0.0234 | 93.4  | 70.2 - 123     |      |
| Chloroform                | 1   | 0.025      | 0.0248 | 99    | 76 - 121       |      |
| Ethylbenzene              | 1   | 0.025      | 0.0241 | 96.2  | 78.8 - 122     |      |
| m&p-Xylenes               | 1   | 0.05       | 0.0497 | 99.5  | 78.8 - 121     |      |
| Methylene Chloride        | 1   | 0.025      | 0.0230 | 92    | 70.3 - 120     |      |
| o-Xylene                  | 1   | 0.025      | 0.0246 | 98.3  | 77.6 - 122     |      |
| Toluene                   | 1   | 0.025      | 0.0227 | 90.6  | 79.7 - 116     |      |
| Vinyl chloride            | 1   | 0.025      | 0.0236 | 94.3  | 65.9 - 128     |      |
| Xylenes, Total            | 1   | 0.075      | 0.0743 | 99.1  | 78.7 - 121     |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

Test: Volatile Organic Compounds by Method 8260B  
 Project No: TX000836.0008.00004 Matrix: Water - mg/L  
 Project: Navajo Refining Company - Artesia, NM EPA ID: TN00003  
 Collection Date: 7/29/2014 Analytic Batch: **WG734780**  
 Analysis Date: 8/1/2014 1:17:00 AM Analyst: 644  
 Instrument ID: VOCMS2  
 Sample Numbers: L712971-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte                   | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|---------------------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| 1,1,1,2-Tetrachloroethane | 1   | 0.025 | 0.0270 | 108   | 0.0268 | 107   | 74.2 - 124     | 0.71       | 20                 |      |
| 1,1,1-Trichloroethane     | 1   | 0.025 | 0.0225 | 90.2  | 0.0227 | 90.8  | 73.2 - 123     | 0.66       | 20                 |      |
| 1,1,2,2-Tetrachloroethane | 1   | 0.025 | 0.0207 | 83    | 0.0202 | 80.7  | 70.7 - 122     | 2.77       | 20                 |      |
| 1,1,2-Trichloroethane     | 1   | 0.025 | 0.0218 | 87.1  | 0.0219 | 87.7  | 77.7 - 118     | 0.78       | 20                 |      |
| 1,1-Dichloroethane        | 1   | 0.025 | 0.0256 | 103   | 0.0255 | 102   | 70.7 - 126     | 0.33       | 20                 |      |
| 1,1-Dichloroethene        | 1   | 0.025 | 0.0265 | 106   | 0.0254 | 102   | 67.8 - 129     | 4.08       | 20                 |      |
| 1,2-Dibromoethane         | 1   | 0.025 | 0.0217 | 86.6  | 0.0218 | 87    | 76.6 - 121     | 0.47       | 20                 |      |
| 1,2-Dichloroethane        | 1   | 0.025 | 0.0215 | 85.8  | 0.0211 | 84.3  | 68.8 - 124     | 1.8        | 20                 |      |
| Benzene                   | 1   | 0.025 | 0.0227 | 91    | 0.0225 | 90.1  | 74.8 - 121     | 0.95       | 20                 |      |
| Carbon tetrachloride      | 1   | 0.025 | 0.0233 | 93.2  | 0.0234 | 93.4  | 70.2 - 123     | 0.27       | 20                 |      |
| Chloroform                | 1   | 0.025 | 0.0245 | 98.2  | 0.0248 | 99    | 76 - 121       | 0.89       | 20                 |      |
| Ethylbenzene              | 1   | 0.025 | 0.0239 | 95.7  | 0.0241 | 96.2  | 78.8 - 122     | 0.55       | 20                 |      |
| m&p-Xylenes               | 1   | 0.05  | 0.0495 | 99.1  | 0.0497 | 99.5  | 78.8 - 121     | 0.39       | 20                 |      |
| Methylene Chloride        | 1   | 0.025 | 0.0233 | 93    | 0.0230 | 92    | 70.3 - 120     | 1.11       | 20                 |      |
| o-Xylene                  | 1   | 0.025 | 0.0255 | 102   | 0.0246 | 98.3  | 77.6 - 122     | 3.68       | 20                 |      |
| Toluene                   | 1   | 0.025 | 0.0227 | 90.6  | 0.0227 | 90.6  | 79.7 - 116     | 0.01       | 20                 |      |
| Vinyl chloride            | 1   | 0.025 | 0.0245 | 97.8  | 0.0236 | 94.3  | 65.9 - 128     | 3.64       | 20                 |      |
| Xylenes, Total            | 1   | 0.075 | 0.0750 | 100   | 0.0743 | 99.1  | 78.7 - 121     | 0.98       | 20                 |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

Test: Volatile Organic Compounds by Method 8260B  
 Project No: TX000836.0008.00004 Matrix: Water - mg/L  
 Project: Navajo Refining Company - Artesia, NM EPA ID: TN00003  
 Collection Date: 7/29/2014 Analytic Batch: **WG734780**  
 Analysis Date: 8/1/2014 1:17:00 AM Analyst: 644  
 Instrument ID: VOCMS2  
 Sample Numbers: L712971-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13

#### Matrix Spike / Matrix Spike Duplicate

L712971-01

| Analyte                          | Dil | Spike Value | Sample | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD  | Control Limits | RPD Qual |
|----------------------------------|-----|-------------|--------|--------|-------|--------|-------|----------------|------------|------|----------------|----------|
| <b>1,1,1,2-Tetrachloroethane</b> | 1   | 0.025       | 0.0    | 0.0256 | 102   | 0.0268 | 107   | 64 - 128       |            | 4.76 | 20             |          |
| <b>1,1,1-Trichloroethane</b>     | 1   | 0.025       | 0.0    | 0.0225 | 90    | 0.0234 | 93.6  | 58.7 - 134     |            | 3.88 | 20             |          |
| <b>1,1,2,2-Tetrachloroethane</b> | 1   | 0.025       | 0.0    | 0.0213 | 85.3  | 0.0219 | 87.7  | 56 - 132       |            | 2.7  | 22.2           |          |
| <b>1,1,2-Trichloroethane</b>     | 1   | 0.025       | 0.0    | 0.0211 | 84.3  | 0.0226 | 90.5  | 66.3 - 125     |            | 7.17 | 20             |          |
| <b>1,1-Dichloroethane</b>        | 1   | 0.025       | 0.0    | 0.0244 | 97.5  | 0.0259 | 104   | 58.5 - 132     |            | 6.02 | 20             |          |
| <b>1,1-Dichloroethene</b>        | 1   | 0.025       | 0.0    | 0.0264 | 105   | 0.0269 | 107   | 51.1 - 140     |            | 1.93 | 20.2           |          |
| <b>1,2-Dibromoethane</b>         | 1   | 0.025       | 0.0    | 0.0206 | 82.6  | 0.0223 | 89    | 67.1 - 125     |            | 7.54 | 20             |          |
| <b>1,2-Dichloroethane</b>        | 1   | 0.025       | 0.0    | 0.0207 | 82.7  | 0.0221 | 88.4  | 60 - 126       |            | 6.74 | 20             |          |
| <b>Benzene</b>                   | 1   | 0.025       | 0.0    | 0.0220 | 87.9  | 0.0234 | 93.6  | 54.3 - 133     |            | 6.28 | 20             |          |
| <b>Carbon tetrachloride</b>      | 1   | 0.025       | 0.0    | 0.0229 | 91.6  | 0.0241 | 96.5  | 55.7 - 134     |            | 5.25 | 20             |          |
| <b>Chloroform</b>                | 1   | 0.025       | 0.0    | 0.0230 | 91.9  | 0.0244 | 97.7  | 63 - 129       |            | 6.13 | 20             |          |
| <b>Ethylbenzene</b>              | 1   | 0.025       | 0.0    | 0.0231 | 92.3  | 0.0242 | 96.6  | 61.4 - 133     |            | 4.59 | 20             |          |
| <b>m&amp;p-Xylenes</b>           | 1   | 0.05        | 0.0    | 0.0472 | 94.5  | 0.0500 | 99.9  | 61.7 - 133     |            | 5.58 | 20             |          |
| <b>Methylene Chloride</b>        | 1   | 0.025       | 0.0    | 0.0227 | 90.9  | 0.0239 | 95.6  | 58.1 - 122     |            | 5.04 | 20             |          |
| <b>o-Xylene</b>                  | 1   | 0.025       | 0.0    | 0.0238 | 95    | 0.0246 | 98.6  | 63.3 - 130     |            | 3.63 | 20             |          |
| <b>Toluene</b>                   | 1   | 0.025       | 0.0    | 0.0224 | 89.6  | 0.0236 | 94.5  | 61.4 - 130     |            | 5.4  | 20             |          |
| <b>Vinyl chloride</b>            | 1   | 0.025       | 0.0    | 0.0260 | 104   | 0.0259 | 104   | 47.8 - 137     |            | 0.43 | 20             |          |
| <b>Xylenes, Total</b>            | 1   | 0.075       | 0.0    | 0.0710 | 94.7  | 0.0746 | 99.5  | 63.3 - 131     |            | 4.93 | 20             |          |



## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

Test: Volatile Organic Compounds by Method 8260B  
 Project No: TX000836.0008.00004 Matrix: Water - mg/L  
 Project: Navajo Refining Company - Artesia, NM EPA ID: TN00003  
 Collection Date: 7/29/2014 Analytic Batch: **WG734780**  
 Analysis Date: 8/1/2014 1:17:00 AM Analyst: 644  
 Instrument ID: VOCMS2  
 Sample Numbers: L712971-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13

## Internal Standard Response and Retention Time Summary

File ID: 0731\_33

Analyzed: 07/31/14 204600

|                    | IS4      |      | IS2      |      | IS3      |      | IS1      |      |
|--------------------|----------|------|----------|------|----------|------|----------|------|
|                    | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| <b>12 Hr. Std</b>  | 423140   | 8.22 | 897443   | 4.67 | 138102   | 5.84 | 497766   | 4.34 |
| <b>Upper Limit</b> | 846000   | 8.72 | 1790000  | 5.17 | 276000   | 6.34 | 996000   | 4.84 |
| <b>Lower Limit</b> | 212000   | 7.72 | 449000   | 4.17 | 69100    | 5.34 | 249000   | 3.84 |
| Sample ID          | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| L712971-10         | 355587   | 8.22 | 755318   | 4.67 | 118741   | 5.84 | 399339   | 4.34 |
| L712971-11         | 365772   | 8.22 | 777118   | 4.67 | 118967   | 5.84 | 400322   | 4.34 |
| L712971-13         | 359636   | 8.22 | 765567   | 4.67 | 119348   | 5.84 | 402176   | 4.34 |
| L712971-01         | 383121   | 8.22 | 799289   | 4.67 | 124873   | 5.84 | 410184   | 4.34 |
| L712971-02         | 371786   | 8.22 | 760311   | 4.67 | 118156   | 5.84 | 392427   | 4.34 |
| L712971-03         | 376376   | 8.22 | 772521   | 4.67 | 121338   | 5.84 | 400465   | 4.34 |
| L712971-04         | 370786   | 8.22 | 755163   | 4.67 | 116462   | 5.84 | 392032   | 4.34 |
| L712971-05         | 358657   | 8.22 | 736550   | 4.67 | 117779   | 5.84 | 392505   | 4.34 |
| L712971-06         | 346390   | 8.22 | 702762   | 4.67 | 110073   | 5.84 | 369169   | 4.34 |
| L712971-07         | 361024   | 8.22 | 716771   | 4.67 | 115693   | 5.84 | 378862   | 4.34 |
| L712971-08         | 340459   | 8.22 | 691843   | 4.67 | 110086   | 5.84 | 362218   | 4.34 |
| L712971-09         | 342072   | 8.22 | 679318   | 4.67 | 105631   | 5.84 | 365138   | 4.34 |
| L712971-12         | 348764   | 8.22 | 718692   | 4.67 | 108633   | 5.84 | 373567   | 4.34 |
| MSD WG734780       | 407483   | 8.22 | 858797   | 4.67 | 140640   | 5.84 | 458000   | 4.34 |
| MS WG734780        | 396829   | 8.22 | 796918   | 4.67 | 130309   | 5.84 | 436916   | 4.34 |
| LCSD WG734780      | 412650   | 8.22 | 867375   | 4.67 | 139635   | 5.84 | 471224   | 4.34 |
| LCS WG734780       | 401441   | 8.22 | 848019   | 4.67 | 134358   | 5.84 | 458063   | 4.34 |
| BLANK WG734780     | 382109   | 8.22 | 828423   | 4.67 | 126454   | 5.84 | 429680   | 4.34 |

#### Legend:

IS4 -- 1,4-DICHLOROBENZENE-D4  
 IS2 -- 1,4-DIFLUOROBENZENE  
 IS3 -- 2-BROMO-1-CHLOROPROPANE  
 IS1 -- PENTAFLUOROBENZENE

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

Test: Volatile Organic Compounds by Method 8260B  
 Project No: TX000836.0008.00004 Matrix: Water - mg/L  
 Project: Navajo Refining Company - Artesia, NM EPA ID: TN00003  
 Collection Date: 7/29/2014 Analytic Batch: WG734780  
 Analysis Date: 8/1/2014 1:17:00 AM Analyst: 644  
 Instrument ID: VOCMS2  
 Sample Numbers: L712971-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13

### Surrogate Summary

|                |            | BFB     |        | DFM   |        | TD8   |        | TFT   |        |       |
|----------------|------------|---------|--------|-------|--------|-------|--------|-------|--------|-------|
| Laboratory     |            |         |        |       |        |       |        |       |        |       |
| Sample ID      | Instrument | File ID | ppm    | % Rec | ppm    | % Rec | ppm    | % Rec | ppm    | % Rec |
| L712971-01     | VOCMS2     | 0731_46 | 0.0386 | 96.5  | 0.0407 | 102   | 0.0399 | 99.7  |        |       |
| L712971-02     | VOCMS2     | 0731_51 | 0.0394 | 98.6  | 0.0413 | 103   | 0.0404 | 101   |        |       |
| L712971-03     | VOCMS2     | 0731_52 | 0.0390 | 97.4  | 0.0403 | 101   | 0.0414 | 104   |        |       |
| L712971-04     | VOCMS2     | 0731_53 | 0.0394 | 98.6  | 0.0405 | 101   | 0.0408 | 102   |        |       |
| L712971-05     | VOCMS2     | 0731_54 | 0.0389 | 97.3  | 0.0406 | 102   | 0.0415 | 104   |        |       |
| L712971-06     | VOCMS2     | 0731_55 | 0.0389 | 97.2  | 0.0391 | 97.7  | 0.0408 | 102   |        |       |
| L712971-07     | VOCMS2     | 0731_56 | 0.0388 | 97.0  | 0.0408 | 102   | 0.0416 | 104   |        |       |
| L712971-08     | VOCMS2     | 0731_57 | 0.0389 | 97.2  | 0.0400 | 100   | 0.0415 | 104   |        |       |
| L712971-09     | VOCMS2     | 0731_58 | 0.0398 | 99.5  | 0.0403 | 101   | 0.0411 | 103   |        |       |
| L712971-10     | VOCMS2     | 0731_43 | 0.0383 | 95.8  | 0.0395 | 98.8  | 0.0401 | 100   |        |       |
| L712971-11     | VOCMS2     | 0731_44 | 0.0391 | 97.8  | 0.0405 | 101   | 0.0398 | 99.5  |        |       |
| L712971-12     | VOCMS2     | 0731_59 | 0.0393 | 98.3  | 0.0393 | 98.3  | 0.0398 | 99.6  |        |       |
| L712971-13     | VOCMS2     | 0731_45 | 0.0389 | 97.4  | 0.0395 | 98.8  | 0.0403 | 101   |        |       |
| LCS WG734780   | VOCMS2     | 0731_38 | 0.0354 | 88.5  | 0.0414 | 104   | 0.0393 | 98.2  | 0.0421 | 105   |
| LCSD WG734780  | VOCMS2     | 0731_39 | 0.0353 | 88.2  | 0.0406 | 101   | 0.0399 | 99.7  | 0.0423 | 106   |
| MS WG734780    | VOCMS2     | 0731_47 | 0.0355 | 88.8  | 0.0407 | 102   | 0.0399 | 99.8  | 0.0418 | 104   |
| MSD WG734780   | VOCMS2     | 0731_48 | 0.0344 | 86.0  | 0.0410 | 102   | 0.0401 | 100   | 0.0414 | 103   |
| BLANK WG734780 | VOCMS2     | 0731_41 | 0.0390 | 97.4  | 0.0389 | 97.3  | 0.0404 | 101   | 0.0401 | 100   |

BFB --4-BROMOFLUOROBENZENE

True Value: 0.04 ppm Limits: 71 - 126

DFM --DIBROMOFLUOROMETHANE

True Value: 0.04 ppm Limits: 78.3 - 121

TD8 --TOLUENE-D8

True Value: 0.04 ppm Limits: 88.50 - 111

TFT --A,A,A-TRIFLUOROTOLUENE

True Value: 0.04 ppm Limits: 85 - 114

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                               |  |  |                        |                 |
|------------------|-----------------------------------------------|--|--|------------------------|-----------------|
| Test:            | Diesel Range Organics by Method 8015          |  |  | Matrix:                | Water - mg/L    |
| Project No:      | TX000836.0008.00004                           |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM         |  |  | <b>Analytic Batch:</b> | <b>WG734853</b> |
| Collection Date: | 7/29/2014                                     |  |  | Analyst:               | 546             |
| Analysis Date:   | 8/1/2014 3:41:00 PM                           |  |  | Prep Date:             | 7/31/2014       |
| Instrument ID:   | SVGC27, SVGC31                                |  |  |                        |                 |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -09 |  |  |                        |                 |

#### Method Blank

| Analyte                           | CAS | RDL     | MDL      | Qualifier |
|-----------------------------------|-----|---------|----------|-----------|
| C10-C28 Diesel Range              |     | < 0.100 | < 0.0222 |           |
| C28-C40 Oil Range                 |     | < 0.100 | < 0.0118 |           |
| Extractable Petroleum Hydrocarbon |     | < 0.100 | < 0.0330 |           |

#### Laboratory Control Sample (LCS)

| Analyte                           | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|-----------------------------------|-----|------------|--------|-------|----------------|------|
| Extractable Petroleum Hydrocarbon | 1   | 1.5        | 1.5553 | 104   | 70 - 130       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte                           | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|-----------------------------------|-----|------------|--------|-------|----------------|------|
| Extractable Petroleum Hydrocarbon | 1   | 1.5        | 1.6565 | 110   | 70 - 130       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte                           | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|-----------------------------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Extractable Petroleum Hydrocarbon | 1   | 1.5   | 1.5553 | 104   | 1.6565 | 110   | 70 - 130       | 6.3        | 20                 |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

Test: Diesel Range Organics by Method 8015  
Project No: TX000836.0008.00004  
Project: Navajo Refining Company - Artesia, NM  
Collection Date: 7/29/2014  
Analysis Date: 8/7/2014 6:47:00 PM  
Instrument ID: SVGC27  
Sample Numbers: L712971-08

Matrix: Water - mg/L  
EPA ID: TN00003  
**Analytic Batch: WG735881**  
Analyst: 546  
Prep Date: 8/6/2014

#### Method Blank

| Analyte                           | CAS | RDL     | MDL      | Qualifier |
|-----------------------------------|-----|---------|----------|-----------|
| C10-C28 Diesel Range              |     | < 0.100 | < 0.0222 |           |
| C28-C40 Oil Range                 |     | < 0.100 | < 0.0118 |           |
| Extractable Petroleum Hydrocarbon |     | < 0.100 | < 0.0330 |           |

#### Laboratory Control Sample (LCS)

| Analyte                           | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|-----------------------------------|-----|------------|--------|-------|----------------|------|
| Extractable Petroleum Hydrocarbon | 1   | 1.5        | 1.5427 | 103   | 70 - 130       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte                           | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|-----------------------------------|-----|------------|--------|-------|----------------|------|
| Extractable Petroleum Hydrocarbon | 1   | 1.5        | 1.5832 | 106   | 70 - 130       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte                           | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD | RPD Qual |
|-----------------------------------|-----|-------|--------|-------|--------|-------|----------------|------------|-------------|----------|
| Extractable Petroleum Hydrocarbon | 1   | 1.5   | 1.5427 | 103   | 1.5832 | 106   | 70 - 130       | 2.59       | 20          |          |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                               |                        |                 |
|------------------|-----------------------------------------------|------------------------|-----------------|
| Test:            | Diesel Range Organics by Method 8015          |                        |                 |
| Project No:      | TX000836.0008.00004                           | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM         | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                     | <b>Analytic Batch:</b> | <b>WG734853</b> |
| Analysis Date:   | 8/1/2014 3:41:00 PM                           | Analyst:               | 546             |
| Instrument ID:   | SVGC27                                        | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -09 |                        |                 |

### Surrogate Summary

o-Terphenyl

Laboratory

| Sample ID      | Instrument | File ID | ppm    | % Rec |
|----------------|------------|---------|--------|-------|
| L712971-01     | SVGC27     | 0801_14 | 0.0196 | 98.2  |
| L712971-02     | SVGC27     | 0801_15 | 0.0206 | 103   |
| L712971-03     | SVGC27     | 0801_16 | 0.0206 | 103   |
| L712971-04     | SVGC27     | 0801_17 | 0.0190 | 95.1  |
| L712971-05     | SVGC31     | 0802_05 | 0.0209 | 104   |
| L712971-06     | SVGC31     | 0802_06 | 0.0213 | 106   |
| L712971-07     | SVGC31     | 0802_07 | 0.0206 | 103   |
| L712971-09     | SVGC31     | 0802_09 | 0.0209 | 104   |
| BLANK WG734853 | SVGC27     | 0801_05 | 0.0203 | 101   |
| LCS WG734853   | SVGC27     | 0801_06 | 0.0202 | 101   |
| LCSD WG734853  | SVGC27     | 0801_07 | 0.0208 | 104   |

o-Terphenyl --O-TERPHENYL

True Value: 0.02 ppm Limits: 50 - 150

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Diesel Range Organics by Method 8015  |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG735881</b> |
| Analysis Date:   | 8/7/2014 6:47:00 PM                   | Analyst:               | 546             |
| Instrument ID:   | SVGC27                                | Prep Date:             | 8/6/2014        |
| Sample Numbers:  | L712971-08                            |                        |                 |

## Surrogate Summary

o-Terphenyl

Laboratory

| Sample ID      | Instrument | File ID | ppm    | % Rec |
|----------------|------------|---------|--------|-------|
| L712971-08     | SVGC27     | 0807_17 | 0.0203 | 102   |
| BLANK WG735881 | SVGC27     | 0807_11 | 0.0200 | 99.9  |
| LCS WG735881   | SVGC27     | 0807_12 | 0.0191 | 95.6  |
| LCSD WG735881  | SVGC27     | 0807_13 | 0.0200 | 100   |

o-Terphenyl --O-TERPHENYL

True Value: 0.02 ppm Limits: 50 - 150

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734919</b> |
| Analysis Date:   | 8/2/2014 5:00:00 AM                              | Analyst:               | 280             |
| Instrument ID:   | BNAMS2, BNAMS11                                  | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-01, -02, -03, -08                        |                        |                 |

#### Method Blank

| Analyte                    | CAS     | RDL    | MDL     | Qualifier |
|----------------------------|---------|--------|---------|-----------|
| <b>1-Methylnaphthalene</b> | 90-12-0 | < 1.00 | < 0.330 |           |
| <b>2-Methylnaphthalene</b> | 91-57-6 | < 1.00 | < 0.311 |           |
| <b>Benzo(a)pyrene</b>      | 50-32-8 | < 1.00 | < 0.340 |           |
| <b>Naphthalene</b>         | 91-20-3 | < 1.00 | < 0.372 |           |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734920</b> |
| Analysis Date:   | 8/2/2014 11:38:00 AM                             | Analyst:               | 377             |
| Instrument ID:   | BNAMS19, BNAMS11                                 | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-04, -05, -06, -07, -09                   |                        |                 |

#### Method Blank

| Analyte                    | CAS     | RDL    | MDL     | Qualifier |
|----------------------------|---------|--------|---------|-----------|
| <b>1-Methylnaphthalene</b> | 90-12-0 | < 1.00 | < 0.330 |           |
| <b>2-Methylnaphthalene</b> | 91-57-6 | < 1.00 | < 0.311 |           |
| <b>Benzo(a)pyrene</b>      | 50-32-8 | < 1.00 | < 0.340 |           |
| <b>Naphthalene</b>         | 91-20-3 | < 1.00 | < 0.372 |           |



## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734919</b> |
| Analysis Date:   | 8/2/2014 5:00:00 AM                              | Analyst:               | 280             |
| Instrument ID:   | BNAMS2, BNAMS11                                  | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-01, -02, -03, -08                        |                        |                 |

#### Laboratory Control Sample (LCS)

| Analyte             | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------|-----|------------|--------|-------|----------------|------|
| 1-Methylnaphthalene | 1   | 25         | 20.944 | 83.8  | 34.7 - 102     |      |
| 2-Methylnaphthalene | 1   | 25         | 19.238 | 77    | 33.8 - 98.6    |      |
| Benzo(a)pyrene      | 1   | 25         | 20.416 | 81.7  | 45.6 - 106     |      |
| Naphthalene         | 1   | 25         | 20.513 | 82.1  | 32.2 - 101     |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte             | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------|-----|------------|--------|-------|----------------|------|
| 1-Methylnaphthalene | 1   | 25         | 19.881 | 79.5  | 34.7 - 102     |      |
| 2-Methylnaphthalene | 1   | 25         | 17.815 | 71.3  | 33.8 - 98.6    |      |
| Benzo(a)pyrene      | 1   | 25         | 19.769 | 79.1  | 45.6 - 106     |      |
| Naphthalene         | 1   | 25         | 18.965 | 75.9  | 32.2 - 101     |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte             | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|---------------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| 1-Methylnaphthalene | 1   | 25    | 20.944 | 83.8  | 19.881 | 79.5  | 34.7 - 102     | 5.21       | 24.9               |      |
| 2-Methylnaphthalene | 1   | 25    | 19.238 | 77    | 17.815 | 71.3  | 33.8 - 98.6    | 7.68       | 24.2               |      |
| Benzo(a)pyrene      | 1   | 25    | 20.416 | 81.7  | 19.769 | 79.1  | 45.6 - 106     | 3.22       | 20                 |      |
| Naphthalene         | 1   | 25    | 20.513 | 82.1  | 18.965 | 75.9  | 32.2 - 101     | 7.84       | 23.8               |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734920</b> |
| Analysis Date:   | 8/2/2014 11:38:00 AM                             | Analyst:               | 377             |
| Instrument ID:   | BNAMS19, BNAMS11                                 | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-04, -05, -06, -07, -09                   |                        |                 |

#### Laboratory Control Sample (LCS)

| Analyte             | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------|-----|------------|--------|-------|----------------|------|
| 1-Methylnaphthalene | 1   | 25         | 18.463 | 73.9  | 34.7 - 102     |      |
| 2-Methylnaphthalene | 1   | 25         | 16.377 | 65.5  | 33.8 - 98.6    |      |
| Benzo(a)pyrene      | 1   | 25         | 17.816 | 71.3  | 45.6 - 106     |      |
| Naphthalene         | 1   | 25         | 16.372 | 65.5  | 32.2 - 101     |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte             | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------|-----|------------|--------|-------|----------------|------|
| 1-Methylnaphthalene | 1   | 25         | 18.112 | 72.4  | 34.7 - 102     |      |
| 2-Methylnaphthalene | 1   | 25         | 16.321 | 65.3  | 33.8 - 98.6    |      |
| Benzo(a)pyrene      | 1   | 25         | 18.139 | 72.6  | 45.6 - 106     |      |
| Naphthalene         | 1   | 25         | 15.329 | 61.3  | 32.2 - 101     |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte             | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|---------------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| 1-Methylnaphthalene | 1   | 25    | 18.463 | 73.9  | 18.112 | 72.4  | 34.7 - 102     | 1.92       | 24.9               |      |
| 2-Methylnaphthalene | 1   | 25    | 16.377 | 65.5  | 16.321 | 65.3  | 33.8 - 98.6    | 0.34       | 24.2               |      |
| Benzo(a)pyrene      | 1   | 25    | 17.816 | 71.3  | 18.139 | 72.6  | 45.6 - 106     | 1.79       | 20                 |      |
| Naphthalene         | 1   | 25    | 16.372 | 65.5  | 15.329 | 61.3  | 32.2 - 101     | 6.58       | 23.8               |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734919</b> |
| Analysis Date:   | 8/2/2014 5:00:00 AM                              | Analyst:               | 280             |
| Instrument ID:   | BNAMS11                                          | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-01, -02, -03, -08                        |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0801\_02  
Analyzed: 08/02/14 020700

|                    | IS4      |      | ACE      |      | CHR      |       | NAP      |      |
|--------------------|----------|------|----------|------|----------|-------|----------|------|
|                    | Response | RT   | Response | RT   | Response | RT    | Response | RT   |
| <b>12 Hr. Std</b>  | 56535    | 5.43 | 124582   | 7.21 | 197633   | 10.27 | 223701   | 6.17 |
| <b>Upper Limit</b> | 113000   | 5.93 | 249000   | 7.71 | 395000   | 10.77 | 447000   | 6.67 |
| <b>Lower Limit</b> | 28300    | 4.93 | 62300    | 6.71 | 98800    | 9.77  | 112000   | 5.67 |
| Sample ID          | Response | RT   | Response | RT   | Response | RT    | Response | RT   |
| LCSD WG734919      | 51083    | 5.43 | 113079   | 7.21 | 178853   | 10.27 | 201641   | 6.17 |
| LCS WG734919       | 52219    | 5.43 | 113387   | 7.21 | 184519   | 10.27 | 206248   | 6.17 |
| BLANK WG734919     | 54073    | 5.43 | 121026   | 7.21 | 180896   | 10.27 | 215173   | 6.17 |

### Legend:

IS4 -- 1,4-Dichlorobenzene-d4  
ACE -- Acenaphthene-d10  
CHR -- Chrysene-d12  
NAP -- Naphthalene-d8  
PER -- Perylene-d12  
PHEN -- Phenanthrene-d10

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734919</b> |
| Analysis Date:   | 8/2/2014 5:00:00 AM                              | Analyst:               | 280             |
| Instrument ID:   | BNAMS11                                          | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-01, -02, -03, -08                        |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0801\_02  
Analyzed: 08/02/14 020700

|                    | IS4      |      | PER      |       | PHEN     |      |
|--------------------|----------|------|----------|-------|----------|------|
|                    | Response | RT   | Response | RT    | Response | RT   |
| <b>12 Hr. Std</b>  | 56535    | 5.43 | 218739   | 12.54 | 221439   | 8.09 |
| <b>Upper Limit</b> | 113000   | 5.93 | 437000   | 13.04 | 443000   | 8.59 |
| <b>Lower Limit</b> | 28300    | 4.93 | 109000   | 12.04 | 111000   | 7.59 |
| Sample ID          | Response | RT   | Response | RT    | Response | RT   |
| LCSD WG734919      | 51083    | 5.43 | 199058   | 12.54 | 193230   | 8.09 |
| LCS WG734919       | 52219    | 5.43 | 207029   | 12.55 | 194050   | 8.09 |
| BLANK WG734919     | 54073    | 5.43 | 204152   | 12.55 | 202334   | 8.09 |

### Legend:

IS4 -- 1,4-Dichlorobenzene-d4  
ACE -- Acenaphthene-d10  
CHR -- Chrysene-d12  
NAP -- Naphthalene-d8  
PER -- Perylene-d12  
PHEN -- Phenanthrene-d10

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734919</b> |
| Analysis Date:   | 8/2/2014 5:00:00 AM                              | Analyst:               | 280             |
| Instrument ID:   | BNAMS2                                           | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-01, -02, -03, -08                        |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0801B\_02

Analyzed: 08/02/14 032200

|                    | IS4      |      | ACE      |      | CHR      |       | NAP      |      |
|--------------------|----------|------|----------|------|----------|-------|----------|------|
|                    | Response | RT   | Response | RT   | Response | RT    | Response | RT   |
| <b>12 Hr. Std</b>  | 188637   | 5.40 | 460178   | 7.17 | 537231   | 10.18 | 741714   | 6.15 |
| <b>Upper Limit</b> | 377000   | 5.90 | 920000   | 7.67 | 1070000  | 10.68 | 1480000  | 6.65 |
| <b>Lower Limit</b> | 94300    | 4.90 | 230000   | 6.67 | 269000   | 9.68  | 371000   | 5.65 |
| Sample ID          | Response | RT   | Response | RT   | Response | RT    | Response | RT   |
| L712971-01         | 219605   | 5.40 | 531911   | 7.18 | 590101   | 10.19 | 873374   | 6.15 |
| L712971-02         | 208231   | 5.40 | 500169   | 7.18 | 575525   | 10.19 | 820714   | 6.15 |
| L712971-03         | 204803   | 5.40 | 495716   | 7.18 | 576184   | 10.18 | 814654   | 6.15 |
| L712971-08         | 204031   | 5.40 | 496137   | 7.18 | 548401   | 10.19 | 815703   | 6.15 |

### Legend:

IS4 -- 1,4-Dichlorobenzene-d4  
ACE -- Acenaphthene-d10  
CHR -- Chrysene-d12  
NAP -- Naphthalene-d8  
PER -- Perylene-d12  
PHEN -- Phenanthrene-d10

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734919</b> |
| Analysis Date:   | 8/2/2014 5:00:00 AM                              | Analyst:               | 280             |
| Instrument ID:   | BNAMS2                                           | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-01, -02, -03, -08                        |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0801B\_02

Analyzed: 08/02/14 032200

|                    | IS4      |      | PER      |       | PHEN     |      |
|--------------------|----------|------|----------|-------|----------|------|
|                    | Response | RT   | Response | RT    | Response | RT   |
| <b>12 Hr. Std</b>  | 188637   | 5.40 | 603620   | 12.44 | 683272   | 8.05 |
| <b>Upper Limit</b> | 377000   | 5.90 | 1210000  | 12.94 | 1370000  | 8.55 |
| <b>Lower Limit</b> | 94300    | 4.90 | 302000   | 11.94 | 342000   | 7.55 |
| Sample ID          | Response | RT   | Response | RT    | Response | RT   |
| L712971-01         | 219605   | 5.40 | 686739   | 12.45 | 772243   | 8.06 |
| L712971-02         | 208231   | 5.40 | 665425   | 12.46 | 719572   | 8.06 |
| L712971-03         | 204803   | 5.40 | 674854   | 12.45 | 718667   | 8.06 |
| L712971-08         | 204031   | 5.40 | 645977   | 12.46 | 723500   | 8.06 |

### Legend:

IS4 -- 1,4-Dichlorobenzene-d4  
ACE -- Acenaphthene-d10  
CHR -- Chrysene-d12  
NAP -- Naphthalene-d8  
PER -- Perylene-d12  
PHEN -- Phenanthrene-d10

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734920</b> |
| Analysis Date:   | 8/2/2014 11:38:00 AM                             | Analyst:               | 377             |
| Instrument ID:   | BNAMS11                                          | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-04, -05, -06, -07, -09                   |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0807\_02  
Analyzed: 08/07/14 110300

|                    | IS4      |      | ACE      |      | CHR      |       | NAP      |      |
|--------------------|----------|------|----------|------|----------|-------|----------|------|
|                    | Response | RT   | Response | RT   | Response | RT    | Response | RT   |
| <b>12 Hr. Std</b>  | 56978    | 5.43 | 124924   | 7.21 | 203315   | 10.27 | 222802   | 6.17 |
| <b>Upper Limit</b> | 114000   | 5.93 | 250000   | 7.71 | 407000   | 10.77 | 446000   | 6.67 |
| <b>Lower Limit</b> | 28500    | 4.93 | 62500    | 6.71 | 102000   | 9.77  | 111000   | 5.67 |
| Sample ID          | Response | RT   | Response | RT   | Response | RT    | Response | RT   |
| L712971-07         | 66905    | 5.43 | 145591   | 7.21 | 241612   | 10.27 | 259265   | 6.17 |
| L712971-09         | 58988    | 5.43 | 127239   | 7.21 | 207492   | 10.27 | 232573   | 6.17 |

### Legend:

IS4 -- 1,4-Dichlorobenzene-d4  
ACE -- Acenaphthene-d10  
CHR -- Chrysene-d12  
NAP -- Naphthalene-d8  
PER -- Perylene-d12  
PHEN -- Phenanthrene-d10

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734920</b> |
| Analysis Date:   | 8/2/2014 11:38:00 AM                             | Analyst:               | 377             |
| Instrument ID:   | BNAMS11                                          | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-04, -05, -06, -07, -09                   |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0807\_02  
Analyzed: 08/07/14 110300

|                    | IS4      |      | PER      |       | PHEN     |      |
|--------------------|----------|------|----------|-------|----------|------|
|                    | Response | RT   | Response | RT    | Response | RT   |
| <b>12 Hr. Std</b>  | 56978    | 5.43 | 237487   | 12.54 | 213922   | 8.09 |
| <b>Upper Limit</b> | 114000   | 5.93 | 475000   | 13.04 | 428000   | 8.59 |
| <b>Lower Limit</b> | 28500    | 4.93 | 119000   | 12.04 | 107000   | 7.59 |
| Sample ID          | Response | RT   | Response | RT    | Response | RT   |
| L712971-07         | 66905    | 5.43 | 266386   | 12.54 | 249821   | 8.09 |
| L712971-09         | 58988    | 5.43 | 234265   | 12.54 | 219607   | 8.09 |

### Legend:

IS4 -- 1,4-Dichlorobenzene-d4  
ACE -- Acenaphthene-d10  
CHR -- Chrysene-d12  
NAP -- Naphthalene-d8  
PER -- Perylene-d12  
PHEN -- Phenanthrene-d10



## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734920</b> |
| Analysis Date:   | 8/2/2014 11:38:00 AM                             | Analyst:               | 377             |
| Instrument ID:   | BNAMS19                                          | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-04, -05, -06, -07, -09                   |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0801A\_02

Analyzed: 08/02/14 012700

|                    | IS4      |      | ACE      |      | CHR      |       | NAP      |      |
|--------------------|----------|------|----------|------|----------|-------|----------|------|
|                    | Response | RT   | Response | RT   | Response | RT    | Response | RT   |
| <b>12 Hr. Std</b>  | 108057   | 5.40 | 321640   | 8.56 | 835673   | 13.07 | 464982   | 6.67 |
| <b>Upper Limit</b> | 216000   | 5.90 | 643000   | 9.06 | 1670000  | 13.57 | 930000   | 7.17 |
| <b>Lower Limit</b> | 54000    | 4.90 | 161000   | 8.06 | 418000   | 12.57 | 232000   | 6.17 |
| Sample ID          | Response | RT   | Response | RT   | Response | RT    | Response | RT   |
| L712971-04         | 87781    | 5.40 | 259160   | 8.55 | 590320   | 13.07 | 383772   | 6.67 |
| L712971-05         | 85973    | 5.40 | 255483   | 8.55 | 564311   | 13.07 | 363210   | 6.67 |
| L712971-06         | 83435    | 5.40 | 239396   | 8.55 | 595670   | 13.07 | 343993   | 6.67 |
| LCSD WG734920      | 95097    | 5.40 | 263285   | 8.55 | 638649   | 13.07 | 377520   | 6.67 |
| LCS WG734920       | 91543    | 5.40 | 261902   | 8.55 | 632462   | 13.07 | 379623   | 6.67 |
| BLANK WG734920     | 95299    | 5.40 | 274975   | 8.55 | 599775   | 13.07 | 393752   | 6.67 |

### Legend:

IS4 -- 1,4-Dichlorobenzene-d4  
ACE -- Acenaphthene-d10  
CHR -- Chrysene-d12  
NAP -- Naphthalene-d8  
PER -- Perylene-d12  
PHEN -- Phenanthrene-d10

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734920</b> |
| Analysis Date:   | 8/2/2014 11:38:00 AM                             | Analyst:               | 377             |
| Instrument ID:   | BNAMS19                                          | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-04, -05, -06, -07, -09                   |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0801A\_02

Analyzed: 08/02/14 012700

|                    | IS4      |      | PER      |       | PHEN     |       |
|--------------------|----------|------|----------|-------|----------|-------|
|                    | Response | RT   | Response | RT    | Response | RT    |
| <b>12 Hr. Std</b>  | 108057   | 5.40 | 902384   | 14.94 | 646074   | 10.18 |
| <b>Upper Limit</b> | 216000   | 5.90 | 1800000  | 15.44 | 1290000  | 10.68 |
| <b>Lower Limit</b> | 54000    | 4.90 | 451000   | 14.44 | 323000   | 9.68  |
| Sample ID          | Response | RT   | Response | RT    | Response | RT    |
| L712971-04         | 87781    | 5.40 | 679426   | 14.93 | 512013   | 10.18 |
| L712971-05         | 85973    | 5.40 | 655777   | 14.94 | 499618   | 10.18 |
| L712971-06         | 83435    | 5.40 | 679743   | 14.93 | 472759   | 10.18 |
| LCSD WG734920      | 95097    | 5.40 | 720135   | 14.94 | 510914   | 10.18 |
| LCS WG734920       | 91543    | 5.40 | 737884   | 14.93 | 503427   | 10.18 |
| BLANK WG734920     | 95299    | 5.40 | 694096   | 14.93 | 529379   | 10.18 |

### Legend:

IS4 -- 1,4-Dichlorobenzene-d4  
ACE -- Acenaphthene-d10  
CHR -- Chrysene-d12  
NAP -- Naphthalene-d8  
PER -- Perylene-d12  
PHEN -- Phenanthrene-d10

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734919</b> |
| Analysis Date:   | 8/2/2014 5:00:00 AM                              | Analyst:               | 280             |
| Instrument ID:   | BNAMS2                                           | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-01, -02, -03, -08                        |                        |                 |

### Surrogate Summary

|                |            | TBP       |        |       | FBP     |       | 2FP     |       | NBZ     |       |
|----------------|------------|-----------|--------|-------|---------|-------|---------|-------|---------|-------|
| Laboratory     |            |           |        |       |         |       |         |       |         |       |
| Sample ID      | Instrument | File ID   | ppm    | % Rec | ppm     | % Rec | ppm     | % Rec | ppm     | % Rec |
| L712971-01     | BNAMS2     | 0801B_05  | 0.0166 | 82.8  | 0.00688 | 68.8  | 0.00846 | 42.3  | 0.00687 | 68.7  |
| L712971-02     | BNAMS2     | 0801B_06  | 0.0185 | 92.3  | 0.00677 | 67.7  | 0.00581 | 29.1  | 0.00655 | 65.5  |
| L712971-03     | BNAMS2     | 0801B_07  | 0.0182 | 90.9  | 0.00688 | 68.8  | 0.00983 | 49.2  | 0.00685 | 68.5  |
| L712971-08     | BNAMS2     | 0801B_08  | 0.0215 | 108   | 0.00822 | 82.2  | 0.0117  | 58.4  | 0.00759 | 75.9  |
| LCS WG734919   | BNAMS11    | 0801_04-2 | 0.0166 | 83.1  | 0.00830 | 83.0  | 0.00979 | 48.9  | 0.00854 | 85.4  |
| LCSD WG734919  | BNAMS11    | 0801_05-2 | 0.0155 | 77.7  | 0.00778 | 77.8  | 0.00902 | 45.1  | 0.00818 | 81.8  |
| BLANK WG734919 | BNAMS11    | 0801_06-2 | 0.0151 | 75.5  | 0.00859 | 85.9  | 0.0115  | 57.6  | 0.00782 | 78.2  |

TBP --2,4,6-TRIBROMOPHENOL

True Value: 0.02 ppm Limits: 11.2 - 130

FBP --2-FLUOROBIPHENYL

True Value: 0.01 ppm Limits: 29.5 - 131

2FP --2-FLUOROPHENOL

True Value: 0.02 ppm Limits: 10 - 77.9

NBZ --NITROBENZENE-D5

True Value: 0.01 ppm Limits: 21.8 - 123

TPH --P-TERPHENYL-D14

True Value: 0.01 ppm Limits: 29.3 - 137

PHL --PHENOL-D5

True Value: 0.02 ppm Limits: 5 - 70.1



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Est. 1970

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734919</b> |
| Analysis Date:   | 8/2/2014 5:00:00 AM                              | Analyst:               | 280             |
| Instrument ID:   | BNAMS2                                           | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-01, -02, -03, -08                        |                        |                 |

### Surrogate Summary

| Laboratory | TPH            |            |           |              | PHL          |  |
|------------|----------------|------------|-----------|--------------|--------------|--|
|            | Sample ID      | Instrument | File ID   | ppm % Rec    | ppm % Rec    |  |
|            | L712971-01     | BNAMS2     | 0801B_05  | 0.00783 78.3 | 0.00734 36.7 |  |
|            | L712971-02     | BNAMS2     | 0801B_06  | 0.00786 78.6 | 0.00422 21.1 |  |
|            | L712971-03     | BNAMS2     | 0801B_07  | 0.00732 73.2 | 0.00828 41.4 |  |
|            | L712971-08     | BNAMS2     | 0801B_08  | 0.00792 79.2 | 0.00916 45.8 |  |
|            | LCS WG734919   | BNAMS11    | 0801_04-2 | 0.00772 77.2 | 0.00814 40.7 |  |
|            | LCSD WG734919  | BNAMS11    | 0801_05-2 | 0.00761 76.1 | 0.00756 37.8 |  |
|            | BLANK WG734919 | BNAMS11    | 0801_06-2 | 0.00791 79.1 | 0.00865 43.3 |  |

TBP --2,4,6-TRIBROMOPHENOL

True Value: 0.02 ppm Limits: 11.2 - 130

FBP --2-FLUOROBIPHENYL

True Value: 0.01 ppm Limits: 29.5 - 131

2FP --2-FLUOROPHENOL

True Value: 0.02 ppm Limits: 10 - 77.9

NBZ --NITROBENZENE-D5

True Value: 0.01 ppm Limits: 21.8 - 123

TPH --P-TERPHENYL-D14

True Value: 0.01 ppm Limits: 29.3 - 137

PHL --PHENOL-D5

True Value: 0.02 ppm Limits: 5 - 70.1

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## Quality Control Summary

SDG: L712971

ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734920</b> |
| Analysis Date:   | 8/2/2014 11:38:00 AM                             | Analyst:               | 377             |
| Instrument ID:   | BNAMS19                                          | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-04, -05, -06, -07, -09                   |                        |                 |

## Surrogate Summary

|                |            | TBP       |        |       | FBP     |       | 2FP     |       | NBZ     |       |
|----------------|------------|-----------|--------|-------|---------|-------|---------|-------|---------|-------|
| Laboratory     |            |           |        |       |         |       |         |       |         |       |
| Sample ID      | Instrument | File ID   | ppm    | % Rec | ppm     | % Rec | ppm     | % Rec | ppm     | % Rec |
| L712971-04     | BNAMS19    | 0801A_27  | 0.0184 | 92.2  | 0.00745 | 74.5  | 0.00924 | 46.2  | 0.00500 | 50.0  |
| L712971-05     | BNAMS19    | 0801A_28  | 0.0167 | 83.5  | 0.00740 | 74.0  | 0.0103  | 51.4  | 0.00549 | 54.9  |
| L712971-06     | BNAMS19    | 0801A_29  | 0.0156 | 77.9  | 0.00689 | 68.9  | 0.0102  | 51.0  | 0.00493 | 49.3  |
| L712971-07     | BNAMS11    | 0807_13   | 0.0159 | 79.5  | 0.00854 | 85.4  | 0.0102  | 50.8  | 0.00737 | 73.7  |
| L712971-09     | BNAMS11    | 0807_14   | 0.0146 | 73.0  | 0.00820 | 82.0  | 0.0108  | 54.2  | 0.00722 | 72.2  |
| LCS WG734920   | BNAMS19    | 0801A_04- | 0.0187 | 93.6  | 0.00736 | 73.6  | 0.0100  | 50.1  | 0.00535 | 53.5  |
| LCSD WG734920  | BNAMS19    | 0801A_05- | 0.0177 | 88.5  | 0.00715 | 71.5  | 0.00893 | 44.6  | 0.00494 | 49.4  |
| BLANK WG734920 | BNAMS19    | 0801A_06- | 0.0153 | 76.5  | 0.00708 | 70.8  | 0.00832 | 41.6  | 0.00478 | 47.8  |

TBP --2,4,6-TRIBROMOPHENOL

True Value: 0.02 ppm Limits: 11.2 - 130

FBP --2-FLUOROBIPHENYL

True Value: 0.01 ppm Limits: 29.5 - 131

2FP --2-FLUOROPHENOL

True Value: 0.02 ppm Limits: 10 - 77.9

NBZ --NITROBENZENE-D5

True Value: 0.01 ppm Limits: 21.8 - 123

TPH --P-TERPHENYL-D14

True Value: 0.01 ppm Limits: 29.3 - 137

PHL --PHENOL-D5

True Value: 0.02 ppm Limits: 5 - 70.1



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Est. 1970

## Quality Control Summary

SDG: L712971

ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C | Matrix:                | Water - ug/L    |
| Project No:      | TX000836.0008.00004                              | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM            | <b>Analytic Batch:</b> | <b>WG734920</b> |
| Collection Date: | 7/29/2014                                        | Analyst:               | 377             |
| Analysis Date:   | 8/2/2014 11:38:00 AM                             | Prep Date:             | 7/31/2014       |
| Instrument ID:   | BNAMS19                                          |                        |                 |
| Sample Numbers:  | L712971-04, -05, -06, -07, -09                   |                        |                 |

## Surrogate Summary

|                |            |           | TPH     |       | PHL     |       |
|----------------|------------|-----------|---------|-------|---------|-------|
| Laboratory     |            |           |         |       |         |       |
| Sample ID      | Instrument | File ID   | ppm     | % Rec | ppm     | % Rec |
| L712971-04     | BNAMS19    | 0801A_27  | 0.00733 | 73.3  | 0.00714 | 35.7  |
| L712971-05     | BNAMS19    | 0801A_28  | 0.00725 | 72.5  | 0.00712 | 35.6  |
| L712971-06     | BNAMS19    | 0801A_29  | 0.00671 | 67.1  | 0.00711 | 35.5  |
| L712971-07     | BNAMS11    | 0807_13   | 0.00784 | 78.4  | 0.00770 | 38.5  |
| L712971-09     | BNAMS11    | 0807_14   | 0.00741 | 74.1  | 0.00813 | 40.7  |
| LCS WG734920   | BNAMS19    | 0801A_04- | 0.00681 | 68.1  | 0.00675 | 33.7  |
| LCSD WG734920  | BNAMS19    | 0801A_05- | 0.00656 | 65.6  | 0.00611 | 30.5  |
| BLANK WG734920 | BNAMS19    | 0801A_06- | 0.00679 | 67.9  | 0.00599 | 29.9  |

TBP --2,4,6-TRIBROMOPHENOL

True Value: 0.02 ppm Limits: 11.2 - 130

FBP --2-FLUOROBIPHENYL

True Value: 0.01 ppm Limits: 29.5 - 131

2FP --2-FLUOROPHENOL

True Value: 0.02 ppm Limits: 10 - 77.9

NBZ --NITROBENZENE-D5

True Value: 0.01 ppm Limits: 21.8 - 123

TPH --P-TERPHENYL-D14

True Value: 0.01 ppm Limits: 29.3 - 137

PHL --PHENOL-D5

True Value: 0.02 ppm Limits: 5 - 70.1

# ARCADIS US - TX

2929 Briarpark Dr., Suite 300  
Houston, TX 77042

## Billing Information:

Attn: Accounts Payable  
630 Plaza Drive, Suite 600  
Highlands Ranch, CO 80129

Email To: pam.krueger@arcadis-us.com

Report to:  
Project Manager

Project  
Description: Navajo Refining Company - Artesia, NM

Phone: 713-953-4800  
Fax:

Client Project #  
TX000836.0008.00004

City/State  
Collected:  
Lab Project #  
ARCADHTX-NAVAJO

Collected by (print):

Collected by (signature):

Immediately  
Packed on Ice N ☒ Y ☒

Site/Facility ID #

P.O. #

Rush? (Lab MUST Be Notified)

Same Day .....200%  
Next Day .....100%  
Two Day .....50%  
Three Day .....25%

Date Results Needed

Email? ☐ No ☒ Yes  
FAX? ☐ No ☐ Yes

No.  
of  
Cnts

\*\*Cl,F,NO2,NO3,S04\*\* 125mlHDPE-NoPres

8270 100ml Amb NoPres

CN 250mlHDPEAmb-NaOH

DROOROLVI 40mlAmb-HCl-BT

Diss. Metals (Field) 500mlHDPE-HNO3

GRO 40mlAmb HCl

RA226/RA228 1L-HDPE-Add HNO3

TDS 250mlHDPE-NoPres

Total Hg 500mlHDPE-HNO3

V8260 40mlAmb-HCl

## Analysis / Container / Preservative

Chain of Custody Page \_\_\_ of \_\_\_



YOUR LAB OF CHOICE

12065 Lebanon Rd  
Mount Juliet, TN 37122  
Phone: 615-758-5858  
Phone: 800-767-5859  
Fax: 615-758-5859



L# 6712 971

D208

Acctnum: ARCADHTX

Template: T95739

Prelogin: P476834

TSR: 633 - Pam Langford

PB: 7.24 M8

Shipped Via: FedEX Ground

Rem./Contaminant Sample # (lab only)

| Sample ID | Comp/Grab | Matrix * | Depth | Date    | Time | No.<br>of<br>Cnts | **Cl,F,NO2,NO3,S04** 125mlHDPE-NoPres | 8270 100ml Amb NoPres | CN 250mlHDPEAmb-NaOH | DROOROLVI 40mlAmb-HCl-BT | Diss. Metals (Field) 500mlHDPE-HNO3 | GRO 40mlAmb HCl | RA226/RA228 1L-HDPE-Add HNO3 | TDS 250mlHDPE-NoPres | Total Hg 500mlHDPE-HNO3 | V8260 40mlAmb-HCl | Rem./Contaminant | Sample # (lab only) |
|-----------|-----------|----------|-------|---------|------|-------------------|---------------------------------------|-----------------------|----------------------|--------------------------|-------------------------------------|-----------------|------------------------------|----------------------|-------------------------|-------------------|------------------|---------------------|
| MW-12     | G         | GW       |       | 7/29/14 | 1530 | 15                | X                                     | X                     | X                    | X                        | X                                   | X               | X                            | X                    | X                       | X                 |                  | 01                  |
| MW-13     | G         | GW       |       | 7/29/14 | 1350 | 15                | X                                     | X                     | X                    | X                        | X                                   | X               | X                            | X                    | X                       | X                 |                  | 02                  |
| MW-25     | C         | GW       |       | 7/29/14 | 1730 | 15                | X                                     | X                     | X                    | X                        | X                                   | X               | X                            | X                    | X                       | X                 |                  | 03                  |
| MW-136    | G         | GW       |       | 7/30/14 | 0810 | 15                | X                                     | X                     | X                    | X                        | X                                   | X               | X                            | X                    | X                       | X                 |                  | 04                  |
| UG-1      | G         | GW       |       | 7/30/14 | 0945 | 15                | X                                     | X                     | X                    | X                        | X                                   | X               | X                            | X                    | X                       | X                 |                  | 05                  |
| UG-3R     | G         | GW       |       | 7/30/14 | 1120 | 15                | X                                     | X                     | X                    | X                        | X                                   | X               | X                            | X                    | X                       | X                 |                  | 06                  |
| UG-2      | G         | GW       |       | 7/30/14 | 1250 | 15                | X                                     | X                     | X                    | X                        | X                                   | X               | X                            | X                    | X                       | X                 |                  | 07                  |
| EB-002    | G         | GW       |       | 7/29/14 | 1835 | 15                | X                                     | X                     | X                    | X                        | X                                   | X               | X                            | X                    | X                       | X                 |                  | 08                  |
| EB-003    | G         | GW       |       | 7/30/14 | 1400 | 15                | X                                     | X                     | X                    | X                        | X                                   | X               | X                            | X                    | X                       | X                 |                  | 09                  |
|           |           | GW       |       |         |      | 15                | X                                     | X                     | X                    | X                        | X                                   | X               | X                            | X                    | X                       | X                 |                  |                     |

\* Matrix: SS - Soil GW - Groundwater WW - Waste Water DW - Drinking Water OT - Other

Remarks: \*\*\*\*Add Uranium (in house)\*\*\*\*

★ Add Total Metals

608971744415 608971748362  
608971744406 608971744407

pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_

Relinquished by: (Signature)

Date: 7/30/14 Time: 1515

Received by: (Signature)

Samples returned via: ☐ UPS

☒ FedEx ☐ Courier ☐ \_\_\_\_\_

Relinquished by: (Signature)

Date: Time:

Received by: (Signature)

Temp: 3.8 °C Bottles Received: 148

Relinquished by: (Signature)

Date: Time:

Received for lab by: (Signature)

Date: 7/31/14 Time: 0900

Hold #

Condition: (lab use only)

COC Seal Intact: ☒ Y ☐ N ☐ NA

pH Checked: NCF:

110 of 112



ARCADIS US - TX

2929 Briarpark Dr., Suite 300  
Houston, TX 77042

Report to:  
Pam Krueger

Project  
Description: Navajo Refining Company - Artesia, NM

Phone: 713-953-4800  
Fax:

Client Project #  
TX000836.0008.00004

City/State  
Collected:  
Lab Project #  
ARCADHTX-NAVAJO

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)  
\_\_\_\_ Same Day .....200%  
\_\_\_\_ Next Day .....100%  
\_\_\_\_ Two Day .....50%  
\_\_\_\_ Three Day .....25%

Date Results Needed

Email? \_\_\_\_ No ☒ Yes

FAX? \_\_\_\_ No \_\_\_\_ Yes

No.  
of  
Cnts

Immediately  
Packed on Ice N \_\_\_\_ Y \_\_\_\_

| Sample ID  | Comp/Grab | Matrix * | Depth | Date | Time | Cnts | Total Metals: 500mL HDPE-HNO3 | VOCs | Analysis / Container / Preservative | Chain of Custody                                                                                                                                                                                                                                                                                                                          | Page ____ of ____           |
|------------|-----------|----------|-------|------|------|------|-------------------------------|------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| Trip Blank |           | GW       |       |      |      | 1    | X                             |      |                                     | <br>L.A.B S.C.I.E.N.C.E.S<br>YOUR LAB OF CHOICE<br>12065 Lebanon Rd<br>Mount Juliet, TN 37122<br>Phone: 615-758-5858<br>Phone: 800-767-5859<br>Fax: 615-758-5859<br> | L# 672971                   |
| Trip Blank |           | GW       |       |      |      | 1    | X                             |      |                                     |                                                                                                                                                                                                                                                                                                                                           | Table #                     |
| Trip Blank |           | GW       |       |      |      | 1    | X                             |      |                                     |                                                                                                                                                                                                                                                                                                                                           | Acctnum: ARCADHTX           |
| Trip Blank |           | GW       |       |      |      | 1    | X                             |      |                                     |                                                                                                                                                                                                                                                                                                                                           | Template: T95815            |
|            |           | GW       |       |      |      | 1    | X                             |      |                                     |                                                                                                                                                                                                                                                                                                                                           | Prelogin: P477209           |
|            |           | GW       |       |      |      | 1    | X                             |      |                                     |                                                                                                                                                                                                                                                                                                                                           | TSR: 633 Pam Langford       |
|            |           | GW       |       |      |      | 1    | X                             |      |                                     |                                                                                                                                                                                                                                                                                                                                           | PB: 7/28/14 <i>mb</i>       |
|            |           | GW       |       |      |      | 1    | X                             |      |                                     |                                                                                                                                                                                                                                                                                                                                           | Shipped Via: FedEx Standard |
|            |           | GW       |       |      |      | 1    | X                             |      |                                     |                                                                                                                                                                                                                                                                                                                                           | Rem./Contaminant            |
|            |           | GW       |       |      |      | 1    | X                             |      |                                     |                                                                                                                                                                                                                                                                                                                                           | Sample # (lab only)         |

\* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks:

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Relinquished by : (Signature)  
*Rachel Wood*  
Relinquished by : (Signature)  
Relinquished by : (Signature)

Date:  
7/30/14  
Date:  
Date:

Time:  
Time:  
Time:

Received by: (Signature)  
Received by: (Signature)  
Received for lab by: (Signature)  
*[Signature]*

Samples returned via: ☐ UPS  
☒ FedEx ☐ Courier ☐ \_\_\_\_\_  
Temp: 3.8 °C Bottles Received: 148  
Date: 7/31/14 Time: 0900

Hold #  
Condition: 5 (lab use only)  
COC Seal Intact: ☒ Y ☐ N ☐ NA  
pH Checked: 111 of 112



## Pam Langford

---

**From:** Osborne, Melissa <Melissa.Osborne@arcadis-us.com>  
**Sent:** Monday, August 25, 2014 8:51 AM  
**To:** Pam Langford; Turner, Maisha; Osborne, Melissa; Krueger, Pamela  
**Subject:** RE: ESC Lab Sciences Report for TX000836.0008.00004 Navajo Refining Company - Artesia, NM L712971

Pam L.,  
Please revise Sample IDs XX-XX-0714-BG (i.e. MW-12-0714-BG).

If you have any questions please let me know.  
Thanks,  
Mel

-----Original Message-----

From: Pam Langford [<mailto:plangford@esclabsciences.com>]  
Sent: Friday, August 22, 2014 5:27 PM  
To: Turner, Maisha; Osborne, Melissa; Krueger, Pamela  
Subject: ESC Lab Sciences Report for TX000836.0008.00004 Navajo Refining Company - Artesia, NM L712971

Thank you for choosing ESC Lab Sciences! Please find enclosed PDF files containing your laboratory analysis and chain of custody.

ESC is pleased to announce that we are accepting samples from 21 states for the new 3511 prep technique for PAHs by 8270 and 8270SIM. This technique allows for a 98% reduction in solvent usage, and requires only 2 to 3 40 mL non-preserved amber vials vs. the traditional 1 or 2 amber liter jars. Please contact your Technical Service Representative for details.

ESC is leading the laboratory industry with our On-line Data Management tools. Please contact your Technical Service Representative to learn how to create historical Excel tables or access data in real time using powerful and intuitive software that is only available at <http://www.esclabsciences.com>.

How are we doing? ESC would like to hear from you. Please take a moment and complete our customer feedback survey at <https://www.surveymonkey.com/s/TCGLB7T>.

ESC ... "Your Lab of Choice"

Pam Langford  
Technical Service Representative  
--

ESC Lab Sciences  
12065 Lebanon Rd.  
Mt. Juliet, TN 37122

## Quality Control Summary

### SDG: L712736

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,**

**August 11, 2015**

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#### **Sample Receiving and Handling**

All sample aliquots were received at the correct temperature, in the proper containers, and with the appropriate preservatives. All method specified holding times were met.

#### **Anions by Method 9056MOD**

##### **Laboratory Control Sample**

Samples L712736-01, -02, -03, -04, and -05 were analyzed in analytical batch WG734496. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Sample Duplicate Analysis**

For analytical batch WG734496 sample duplicate analysis was performed on sample L712736-02. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG734496 sample duplicate analysis was performed on sample L712727-01. The relative percent differences were within the method limits for target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG734496 matrix spike/matrix spike duplicate analysis was performed on sample L712737-01. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

##### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Total Dissolved Solids by Method 2540 C-2011**

##### **Laboratory Control Sample**

Samples L712736-01, -02, -03, -04, and -05 were analyzed in analytical batch WG734543. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Sample Duplicate Analysis**

For analytical batch WG734543 sample duplicate analysis was performed on sample L712736-05. The relative percent differences were within the method limits for target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

Precision for batch WG734543 was evaluated using the LCS/LCSD. The RPDs were within method limits.

##### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

## Quality Control Summary

### SDG: L712736

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,**

**August 11, 2015**

---

#### Cyanide by Method 9012B

##### **Laboratory Control Sample**

Samples L712736-01, -02, -03, -04, and -05 were analyzed in analytical batch WG735726. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Sample Duplicate Analysis**

For analytical batch WG735726 sample duplicate analysis was performed on sample L712736-01. The relative percent difference exceeded the method limits for Cyanide.

For analytical batch WG735726 sample duplicate analysis was performed on sample L712786-01. The relative percent differences were within the method limits for target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG735726 matrix spike/matrix spike duplicate analysis was performed on sample L712736-05. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

##### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### Mercury by Method 7470A

##### **Laboratory Control Sample**

Samples L712736-01, -02, -03, -04, and -05 were analyzed in analytical batch WG736040. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch.

##### **Sample Duplicate Analysis**

For analytical batch WG736040 sample duplicate analysis was performed on sample L712736-01. The relative percent differences were within the method limits for target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG736040 matrix spike/matrix spike duplicate analysis was performed on sample L712736-01. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

##### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### Trace Metals by Method 6020

##### **Laboratory Control Sample**

Samples L712736-01, -02, -03, -04, and -05 were analyzed in analytical batch WG737003. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

## Quality Control Summary

### SDG: L712736

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,  
August 11, 2015**

Samples L712736-01, -02, -03, -04, and -05 were analyzed in analytical batch WG737007. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

#### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG737003 matrix spike/matrix spike duplicate analysis was performed on sample L712736-03. The matrix spike recoveries were below laboratory control limits for Calcium, Dissolved. The spike recoveries were within limits for the remaining target compounds reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

For analytical batch WG737007 matrix spike/matrix spike duplicate analysis was performed on sample L712736-05. The matrix spike recoveries were above laboratory control limits for Calcium. The spike recoveries were within limits for the remaining target compounds reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

### **Volatile TPH by Method 8015D/GRO**

#### **Laboratory Control Sample**

Samples L712736-01, -02, -03, -04, and -05 were analyzed in analytical batch WG734527. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

#### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG734527 matrix spike/matrix spike duplicate analysis was performed on sample L711663-04. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

### **Volatile Organic Compounds by Method 8260B**

#### **Laboratory Control Sample**

Samples L712736-01, -02, -03, -04, and -05 were analyzed in analytical batch WG734591. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

#### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG734591 matrix spike/matrix spike duplicate analysis was performed on sample L712736-01. The matrix spike recoveries were within laboratory control limits for all target analytes reported from this batch. The relative percent difference exceeded laboratory limits for 1,1-Dichloroethene.

## Quality Control Summary

### SDG: L712736

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,**

**August 11, 2015**

---

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Semi-Volatile Organic Compounds by Method 8270 C**

##### **Laboratory Control Sample**

Samples L712736-01, -02, -03, -04, and -05 were analyzed in analytical batch WG734861. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

Precision for batch WG734861 was evaluated using the LCS/LCSD. The RPDs were within method limits.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Diesel Range Organics by Method 8015**

##### **Laboratory Control Sample**

Samples L712736-01, -02, -03, -04, and -05 were analyzed in analytical batch WG734853. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

Precision for batch WG734853 was evaluated using the LCS/LCSD. The RPDs were within method limits.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

Nancy F. McLain  
ESC Representative  
ESC Lab Sciences



12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

## Report Summary

Monday August 10, 2015

Report Number: L712736

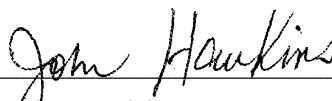
Samples Received: 07/30/14

Client Project: TX000836.0008.00004

Description: Navajo Refining Company - Artesia, NM

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

  
John Hawkins , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BI0041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

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Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712736-01

Sample ID : MW-55-0714-BG 22FT

Site ID :

Collected By : Teresa Mofield  
Collection Date : 07/28/14 18:15

Project # : TX000836.0008.00004

| Parameter             | Result  | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|---------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 290000  | 2600 | 50000  | ug/l  |           | 9056MOD | 07/30/14 | 50   |
| Fluoride              | 2000    | 9.9  | 100    | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Nitrate               | 7500    | 23.  | 100    | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Nitrite               | U       | 28.  | 100    | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Sulfate               | 2600000 | 3900 | 250000 | ug/l  |           | 9056MOD | 07/30/14 | 50   |
| Cyanide               | 2.1     | 1.8  | 5.0    | ug/l  | JP1       | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 4100000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/01/14 | 1    |
| Aluminum              | 110     | 2.0  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Aluminum, Dissolved   | 21.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Arsenic               | 5.1     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Arsenic, Dissolved    | 5.0     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Barium                | 12.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Barium, Dissolved     | 10.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Boron                 | 1200    | 1.5  | 20.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Boron, Dissolved      | 1400    | 1.5  | 20.    | ug/l  |           | 6020    | 08/20/14 | 1    |
| Cadmium               | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cadmium, Dissolved    | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Calcium               | 680000  | 460  | 10000  | ug/l  |           | 6020    | 08/14/14 | 10   |
| Calcium, Dissolved    | 630000  | 460  | 10000  | ug/l  |           | 6020    | 08/14/14 | 10   |
| Chromium              | 1.9     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Chromium, Dissolved   | 1.5     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Copper                | 0.94    | 0.52 | 1.0    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Copper, Dissolved     | 1.1     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cobalt                | 1.1     | 0.26 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cobalt, Dissolved     | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Iron                  | 67.     | 50.  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Iron, Dissolved       | U       | 50.  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Lead                  | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Lead, Dissolved       | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Manganese             | 120     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Manganese, Dissolved  | 28.     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Molybdenum            | 30.     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Molybdenum, Dissolved | 29.     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Nickel                | 5.6     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Nickel, Dissolved     | 3.8     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Potassium             | 1200    | 37.  | 1000   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Potassium, Dissolved  | 1400    | 37.  | 1000   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Selenium              | 20.     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Selenium, Dissolved   | 20.     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Silver                | U       | 0.31 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |

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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712736-01

Sample ID : MW-55-0714-BG 22FT

Site ID :

Collected By : Teresa Mofield  
Collection Date : 07/28/14 18:15

Project # : TX000836.0008.00004

| Parameter                                           | Result | MDL   | RDL   | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|--------|-------|-------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U      | 0.31  | 0.50  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Sodium                                              | 240000 | 1100  | 10000 | ug/l   |           | 6020    | 08/14/14 | 10   |
| Sodium, Dissolved                                   | 220000 | 1100  | 10000 | ug/l   |           | 6020    | 08/14/14 | 10   |
| Uranium                                             | 42.    | 0.33  | 10.   | ug/l   |           | 6020    | 08/13/14 | 1    |
| Uranium, Dissolved                                  | 40.    | 0.33  | 10.   | ug/l   |           | 6020    | 08/13/14 | 1    |
| Vanadium                                            | 18.    | 0.18  | 1.0   | ug/l   |           | 6020    | 08/13/14 | 1    |
| Vanadium, Dissolved                                 | 19.    | 0.18  | 1.0   | ug/l   |           | 6020    | 08/13/14 | 1    |
| Zinc                                                | U      | 2.6   | 10.   | ug/l   |           | 6020    | 08/13/14 | 1    |
| Zinc, Dissolved                                     | U      | 2.6   | 10.   | ug/l   |           | 6020    | 08/13/14 | 1    |
| Mercury                                             | U      | 0.049 | 0.20  | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U      | 31.   | 100   | ug/l   |           | 8015D/G | 07/30/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 102.   |       |       | % Rec. |           | 8015D/G | 07/30/14 | 1    |
| Volatile Organics                                   |        |       |       |        |           |         |          |      |
| Benzene                                             | U      | 0.33  | 1.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| Carbon tetrachloride                                | U      | 0.38  | 1.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| Chloroform                                          | U      | 0.32  | 5.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| 1,2-Dibromoethane                                   | U      | 0.38  | 1.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| 1,1-Dichloroethane                                  | U      | 0.26  | 1.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| 1,2-Dichloroethane                                  | U      | 0.36  | 1.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| 1,1-Dichloroethene                                  | U      | 0.40  | 1.0   | ug/l   | J3        | 8260B   | 07/30/14 | 1    |
| Ethylbenzene                                        | U      | 0.38  | 1.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| Methylene Chloride                                  | U      | 1.0   | 5.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U      | 0.38  | 1.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U      | 0.13  | 1.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| Toluene                                             | U      | 0.78  | 5.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| 1,1,1-Trichloroethane                               | U      | 0.32  | 1.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| Tetrachloroethene                                   | U      | 0.37  | 1.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| 1,1,2-Trichloroethane                               | U      | 0.38  | 1.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| Vinyl chloride                                      | U      | 0.26  | 1.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| o-Xylene                                            | U      | 0.34  | 1.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| m&p-Xylene                                          | U      | 0.72  | 2.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| Xylenes, Total                                      | U      | 1.1   | 3.0   | ug/l   |           | 8260B   | 07/30/14 | 1    |
| Surrogate Recovery                                  |        |       |       |        |           |         |          |      |
| Toluene-d8                                          | 107.   |       |       | % Rec. |           | 8260B   | 07/30/14 | 1    |
| Dibromofluoromethane                                | 116.   |       |       | % Rec. |           | 8260B   | 07/30/14 | 1    |
| 4-Bromofluorobenzene                                | 99.1   |       |       | % Rec. |           | 8260B   | 07/30/14 | 1    |
| Diesel and Oil Ranges                               |        |       |       |        |           |         |          |      |
| C10-C28 Diesel Range                                | 170    | 22.   | 100   | ug/l   |           | 8015    | 08/01/14 | 1    |

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Est. 1970

# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : MW-55-0714-BG 22FT  
Collected By : Teresa Mofield  
Collection Date : 07/28/14 18:15

ESC Sample # : L712736-01

Site ID :

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| C28-C40 Oil Range         | 74.    | 12.  | 100 | ug/l   | J         | 8015   | 08/01/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| o-Terphenyl               | 101.   |      |     | % Rec. |           | 8015   | 08/01/14 | 1    |
| Base/Neutral Extractables |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene            | 0.36   | 0.34 | 1.0 | ug/l   | J         | 8270 C | 08/01/14 | 1    |
| 1-Methylnaphthalene       | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| 2-Methylnaphthalene       | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| Naphthalene               | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| 2-Fluorophenol            | 45.4   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| Phenol-d5                 | 35.9   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| Nitrobenzene-d5           | 44.6   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| 2-Fluorobiphenyl          | 64.4   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| 2,4,6-Tribromophenol      | 71.3   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| p-Terphenyl-d14           | 62.4   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |

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Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712736-02

Sample ID : NP-5-0714-BG 21FT

Site ID :

Collected By : Teresa Mofield  
Collection Date : 07/28/14 09:15

Project # : TX000836.0008.00004

| Parameter             | Result  | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|---------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 390000  | 2600 | 50000  | ug/l  |           | 9056MOD | 07/31/14 | 50   |
| Fluoride              | 2400    | 9.9  | 100    | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Nitrate               | 820     | 23.  | 100    | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Nitrite               | U       | 28.  | 100    | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Sulfate               | 3100000 | 3900 | 250000 | ug/l  |           | 9056MOD | 07/31/14 | 50   |
| Cyanide               | U       | 1.8  | 5.0    | ug/l  |           | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 4900000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/01/14 | 1    |
| Aluminum              | 96.     | 2.0  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Aluminum, Dissolved   | 24.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Arsenic               | 3.2     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Arsenic, Dissolved    | 3.3     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Barium                | 8.5     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Barium, Dissolved     | 7.6     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Boron                 | 1800    | 1.5  | 20.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Boron, Dissolved      | 2100    | 1.5  | 20.    | ug/l  |           | 6020    | 08/20/14 | 1    |
| Cadmium               | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cadmium, Dissolved    | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Calcium               | 530000  | 460  | 10000  | ug/l  |           | 6020    | 08/14/14 | 10   |
| Calcium, Dissolved    | 550000  | 460  | 10000  | ug/l  |           | 6020    | 08/14/14 | 10   |
| Chromium              | 0.98    | 0.54 | 1.0    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Chromium, Dissolved   | 0.56    | 0.54 | 1.0    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Copper                | 1.5     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Copper, Dissolved     | 1.1     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cobalt                | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cobalt, Dissolved     | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Iron                  | 67.     | 50.  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Iron, Dissolved       | U       | 50.  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Lead                  | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Lead, Dissolved       | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Manganese             | 0.74    | 0.25 | 2.0    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Manganese, Dissolved  | 0.41    | 0.25 | 2.0    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Molybdenum            | 33.     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Molybdenum, Dissolved | 32.     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Nickel                | 1.1     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Nickel, Dissolved     | 1.2     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Potassium             | 370     | 37.  | 1000   | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Potassium, Dissolved  | 340     | 37.  | 1000   | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Selenium              | 7.9     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Selenium, Dissolved   | 8.7     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Silver                | U       | 0.31 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |

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# REPORT OF ANALYSIS

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August 10, 2015

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712736-02

Sample ID : NP-5-0714-BG 21FT

Site ID :

Collected By : Teresa Mofield  
Collection Date : 07/28/14 09:15

Project # : TX000836.0008.00004

| Parameter                                           | Result | MDL   | RDL   | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|--------|-------|-------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U      | 0.31  | 0.50  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Sodium                                              | 240000 | 1100  | 10000 | ug/l   |           | 6020    | 08/14/14 | 10   |
| Sodium, Dissolved                                   | 240000 | 1100  | 10000 | ug/l   |           | 6020    | 08/14/14 | 10   |
| Uranium                                             | 190    | 0.33  | 10.   | ug/l   |           | 6020    | 08/13/14 | 1    |
| Uranium, Dissolved                                  | 190    | 0.33  | 10.   | ug/l   |           | 6020    | 08/13/14 | 1    |
| Vanadium                                            | 19.    | 0.18  | 1.0   | ug/l   |           | 6020    | 08/13/14 | 1    |
| Vanadium, Dissolved                                 | 19.    | 0.18  | 1.0   | ug/l   |           | 6020    | 08/13/14 | 1    |
| Zinc                                                | 12.    | 2.6   | 10.   | ug/l   |           | 6020    | 08/13/14 | 1    |
| Zinc, Dissolved                                     | U      | 2.6   | 10.   | ug/l   |           | 6020    | 08/13/14 | 1    |
| Mercury                                             | U      | 0.049 | 0.20  | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U      | 31.   | 100   | ug/l   |           | 8015D/G | 07/30/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 102.   |       |       | % Rec. |           | 8015D/G | 07/30/14 | 1    |
| Volatile Organics                                   |        |       |       |        |           |         |          |      |
| Benzene                                             | U      | 0.33  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Carbon tetrachloride                                | U      | 0.38  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Chloroform                                          | U      | 0.32  | 5.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,2-Dibromoethane                                   | U      | 0.38  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1-Dichloroethane                                  | U      | 0.26  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,2-Dichloroethane                                  | U      | 0.36  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1-Dichloroethene                                  | U      | 0.40  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Ethylbenzene                                        | U      | 0.38  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Methylene Chloride                                  | U      | 1.0   | 5.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U      | 0.38  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U      | 0.13  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Toluene                                             | U      | 0.78  | 5.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,1-Trichloroethane                               | U      | 0.32  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Tetrachloroethene                                   | U      | 0.37  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,2-Trichloroethane                               | U      | 0.38  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Vinyl chloride                                      | U      | 0.26  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| o-Xylene                                            | U      | 0.34  | 1.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| m&p-Xylene                                          | U      | 0.72  | 2.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Xylenes, Total                                      | U      | 1.1   | 3.0   | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Surrogate Recovery                                  |        |       |       |        |           |         |          |      |
| Toluene-d8                                          | 109.   |       |       | % Rec. |           | 8260B   | 07/31/14 | 1    |
| Dibromofluoromethane                                | 107.   |       |       | % Rec. |           | 8260B   | 07/31/14 | 1    |
| 4-Bromofluorobenzene                                | 100.   |       |       | % Rec. |           | 8260B   | 07/31/14 | 1    |
| Diesel and Oil Ranges                               |        |       |       |        |           |         |          |      |
| C10-C28 Diesel Range                                | 56.    | 22.   | 100   | ug/l   | J         | 8015    | 08/01/14 | 1    |

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

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Est. 1970

REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : NP-5-0714-BG 21FT  
Collected By : Teresa Mofield  
Collection Date : 07/28/14 09:15

ESC Sample # : L712736-02

Site ID :

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| C28-C40 Oil Range         | 35.    | 12.  | 100 | ug/l   | J         | 8015   | 08/01/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| o-Terphenyl               | 101.   |      |     | % Rec. |           | 8015   | 08/01/14 | 1    |
| Base/Neutral Extractables |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene            | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| 1-Methylnaphthalene       | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| 2-Methylnaphthalene       | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| Naphthalene               | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| 2-Fluorophenol            | 53.2   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| Phenol-d5                 | 38.1   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| Nitrobenzene-d5           | 48.0   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| 2-Fluorobiphenyl          | 72.6   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| 2,4,6-Tribromophenol      | 77.1   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| p-Terphenyl-d14           | 70.5   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712736-03

Sample ID : MW-17-0714-BG 26FT

Site ID :

Collected By : Teresa Mofield  
Collection Date : 07/28/14 11:00

Project # : TX000836.0008.00004

| Parameter             | Result  | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|---------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 170000  | 1000 | 20000  | ug/l  |           | 9056MOD | 07/31/14 | 20   |
| Fluoride              | 1000    | 9.9  | 100    | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Nitrate               | 1900    | 23.  | 100    | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Nitrite               | U       | 28.  | 100    | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Sulfate               | 1200000 | 1500 | 100000 | ug/l  |           | 9056MOD | 07/31/14 | 20   |
| Cyanide               | U       | 1.8  | 5.0    | ug/l  |           | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 2100000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/01/14 | 1    |
| Aluminum              | 66.     | 2.0  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Aluminum, Dissolved   | 34.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Arsenic               | 0.63    | 0.25 | 1.0    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Arsenic, Dissolved    | 0.66    | 0.25 | 1.0    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Barium                | 15.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Barium, Dissolved     | 14.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Boron                 | 170     | 1.5  | 20.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Boron, Dissolved      | 180     | 1.5  | 20.    | ug/l  |           | 6020    | 08/20/14 | 1    |
| Cadmium               | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cadmium, Dissolved    | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Calcium               | 440000  | 460  | 10000  | ug/l  |           | 6020    | 08/14/14 | 10   |
| Calcium, Dissolved    | 440000  | 460  | 10000  | ug/l  | V         | 6020    | 08/14/14 | 10   |
| Chromium              | 2.0     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Chromium, Dissolved   | 1.8     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Copper                | U       | 0.52 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Copper, Dissolved     | 0.60    | 0.52 | 1.0    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Cobalt                | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cobalt, Dissolved     | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Iron                  | 100     | 50.  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Iron, Dissolved       | U       | 50.  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Lead                  | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Lead, Dissolved       | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Manganese             | 4.5     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Manganese, Dissolved  | 0.56    | 0.25 | 2.0    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Molybdenum            | 7.2     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Molybdenum, Dissolved | 7.1     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Nickel                | U       | 0.35 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Nickel, Dissolved     | 0.59    | 0.35 | 1.0    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Potassium             | 2200    | 37.  | 1000   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Potassium, Dissolved  | 2100    | 37.  | 1000   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Selenium              | 8.0     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Selenium, Dissolved   | 8.5     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Silver                | U       | 0.31 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712736-03

Sample ID : MW-17-0714-BG 26FT

Site ID :

Collected By : Teresa Mofield  
Collection Date : 07/28/14 11:00

Project # : TX000836.0008.00004

| Parameter                                           | Result | MDL   | RDL  | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|--------|-------|------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U      | 0.31  | 0.50 | ug/l   |           | 6020    | 08/13/14 | 1    |
| Sodium                                              | 80000  | 110   | 1000 | ug/l   |           | 6020    | 08/13/14 | 1    |
| Sodium, Dissolved                                   | 77000  | 110   | 1000 | ug/l   |           | 6020    | 08/13/14 | 1    |
| Uranium                                             | 4.0    | 0.33  | 10.  | ug/l   | J         | 6020    | 08/13/14 | 1    |
| Uranium, Dissolved                                  | 3.9    | 0.33  | 10.  | ug/l   | J         | 6020    | 08/13/14 | 1    |
| Vanadium                                            | 4.6    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Vanadium, Dissolved                                 | 4.4    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Zinc                                                | U      | 2.6   | 10.  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Zinc, Dissolved                                     | 5.6    | 2.6   | 10.  | ug/l   | J         | 6020    | 08/13/14 | 1    |
| Mercury                                             | U      | 0.049 | 0.20 | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U      | 31.   | 100  | ug/l   |           | 8015D/G | 07/30/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 102.   |       |      | % Rec. |           | 8015D/G | 07/30/14 | 1    |
| Volatile Organics                                   |        |       |      |        |           |         |          |      |
| Benzene                                             | U      | 0.33  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Carbon tetrachloride                                | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Chloroform                                          | U      | 0.32  | 5.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,2-Dibromoethane                                   | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1-Dichloroethane                                  | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,2-Dichloroethane                                  | U      | 0.36  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1-Dichloroethene                                  | U      | 0.40  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Ethylbenzene                                        | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Methylene Chloride                                  | U      | 1.0   | 5.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U      | 0.13  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Toluene                                             | U      | 0.78  | 5.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,1-Trichloroethane                               | U      | 0.32  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Tetrachloroethene                                   | U      | 0.37  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,2-Trichloroethane                               | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Vinyl chloride                                      | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| o-Xylene                                            | U      | 0.34  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| m&p-Xylene                                          | U      | 0.72  | 2.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Xylenes, Total                                      | U      | 1.1   | 3.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Surrogate Recovery                                  |        |       |      |        |           |         |          |      |
| Toluene-d8                                          | 102.   |       |      | % Rec. |           | 8260B   | 07/31/14 | 1    |
| Dibromofluoromethane                                | 106.   |       |      | % Rec. |           | 8260B   | 07/31/14 | 1    |
| 4-Bromofluorobenzene                                | 99.3   |       |      | % Rec. |           | 8260B   | 07/31/14 | 1    |
| Diesel and Oil Ranges                               |        |       |      |        |           |         |          |      |
| C10-C28 Diesel Range                                | U      | 22.   | 100  | ug/l   |           | 8015    | 08/01/14 | 1    |

U = ND (Not Detected)

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : MW-17-0714-BG 26FT  
Collected By : Teresa Mofield  
Collection Date : 07/28/14 11:00

ESC Sample # : L712736-03

Site ID :

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| C28-C40 Oil Range         | U      | 12.  | 100 | ug/l   |           | 8015   | 08/01/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| o-Terphenyl               | 105.   |      |     | % Rec. |           | 8015   | 08/01/14 | 1    |
| Base/Neutral Extractables |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene            | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| 1-Methylnaphthalene       | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| 2-Methylnaphthalene       | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| Naphthalene               | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| 2-Fluorophenol            | 48.2   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| Phenol-d5                 | 36.0   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| Nitrobenzene-d5           | 49.6   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| 2-Fluorobiphenyl          | 67.7   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| 2,4,6-Tribromophenol      | 71.8   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| p-Terphenyl-d14           | 69.5   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712736-04

Sample ID : EB-01-0714-BG

Site ID :

Collected By : Teresa Mofield  
Collection Date : 07/28/14 15:00

Project # : TX000836.0008.00004

| Parameter             | Result | MDL  | RDL   | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|--------|------|-------|-------|-----------|---------|----------|------|
| Chloride              | 250    | 52.  | 1000  | ug/l  | J         | 9056MOD | 07/30/14 | 1    |
| Fluoride              | U      | 9.9  | 100   | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Nitrate               | U      | 23.  | 100   | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Nitrite               | U      | 28.  | 100   | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Sulfate               | U      | 77.  | 5000  | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Cyanide               | U      | 1.8  | 5.0   | ug/l  |           | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 5000   | 2800 | 10000 | ug/l  | J         | 2540 C- | 08/01/14 | 1    |
| Aluminum              | 21.    | 2.0  | 50.   | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Aluminum, Dissolved   | 14.    | 2.0  | 50.   | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Arsenic               | U      | 0.25 | 1.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Arsenic, Dissolved    | U      | 0.25 | 1.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Barium                | U      | 0.36 | 2.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Barium, Dissolved     | U      | 0.36 | 2.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Boron                 | 46.    | 1.5  | 20.   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Boron, Dissolved      | 60.    | 1.5  | 20.   | ug/l  |           | 6020    | 08/20/14 | 1    |
| Cadmium               | U      | 0.16 | 0.50  | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cadmium, Dissolved    | U      | 0.16 | 0.50  | ug/l  |           | 6020    | 08/13/14 | 1    |
| Calcium               | U      | 46.  | 1000  | ug/l  |           | 6020    | 08/13/14 | 1    |
| Calcium, Dissolved    | U      | 46.  | 1000  | ug/l  |           | 6020    | 08/13/14 | 1    |
| Chromium              | 0.60   | 0.54 | 1.0   | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Chromium, Dissolved   | U      | 0.54 | 1.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Copper                | 0.61   | 0.52 | 1.0   | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Copper, Dissolved     | U      | 0.52 | 1.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cobalt                | U      | 0.26 | 1.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cobalt, Dissolved     | U      | 0.26 | 1.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Iron                  | U      | 50.  | 50.   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Iron, Dissolved       | U      | 50.  | 50.   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Lead                  | U      | 0.24 | 1.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Lead, Dissolved       | U      | 0.24 | 1.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Manganese             | 0.38   | 0.25 | 2.0   | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Manganese, Dissolved  | U      | 0.25 | 2.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Molybdenum            | U      | 0.14 | 2.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Molybdenum, Dissolved | U      | 0.14 | 2.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Nickel                | U      | 0.35 | 1.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Nickel, Dissolved     | U      | 0.35 | 1.0   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Potassium             | 68.    | 37.  | 1000  | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Potassium, Dissolved  | 42.    | 37.  | 1000  | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Selenium              | 0.98   | 0.38 | 2.0   | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Selenium, Dissolved   | 0.87   | 0.38 | 2.0   | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Silver                | U      | 0.31 | 0.50  | ug/l  |           | 6020    | 08/13/14 | 1    |

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712736-04

Sample ID : EB-01-0714-BG

Site ID :

Collected By : Teresa Mofield  
Collection Date : 07/28/14 15:00

Project # : TX000836.0008.00004

| Parameter                                           | Result | MDL   | RDL  | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|--------|-------|------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | 1.5    | 0.31  | 0.50 | ug/l   |           | 6020    | 08/13/14 | 1    |
| Sodium                                              | 230    | 110   | 1000 | ug/l   | J         | 6020    | 08/13/14 | 1    |
| Sodium, Dissolved                                   | 220    | 110   | 1000 | ug/l   | J         | 6020    | 08/13/14 | 1    |
| Uranium                                             | U      | 0.33  | 10.  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Uranium, Dissolved                                  | U      | 0.33  | 10.  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Vanadium                                            | U      | 0.18  | 1.0  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Vanadium, Dissolved                                 | U      | 0.18  | 1.0  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Zinc                                                | U      | 2.6   | 10.  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Zinc, Dissolved                                     | U      | 2.6   | 10.  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Mercury                                             | U      | 0.049 | 0.20 | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U      | 31.   | 100  | ug/l   |           | 8015D/G | 07/30/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 102.   |       |      | % Rec. |           | 8015D/G | 07/30/14 | 1    |
| Volatile Organics                                   |        |       |      |        |           |         |          |      |
| Benzene                                             | U      | 0.33  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Carbon tetrachloride                                | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Chloroform                                          | U      | 0.32  | 5.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,2-Dibromoethane                                   | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1-Dichloroethane                                  | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,2-Dichloroethane                                  | U      | 0.36  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1-Dichloroethene                                  | U      | 0.40  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Ethylbenzene                                        | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Methylene Chloride                                  | U      | 1.0   | 5.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U      | 0.13  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Toluene                                             | U      | 0.78  | 5.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,1-Trichloroethane                               | U      | 0.32  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Tetrachloroethene                                   | U      | 0.37  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,2-Trichloroethane                               | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Vinyl chloride                                      | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| o-Xylene                                            | U      | 0.34  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| m&p-Xylene                                          | U      | 0.72  | 2.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Xylenes, Total                                      | U      | 1.1   | 3.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Surrogate Recovery                                  |        |       |      |        |           |         |          |      |
| Toluene-d8                                          | 103.   |       |      | % Rec. |           | 8260B   | 07/31/14 | 1    |
| Dibromofluoromethane                                | 106.   |       |      | % Rec. |           | 8260B   | 07/31/14 | 1    |
| 4-Bromofluorobenzene                                | 99.5   |       |      | % Rec. |           | 8260B   | 07/31/14 | 1    |
| Diesel and Oil Ranges                               |        |       |      |        |           |         |          |      |
| C10-C28 Diesel Range                                | 35.    | 22.   | 100  | ug/l   | J         | 8015    | 08/01/14 | 1    |

U = ND (Not Detected)

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Est. 1970

# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : EB-01-0714-BG  
Collected By : Teresa Mofield  
Collection Date : 07/28/14 15:00

ESC Sample # : L712736-04

Site ID :

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| C28-C40 Oil Range         | U      | 12.  | 100 | ug/l   |           | 8015   | 08/01/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| o-Terphenyl               | 101.   |      |     | % Rec. |           | 8015   | 08/01/14 | 1    |
| Base/Neutral Extractables |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene            | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| 1-Methylnaphthalene       | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| 2-Methylnaphthalene       | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| Naphthalene               | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| 2-Fluorophenol            | 48.2   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| Phenol-d5                 | 33.6   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| Nitrobenzene-d5           | 50.1   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| 2-Fluorobiphenyl          | 70.3   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| 2,4,6-Tribromophenol      | 77.2   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| p-Terphenyl-d14           | 68.9   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712736-05

Sample ID : DUP-01-0714-BG

Site ID :

Collected By : Teresa Mofield  
Collection Date : 07/28/14 00:00

Project # : TX000836.0008.00004

| Parameter             | Result  | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|---------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 160000  | 1000 | 20000  | ug/l  |           | 9056MOD | 07/30/14 | 20   |
| Fluoride              | 1000    | 9.9  | 100    | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Nitrate               | 2300    | 23.  | 100    | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Nitrite               | U       | 28.  | 100    | ug/l  |           | 9056MOD | 07/30/14 | 1    |
| Sulfate               | 1200000 | 1500 | 100000 | ug/l  |           | 9056MOD | 07/30/14 | 20   |
| Cyanide               | U       | 1.8  | 5.0    | ug/l  |           | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 2100000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/01/14 | 1    |
| Aluminum              | 60.     | 2.0  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Aluminum, Dissolved   | 45.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Arsenic               | 0.66    | 0.25 | 1.0    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Arsenic, Dissolved    | 0.63    | 0.25 | 1.0    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Barium                | 15.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Barium, Dissolved     | 15.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Boron                 | 160     | 1.5  | 20.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Boron, Dissolved      | 190     | 1.5  | 20.    | ug/l  |           | 6020    | 08/20/14 | 1    |
| Cadmium               | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cadmium, Dissolved    | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Calcium               | 420000  | 460  | 10000  | ug/l  | V         | 6020    | 08/14/14 | 10   |
| Calcium, Dissolved    | 420000  | 460  | 10000  | ug/l  |           | 6020    | 08/14/14 | 10   |
| Chromium              | 1.7     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Chromium, Dissolved   | 1.5     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Copper                | U       | 0.52 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Copper, Dissolved     | U       | 0.52 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cobalt                | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cobalt, Dissolved     | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Iron                  | U       | 50.  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Iron, Dissolved       | U       | 50.  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Lead                  | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Lead, Dissolved       | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Manganese             | 3.8     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Manganese, Dissolved  | 3.7     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Molybdenum            | 7.4     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Molybdenum, Dissolved | 6.8     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Nickel                | U       | 0.35 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Nickel, Dissolved     | U       | 0.35 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Potassium             | 2100    | 37.  | 1000   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Potassium, Dissolved  | 2200    | 37.  | 1000   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Selenium              | 8.4     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Selenium, Dissolved   | 8.4     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Silver                | U       | 0.31 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712736-05

Sample ID : DUP-01-0714-BG

Site ID :

Collected By : Teresa Mofield  
Collection Date : 07/28/14 00:00

Project # : TX000836.0008.00004

| Parameter                                           | Result | MDL   | RDL  | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|--------|-------|------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U      | 0.31  | 0.50 | ug/l   |           | 6020    | 08/13/14 | 1    |
| Sodium                                              | 78000  | 110   | 1000 | ug/l   |           | 6020    | 08/13/14 | 1    |
| Sodium, Dissolved                                   | 77000  | 110   | 1000 | ug/l   |           | 6020    | 08/13/14 | 1    |
| Uranium                                             | 4.0    | 0.33  | 10.  | ug/l   | J         | 6020    | 08/13/14 | 1    |
| Uranium, Dissolved                                  | 3.9    | 0.33  | 10.  | ug/l   | J         | 6020    | 08/13/14 | 1    |
| Vanadium                                            | 4.5    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Vanadium, Dissolved                                 | 4.4    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Zinc                                                | U      | 2.6   | 10.  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Zinc, Dissolved                                     | U      | 2.6   | 10.  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Mercury                                             | U      | 0.049 | 0.20 | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U      | 31.   | 100  | ug/l   |           | 8015D/G | 07/30/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 102.   |       |      | % Rec. |           | 8015D/G | 07/30/14 | 1    |
| Volatile Organics                                   |        |       |      |        |           |         |          |      |
| Benzene                                             | U      | 0.33  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Carbon tetrachloride                                | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Chloroform                                          | U      | 0.32  | 5.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,2-Dibromoethane                                   | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1-Dichloroethane                                  | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,2-Dichloroethane                                  | U      | 0.36  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1-Dichloroethene                                  | U      | 0.40  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Ethylbenzene                                        | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Methylene Chloride                                  | U      | 1.0   | 5.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U      | 0.13  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Toluene                                             | U      | 0.78  | 5.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,1-Trichloroethane                               | U      | 0.32  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Tetrachloroethene                                   | U      | 0.37  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| 1,1,2-Trichloroethane                               | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Vinyl chloride                                      | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| o-Xylene                                            | U      | 0.34  | 1.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| m&p-Xylene                                          | U      | 0.72  | 2.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Xylenes, Total                                      | U      | 1.1   | 3.0  | ug/l   |           | 8260B   | 07/31/14 | 1    |
| Surrogate Recovery                                  |        |       |      |        |           |         |          |      |
| Toluene-d8                                          | 105.   |       |      | % Rec. |           | 8260B   | 07/31/14 | 1    |
| Dibromofluoromethane                                | 106.   |       |      | % Rec. |           | 8260B   | 07/31/14 | 1    |
| 4-Bromofluorobenzene                                | 99.6   |       |      | % Rec. |           | 8260B   | 07/31/14 | 1    |
| Diesel and Oil Ranges                               |        |       |      |        |           |         |          |      |
| C10-C28 Diesel Range                                | 24.    | 22.   | 100  | ug/l   | J         | 8015    | 08/01/14 | 1    |

U = ND (Not Detected)

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 30, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : DUP-01-0714-BG  
Collected By : Teresa Mofield  
Collection Date : 07/28/14 00:00

ESC Sample # : L712736-05

Site ID :

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| C28-C40 Oil Range         | U      | 12.  | 100 | ug/l   |           | 8015   | 08/01/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| o-Terphenyl               | 101.   |      |     | % Rec. |           | 8015   | 08/01/14 | 1    |
| Base/Neutral Extractables |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene            | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| 1-Methylnaphthalene       | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| 2-Methylnaphthalene       | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| Naphthalene               | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/01/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| 2-Fluorophenol            | 49.5   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| Phenol-d5                 | 34.5   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| Nitrobenzene-d5           | 51.2   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| 2-Fluorobiphenyl          | 74.1   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| 2,4,6-Tribromophenol      | 67.7   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |
| p-Terphenyl-d14           | 60.4   |      |     | % Rec. |           | 8270 C | 08/01/14 | 1    |

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Attachment A  
List of Analytes with QC Qualifiers

| Sample Number | Work Group | Sample Type | Analyte              | Run ID   | Qualifier |
|---------------|------------|-------------|----------------------|----------|-----------|
| L712736-01    | WG734853   | SAMP        | C28-C40 Oil Range    | R2971125 | J         |
|               | WG735726   | SAMP        | Cyanide              | R2973005 | JP1       |
|               | WG734861   | SAMP        | Benzo(a)pyrene       | R2970974 | J         |
|               | WG737003   | SAMP        | Aluminum, Dissolved  | R2978051 | J         |
|               | WG737007   | SAMP        | Copper               | R2978050 | J         |
| L712736-02    | WG734591   | SAMP        | 1,1-Dichloroethene   | R2972025 | J3        |
|               | WG734853   | SAMP        | C10-C28 Diesel Range | R2971125 | J         |
|               | WG734853   | SAMP        | C28-C40 Oil Range    | R2971125 | J         |
|               | WG737003   | SAMP        | Aluminum, Dissolved  | R2978051 | J         |
|               | WG737007   | SAMP        | Chromium             | R2978050 | J         |
|               | WG737003   | SAMP        | Chromium, Dissolved  | R2978051 | J         |
|               | WG737007   | SAMP        | Manganese            | R2978050 | J         |
|               | WG737003   | SAMP        | Manganese, Dissolved | R2978051 | J         |
|               | WG737007   | SAMP        | Potassium            | R2978050 | J         |
|               | WG737003   | SAMP        | Potassium, Dissolved | R2978051 | J         |
| L712736-03    | WG737003   | SAMP        | Aluminum, Dissolved  | R2978051 | J         |
|               | WG737007   | SAMP        | Arsenic              | R2978050 | J         |
|               | WG737003   | SAMP        | Arsenic, Dissolved   | R2978051 | J         |
|               | WG737003   | SAMP        | Calcium, Dissolved   | R2978067 | V         |
|               | WG737003   | SAMP        | Copper, Dissolved    | R2978051 | J         |
|               | WG737003   | SAMP        | Manganese, Dissolved | R2978051 | J         |
|               | WG737003   | SAMP        | Nickel, Dissolved    | R2978051 | J         |
|               | WG737007   | SAMP        | Uranium              | R2978050 | J         |
|               | WG737003   | SAMP        | Uranium, Dissolved   | R2978051 | J         |
|               | WG737003   | SAMP        | Zinc, Dissolved      | R2978051 | J         |
|               | WG734853   | SAMP        | C10-C28 Diesel Range | R2971125 | J         |
|               | WG734496   | SAMP        | Chloride             | R2970259 | J         |
|               | WG734543   | SAMP        | Dissolved Solids     | R2970905 | J         |
| L712736-04    | WG737007   | SAMP        | Aluminum             | R2978050 | J         |
|               | WG737003   | SAMP        | Aluminum, Dissolved  | R2978051 | J         |
|               | WG737007   | SAMP        | Chromium             | R2978050 | J         |
|               | WG737007   | SAMP        | Copper               | R2978050 | J         |
|               | WG737007   | SAMP        | Manganese            | R2978050 | J         |
|               | WG737007   | SAMP        | Potassium            | R2978050 | J         |
|               | WG737003   | SAMP        | Potassium, Dissolved | R2978051 | J         |
|               | WG737007   | SAMP        | Selenium             | R2978050 | J         |
|               | WG737003   | SAMP        | Selenium, Dissolved  | R2978051 | J         |
|               | WG737007   | SAMP        | Sodium               | R2978050 | J         |
|               | WG737003   | SAMP        | Sodium, Dissolved    | R2978051 | J         |
|               | WG734853   | SAMP        | C10-C28 Diesel Range | R2971125 | J         |
|               | WG737003   | SAMP        | Aluminum, Dissolved  | R2978051 | J         |
|               | WG737007   | SAMP        | Arsenic              | R2978050 | J         |
|               | WG737003   | SAMP        | Arsenic, Dissolved   | R2978051 | J         |
| L712736-05    | WG737007   | SAMP        | Calcium              | R2978066 | V         |
|               | WG737007   | SAMP        | Uranium              | R2978050 | J         |
|               | WG737003   | SAMP        | Uranium, Dissolved   | R2978051 | J         |

Attachment B  
Explanation of QC Qualifier Codes

| Qualifier | Meaning                                                                                                 |
|-----------|---------------------------------------------------------------------------------------------------------|
| J         | (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.   |
| J3        | The associated batch QC was outside the established quality control range for precision.                |
| P1        | RPD value not applicable for sample concentrations less than 5 times the reporting limit.               |
| V         | (ESC) - Additional QC Info: The sample concentration is too high to evaluate accurate spike recoveries. |

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy** - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision** - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate** - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC** - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Anions by Method 9056MOD              |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG734496</b> |
| Analysis Date:   | 7/30/2014 9:00:00 PM                  | Analyst:               | 577             |
| Instrument ID:   | IC-10                                 |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Method Blank

| Analyte         | CAS        | RDL     | MDL       | Qualifier |
|-----------------|------------|---------|-----------|-----------|
| <b>Chloride</b> | 16887-00-6 | < 1.00  | < 0.0519  |           |
| <b>Fluoride</b> | 16984-48-8 | < 0.100 | < 0.00990 |           |
| <b>Nitrate</b>  | 14797-55-8 | < 0.100 | < 0.0227  |           |
| <b>Nitrite</b>  | 14797-65-0 | < 0.100 | < 0.0277  |           |
| <b>Sulfate</b>  | 14808-79-8 | < 5.00  | < 0.0774  |           |



## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |  |  |                        |                 |
|------------------|---------------------------------------|--|--|------------------------|-----------------|
| Test:            | Anions by Method 9056MOD              |  |  | Matrix:                | Water - mg/L    |
| Project No:      | TX000836.0008.00004                   |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM |  |  | <b>Analytic Batch:</b> | <b>WG734496</b> |
| Collection Date: | 7/28/2014                             |  |  | Analyst:               | 577             |
| Analysis Date:   | 7/30/2014 9:00:00 PM                  |  |  |                        |                 |
| Instrument ID:   | IC-10                                 |  |  |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |  |  |                        |                 |

#### Laboratory Control Sample (LCS)

| Analyte  | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------|-----|------------|--------|-------|----------------|------|
| Chloride | 1   | 40         | 39.707 | 99    | 90 - 110       |      |
| Fluoride | 1   | 8          | 7.988  | 100   | 90 - 110       |      |
| Nitrate  | 1   | 8          | 8.0677 | 101   | 90 - 110       |      |
| Nitrite  | 1   | 8          | 7.8614 | 98    | 90 - 110       |      |
| Sulfate  | 1   | 40         | 39.846 | 100   | 90 - 110       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte  | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------|-----|------------|--------|-------|----------------|------|
| Chloride | 1   | 40         | 40.219 | 101   | 90 - 110       |      |
| Fluoride | 1   | 8          | 8.1452 | 102   | 90 - 110       |      |
| Nitrate  | 1   | 8          | 8.1688 | 102   | 90 - 110       |      |
| Nitrite  | 1   | 8          | 8.0231 | 100   | 90 - 110       |      |
| Sulfate  | 1   | 40         | 40.401 | 101   | 90 - 110       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte  | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|----------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Chloride | 1   | 40    | 39.707 | 99    | 40.219 | 101   | 90 - 110       | 1          | 20                 |      |
| Fluoride | 1   | 8     | 7.988  | 100   | 8.1452 | 102   | 90 - 110       | 2          | 20                 |      |
| Nitrate  | 1   | 8     | 8.0677 | 101   | 8.1688 | 102   | 90 - 110       | 1          | 20                 |      |
| Nitrite  | 1   | 8     | 7.8614 | 98    | 8.0231 | 100   | 90 - 110       | 2          | 20                 |      |
| Sulfate  | 1   | 40    | 39.846 | 100   | 40.401 | 101   | 90 - 110       | 1          | 20                 |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |  |  |                        |                 |
|------------------|---------------------------------------|--|--|------------------------|-----------------|
| Test:            | Anions by Method 9056MOD              |  |  | Matrix:                | Water - mg/L    |
| Project No:      | TX000836.0008.00004                   |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM |  |  | <b>Analytic Batch:</b> | <b>WG734496</b> |
| Collection Date: | 7/28/2014                             |  |  | Analyst:               | 577             |
| Analysis Date:   | 7/30/2014 9:00:00 PM                  |  |  |                        |                 |
| Instrument ID:   | IC-10                                 |  |  |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |  |  |                        |                 |

#### Sample Duplicate

L712736-02

| Analyte  | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|----------|-----|---------------|------------|-------|-------|-----------|
| Chloride | 50  | 387.53        | 379.61     | 2     | 20    |           |
| Fluoride | 1   | 2.4176        | 2.55       | 5     | 20    |           |
| Nitrate  | 1   | 0.8229        | 0.8143     | 1     | 20    |           |
| Nitrite  | 1   | <0.0277       | <0.0277    |       | 20    |           |
| Sulfate  | 50  | 3096.0        | 2987.9     | 4     | 20    |           |

#### Sample Duplicate

L712727-01

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Nitrate | 1   | 1.0065        | 1.0636     | 6     | 20    |           |
| Nitrite | 1   | <0.0277       | <0.0277    |       | 20    |           |
| Sulfate | 5   | 194.48        | 197.60     | 2     | 20    |           |

#### Matrix Spike / Matrix Spike Duplicate

L712737-01

| Analyte | Dil | Spike Value | Sample | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD | Control Limits | RPD Qual |
|---------|-----|-------------|--------|--------|-------|--------|-------|----------------|------------|-----|----------------|----------|
| Nitrate | 1   | 5           | 0.4263 | 5.4915 | 101   | 5.4749 | 101   | 80 - 120       |            | 0   | 20             |          |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Cyanide by Method 9012B               |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG735726</b> |
| Analysis Date:   | 8/7/2014 9:50:00 AM                   | Analyst:               | 578             |
| Instrument ID:   | LACHAT4                               |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Method Blank

| Analyte | CAS     | RDL       | MDL       | Qualifier |
|---------|---------|-----------|-----------|-----------|
| Cyanide | 57-12-5 | < 0.00500 | < 0.00180 |           |

#### Laboratory Control Sample (LCS)

| Analyte | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------|-----|------------|--------|-------|----------------|------|
| Cyanide | 1   | 0.1        | 0.0988 | 98.8  | 90 - 110       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------|-----|------------|--------|-------|----------------|------|
| Cyanide | 1   | 0.1        | 0.0996 | 99.6  | 90 - 110       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD | RPD Limits | Qual |
|---------|-----|-------|--------|-------|--------|-------|----------------|------------|-------------|------------|------|
| Cyanide | 1   | 0.1   | 0.0988 | 98.8  | 0.0996 | 99.6  | 90 - 110       | 0.81       | 20          |            |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |  |  |                        |                 |
|------------------|---------------------------------------|--|--|------------------------|-----------------|
| Test:            | Cyanide by Method 9012B               |  |  | Matrix:                | Water - mg/L    |
| Project No:      | TX000836.0008.00004                   |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM |  |  | <b>Analytic Batch:</b> | <b>WG735726</b> |
| Collection Date: | 7/28/2014                             |  |  | Analyst:               | 578             |
| Analysis Date:   | 8/7/2014 9:50:00 AM                   |  |  |                        |                 |
| Instrument ID:   | LACHAT4                               |  |  |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |  |  |                        |                 |

#### Sample Duplicate

L712736-01

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Cyanide | 1   | 0.0021        | <0.0018    | 200   | 20    | P1        |

#### Sample Duplicate

L712786-01

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Cyanide | 1   | <0.0018       | <0.0018    |       | 20    |           |

#### Matrix Spike / Matrix Spike Duplicate

L712736-05

| Analyte | Dil | Spike Value | Sample  | MS    | % Rec | MSD   | % Rec | Control Limits | % Rec Qual | RPD  | Control Limits | RPD Qual |
|---------|-----|-------------|---------|-------|-------|-------|-------|----------------|------------|------|----------------|----------|
| Cyanide | 1   | 0.2         | <0.0018 | 0.194 | 97    | 0.189 | 94.5  | 90 - 110       |            | 2.61 | 20             |          |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                              |                        |                 |
|------------------|----------------------------------------------|------------------------|-----------------|
| Test:            | Total Dissolved Solids by Method 2540 C-2011 |                        |                 |
| Project No:      | TX000836.0008.00004                          | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM        | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                    | <b>Analytic Batch:</b> | <b>WG734543</b> |
| Analysis Date:   | 8/1/2014 3:19:00 PM                          | Analyst:               | 519             |
| Instrument ID:   | WETBAL2                                      |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05               |                        |                 |

#### Method Blank

| Analyte          | CAS     | RDL    | MDL    | Qualifier |
|------------------|---------|--------|--------|-----------|
| Dissolved Solids | DSOLIDS | < 10.0 | < 2.82 |           |

#### Laboratory Control Sample (LCS)

| Analyte          | Dil | True Value | Found | % Rec | Control Limits | Qual |
|------------------|-----|------------|-------|-------|----------------|------|
| Dissolved Solids | 1   | 8800       | 8720  | 99.1  | 85 - 115       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte          | Dil | True Value | Found | % Rec | Control Limits | Qual |
|------------------|-----|------------|-------|-------|----------------|------|
| Dissolved Solids | 1   | 8800       | 8690  | 98.8  | 85 - 115       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte          | Dil | Spike | LCS  | % Rec | LCSD | % Rec | Control Limits | % Rec Qual | Control RPD % RPD | Control RPD Limits | Control RPD Qual |
|------------------|-----|-------|------|-------|------|-------|----------------|------------|-------------------|--------------------|------------------|
| Dissolved Solids | 1   | 8800  | 8720 | 99.1  | 8690 | 98.8  | 85 - 115       | 0.34       | 5                 |                    |                  |

## Quality Control Summary

**SDG: L712736**

**ARCADIS US - TX**

|                  |                                              |                        |                 |
|------------------|----------------------------------------------|------------------------|-----------------|
| Test:            | Total Dissolved Solids by Method 2540 C-2011 |                        |                 |
| Project No:      | TX000836.0008.00004                          | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM        | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                    | <b>Analytic Batch:</b> | <b>WG734543</b> |
| Analysis Date:   | 8/1/2014 3:19:00 PM                          | Analyst:               | 519             |
| Instrument ID:   | WETBAL2                                      |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05               |                        |                 |

### Sample Duplicate

L712736-05

| Analyte          | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|------------------|-----|---------------|------------|-------|-------|-----------|
| Dissolved Solids | 1   | 2105          | 2200       | 4.41  | 5     |           |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Mercury by Method 7470A               |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG736040</b> |
| Analysis Date:   | 8/8/2014 10:56:00 AM                  | Analyst:               | 572             |
| Instrument ID:   | CVAA3                                 | Prep Date:             | 8/7/2014        |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Method Blank

| Analyte | CAS       | RDL     | MDL      | Qualifier |
|---------|-----------|---------|----------|-----------|
| Mercury | 7439-97-6 | < 0.200 | < 0.0490 |           |

#### Laboratory Control Sample (LCS)

| Analyte | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------|-----|------------|--------|-------|----------------|------|
| Mercury | 1   | 3          | 3.0934 | 103   | 85 - 115       |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Mercury by Method 7470A               |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG736040</b> |
| Analysis Date:   | 8/8/2014 10:56:00 AM                  | Analyst:               | 572             |
| Instrument ID:   | CVAA3                                 | Prep Date:             | 8/7/2014        |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Sample Duplicate

L712736-01

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Mercury | 1   | <0.049        | <0.049     |       | 20    |           |

#### Serial Dilution

L712736-01

| Analyte | Dil | Sample Result | SD Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|-----------|-------|-------|-----------|
| Mercury | 5   | <0.049        | <0.245    |       | 10    |           |

#### Matrix Spike / Matrix Spike Duplicate

L712736-01

| Analyte | Dil | Spike Value | Sample | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD | Control Limits | RPD Qual |
|---------|-----|-------------|--------|--------|-------|--------|-------|----------------|------------|-----|----------------|----------|
| Mercury | 1   | 3           | <0.049 | 2.7974 | 92    | 2.9087 | 96    | 80 - 120       |            | 4   | 20             |          |



## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 8:52:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Method Blank

| Analyte              | CAS       | RDL    | MDL     | Qualifier |
|----------------------|-----------|--------|---------|-----------|
| Aluminum,Dissolved   | 7429-90-5 | < 100  | 6.48    |           |
| Arsenic,Dissolved    | 7440-38-2 | < 2.00 | < 0.250 |           |
| Barium,Dissolved     | 7440-39-3 | < 5.00 | < 0.360 |           |
| Boron,Dissolved      | 7440-42-8 | < 20.0 | < 1.5   |           |
| Cadmium,Dissolved    | 7440-43-9 | < 1.00 | < 0.160 |           |
| Calcium,Dissolved    | 7440-70-2 | < 1000 | < 46.0  |           |
| Chromium,Dissolved   | 7440-47-3 | < 1.00 | < 0.540 |           |
| Cobalt,Dissolved     | 7440-48-4 | < 2.00 | < 0.260 |           |
| Copper,Dissolved     | 7440-50-8 | < 5.00 | < 0.520 |           |
| Iron,Dissolved       | 7439-89-6 | < 100  | < 15.0  |           |
| Lead,Dissolved       | 7439-92-1 | < 2.00 | < 0.240 |           |
| Manganese,Dissolved  | 7439-96-5 | < 5.00 | < 0.250 |           |
| Molybdenum,Dissolved | 7439-98-7 | < 5.00 | < 0.140 |           |
| Nickel,Dissolved     | 7440-02-0 | < 2.00 | < 0.350 |           |
| Potassium,Dissolved  | 7440-09-7 | < 1000 | 46.5    |           |
| Selenium,Dissolved   | 7782-49-2 | < 2.00 | 0.596   |           |
| Silver,Dissolved     | 7440-22-4 | < 2.00 | < 0.310 |           |
| Sodium,Dissolved     | 7440-23-5 | < 1000 | < 110   |           |
| Uranium,Dissolved    | 7440-61-1 | < 10.0 | < 0.330 |           |
| Vanadium,Dissolved   | 7440-62-2 | < 5.00 | < 0.180 |           |
| Zinc,Dissolved       | 7440-66-6 | < 25.0 | < 2.56  |           |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:21:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Method Blank

| Analyte    | CAS       | RDL    | MDL     | Qualifier |
|------------|-----------|--------|---------|-----------|
| Aluminum   | 7429-90-5 | < 100  | 3.37    |           |
| Arsenic    | 7440-38-2 | < 2.00 | < 0.250 |           |
| Barium     | 7440-39-3 | < 5.00 | < 0.360 |           |
| Boron      | 7440-42-8 | < 20.0 | 2.52    |           |
| Cadmium    | 7440-43-9 | < 1.00 | < 0.160 |           |
| Calcium    | 7440-70-2 | < 1000 | < 46.0  |           |
| Chromium   | 7440-47-3 | < 1.00 | < 0.540 |           |
| Cobalt     | 7440-48-4 | < 2.00 | < 0.260 |           |
| Copper     | 7440-50-8 | < 5.00 | < 0.520 |           |
| Iron       | 7439-89-6 | < 100  | < 15.0  |           |
| Lead       | 7439-92-1 | < 2.00 | < 0.240 |           |
| Manganese  | 7439-96-5 | < 5.00 | < 0.250 |           |
| Molybdenum | 7439-98-7 | < 5.00 | < 0.140 |           |
| Nickel     | 7440-02-0 | < 2.00 | < 0.350 |           |
| Potassium  | 7440-09-7 | < 1000 | < 37.0  |           |
| Selenium   | 7782-49-2 | < 2.00 | 0.714   |           |
| Silver     | 7440-22-4 | < 2.00 | < 0.310 |           |
| Sodium     | 7440-23-5 | < 1000 | < 110   |           |
| Uranium    | 7440-61-1 | < 10.0 | < 0.330 |           |
| Vanadium   | 7440-62-2 | < 5.00 | < 0.180 |           |
| Zinc       | 7440-66-6 | < 25.0 | < 2.56  |           |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 8:52:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

### Laboratory Control Sample (LCS)

| Analyte              | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------------------|-----|------------|--------|-------|----------------|------|
| Aluminum,Dissolved   | 1   | 1110       | 1003.7 | 90    | 70 - 130       |      |
| Arsenic,Dissolved    | 1   | 111        | 98.223 | 88    | 85 - 115       |      |
| Barium,Dissolved     | 1   | 111        | 99.882 | 90    | 85 - 115       |      |
| Boron,Dissolved      | 1   | 111        | 112.24 | 101   | 70 - 130       |      |
| Cadmium,Dissolved    | 1   | 111        | 97.930 | 88    | 85 - 115       |      |
| Calcium,Dissolved    | 1   | 11100      | 10231  | 92    | 70 - 130       |      |
| Chromium,Dissolved   | 1   | 111        | 98.361 | 89    | 85 - 115       |      |
| Cobalt,Dissolved     | 1   | 111        | 99.060 | 89    | 85 - 115       |      |
| Copper,Dissolved     | 1   | 111        | 98.338 | 89    | 85 - 115       |      |
| Iron,Dissolved       | 1   | 1110       | 1004.8 | 91    | 85 - 115       |      |
| Lead,Dissolved       | 1   | 111        | 98.459 | 89    | 85 - 115       |      |
| Manganese,Dissolved  | 1   | 111        | 99.623 | 90    | 85 - 115       |      |
| Molybdenum,Dissolved | 1   | 111        | 102.26 | 92    | 85 - 115       |      |
| Nickel,Dissolved     | 1   | 111        | 99.430 | 90    | 85 - 115       |      |
| Potassium,Dissolved  | 1   | 11100      | 9852.2 | 89    | 70 - 130       |      |
| Selenium,Dissolved   | 1   | 111        | 97.620 | 88    | 85 - 115       |      |
| Silver,Dissolved     | 1   | 111        | 102.54 | 92    | 85 - 115       |      |
| Sodium,Dissolved     | 1   | 11100      | 9946.8 | 90    | 70 - 130       |      |
| Uranium,Dissolved    | 1   | 111        | 98.006 | 88    | 70 - 130       |      |
| Vanadium,Dissolved   | 1   | 111        | 98.601 | 89    | 85 - 115       |      |
| Zinc,Dissolved       | 1   | 111        | 97.672 | 88    | 85 - 115       |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 8:52:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte              | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------------------|-----|------------|--------|-------|----------------|------|
| Aluminum,Dissolved   | 1   | 1110       | 1018.2 | 92    | 70 - 130       |      |
| Arsenic,Dissolved    | 1   | 111        | 97.318 | 88    | 85 - 115       |      |
| Barium,Dissolved     | 1   | 111        | 100.90 | 91    | 85 - 115       |      |
| Boron,Dissolved      | 1   | 111        | 121.39 | 109   | 70 - 130       |      |
| Cadmium,Dissolved    | 1   | 111        | 97.919 | 88    | 85 - 115       |      |
| Calcium,Dissolved    | 1   | 11100      | 10287  | 93    | 70 - 130       |      |
| Chromium,Dissolved   | 1   | 111        | 99.150 | 89    | 85 - 115       |      |
| Cobalt,Dissolved     | 1   | 111        | 97.966 | 88    | 85 - 115       |      |
| Copper,Dissolved     | 1   | 111        | 97.303 | 88    | 85 - 115       |      |
| Iron,Dissolved       | 1   | 1110       | 989.32 | 89    | 85 - 115       |      |
| Lead,Dissolved       | 1   | 111        | 98.857 | 89    | 85 - 115       |      |
| Manganese,Dissolved  | 1   | 111        | 98.806 | 89    | 85 - 115       |      |
| Molybdenum,Dissolved | 1   | 111        | 101.17 | 91    | 85 - 115       |      |
| Nickel,Dissolved     | 1   | 111        | 98.464 | 89    | 85 - 115       |      |
| Potassium,Dissolved  | 1   | 11100      | 9946.2 | 90    | 70 - 130       |      |
| Selenium,Dissolved   | 1   | 111        | 97.783 | 88    | 85 - 115       |      |
| Silver,Dissolved     | 1   | 111        | 103.08 | 93    | 85 - 115       |      |
| Sodium,Dissolved     | 1   | 11100      | 9947.9 | 90    | 70 - 130       |      |
| Uranium,Dissolved    | 1   | 111        | 98.923 | 89    | 70 - 130       |      |
| Vanadium,Dissolved   | 1   | 111        | 100.05 | 90    | 85 - 115       |      |
| Zinc,Dissolved       | 1   | 111        | 95.954 | 86    | 85 - 115       |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 8:52:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte              | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|----------------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Aluminum,Dissolved   | 1   | 1110  | 1003.7 | 90    | 1018.2 | 92    | 70 - 130       | 1          | 20                 |      |
| Arsenic,Dissolved    | 1   | 111   | 98.223 | 88    | 97.318 | 88    | 85 - 115       | 1          | 20                 |      |
| Barium,Dissolved     | 1   | 111   | 99.882 | 90    | 100.90 | 91    | 85 - 115       | 1          | 20                 |      |
| Boron,Dissolved      | 1   | 111   | 112.24 | 101   | 121.39 | 109   | 70 - 130       | 8          | 20                 |      |
| Cadmium,Dissolved    | 1   | 111   | 97.930 | 88    | 97.919 | 88    | 85 - 115       | 0          | 20                 |      |
| Calcium,Dissolved    | 1   | 11100 | 10231  | 92    | 10287  | 93    | 70 - 130       | 1          | 20                 |      |
| Chromium,Dissolved   | 1   | 111   | 98.361 | 89    | 99.150 | 89    | 85 - 115       | 1          | 20                 |      |
| Cobalt,Dissolved     | 1   | 111   | 99.060 | 89    | 97.966 | 88    | 85 - 115       | 1          | 20                 |      |
| Copper,Dissolved     | 1   | 111   | 98.338 | 89    | 97.303 | 88    | 85 - 115       | 1          | 20                 |      |
| Iron,Dissolved       | 1   | 1110  | 1004.8 | 91    | 989.32 | 89    | 85 - 115       | 2          | 20                 |      |
| Lead,Dissolved       | 1   | 111   | 98.459 | 89    | 98.857 | 89    | 85 - 115       | 0          | 20                 |      |
| Manganese,Dissolved  | 1   | 111   | 99.623 | 90    | 98.806 | 89    | 85 - 115       | 1          | 20                 |      |
| Molybdenum,Dissolved | 1   | 111   | 102.26 | 92    | 101.17 | 91    | 85 - 115       | 1          | 20                 |      |
| Nickel,Dissolved     | 1   | 111   | 99.430 | 90    | 98.464 | 89    | 85 - 115       | 1          | 20                 |      |
| Potassium,Dissolved  | 1   | 11100 | 9852.2 | 89    | 9946.2 | 90    | 70 - 130       | 1          | 20                 |      |
| Selenium,Dissolved   | 1   | 111   | 97.620 | 88    | 97.783 | 88    | 85 - 115       | 0          | 20                 |      |
| Silver,Dissolved     | 1   | 111   | 102.54 | 92    | 103.08 | 93    | 85 - 115       | 1          | 20                 |      |
| Sodium,Dissolved     | 1   | 11100 | 9946.8 | 90    | 9947.9 | 90    | 70 - 130       | 0          | 20                 |      |
| Uranium,Dissolved    | 1   | 111   | 98.006 | 88    | 98.923 | 89    | 70 - 130       | 1          | 20                 |      |
| Vanadium,Dissolved   | 1   | 111   | 98.601 | 89    | 100.05 | 90    | 85 - 115       | 1          | 20                 |      |
| Zinc,Dissolved       | 1   | 111   | 97.672 | 88    | 95.954 | 86    | 85 - 115       | 2          | 20                 |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:21:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

### Laboratory Control Sample (LCS)

| Analyte    | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|------------|-----|------------|--------|-------|----------------|------|
| Aluminum   | 1   | 1110       | 996.26 | 90    | 70 - 130       |      |
| Arsenic    | 1   | 111        | 98.350 | 89    | 85 - 115       |      |
| Barium     | 1   | 111        | 99.041 | 89    | 85 - 115       |      |
| Boron      | 1   | 111        | 95.712 | 86    | 70 - 130       |      |
| Cadmium    | 1   | 111        | 97.570 | 88    | 85 - 115       |      |
| Calcium    | 1   | 11100      | 10367  | 93    | 70 - 130       |      |
| Chromium   | 1   | 111        | 99.555 | 90    | 85 - 115       |      |
| Cobalt     | 1   | 111        | 99.346 | 90    | 85 - 115       |      |
| Copper     | 1   | 111        | 98.356 | 89    | 85 - 115       |      |
| Iron       | 1   | 1110       | 1006.2 | 91    | 85 - 115       |      |
| Lead       | 1   | 111        | 99.458 | 90    | 85 - 115       |      |
| Manganese  | 1   | 111        | 99.817 | 90    | 85 - 115       |      |
| Molybdenum | 1   | 111        | 102.13 | 92    | 85 - 115       |      |
| Nickel     | 1   | 111        | 98.809 | 89    | 85 - 115       |      |
| Potassium  | 1   | 11100      | 10035  | 90    | 70 - 130       |      |
| Selenium   | 1   | 111        | 98.952 | 89    | 85 - 115       |      |
| Silver     | 1   | 111        | 102.07 | 92    | 85 - 115       |      |
| Sodium     | 1   | 11100      | 9954.8 | 90    | 70 - 130       |      |
| Uranium    | 1   | 111        | 99.328 | 89    | 70 - 130       |      |
| Vanadium   | 1   | 111        | 99.476 | 90    | 85 - 115       |      |
| Zinc       | 1   | 111        | 97.621 | 88    | 85 - 115       |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:21:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte    | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|------------|-----|------------|--------|-------|----------------|------|
| Aluminum   | 1   | 1110       | 993.16 | 89    | 70 - 130       |      |
| Arsenic    | 1   | 111        | 97.750 | 88    | 85 - 115       |      |
| Barium     | 1   | 111        | 99.868 | 90    | 85 - 115       |      |
| Boron      | 1   | 111        | 99.227 | 89    | 70 - 130       |      |
| Cadmium    | 1   | 111        | 98.035 | 88    | 85 - 115       |      |
| Calcium    | 1   | 11100      | 10214  | 92    | 70 - 130       |      |
| Chromium   | 1   | 111        | 98.612 | 89    | 85 - 115       |      |
| Cobalt     | 1   | 111        | 98.521 | 89    | 85 - 115       |      |
| Copper     | 1   | 111        | 98.232 | 88    | 85 - 115       |      |
| Iron       | 1   | 1110       | 997.20 | 90    | 85 - 115       |      |
| Lead       | 1   | 111        | 99.722 | 90    | 85 - 115       |      |
| Manganese  | 1   | 111        | 98.680 | 89    | 85 - 115       |      |
| Molybdenum | 1   | 111        | 101.31 | 91    | 85 - 115       |      |
| Nickel     | 1   | 111        | 99.048 | 89    | 85 - 115       |      |
| Potassium  | 1   | 11100      | 9851.6 | 89    | 70 - 130       |      |
| Selenium   | 1   | 111        | 97.828 | 88    | 85 - 115       |      |
| Silver     | 1   | 111        | 103.06 | 93    | 85 - 115       |      |
| Sodium     | 1   | 11100      | 9842.4 | 89    | 70 - 130       |      |
| Uranium    | 1   | 111        | 99.146 | 89    | 70 - 130       |      |
| Vanadium   | 1   | 111        | 99.101 | 89    | 85 - 115       |      |
| Zinc       | 1   | 111        | 96.746 | 87    | 85 - 115       |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |  |  |                        |                 |
|------------------|---------------------------------------|--|--|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |  |  | Matrix:                | Water - ug/L    |
| Project No:      | TX000836.0008.00004                   |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM |  |  | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Collection Date: | 7/28/2014                             |  |  | Analyst:               | 664             |
| Analysis Date:   | 8/13/2014 7:21:00 PM                  |  |  | Prep Date:             | 8/13/2014       |
| Instrument ID:   | ICPMS8                                |  |  |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |  |  |                        |                 |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte    | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Aluminum   | 1   | 1110  | 996.26 | 90    | 993.16 | 89    | 70 - 130       | 0          | 20                 |      |
| Arsenic    | 1   | 111   | 98.350 | 89    | 97.750 | 88    | 85 - 115       | 1          | 20                 |      |
| Barium     | 1   | 111   | 99.041 | 89    | 99.868 | 90    | 85 - 115       | 1          | 20                 |      |
| Boron      | 1   | 111   | 95.712 | 86    | 99.227 | 89    | 70 - 130       | 4          | 20                 |      |
| Cadmium    | 1   | 111   | 97.570 | 88    | 98.035 | 88    | 85 - 115       | 0          | 20                 |      |
| Calcium    | 1   | 11100 | 10367  | 93    | 10214  | 92    | 70 - 130       | 1          | 20                 |      |
| Chromium   | 1   | 111   | 99.555 | 90    | 98.612 | 89    | 85 - 115       | 1          | 20                 |      |
| Cobalt     | 1   | 111   | 99.346 | 90    | 98.521 | 89    | 85 - 115       | 1          | 20                 |      |
| Copper     | 1   | 111   | 98.356 | 89    | 98.232 | 88    | 85 - 115       | 0          | 20                 |      |
| Iron       | 1   | 1110  | 1006.2 | 91    | 997.20 | 90    | 85 - 115       | 1          | 20                 |      |
| Lead       | 1   | 111   | 99.458 | 90    | 99.722 | 90    | 85 - 115       | 0          | 20                 |      |
| Manganese  | 1   | 111   | 99.817 | 90    | 98.680 | 89    | 85 - 115       | 1          | 20                 |      |
| Molybdenum | 1   | 111   | 102.13 | 92    | 101.31 | 91    | 85 - 115       | 1          | 20                 |      |
| Nickel     | 1   | 111   | 98.809 | 89    | 99.048 | 89    | 85 - 115       | 0          | 20                 |      |
| Potassium  | 1   | 11100 | 10035  | 90    | 9851.6 | 89    | 70 - 130       | 2          | 20                 |      |
| Selenium   | 1   | 111   | 98.952 | 89    | 97.828 | 88    | 85 - 115       | 1          | 20                 |      |
| Silver     | 1   | 111   | 102.07 | 92    | 103.06 | 93    | 85 - 115       | 1          | 20                 |      |
| Sodium     | 1   | 11100 | 9954.8 | 90    | 9842.4 | 89    | 70 - 130       | 1          | 20                 |      |
| Uranium    | 1   | 111   | 99.328 | 89    | 99.146 | 89    | 70 - 130       | 0          | 20                 |      |
| Vanadium   | 1   | 111   | 99.476 | 90    | 99.101 | 89    | 85 - 115       | 0          | 20                 |      |
| Zinc       | 1   | 111   | 97.621 | 88    | 96.746 | 87    | 85 - 115       | 1          | 20                 |      |



## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 8:52:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Serial Dilution

L712736-03

| Analyte              | Dil | Sample Result | SD Result | % RPD | Limit | Qualifier |
|----------------------|-----|---------------|-----------|-------|-------|-----------|
| Aluminum,Dissolved   | 5   | 34.176        | 42.113    | 23    | 10    |           |
| Arsenic,Dissolved    | 5   | 0.6592        | <1.25     | 11    | 10    |           |
| Barium,Dissolved     | 5   | 14.446        | 15.500    | 7     | 10    |           |
| Boron,Dissolved      | 5   | 177.11        | 133.00    | 25    | 10    |           |
| Cadmium,Dissolved    | 5   | <0.16         | <0.8      |       | 10    |           |
| Chromium,Dissolved   | 5   | 1.7940        | <2.7      | 29    | 10    |           |
| Cobalt,Dissolved     | 5   | <0.26         | <1.3      |       | 10    |           |
| Copper,Dissolved     | 5   | 0.5970        | <2.6      | 36    | 10    |           |
| Iron,Dissolved       | 5   | <15           | <75       |       | 10    |           |
| Lead,Dissolved       | 5   | <0.24         | <1.2      |       | 10    |           |
| Manganese,Dissolved  | 5   | 0.5617        | <1.25     | 40    | 10    |           |
| Molybdenum,Dissolved | 5   | 7.1002        | 7.4059    | 4     | 10    |           |
| Nickel,Dissolved     | 5   | 0.5948        | <1.75     | 112   | 10    |           |
| Potassium,Dissolved  | 5   | 2121.2        | 2546.5    | 20    | 10    |           |
| Selenium,Dissolved   | 5   | 8.5181        | 11.105    | 30    | 10    |           |
| Silver,Dissolved     | 5   | <0.31         | <1.55     |       | 10    |           |
| Sodium,Dissolved     | 5   | 76826         | 86257     | 12    | 10    |           |
| Uranium,Dissolved    | 5   | 3.8706        | 4.2095    | 9     | 10    |           |
| Vanadium,Dissolved   | 5   | 4.3521        | 5.0052    | 15    | 10    |           |
| Zinc,Dissolved       | 5   | 5.6014        | 15.045    | 169   | 10    |           |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 8:52:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Matrix Spike / Matrix Spike Duplicate

L712736-03

| Analyte              | Dil | Spike Value | Sample | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD | Control Limits | RPD |
|----------------------|-----|-------------|--------|--------|-------|--------|-------|----------------|------------|-----|----------------|-----|
| Aluminum,Dissolved   | 1   | 1110        | 34.176 | 1002.9 | 87    | 1010.6 | 88    | 70 - 130       |            | 1   | 20             |     |
| Arsenic,Dissolved    | 1   | 111         | 0.6592 | 99.516 | 89    | 99.864 | 89    | 75 - 125       |            | 0   | 20             |     |
| Barium,Dissolved     | 1   | 111         | 14.446 | 112.45 | 88    | 113.73 | 89    | 75 - 125       |            | 1   | 20             |     |
| Boron,Dissolved      | 1   | 111         | 177.11 | 309.50 | 119   | 302.59 | 113   | 70 - 130       |            | 2   | 20             |     |
| Cadmium,Dissolved    | 1   | 111         | <0.16  | 96.715 | 87    | 98.129 | 88    | 75 - 125       |            | 1   | 20             |     |
| Calcium,Dissolved    | 10  | 1110        | 440108 | 426802 | 0     | 424358 | 0     | 70 - 130       | V          | 1   | 20             |     |
| Chromium,Dissolved   | 1   | 111         | 1.7940 | 99.050 | 88    | 100.73 | 89    | 75 - 125       |            | 2   | 20             |     |
| Cobalt,Dissolved     | 1   | 111         | <0.26  | 96.642 | 87    | 97.498 | 88    | 75 - 125       |            | 1   | 20             |     |
| Copper,Dissolved     | 1   | 111         | 0.5970 | 96.852 | 87    | 97.576 | 87    | 75 - 125       |            | 1   | 20             |     |
| Iron,Dissolved       | 1   | 1110        | <15    | 986.47 | 88    | 1000.8 | 89    | 75 - 125       |            | 1   | 20             |     |
| Lead,Dissolved       | 1   | 111         | <0.24  | 96.814 | 87    | 98.383 | 89    | 75 - 125       |            | 2   | 20             |     |
| Manganese,Dissolved  | 1   | 111         | 0.5617 | 98.699 | 88    | 99.453 | 89    | 75 - 125       |            | 1   | 20             |     |
| Molybdenum,Dissolved | 1   | 111         | 7.1002 | 106.40 | 89    | 107.37 | 90    | 75 - 125       |            | 1   | 20             |     |
| Nickel,Dissolved     | 1   | 111         | 0.5948 | 95.955 | 86    | 96.350 | 86    | 75 - 125       |            | 0   | 20             |     |
| Potassium,Dissolved  | 1   | 11100       | 2121.2 | 11861  | 88    | 11986  | 89    | 70 - 130       |            | 1   | 20             |     |
| Selenium,Dissolved   | 1   | 111         | 8.5181 | 102.14 | 84    | 102.01 | 84    | 75 - 125       |            | 0   | 20             |     |
| Silver,Dissolved     | 1   | 111         | <0.31  | 93.673 | 84    | 98.998 | 89    | 75 - 125       |            | 6   | 20             |     |
| Sodium,Dissolved     | 1   | 11100       | 76826  | 86006  | 83    | 86588  | 88    | 70 - 130       |            | 1   | 20             |     |
| Uranium,Dissolved    | 1   | 111         | 3.8706 | 101.58 | 88    | 103.61 | 90    | 70 - 130       |            | 2   | 20             |     |
| Vanadium,Dissolved   | 1   | 111         | 4.3521 | 104.56 | 90    | 105.52 | 91    | 75 - 125       |            | 1   | 20             |     |
| Zinc,Dissolved       | 1   | 111         | 5.6014 | 94.599 | 80    | 95.177 | 81    | 75 - 125       |            | 1   | 20             |     |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 8:52:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Post Digest Spike

L712736-03

| Analyte              | Dil | Spike Value | Sample | Result | % Rec | Control Limits | Qualifier |
|----------------------|-----|-------------|--------|--------|-------|----------------|-----------|
| Aluminum,Dissolved   | 1   | 1110        | 34.176 | 1096.2 | 96    | 70-130         |           |
| Arsenic,Dissolved    | 1   | 111         | 0.6592 | 106.88 | 96    | 85-115         |           |
| Barium,Dissolved     | 1   | 111         | 14.446 | 121.48 | 96    | 85-115         |           |
| Boron,Dissolved      | 1   | 111         | 177.11 | 312.68 | 122   | 70-130         |           |
| Cadmium,Dissolved    | 1   | 111         | <0.16  | 105.74 | 95    | 85-115         |           |
| Chromium,Dissolved   | 1   | 111         | 1.7940 | 107.41 | 95    | 85-115         |           |
| Cobalt,Dissolved     | 1   | 111         | <0.26  | 104.18 | 94    | 85-115         |           |
| Copper,Dissolved     | 1   | 111         | 0.5970 | 104.28 | 93    | 85-115         |           |
| Iron,Dissolved       | 1   | 1110        | <15    | 1074.8 | 96    | 85-115         |           |
| Lead,Dissolved       | 1   | 111         | <0.24  | 105.79 | 95    | 85-115         |           |
| Manganese,Dissolved  | 1   | 111         | 0.5617 | 106.47 | 95    | 85-115         |           |
| Molybdenum,Dissolved | 1   | 111         | 7.1002 | 113.22 | 96    | 85-115         |           |
| Nickel,Dissolved     | 1   | 111         | 0.5948 | 103.24 | 92    | 85-115         |           |
| Potassium,Dissolved  | 1   | 11100       | 2121.2 | 12538  | 94    | 70-130         |           |
| Selenium,Dissolved   | 1   | 111         | 8.5181 | 108.20 | 90    | 85-115         |           |
| Silver,Dissolved     | 1   | 111         | <0.31  | 51.386 | 46    | 85-115         |           |
| Sodium,Dissolved     | 1   | 11100       | 76826  | 87520  | 96    | 70-130         |           |
| Uranium,Dissolved    | 1   | 111         | 3.8706 | 110.42 | 96    | 70-130         |           |
| Vanadium,Dissolved   | 1   | 111         | 4.3521 | 113.19 | 98    | 85-115         |           |
| Zinc,Dissolved       | 1   | 111         | 5.6014 | 105.30 | 90    | 85-115         |           |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:21:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Serial Dilution

L712736-05

| Analyte    | Dil | Sample Result | SD Result | % RPD | Limit | Qualifier |
|------------|-----|---------------|-----------|-------|-------|-----------|
| Aluminum   | 5   | 60.325        | 71.083    | 18    | 10    |           |
| Arsenic    | 5   | 0.6651        | <1.25     | 8     | 10    |           |
| Barium     | 5   | 14.999        | 15.944    | 6     | 10    |           |
| Boron      | 5   | 157.19        | 173.81    | 11    | 10    |           |
| Cadmium    | 5   | <0.16         | <0.8      |       | 10    |           |
| Chromium   | 5   | 1.6723        | <2.7      | 40    | 10    |           |
| Cobalt     | 5   | <0.26         | <1.3      |       | 10    |           |
| Copper     | 5   | <0.52         | <2.6      |       | 10    |           |
| Iron       | 5   | 41.965        | <75       | 0     | 10    |           |
| Lead       | 5   | <0.24         | <1.2      |       | 10    |           |
| Manganese  | 5   | 3.8046        | 4.0327    | 6     | 10    |           |
| Molybdenum | 5   | 7.4270        | 7.7612    | 4     | 10    |           |
| Nickel     | 5   | <0.35         | <1.75     |       | 10    |           |
| Potassium  | 5   | 2119.4        | 2392.8    | 13    | 10    |           |
| Selenium   | 5   | 8.4529        | 9.1170    | 8     | 10    |           |
| Silver     | 5   | <0.31         | <1.55     |       | 10    |           |
| Sodium     | 5   | 77721         | 82883     | 7     | 10    |           |
| Uranium    | 5   | 4.0052        | 4.2463    | 6     | 10    |           |
| Vanadium   | 5   | 4.4657        | 4.9237    | 10    | 10    |           |
| Zinc       | 5   | <2.56         | <12.8     |       | 10    |           |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:21:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Matrix Spike / Matrix Spike Duplicate

L712736-05

| Analyte    | Dil | Spike Value | Sample | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD | Control Limits | RPD |
|------------|-----|-------------|--------|--------|-------|--------|-------|----------------|------------|-----|----------------|-----|
| Aluminum   | 1   | 1110        | 60.325 | 1059.7 | 90    | 1044.9 | 89    | 70 - 130       |            | 1   | 20             |     |
| Arsenic    | 1   | 111         | 0.6651 | 100.78 | 90    | 100.60 | 90    | 75 - 125       |            | 0   | 20             |     |
| Barium     | 1   | 111         | 14.999 | 115.92 | 91    | 112.93 | 88    | 75 - 125       |            | 3   | 20             |     |
| Boron      | 1   | 111         | 157.19 | 250.19 | 84    | 251.60 | 85    | 70 - 130       |            | 1   | 20             |     |
| Cadmium    | 1   | 111         | <0.16  | 98.897 | 89    | 97.395 | 88    | 75 - 125       |            | 2   | 20             |     |
| Calcium    | 10  | 1110        | 422811 | 499404 | 690   | 438033 | 137   | 70 - 130       | V          | 13  | 20             |     |
| Chromium   | 1   | 111         | 1.6723 | 101.42 | 90    | 100.92 | 89    | 75 - 125       |            | 0   | 20             |     |
| Cobalt     | 1   | 111         | <0.26  | 99.160 | 89    | 98.269 | 88    | 75 - 125       |            | 1   | 20             |     |
| Copper     | 1   | 111         | <0.52  | 99.403 | 89    | 98.926 | 89    | 75 - 125       |            | 0   | 20             |     |
| Iron       | 1   | 1110        | 41.965 | 1053.8 | 91    | 1054.9 | 91    | 75 - 125       |            | 0   | 20             |     |
| Lead       | 1   | 111         | <0.24  | 100.13 | 90    | 98.885 | 89    | 75 - 125       |            | 1   | 20             |     |
| Manganese  | 1   | 111         | 3.8046 | 103.18 | 90    | 103.38 | 90    | 75 - 125       |            | 0   | 20             |     |
| Molybdenum | 1   | 111         | 7.4270 | 109.85 | 92    | 109.87 | 92    | 75 - 125       |            | 0   | 20             |     |
| Nickel     | 1   | 111         | <0.35  | 97.974 | 88    | 97.444 | 88    | 75 - 125       |            | 1   | 20             |     |
| Potassium  | 1   | 11100       | 2119.4 | 12055  | 90    | 11848  | 88    | 70 - 130       |            | 2   | 20             |     |
| Selenium   | 1   | 111         | 8.4529 | 102.24 | 84    | 102.68 | 85    | 75 - 125       |            | 0   | 20             |     |
| Silver     | 1   | 111         | <0.31  | 94.655 | 85    | 95.186 | 86    | 75 - 125       |            | 1   | 20             |     |
| Sodium     | 1   | 11100       | 77721  | 87339  | 87    | 87082  | 84    | 70 - 130       |            | 0   | 20             |     |
| Uranium    | 1   | 111         | 4.0052 | 106.27 | 92    | 104.32 | 90    | 70 - 130       |            | 2   | 20             |     |
| Vanadium   | 1   | 111         | 4.4657 | 106.18 | 92    | 105.19 | 91    | 75 - 125       |            | 1   | 20             |     |
| Zinc       | 1   | 111         | <2.56  | 97.038 | 86    | 97.032 | 86    | 75 - 125       |            | 0   | 20             |     |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:21:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Post Digest Spike

L712736-05

| Analyte    | Dil | Spike Value | Sample | Result | % Rec | Control Limits | Qualifier |
|------------|-----|-------------|--------|--------|-------|----------------|-----------|
| Aluminum   | 1   | 1110        | 60.325 | 1096.7 | 93    | 70-130         |           |
| Arsenic    | 1   | 111         | 0.6651 | 103.93 | 93    | 85-115         |           |
| Barium     | 1   | 111         | 14.999 | 115.84 | 91    | 85-115         |           |
| Boron      | 1   | 111         | 157.19 | 275.36 | 106   | 70-130         |           |
| Cadmium    | 1   | 111         | <0.16  | 100.06 | 90    | 85-115         |           |
| Chromium   | 1   | 111         | 1.6723 | 104.20 | 92    | 85-115         |           |
| Cobalt     | 1   | 111         | <0.26  | 101.01 | 91    | 85-115         |           |
| Copper     | 1   | 111         | <0.52  | 101.59 | 91    | 85-115         |           |
| Iron       | 1   | 1110        | 41.965 | 1072.2 | 93    | 85-115         |           |
| Lead       | 1   | 111         | <0.24  | 101.91 | 92    | 85-115         |           |
| Manganese  | 1   | 111         | 3.8046 | 106.36 | 92    | 85-115         |           |
| Molybdenum | 1   | 111         | 7.4270 | 112.85 | 95    | 85-115         |           |
| Nickel     | 1   | 111         | <0.35  | 100.25 | 90    | 85-115         |           |
| Potassium  | 1   | 11100       | 2119.4 | 12210  | 91    | 70-130         |           |
| Selenium   | 1   | 111         | 8.4529 | 104.50 | 87    | 85-115         |           |
| Silver     | 1   | 111         | <0.31  | 34.135 | 31    | 85-115         |           |
| Sodium     | 1   | 11100       | 77721  | 85009  | 66    | 70-130         |           |
| Uranium    | 1   | 111         | 4.0052 | 107.69 | 93    | 70-130         |           |
| Vanadium   | 1   | 111         | 4.4657 | 109.21 | 94    | 85-115         |           |
| Zinc       | 1   | 111         | <2.56  | 99.558 | 89    | 85-115         |           |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Volatile TPH by Method 8015D/GRO      |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG734527</b> |
| Analysis Date:   | 7/30/2014 7:20:00 PM                  | Analyst:               | 621             |
| Instrument ID:   | VOCGC12                               |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

#### Method Blank

| Analyte                   | CAS       | RDL     | MDL      | Qualifier |
|---------------------------|-----------|---------|----------|-----------|
| TPH (GC/FID) Low Fraction | 8006-61-9 | < 0.100 | < 0.0314 |           |

#### Laboratory Control Sample (LCS)

| Analyte                   | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------------|-----|------------|--------|-------|----------------|------|
| TPH (GC/FID) Low Fraction | 1   | 5.5        | 6.0268 | 110   | 67 - 132       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte                   | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------------|-----|------------|--------|-------|----------------|------|
| TPH (GC/FID) Low Fraction | 1   | 5.5        | 6.2154 | 113   | 67 - 132       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte                   | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD | RPD Limits | Qual |
|---------------------------|-----|-------|--------|-------|--------|-------|----------------|------------|-------------|------------|------|
| TPH (GC/FID) Low Fraction | 1   | 5.5   | 6.0268 | 110   | 6.2154 | 113   | 67 - 132       | 3.08       | 20          |            |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Volatile TPH by Method 8015D/GRO      |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG734527</b> |
| Analysis Date:   | 7/30/2014 7:20:00 PM                  | Analyst:               | 621             |
| Instrument ID:   | VOCGC12                               |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

### Matrix Spike / Matrix Spike Duplicate

L711663-04

| Analyte                   | Dil | Spike Value | Sample  | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD  | Control Limits | RPD |
|---------------------------|-----|-------------|---------|--------|-------|--------|-------|----------------|------------|------|----------------|-----|
| TPH (GC/FID) Low Fraction | 1   | 5.5         | <0.0314 | 6.3333 | 115   | 5.9328 | 108   | 50 - 143       |            | 6.53 | 20             |     |



## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Volatile TPH by Method 8015D/GRO      |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG734527</b> |
| Analysis Date:   | 7/30/2014 7:20:00 PM                  | Analyst:               | 621             |
| Instrument ID:   | VOCGC12                               |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

### Surrogate Summary

#### Laboratory

| Sample ID      | Instrument | File ID | ppm   | % Rec | ppm   | % Rec |
|----------------|------------|---------|-------|-------|-------|-------|
| L712736-01     | VOCGC12    | 0730_50 | 0.204 | 102   |       |       |
| L712736-02     | VOCGC12    | 0730_51 | 0.205 | 102   |       |       |
| L712736-03     | VOCGC12    | 0730_52 | 0.204 | 102   |       |       |
| L712736-04     | VOCGC12    | 0730_53 | 0.204 | 102   |       |       |
| L712736-05     | VOCGC12    | 0730_54 | 0.203 | 102   |       |       |
| LCS WG734527   | VOCGC12    | 0730_39 | 0.201 | 100   | 0.208 | 104   |
| LCSD WG734527  | VOCGC12    | 0730_40 | 0.201 | 101   | 0.208 | 104   |
| MS WG734527    | VOCGC12    | 0730_41 | 0.202 | 101   | 0.209 | 104   |
| MSD WG734527   | VOCGC12    | 0730_42 | 0.203 | 102   | 0.208 | 104   |
| BLANK WG734527 | VOCGC12    | 0730_44 | 0.205 | 102   | 0.204 | 102   |

--A,A,A-TRIFLUOROTOLUENE(FID)

True Value: 0.2 ppm Limits: 62 - 128

--A,A,A-TRIFLUOROTOLUENE(PID)

True Value: 0.2 ppm Limits: 55 - 122

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                            |                        |                 |
|------------------|--------------------------------------------|------------------------|-----------------|
| Test:            | Volatile Organic Compounds by Method 8260B |                        |                 |
| Project No:      | TX000836.0008.00004                        | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM      | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                  | <b>Analytic Batch:</b> | <b>WG734591</b> |
| Analysis Date:   | 7/30/2014 11:56:00 PM                      | Analyst:               | 644             |
| Instrument ID:   | VOCMS25                                    |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05             |                        |                 |

#### Method Blank

| Analyte                          | CAS       | RDL       | MDL        | Qualifier |
|----------------------------------|-----------|-----------|------------|-----------|
| <b>1,1,1,2-Tetrachloroethane</b> | 630-20-6  | < 0.00100 | < 0.000385 |           |
| <b>1,1,1-Trichloroethane</b>     | 71-55-6   | < 0.00100 | < 0.000319 |           |
| <b>1,1,2,2-Tetrachloroethane</b> | 79-34-5   | < 0.00100 | < 0.000130 |           |
| <b>1,1,2-Trichloroethane</b>     | 79-00-5   | < 0.00100 | < 0.000383 |           |
| <b>1,1-Dichloroethane</b>        | 75-34-3   | < 0.00100 | < 0.000259 |           |
| <b>1,1-Dichloroethene</b>        | 75-35-4   | < 0.00100 | < 0.000398 |           |
| <b>1,2-Dibromoethane</b>         | 106-93-4  | < 0.00100 | < 0.000381 |           |
| <b>1,2-Dichloroethane</b>        | 107-06-2  | < 0.00100 | < 0.000361 |           |
| <b>Benzene</b>                   | 71-43-2   | < 0.00100 | < 0.000331 |           |
| <b>Carbon tetrachloride</b>      | 56-23-5   | < 0.00100 | < 0.000379 |           |
| <b>Chloroform</b>                | 67-66-3   | < 0.00500 | < 0.000324 |           |
| <b>Ethylbenzene</b>              | 100-41-4  | < 0.00100 | < 0.000384 |           |
| <b>m&amp;p-Xylenes</b>           | 1330-20-7 | < 0.00200 | < 0.000719 |           |
| <b>Methylene Chloride</b>        | 75-09-2   | < 0.00500 | < 0.00100  |           |
| <b>o-Xylene</b>                  | 95-47-6   | < 0.00100 | < 0.000341 |           |
| <b>Tetrachloroethene</b>         | 127-18-4  | < 0.00100 | < 0.000372 |           |
| <b>Toluene</b>                   | 108-88-3  | < 0.00500 | < 0.000780 |           |
| <b>Vinyl chloride</b>            | 75-01-4   | < 0.00100 | < 0.000259 |           |
| <b>Xylenes, Total</b>            | 1330-20-7 | < 0.00300 | < 0.00106  |           |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                            |                        |                 |
|------------------|--------------------------------------------|------------------------|-----------------|
| Test:            | Volatile Organic Compounds by Method 8260B |                        |                 |
| Project No:      | TX000836.0008.00004                        | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM      | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                  | <b>Analytic Batch:</b> | <b>WG734591</b> |
| Analysis Date:   | 7/30/2014 11:56:00 PM                      | Analyst:               | 644             |
| Instrument ID:   | VOCMS25                                    |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05             |                        |                 |

### Laboratory Control Sample (LCS)

| Analyte                          | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------------------------------|-----|------------|--------|-------|----------------|------|
| <b>1,1,1,2-Tetrachloroethane</b> | 1   | 0.025      | 0.0234 | 93.7  | 74.2 - 124     |      |
| <b>1,1,1-Trichloroethane</b>     | 1   | 0.025      | 0.0246 | 98.6  | 73.2 - 123     |      |
| <b>1,1,2,2-Tetrachloroethane</b> | 1   | 0.025      | 0.0268 | 107   | 70.7 - 122     |      |
| <b>1,1,2-Trichloroethane</b>     | 1   | 0.025      | 0.0244 | 97.5  | 77.7 - 118     |      |
| <b>1,1-Dichloroethane</b>        | 1   | 0.025      | 0.0267 | 107   | 70.7 - 126     |      |
| <b>1,1-Dichloroethene</b>        | 1   | 0.025      | 0.0250 | 100   | 67.8 - 129     |      |
| <b>1,2-Dibromoethane</b>         | 1   | 0.025      | 0.0247 | 98.8  | 76.6 - 121     |      |
| <b>1,2-Dichloroethane</b>        | 1   | 0.025      | 0.0271 | 108   | 68.8 - 124     |      |
| <b>Benzene</b>                   | 1   | 0.025      | 0.0244 | 97.6  | 74.8 - 121     |      |
| <b>Carbon tetrachloride</b>      | 1   | 0.025      | 0.0240 | 96    | 70.2 - 123     |      |
| <b>Chloroform</b>                | 1   | 0.025      | 0.0233 | 93.1  | 76 - 121       |      |
| <b>Ethylbenzene</b>              | 1   | 0.025      | 0.0222 | 88.8  | 78.8 - 122     |      |
| <b>m&amp;p-Xylenes</b>           | 1   | 0.05       | 0.0468 | 93.6  | 78.8 - 121     |      |
| <b>Methylene Chloride</b>        | 1   | 0.025      | 0.0241 | 96.5  | 70.3 - 120     |      |
| <b>o-Xylene</b>                  | 1   | 0.025      | 0.0233 | 93    | 77.6 - 122     |      |
| <b>Tetrachloroethene</b>         | 1   | 0.025      | 0.0224 | 89.6  | 72.6 - 126     |      |
| <b>Toluene</b>                   | 1   | 0.025      | 0.0249 | 99.5  | 79.7 - 116     |      |
| <b>Vinyl chloride</b>            | 1   | 0.025      | 0.0271 | 108   | 65.9 - 128     |      |
| <b>Xylenes, Total</b>            | 1   | 0.075      | 0.0700 | 93.4  | 78.7 - 121     |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                            |                        |                 |
|------------------|--------------------------------------------|------------------------|-----------------|
| Test:            | Volatile Organic Compounds by Method 8260B |                        |                 |
| Project No:      | TX000836.0008.00004                        | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM      | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                  | <b>Analytic Batch:</b> | <b>WG734591</b> |
| Analysis Date:   | 7/30/2014 11:56:00 PM                      | Analyst:               | 644             |
| Instrument ID:   | VOCMS25                                    |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05             |                        |                 |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte                   | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------------|-----|------------|--------|-------|----------------|------|
| 1,1,1,2-Tetrachloroethane | 1   | 0.025      | 0.0237 | 94.9  | 74.2 - 124     |      |
| 1,1,1-Trichloroethane     | 1   | 0.025      | 0.0261 | 104   | 73.2 - 123     |      |
| 1,1,2,2-Tetrachloroethane | 1   | 0.025      | 0.0257 | 103   | 70.7 - 122     |      |
| 1,1,2-Trichloroethane     | 1   | 0.025      | 0.0235 | 94.1  | 77.7 - 118     |      |
| 1,1-Dichloroethane        | 1   | 0.025      | 0.0269 | 108   | 70.7 - 126     |      |
| 1,1-Dichloroethene        | 1   | 0.025      | 0.0272 | 109   | 67.8 - 129     |      |
| 1,2-Dibromoethane         | 1   | 0.025      | 0.0232 | 92.8  | 76.6 - 121     |      |
| 1,2-Dichloroethane        | 1   | 0.025      | 0.0266 | 106   | 68.8 - 124     |      |
| Benzene                   | 1   | 0.025      | 0.0252 | 101   | 74.8 - 121     |      |
| Carbon tetrachloride      | 1   | 0.025      | 0.0256 | 102   | 70.2 - 123     |      |
| Chloroform                | 1   | 0.025      | 0.0240 | 96    | 76 - 121       |      |
| Ethylbenzene              | 1   | 0.025      | 0.0229 | 91.7  | 78.8 - 122     |      |
| m&p-Xylenes               | 1   | 0.05       | 0.0464 | 92.8  | 78.8 - 121     |      |
| Methylene Chloride        | 1   | 0.025      | 0.0232 | 92.8  | 70.3 - 120     |      |
| o-Xylene                  | 1   | 0.025      | 0.0232 | 93    | 77.6 - 122     |      |
| Tetrachloroethene         | 1   | 0.025      | 0.0230 | 92    | 72.6 - 126     |      |
| Toluene                   | 1   | 0.025      | 0.0243 | 97.3  | 79.7 - 116     |      |
| Vinyl chloride            | 1   | 0.025      | 0.0289 | 116   | 65.9 - 128     |      |
| Xylenes, Total            | 1   | 0.075      | 0.0696 | 92.9  | 78.7 - 121     |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                            |                        |                 |
|------------------|--------------------------------------------|------------------------|-----------------|
| Test:            | Volatile Organic Compounds by Method 8260B |                        |                 |
| Project No:      | TX000836.0008.00004                        | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM      | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                  | <b>Analytic Batch:</b> | <b>WG734591</b> |
| Analysis Date:   | 7/30/2014 11:56:00 PM                      | Analyst:               | 644             |
| Instrument ID:   | VOCMS25                                    |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05             |                        |                 |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte                   | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control    | % Rec | Control RPD |             |
|---------------------------|-----|-------|--------|-------|--------|-------|------------|-------|-------------|-------------|
|                           |     |       |        |       |        |       | Limits     | Qual  | % RPD       | Limits Qual |
| 1,1,1,2-Tetrachloroethane | 1   | 0.025 | 0.0234 | 93.7  | 0.0237 | 94.9  | 74.2 - 124 |       | 1.33        | 20          |
| 1,1,1-Trichloroethane     | 1   | 0.025 | 0.0246 | 98.6  | 0.0261 | 104   | 73.2 - 123 |       | 5.79        | 20          |
| 1,1,2,2-Tetrachloroethane | 1   | 0.025 | 0.0268 | 107   | 0.0257 | 103   | 70.7 - 122 |       | 4.23        | 20          |
| 1,1,2-Trichloroethane     | 1   | 0.025 | 0.0244 | 97.5  | 0.0235 | 94.1  | 77.7 - 118 |       | 3.53        | 20          |
| 1,1-Dichloroethane        | 1   | 0.025 | 0.0267 | 107   | 0.0269 | 108   | 70.7 - 126 |       | 0.59        | 20          |
| 1,1-Dichloroethene        | 1   | 0.025 | 0.0250 | 100   | 0.0272 | 109   | 67.8 - 129 |       | 8.3         | 20          |
| 1,2-Dibromoethane         | 1   | 0.025 | 0.0247 | 98.8  | 0.0232 | 92.8  | 76.6 - 121 |       | 6.21        | 20          |
| 1,2-Dichloroethane        | 1   | 0.025 | 0.0271 | 108   | 0.0266 | 106   | 68.8 - 124 |       | 1.75        | 20          |
| Benzene                   | 1   | 0.025 | 0.0244 | 97.6  | 0.0252 | 101   | 74.8 - 121 |       | 3.28        | 20          |
| Carbon tetrachloride      | 1   | 0.025 | 0.0240 | 96    | 0.0256 | 102   | 70.2 - 123 |       | 6.48        | 20          |
| Chloroform                | 1   | 0.025 | 0.0233 | 93.1  | 0.0240 | 96    | 76 - 121   |       | 3.08        | 20          |
| Ethylbenzene              | 1   | 0.025 | 0.0222 | 88.8  | 0.0229 | 91.7  | 78.8 - 122 |       | 3.18        | 20          |
| m&p-Xylenes               | 1   | 0.05  | 0.0468 | 93.6  | 0.0464 | 92.8  | 78.8 - 121 |       | 0.81        | 20          |
| Methylene Chloride        | 1   | 0.025 | 0.0241 | 96.5  | 0.0232 | 92.8  | 70.3 - 120 |       | 3.91        | 20          |
| o-Xylene                  | 1   | 0.025 | 0.0233 | 93    | 0.0232 | 93    | 77.6 - 122 |       | 0.05        | 20          |
| Tetrachloroethene         | 1   | 0.025 | 0.0224 | 89.6  | 0.0230 | 92    | 72.6 - 126 |       | 2.63        | 20          |
| Toluene                   | 1   | 0.025 | 0.0249 | 99.5  | 0.0243 | 97.3  | 79.7 - 116 |       | 2.22        | 20          |
| Vinyl chloride            | 1   | 0.025 | 0.0271 | 108   | 0.0289 | 116   | 65.9 - 128 |       | 6.45        | 20          |
| Xylenes, Total            | 1   | 0.075 | 0.0700 | 93.4  | 0.0696 | 92.9  | 78.7 - 121 |       | 0.56        | 20          |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                            |                        |                 |
|------------------|--------------------------------------------|------------------------|-----------------|
| Test:            | Volatile Organic Compounds by Method 8260B |                        |                 |
| Project No:      | TX000836.0008.00004                        | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM      | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                  | <b>Analytic Batch:</b> | <b>WG734591</b> |
| Analysis Date:   | 7/30/2014 11:56:00 PM                      | Analyst:               | 644             |
| Instrument ID:   | VOCMS25                                    |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05             |                        |                 |

#### Matrix Spike / Matrix Spike Duplicate

L712736-01

| Analyte                   | Dil | Spike Value | Sample  | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD  | Control Limits | RPD Qual |
|---------------------------|-----|-------------|---------|--------|-------|--------|-------|----------------|------------|------|----------------|----------|
| 1,1,1,2-Tetrachloroethane | 1   | 0.025       | <0.0004 | 0.0245 | 97.8  | 0.0243 | 97.1  | 70.5 - 132     |            | 0.8  | 20             |          |
| 1,1,1-Trichloroethane     | 1   | 0.025       | <0.0003 | 0.0249 | 99.7  | 0.0263 | 105   | 58.7 - 134     |            | 5.36 | 20             |          |
| 1,1,2,2-Tetrachloroethane | 1   | 0.025       | <0.0001 | 0.0281 | 112   | 0.0283 | 113   | 64.9 - 145     |            | 0.81 | 20             |          |
| 1,1,2-Trichloroethane     | 1   | 0.025       | <0.0004 | 0.0245 | 97.8  | 0.0249 | 99.7  | 74.1 - 130     |            | 1.83 | 20             |          |
| 1,1-Dichloroethane        | 1   | 0.025       | <0.0003 | 0.0245 | 98.1  | 0.0263 | 105   | 64 - 134       |            | 7.17 | 20             |          |
| 1,1-Dichloroethene        | 1   | 0.025       | <0.0004 | 0.0228 | 91    | 0.0280 | 112   | 48.8 - 144     |            | 20.7 | 20             | J3       |
| 1,2-Dibromoethane         | 1   | 0.025       | <0.0004 | 0.0245 | 98.2  | 0.0254 | 102   | 73.8 - 131     |            | 3.34 | 20             |          |
| 1,2-Dichloroethane        | 1   | 0.025       | <0.0004 | 0.0240 | 96    | 0.0281 | 112   | 60.7 - 132     |            | 15.7 | 20             |          |
| Benzene                   | 1   | 0.025       | <0.0003 | 0.0239 | 95.6  | 0.0254 | 102   | 58.6 - 133     |            | 6.22 | 20             |          |
| Carbon tetrachloride      | 1   | 0.025       | <0.0004 | 0.0243 | 97.3  | 0.0258 | 103   | 60.6 - 139     |            | 6.01 | 20             |          |
| Chloroform                | 1   | 0.025       | <0.0003 | 0.0218 | 87.1  | 0.0238 | 95    | 66.1 - 133     |            | 8.69 | 20             |          |
| Ethylbenzene              | 1   | 0.025       | <0.0004 | 0.0237 | 94.7  | 0.0241 | 96.3  | 62.7 - 136     |            | 1.67 | 20             |          |
| m&p-Xylenes               | 1   | 0.05        | <0.0007 | 0.0489 | 97.8  | 0.0473 | 94.7  | 64.1 - 133     |            | 3.29 | 20             |          |
| Methylene Chloride        | 1   | 0.025       | <0.001  | 0.0223 | 86.7  | 0.0254 | 98.9  | 61.5 - 125     |            | 12.8 | 20             |          |
| o-Xylene                  | 1   | 0.025       | <0.0003 | 0.0242 | 96.9  | 0.0239 | 95.7  | 67.1 - 133     |            | 1.32 | 20             |          |
| Tetrachloroethene         | 1   | 0.025       | <0.0004 | 0.0232 | 92.6  | 0.0233 | 93.2  | 57.4 - 141     |            | 0.64 | 20             |          |
| Toluene                   | 1   | 0.025       | <0.0008 | 0.0258 | 103   | 0.0244 | 97.4  | 67.8 - 124     |            | 5.77 | 20             |          |
| Vinyl chloride            | 1   | 0.025       | <0.0003 | 0.0244 | 97.5  | 0.0283 | 113   | 44.3 - 143     |            | 14.8 | 20             |          |
| Xylenes, Total            | 1   | 0.075       | <0.0011 | 0.0731 | 97.5  | 0.0712 | 95    | 65.6 - 133     |            | 2.64 | 20             |          |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                            |                        |                 |
|------------------|--------------------------------------------|------------------------|-----------------|
| Test:            | Volatile Organic Compounds by Method 8260B |                        |                 |
| Project No:      | TX000836.0008.00004                        | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM      | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                  | <b>Analytic Batch:</b> | <b>WG734591</b> |
| Analysis Date:   | 7/30/2014 11:56:00 PM                      | Analyst:               | 644             |
| Instrument ID:   | VOCMS25                                    |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05             |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0730\_31

Analyzed: 07/30/14 203400

|                    | IS1      |      | IS2      |      | IS3      |      | DCB      |      |
|--------------------|----------|------|----------|------|----------|------|----------|------|
|                    | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| <b>12 Hr. Std</b>  | 393546   | 3.81 | 643764   | 4.13 | 106233   | 5.27 | 315159   | 7.67 |
| <b>Upper Limit</b> | 787000   | 4.31 | 1290000  | 4.63 | 212000   | 5.77 | 630000   | 8.17 |
| <b>Lower Limit</b> | 197000   | 3.31 | 322000   | 3.63 | 53100    | 4.77 | 158000   | 7.17 |
| Sample ID          | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| L712736-01         | 416499   | 3.81 | 668984   | 4.13 | 113140   | 5.27 | 342819   | 7.67 |
| L712736-02         | 382256   | 3.80 | 629718   | 4.12 | 104917   | 5.27 | 311640   | 7.67 |
| L712736-03         | 376323   | 3.80 | 611990   | 4.12 | 101009   | 5.27 | 303500   | 7.67 |
| L712736-04         | 390048   | 3.80 | 664557   | 4.12 | 108561   | 5.27 | 316427   | 7.67 |
| L712736-05         | 375685   | 3.80 | 614786   | 4.12 | 102711   | 5.27 | 305760   | 7.67 |
| MSD WG734591       | 416531   | 3.80 | 707484   | 4.12 | 115277   | 5.27 | 332436   | 7.67 |
| MS WG734591        | 463330   | 3.80 | 669594   | 4.12 | 112032   | 5.27 | 323731   | 7.67 |
| LCSD WG734591      | 401806   | 3.80 | 663686   | 4.12 | 110142   | 5.27 | 320465   | 7.67 |
| LCS WG734591       | 413850   | 3.80 | 683122   | 4.12 | 113483   | 5.27 | 339593   | 7.67 |
| BLANK WG734591     | 421871   | 3.80 | 707877   | 4.12 | 116400   | 5.27 | 325908   | 7.67 |

### Legend:

IS1 -- PENTAFLUOROBENZENE  
IS2 -- 1,4-DIFLUOROBENZENE  
IS3 -- 2-BROMO-1-CHLOROPROPANE  
DCB -- 1,4-DICHLOROBENZENE-D4

## Quality Control Summary

**SDG: L712736**

**ARCADIS US - TX**

|                  |                                            |                        |                 |
|------------------|--------------------------------------------|------------------------|-----------------|
| Test:            | Volatile Organic Compounds by Method 8260B |                        |                 |
| Project No:      | TX000836.0008.00004                        | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM      | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                  | <b>Analytic Batch:</b> | <b>WG734591</b> |
| Analysis Date:   | 7/30/2014 11:56:00 PM                      | Analyst:               | 644             |
| Instrument ID:   | VOCMS25                                    |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05             |                        |                 |

## Surrogate Summary

|                |            | BFB     |        |       | DFM    |       | TD8    |       | TFT    |       |
|----------------|------------|---------|--------|-------|--------|-------|--------|-------|--------|-------|
| Laboratory     |            |         |        |       |        |       |        |       |        |       |
| Sample ID      | Instrument | File ID | ppm    | % Rec | ppm    | % Rec | ppm    | % Rec | ppm    | % Rec |
| L712736-01     | VOCMS25    | 0730_41 | 0.0396 | 99.1  | 0.0463 | 116   | 0.0430 | 107   |        |       |
| L712736-02     | VOCMS25    | 0730_42 | 0.0402 | 100   | 0.0428 | 107   | 0.0434 | 109   |        |       |
| L712736-03     | VOCMS25    | 0730_43 | 0.0397 | 99.3  | 0.0424 | 106   | 0.0409 | 102   |        |       |
| L712736-04     | VOCMS25    | 0730_44 | 0.0398 | 99.5  | 0.0425 | 106   | 0.0412 | 103   |        |       |
| L712736-05     | VOCMS25    | 0730_45 | 0.0398 | 99.6  | 0.0425 | 106   | 0.0420 | 105   |        |       |
| LCS WG734591   | VOCMS25    | 0730_32 | 0.0379 | 94.9  | 0.0415 | 104   | 0.0432 | 108   | 0.0400 | 99.9  |
| LCSD WG734591  | VOCMS25    | 0730_33 | 0.0379 | 94.7  | 0.0427 | 107   | 0.0418 | 105   | 0.0395 | 98.7  |
| MS WG734591    | VOCMS25    | 0730_35 | 0.0377 | 94.2  | 0.0401 | 100   | 0.0420 | 105   | 0.0398 | 99.5  |
| MSD WG734591   | VOCMS25    | 0730_36 | 0.0384 | 95.9  | 0.0427 | 107   | 0.0409 | 102   | 0.0384 | 96.0  |
| BLANK WG734591 | VOCMS25    | 0730_38 | 0.0391 | 97.7  | 0.0406 | 102   | 0.0415 | 104   | 0.0385 | 96.3  |

BFB --4-BROMOFLUOROBENZENE

True Value: 0.04 ppm Limits: 80.1 - 120

DFM --DIBROMOFLUOROMETHANE

True Value: 0.04 ppm Limits: 79 - 121

TD8 --TOLUENE-D8

True Value: 0.04 ppm Limits: 90 - 115

TFT --A,A,A-TRIFLUOROTOLUENE

True Value: 0.04 ppm Limits: 85 - 114



## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |  |  |                        |                 |
|------------------|---------------------------------------|--|--|------------------------|-----------------|
| Test:            | Diesel Range Organics by Method 8015  |  |  | Matrix:                | Water - mg/L    |
| Project No:      | TX000836.0008.00004                   |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM |  |  | <b>Analytic Batch:</b> | <b>WG734853</b> |
| Collection Date: | 7/28/2014                             |  |  | Analyst:               | 546             |
| Analysis Date:   | 8/1/2014 2:10:00 PM                   |  |  | Prep Date:             | 7/31/2014       |
| Instrument ID:   | SVGC27                                |  |  |                        |                 |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |  |  |                        |                 |

#### Method Blank

| Analyte                           | CAS | RDL     | MDL      | Qualifier |
|-----------------------------------|-----|---------|----------|-----------|
| C10-C28 Diesel Range              |     | < 0.100 | < 0.0222 |           |
| C28-C40 Oil Range                 |     | < 0.100 | < 0.0118 |           |
| Extractable Petroleum Hydrocarbon |     | < 0.100 | < 0.0330 |           |

#### Laboratory Control Sample (LCS)

| Analyte                           | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|-----------------------------------|-----|------------|--------|-------|----------------|------|
| Extractable Petroleum Hydrocarbon | 1   | 1.5        | 1.5553 | 104   | 70 - 130       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte                           | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|-----------------------------------|-----|------------|--------|-------|----------------|------|
| Extractable Petroleum Hydrocarbon | 1   | 1.5        | 1.6565 | 110   | 70 - 130       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte                           | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|-----------------------------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Extractable Petroleum Hydrocarbon | 1   | 1.5   | 1.5553 | 104   | 1.6565 | 110   | 70 - 130       | 6.3        | 20                 |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Diesel Range Organics by Method 8015  |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                             | <b>Analytic Batch:</b> | <b>WG734853</b> |
| Analysis Date:   | 8/1/2014 2:10:00 PM                   | Analyst:               | 546             |
| Instrument ID:   | SVGC27                                | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05        |                        |                 |

### Surrogate Summary

o-Terphenyl

Laboratory

| Sample ID      | Instrument | File ID | ppm    | % Rec |
|----------------|------------|---------|--------|-------|
| L712736-01     | SVGC27     | 0801_09 | 0.0203 | 101   |
| L712736-02     | SVGC27     | 0801_10 | 0.0202 | 101   |
| L712736-03     | SVGC27     | 0801_11 | 0.0211 | 105   |
| L712736-04     | SVGC27     | 0801_12 | 0.0203 | 101   |
| L712736-05     | SVGC27     | 0801_13 | 0.0202 | 101   |
| BLANK WG734853 | SVGC27     | 0801_05 | 0.0203 | 101   |
| LCS WG734853   | SVGC27     | 0801_06 | 0.0202 | 101   |
| LCSD WG734853  | SVGC27     | 0801_07 | 0.0208 | 104   |

o-Terphenyl --O-TERPHENYL

True Value: 0.02 ppm Limits: 50 - 150

## Quality Control Summary

**SDG: L712736**

**ARCADIS US - TX**

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                        | <b>Analytic Batch:</b> | <b>WG734861</b> |
| Analysis Date:   | 8/1/2014 9:44:00 AM                              | Analyst:               | 377             |
| Instrument ID:   | BNAMS19                                          | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05                   |                        |                 |

### Method Blank

| Analyte                    | CAS     | RDL    | MDL     | Qualifier |
|----------------------------|---------|--------|---------|-----------|
| <b>1-Methylnaphthalene</b> | 90-12-0 | < 1.00 | < 0.330 |           |
| <b>2-Methylnaphthalene</b> | 91-57-6 | < 1.00 | < 0.311 |           |
| <b>Benzo(a)pyrene</b>      | 50-32-8 | < 1.00 | < 0.340 |           |
| <b>Naphthalene</b>         | 91-20-3 | < 1.00 | < 0.372 |           |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                        | <b>Analytic Batch:</b> | <b>WG734861</b> |
| Analysis Date:   | 8/1/2014 9:44:00 AM                              | Analyst:               | 377             |
| Instrument ID:   | BNAMS19                                          | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05                   |                        |                 |

#### Laboratory Control Sample (LCS)

| Analyte             | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------|-----|------------|--------|-------|----------------|------|
| 1-Methylnaphthalene | 1   | 25         | 19.452 | 77.8  | 34.7 - 102     |      |
| 2-Methylnaphthalene | 1   | 25         | 17.158 | 68.6  | 33.8 - 98.6    |      |
| Benzo(a)pyrene      | 1   | 25         | 18.367 | 73.5  | 45.6 - 106     |      |
| Naphthalene         | 1   | 25         | 16.322 | 65.3  | 32.2 - 101     |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte             | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------|-----|------------|--------|-------|----------------|------|
| 1-Methylnaphthalene | 1   | 25         | 18.228 | 72.9  | 34.7 - 102     |      |
| 2-Methylnaphthalene | 1   | 25         | 16.480 | 65.9  | 33.8 - 98.6    |      |
| Benzo(a)pyrene      | 1   | 25         | 18.404 | 73.6  | 45.6 - 106     |      |
| Naphthalene         | 1   | 25         | 15.512 | 62    | 32.2 - 101     |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte             | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD | % RPD Limits | Qual |
|---------------------|-----|-------|--------|-------|--------|-------|----------------|------------|-------------|--------------|------|
| 1-Methylnaphthalene | 1   | 25    | 19.452 | 77.8  | 18.228 | 72.9  | 34.7 - 102     | 6.5        | 24.9        |              |      |
| 2-Methylnaphthalene | 1   | 25    | 17.158 | 68.6  | 16.480 | 65.9  | 33.8 - 98.6    | 4.03       | 24.2        |              |      |
| Benzo(a)pyrene      | 1   | 25    | 18.367 | 73.5  | 18.404 | 73.6  | 45.6 - 106     | 0.2        | 20          |              |      |
| Naphthalene         | 1   | 25    | 16.322 | 65.3  | 15.512 | 62    | 32.2 - 101     | 5.09       | 23.8        |              |      |

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                        | <b>Analytic Batch:</b> | <b>WG734861</b> |
| Analysis Date:   | 8/1/2014 9:44:00 AM                              | Analyst:               | 377             |
| Instrument ID:   | BNAMS19                                          | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05                   |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0731B\_03

Analyzed: 08/01/14 052300

|                    | DCB      |      | NAP      |      | ACE      |      | PHEN     |       |
|--------------------|----------|------|----------|------|----------|------|----------|-------|
|                    | Response | RT   | Response | RT   | Response | RT   | Response | RT    |
| <b>12 Hr. Std</b>  | 78985    | 5.40 | 344807   | 6.67 | 244147   | 8.55 | 462975   | 10.18 |
| <b>Upper Limit</b> | 158000   | 5.90 | 690000   | 7.17 | 488000   | 9.05 | 926000   | 10.68 |
| <b>Lower Limit</b> | 39500    | 4.90 | 172000   | 6.17 | 122000   | 8.05 | 231000   | 9.68  |
| Sample ID          | Response | RT   | Response | RT   | Response | RT   | Response | RT    |
| L712736-01         | 87236    | 5.40 | 386192   | 6.67 | 269108   | 8.55 | 521368   | 10.18 |
| L712736-02         | 86605    | 5.40 | 388492   | 6.67 | 260564   | 8.55 | 514344   | 10.18 |
| L712736-03         | 88652    | 5.40 | 388722   | 6.67 | 268476   | 8.55 | 516260   | 10.18 |
| L712736-04         | 88286    | 5.40 | 371620   | 6.67 | 254778   | 8.55 | 530268   | 10.18 |
| L712736-05         | 86604    | 5.40 | 364143   | 6.67 | 244231   | 8.55 | 503454   | 10.18 |
| LCSD WG734861      | 85155    | 5.40 | 367830   | 6.67 | 265277   | 8.55 | 493184   | 10.18 |
| LCS WG734861       | 85606    | 5.40 | 351835   | 6.67 | 243573   | 8.55 | 490837   | 10.18 |
| BLANK WG734861     | 88226    | 5.40 | 371207   | 6.67 | 245712   | 8.55 | 474757   | 10.18 |

### Legend:

DCB -- 1,4-Dichlorobenzene-d4

NAP -- Naphthalene-d8

ACE -- Acenaphthene-d10

PHEN -- Phenanthrene-d10

CHR -- Chrysene-d12

PER -- Perylene-d12

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                        | <b>Analytic Batch:</b> | <b>WG734861</b> |
| Analysis Date:   | 8/1/2014 9:44:00 AM                              | Analyst:               | 377             |
| Instrument ID:   | BNAMS19                                          | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05                   |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0731B\_03

Analyzed: 08/01/14 052300

|                    | DCB      |      | CHR      |       | PER      |       |
|--------------------|----------|------|----------|-------|----------|-------|
|                    | Response | RT   | Response | RT    | Response | RT    |
| <b>12 Hr. Std</b>  | 78985    | 5.40 | 539874   | 13.07 | 610232   | 14.94 |
| <b>Upper Limit</b> | 158000   | 5.90 | 1080000  | 13.57 | 1220000  | 15.44 |
| <b>Lower Limit</b> | 39500    | 4.90 | 270000   | 12.57 | 305000   | 14.44 |
| Sample ID          | Response | RT   | Response | RT    | Response | RT    |
| L712736-01         | 87236    | 5.40 | 661491   | 13.07 | 787577   | 14.94 |
| L712736-02         | 86605    | 5.40 | 593109   | 13.07 | 676789   | 14.93 |
| L712736-03         | 88652    | 5.40 | 604597   | 13.07 | 686406   | 14.93 |
| L712736-04         | 88286    | 5.40 | 616733   | 13.07 | 707143   | 14.94 |
| L712736-05         | 86604    | 5.40 | 600884   | 13.07 | 684968   | 14.94 |
| LCSD WG734861      | 85155    | 5.40 | 577290   | 13.07 | 667823   | 14.93 |
| LCS WG734861       | 85606    | 5.40 | 617458   | 13.07 | 697647   | 14.93 |
| BLANK WG734861     | 88226    | 5.40 | 595577   | 13.07 | 681517   | 14.93 |

### Legend:

DCB -- 1,4-Dichlorobenzene-d4  
NAP -- Naphthalene-d8  
ACE -- Acenaphthene-d10  
PHEN -- Phenanthrene-d10  
CHR -- Chrysene-d12  
PER -- Perylene-d12

## Quality Control Summary

### SDG: L712736

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                        | <b>Analytic Batch:</b> | <b>WG734861</b> |
| Analysis Date:   | 8/1/2014 9:44:00 AM                              | Analyst:               | 377             |
| Instrument ID:   | BNAMS19                                          | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05                   |                        |                 |

### Surrogate Summary

|                |            | TBP              |        |       | FBP     |       | 2FP     |       | NBZ     |       |
|----------------|------------|------------------|--------|-------|---------|-------|---------|-------|---------|-------|
| Laboratory     |            |                  |        |       |         |       |         |       |         |       |
| Sample ID      | Instrument | File ID          | ppm    | % Rec | ppm     | % Rec | ppm     | % Rec | ppm     | % Rec |
| L712736-01     | BNAMS19    | 0731B_14         | 0.0143 | 71.3  | 0.00644 | 64.4  | 0.00908 | 45.4  | 0.00446 | 44.6  |
| L712736-02     | BNAMS19    | 0731B_15         | 0.0154 | 77.1  | 0.00726 | 72.6  | 0.0106  | 53.2  | 0.00480 | 48.0  |
| L712736-03     | BNAMS19    | 0731B_16         | 0.0144 | 71.8  | 0.00677 | 67.7  | 0.00963 | 48.2  | 0.00496 | 49.6  |
| L712736-04     | BNAMS19    | 0731B_17         | 0.0154 | 77.2  | 0.00703 | 70.3  | 0.00964 | 48.2  | 0.00501 | 50.1  |
| L712736-05     | BNAMS19    | 0731B_18         | 0.0135 | 67.7  | 0.00741 | 74.1  | 0.00990 | 49.5  | 0.00512 | 51.2  |
| LCS WG734861   | BNAMS19    | 0731B_05-20.0179 | 89.6   |       | 0.00701 | 70.1  | 0.0102  | 51.1  | 0.00511 | 51.1  |
| LCSD WG734861  | BNAMS19    | 0731B_06-20.0162 | 80.8   |       | 0.00646 | 64.6  | 0.0101  | 50.5  | 0.00467 | 46.7  |
| BLANK WG734861 | BNAMS19    | 0731B_07-20.0158 | 78.8   |       | 0.00751 | 75.1  | 0.0103  | 51.7  | 0.00516 | 51.6  |

TBP --2,4,6-TRIBROMOPHENOL

True Value: 0.02 ppm Limits: 11.2 - 130

FBP --2-FLUOROBIPHENYL

True Value: 0.01 ppm Limits: 29.5 - 131

2FP --2-FLUOROPHENOL

True Value: 0.02 ppm Limits: 10 - 77.9

NBZ --NITROBENZENE-D5

True Value: 0.01 ppm Limits: 21.8 - 123

TPH --P-TERPHENYL-D14

True Value: 0.01 ppm Limits: 29.3 - 137

PHL --PHENOL-D5

True Value: 0.02 ppm Limits: 5 - 70.1



YOUR LAB OF CHOICE

12065 Lebanon Rd  
Mt. Juliet, TN 37122  
(615) 758-5858  
(800) 767-5859  
Fax (615) 758-5859  
Tax I.D 62-0814289  
Est. 1970

## Quality Control Summary

**SDG: L712736**

**ARCADIS US - TX**

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/28/2014                                        | <b>Analytic Batch:</b> | <b>WG734861</b> |
| Analysis Date:   | 8/1/2014 9:44:00 AM                              | Analyst:               | 377             |
| Instrument ID:   | BNAMS19                                          | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712736-01, -02, -03, -04, -05                   |                        |                 |

## Surrogate Summary

|                |            | TPH               |         | PHL   |              |
|----------------|------------|-------------------|---------|-------|--------------|
| Laboratory     |            |                   |         |       |              |
| Sample ID      | Instrument | File ID           | ppm     | % Rec | ppm % Rec    |
| L712736-01     | BNAMS19    | 0731B_14          | 0.00624 | 62.4  | 0.00718 35.9 |
| L712736-02     | BNAMS19    | 0731B_15          | 0.00705 | 70.5  | 0.00761 38.1 |
| L712736-03     | BNAMS19    | 0731B_16          | 0.00695 | 69.5  | 0.00721 36.0 |
| L712736-04     | BNAMS19    | 0731B_17          | 0.00689 | 68.9  | 0.00673 33.6 |
| L712736-05     | BNAMS19    | 0731B_18          | 0.00604 | 60.4  | 0.00689 34.5 |
| LCS WG734861   | BNAMS19    | 0731B_05-20.00667 | 66.7    |       | 0.00733 36.7 |
| LCSD WG734861  | BNAMS19    | 0731B_06-20.00688 | 68.8    |       | 0.00715 35.7 |
| BLANK WG734861 | BNAMS19    | 0731B_07-20.00686 | 68.6    |       | 0.00777 38.9 |

TBP --2,4,6-TRIBROMOPHENOL

True Value: 0.02 ppm Limits: 11.2 - 130

FBP --2-FLUOROBIPHENYL

True Value: 0.01 ppm Limits: 29.5 - 131

2FP --2-FLUOROPHENOL

True Value: 0.02 ppm Limits: 10 - 77.9

NBZ --NITROBENZENE-D5

True Value: 0.01 ppm Limits: 21.8 - 123

TPH --P-TERPHENYL-D14

True Value: 0.01 ppm Limits: 29.3 - 137

PHL --PHENOL-D5

True Value: 0.02 ppm Limits: 5 - 70.1



# ARCADIS US - TX

2929 Briarpark Dr., Suite 300  
Houston, TX 77042

## Billing Information:

Attn: Accounts Payable  
630 Plaza Drive, Suite 600  
Highlands Ranch, CO 80129

Report to:  
Project Manager

Email To: pam.krueger@arcadis-us.com

Project  
Description: Navajo Refining Company - Artesia, NM

City/State  
Collected:

Phone: 713-953-4800  
Fax:

Client Project #  
TX000836.0008.00004

Lab Project #  
ARCADHTX-NAVAJO

Collected by (print):  
Eric Bergeron

Site/Facility ID #

P.O. #

Collected by (signature):

**Rush?** (Lab MUST Be Notified)

Date Results Needed

Immediately  
Packed on Ice N ☐ Y ☒

☐ Same Day .....200%  
☐ Next Day .....100%  
☐ Two Day .....50%  
☐ Three Day .....25%

Email? ☐ No ☒ Yes  
FAX? ☐ No ☐ Yes

No.  
of  
Cnts

| Sample ID | Comp/Grab | Matrix * | Depth | Date    | Time | No.<br>of<br>Cnts | **Cl,F,NO2,NO3,S04** 125mlHDPE-NoPres | 8270 100ml Amb NoPres | CN 250mlHDPEAmb-NaOH >10 | DROOROLVI 40mlAmb-HCl-BT | Diss. Metals (Field) 500mlHDPE-HNO3 <2 | GRO 40mlAmb HCl | RA226/RA228 1L-HDPE-Add HNO3 <2 | TDS 250mlHDPE-NoPres | Total Hg 500mlHDPE-HNO3 <2 | VB260 40mlAmb-HCl | Rem./Contaminant | Sample # (lab only) |
|-----------|-----------|----------|-------|---------|------|-------------------|---------------------------------------|-----------------------|--------------------------|--------------------------|----------------------------------------|-----------------|---------------------------------|----------------------|----------------------------|-------------------|------------------|---------------------|
| MW-SS     | 6         | DW       | 22'   | 7/28/14 | 1815 | 15                | X                                     | X                     | X                        | X                        | X                                      | X               | X                               | X                    | X                          | X                 | cd               |                     |
| NP-S      | 6         | GW       | 21'   | 7/29/14 | 0915 | 15                | X                                     | X                     | X                        | X                        | X                                      | X               | X                               | X                    | X                          | X                 | -02              |                     |
| MW-17     | 6         | GW       | 26'   | 7/29/14 | 1100 | 15                | X                                     | X                     | X                        | X                        | X                                      | X               | X                               | X                    | X                          | X                 | -03              |                     |
| EB-01     | 6         | GW       | -     | 7/28/14 | 1500 | 15                | X                                     | X                     | X                        | X                        | X                                      | X               | X                               | X                    | X                          | X                 | -04              |                     |
| DUP-01    | 6         | DW       |       |         |      | 15                | X                                     | X                     | X                        | X                        | X                                      | X               | X                               | X                    | X                          | X                 | -05              |                     |
|           |           | GW       |       |         |      | 2                 |                                       |                       |                          |                          |                                        |                 |                                 |                      |                            | X                 |                  |                     |
|           |           | GW       |       |         |      | 2                 |                                       |                       |                          |                          |                                        |                 |                                 |                      |                            | X                 |                  |                     |
|           |           | GW       |       |         |      | 2                 |                                       |                       |                          |                          |                                        |                 |                                 |                      |                            | X                 |                  |                     |

\* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks:\*\*\*\*Add Uranium (in house)\*\*\*\*

608971744437  
608971744390  
608971744010

pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_

Hold #

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Samples returned via: ☐ UPS

Condition: (lab use only)

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: 3.4 °C Bottles Received: 76+2TB

COC Seal Intact: ☐ Y ☐ N ☐ NA

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: 7/30/14 Time: 0900

pH Checked: 2.272 NCF:

# ARCADIS US - TX

2929 Briarpark Dr., Suite 300  
Houston, TX 77042

## Billing Information:

Attn: Accounts Payable  
630 Plaza Drive, Suite 600  
Highlands Ranch, CO 80129

Report to:  
Project Manager

Email To: pam.krueger@arcadis-us.com

Project  
Description: Navajo Refining Company - Artesia, NM

City/State  
Collected:

Phone: 713-953-4800  
Fax:

Client Project #  
TX000836.0008.00004

Lab Project #  
ARCADHTX-NAVAJO

Collected by (Print):  
Eric Bergeron

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately  
Packed on ice N ☐ Y ☒

**Rush?** (Lab MUST Be Notified)  
 \_\_\_ Same Day .....200%  
 \_\_\_ Next Day .....100%  
 \_\_\_ Two Day .....50%  
 \_\_\_ Three Day .....25%

Date Results Needed

Email? \_\_\_ No ☒ Yes

FAX? \_\_\_ No \_\_\_ Yes

No.  
of  
Cntrs

| Sample ID | Comp/Grab | Matrix * | Depth | Date    | Time | No.<br>of<br>Cntrs | **Cl,F,NO2,NO3,SO4** 125mlHDPE-NoPres | 8270 100ml Amb NoPres | CN 250mlHDPEAmb-NaOH 7/2 | DROOROLVI 40mlAmb-HCl-BT | Diss. Metals (Field) 500mlHDPE-HNO3 <2 | GRO 40mlAmb HCl | RA226/RA228 1L-HDPE-Add HNO3 <2 | TDS 250mlHDPE-NoPres | Total Hg 500mlHDPE-HNO3 <2 | V8260 40mlAmb-HCl | Rem./Contaminant | Sample # (lab only) |
|-----------|-----------|----------|-------|---------|------|--------------------|---------------------------------------|-----------------------|--------------------------|--------------------------|----------------------------------------|-----------------|---------------------------------|----------------------|----------------------------|-------------------|------------------|---------------------|
| MW-SS     | 6         | DW       | 22'   | 7/28/14 | 1815 | 15                 | X                                     | X                     | X                        | X                        | X                                      | X               | X                               | X                    | X                          | X                 | cd               | L712741             |
| NP-S      | 6         | GW       | 21'   | 7/29/14 | 0915 | 15                 | X                                     | X                     | X                        | X                        | X                                      | X               | X                               | X                    | X                          | X                 | cd               |                     |
| MW-17     | 6         | GW       | 26'   | 7/29/14 | 1100 | 15                 | X                                     | X                     | X                        | X                        | X                                      | X               | X                               | X                    | X                          | X                 | cd               |                     |
| EB-01     | 6         | GW       | -     | 7/28/14 | 1500 | 15                 | X                                     | X                     | X                        | X                        | X                                      | X               | X                               | X                    | X                          | X                 | cd               |                     |
| DUP-01    | 6         | DW       |       |         |      | 15                 | X                                     | X                     | X                        | X                        | X                                      | X               | X                               | X                    | X                          | X                 | cd               |                     |
|           |           | GW       |       |         |      | 2                  |                                       |                       |                          |                          |                                        |                 |                                 |                      |                            | X                 |                  |                     |
|           |           | GW       |       |         |      | 2                  |                                       |                       |                          |                          |                                        |                 |                                 |                      |                            | X                 |                  |                     |
|           |           | GW       |       |         |      | 2                  |                                       |                       |                          |                          |                                        |                 |                                 |                      |                            | X                 |                  |                     |
|           |           |          |       |         |      |                    |                                       |                       |                          |                          |                                        |                 |                                 |                      |                            |                   |                  |                     |
|           |           |          |       |         |      |                    |                                       |                       |                          |                          |                                        |                 |                                 |                      |                            |                   |                  |                     |
|           |           |          |       |         |      |                    |                                       |                       |                          |                          |                                        |                 |                                 |                      |                            |                   |                  |                     |

\* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks:\*\*\*\*Add Uranium (in house)\*\*\*\*

608971744437  
608971744390  
608971744010

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Samples returned via: ☐ UPS

☒ FedEx ☐ Courier ☐ \_\_\_\_\_

Hold #

Condition: (lab use only)

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: 3.4 °C Bottles Received: 76+2TB

COC Seal Intact: \_\_\_ Y \_\_\_ N \_\_\_ NA

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: 7/30/14 Time: 0900

pH Checked: 22722

NCF:



YOUR LAB OF CHOICE

12065 Lebanon Rd  
Mount Juliet, TN 37122  
Phone: 615-758-5858  
Phone: 800-767-5859  
Fax: 615-758-5859



L# L72736

G127

Acctnum: ARCADHTX

Template: T95739

Prelogin: P476834

TSR: 633 - Pam Langford

PB: 7.24 mg

Shipped Via: FedEx Ground



August 28, 2014

Ms. Janice Cozby  
Environmental Science Corporation  
12065 Lebanon Road  
Mount Juliet, Tennessee 37122

Re: Radiochemistry  
Work Order: 353756

Dear Ms. Cozby:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on July 31, 2014. This original data report has been prepared and reviewed in accordance with GEL'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 (843) 556-8171, ext. 4289.

Sincerely,

Julie Robinson  
Project Manager

Purchase Order: S20444  
Chain of Custody: WG734534  
Enclosures



## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

### Certificate of Analysis Report for

ENVL001 Environmental Science Corporation  
Client SDG: 353756 GEL Work Order: 353756

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Julie Robinson.

Reviewed by



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 28, 2014

Company : Environmental Science Corporation  
Address : 12065 Lebanon Road

Mount Juliet, Tennessee 37122

Contact: Ms. Janice Cozby  
Project: Radiochemistry

Client Sample ID: L712741-01  
Sample ID: 353756001  
Matrix: Drinking Water (Potable)  
Collect Date: 28-JUL-14 18:15  
Receive Date: 31-JUL-14  
Collector: Client

Project: ENVL00307  
Client ID: ENVL001

| Parameter                                                        | Qualifier | Result | Uncertainty | MDC   | RL   | Units | DF | Analyst | Date     | Time | Batch   | Method |
|------------------------------------------------------------------|-----------|--------|-------------|-------|------|-------|----|---------|----------|------|---------|--------|
| Rad Gas Flow Proportional Counting                               |           |        |             |       |      |       |    |         |          |      |         |        |
| Radium-228 in Drinking Water EPA 904.0 "As Received"             |           |        |             |       |      |       |    |         |          |      |         |        |
| Radium-228                                                       | U         | 0.805  | +/-0.549    | 0.863 | 1.00 | pCi/L |    | CXP3    | 08/27/14 | 0813 | 1410825 | 1      |
| Rad Radium-226                                                   |           |        |             |       |      |       |    |         |          |      |         |        |
| Radium-226 in Drinking Water EPA 903.1 (De-emanati "As Received" |           |        |             |       |      |       |    |         |          |      |         |        |
| Radium-226                                                       |           | 0.298  | +/-0.146    | 0.179 | 1.00 | pCi/L |    | JAOC    | 08/11/14 | 0330 | 1408246 | 2      |

The following Analytical Methods were performed:

| Method | Description         | Analyst Comments |
|--------|---------------------|------------------|
| 1      | EPA 904.0/ EPA 9320 |                  |
| 2      | EPA 903.1           |                  |

| Surrogate/Tracer Recovery | Test                                                 | Result | Nominal | Recovery% | Acceptable Limits |
|---------------------------|------------------------------------------------------|--------|---------|-----------|-------------------|
| Yttrium Carrier           | Radium-228 in Drinking Water EPA 904.0 "As Received" |        |         | 76.5      | (25%-125%)        |
| Barium Carrier            | Radium-228 in Drinking Water EPA 904.0 "As Received" |        |         | 83.0      | (25%-125%)        |

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: August 28, 2014

Company : Environmental Science Corporation  
Address : 12065 Lebanon Road

Mount Juliet, Tennessee 37122

Contact: Ms. Janice Cozby  
Project: Radiochemistry

Client Sample ID: L712741-02  
Sample ID: 353756002  
Matrix: Drinking Water (Potable)  
Collect Date: 28-JUL-14 18:15  
Receive Date: 31-JUL-14  
Collector: Client

Project: ENVL00307  
Client ID: ENVL001

| Parameter                                                        | Qualifier | Result | Uncertainty | MDC   | RL   | Units | DF | Analyst | Date     | Time | Batch   | Method |
|------------------------------------------------------------------|-----------|--------|-------------|-------|------|-------|----|---------|----------|------|---------|--------|
| Rad Gas Flow Proportional Counting                               |           |        |             |       |      |       |    |         |          |      |         |        |
| Radium-228 in Drinking Water EPA 904.0 "As Received"             |           |        |             |       |      |       |    |         |          |      |         |        |
| Radium-228                                                       | U         | 0.577  | +/-0.448    | 0.719 | 1.00 | pCi/L |    | CXP3    | 08/27/14 | 0813 | 1410825 | 1      |
| Rad Radium-226                                                   |           |        |             |       |      |       |    |         |          |      |         |        |
| Radium-226 in Drinking Water EPA 903.1 (De-emanati "As Received" |           |        |             |       |      |       |    |         |          |      |         |        |
| Radium-226                                                       |           | 0.216  | +/-0.137    | 0.194 | 1.00 | pCi/L |    | JAOC    | 08/11/14 | 0330 | 1408246 | 2      |

The following Analytical Methods were performed:

| Method | Description         | Analyst Comments |
|--------|---------------------|------------------|
| 1      | EPA 904.0/ EPA 9320 |                  |
| 2      | EPA 903.1           |                  |

| Surrogate/Tracer Recovery | Test                                                 | Result | Nominal | Recovery% | Acceptable Limits |
|---------------------------|------------------------------------------------------|--------|---------|-----------|-------------------|
| Yttrium Carrier           | Radium-228 in Drinking Water EPA 904.0 "As Received" |        |         | 81.2      | (25%-125%)        |
| Barium Carrier            | Radium-228 in Drinking Water EPA 904.0 "As Received" |        |         | 92.4      | (25%-125%)        |

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 28, 2014

Company : Environmental Science Corporation  
Address : 12065 Lebanon Road

Mount Juliet, Tennessee 37122

Contact: Ms. Janice Cozby  
Project: Radiochemistry

Client Sample ID: L712741-03  
Sample ID: 353756003  
Matrix: Drinking Water (Potable)  
Collect Date: 28-JUL-14 18:15  
Receive Date: 31-JUL-14  
Collector: Client

Project: ENVL00307  
Client ID: ENVL001

| Parameter                                                        | Qualifier | Result | Uncertainty | MDC   | RL   | Units | DF | Analyst | Date     | Time | Batch   | Method |
|------------------------------------------------------------------|-----------|--------|-------------|-------|------|-------|----|---------|----------|------|---------|--------|
| Rad Gas Flow Proportional Counting                               |           |        |             |       |      |       |    |         |          |      |         |        |
| Radium-228 in Drinking Water EPA 904.0 "As Received"             |           |        |             |       |      |       |    |         |          |      |         |        |
| Radium-228                                                       |           | 0.806  | +/-0.413    | 0.626 | 1.00 | pCi/L |    | CXP3    | 08/27/14 | 0813 | 1410825 | 1      |
| Rad Radium-226                                                   |           |        |             |       |      |       |    |         |          |      |         |        |
| Radium-226 in Drinking Water EPA 903.1 (De-emanati "As Received" |           |        |             |       |      |       |    |         |          |      |         |        |
| Radium-226                                                       |           | 0.204  | +/-0.132    | 0.184 | 1.00 | pCi/L |    | JAOC    | 08/11/14 | 0330 | 1408246 | 2      |

The following Analytical Methods were performed:

| Method | Description         | Analyst Comments |
|--------|---------------------|------------------|
| 1      | EPA 904.0/ EPA 9320 |                  |
| 2      | EPA 903.1           |                  |

| Surrogate/Tracer Recovery | Test                                                 | Result | Nominal | Recovery% | Acceptable Limits |
|---------------------------|------------------------------------------------------|--------|---------|-----------|-------------------|
| Yttrium Carrier           | Radium-228 in Drinking Water EPA 904.0 "As Received" |        |         | 88.6      | (25%-125%)        |
| Barium Carrier            | Radium-228 in Drinking Water EPA 904.0 "As Received" |        |         | 103       | (25%-125%)        |

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: August 28, 2014

Company : Environmental Science Corporation  
Address : 12065 Lebanon Road

Mount Juliet, Tennessee 37122

Contact: Ms. Janice Cozby  
Project: Radiochemistry

Client Sample ID: L712741-04  
Sample ID: 353756004  
Matrix: Drinking Water (Potable)  
Collect Date: 28-JUL-14 18:15  
Receive Date: 31-JUL-14  
Collector: Client

Project: ENVL00307  
Client ID: ENVL001

| Parameter                                                        | Qualifier | Result  | Uncertainty | MDC   | RL   | Units | DF | Analyst | Date     | Time | Batch   | Method |
|------------------------------------------------------------------|-----------|---------|-------------|-------|------|-------|----|---------|----------|------|---------|--------|
| Rad Gas Flow Proportional Counting                               |           |         |             |       |      |       |    |         |          |      |         |        |
| Radium-228 in Drinking Water EPA 904.0 "As Received"             |           |         |             |       |      |       |    |         |          |      |         |        |
| Radium-228                                                       | U         | -0.0745 | +/-0.261    | 0.457 | 1.00 | pCi/L |    | CXP3    | 08/27/14 | 0926 | 1410825 | 1      |
| Rad Radium-226                                                   |           |         |             |       |      |       |    |         |          |      |         |        |
| Radium-226 in Drinking Water EPA 903.1 (De-emanati "As Received" |           |         |             |       |      |       |    |         |          |      |         |        |
| Radium-226                                                       |           | 0.271   | +/-0.141    | 0.177 | 1.00 | pCi/L |    | JAOC    | 08/11/14 | 0330 | 1408246 | 2      |

The following Analytical Methods were performed:

| Method | Description         | Analyst Comments |
|--------|---------------------|------------------|
| 1      | EPA 904.0/ EPA 9320 |                  |
| 2      | EPA 903.1           |                  |

| Surrogate/Tracer Recovery | Test                                                 | Result | Nominal | Recovery% | Acceptable Limits |
|---------------------------|------------------------------------------------------|--------|---------|-----------|-------------------|
| Yttrium Carrier           | Radium-228 in Drinking Water EPA 904.0 "As Received" |        |         | 87.8      | (25%-125%)        |
| Barium Carrier            | Radium-228 in Drinking Water EPA 904.0 "As Received" |        |         | 111       | (25%-125%)        |

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).



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## Certificate of Analysis

Report Date: August 28, 2014

Company : Environmental Science Corporation  
Address : 12065 Lebanon Road

Mount Juliet, Tennessee 37122

Contact: Ms. Janice Cozby  
Project: Radiochemistry

Client Sample ID: L712741-05  
Sample ID: 353756005  
Matrix: Drinking Water (Potable)  
Collect Date: 28-JUL-14 18:15  
Receive Date: 31-JUL-14  
Collector: Client

Project: ENVL00307  
Client ID: ENVL001

| Parameter                                                        | Qualifier | Result | Uncertainty | MDC   | RL   | Units | DF | Analyst | Date     | Time | Batch   | Method |
|------------------------------------------------------------------|-----------|--------|-------------|-------|------|-------|----|---------|----------|------|---------|--------|
| Rad Gas Flow Proportional Counting                               |           |        |             |       |      |       |    |         |          |      |         |        |
| Radium-228 in Drinking Water EPA 904.0 "As Received"             |           |        |             |       |      |       |    |         |          |      |         |        |
| Radium-228                                                       | U         | 0.420  | +/-0.436    | 0.726 | 1.00 | pCi/L |    | CXP3    | 08/27/14 | 0818 | 1410825 | 1      |
| Rad Radium-226                                                   |           |        |             |       |      |       |    |         |          |      |         |        |
| Radium-226 in Drinking Water EPA 903.1 (De-emanati "As Received" |           |        |             |       |      |       |    |         |          |      |         |        |
| Radium-226                                                       | U         | 0.0645 | +/-0.116    | 0.208 | 1.00 | pCi/L |    | JAOC    | 08/11/14 | 0330 | 1408246 | 2      |

The following Analytical Methods were performed:

| Method | Description         | Analyst Comments |
|--------|---------------------|------------------|
| 1      | EPA 904.0/ EPA 9320 |                  |
| 2      | EPA 903.1           |                  |

| Surrogate/Tracer Recovery | Test                                                 | Result | Nominal | Recovery% | Acceptable Limits |
|---------------------------|------------------------------------------------------|--------|---------|-----------|-------------------|
| Yttrium Carrier           | Radium-228 in Drinking Water EPA 904.0 "As Received" |        |         | 94.1      | (25%-125%)        |
| Barium Carrier            | Radium-228 in Drinking Water EPA 904.0 "As Received" |        |         | 91.0      | (25%-125%)        |

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Report Date: August 28, 2014

Page 1 of 2

Environmental Science Corporation  
12065 Lebanon Road  
Mount Juliet, Tennessee

Contact: Ms. Janice Cozby

Workorder: 353756

| Parmname            | NOM       | Sample | Qual        | QC          | Units    | RPD%     | REC%  | Range | Anlst       | Date | Time           |
|---------------------|-----------|--------|-------------|-------------|----------|----------|-------|-------|-------------|------|----------------|
| <b>Rad Gas Flow</b> |           |        |             |             |          |          |       |       |             |      |                |
| Batch               | 1410825   |        |             |             |          |          |       |       |             |      |                |
| QC1203146371        | 354120001 | DUP    |             |             |          |          |       |       |             |      |                |
| Radium-228          |           |        | U           | 0.0157      | U        | -0.646   | pCi/L | N/A   | N/A         | CXP3 | 08/27/14 09:26 |
|                     |           |        | Uncertainty | +/-0.538    |          | +/-0.612 |       |       |             |      |                |
| QC1203146373        | LCS       |        |             |             |          |          |       |       |             |      |                |
| Radium-228          |           |        |             | 16.7        |          | 14.2     | pCi/L | 85.3  | (80%-120%)  |      | 08/27/14 08:09 |
|                     |           |        |             | Uncertainty |          | +/-1.14  |       |       |             |      |                |
| QC1203146370        | MB        |        |             |             |          |          |       |       |             |      |                |
| Radium-228          |           |        | U           | 0.143       |          |          | pCi/L |       |             |      | 08/27/14 09:16 |
|                     |           |        |             | Uncertainty |          | +/-0.417 |       |       |             |      |                |
| QC1203146372        | 354120001 | MS     |             |             |          |          |       |       |             |      |                |
| Radium-228          |           |        | U           | 55.9        | 0.0157   | 51.0     | pCi/L | 91.2  | (70%-130%)  |      | 08/27/14 08:21 |
|                     |           |        |             | Uncertainty | +/-0.538 | +/-4.16  |       |       |             |      |                |
| <b>Rad Ra-226</b>   |           |        |             |             |          |          |       |       |             |      |                |
| Batch               | 1408246   |        |             |             |          |          |       |       |             |      |                |
| QC1203139937        | 354767001 | DUP    |             |             |          |          |       |       |             |      |                |
| Radium-226          |           |        |             | 0.178       | U        | 0.136    | pCi/L | 26.9  | (0% - 100%) | JAOC | 08/11/14 04:00 |
|                     |           |        |             | Uncertainty | +/-0.112 | +/-0.136 |       |       |             |      |                |
| QC1203139861        | LCS       |        |             |             |          |          |       |       |             |      |                |
| Radium-226          |           |        |             | 12.4        |          | 13.2     | pCi/L | 107   | (90%-110%)  |      | 08/11/14 04:00 |
|                     |           |        |             | Uncertainty |          | +/-0.843 |       |       |             |      |                |
| QC1203139860        | MB        |        |             |             |          |          |       |       |             |      |                |
| Radium-226          |           |        |             |             |          | 0.209    | pCi/L |       |             |      | 08/11/14 04:00 |
|                     |           |        |             | Uncertainty |          | +/-0.115 |       |       |             |      |                |
| QC1203139938        | 354767001 | MS     |             |             |          |          |       |       |             |      |                |
| Radium-226          |           |        |             | 12.4        | 0.178    | 13.7     | pCi/L | 109   | (80%-120%)  |      | 08/11/14 04:00 |
|                     |           |        |             | Uncertainty | +/-0.112 | +/-0.841 |       |       |             |      |                |

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- \*\* Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 353756

Page 2 of 2

| Parmname | NOM                                                                                                                            | Sample | Qual | QC | Units | RPD% | REC% | Range | Anlst | Date | Time |
|----------|--------------------------------------------------------------------------------------------------------------------------------|--------|------|----|-------|------|------|-------|-------|------|------|
| M        | REMP Result > MDC/CL and < RDL                                                                                                 |        |      |    |       |      |      |       |       |      |      |
| N/A      | RPD or %Recovery limits do not apply.                                                                                          |        |      |    |       |      |      |       |       |      |      |
| N1       | See case narrative                                                                                                             |        |      |    |       |      |      |       |       |      |      |
| ND       | Analyte concentration is not detected above the detection limit                                                                |        |      |    |       |      |      |       |       |      |      |
| NJ       | Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier                                     |        |      |    |       |      |      |       |       |      |      |
| Q        | One or more quality control criteria have not been met. Refer to the applicable narrative or DER.                              |        |      |    |       |      |      |       |       |      |      |
| R        | Sample results are rejected                                                                                                    |        |      |    |       |      |      |       |       |      |      |
| U        | Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.                                                         |        |      |    |       |      |      |       |       |      |      |
| UI       | Gamma Spectroscopy--Uncertain identification                                                                                   |        |      |    |       |      |      |       |       |      |      |
| UJ       | Gamma Spectroscopy--Uncertain identification                                                                                   |        |      |    |       |      |      |       |       |      |      |
| UL       | Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.       |        |      |    |       |      |      |       |       |      |      |
| X        | Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier                                     |        |      |    |       |      |      |       |       |      |      |
| Y        | Other specific qualifiers were required to properly define the results. Consult case narrative.                                |        |      |    |       |      |      |       |       |      |      |
| ^        | RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry. |        |      |    |       |      |      |       |       |      |      |
| h        | Preparation or preservation holding time was exceeded                                                                          |        |      |    |       |      |      |       |       |      |      |

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

**List of current GEL Certifications as of 28 August 2014**

| <b>State</b>              | <b>Certification</b>         |
|---------------------------|------------------------------|
| Alaska                    | UST-110                      |
| Arkansas                  | 88-0651                      |
| CLIA                      | 42D0904046                   |
| California NELAP          | 01151CA                      |
| Colorado                  | SC00012                      |
| Connecticut               | PH-0169                      |
| Delaware                  | SC000122013-10               |
| DoD ELAP/ ISO17025 A2LA   | 2567.01                      |
| Florida NELAP             | E87156                       |
| Foreign Soils Permit      | P330-12-00283, P330-12-00284 |
| Georgia                   | SC00012                      |
| Georgia SDWA              | 967                          |
| Hawaii                    | SC000122013-10               |
| Idaho Chemistry           | SC00012                      |
| Idaho Radiochemistry      | SC00012                      |
| Illinois NELAP            | 200029                       |
| Indiana                   | C-SC-01                      |
| Kansas NELAP              | E-10332                      |
| Kentucky                  | 90129                        |
| Louisiana NELAP           | 03046 (AI33904)              |
| Louisiana SDWA            | LA130005                     |
| Maryland                  | 270                          |
| Massachusetts             | M-SC012                      |
| Michigan                  | 9976                         |
| Mississippi               | SC000122013-10               |
| Nebraska                  | NE-OS-26-13                  |
| Nevada                    | SC000122014-1                |
| New Hampshire NELAP       | 2054                         |
| New Jersey NELAP          | SC002                        |
| New Mexico                | SC00012                      |
| New York NELAP            | 11501                        |
| North Carolina            | 233                          |
| North Carolina SDWA       | 45709                        |
| Oklahoma                  | 9904                         |
| Pennsylvania NELAP        | 68-00485                     |
| Plant Material Permit     | PDEP-12-00260                |
| South Carolina Chemistry  | 10120001                     |
| South Carolina GVL        | 23611001                     |
| South Carolina Radiochemi | 10120002                     |
| Tennessee                 | TN 02934                     |
| Texas NELAP               | T104704235-14-9              |
| Utah NELAP                | SC000122014-14               |
| Vermont                   | VT87156                      |
| Virginia NELAP            | 460202                       |
| Washington                | C780-12                      |
| Wisconsin                 | 999887790                    |

| DATA EXCEPTION REPORT                                                                                                                 |                                              |                                            |                                                |
|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|--------------------------------------------|------------------------------------------------|
| <b>Mo.Day Yr.</b><br>28-AUG-14                                                                                                        | <b>Division:</b><br>Radiochemistry           | <b>Quality Criteria:</b><br>Specifications | <b>Type:</b><br>Process                        |
| <b>Instrument Type:</b><br>GFPC                                                                                                       | <b>Test / Method:</b><br>EPA 904.0/ EPA 9320 | <b>Matrix Type:</b><br>Drinking Water      | <b>Client Code:</b><br>ENCI, ENVL, MILA, PABR, |
| <b>Batch ID:</b><br>1410825                                                                                                           | <b>Sample Numbers:</b><br>See Below          |                                            |                                                |
| <b>Potentially affected work order(s)(SDG): 353756,354120,354283,354334,354403</b><br><b>Application Issues:</b><br>RDL less than MDA |                                              |                                            |                                                |
| <b>Specification and Requirements</b>                                                                                                 |                                              | <b>DER Disposition:</b>                    |                                                |
| <b>Exception Description:</b>                                                                                                         |                                              |                                            |                                                |
| 1. Samples 354283001 and 1203146371 do not meet the required detection limit. The samples were counted the maximum count time.        |                                              | 1. Reporting results                       |                                                |

**Originator's Name:**

Nat Long

28-AUG-14

**Data Validator/Group Leader:**

Amanda Fehr

28-AUG-14

# Sub-Contract Chain of Custody



Environmental Science Corp  
12065 Lebanon Road  
Mt. Juliet, TN 37122  
(615) 773-9756 (615) 758-5859 fax

Sub-Contract Lab : GEL

City / State : Charleston, SC

Results Needed by : 8/27/14

ESC Purchase Order # : S20444

Send Reports To : Janice Cozby jcozby@esclabsciences.com

WORKGROUP

WG734534

Date Created :

7/30/2014

| SAMPLENO<br>Container # | MATRIX        | Date / Time<br>Collected   | PARAMETER          | Code            | METHOD           | Comments             |
|-------------------------|---------------|----------------------------|--------------------|-----------------|------------------|----------------------|
| L712741-01              | DW            | 7/28/2014 18:15            | Radium 226         | RA226           | 7500Ra B-2001    |                      |
| 17111482                |               |                            |                    |                 |                  |                      |
| L712741-01              | DW            | 7/28/2014 18:15            | Radium 228         | RA228           | 7500Ra D-2001    |                      |
| 17111483                |               |                            |                    |                 |                  |                      |
| <del>L712741-01</del>   | <del>DW</del> | <del>7/28/2014 18:15</del> | <del>Uranium</del> | <del>UTOT</del> | <del>200.8</del> | <del>cancelled</del> |
| L712741-02              | DW            | 7/28/2014 18:15            | Radium 226         | RA226           | 7500Ra B-2001    |                      |
| 17111484                |               |                            |                    |                 |                  |                      |
| L712741-02              | DW            | 7/28/2014 18:15            | Radium 228         | RA228           | 7500Ra D-2001    |                      |
| 17111485                |               |                            |                    |                 |                  |                      |
| <del>L712741-02</del>   | <del>DW</del> | <del>7/28/2014 18:15</del> | <del>Uranium</del> | <del>UTOT</del> | <del>200.8</del> | <del>cancelled</del> |
| L712741-03              | DW            | 7/28/2014 18:15            | Radium 226         | RA226           | 7500Ra B-2001    |                      |
| 17111486                |               |                            |                    |                 |                  |                      |
| L712741-03              | DW            | 7/28/2014 18:15            | Radium 228         | RA228           | 7500Ra D-2001    |                      |
| 17111487                |               |                            |                    |                 |                  |                      |
| <del>L712741-03</del>   | <del>DW</del> | <del>7/28/2014 18:15</del> | <del>Uranium</del> | <del>UTOT</del> | <del>200.8</del> | <del>cancelled</del> |
| L712741-04              | DW            | 7/28/2014 18:15            | Radium 226         | RA226           | 7500Ra B-2001    |                      |
| 17111488                |               |                            |                    |                 |                  |                      |
| L712741-04              | DW            | 7/28/2014 18:15            | Radium 228         | RA228           | 7500Ra D-2001    |                      |
| 17111489                |               |                            |                    |                 |                  |                      |
| <del>L712741-04</del>   | <del>DW</del> | <del>7/28/2014 18:15</del> | <del>Uranium</del> | <del>UTOT</del> | <del>200.8</del> | <del>cancelled</del> |
| L712741-05              | DW            | 7/28/2014 18:15            | Radium 226         | RA226           | 7500Ra B-2001    |                      |
| 17111490                |               |                            |                    |                 |                  |                      |

Relinquished by J Cozby

Date: 07/30/14

Received by : [Signature]

Date: 7-31-14 0850

Relinquished by \_\_\_\_\_

Date: \_\_\_\_\_

Received by : \_\_\_\_\_

Date: \_\_\_\_\_

Page : 1

Contract Lab : GEL  
/ State : Charleston, SC  
Results Needed by : 8/27/14  
ESC Purchase Order # : S20444

Send Reports To : Janice Cozby jcozby@esclabsciences.com

WORKGROUP **WG734534**

Date Created : **7/30/2014**

| <b>SAMPLENO</b><br>Container # | <b>MATRIX</b>        | <b>Date / Time</b><br>Collected   | <b>PARAMETER</b>          | Code  | <b>METHOD</b>           | <b>Comments</b>  |
|--------------------------------|----------------------|-----------------------------------|---------------------------|-------|-------------------------|------------------|
| <b>L712741-05</b><br>17111491  | <b>DW</b>            | <b>7/28/2014 18:15</b>            | <b>Radium 228</b>         | RA228 | <b>7500Ra D-2001</b>    |                  |
| <del><b>L712741-05</b></del>   | <del><b>DW</b></del> | <del><b>7/28/2014 18:15</b></del> | <del><b>Uranium</b></del> | UTOT  | <del><b>200.8</b></del> | <i>cancelled</i> |

Relinquished by \_\_\_\_\_ Date: 7-31-14 0850

Received by : \_\_\_\_\_ Date: *[Signature]*

Relinquished by \_\_\_\_\_ Date: \_\_\_\_\_

Received by : \_\_\_\_\_ Date: \_\_\_\_\_



## SAMPLE RECEIPT &amp; REVIEW FORM

|                                                                          |     |                                      |                                                                                                                            |
|--------------------------------------------------------------------------|-----|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Client: <u>ENVL</u>                                                      |     | SDG/AR/COC/Work Order: <u>353756</u> |                                                                                                                            |
| Received By: <u>MK</u>                                                   |     | Date Received: <u>7-31-14</u>        |                                                                                                                            |
| Suspected Hazard Information                                             | Yes | No                                   | *If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation. |
| COC/Samples marked as radioactive?                                       |     | <input checked="" type="checkbox"/>  | Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>cpm</u>                                        |
| Classified Radioactive II or III by RSO?                                 |     | <input checked="" type="checkbox"/>  | If yes, Were swipes taken of sample containers < action levels?                                                            |
| COC/Samples marked containing PCBs?                                      |     | <input checked="" type="checkbox"/>  |                                                                                                                            |
| Package, COC, and/or Samples marked as beryllium or asbestos containing? |     | <input checked="" type="checkbox"/>  | If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.                     |
| Shipped as a DOT Hazardous?                                              |     | <input checked="" type="checkbox"/>  | Hazard Class Shipped: UN#:                                                                                                 |
| Samples identified as Foreign Soil?                                      |     | <input checked="" type="checkbox"/>  |                                                                                                                            |

| Sample Receipt Criteria |                                                                | Yes                                 | NA | No | Comments/Qualifiers (Required for Non-Conforming Items)                                                                  |
|-------------------------|----------------------------------------------------------------|-------------------------------------|----|----|--------------------------------------------------------------------------------------------------------------------------|
| 1                       | Shipping containers received intact and sealed?                | <input checked="" type="checkbox"/> |    |    | Circle Applicable:<br>Seals broken Damaged container Leaking container Other (describe)                                  |
| 2                       | Samples requiring cold preservation within (0 ≤ 6 deg. C)?*    | <input checked="" type="checkbox"/> |    |    | Preservation Method: <u>Ice bags</u> Blue ice Dry ice None Other (describe)<br>*all temperatures are recorded in Celsius |
| 2a                      | Daily check performed and passed on IR temperature gun?        | <input checked="" type="checkbox"/> |    |    | Temperature Device Serial #: <u>130532776</u><br>Secondary Temperature Device Serial # (If Applicable):                  |
| 3                       | Chain of custody documents included with shipment?             | <input checked="" type="checkbox"/> |    |    |                                                                                                                          |
| 4                       | Sample containers intact and sealed?                           | <input checked="" type="checkbox"/> |    |    | Circle Applicable:<br>Seals broken Damaged container Leaking container Other (describe)                                  |
| 5                       | Samples requiring chemical preservation at proper pH?          | <input checked="" type="checkbox"/> |    |    | Sample ID's, containers affected and observed pH:                                                                        |
| 6                       | VOA vials free of headspace (defined as < 6mm bubble)?         | <input checked="" type="checkbox"/> |    |    | If Preservation added, Lot#:<br>Sample ID's and containers affected:                                                     |
| 7                       | Are Encore containers present?                                 | <input checked="" type="checkbox"/> |    |    | (If yes, immediately deliver to Volatiles laboratory)                                                                    |
| 8                       | Samples received within holding time?                          | <input checked="" type="checkbox"/> |    |    | ID's and tests affected:                                                                                                 |
| 9                       | Sample ID's on COC match ID's on bottles?                      | <input checked="" type="checkbox"/> |    |    | Sample ID's and containers affected:                                                                                     |
| 10                      | Date & time on COC match date & time on bottles?               | <input checked="" type="checkbox"/> |    |    | Sample ID's affected:                                                                                                    |
| 11                      | Number of containers received match number indicated on COC?   | <input checked="" type="checkbox"/> |    |    | Sample ID's affected:<br><u>2 per ID</u>                                                                                 |
| 12                      | Are sample containers identifiable as GEL provided?            | <input checked="" type="checkbox"/> |    |    |                                                                                                                          |
| 13                      | COC form is properly signed in relinquished/received sections? | <input checked="" type="checkbox"/> |    |    |                                                                                                                          |
| 14                      | Carrier and tracking number.                                   | <input checked="" type="checkbox"/> |    |    | Circle Applicable:<br><u>FedEx Air</u> FedEx Ground UPS Field Services Courier Other<br><u>6089 7175 5695</u>            |

Comments (Use Continuation Form if needed):



## Quality Control Summary

### SDG: L712971

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,**

**August 11, 2015**

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#### **Sample Receiving and Handling**

All sample aliquots were received at the correct temperature, in the proper containers, and with the appropriate preservatives. All method specified holding times were met.

#### **Anions by Method 9056MOD**

##### **Laboratory Control Sample**

Samples L712971-01, -02, -03, -04, -05, -06, -07, -08, and -09 were analyzed in analytical batch WG734733. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Sample L712971-04 was analyzed in analytical batch WG734962. The laboratory control sample associated with this sample was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Sample Duplicate Analysis**

For analytical batch WG734733 sample duplicate analysis was performed on sample L712971-09. The relative percent difference exceeded the method limits for Nitrate.

For analytical batch WG734733 sample duplicate analysis was performed on sample L712986-12. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG734962 sample duplicate analysis was performed on sample L712857-04. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG734962 sample duplicate analysis was performed on sample L713064-09. The relative percent differences were within the method limits for target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG734733 matrix spike/matrix spike duplicate analysis was performed on sample L712986-13. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

For analytical batch WG734962 matrix spike/matrix spike duplicate analysis was performed on sample L712968-05. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

##### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Total Dissolved Solids by Method 2540 C-2011**

##### **Laboratory Control Sample**

Samples L712971-01, -02, -03, and -08 were analyzed in analytical batch WG734812. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

## Quality Control Summary

### SDG: L712971

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,  
August 11, 2015**

Samples L712971-04, -05, -06, -07, and -09 were analyzed in analytical batch WG734813. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

#### **Sample Duplicate Analysis**

For analytical batch WG734812 sample duplicate analysis was performed on sample L712857-06. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG734813 sample duplicate analysis was performed on sample L712921-01. The relative percent differences were within the method limits for target analytes reported from this batch.

#### **Matrix Spike/Matrix Spike Duplicate**

Precision for batch WG734812 was evaluated using the LCS/LCSD. The RPDs were within method limits.

Precision for batch WG734813 was evaluated using the LCS/LCSD. The RPDs were within method limits.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Cyanide by Method 9012B**

##### **Laboratory Control Sample**

Samples L712971-01, -02, -03, -04, -05, -06, -07, -08, and -09 were analyzed in analytical batch WG735642. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

#### **Sample Duplicate Analysis**

For analytical batch WG735642 sample duplicate analysis was performed on sample L712971-02. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG735642 sample duplicate analysis was performed on sample L713011-02. The relative percent differences were within the method limits for target analytes reported from this batch.

#### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG735642 matrix spike/matrix spike duplicate analysis was performed on sample L712971-04. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Mercury by Method 7470A**

##### **Laboratory Control Sample**

Samples L712971-01, -02, -03, -04, -05, -06, -07, -08, and -09 were analyzed in analytical batch WG736040. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes

## Quality Control Summary

### SDG: L712971

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,**

**August 11, 2015**

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reported from this batch.

#### **Sample Duplicate Analysis**

For analytical batch WG736040 sample duplicate analysis was performed on sample L712736-01. The relative percent differences were within the method limits for target analytes reported from this batch.

#### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG736040 matrix spike/matrix spike duplicate analysis was performed on sample L712736-01. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Trace Metals by Method 6020**

##### **Laboratory Control Sample**

Samples L712971-01, -02, -03, -05, -06, -07, -08, and -09 were analyzed in analytical batch WG736270. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Sample L712971-04 was analyzed in analytical batch WG737003. The laboratory control sample associated with this sample was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Sample L712971-04 was analyzed in analytical batch WG737007. The laboratory control sample associated with this sample was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Samples L712971-01, -02, -03, -05, -06, -07, -08, and -09 were analyzed in analytical batch WG738505. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

#### **Matrix Spike/Matrix Spike Duplicate**

Precision for batch WG736270 was evaluated using the LCS/LCSD. The RPDs were within method limits.

For analytical batch WG737003 matrix spike/matrix spike duplicate analysis was performed on sample L712736-03. The matrix spike recoveries were below laboratory control limits for Calcium, Dissolved. The spike recoveries were within limits for the remaining target compounds reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

For analytical batch WG737007 matrix spike/matrix spike duplicate analysis was performed on sample L712736-05. The matrix spike recoveries were above laboratory control limits for Calcium. The spike recoveries were within limits for the remaining target compounds reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

## Quality Control Summary

### SDG: L712971

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,**

**August 11, 2015**

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For analytical batch WG738505 matrix spike/matrix spike duplicate analysis was performed on sample L712971-01. The matrix spike recoveries were above laboratory control limits for Boron, Calcium, and Sodium. The spike recoveries were within limits for the remaining target compounds reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch. Boron did not meet the method limit criteria for the serial dilution. Calcium and Sodium did not meet the method limit criteria for the post digest spike.

#### **Blank Analysis**

For batch WG736270, the concentration of Silver, Dissolved was above the method reporting limit.

The remaining method blanks, initial calibration blank, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Volatile TPH by Method 8015D/GRO**

##### **Laboratory Control Sample**

Samples L712971-01, -02, -03, -04, -05, -06, -07, -08, and -09 were analyzed in analytical batch WG734878. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG734878 matrix spike/matrix spike duplicate analysis was performed on sample L712949-01. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Volatile Organic Compounds by Method 8260B**

##### **Laboratory Control Sample**

Samples L712971-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, and -13 were analyzed in analytical batch WG734780. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG734780 matrix spike/matrix spike duplicate analysis was performed on sample L712971-01. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

## Quality Control Summary

### SDG: L712971

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,  
August 11, 2015**

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#### **Semi-Volatile Organic Compounds by Method 8270 C**

##### **Laboratory Control Sample**

Samples L712971-01, -02, -03, and -08 were analyzed in analytical batch WG734919. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Samples L712971-04, -05, -06, -07, and -09 were analyzed in analytical batch WG734920. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

Precision for batch WG734919 was evaluated using the LCS/LCSD. The RPDs were within method limits.

Precision for batch WG734920 was evaluated using the LCS/LCSD. The RPDs were within method limits.

##### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Diesel Range Organics by Method 8015**

##### **Laboratory Control Sample**

Samples L712971-01, -02, -03, -04, -05, -06, -07, and -09 were analyzed in analytical batch WG734853. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Sample L712971-08 was analyzed in analytical batch WG735881. The laboratory control sample associated with this sample was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

Precision for batch WG734853 was evaluated using the LCS/LCSD. The RPDs were within method limits.

Precision for batch WG735881 was evaluated using the LCS/LCSD. The RPDs were within method limits.

##### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

Nancy F. McLain  
ESC Representative  
ESC Lab Sciences



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Est. 1970

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

## Report Summary

Monday August 10, 2015

Report Number: L712971

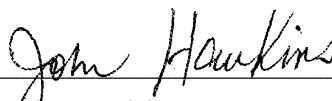
Samples Received: 07/31/14

Client Project: TX000836.0008.00004

Description: Navajo Refining Company - Artesia, NM

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

  
John Hawkins , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BI0041, ND - R-140, NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-01

Sample ID : MW-12-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/29/14 15:30

Project # : TX000836.0008.00004

| Parameter             | Result  | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|---------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 1800000 | 2600 | 50000  | ug/l  |           | 9056MOD | 07/31/14 | 50   |
| Fluoride              | 1300    | 9.9  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrate               | 8900    | 23.  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrite               | U       | 28.  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Sulfate               | 3100000 | 3900 | 250000 | ug/l  |           | 9056MOD | 07/31/14 | 50   |
| Cyanide               | U       | 1.8  | 5.0    | ug/l  |           | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 7700000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/04/14 | 1    |
| Aluminum              | 10.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Aluminum, Dissolved   | 14.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/12/14 | 1    |
| Arsenic               | 1.9     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Arsenic, Dissolved    | 1.1     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Barium                | 20.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Barium, Dissolved     | 20.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Boron                 | 560     | 1.5  | 20.    | ug/l  | 01V       | 6020    | 08/21/14 | 1    |
| Boron, Dissolved      | 560     | 1.5  | 20.    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cadmium               | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cadmium, Dissolved    | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Calcium               | 740000  | 920  | 20000  | ug/l  | 01V       | 6020    | 08/21/14 | 20   |
| Calcium, Dissolved    | 750000  | 920  | 20000  | ug/l  |           | 6020    | 08/11/14 | 20   |
| Chromium              | 0.68    | 0.54 | 1.0    | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Chromium, Dissolved   | 1.2     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Copper                | 2.0     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Copper, Dissolved     | 2.0     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cobalt                | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cobalt, Dissolved     | 0.27    | 0.26 | 1.0    | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Iron                  | 980     | 50.  | 50.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Iron, Dissolved       | U       | 50.  | 50.    | ug/l  |           | 6020    | 08/12/14 | 1    |
| Lead                  | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Lead, Dissolved       | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Manganese             | 87.     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Manganese, Dissolved  | 130     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Molybdenum            | 5.0     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Molybdenum, Dissolved | 5.1     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Nickel                | 2.0     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Nickel, Dissolved     | 2.4     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Potassium             | 4700    | 37.  | 1000   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Potassium, Dissolved  | 5000    | 37.  | 1000   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Selenium              | 10.     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Selenium, Dissolved   | 9.4     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Silver                | U       | 0.31 | 0.50   | ug/l  |           | 6020    | 08/21/14 | 1    |

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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : MW-12-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/29/14 15:30

ESC Sample # : L712971-01

Site ID :

Project # : TX000836.0008.00004

| Parameter                                           | Result  | MDL   | RDL   | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|---------|-------|-------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U       | 0.31  | 0.50  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Sodium                                              | 1500000 | 2200  | 20000 | ug/l   | 01V       | 6020    | 08/21/14 | 20   |
| Sodium, Dissolved                                   | 1600000 | 2200  | 20000 | ug/l   |           | 6020    | 08/11/14 | 20   |
| Uranium                                             | 5.5     | 0.33  | 10.   | ug/l   | J         | 6020    | 08/22/14 | 1    |
| Uranium, Dissolved                                  | 5.8     | 0.33  | 10.   | ug/l   | J         | 6020    | 08/11/14 | 1    |
| Vanadium                                            | 2.1     | 0.18  | 1.0   | ug/l   |           | 6020    | 08/21/14 | 1    |
| Vanadium, Dissolved                                 | 1.6     | 0.18  | 1.0   | ug/l   |           | 6020    | 08/11/14 | 1    |
| Zinc                                                | 4.7     | 2.6   | 10.   | ug/l   | J         | 6020    | 08/21/14 | 1    |
| Zinc, Dissolved                                     | U       | 2.6   | 10.   | ug/l   |           | 6020    | 08/11/14 | 1    |
| Mercury                                             | U       | 0.049 | 0.20  | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U       | 31.   | 100   | ug/l   |           | 8015D/G | 07/31/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 101.    |       |       | % Rec. |           | 8015D/G | 07/31/14 | 1    |
| Volatile Organics                                   |         |       |       |        |           |         |          |      |
| Benzene                                             | U       | 0.33  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Carbon tetrachloride                                | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Chloroform                                          | U       | 0.32  | 5.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dibromoethane                                   | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethane                                  | U       | 0.26  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dichloroethane                                  | U       | 0.36  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethene                                  | U       | 0.40  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Ethylbenzene                                        | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Methylene Chloride                                  | U       | 1.0   | 5.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U       | 0.13  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Toluene                                             | U       | 0.78  | 5.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1-Trichloroethane                               | U       | 0.32  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Tetrachloroethene                                   | U       | 0.37  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2-Trichloroethane                               | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Vinyl chloride                                      | U       | 0.26  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| o-Xylene                                            | U       | 0.34  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| m&p-Xylene                                          | U       | 0.72  | 2.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Xylenes, Total                                      | U       | 1.1   | 3.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Surrogate Recovery                                  |         |       |       |        |           |         |          |      |
| Toluene-d8                                          | 99.7    |       |       | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Dibromofluoromethane                                | 102.    |       |       | % Rec. |           | 8260B   | 08/01/14 | 1    |
| 4-Bromofluorobenzene                                | 96.5    |       |       | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Diesel and Oil Ranges                               |         |       |       |        |           |         |          |      |
| C10-C28 Diesel Range                                | 25.     | 22.   | 100   | ug/l   | J         | 8015    | 08/01/14 | 1    |

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REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : MW-12-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/29/14 15:30

ESC Sample # : L712971-01

Site ID :

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| C28-C40 Oil Range         | U      | 12.  | 100 | ug/l   |           | 8015   | 08/01/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| o-Terphenyl               | 98.2   |      |     | % Rec. |           | 8015   | 08/01/14 | 1    |
| Base/Neutral Extractables |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene            | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 1-Methylnaphthalene       | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 2-Methylnaphthalene       | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Naphthalene               | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| 2-Fluorophenol            | 42.3   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Phenol-d5                 | 36.7   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Nitrobenzene-d5           | 68.7   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2-Fluorobiphenyl          | 68.8   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2,4,6-Tribromophenol      | 82.8   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| p-Terphenyl-d14           | 78.3   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-02

Sample ID : MW-13-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/29/14 13:50

Project # : TX000836.0008.00004

| Parameter             | Result  | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|---------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 1700000 | 2600 | 50000  | ug/l  |           | 9056MOD | 07/31/14 | 50   |
| Fluoride              | 650     | 9.9  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrate               | 320     | 23.  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrite               | U       | 28.  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Sulfate               | 2500000 | 3900 | 250000 | ug/l  |           | 9056MOD | 07/31/14 | 50   |
| Cyanide               | U       | 1.8  | 5.0    | ug/l  |           | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 8800000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/04/14 | 1    |
| Aluminum              | 8.9     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Aluminum, Dissolved   | 13.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/12/14 | 1    |
| Arsenic               | 1.4     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Arsenic, Dissolved    | 1.0     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Barium                | 25.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Barium, Dissolved     | 23.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Boron                 | 640     | 1.5  | 20.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Boron, Dissolved      | 620     | 1.5  | 20.    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cadmium               | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cadmium, Dissolved    | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Calcium               | 830000  | 920  | 20000  | ug/l  |           | 6020    | 08/21/14 | 20   |
| Calcium, Dissolved    | 810000  | 920  | 20000  | ug/l  |           | 6020    | 08/11/14 | 20   |
| Chromium              | 0.77    | 0.54 | 1.0    | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Chromium, Dissolved   | 1.1     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Copper                | 1.2     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Copper, Dissolved     | 1.0     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cobalt                | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cobalt, Dissolved     | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Iron                  | 230     | 50.  | 50.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Iron, Dissolved       | 130     | 50.  | 50.    | ug/l  |           | 6020    | 08/12/14 | 1    |
| Lead                  | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Lead, Dissolved       | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Manganese             | 560     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Manganese, Dissolved  | 410     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Molybdenum            | 4.6     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Molybdenum, Dissolved | 4.1     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Nickel                | 1.5     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Nickel, Dissolved     | 1.3     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Potassium             | 5600    | 37.  | 1000   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Potassium, Dissolved  | 6100    | 37.  | 1000   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Selenium              | 0.69    | 0.38 | 2.0    | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Selenium, Dissolved   | 0.88    | 0.38 | 2.0    | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Silver                | U       | 0.31 | 0.50   | ug/l  |           | 6020    | 08/21/14 | 1    |

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-02

Sample ID : MW-13-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/29/14 13:50

Project # : TX000836.0008.00004

| Parameter                                           | Result  | MDL   | RDL   | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|---------|-------|-------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U       | 0.31  | 0.50  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Sodium                                              | 1300000 | 2200  | 20000 | ug/l   |           | 6020    | 08/21/14 | 20   |
| Sodium, Dissolved                                   | 1300000 | 2200  | 20000 | ug/l   |           | 6020    | 08/11/14 | 20   |
| Uranium                                             | 7.0     | 0.33  | 10.   | ug/l   | J         | 6020    | 08/22/14 | 1    |
| Uranium, Dissolved                                  | 6.8     | 0.33  | 10.   | ug/l   | J         | 6020    | 08/11/14 | 1    |
| Vanadium                                            | 4.5     | 0.18  | 1.0   | ug/l   |           | 6020    | 08/21/14 | 1    |
| Vanadium, Dissolved                                 | 4.0     | 0.18  | 1.0   | ug/l   |           | 6020    | 08/11/14 | 1    |
| Zinc                                                | 2.8     | 2.6   | 10.   | ug/l   | J         | 6020    | 08/21/14 | 1    |
| Zinc, Dissolved                                     | U       | 2.6   | 10.   | ug/l   |           | 6020    | 08/11/14 | 1    |
| Mercury                                             | U       | 0.049 | 0.20  | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U       | 31.   | 100   | ug/l   |           | 8015D/G | 07/31/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 100.    |       |       | % Rec. |           | 8015D/G | 07/31/14 | 1    |
| Volatile Organics                                   |         |       |       |        |           |         |          |      |
| Benzene                                             | U       | 0.33  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Carbon tetrachloride                                | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Chloroform                                          | U       | 0.32  | 5.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dibromoethane                                   | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethane                                  | U       | 0.26  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dichloroethane                                  | U       | 0.36  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethene                                  | U       | 0.40  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Ethylbenzene                                        | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Methylene Chloride                                  | U       | 1.0   | 5.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U       | 0.13  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Toluene                                             | U       | 0.78  | 5.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1-Trichloroethane                               | U       | 0.32  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Tetrachloroethene                                   | U       | 0.37  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2-Trichloroethane                               | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Vinyl chloride                                      | U       | 0.26  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| o-Xylene                                            | U       | 0.34  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| m&p-Xylene                                          | U       | 0.72  | 2.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Xylenes, Total                                      | U       | 1.1   | 3.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Surrogate Recovery                                  |         |       |       |        |           |         |          |      |
| Toluene-d8                                          | 101.    |       |       | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Dibromofluoromethane                                | 103.    |       |       | % Rec. |           | 8260B   | 08/01/14 | 1    |
| 4-Bromofluorobenzene                                | 98.6    |       |       | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Diesel and Oil Ranges                               |         |       |       |        |           |         |          |      |
| C10-C28 Diesel Range                                | 45.     | 22.   | 100   | ug/l   | J         | 8015    | 08/01/14 | 1    |

U = ND (Not Detected)

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REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : MW-13-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/29/14 13:50

ESC Sample # : L712971-02

Site ID :

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| C28-C40 Oil Range         | 18.    | 12.  | 100 | ug/l   | J         | 8015   | 08/01/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| o-Terphenyl               | 103.   |      |     | % Rec. |           | 8015   | 08/01/14 | 1    |
| Base/Neutral Extractables |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene            | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 1-Methylnaphthalene       | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 2-Methylnaphthalene       | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Naphthalene               | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| 2-Fluorophenol            | 29.1   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Phenol-d5                 | 21.1   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Nitrobenzene-d5           | 65.5   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2-Fluorobiphenyl          | 67.7   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2,4,6-Tribromophenol      | 92.3   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| p-Terphenyl-d14           | 78.6   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-03

Sample ID : MW-25-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/29/14 17:30

Project # : TX000836.0008.00004

| Parameter             | Result   | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|----------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 4200000  | 2600 | 50000  | ug/l  |           | 9056MOD | 07/31/14 | 50   |
| Fluoride              | 930      | 9.9  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrate               | 5200     | 23.  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrite               | U        | 28.  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Sulfate               | 3100000  | 3900 | 250000 | ug/l  |           | 9056MOD | 07/31/14 | 50   |
| Cyanide               | U        | 1.8  | 5.0    | ug/l  |           | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 12000000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/04/14 | 1    |
| Aluminum              | 16.      | 2.0  | 50.    | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Aluminum, Dissolved   | 13.      | 2.0  | 50.    | ug/l  | J         | 6020    | 08/12/14 | 1    |
| Arsenic               | 5.0      | 0.25 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Arsenic, Dissolved    | 5.0      | 0.25 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Barium                | 25.      | 0.36 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Barium, Dissolved     | 21.      | 0.36 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Boron                 | 220      | 1.5  | 20.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Boron, Dissolved      | 230      | 1.5  | 20.    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cadmium               | U        | 0.16 | 0.50   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cadmium, Dissolved    | U        | 0.16 | 0.50   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Calcium               | 1100000  | 2300 | 50000  | ug/l  |           | 6020    | 08/21/14 | 50   |
| Calcium, Dissolved    | 1200000  | 2300 | 50000  | ug/l  |           | 6020    | 08/11/14 | 50   |
| Chromium              | 0.66     | 0.54 | 1.0    | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Chromium, Dissolved   | 0.90     | 0.54 | 1.0    | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Copper                | 1.3      | 0.52 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Copper, Dissolved     | 1.1      | 0.52 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cobalt                | 8.0      | 0.26 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cobalt, Dissolved     | 0.46     | 0.26 | 1.0    | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Iron                  | U        | 50.  | 50.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Iron, Dissolved       | U        | 50.  | 50.    | ug/l  |           | 6020    | 08/12/14 | 1    |
| Lead                  | U        | 0.24 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Lead, Dissolved       | U        | 0.24 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Manganese             | 2900     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Manganese, Dissolved  | 130      | 0.25 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Molybdenum            | 14.      | 0.14 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Molybdenum, Dissolved | 15.      | 0.14 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Nickel                | 4.4      | 0.35 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Nickel, Dissolved     | 3.0      | 0.35 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Potassium             | 6500     | 37.  | 1000   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Potassium, Dissolved  | 7200     | 37.  | 1000   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Selenium              | 6.7      | 0.38 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Selenium, Dissolved   | 5.6      | 0.38 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Silver                | U        | 0.31 | 0.50   | ug/l  |           | 6020    | 08/21/14 | 1    |

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : MW-25-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/29/14 17:30

ESC Sample # : L712971-03

Site ID :

Project # : TX000836.0008.00004

| Parameter                                           | Result  | MDL   | RDL   | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|---------|-------|-------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U       | 0.31  | 0.50  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Sodium                                              | 2200000 | 5500  | 50000 | ug/l   |           | 6020    | 08/21/14 | 50   |
| Sodium, Dissolved                                   | 2600000 | 5500  | 50000 | ug/l   |           | 6020    | 08/11/14 | 50   |
| Uranium                                             | 11.     | 0.33  | 10.   | ug/l   |           | 6020    | 08/22/14 | 1    |
| Uranium, Dissolved                                  | 11.     | 0.33  | 10.   | ug/l   |           | 6020    | 08/11/14 | 1    |
| Vanadium                                            | 12.     | 0.18  | 1.0   | ug/l   |           | 6020    | 08/21/14 | 1    |
| Vanadium, Dissolved                                 | 9.9     | 0.18  | 1.0   | ug/l   |           | 6020    | 08/11/14 | 1    |
| Zinc                                                | U       | 2.6   | 10.   | ug/l   |           | 6020    | 08/21/14 | 1    |
| Zinc, Dissolved                                     | U       | 2.6   | 10.   | ug/l   |           | 6020    | 08/11/14 | 1    |
| Mercury                                             | U       | 0.049 | 0.20  | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U       | 31.   | 100   | ug/l   |           | 8015D/G | 08/01/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 101.    |       |       | % Rec. |           | 8015D/G | 08/01/14 | 1    |
| Volatile Organics                                   |         |       |       |        |           |         |          |      |
| Benzene                                             | U       | 0.33  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Carbon tetrachloride                                | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Chloroform                                          | U       | 0.32  | 5.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dibromoethane                                   | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethane                                  | U       | 0.26  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dichloroethane                                  | U       | 0.36  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethene                                  | U       | 0.40  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Ethylbenzene                                        | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Methylene Chloride                                  | U       | 1.0   | 5.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U       | 0.13  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Toluene                                             | U       | 0.78  | 5.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1-Trichloroethane                               | U       | 0.32  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Tetrachloroethene                                   | U       | 0.37  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2-Trichloroethane                               | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Vinyl chloride                                      | U       | 0.26  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| o-Xylene                                            | U       | 0.34  | 1.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| m&p-Xylene                                          | U       | 0.72  | 2.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Xylenes, Total                                      | U       | 1.1   | 3.0   | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Surrogate Recovery                                  |         |       |       |        |           |         |          |      |
| Toluene-d8                                          | 104.    |       |       | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Dibromofluoromethane                                | 101.    |       |       | % Rec. |           | 8260B   | 08/01/14 | 1    |
| 4-Bromofluorobenzene                                | 97.4    |       |       | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Diesel and Oil Ranges                               |         |       |       |        |           |         |          |      |
| C10-C28 Diesel Range                                | 120     | 22.   | 100   | ug/l   |           | 8015    | 08/01/14 | 1    |

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REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : MW-25-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/29/14 17:30

ESC Sample # : L712971-03

Site ID :

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| C28-C40 Oil Range         | 16.    | 12.  | 100 | ug/l   | J         | 8015   | 08/01/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| o-Terphenyl               | 103.   |      |     | % Rec. |           | 8015   | 08/01/14 | 1    |
| Base/Neutral Extractables |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene            | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 1-Methylnaphthalene       | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 2-Methylnaphthalene       | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Naphthalene               | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| 2-Fluorophenol            | 49.2   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Phenol-d5                 | 41.4   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Nitrobenzene-d5           | 68.5   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2-Fluorobiphenyl          | 68.8   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2,4,6-Tribromophenol      | 90.9   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| p-Terphenyl-d14           | 73.2   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-04

Sample ID : MW-136-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/30/14 08:10

Project # : TX000836.0008.00004

| Parameter             | Result  | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|---------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 270000  | 2600 | 50000  | ug/l  |           | 9056MOD | 08/02/14 | 50   |
| Fluoride              | 1600    | 9.9  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrate               | 470     | 23.  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrite               | 30.     | 28.  | 100    | ug/l  | J         | 9056MOD | 07/31/14 | 1    |
| Sulfate               | 2300000 | 3900 | 250000 | ug/l  |           | 9056MOD | 08/02/14 | 50   |
| Cyanide               | U       | 1.8  | 5.0    | ug/l  |           | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 3400000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/04/14 | 1    |
| Aluminum              | 4800    | 2.0  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Aluminum, Dissolved   | 31.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/13/14 | 1    |
| Arsenic               | 2.0     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Arsenic, Dissolved    | 1.5     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Barium                | 100     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Barium, Dissolved     | 30.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Boron                 | 540     | 1.5  | 20.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Boron, Dissolved      | 720     | 1.5  | 20.    | ug/l  |           | 6020    | 08/20/14 | 1    |
| Cadmium               | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cadmium, Dissolved    | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Calcium               | 740000  | 460  | 10000  | ug/l  |           | 6020    | 08/14/14 | 10   |
| Calcium, Dissolved    | 710000  | 460  | 10000  | ug/l  |           | 6020    | 08/14/14 | 10   |
| Chromium              | 5.2     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Chromium, Dissolved   | U       | 0.54 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Copper                | 3.6     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Copper, Dissolved     | 1.3     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cobalt                | 4.1     | 0.26 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Cobalt, Dissolved     | 2.2     | 0.26 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Iron                  | 2700    | 50.  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Iron, Dissolved       | U       | 50.  | 50.    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Lead                  | 2.1     | 0.24 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Lead, Dissolved       | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Manganese             | 340     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Manganese, Dissolved  | 220     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Molybdenum            | 10.     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Molybdenum, Dissolved | 8.7     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Nickel                | 6.7     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Nickel, Dissolved     | 3.2     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Potassium             | 5000    | 37.  | 1000   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Potassium, Dissolved  | 3700    | 37.  | 1000   | ug/l  |           | 6020    | 08/13/14 | 1    |
| Selenium              | 3.7     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Selenium, Dissolved   | 4.5     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/13/14 | 1    |
| Silver                | U       | 0.31 | 0.50   | ug/l  |           | 6020    | 08/13/14 | 1    |

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Reported: 08/10/15 17:00 Printed: 08/10/15 17:02





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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-04

Sample ID : MW-136-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/30/14 08:10

Project # : TX000836.0008.00004

| Parameter                                           | Result | MDL   | RDL  | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|--------|-------|------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U      | 0.31  | 0.50 | ug/l   |           | 6020    | 08/13/14 | 1    |
| Sodium                                              | 81000  | 110   | 1000 | ug/l   |           | 6020    | 08/13/14 | 1    |
| Sodium, Dissolved                                   | 84000  | 110   | 1000 | ug/l   |           | 6020    | 08/13/14 | 1    |
| Uranium                                             | 63.    | 0.33  | 10.  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Uranium, Dissolved                                  | 62.    | 0.33  | 10.  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Vanadium                                            | 15.    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Vanadium, Dissolved                                 | 12.    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Zinc                                                | 51.    | 2.6   | 10.  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Zinc, Dissolved                                     | 18.    | 2.6   | 10.  | ug/l   |           | 6020    | 08/13/14 | 1    |
| Mercury                                             | U      | 0.049 | 0.20 | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U      | 31.   | 100  | ug/l   |           | 8015D/G | 08/01/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 101.   |       |      | % Rec. |           | 8015D/G | 08/01/14 | 1    |
| Volatile Organics                                   |        |       |      |        |           |         |          |      |
| Benzene                                             | U      | 0.33  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Carbon tetrachloride                                | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Chloroform                                          | U      | 0.32  | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dibromoethane                                   | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethane                                  | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dichloroethane                                  | U      | 0.36  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethene                                  | U      | 0.40  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Ethylbenzene                                        | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Methylene Chloride                                  | U      | 1.0   | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U      | 0.13  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Toluene                                             | U      | 0.78  | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1-Trichloroethane                               | U      | 0.32  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Tetrachloroethene                                   | U      | 0.37  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2-Trichloroethane                               | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Vinyl chloride                                      | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| o-Xylene                                            | U      | 0.34  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| m&p-Xylene                                          | U      | 0.72  | 2.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Xylenes, Total                                      | U      | 1.1   | 3.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Surrogate Recovery                                  |        |       |      |        |           |         |          |      |
| Toluene-d8                                          | 102.   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Dibromofluoromethane                                | 101.   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| 4-Bromofluorobenzene                                | 98.6   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Diesel and Oil Ranges                               |        |       |      |        |           |         |          |      |
| C10-C28 Diesel Range                                | 280    | 22.   | 100  | ug/l   |           | 8015    | 08/01/14 | 1    |

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : MW-136-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/30/14 08:10

ESC Sample # : L712971-04

Site ID :

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| C28-C40 Oil Range         | 20.    | 12.  | 100 | ug/l   | J         | 8015   | 08/01/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| o-Terphenyl               | 95.1   |      |     | % Rec. |           | 8015   | 08/01/14 | 1    |
| Base/Neutral Extractables |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene            | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 1-Methylnaphthalene       | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 2-Methylnaphthalene       | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Naphthalene               | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| 2-Fluorophenol            | 46.2   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Phenol-d5                 | 35.7   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Nitrobenzene-d5           | 50.0   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2-Fluorobiphenyl          | 74.5   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2,4,6-Tribromophenol      | 92.2   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| p-Terphenyl-d14           | 73.3   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |

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Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-05

Sample ID : UG-1-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/30/14 09:45

Project # : TX000836.0008.00004

| Parameter             | Result  | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|---------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 77000   | 52.  | 1000   | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Fluoride              | 610     | 9.9  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrate               | 6600    | 23.  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrite               | 29.     | 28.  | 100    | ug/l  | J         | 9056MOD | 07/31/14 | 1    |
| Sulfate               | 1100000 | 1500 | 100000 | ug/l  |           | 9056MOD | 07/31/14 | 20   |
| Cyanide               | U       | 1.8  | 5.0    | ug/l  |           | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 2800000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/04/14 | 1    |
| Aluminum              | 410     | 2.0  | 50.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Aluminum, Dissolved   | 12.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/12/14 | 1    |
| Arsenic               | 1.5     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Arsenic, Dissolved    | 1.4     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Barium                | 14.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Barium, Dissolved     | 11.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Boron                 | 460     | 1.5  | 20.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Boron, Dissolved      | 510     | 1.5  | 20.    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cadmium               | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cadmium, Dissolved    | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Calcium               | 490000  | 460  | 10000  | ug/l  |           | 6020    | 08/21/14 | 10   |
| Calcium, Dissolved    | 520000  | 460  | 10000  | ug/l  |           | 6020    | 08/11/14 | 10   |
| Chromium              | 1.7     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Chromium, Dissolved   | 1.8     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Copper                | 1.6     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Copper, Dissolved     | 1.1     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cobalt                | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cobalt, Dissolved     | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Iron                  | 200     | 50.  | 50.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Iron, Dissolved       | U       | 50.  | 50.    | ug/l  |           | 6020    | 08/12/14 | 1    |
| Lead                  | 0.43    | 0.24 | 1.0    | ug/l  | J         | 6020    | 08/22/14 | 1    |
| Lead, Dissolved       | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Manganese             | 17.     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Manganese, Dissolved  | 11.     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Molybdenum            | 4.7     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Molybdenum, Dissolved | 4.9     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Nickel                | 1.2     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Nickel, Dissolved     | 1.2     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Potassium             | 1800    | 37.  | 1000   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Potassium, Dissolved  | 1900    | 37.  | 1000   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Selenium              | 6.0     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Selenium, Dissolved   | 5.2     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Silver                | U       | 0.31 | 0.50   | ug/l  |           | 6020    | 08/21/14 | 1    |

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# REPORT OF ANALYSIS

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ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : UG-1-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/30/14 09:45

ESC Sample # : L712971-05

Site ID :

Project # : TX000836.0008.00004

| Parameter                                           | Result | MDL   | RDL  | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|--------|-------|------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U      | 0.31  | 0.50 | ug/l   |           | 6020    | 08/11/14 | 1    |
| Sodium                                              | 85000  | 110   | 1000 | ug/l   |           | 6020    | 08/21/14 | 1    |
| Sodium, Dissolved                                   | 88000  | 110   | 1000 | ug/l   |           | 6020    | 08/11/14 | 1    |
| Uranium                                             | 17.    | 0.33  | 10.  | ug/l   |           | 6020    | 08/22/14 | 1    |
| Uranium, Dissolved                                  | 18.    | 0.33  | 10.  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Vanadium                                            | 11.    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/21/14 | 1    |
| Vanadium, Dissolved                                 | 11.    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Zinc                                                | 5.5    | 2.6   | 10.  | ug/l   | J         | 6020    | 08/21/14 | 1    |
| Zinc, Dissolved                                     | 3.8    | 2.6   | 10.  | ug/l   | J         | 6020    | 08/11/14 | 1    |
| Mercury                                             | U      | 0.049 | 0.20 | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U      | 31.   | 100  | ug/l   |           | 8015D/G | 08/01/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 101.   |       |      | % Rec. |           | 8015D/G | 08/01/14 | 1    |
| Volatile Organics                                   |        |       |      |        |           |         |          |      |
| Benzene                                             | U      | 0.33  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Carbon tetrachloride                                | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Chloroform                                          | U      | 0.32  | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dibromoethane                                   | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethane                                  | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dichloroethane                                  | U      | 0.36  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethene                                  | U      | 0.40  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Ethylbenzene                                        | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Methylene Chloride                                  | U      | 1.0   | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U      | 0.13  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Toluene                                             | U      | 0.78  | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1-Trichloroethane                               | U      | 0.32  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Tetrachloroethene                                   | U      | 0.37  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2-Trichloroethane                               | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Vinyl chloride                                      | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| o-Xylene                                            | U      | 0.34  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| m&p-Xylene                                          | U      | 0.72  | 2.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Xylenes, Total                                      | U      | 1.1   | 3.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Surrogate Recovery                                  |        |       |      |        |           |         |          |      |
| Toluene-d8                                          | 104.   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Dibromofluoromethane                                | 102.   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| 4-Bromofluorobenzene                                | 97.3   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Diesel and Oil Ranges                               |        |       |      |        |           |         |          |      |
| C10-C28 Diesel Range                                | 59.    | 22.   | 100  | ug/l   | J         | 8015    | 08/02/14 | 1    |

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August 10, 2015

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Description : Navajo Refining Company - Artesia, NM  
Sample ID : UG-1-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/30/14 09:45

ESC Sample # : L712971-05

Site ID :

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| C28-C40 Oil Range         | 41.    | 12.  | 100 | ug/l   | J         | 8015   | 08/02/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| o-Terphenyl               | 104.   |      |     | % Rec. |           | 8015   | 08/02/14 | 1    |
| Base/Neutral Extractables |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene            | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 1-Methylnaphthalene       | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 2-Methylnaphthalene       | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Naphthalene               | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| 2-Fluorophenol            | 51.4   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Phenol-d5                 | 35.6   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Nitrobenzene-d5           | 54.9   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2-Fluorobiphenyl          | 74.0   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2,4,6-Tribromophenol      | 83.5   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| p-Terphenyl-d14           | 72.5   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |

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August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-06

Sample ID : UG-3R-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/30/14 11:20

Project # : TX000836.0008.00004

| Parameter             | Result  | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|---------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 44000   | 52.  | 1000   | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Fluoride              | 660     | 9.9  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrate               | 1000    | 23.  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrite               | U       | 28.  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Sulfate               | 1400000 | 1500 | 100000 | ug/l  |           | 9056MOD | 07/31/14 | 20   |
| Cyanide               | U       | 1.8  | 5.0    | ug/l  |           | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 2200000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/04/14 | 1    |
| Aluminum              | 170     | 2.0  | 50.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Aluminum, Dissolved   | 12.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/12/14 | 1    |
| Arsenic               | 1.4     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Arsenic, Dissolved    | 1.3     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Barium                | 17.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Barium, Dissolved     | 16.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Boron                 | 330     | 1.5  | 20.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Boron, Dissolved      | 300     | 1.5  | 20.    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cadmium               | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cadmium, Dissolved    | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Calcium               | 490000  | 460  | 10000  | ug/l  |           | 6020    | 08/21/14 | 10   |
| Calcium, Dissolved    | 460000  | 460  | 10000  | ug/l  |           | 6020    | 08/11/14 | 10   |
| Chromium              | 1.2     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Chromium, Dissolved   | 1.4     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Copper                | U       | 0.52 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Copper, Dissolved     | 0.57    | 0.52 | 1.0    | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Cobalt                | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cobalt, Dissolved     | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Iron                  | 100     | 50.  | 50.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Iron, Dissolved       | U       | 50.  | 50.    | ug/l  |           | 6020    | 08/12/14 | 1    |
| Lead                  | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Lead, Dissolved       | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Manganese             | 4.0     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Manganese, Dissolved  | 0.34    | 0.25 | 2.0    | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Molybdenum            | 2.5     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Molybdenum, Dissolved | 2.6     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Nickel                | 0.90    | 0.35 | 1.0    | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Nickel, Dissolved     | 1.0     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Potassium             | 1800    | 37.  | 1000   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Potassium, Dissolved  | 1800    | 37.  | 1000   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Selenium              | 3.2     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Selenium, Dissolved   | 3.1     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Silver                | U       | 0.31 | 0.50   | ug/l  |           | 6020    | 08/21/14 | 1    |

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

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Note:

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1-800-767-5859  
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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : UG-3R-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/30/14 11:20

ESC Sample # : L712971-06

Site ID :

Project # : TX000836.0008.00004

| Parameter                                           | Result | MDL   | RDL  | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|--------|-------|------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U      | 0.31  | 0.50 | ug/l   |           | 6020    | 08/11/14 | 1    |
| Sodium                                              | 46000  | 110   | 1000 | ug/l   |           | 6020    | 08/21/14 | 1    |
| Sodium, Dissolved                                   | 47000  | 110   | 1000 | ug/l   |           | 6020    | 08/11/14 | 1    |
| Uranium                                             | 15.    | 0.33  | 10.  | ug/l   |           | 6020    | 08/22/14 | 1    |
| Uranium, Dissolved                                  | 15.    | 0.33  | 10.  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Vanadium                                            | 9.2    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/21/14 | 1    |
| Vanadium, Dissolved                                 | 9.4    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Zinc                                                | U      | 2.6   | 10.  | ug/l   |           | 6020    | 08/21/14 | 1    |
| Zinc, Dissolved                                     | U      | 2.6   | 10.  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Mercury                                             | U      | 0.049 | 0.20 | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U      | 31.   | 100  | ug/l   |           | 8015D/G | 08/01/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 101.   |       |      | % Rec. |           | 8015D/G | 08/01/14 | 1    |
| Volatile Organics                                   |        |       |      |        |           |         |          |      |
| Benzene                                             | U      | 0.33  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Carbon tetrachloride                                | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Chloroform                                          | U      | 0.32  | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dibromoethane                                   | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethane                                  | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dichloroethane                                  | U      | 0.36  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethene                                  | U      | 0.40  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Ethylbenzene                                        | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Methylene Chloride                                  | U      | 1.0   | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U      | 0.13  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Toluene                                             | U      | 0.78  | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1-Trichloroethane                               | U      | 0.32  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Tetrachloroethene                                   | U      | 0.37  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2-Trichloroethane                               | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Vinyl chloride                                      | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| o-Xylene                                            | U      | 0.34  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| m&p-Xylene                                          | U      | 0.72  | 2.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Xylenes, Total                                      | U      | 1.1   | 3.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Surrogate Recovery                                  |        |       |      |        |           |         |          |      |
| Toluene-d8                                          | 102.   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Dibromofluoromethane                                | 97.7   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| 4-Bromofluorobenzene                                | 97.2   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Diesel and Oil Ranges                               |        |       |      |        |           |         |          |      |
| C10-C28 Diesel Range                                | 58.    | 22.   | 100  | ug/l   | J         | 8015    | 08/02/14 | 1    |

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

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Est. 1970

# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : UG-3R-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/30/14 11:20

ESC Sample # : L712971-06

Site ID :

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| C28-C40 Oil Range         | 38.    | 12.  | 100 | ug/l   | J         | 8015   | 08/02/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| o-Terphenyl               | 106.   |      |     | % Rec. |           | 8015   | 08/02/14 | 1    |
| Base/Neutral Extractables |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene            | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 1-Methylnaphthalene       | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 2-Methylnaphthalene       | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Naphthalene               | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| 2-Fluorophenol            | 51.0   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Phenol-d5                 | 35.5   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Nitrobenzene-d5           | 49.3   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2-Fluorobiphenyl          | 68.9   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2,4,6-Tribromophenol      | 77.9   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| p-Terphenyl-d14           | 67.1   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-07

Sample ID : UG-2-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/30/14 12:50

Project # : TX000836.0008.00004

| Parameter             | Result  | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|---------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 73000   | 52.  | 1000   | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Fluoride              | 1600    | 9.9  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrate               | 3200    | 23.  | 100    | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrite               | 57.     | 28.  | 100    | ug/l  | J         | 9056MOD | 07/31/14 | 1    |
| Sulfate               | 1200000 | 1500 | 100000 | ug/l  |           | 9056MOD | 07/31/14 | 20   |
| Cyanide               | 2.9     | 1.8  | 5.0    | ug/l  | J         | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 2200000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/04/14 | 1    |
| Aluminum              | 54.     | 2.0  | 50.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Aluminum, Dissolved   | 14.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/12/14 | 1    |
| Arsenic               | 2.0     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Arsenic, Dissolved    | 1.8     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Barium                | 14.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Barium, Dissolved     | 13.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Boron                 | 380     | 1.5  | 20.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Boron, Dissolved      | 340     | 1.5  | 20.    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cadmium               | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cadmium, Dissolved    | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Calcium               | 420000  | 460  | 10000  | ug/l  |           | 6020    | 08/21/14 | 10   |
| Calcium, Dissolved    | 380000  | 460  | 10000  | ug/l  |           | 6020    | 08/11/14 | 10   |
| Chromium              | 1.0     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Chromium, Dissolved   | 3.1     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Copper                | 0.96    | 0.52 | 1.0    | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Copper, Dissolved     | 0.73    | 0.52 | 1.0    | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Cobalt                | 3.4     | 0.26 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cobalt, Dissolved     | 2.6     | 0.26 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Iron                  | 93.     | 50.  | 50.    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Iron, Dissolved       | U       | 50.  | 50.    | ug/l  |           | 6020    | 08/12/14 | 1    |
| Lead                  | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Lead, Dissolved       | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Manganese             | 180     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Manganese, Dissolved  | 170     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Molybdenum            | 32.     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Molybdenum, Dissolved | 28.     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Nickel                | 41.     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/21/14 | 1    |
| Nickel, Dissolved     | 36.     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Potassium             | 1900    | 37.  | 1000   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Potassium, Dissolved  | 1800    | 37.  | 1000   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Selenium              | 1.8     | 0.38 | 2.0    | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Selenium, Dissolved   | 2.4     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/11/14 | 1    |
| Silver                | U       | 0.31 | 0.50   | ug/l  |           | 6020    | 08/21/14 | 1    |

U = ND (Not Detected)

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# REPORT OF ANALYSIS

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ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : UG-2-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/30/14 12:50

ESC Sample # : L712971-07

Site ID :

Project # : TX000836.0008.00004

| Parameter                                           | Result | MDL   | RDL  | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|--------|-------|------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U      | 0.31  | 0.50 | ug/l   |           | 6020    | 08/11/14 | 1    |
| Sodium                                              | 95000  | 110   | 1000 | ug/l   |           | 6020    | 08/21/14 | 1    |
| Sodium, Dissolved                                   | 90000  | 110   | 1000 | ug/l   |           | 6020    | 08/11/14 | 1    |
| Uranium                                             | 25.    | 0.33  | 10.  | ug/l   |           | 6020    | 08/22/14 | 1    |
| Uranium, Dissolved                                  | 23.    | 0.33  | 10.  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Vanadium                                            | 8.6    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/21/14 | 1    |
| Vanadium, Dissolved                                 | 8.9    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Zinc                                                | 12.    | 2.6   | 10.  | ug/l   |           | 6020    | 08/21/14 | 1    |
| Zinc, Dissolved                                     | 10.    | 2.6   | 10.  | ug/l   | J         | 6020    | 08/11/14 | 1    |
| Mercury                                             | U      | 0.049 | 0.20 | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U      | 31.   | 100  | ug/l   |           | 8015D/G | 08/01/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 102.   |       |      | % Rec. |           | 8015D/G | 08/01/14 | 1    |
| Volatile Organics                                   |        |       |      |        |           |         |          |      |
| Benzene                                             | U      | 0.33  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Carbon tetrachloride                                | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Chloroform                                          | U      | 0.32  | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dibromoethane                                   | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethane                                  | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dichloroethane                                  | U      | 0.36  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethene                                  | U      | 0.40  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Ethylbenzene                                        | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Methylene Chloride                                  | U      | 1.0   | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U      | 0.13  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Toluene                                             | U      | 0.78  | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1-Trichloroethane                               | U      | 0.32  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Tetrachloroethene                                   | U      | 0.37  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2-Trichloroethane                               | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Vinyl chloride                                      | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| o-Xylene                                            | U      | 0.34  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| m&p-Xylene                                          | U      | 0.72  | 2.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Xylenes, Total                                      | U      | 1.1   | 3.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Surrogate Recovery                                  |        |       |      |        |           |         |          |      |
| Toluene-d8                                          | 104.   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Dibromofluoromethane                                | 102.   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| 4-Bromofluorobenzene                                | 97.0   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Diesel and Oil Ranges                               |        |       |      |        |           |         |          |      |
| C10-C28 Diesel Range                                | 66.    | 22.   | 100  | ug/l   | J         | 8015    | 08/02/14 | 1    |

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

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Est. 1970

REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : UG-2-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/30/14 12:50

ESC Sample # : L712971-07

Site ID :

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| C28-C40 Oil Range         | 64.    | 12.  | 100 | ug/l   | J         | 8015   | 08/02/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| o-Terphenyl               | 103.   |      |     | % Rec. |           | 8015   | 08/02/14 | 1    |
| Base/Neutral Extractables |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene            | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/07/14 | 1    |
| 1-Methylnaphthalene       | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/07/14 | 1    |
| 2-Methylnaphthalene       | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/07/14 | 1    |
| Naphthalene               | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/07/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| 2-Fluorophenol            | 50.8   |      |     | % Rec. |           | 8270 C | 08/07/14 | 1    |
| Phenol-d5                 | 38.5   |      |     | % Rec. |           | 8270 C | 08/07/14 | 1    |
| Nitrobenzene-d5           | 73.7   |      |     | % Rec. |           | 8270 C | 08/07/14 | 1    |
| 2-Fluorobiphenyl          | 85.4   |      |     | % Rec. |           | 8270 C | 08/07/14 | 1    |
| 2,4,6-Tribromophenol      | 79.5   |      |     | % Rec. |           | 8270 C | 08/07/14 | 1    |
| p-Terphenyl-d14           | 78.4   |      |     | % Rec. |           | 8270 C | 08/07/14 | 1    |

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-08

Sample ID : EB-02-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/29/14 18:35

Project # : TX000836.0008.00004

| Parameter             | Result | MDL  | RDL   | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|--------|------|-------|-------|-----------|---------|----------|------|
| Chloride              | 280    | 52.  | 1000  | ug/l  | J         | 9056MOD | 07/31/14 | 1    |
| Fluoride              | U      | 9.9  | 100   | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrate               | U      | 23.  | 100   | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Nitrite               | U      | 28.  | 100   | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Sulfate               | 440    | 77.  | 5000  | ug/l  | J         | 9056MOD | 07/31/14 | 1    |
| Cyanide               | U      | 1.8  | 5.0   | ug/l  |           | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 7000   | 2800 | 10000 | ug/l  | JT4       | 2540 C- | 08/04/14 | 1    |
| Aluminum              | 10.    | 2.0  | 50.   | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Aluminum, Dissolved   | 13.    | 2.0  | 50.   | ug/l  | J         | 6020    | 08/12/14 | 1    |
| Arsenic               | U      | 0.25 | 1.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Arsenic, Dissolved    | U      | 0.25 | 1.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Barium                | U      | 0.36 | 2.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Barium, Dissolved     | U      | 0.36 | 2.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Boron                 | 50.    | 1.5  | 20.   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Boron, Dissolved      | 37.    | 1.5  | 20.   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cadmium               | U      | 0.16 | 0.50  | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cadmium, Dissolved    | U      | 0.16 | 0.50  | ug/l  |           | 6020    | 08/11/14 | 1    |
| Calcium               | U      | 46.  | 1000  | ug/l  |           | 6020    | 08/21/14 | 1    |
| Calcium, Dissolved    | 120    | 46.  | 1000  | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Chromium              | 0.71   | 0.54 | 1.0   | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Chromium, Dissolved   | 0.92   | 0.54 | 1.0   | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Copper                | U      | 0.52 | 1.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Copper, Dissolved     | U      | 0.52 | 1.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cobalt                | U      | 0.26 | 1.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cobalt, Dissolved     | U      | 0.26 | 1.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Iron                  | U      | 50.  | 50.   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Iron, Dissolved       | U      | 50.  | 50.   | ug/l  |           | 6020    | 08/12/14 | 1    |
| Lead                  | U      | 0.24 | 1.0   | ug/l  |           | 6020    | 08/22/14 | 1    |
| Lead, Dissolved       | U      | 0.24 | 1.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Manganese             | U      | 0.25 | 2.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Manganese, Dissolved  | U      | 0.25 | 2.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Molybdenum            | U      | 0.14 | 2.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Molybdenum, Dissolved | U      | 0.14 | 2.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Nickel                | U      | 0.35 | 1.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Nickel, Dissolved     | U      | 0.35 | 1.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Potassium             | U      | 37.  | 1000  | ug/l  |           | 6020    | 08/21/14 | 1    |
| Potassium, Dissolved  | 70.    | 37.  | 1000  | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Selenium              | U      | 0.38 | 2.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Selenium, Dissolved   | U      | 0.38 | 2.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Silver                | U      | 0.31 | 0.50  | ug/l  |           | 6020    | 08/21/14 | 1    |

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : EB-02-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/29/14 18:35

ESC Sample # : L712971-08

Site ID :

Project # : TX000836.0008.00004

| Parameter                                           | Result | MDL   | RDL  | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|--------|-------|------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U      | 0.31  | 0.50 | ug/l   |           | 6020    | 08/11/14 | 1    |
| Sodium                                              | 660    | 110   | 1000 | ug/l   | J         | 6020    | 08/21/14 | 1    |
| Sodium, Dissolved                                   | 400    | 110   | 1000 | ug/l   | J         | 6020    | 08/11/14 | 1    |
| Uranium                                             | U      | 0.33  | 10.  | ug/l   |           | 6020    | 08/22/14 | 1    |
| Uranium, Dissolved                                  | U      | 0.33  | 10.  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Vanadium                                            | U      | 0.18  | 1.0  | ug/l   |           | 6020    | 08/21/14 | 1    |
| Vanadium, Dissolved                                 | U      | 0.18  | 1.0  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Zinc                                                | U      | 2.6   | 10.  | ug/l   |           | 6020    | 08/21/14 | 1    |
| Zinc, Dissolved                                     | U      | 2.6   | 10.  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Mercury                                             | U      | 0.049 | 0.20 | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U      | 31.   | 100  | ug/l   |           | 8015D/G | 08/01/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 104.   |       |      | % Rec. |           | 8015D/G | 08/01/14 | 1    |
| Volatile Organics                                   |        |       |      |        |           |         |          |      |
| Benzene                                             | U      | 0.33  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Carbon tetrachloride                                | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Chloroform                                          | U      | 0.32  | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dibromoethane                                   | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethane                                  | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dichloroethane                                  | U      | 0.36  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethene                                  | U      | 0.40  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Ethylbenzene                                        | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Methylene Chloride                                  | U      | 1.0   | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U      | 0.13  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Toluene                                             | U      | 0.78  | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1-Trichloroethane                               | U      | 0.32  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Tetrachloroethene                                   | U      | 0.37  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2-Trichloroethane                               | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Vinyl chloride                                      | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| o-Xylene                                            | U      | 0.34  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| m&p-Xylene                                          | U      | 0.72  | 2.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Xylenes, Total                                      | U      | 1.1   | 3.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Surrogate Recovery                                  |        |       |      |        |           |         |          |      |
| Toluene-d8                                          | 104.   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Dibromofluoromethane                                | 100.   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| 4-Bromofluorobenzene                                | 97.2   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Diesel and Oil Ranges                               |        |       |      |        |           |         |          |      |
| C10-C28 Diesel Range                                | 50.    | 22.   | 100  | ug/l   | J         | 8015    | 08/07/14 | 1    |

U = ND (Not Detected)

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REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : EB-02-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/29/14 18:35

ESC Sample # : L712971-08

Site ID :

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| C28-C40 Oil Range         | U      | 12.  | 100 | ug/l   |           | 8015   | 08/07/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| o-Terphenyl               | 102.   |      |     | % Rec. |           | 8015   | 08/07/14 | 1    |
| Base/Neutral Extractables |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene            | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 1-Methylnaphthalene       | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| 2-Methylnaphthalene       | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Naphthalene               | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/02/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| 2-Fluorophenol            | 58.4   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Phenol-d5                 | 45.8   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| Nitrobenzene-d5           | 75.9   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2-Fluorobiphenyl          | 82.2   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| 2,4,6-Tribromophenol      | 108.   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |
| p-Terphenyl-d14           | 79.2   |      |     | % Rec. |           | 8270 C | 08/02/14 | 1    |

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-09

Sample ID : EB-03-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/30/14 14:00

Project # : TX000836.0008.00004

| Parameter             | Result | MDL  | RDL   | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|--------|------|-------|-------|-----------|---------|----------|------|
| Chloride              | 1800   | 52.  | 1000  | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Fluoride              | 77.    | 9.9  | 100   | ug/l  | J         | 9056MOD | 07/31/14 | 1    |
| Nitrate               | 46.    | 23.  | 100   | ug/l  | JP1       | 9056MOD | 07/31/14 | 1    |
| Nitrite               | U      | 28.  | 100   | ug/l  |           | 9056MOD | 07/31/14 | 1    |
| Sulfate               | 1800   | 77.  | 5000  | ug/l  | J         | 9056MOD | 07/31/14 | 1    |
| Cyanide               | U      | 1.8  | 5.0   | ug/l  |           | 9012B   | 08/07/14 | 1    |
| Dissolved Solids      | 17000  | 2800 | 10000 | ug/l  | T4        | 2540 C- | 08/04/14 | 1    |
| Aluminum              | 11.    | 2.0  | 50.   | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Aluminum, Dissolved   | 19.    | 2.0  | 50.   | ug/l  | J         | 6020    | 08/12/14 | 1    |
| Arsenic               | U      | 0.25 | 1.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Arsenic, Dissolved    | U      | 0.25 | 1.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Barium                | 2.3    | 0.36 | 2.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Barium, Dissolved     | 2.5    | 0.36 | 2.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Boron                 | 77.    | 1.5  | 20.   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Boron, Dissolved      | 68.    | 1.5  | 20.   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Cadmium               | U      | 0.16 | 0.50  | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cadmium, Dissolved    | U      | 0.16 | 0.50  | ug/l  |           | 6020    | 08/11/14 | 1    |
| Calcium               | 34000  | 46.  | 1000  | ug/l  |           | 6020    | 08/21/14 | 1    |
| Calcium, Dissolved    | 34000  | 46.  | 1000  | ug/l  |           | 6020    | 08/11/14 | 1    |
| Chromium              | 0.67   | 0.54 | 1.0   | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Chromium, Dissolved   | 0.85   | 0.54 | 1.0   | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Copper                | 1.0    | 0.52 | 1.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Copper, Dissolved     | 0.93   | 0.52 | 1.0   | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Cobalt                | U      | 0.26 | 1.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Cobalt, Dissolved     | U      | 0.26 | 1.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Iron                  | U      | 50.  | 50.   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Iron, Dissolved       | U      | 50.  | 50.   | ug/l  |           | 6020    | 08/12/14 | 1    |
| Lead                  | U      | 0.24 | 1.0   | ug/l  |           | 6020    | 08/22/14 | 1    |
| Lead, Dissolved       | U      | 0.24 | 1.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Manganese             | 0.31   | 0.25 | 2.0   | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Manganese, Dissolved  | 0.50   | 0.25 | 2.0   | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Molybdenum            | 0.32   | 0.14 | 2.0   | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Molybdenum, Dissolved | 0.31   | 0.14 | 2.0   | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Nickel                | U      | 0.35 | 1.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Nickel, Dissolved     | U      | 0.35 | 1.0   | ug/l  |           | 6020    | 08/11/14 | 1    |
| Potassium             | 390    | 37.  | 1000  | ug/l  | J         | 6020    | 08/21/14 | 1    |
| Potassium, Dissolved  | 440    | 37.  | 1000  | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Selenium              | U      | 0.38 | 2.0   | ug/l  |           | 6020    | 08/21/14 | 1    |
| Selenium, Dissolved   | 0.58   | 0.38 | 2.0   | ug/l  | J         | 6020    | 08/11/14 | 1    |
| Silver                | U      | 0.31 | 0.50  | ug/l  |           | 6020    | 08/21/14 | 1    |

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-09

Sample ID : EB-03-0714-BG

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/30/14 14:00

Project # : TX000836.0008.00004

| Parameter                                             | Result | MDL   | RDL  | Units  | Qualifier | Method  | Date     | Dil. |
|-------------------------------------------------------|--------|-------|------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                     | U      | 0.31  | 0.50 | ug/l   |           | 6020    | 08/11/14 | 1    |
| Sodium                                                | 28000  | 110   | 1000 | ug/l   |           | 6020    | 08/21/14 | 1    |
| Sodium, Dissolved                                     | 28000  | 110   | 1000 | ug/l   |           | 6020    | 08/11/14 | 1    |
| Uranium                                               | U      | 0.33  | 10.  | ug/l   |           | 6020    | 08/22/14 | 1    |
| Uranium, Dissolved                                    | U      | 0.33  | 10.  | ug/l   |           | 6020    | 08/11/14 | 1    |
| Vanadium                                              | 0.43   | 0.18  | 1.0  | ug/l   | J         | 6020    | 08/21/14 | 1    |
| Vanadium, Dissolved                                   | 0.41   | 0.18  | 1.0  | ug/l   | J         | 6020    | 08/11/14 | 1    |
| Zinc                                                  | 8.3    | 2.6   | 10.  | ug/l   | J         | 6020    | 08/21/14 | 1    |
| Zinc, Dissolved                                       | 8.6    | 2.6   | 10.  | ug/l   | J         | 6020    | 08/11/14 | 1    |
| Mercury                                               | U      | 0.049 | 0.20 | ug/l   |           | 7470A   | 08/08/14 | 1    |
| TPH (GC/FID) Low Fraction                             | U      | 31.   | 100  | ug/l   |           | 8015D/G | 08/01/14 | 1    |
| Surrogate Recovery-%<br>a, a, a-Trifluorotoluene(FID) | 106.   |       |      | % Rec. |           | 8015D/G | 08/01/14 | 1    |
| Volatile Organics                                     |        |       |      |        |           |         |          |      |
| Benzene                                               | U      | 0.33  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Carbon tetrachloride                                  | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Chloroform                                            | U      | 0.32  | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dibromoethane                                     | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethane                                    | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,2-Dichloroethane                                    | U      | 0.36  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1-Dichloroethene                                    | U      | 0.40  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Ethylbenzene                                          | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Methylene Chloride                                    | U      | 1.0   | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane                             | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane                             | U      | 0.13  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Toluene                                               | U      | 0.78  | 5.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,1-Trichloroethane                                 | U      | 0.32  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Tetrachloroethene                                     | U      | 0.37  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| 1,1,2-Trichloroethane                                 | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Vinyl chloride                                        | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| o-Xylene                                              | U      | 0.34  | 1.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| m&p-Xylene                                            | U      | 0.72  | 2.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Xylenes, Total                                        | U      | 1.1   | 3.0  | ug/l   |           | 8260B   | 08/01/14 | 1    |
| Surrogate Recovery                                    |        |       |      |        |           |         |          |      |
| Toluene-d8                                            | 103.   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Dibromofluoromethane                                  | 101.   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| 4-Bromofluorobenzene                                  | 99.5   |       |      | % Rec. |           | 8260B   | 08/01/14 | 1    |
| Diesel and Oil Ranges                                 |        |       |      |        |           |         |          |      |
| C10-C28 Diesel Range                                  | U      | 22.   | 100  | ug/l   |           | 8015    | 08/02/14 | 1    |

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

MDL = Minimum Detection Limit = LOD = TRRP SDL

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Est. 1970

# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : EB-03-0714-BG  
Collected By : Ronald Wood  
Collection Date : 07/30/14 14:00

ESC Sample # : L712971-09

Site ID :

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| C28-C40 Oil Range         | 21.    | 12.  | 100 | ug/l   | J         | 8015   | 08/02/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| o-Terphenyl               | 104.   |      |     | % Rec. |           | 8015   | 08/02/14 | 1    |
| Base/Neutral Extractables |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene            | U      | 0.34 | 1.0 | ug/l   |           | 8270 C | 08/07/14 | 1    |
| 1-Methylnaphthalene       | U      | 0.33 | 1.0 | ug/l   |           | 8270 C | 08/07/14 | 1    |
| 2-Methylnaphthalene       | U      | 0.31 | 1.0 | ug/l   |           | 8270 C | 08/07/14 | 1    |
| Naphthalene               | U      | 0.37 | 1.0 | ug/l   |           | 8270 C | 08/07/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| 2-Fluorophenol            | 54.2   |      |     | % Rec. |           | 8270 C | 08/07/14 | 1    |
| Phenol-d5                 | 40.7   |      |     | % Rec. |           | 8270 C | 08/07/14 | 1    |
| Nitrobenzene-d5           | 72.2   |      |     | % Rec. |           | 8270 C | 08/07/14 | 1    |
| 2-Fluorobiphenyl          | 82.0   |      |     | % Rec. |           | 8270 C | 08/07/14 | 1    |
| 2,4,6-Tribromophenol      | 73.0   |      |     | % Rec. |           | 8270 C | 08/07/14 | 1    |
| p-Terphenyl-d14           | 74.1   |      |     | % Rec. |           | 8270 C | 08/07/14 | 1    |

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : TRIP BLANK  
Collected By : Ronald Wood  
Collection Date : 07/30/14 00:00

ESC Sample # : L712971-10

Site ID :

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL     | RDL    | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|---------|--------|--------|-----------|--------|----------|------|
| Volatile Organics         |        |         |        |        |           |        |          |      |
| Benzene                   | U      | 0.00033 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Carbon tetrachloride      | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Chloroform                | U      | 0.00032 | 0.0050 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,2-Dibromoethane         | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1-Dichloroethane        | U      | 0.00026 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,2-Dichloroethane        | U      | 0.00036 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1-Dichloroethene        | U      | 0.00040 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Ethylbenzene              | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Methylene Chloride        | U      | 0.0010  | 0.0050 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane | U      | 0.00013 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Toluene                   | U      | 0.00078 | 0.0050 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,1-Trichloroethane     | U      | 0.00032 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Tetrachloroethene         | U      | 0.00037 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,2-Trichloroethane     | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Vinyl chloride            | U      | 0.00026 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| o-Xylene                  | U      | 0.00034 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| m&p-Xylene                | U      | 0.00072 | 0.0020 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Xylenes, Total            | U      | 0.0011  | 0.0030 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Surrogate Recovery        |        |         |        |        |           |        |          |      |
| Toluene-d8                | 100.   |         |        | % Rec. |           | 8260B  | 08/01/14 | 1    |
| Dibromofluoromethane      | 98.8   |         |        | % Rec. |           | 8260B  | 08/01/14 | 1    |
| 4-Bromofluorobenzene      | 95.8   |         |        | % Rec. |           | 8260B  | 08/01/14 | 1    |

U = ND (Not Detected)

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-11

Sample ID : TRIP BLANK2

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/30/14 00:00

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL     | RDL    | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|---------|--------|--------|-----------|--------|----------|------|
| Volatile Organics         |        |         |        |        |           |        |          |      |
| Benzene                   | U      | 0.00033 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Carbon tetrachloride      | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Chloroform                | U      | 0.00032 | 0.0050 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,2-Dibromoethane         | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1-Dichloroethane        | U      | 0.00026 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,2-Dichloroethane        | U      | 0.00036 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1-Dichloroethene        | U      | 0.00040 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Ethylbenzene              | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Methylene Chloride        | U      | 0.0010  | 0.0050 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane | U      | 0.00013 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Toluene                   | U      | 0.00078 | 0.0050 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,1-Trichloroethane     | U      | 0.00032 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Tetrachloroethene         | U      | 0.00037 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,2-Trichloroethane     | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Vinyl chloride            | U      | 0.00026 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| o-Xylene                  | U      | 0.00034 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| m&p-Xylene                | U      | 0.00072 | 0.0020 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Xylenes, Total            | U      | 0.0011  | 0.0030 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Surrogate Recovery        |        |         |        |        |           |        |          |      |
| Toluene-d8                | 99.5   |         |        | % Rec. |           | 8260B  | 08/01/14 | 1    |
| Dibromofluoromethane      | 101.   |         |        | % Rec. |           | 8260B  | 08/01/14 | 1    |
| 4-Bromofluorobenzene      | 97.8   |         |        | % Rec. |           | 8260B  | 08/01/14 | 1    |

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-12

Sample ID : TRIP BLANK3

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/30/14 00:00

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL     | RDL    | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|---------|--------|--------|-----------|--------|----------|------|
| Volatile Organics         |        |         |        |        |           |        |          |      |
| Benzene                   | U      | 0.00033 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Carbon tetrachloride      | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Chloroform                | U      | 0.00032 | 0.0050 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,2-Dibromoethane         | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1-Dichloroethane        | U      | 0.00026 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,2-Dichloroethane        | U      | 0.00036 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1-Dichloroethene        | U      | 0.00040 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Ethylbenzene              | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Methylene Chloride        | U      | 0.0010  | 0.0050 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane | U      | 0.00013 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Toluene                   | U      | 0.00078 | 0.0050 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,1-Trichloroethane     | U      | 0.00032 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Tetrachloroethene         | U      | 0.00037 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,2-Trichloroethane     | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Vinyl chloride            | U      | 0.00026 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| o-Xylene                  | U      | 0.00034 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| m&p-Xylene                | U      | 0.00072 | 0.0020 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Xylenes, Total            | U      | 0.0011  | 0.0030 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Surrogate Recovery        |        |         |        |        |           |        |          |      |
| Toluene-d8                | 99.6   |         |        | % Rec. |           | 8260B  | 08/01/14 | 1    |
| Dibromofluoromethane      | 98.3   |         |        | % Rec. |           | 8260B  | 08/01/14 | 1    |
| 4-Bromofluorobenzene      | 98.3   |         |        | % Rec. |           | 8260B  | 08/01/14 | 1    |

U = ND (Not Detected)

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Est. 1970

# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : July 31, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L712971-13

Sample ID : TRIP BLANK4

Site ID :

Collected By : Ronald Wood  
Collection Date : 07/30/14 00:00

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL     | RDL    | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|---------|--------|--------|-----------|--------|----------|------|
| Volatile Organics         |        |         |        |        |           |        |          |      |
| Benzene                   | U      | 0.00033 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Carbon tetrachloride      | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Chloroform                | U      | 0.00032 | 0.0050 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,2-Dibromoethane         | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1-Dichloroethane        | U      | 0.00026 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,2-Dichloroethane        | U      | 0.00036 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1-Dichloroethene        | U      | 0.00040 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Ethylbenzene              | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Methylene Chloride        | U      | 0.0010  | 0.0050 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,1,2-Tetrachloroethane | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,2,2-Tetrachloroethane | U      | 0.00013 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Toluene                   | U      | 0.00078 | 0.0050 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,1-Trichloroethane     | U      | 0.00032 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Tetrachloroethene         | U      | 0.00037 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| 1,1,2-Trichloroethane     | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Vinyl chloride            | U      | 0.00026 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| o-Xylene                  | U      | 0.00034 | 0.0010 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| m&p-Xylene                | U      | 0.00072 | 0.0020 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Xylenes, Total            | U      | 0.0011  | 0.0030 | mg/l   |           | 8260B  | 08/01/14 | 1    |
| Surrogate Recovery        |        |         |        |        |           |        |          |      |
| Toluene-d8                | 101.   |         |        | % Rec. |           | 8260B  | 08/01/14 | 1    |
| Dibromofluoromethane      | 98.8   |         |        | % Rec. |           | 8260B  | 08/01/14 | 1    |
| 4-Bromofluorobenzene      | 97.4   |         |        | % Rec. |           | 8260B  | 08/01/14 | 1    |

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD = TRRP SDL

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 08/10/15 17:00 Printed: 08/10/15 17:02

Attachment A  
List of Analytes with QC Qualifiers

| Sample Number | Work Group | Sample Type | Analyte              | Run ID   | Qualifier |
|---------------|------------|-------------|----------------------|----------|-----------|
| L712971-01    | WG734853   | SAMP        | C10-C28 Diesel Range | R2971125 | J         |
|               | WG738505   | SAMP        | Aluminum             | R2979145 | J         |
|               | WG736270   | SAMP        | Aluminum, Dissolved  | R2977948 | J         |
|               | WG738505   | SAMP        | Boron                | R2979145 | 01V       |
|               | WG738505   | SAMP        | Calcium              | R2979145 | 01V       |
|               | WG738505   | SAMP        | Chromium             | R2979145 | J         |
|               | WG736270   | SAMP        | Cobalt, Dissolved    | R2977938 | J         |
|               | WG738505   | SAMP        | Sodium               | R2979145 | 01V       |
|               | WG738505   | SAMP        | Uranium              | R2979734 | J         |
|               | WG736270   | SAMP        | Uranium, Dissolved   | R2977938 | J         |
|               | WG738505   | SAMP        | Zinc                 | R2979145 | J         |
|               | WG734853   | SAMP        | C10-C28 Diesel Range | R2971125 | J         |
|               | WG734853   | SAMP        | C28-C40 Oil Range    | R2971125 | J         |
|               | WG738505   | SAMP        | Aluminum             | R2979145 | J         |
| L712971-02    | WG736270   | SAMP        | Aluminum, Dissolved  | R2977948 | J         |
|               | WG738505   | SAMP        | Chromium             | R2979145 | J         |
|               | WG738505   | SAMP        | Selenium             | R2979145 | J         |
|               | WG736270   | SAMP        | Selenium, Dissolved  | R2977938 | J         |
|               | WG738505   | SAMP        | Uranium              | R2979734 | J         |
|               | WG736270   | SAMP        | Uranium, Dissolved   | R2977938 | J         |
|               | WG738505   | SAMP        | Zinc                 | R2979145 | J         |
|               | WG734853   | SAMP        | C28-C40 Oil Range    | R2971125 | J         |
|               | WG738505   | SAMP        | Aluminum             | R2979145 | J         |
|               | WG736270   | SAMP        | Aluminum, Dissolved  | R2977948 | J         |
|               | WG738505   | SAMP        | Chromium             | R2979145 | J         |
|               | WG736270   | SAMP        | Chromium, Dissolved  | R2977938 | J         |
|               | WG736270   | SAMP        | Cobalt, Dissolved    | R2977938 | J         |
|               | WG734853   | SAMP        | C28-C40 Oil Range    | R2971125 | J         |
| L712971-03    | WG734733   | SAMP        | Nitrite              | R2970638 | J         |
|               | WG737003   | SAMP        | Aluminum, Dissolved  | R2978051 | J         |
|               | WG734853   | SAMP        | C10-C28 Diesel Range | R2971782 | J         |
|               | WG734853   | SAMP        | C28-C40 Oil Range    | R2971782 | J         |
|               | WG734733   | SAMP        | Nitrite              | R2970638 | J         |
|               | WG736270   | SAMP        | Aluminum, Dissolved  | R2977948 | J         |
|               | WG738505   | SAMP        | Lead                 | R2979734 | J         |
|               | WG738505   | SAMP        | Zinc                 | R2979145 | J         |
|               | WG736270   | SAMP        | Zinc, Dissolved      | R2977938 | J         |
|               | WG734853   | SAMP        | C10-C28 Diesel Range | R2971782 | J         |
|               | WG734853   | SAMP        | C28-C40 Oil Range    | R2971782 | J         |
|               | WG736270   | SAMP        | Aluminum, Dissolved  | R2977948 | J         |
|               | WG736270   | SAMP        | Copper, Dissolved    | R2977938 | J         |
|               | WG736270   | SAMP        | Manganese, Dissolved | R2977938 | J         |
| L712971-04    | WG738505   | SAMP        | Nickel               | R2979145 | J         |
|               | WG734853   | SAMP        | C10-C28 Diesel Range | R2971782 | J         |
|               | WG734853   | SAMP        | C28-C40 Oil Range    | R2971782 | J         |
|               | WG735642   | SAMP        | Cyanide              | R2973129 | J         |
|               | WG734733   | SAMP        | Nitrite              | R2970638 | J         |
|               | WG736270   | SAMP        | Aluminum, Dissolved  | R2977948 | J         |
|               | WG738505   | SAMP        | Copper               | R2979145 | J         |
|               | WG736270   | SAMP        | Copper, Dissolved    | R2977938 | J         |
|               | WG738505   | SAMP        | Selenium             | R2979145 | J         |
|               | WG736270   | SAMP        | Zinc, Dissolved      | R2977938 | J         |
|               | WG735881   | SAMP        | C10-C28 Diesel Range | R2973566 | J         |
|               | WG734733   | SAMP        | Chloride             | R2970638 | J         |
|               | WG734733   | SAMP        | Sulfate              | R2970638 | J         |
|               | WG734812   | SAMP        | Dissolved Solids     | R2971954 | JT4       |
| L712971-05    | WG738505   | SAMP        | Aluminum             | R2979145 | J         |
|               | WG736270   | SAMP        | Aluminum, Dissolved  | R2977948 | J         |
|               | WG736270   | SAMP        | Calcium, Dissolved   | R2977938 | J         |
|               | WG738505   | SAMP        | Chromium             | R2979145 | J         |
|               | WG736270   | SAMP        | Chromium, Dissolved  | R2977938 | J         |
|               | WG736270   | SAMP        | Potassium, Dissolved | R2977938 | J         |
|               | WG738505   | SAMP        | Sodium               | R2979145 | J         |
|               | WG736270   | SAMP        | Sodium, Dissolved    | R2977938 | J         |
|               | WG734853   | SAMP        | C28-C40 Oil Range    | R2971782 | J         |
|               | WG734733   | SAMP        | Fluoride             | R2970638 | J         |
|               | WG734733   | SAMP        | Nitrate              | R2970638 | JP1       |
|               | WG734733   | SAMP        | Sulfate              | R2970638 | J         |
|               | WG734813   | SAMP        | Dissolved Solids     | R2971948 | T4        |

Attachment A  
List of Analytes with QC Qualifiers

| Sample Number | Work Group | Sample Type | Analyte              | Run ID   | Qualifier |
|---------------|------------|-------------|----------------------|----------|-----------|
|               | WG738505   | SAMP        | Aluminum             | R2979145 | J         |
|               | WG736270   | SAMP        | Aluminum,Dissolved   | R2977948 | J         |
|               | WG738505   | SAMP        | Chromium             | R2979145 | J         |
|               | WG736270   | SAMP        | Chromium,Dissolved   | R2977938 | J         |
|               | WG736270   | SAMP        | Copper,Dissolved     | R2977938 | J         |
|               | WG738505   | SAMP        | Manganese            | R2979145 | J         |
|               | WG736270   | SAMP        | Manganese,Dissolved  | R2977938 | J         |
|               | WG738505   | SAMP        | Molybdenum           | R2979145 | J         |
|               | WG736270   | SAMP        | Molybdenum,Dissolved | R2977938 | J         |
|               | WG738505   | SAMP        | Potassium            | R2979145 | J         |
|               | WG736270   | SAMP        | Potassium,Dissolved  | R2977938 | J         |
|               | WG736270   | SAMP        | Selenium,Dissolved   | R2977938 | J         |
|               | WG738505   | SAMP        | Vanadium             | R2979145 | J         |
|               | WG736270   | SAMP        | Vanadium,Dissolved   | R2977938 | J         |
|               | WG738505   | SAMP        | Zinc                 | R2979145 | J         |
|               | WG736270   | SAMP        | Zinc,Dissolved       | R2977938 | J         |

Attachment B  
Explanation of QC Qualifier Codes

| Qualifier | Meaning                                                                                                                                               |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| J         | (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.                                                 |
| 01        | (ESC) The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference. |
| P1        | RPD value not applicable for sample concentrations less than 5 times the reporting limit.                                                             |
| T4        | (ESC) - Additional method/sample information: QNS - Quantity Not Sufficient                                                                           |
| V         | (ESC) - Additional QC Info: The sample concentration is too high to evaluate accurate spike recoveries.                                               |

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy** - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision** - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate** - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC** - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                    |                        |                 |
|------------------|----------------------------------------------------|------------------------|-----------------|
| Test:            | Anions by Method 9056MOD                           |                        |                 |
| Project No:      | TX000836.0008.00004                                | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM              | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                          | <b>Analytic Batch:</b> | <b>WG734733</b> |
| Analysis Date:   | 7/31/2014 12:23:00 PM                              | Analyst:               | 577             |
| Instrument ID:   | IC-10                                              |                        |                 |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -08, -09 |                        |                 |

#### Method Blank

| Analyte         | CAS        | RDL     | MDL       | Qualifier |
|-----------------|------------|---------|-----------|-----------|
| <b>Chloride</b> | 16887-00-6 | < 1.00  | < 0.0519  |           |
| <b>Fluoride</b> | 16984-48-8 | < 0.100 | < 0.00990 |           |
| <b>Nitrate</b>  | 14797-55-8 | < 0.100 | < 0.0227  |           |
| <b>Nitrite</b>  | 14797-65-0 | < 0.100 | < 0.0277  |           |
| <b>Sulfate</b>  | 14808-79-8 | < 5.00  | < 0.0774  |           |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Anions by Method 9056MOD              |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG734962</b> |
| Analysis Date:   | 8/2/2014 12:06:00 PM                  | Analyst:               | 577             |
| Instrument ID:   | IC-9                                  |                        |                 |
| Sample Numbers:  | L712971-04                            |                        |                 |

#### Method Blank

| Analyte         | CAS        | RDL     | MDL       | Qualifier |
|-----------------|------------|---------|-----------|-----------|
| <b>Chloride</b> | 16887-00-6 | < 1.00  | < 0.0519  |           |
| Fluoride        | 16984-48-8 | < 0.100 | < 0.00990 |           |
| <b>Sulfate</b>  | 14808-79-8 | < 5.00  | < 0.0774  |           |

#### Laboratory Control Sample (LCS)

| Analyte         | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|-----------------|-----|------------|--------|-------|----------------|------|
| <b>Chloride</b> | 1   | 40         | 39.947 | 100   | 90 - 110       |      |
| Fluoride        | 1   | 8          | 8.0078 | 100   | 90 - 110       |      |
| <b>Sulfate</b>  | 1   | 40         | 39.911 | 100   | 90 - 110       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte         | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|-----------------|-----|------------|--------|-------|----------------|------|
| <b>Chloride</b> | 1   | 40         | 39.967 | 100   | 90 - 110       |      |
| Fluoride        | 1   | 8          | 8.0039 | 100   | 90 - 110       |      |
| <b>Sulfate</b>  | 1   | 40         | 39.921 | 100   | 90 - 110       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte         | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec | Control RPD |
|-----------------|-----|-------|--------|-------|--------|-------|----------------|-------|-------------|
| <b>Chloride</b> | 1   | 40    | 39.947 | 100   | 39.967 | 100   | 90 - 110       | 0     | 20          |
| Fluoride        | 1   | 8     | 8.0078 | 100   | 8.0039 | 100   | 90 - 110       | 0     | 20          |
| <b>Sulfate</b>  | 1   | 40    | 39.911 | 100   | 39.921 | 100   | 90 - 110       | 0     | 20          |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                    |  |  |                        |                 |
|------------------|----------------------------------------------------|--|--|------------------------|-----------------|
| Test:            | Anions by Method 9056MOD                           |  |  | Matrix:                | Water - mg/L    |
| Project No:      | TX000836.0008.00004                                |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM              |  |  | <b>Analytic Batch:</b> | <b>WG734733</b> |
| Collection Date: | 7/29/2014                                          |  |  | Analyst:               | 577             |
| Analysis Date:   | 7/31/2014 12:23:00 PM                              |  |  |                        |                 |
| Instrument ID:   | IC-10                                              |  |  |                        |                 |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -08, -09 |  |  |                        |                 |

#### Laboratory Control Sample (LCS)

| Analyte  | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------|-----|------------|--------|-------|----------------|------|
| Chloride | 1   | 40         | 40.457 | 101   | 90 - 110       |      |
| Fluoride | 1   | 8          | 8.225  | 103   | 90 - 110       |      |
| Nitrate  | 1   | 8          | 8.2397 | 103   | 90 - 110       |      |
| Nitrite  | 1   | 8          | 8.1027 | 101   | 90 - 110       |      |
| Sulfate  | 1   | 40         | 40.826 | 102   | 90 - 110       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte  | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------|-----|------------|--------|-------|----------------|------|
| Chloride | 1   | 40         | 40.414 | 101   | 90 - 110       |      |
| Fluoride | 1   | 8          | 8.2562 | 103   | 90 - 110       |      |
| Nitrate  | 1   | 8          | 8.2243 | 103   | 90 - 110       |      |
| Nitrite  | 1   | 8          | 8.103  | 101   | 90 - 110       |      |
| Sulfate  | 1   | 40         | 40.624 | 102   | 90 - 110       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte  | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|----------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Chloride | 1   | 40    | 40.457 | 101   | 40.414 | 101   | 90 - 110       | 0          | 20                 |      |
| Fluoride | 1   | 8     | 8.225  | 103   | 8.2562 | 103   | 90 - 110       | 0          | 20                 |      |
| Nitrate  | 1   | 8     | 8.2397 | 103   | 8.2243 | 103   | 90 - 110       | 0          | 20                 |      |
| Nitrite  | 1   | 8     | 8.1027 | 101   | 8.103  | 101   | 90 - 110       | 0          | 20                 |      |
| Sulfate  | 1   | 40    | 40.826 | 102   | 40.624 | 102   | 90 - 110       | 0          | 20                 |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                    |                        |                 |
|------------------|----------------------------------------------------|------------------------|-----------------|
| Test:            | Anions by Method 9056MOD                           |                        |                 |
| Project No:      | TX000836.0008.00004                                | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM              | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                          | <b>Analytic Batch:</b> | <b>WG734733</b> |
| Analysis Date:   | 7/31/2014 12:23:00 PM                              | Analyst:               | 577             |
| Instrument ID:   | IC-10                                              |                        |                 |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -08, -09 |                        |                 |

#### Sample Duplicate

L712971-09

| Analyte  | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|----------|-----|---------------|------------|-------|-------|-----------|
| Chloride | 1   | 1.7924        | 1.679      | 7     | 20    |           |
| Fluoride | 1   | 0.0772        | 0.0802     | 4     | 20    |           |
| Nitrate  | 1   | 0.0458        | 0.0988     | 73    | 20    | P1        |
| Nitrite  | 1   | <0.0277       | <0.0277    |       | 20    |           |
| Sulfate  | 1   | 1.8168        | 2.0101     | 10    | 20    |           |

#### Sample Duplicate

L712986-12

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Nitrate | 1   | 3.3499        | 3.348      | 0     | 20    |           |

#### Matrix Spike / Matrix Spike Duplicate

L712986-13

| Analyte | Dil | Spike Value | Sample MS | % Rec  | MSD | % Rec  | Control Limits | % Rec Qual | RPD | Control Limits | RPD Qual |
|---------|-----|-------------|-----------|--------|-----|--------|----------------|------------|-----|----------------|----------|
| Nitrate | 1   | 5           | 0.8978    | 5.9156 | 100 | 5.8927 | 100            | 80 - 120   | 0   | 20             |          |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |  |  |                        |                 |
|------------------|---------------------------------------|--|--|------------------------|-----------------|
| Test:            | Anions by Method 9056MOD              |  |  | Matrix:                | Water - mg/L    |
| Project No:      | TX000836.0008.00004                   |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM |  |  | <b>Analytic Batch:</b> | <b>WG734962</b> |
| Collection Date: | 7/29/2014                             |  |  | Analyst:               | 577             |
| Analysis Date:   | 8/2/2014 12:06:00 PM                  |  |  |                        |                 |
| Instrument ID:   | IC-9                                  |  |  |                        |                 |
| Sample Numbers:  | L712971-04                            |  |  |                        |                 |

#### Sample Duplicate

L712857-04

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Sulfate | 5   | 250.76        | 243.62     | 3     | 20    |           |

#### Sample Duplicate

L713064-09

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Sulfate | 5   | 210.90        | 205.18     | 3     | 20    |           |

#### Matrix Spike / Matrix Spike Duplicate

L712968-05

| Analyte  | Dil | Spike Value | Sample | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD | Control Limits | RPD Qual |
|----------|-----|-------------|--------|--------|-------|--------|-------|----------------|------------|-----|----------------|----------|
| Chloride | 1   | 50          | 15.907 | 65.129 | 98    | 65.061 | 98    | 80 - 120       |            | 0   | 20             |          |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                    |  |  |                        |                 |
|------------------|----------------------------------------------------|--|--|------------------------|-----------------|
| Test:            | Cyanide by Method 9012B                            |  |  | Matrix:                | Water - mg/L    |
| Project No:      | TX000836.0008.00004                                |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM              |  |  | <b>Analytic Batch:</b> | <b>WG735642</b> |
| Collection Date: | 7/29/2014                                          |  |  | Analyst:               | 578             |
| Analysis Date:   | 8/7/2014 12:55:00 PM                               |  |  |                        |                 |
| Instrument ID:   | LACHAT4                                            |  |  |                        |                 |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -08, -09 |  |  |                        |                 |

#### Method Blank

| Analyte | CAS     | RDL       | MDL       | Qualifier |
|---------|---------|-----------|-----------|-----------|
| Cyanide | 57-12-5 | < 0.00500 | < 0.00180 |           |

#### Laboratory Control Sample (LCS)

| Analyte | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------|-----|------------|--------|-------|----------------|------|
| Cyanide | 1   | 0.1        | 0.0996 | 99.6  | 90 - 110       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte | Dil | True Value | Found | % Rec | Control Limits | Qual |
|---------|-----|------------|-------|-------|----------------|------|
| Cyanide | 1   | 0.1        | 0.102 | 102   | 90 - 110       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte | Dil | Spike | LCS    | % Rec | LCSD  | % Rec | Control Limits | % Rec Qual | Control RPD % RPD | Control RPD Limits | Qual |
|---------|-----|-------|--------|-------|-------|-------|----------------|------------|-------------------|--------------------|------|
| Cyanide | 1   | 0.1   | 0.0996 | 99.6  | 0.102 | 102   | 90 - 110       | 2.38       | 20                |                    |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                    |  |  |                        |                 |
|------------------|----------------------------------------------------|--|--|------------------------|-----------------|
| Test:            | Cyanide by Method 9012B                            |  |  | Matrix:                | Water - mg/L    |
| Project No:      | TX000836.0008.00004                                |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM              |  |  | <b>Analytic Batch:</b> | <b>WG735642</b> |
| Collection Date: | 7/29/2014                                          |  |  | Analyst:               | 578             |
| Analysis Date:   | 8/7/2014 12:55:00 PM                               |  |  |                        |                 |
| Instrument ID:   | LACHAT4                                            |  |  |                        |                 |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -08, -09 |  |  |                        |                 |

#### Sample Duplicate

L712971-02

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Cyanide | 1   | <0.0018       | <0.0018    |       | 20    |           |

#### Sample Duplicate

L713011-02

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Cyanide | 1   | <0.0018       | 0.0033     | 0     | 20    |           |

#### Matrix Spike / Matrix Spike Duplicate

L712971-04

| Analyte | Dil | Spike Value | Sample  | MS    | % Rec | MSD  | % Rec | Control Limits | % Rec Qual | RPD  | Control Limits | RPD Qual |
|---------|-----|-------------|---------|-------|-------|------|-------|----------------|------------|------|----------------|----------|
| Cyanide | 1   | 0.2         | <0.0018 | 0.197 | 98.5  | 0.19 | 95    | 90 - 110       |            | 3.62 | 20             |          |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                              |                        |                 |
|------------------|----------------------------------------------|------------------------|-----------------|
| Test:            | Total Dissolved Solids by Method 2540 C-2011 |                        |                 |
| Project No:      | TX000836.0008.00004                          | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM        | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                    | <b>Analytic Batch:</b> | <b>WG734812</b> |
| Analysis Date:   | 8/4/2014 2:38:00 PM                          | Analyst:               | 36              |
| Instrument ID:   | WETBAL1                                      |                        |                 |
| Sample Numbers:  | L712971-01, -02, -03, -08                    |                        |                 |

#### Method Blank

| Analyte          | CAS     | RDL    | MDL    | Qualifier |
|------------------|---------|--------|--------|-----------|
| Dissolved Solids | DSOLIDS | < 10.0 | < 2.82 |           |

#### Laboratory Control Sample (LCS)

| Analyte          | Dil | True Value | Found | % Rec | Control Limits | Qual |
|------------------|-----|------------|-------|-------|----------------|------|
| Dissolved Solids | 1   | 8800       | 8730  | 99.2  | 85 - 115       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte          | Dil | True Value | Found | % Rec | Control Limits | Qual |
|------------------|-----|------------|-------|-------|----------------|------|
| Dissolved Solids | 1   | 8800       | 8770  | 99.7  | 85 - 115       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte          | Dil | Spike | LCS  | % Rec | LCSD | % Rec | Control Limits | % Rec Qual | Control RPD % RPD | Control RPD Limits | Control RPD Qual |
|------------------|-----|-------|------|-------|------|-------|----------------|------------|-------------------|--------------------|------------------|
| Dissolved Solids | 1   | 8800  | 8730 | 99.2  | 8770 | 99.7  | 85 - 115       | 0.46       | 5                 |                    |                  |



## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                              |                        |                 |
|------------------|----------------------------------------------|------------------------|-----------------|
| Test:            | Total Dissolved Solids by Method 2540 C-2011 |                        |                 |
| Project No:      | TX000836.0008.00004                          | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM        | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                    | <b>Analytic Batch:</b> | <b>WG734813</b> |
| Analysis Date:   | 8/4/2014 2:23:00 PM                          | Analyst:               | 36              |
| Instrument ID:   | WETBAL1                                      |                        |                 |
| Sample Numbers:  | L712971-04, -05, -06, -07, -09               |                        |                 |

#### Method Blank

| Analyte          | CAS     | RDL    | MDL    | Qualifier |
|------------------|---------|--------|--------|-----------|
| Dissolved Solids | DSOLIDS | < 10.0 | < 2.82 |           |

#### Laboratory Control Sample (LCS)

| Analyte          | Dil | True Value | Found | % Rec | Control Limits | Qual |
|------------------|-----|------------|-------|-------|----------------|------|
| Dissolved Solids | 1   | 8800       | 8820  | 100   | 85 - 115       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte          | Dil | True Value | Found | % Rec | Control Limits | Qual |
|------------------|-----|------------|-------|-------|----------------|------|
| Dissolved Solids | 1   | 8800       | 8770  | 99.7  | 85 - 115       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte          | Dil | Spike | LCS  | % Rec | LCSD | % Rec | Control Limits | % Rec Qual | Control RPD % RPD | Control RPD Limits | Control RPD Qual |
|------------------|-----|-------|------|-------|------|-------|----------------|------------|-------------------|--------------------|------------------|
| Dissolved Solids | 1   | 8800  | 8820 | 100   | 8770 | 99.7  | 85 - 115       | 0.57       | 5                 |                    |                  |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                              |                        |                 |
|------------------|----------------------------------------------|------------------------|-----------------|
| Test:            | Total Dissolved Solids by Method 2540 C-2011 |                        |                 |
| Project No:      | TX000836.0008.00004                          | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM        | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                    | <b>Analytic Batch:</b> | <b>WG734812</b> |
| Analysis Date:   | 8/4/2014 2:38:00 PM                          | Analyst:               | 36              |
| Instrument ID:   | WETBAL1                                      |                        |                 |
| Sample Numbers:  | L712971-01, -02, -03, -08                    |                        |                 |

### Sample Duplicate

L712857-06

| Analyte          | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|------------------|-----|---------------|------------|-------|-------|-----------|
| Dissolved Solids | 1   | 2695          | 2710       | 0.56  | 5     |           |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                              |                        |                 |
|------------------|----------------------------------------------|------------------------|-----------------|
| Test:            | Total Dissolved Solids by Method 2540 C-2011 |                        |                 |
| Project No:      | TX000836.0008.00004                          | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM        | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                    | <b>Analytic Batch:</b> | <b>WG734813</b> |
| Analysis Date:   | 8/4/2014 2:23:00 PM                          | Analyst:               | 36              |
| Instrument ID:   | WETBAL1                                      |                        |                 |
| Sample Numbers:  | L712971-04, -05, -06, -07, -09               |                        |                 |

### Sample Duplicate

L712921-01

| Analyte          | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|------------------|-----|---------------|------------|-------|-------|-----------|
| Dissolved Solids | 1   | 216           | 218        | 0.92  | 5     |           |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                    |                        |                 |
|------------------|----------------------------------------------------|------------------------|-----------------|
| Test:            | Mercury by Method 7470A                            |                        |                 |
| Project No:      | TX000836.0008.00004                                | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM              | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                          | <b>Analytic Batch:</b> | <b>WG736040</b> |
| Analysis Date:   | 8/8/2014 11:29:00 AM                               | Analyst:               | 572             |
| Instrument ID:   | CVAA3                                              | Prep Date:             | 8/7/2014        |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -08, -09 |                        |                 |

#### Method Blank

| Analyte | CAS       | RDL     | MDL      | Qualifier |
|---------|-----------|---------|----------|-----------|
| Mercury | 7439-97-6 | < 0.200 | < 0.0490 |           |

#### Laboratory Control Sample (LCS)

| Analyte | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------|-----|------------|--------|-------|----------------|------|
| Mercury | 1   | 3          | 3.0934 | 103   | 85 - 115       |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                    |                        |                 |
|------------------|----------------------------------------------------|------------------------|-----------------|
| Test:            | Mercury by Method 7470A                            |                        |                 |
| Project No:      | TX000836.0008.00004                                | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM              | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                          | <b>Analytic Batch:</b> | <b>WG736040</b> |
| Analysis Date:   | 8/8/2014 11:29:00 AM                               | Analyst:               | 572             |
| Instrument ID:   | CVAA3                                              | Prep Date:             | 8/7/2014        |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -08, -09 |                        |                 |

#### Sample Duplicate

L712736-01

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Mercury | 1   | <0.049        | <0.049     |       | 20    |           |

#### Serial Dilution

L712736-01

| Analyte | Dil | Sample Result | SD Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|-----------|-------|-------|-----------|
| Mercury | 5   | <0.049        | <0.245    |       | 10    |           |

#### Matrix Spike / Matrix Spike Duplicate

L712736-01

| Analyte | Dil | Spike Value | Sample | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD | Control Limits | RPD Qual |
|---------|-----|-------------|--------|--------|-------|--------|-------|----------------|------------|-----|----------------|----------|
| Mercury | 1   | 3           | <0.049 | 2.7974 | 92    | 2.9087 | 96    | 80 - 120       |            | 4   | 20             |          |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

Test: Trace Metals by Method 6020  
Project No: TX000836.0008.00004  
Project: Navajo Refining Company - Artesia, NM  
Collection Date: 7/29/2014  
Analysis Date: 8/11/2014 12:13:00 PM  
Instrument ID: ICPMS8  
Sample Numbers: L712971-01, -02, -03, -05, -06, -07, -08, -09

Matrix: Water - ug/L  
EPA ID: TN00003  
**Analytic Batch: WG736270**  
Analyst: 664  
Prep Date: 8/8/2014

#### Method Blank

| Analyte              | CAS       | RDL    | MDL     | Qualifier |
|----------------------|-----------|--------|---------|-----------|
| Aluminum,Dissolved   | 7429-90-5 | < 100  | 3.12    |           |
| Arsenic,Dissolved    | 7440-38-2 | < 2.00 | < 0.250 |           |
| Barium,Dissolved     | 7440-39-3 | < 5.00 | < 0.360 |           |
| Boron,Dissolved      | 7440-42-8 | < 20.0 | < 1.5   |           |
| Cadmium,Dissolved    | 7440-43-9 | < 1.00 | < 0.160 |           |
| Calcium,Dissolved    | 7440-70-2 | < 1000 | 48.8    |           |
| Chromium,Dissolved   | 7440-47-3 | < 1.00 | < 0.540 |           |
| Cobalt,Dissolved     | 7440-48-4 | < 2.00 | < 0.260 |           |
| Copper,Dissolved     | 7440-50-8 | < 5.00 | < 0.520 |           |
| Iron,Dissolved       | 7439-89-6 | < 100  | < 15.0  |           |
| Lead,Dissolved       | 7439-92-1 | < 2.00 | < 0.240 |           |
| Manganese,Dissolved  | 7439-96-5 | < 5.00 | < 0.250 |           |
| Molybdenum,Dissolved | 7439-98-7 | < 5.00 | < 0.140 |           |
| Nickel,Dissolved     | 7440-02-0 | < 2.00 | < 0.350 |           |
| Potassium,Dissolved  | 7440-09-7 | < 1000 | 49.8    |           |
| Selenium,Dissolved   | 7782-49-2 | < 2.00 | 0.604   |           |
| Silver,Dissolved     | 7440-22-4 | 3.16   | 3.16    | B         |
| Sodium,Dissolved     | 7440-23-5 | < 1000 | < 110   |           |
| Uranium,Dissolved    | 7440-61-1 | < 10.0 | < 0.330 |           |
| Vanadium,Dissolved   | 7440-62-2 | < 5.00 | < 0.180 |           |
| Zinc,Dissolved       | 7440-66-6 | < 25.0 | < 2.56  |           |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 9:07:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

#### Method Blank

| Analyte              | CAS       | RDL    | MDL     | Qualifier |
|----------------------|-----------|--------|---------|-----------|
| Aluminum,Dissolved   | 7429-90-5 | < 100  | 6.48    |           |
| Arsenic,Dissolved    | 7440-38-2 | < 2.00 | < 0.250 |           |
| Barium,Dissolved     | 7440-39-3 | < 5.00 | < 0.360 |           |
| Boron,Dissolved      | 7440-42-8 | < 20.0 | < 1.5   |           |
| Cadmium,Dissolved    | 7440-43-9 | < 1.00 | < 0.160 |           |
| Calcium,Dissolved    | 7440-70-2 | < 1000 | < 46.0  |           |
| Chromium,Dissolved   | 7440-47-3 | < 1.00 | < 0.540 |           |
| Cobalt,Dissolved     | 7440-48-4 | < 2.00 | < 0.260 |           |
| Copper,Dissolved     | 7440-50-8 | < 5.00 | < 0.520 |           |
| Iron,Dissolved       | 7439-89-6 | < 100  | < 15.0  |           |
| Lead,Dissolved       | 7439-92-1 | < 2.00 | < 0.240 |           |
| Manganese,Dissolved  | 7439-96-5 | < 5.00 | < 0.250 |           |
| Molybdenum,Dissolved | 7439-98-7 | < 5.00 | < 0.140 |           |
| Nickel,Dissolved     | 7440-02-0 | < 2.00 | < 0.350 |           |
| Potassium,Dissolved  | 7440-09-7 | < 1000 | 46.5    |           |
| Selenium,Dissolved   | 7782-49-2 | < 2.00 | 0.596   |           |
| Silver,Dissolved     | 7440-22-4 | < 2.00 | < 0.310 |           |
| Sodium,Dissolved     | 7440-23-5 | < 1000 | < 110   |           |
| Uranium,Dissolved    | 7440-61-1 | < 10.0 | < 0.330 |           |
| Vanadium,Dissolved   | 7440-62-2 | < 5.00 | < 0.180 |           |
| Zinc,Dissolved       | 7440-66-6 | < 25.0 | < 2.56  |           |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:36:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

#### Method Blank

| Analyte    | CAS       | RDL    | MDL     | Qualifier |
|------------|-----------|--------|---------|-----------|
| Aluminum   | 7429-90-5 | < 100  | 3.37    |           |
| Arsenic    | 7440-38-2 | < 2.00 | < 0.250 |           |
| Barium     | 7440-39-3 | < 5.00 | < 0.360 |           |
| Boron      | 7440-42-8 | < 20.0 | 2.52    |           |
| Cadmium    | 7440-43-9 | < 1.00 | < 0.160 |           |
| Calcium    | 7440-70-2 | < 1000 | < 46.0  |           |
| Chromium   | 7440-47-3 | < 1.00 | < 0.540 |           |
| Cobalt     | 7440-48-4 | < 2.00 | < 0.260 |           |
| Copper     | 7440-50-8 | < 5.00 | < 0.520 |           |
| Iron       | 7439-89-6 | < 100  | < 15.0  |           |
| Lead       | 7439-92-1 | < 2.00 | < 0.240 |           |
| Manganese  | 7439-96-5 | < 5.00 | < 0.250 |           |
| Molybdenum | 7439-98-7 | < 5.00 | < 0.140 |           |
| Nickel     | 7440-02-0 | < 2.00 | < 0.350 |           |
| Potassium  | 7440-09-7 | < 1000 | < 37.0  |           |
| Selenium   | 7782-49-2 | < 2.00 | 0.714   |           |
| Silver     | 7440-22-4 | < 2.00 | < 0.310 |           |
| Sodium     | 7440-23-5 | < 1000 | < 110   |           |
| Uranium    | 7440-61-1 | < 10.0 | < 0.330 |           |
| Vanadium   | 7440-62-2 | < 5.00 | < 0.180 |           |
| Zinc       | 7440-66-6 | < 25.0 | < 2.56  |           |



## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

Test: Trace Metals by Method 6020  
Project No: TX000836.0008.00004  
Project: Navajo Refining Company - Artesia, NM  
Collection Date: 7/29/2014  
Analysis Date: 8/21/2014 11:17:00 AM  
Instrument ID: ICPMS8  
Sample Numbers: L712971-01, -02, -03, -05, -06, -07, -08, -09

Matrix: Water - ug/L  
EPA ID: TN00003  
**Analytic Batch: WG738505**  
Analyst: 664  
Prep Date: 8/20/2014

#### Method Blank

| Analyte    | CAS       | RDL    | MDL     | Qualifier |
|------------|-----------|--------|---------|-----------|
| Aluminum   | 7429-90-5 | < 100  | < 2.00  |           |
| Arsenic    | 7440-38-2 | < 2.00 | < 0.250 |           |
| Barium     | 7440-39-3 | < 5.00 | < 0.360 |           |
| Boron      | 7440-42-8 | < 20.0 | < 1.5   |           |
| Cadmium    | 7440-43-9 | < 1.00 | < 0.160 |           |
| Calcium    | 7440-70-2 | < 1000 | < 46.0  |           |
| Chromium   | 7440-47-3 | < 1.00 | < 0.540 |           |
| Cobalt     | 7440-48-4 | < 2.00 | < 0.260 |           |
| Copper     | 7440-50-8 | < 5.00 | < 0.520 |           |
| Iron       | 7439-89-6 | < 100  | < 15.0  |           |
| Lead       | 7439-92-1 | < 2.00 | < 0.240 |           |
| Manganese  | 7439-96-5 | < 5.00 | < 0.250 |           |
| Molybdenum | 7439-98-7 | < 5.00 | < 0.140 |           |
| Nickel     | 7440-02-0 | < 2.00 | < 0.350 |           |
| Potassium  | 7440-09-7 | < 1000 | < 37.0  |           |
| Selenium   | 7782-49-2 | < 2.00 | < 0.380 |           |
| Silver     | 7440-22-4 | < 2.00 | < 0.310 |           |
| Sodium     | 7440-23-5 | < 1000 | < 110   |           |
| Uranium    | 7440-61-1 | < 10.0 | < 0.330 |           |
| Vanadium   | 7440-62-2 | < 5.00 | < 0.180 |           |
| Zinc       | 7440-66-6 | < 25.0 | < 2.56  |           |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                               |                        |                 |
|------------------|-----------------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020                   |                        |                 |
| Project No:      | TX000836.0008.00004                           | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM         | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                     | <b>Analytic Batch:</b> | <b>WG736270</b> |
| Analysis Date:   | 8/11/2014 12:13:00 PM                         | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                        | Prep Date:             | 8/8/2014        |
| Sample Numbers:  | L712971-01, -02, -03, -05, -06, -07, -08, -09 |                        |                 |

### Laboratory Control Sample (LCS)

| Analyte              | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------------------|-----|------------|--------|-------|----------------|------|
| Aluminum,Dissolved   | 1   | 1110       | 1096.5 | 99    | 70 - 130       |      |
| Arsenic,Dissolved    | 1   | 111        | 108.82 | 98    | 85 - 115       |      |
| Barium,Dissolved     | 1   | 111        | 108.88 | 98    | 85 - 115       |      |
| Boron,Dissolved      | 1   | 111        | 116.52 | 105   | 70 - 130       |      |
| Cadmium,Dissolved    | 1   | 111        | 106.83 | 96    | 85 - 115       |      |
| Calcium,Dissolved    | 1   | 11100      | 11621  | 105   | 70 - 130       |      |
| Chromium,Dissolved   | 1   | 111        | 111.74 | 101   | 85 - 115       |      |
| Cobalt,Dissolved     | 1   | 111        | 110.58 | 100   | 85 - 115       |      |
| Copper,Dissolved     | 1   | 111        | 109.78 | 99    | 85 - 115       |      |
| Iron,Dissolved       | 1   | 1110       | 1146.1 | 103   | 85 - 115       |      |
| Lead,Dissolved       | 1   | 111        | 109.12 | 98    | 85 - 115       |      |
| Manganese,Dissolved  | 1   | 111        | 111.49 | 100   | 85 - 115       |      |
| Molybdenum,Dissolved | 1   | 111        | 113.87 | 103   | 85 - 115       |      |
| Nickel,Dissolved     | 1   | 111        | 110.63 | 100   | 85 - 115       |      |
| Potassium,Dissolved  | 1   | 11100      | 11406  | 103   | 70 - 130       |      |
| Selenium,Dissolved   | 1   | 111        | 106.89 | 96    | 85 - 115       |      |
| Silver,Dissolved     | 1   | 111        | 94.134 | 85    | 85 - 115       |      |
| Sodium,Dissolved     | 1   | 11100      | 11363  | 102   | 70 - 130       |      |
| Uranium,Dissolved    | 1   | 111        | 107.75 | 97    | 70 - 130       |      |
| Vanadium,Dissolved   | 1   | 111        | 110.99 | 100   | 85 - 115       |      |
| Zinc,Dissolved       | 1   | 111        | 106.51 | 96    | 85 - 115       |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                               |                        |                 |
|------------------|-----------------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020                   |                        |                 |
| Project No:      | TX000836.0008.00004                           | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM         | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                     | <b>Analytic Batch:</b> | <b>WG736270</b> |
| Analysis Date:   | 8/11/2014 12:13:00 PM                         | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                        | Prep Date:             | 8/8/2014        |
| Sample Numbers:  | L712971-01, -02, -03, -05, -06, -07, -08, -09 |                        |                 |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte              | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------------------|-----|------------|--------|-------|----------------|------|
| Aluminum,Dissolved   | 1   | 1110       | 1111.8 | 100   | 70 - 130       |      |
| Arsenic,Dissolved    | 1   | 111        | 110.71 | 100   | 85 - 115       |      |
| Barium,Dissolved     | 1   | 111        | 109.30 | 98    | 85 - 115       |      |
| Boron,Dissolved      | 1   | 111        | 121.83 | 110   | 70 - 130       |      |
| Cadmium,Dissolved    | 1   | 111        | 108.51 | 98    | 85 - 115       |      |
| Calcium,Dissolved    | 1   | 11100      | 12007  | 108   | 70 - 130       |      |
| Chromium,Dissolved   | 1   | 111        | 113.65 | 102   | 85 - 115       |      |
| Cobalt,Dissolved     | 1   | 111        | 112.63 | 101   | 85 - 115       |      |
| Copper,Dissolved     | 1   | 111        | 111.45 | 100   | 85 - 115       |      |
| Iron,Dissolved       | 1   | 1110       | 1158.0 | 104   | 85 - 115       |      |
| Lead,Dissolved       | 1   | 111        | 111.49 | 100   | 85 - 115       |      |
| Manganese,Dissolved  | 1   | 111        | 113.43 | 102   | 85 - 115       |      |
| Molybdenum,Dissolved | 1   | 111        | 114.72 | 103   | 85 - 115       |      |
| Nickel,Dissolved     | 1   | 111        | 111.85 | 101   | 85 - 115       |      |
| Potassium,Dissolved  | 1   | 11100      | 11748  | 106   | 70 - 130       |      |
| Selenium,Dissolved   | 1   | 111        | 108.74 | 98    | 85 - 115       |      |
| Silver,Dissolved     | 1   | 111        | 96.662 | 87    | 85 - 115       |      |
| Sodium,Dissolved     | 1   | 11100      | 11605  | 105   | 70 - 130       |      |
| Uranium,Dissolved    | 1   | 111        | 110.19 | 99    | 70 - 130       |      |
| Vanadium,Dissolved   | 1   | 111        | 113.73 | 102   | 85 - 115       |      |
| Zinc,Dissolved       | 1   | 111        | 108.05 | 97    | 85 - 115       |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

Test: Trace Metals by Method 6020  
Project No: TX000836.0008.00004  
Project: Navajo Refining Company - Artesia, NM  
Collection Date: 7/29/2014  
Analysis Date: 8/11/2014 12:13:00 PM  
Instrument ID: ICPMS8  
Sample Numbers: L712971-01, -02, -03, -05, -06, -07, -08, -09

Matrix: Water - ug/L  
EPA ID: TN00003  
**Analytic Batch: WG736270**  
Analyst: 664  
Prep Date: 8/8/2014

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte              | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|----------------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Aluminum,Dissolved   | 1   | 1110  | 1096.5 | 99    | 1111.8 | 100   | 70 - 130       | 1          | 20                 |      |
| Arsenic,Dissolved    | 1   | 111   | 108.82 | 98    | 110.71 | 100   | 85 - 115       | 2          | 20                 |      |
| Barium,Dissolved     | 1   | 111   | 108.88 | 98    | 109.30 | 98    | 85 - 115       | 0          | 20                 |      |
| Boron,Dissolved      | 1   | 111   | 116.52 | 105   | 121.83 | 110   | 70 - 130       | 4          | 20                 |      |
| Cadmium,Dissolved    | 1   | 111   | 106.83 | 96    | 108.51 | 98    | 85 - 115       | 2          | 20                 |      |
| Calcium,Dissolved    | 1   | 11100 | 11621  | 105   | 12007  | 108   | 70 - 130       | 3          | 20                 |      |
| Chromium,Dissolved   | 1   | 111   | 111.74 | 101   | 113.65 | 102   | 85 - 115       | 2          | 20                 |      |
| Cobalt,Dissolved     | 1   | 111   | 110.58 | 100   | 112.63 | 101   | 85 - 115       | 2          | 20                 |      |
| Copper,Dissolved     | 1   | 111   | 109.78 | 99    | 111.45 | 100   | 85 - 115       | 2          | 20                 |      |
| Iron,Dissolved       | 1   | 1110  | 1146.1 | 103   | 1158.0 | 104   | 85 - 115       | 1          | 20                 |      |
| Lead,Dissolved       | 1   | 111   | 109.12 | 98    | 111.49 | 100   | 85 - 115       | 2          | 20                 |      |
| Manganese,Dissolved  | 1   | 111   | 111.49 | 100   | 113.43 | 102   | 85 - 115       | 2          | 20                 |      |
| Molybdenum,Dissolved | 1   | 111   | 113.87 | 103   | 114.72 | 103   | 85 - 115       | 1          | 20                 |      |
| Nickel,Dissolved     | 1   | 111   | 110.63 | 100   | 111.85 | 101   | 85 - 115       | 1          | 20                 |      |
| Potassium,Dissolved  | 1   | 11100 | 11406  | 103   | 11748  | 106   | 70 - 130       | 3          | 20                 |      |
| Selenium,Dissolved   | 1   | 111   | 106.89 | 96    | 108.74 | 98    | 85 - 115       | 2          | 20                 |      |
| Silver,Dissolved     | 1   | 111   | 94.134 | 85    | 96.662 | 87    | 85 - 115       | 3          | 20                 |      |
| Sodium,Dissolved     | 1   | 11100 | 11363  | 102   | 11605  | 105   | 70 - 130       | 2          | 20                 |      |
| Uranium,Dissolved    | 1   | 111   | 107.75 | 97    | 110.19 | 99    | 70 - 130       | 2          | 20                 |      |
| Vanadium,Dissolved   | 1   | 111   | 110.99 | 100   | 113.73 | 102   | 85 - 115       | 2          | 20                 |      |
| Zinc,Dissolved       | 1   | 111   | 106.51 | 96    | 108.05 | 97    | 85 - 115       | 1          | 20                 |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 9:07:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

### Laboratory Control Sample (LCS)

| Analyte              | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------------------|-----|------------|--------|-------|----------------|------|
| Aluminum,Dissolved   | 1   | 1110       | 1003.7 | 90    | 70 - 130       |      |
| Arsenic,Dissolved    | 1   | 111        | 98.223 | 88    | 85 - 115       |      |
| Barium,Dissolved     | 1   | 111        | 99.882 | 90    | 85 - 115       |      |
| Boron,Dissolved      | 1   | 111        | 112.24 | 101   | 70 - 130       |      |
| Cadmium,Dissolved    | 1   | 111        | 97.930 | 88    | 85 - 115       |      |
| Calcium,Dissolved    | 1   | 11100      | 10231  | 92    | 70 - 130       |      |
| Chromium,Dissolved   | 1   | 111        | 98.361 | 89    | 85 - 115       |      |
| Cobalt,Dissolved     | 1   | 111        | 99.060 | 89    | 85 - 115       |      |
| Copper,Dissolved     | 1   | 111        | 98.338 | 89    | 85 - 115       |      |
| Iron,Dissolved       | 1   | 1110       | 1004.8 | 91    | 85 - 115       |      |
| Lead,Dissolved       | 1   | 111        | 98.459 | 89    | 85 - 115       |      |
| Manganese,Dissolved  | 1   | 111        | 99.623 | 90    | 85 - 115       |      |
| Molybdenum,Dissolved | 1   | 111        | 102.26 | 92    | 85 - 115       |      |
| Nickel,Dissolved     | 1   | 111        | 99.430 | 90    | 85 - 115       |      |
| Potassium,Dissolved  | 1   | 11100      | 9852.2 | 89    | 70 - 130       |      |
| Selenium,Dissolved   | 1   | 111        | 97.620 | 88    | 85 - 115       |      |
| Silver,Dissolved     | 1   | 111        | 102.54 | 92    | 85 - 115       |      |
| Sodium,Dissolved     | 1   | 11100      | 9946.8 | 90    | 70 - 130       |      |
| Uranium,Dissolved    | 1   | 111        | 98.006 | 88    | 70 - 130       |      |
| Vanadium,Dissolved   | 1   | 111        | 98.601 | 89    | 85 - 115       |      |
| Zinc,Dissolved       | 1   | 111        | 97.672 | 88    | 85 - 115       |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 9:07:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte              | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------------------|-----|------------|--------|-------|----------------|------|
| Aluminum,Dissolved   | 1   | 1110       | 1018.2 | 92    | 70 - 130       |      |
| Arsenic,Dissolved    | 1   | 111        | 97.318 | 88    | 85 - 115       |      |
| Barium,Dissolved     | 1   | 111        | 100.90 | 91    | 85 - 115       |      |
| Boron,Dissolved      | 1   | 111        | 121.39 | 109   | 70 - 130       |      |
| Cadmium,Dissolved    | 1   | 111        | 97.919 | 88    | 85 - 115       |      |
| Calcium,Dissolved    | 1   | 11100      | 10287  | 93    | 70 - 130       |      |
| Chromium,Dissolved   | 1   | 111        | 99.150 | 89    | 85 - 115       |      |
| Cobalt,Dissolved     | 1   | 111        | 97.966 | 88    | 85 - 115       |      |
| Copper,Dissolved     | 1   | 111        | 97.303 | 88    | 85 - 115       |      |
| Iron,Dissolved       | 1   | 1110       | 989.32 | 89    | 85 - 115       |      |
| Lead,Dissolved       | 1   | 111        | 98.857 | 89    | 85 - 115       |      |
| Manganese,Dissolved  | 1   | 111        | 98.806 | 89    | 85 - 115       |      |
| Molybdenum,Dissolved | 1   | 111        | 101.17 | 91    | 85 - 115       |      |
| Nickel,Dissolved     | 1   | 111        | 98.464 | 89    | 85 - 115       |      |
| Potassium,Dissolved  | 1   | 11100      | 9946.2 | 90    | 70 - 130       |      |
| Selenium,Dissolved   | 1   | 111        | 97.783 | 88    | 85 - 115       |      |
| Silver,Dissolved     | 1   | 111        | 103.08 | 93    | 85 - 115       |      |
| Sodium,Dissolved     | 1   | 11100      | 9947.9 | 90    | 70 - 130       |      |
| Uranium,Dissolved    | 1   | 111        | 98.923 | 89    | 70 - 130       |      |
| Vanadium,Dissolved   | 1   | 111        | 100.05 | 90    | 85 - 115       |      |
| Zinc,Dissolved       | 1   | 111        | 95.954 | 86    | 85 - 115       |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 9:07:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte              | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|----------------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Aluminum,Dissolved   | 1   | 1110  | 1003.7 | 90    | 1018.2 | 92    | 70 - 130       | 1          | 20                 |      |
| Arsenic,Dissolved    | 1   | 111   | 98.223 | 88    | 97.318 | 88    | 85 - 115       | 1          | 20                 |      |
| Barium,Dissolved     | 1   | 111   | 99.882 | 90    | 100.90 | 91    | 85 - 115       | 1          | 20                 |      |
| Boron,Dissolved      | 1   | 111   | 112.24 | 101   | 121.39 | 109   | 70 - 130       | 8          | 20                 |      |
| Cadmium,Dissolved    | 1   | 111   | 97.930 | 88    | 97.919 | 88    | 85 - 115       | 0          | 20                 |      |
| Calcium,Dissolved    | 1   | 11100 | 10231  | 92    | 10287  | 93    | 70 - 130       | 1          | 20                 |      |
| Chromium,Dissolved   | 1   | 111   | 98.361 | 89    | 99.150 | 89    | 85 - 115       | 1          | 20                 |      |
| Cobalt,Dissolved     | 1   | 111   | 99.060 | 89    | 97.966 | 88    | 85 - 115       | 1          | 20                 |      |
| Copper,Dissolved     | 1   | 111   | 98.338 | 89    | 97.303 | 88    | 85 - 115       | 1          | 20                 |      |
| Iron,Dissolved       | 1   | 1110  | 1004.8 | 91    | 989.32 | 89    | 85 - 115       | 2          | 20                 |      |
| Lead,Dissolved       | 1   | 111   | 98.459 | 89    | 98.857 | 89    | 85 - 115       | 0          | 20                 |      |
| Manganese,Dissolved  | 1   | 111   | 99.623 | 90    | 98.806 | 89    | 85 - 115       | 1          | 20                 |      |
| Molybdenum,Dissolved | 1   | 111   | 102.26 | 92    | 101.17 | 91    | 85 - 115       | 1          | 20                 |      |
| Nickel,Dissolved     | 1   | 111   | 99.430 | 90    | 98.464 | 89    | 85 - 115       | 1          | 20                 |      |
| Potassium,Dissolved  | 1   | 11100 | 9852.2 | 89    | 9946.2 | 90    | 70 - 130       | 1          | 20                 |      |
| Selenium,Dissolved   | 1   | 111   | 97.620 | 88    | 97.783 | 88    | 85 - 115       | 0          | 20                 |      |
| Silver,Dissolved     | 1   | 111   | 102.54 | 92    | 103.08 | 93    | 85 - 115       | 1          | 20                 |      |
| Sodium,Dissolved     | 1   | 11100 | 9946.8 | 90    | 9947.9 | 90    | 70 - 130       | 0          | 20                 |      |
| Uranium,Dissolved    | 1   | 111   | 98.006 | 88    | 98.923 | 89    | 70 - 130       | 1          | 20                 |      |
| Vanadium,Dissolved   | 1   | 111   | 98.601 | 89    | 100.05 | 90    | 85 - 115       | 1          | 20                 |      |
| Zinc,Dissolved       | 1   | 111   | 97.672 | 88    | 95.954 | 86    | 85 - 115       | 2          | 20                 |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:36:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

### Laboratory Control Sample (LCS)

| Analyte    | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|------------|-----|------------|--------|-------|----------------|------|
| Aluminum   | 1   | 1110       | 996.26 | 90    | 70 - 130       |      |
| Arsenic    | 1   | 111        | 98.350 | 89    | 85 - 115       |      |
| Barium     | 1   | 111        | 99.041 | 89    | 85 - 115       |      |
| Boron      | 1   | 111        | 95.712 | 86    | 70 - 130       |      |
| Cadmium    | 1   | 111        | 97.570 | 88    | 85 - 115       |      |
| Calcium    | 1   | 11100      | 10367  | 93    | 70 - 130       |      |
| Chromium   | 1   | 111        | 99.555 | 90    | 85 - 115       |      |
| Cobalt     | 1   | 111        | 99.346 | 90    | 85 - 115       |      |
| Copper     | 1   | 111        | 98.356 | 89    | 85 - 115       |      |
| Iron       | 1   | 1110       | 1006.2 | 91    | 85 - 115       |      |
| Lead       | 1   | 111        | 99.458 | 90    | 85 - 115       |      |
| Manganese  | 1   | 111        | 99.817 | 90    | 85 - 115       |      |
| Molybdenum | 1   | 111        | 102.13 | 92    | 85 - 115       |      |
| Nickel     | 1   | 111        | 98.809 | 89    | 85 - 115       |      |
| Potassium  | 1   | 11100      | 10035  | 90    | 70 - 130       |      |
| Selenium   | 1   | 111        | 98.952 | 89    | 85 - 115       |      |
| Silver     | 1   | 111        | 102.07 | 92    | 85 - 115       |      |
| Sodium     | 1   | 11100      | 9954.8 | 90    | 70 - 130       |      |
| Uranium    | 1   | 111        | 99.328 | 89    | 70 - 130       |      |
| Vanadium   | 1   | 111        | 99.476 | 90    | 85 - 115       |      |
| Zinc       | 1   | 111        | 97.621 | 88    | 85 - 115       |      |



## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:36:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte    | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|------------|-----|------------|--------|-------|----------------|------|
| Aluminum   | 1   | 1110       | 993.16 | 89    | 70 - 130       |      |
| Arsenic    | 1   | 111        | 97.750 | 88    | 85 - 115       |      |
| Barium     | 1   | 111        | 99.868 | 90    | 85 - 115       |      |
| Boron      | 1   | 111        | 99.227 | 89    | 70 - 130       |      |
| Cadmium    | 1   | 111        | 98.035 | 88    | 85 - 115       |      |
| Calcium    | 1   | 11100      | 10214  | 92    | 70 - 130       |      |
| Chromium   | 1   | 111        | 98.612 | 89    | 85 - 115       |      |
| Cobalt     | 1   | 111        | 98.521 | 89    | 85 - 115       |      |
| Copper     | 1   | 111        | 98.232 | 88    | 85 - 115       |      |
| Iron       | 1   | 1110       | 997.20 | 90    | 85 - 115       |      |
| Lead       | 1   | 111        | 99.722 | 90    | 85 - 115       |      |
| Manganese  | 1   | 111        | 98.680 | 89    | 85 - 115       |      |
| Molybdenum | 1   | 111        | 101.31 | 91    | 85 - 115       |      |
| Nickel     | 1   | 111        | 99.048 | 89    | 85 - 115       |      |
| Potassium  | 1   | 11100      | 9851.6 | 89    | 70 - 130       |      |
| Selenium   | 1   | 111        | 97.828 | 88    | 85 - 115       |      |
| Silver     | 1   | 111        | 103.06 | 93    | 85 - 115       |      |
| Sodium     | 1   | 11100      | 9842.4 | 89    | 70 - 130       |      |
| Uranium    | 1   | 111        | 99.146 | 89    | 70 - 130       |      |
| Vanadium   | 1   | 111        | 99.101 | 89    | 85 - 115       |      |
| Zinc       | 1   | 111        | 96.746 | 87    | 85 - 115       |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:36:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte    | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Aluminum   | 1   | 1110  | 996.26 | 90    | 993.16 | 89    | 70 - 130       | 0          | 20                 |      |
| Arsenic    | 1   | 111   | 98.350 | 89    | 97.750 | 88    | 85 - 115       | 1          | 20                 |      |
| Barium     | 1   | 111   | 99.041 | 89    | 99.868 | 90    | 85 - 115       | 1          | 20                 |      |
| Boron      | 1   | 111   | 95.712 | 86    | 99.227 | 89    | 70 - 130       | 4          | 20                 |      |
| Cadmium    | 1   | 111   | 97.570 | 88    | 98.035 | 88    | 85 - 115       | 0          | 20                 |      |
| Calcium    | 1   | 11100 | 10367  | 93    | 10214  | 92    | 70 - 130       | 1          | 20                 |      |
| Chromium   | 1   | 111   | 99.555 | 90    | 98.612 | 89    | 85 - 115       | 1          | 20                 |      |
| Cobalt     | 1   | 111   | 99.346 | 90    | 98.521 | 89    | 85 - 115       | 1          | 20                 |      |
| Copper     | 1   | 111   | 98.356 | 89    | 98.232 | 88    | 85 - 115       | 0          | 20                 |      |
| Iron       | 1   | 1110  | 1006.2 | 91    | 997.20 | 90    | 85 - 115       | 1          | 20                 |      |
| Lead       | 1   | 111   | 99.458 | 90    | 99.722 | 90    | 85 - 115       | 0          | 20                 |      |
| Manganese  | 1   | 111   | 99.817 | 90    | 98.680 | 89    | 85 - 115       | 1          | 20                 |      |
| Molybdenum | 1   | 111   | 102.13 | 92    | 101.31 | 91    | 85 - 115       | 1          | 20                 |      |
| Nickel     | 1   | 111   | 98.809 | 89    | 99.048 | 89    | 85 - 115       | 0          | 20                 |      |
| Potassium  | 1   | 11100 | 10035  | 90    | 9851.6 | 89    | 70 - 130       | 2          | 20                 |      |
| Selenium   | 1   | 111   | 98.952 | 89    | 97.828 | 88    | 85 - 115       | 1          | 20                 |      |
| Silver     | 1   | 111   | 102.07 | 92    | 103.06 | 93    | 85 - 115       | 1          | 20                 |      |
| Sodium     | 1   | 11100 | 9954.8 | 90    | 9842.4 | 89    | 70 - 130       | 1          | 20                 |      |
| Uranium    | 1   | 111   | 99.328 | 89    | 99.146 | 89    | 70 - 130       | 0          | 20                 |      |
| Vanadium   | 1   | 111   | 99.476 | 90    | 99.101 | 89    | 85 - 115       | 0          | 20                 |      |
| Zinc       | 1   | 111   | 97.621 | 88    | 96.746 | 87    | 85 - 115       | 1          | 20                 |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                               |                        |                 |
|------------------|-----------------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020                   |                        |                 |
| Project No:      | TX000836.0008.00004                           | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM         | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                     | <b>Analytic Batch:</b> | <b>WG738505</b> |
| Analysis Date:   | 8/21/2014 11:17:00 AM                         | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                        | Prep Date:             | 8/20/2014       |
| Sample Numbers:  | L712971-01, -02, -03, -05, -06, -07, -08, -09 |                        |                 |

### Laboratory Control Sample (LCS)

| Analyte    | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|------------|-----|------------|--------|-------|----------------|------|
| Aluminum   | 1   | 1110       | 1120.7 | 101   | 70 - 130       |      |
| Arsenic    | 1   | 111        | 114.46 | 103   | 85 - 115       |      |
| Barium     | 1   | 111        | 114.35 | 103   | 85 - 115       |      |
| Boron      | 1   | 111        | 114.63 | 103   | 70 - 130       |      |
| Cadmium    | 1   | 111        | 113.18 | 102   | 85 - 115       |      |
| Calcium    | 1   | 11100      | 12322  | 111   | 70 - 130       |      |
| Chromium   | 1   | 111        | 111.98 | 101   | 85 - 115       |      |
| Cobalt     | 1   | 111        | 115.98 | 104   | 85 - 115       |      |
| Copper     | 1   | 111        | 115.15 | 104   | 85 - 115       |      |
| Iron       | 1   | 1110       | 1200.5 | 108   | 85 - 115       |      |
| Lead       | 1   | 111        | 112.74 | 102   | 85 - 115       |      |
| Manganese  | 1   | 111        | 118.06 | 106   | 85 - 115       |      |
| Molybdenum | 1   | 111        | 115.38 | 104   | 85 - 115       |      |
| Nickel     | 1   | 111        | 115.66 | 104   | 85 - 115       |      |
| Potassium  | 1   | 11100      | 11652  | 105   | 70 - 130       |      |
| Selenium   | 1   | 111        | 113.30 | 102   | 85 - 115       |      |
| Silver     | 1   | 111        | 115.59 | 104   | 85 - 115       |      |
| Sodium     | 1   | 11100      | 11579  | 104   | 70 - 130       |      |
| Uranium    | 1   | 111        | 111.82 | 101   | 70 - 130       |      |
| Vanadium   | 1   | 111        | 113.95 | 103   | 85 - 115       |      |
| Zinc       | 1   | 111        | 114.06 | 103   | 85 - 115       |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                               |                        |                 |
|------------------|-----------------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020                   |                        |                 |
| Project No:      | TX000836.0008.00004                           | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM         | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                     | <b>Analytic Batch:</b> | <b>WG738505</b> |
| Analysis Date:   | 8/21/2014 11:17:00 AM                         | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                        | Prep Date:             | 8/20/2014       |
| Sample Numbers:  | L712971-01, -02, -03, -05, -06, -07, -08, -09 |                        |                 |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte    | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|------------|-----|------------|--------|-------|----------------|------|
| Aluminum   | 1   | 1110       | 1125.6 | 101   | 70 - 130       |      |
| Arsenic    | 1   | 111        | 115.18 | 104   | 85 - 115       |      |
| Barium     | 1   | 111        | 117.66 | 106   | 85 - 115       |      |
| Boron      | 1   | 111        | 118.30 | 107   | 70 - 130       |      |
| Cadmium    | 1   | 111        | 114.72 | 103   | 85 - 115       |      |
| Calcium    | 1   | 11100      | 12477  | 112   | 70 - 130       |      |
| Chromium   | 1   | 111        | 112.04 | 101   | 85 - 115       |      |
| Cobalt     | 1   | 111        | 116.39 | 105   | 85 - 115       |      |
| Copper     | 1   | 111        | 116.60 | 105   | 85 - 115       |      |
| Iron       | 1   | 1110       | 1201.3 | 108   | 85 - 115       |      |
| Lead       | 1   | 111        | 109.92 | 99    | 85 - 115       |      |
| Manganese  | 1   | 111        | 119.97 | 108   | 85 - 115       |      |
| Molybdenum | 1   | 111        | 115.55 | 104   | 85 - 115       |      |
| Nickel     | 1   | 111        | 116.43 | 105   | 85 - 115       |      |
| Potassium  | 1   | 11100      | 11731  | 106   | 70 - 130       |      |
| Selenium   | 1   | 111        | 113.86 | 103   | 85 - 115       |      |
| Silver     | 1   | 111        | 117.14 | 106   | 85 - 115       |      |
| Sodium     | 1   | 11100      | 11673  | 105   | 70 - 130       |      |
| Uranium    | 1   | 111        | 108.63 | 98    | 70 - 130       |      |
| Vanadium   | 1   | 111        | 114.22 | 103   | 85 - 115       |      |
| Zinc       | 1   | 111        | 115.33 | 104   | 85 - 115       |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

Test: Trace Metals by Method 6020  
Project No: TX000836.0008.00004  
Project: Navajo Refining Company - Artesia, NM  
Collection Date: 7/29/2014  
Analysis Date: 8/21/2014 11:17:00 AM  
Instrument ID: ICPMS8  
Sample Numbers: L712971-01, -02, -03, -05, -06, -07, -08, -09

Matrix: Water - ug/L  
EPA ID: TN00003  
**Analytic Batch: WG738505**  
Analyst: 664  
Prep Date: 8/20/2014

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte    | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Aluminum   | 1   | 1110  | 1120.7 | 101   | 1125.6 | 101   | 70 - 130       | 0          | 20                 |      |
| Arsenic    | 1   | 111   | 114.46 | 103   | 115.18 | 104   | 85 - 115       | 1          | 20                 |      |
| Barium     | 1   | 111   | 114.35 | 103   | 117.66 | 106   | 85 - 115       | 3          | 20                 |      |
| Boron      | 1   | 111   | 114.63 | 103   | 118.30 | 107   | 70 - 130       | 3          | 20                 |      |
| Cadmium    | 1   | 111   | 113.18 | 102   | 114.72 | 103   | 85 - 115       | 1          | 20                 |      |
| Calcium    | 1   | 11100 | 12322  | 111   | 12477  | 112   | 70 - 130       | 1          | 20                 |      |
| Chromium   | 1   | 111   | 111.98 | 101   | 112.04 | 101   | 85 - 115       | 0          | 20                 |      |
| Cobalt     | 1   | 111   | 115.98 | 104   | 116.39 | 105   | 85 - 115       | 0          | 20                 |      |
| Copper     | 1   | 111   | 115.15 | 104   | 116.60 | 105   | 85 - 115       | 1          | 20                 |      |
| Iron       | 1   | 1110  | 1200.5 | 108   | 1201.3 | 108   | 85 - 115       | 0          | 20                 |      |
| Lead       | 1   | 111   | 112.74 | 102   | 109.92 | 99    | 85 - 115       | 3          | 20                 |      |
| Manganese  | 1   | 111   | 118.06 | 106   | 119.97 | 108   | 85 - 115       | 2          | 20                 |      |
| Molybdenum | 1   | 111   | 115.38 | 104   | 115.55 | 104   | 85 - 115       | 0          | 20                 |      |
| Nickel     | 1   | 111   | 115.66 | 104   | 116.43 | 105   | 85 - 115       | 1          | 20                 |      |
| Potassium  | 1   | 11100 | 11652  | 105   | 11731  | 106   | 70 - 130       | 1          | 20                 |      |
| Selenium   | 1   | 111   | 113.30 | 102   | 113.86 | 103   | 85 - 115       | 0          | 20                 |      |
| Silver     | 1   | 111   | 115.59 | 104   | 117.14 | 106   | 85 - 115       | 1          | 20                 |      |
| Sodium     | 1   | 11100 | 11579  | 104   | 11673  | 105   | 70 - 130       | 1          | 20                 |      |
| Uranium    | 1   | 111   | 111.82 | 101   | 108.63 | 98    | 70 - 130       | 3          | 20                 |      |
| Vanadium   | 1   | 111   | 113.95 | 103   | 114.22 | 103   | 85 - 115       | 0          | 20                 |      |
| Zinc       | 1   | 111   | 114.06 | 103   | 115.33 | 104   | 85 - 115       | 1          | 20                 |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 9:07:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

#### Serial Dilution

L712736-03

| Analyte              | Dil | Sample Result | SD Result | % RPD | Limit | Qualifier |
|----------------------|-----|---------------|-----------|-------|-------|-----------|
| Aluminum,Dissolved   | 5   | 34.176        | 42.113    | 23    | 10    |           |
| Arsenic,Dissolved    | 5   | 0.6592        | <1.25     | 11    | 10    |           |
| Barium,Dissolved     | 5   | 14.446        | 15.500    | 7     | 10    |           |
| Boron,Dissolved      | 5   | 177.11        | 133.00    | 25    | 10    |           |
| Cadmium,Dissolved    | 5   | <0.16         | <0.8      |       | 10    |           |
| Chromium,Dissolved   | 5   | 1.7940        | <2.7      | 29    | 10    |           |
| Cobalt,Dissolved     | 5   | <0.26         | <1.3      |       | 10    |           |
| Copper,Dissolved     | 5   | 0.5970        | <2.6      | 36    | 10    |           |
| Iron,Dissolved       | 5   | <15           | <75       |       | 10    |           |
| Lead,Dissolved       | 5   | <0.24         | <1.2      |       | 10    |           |
| Manganese,Dissolved  | 5   | 0.5617        | <1.25     | 40    | 10    |           |
| Molybdenum,Dissolved | 5   | 7.1002        | 7.4059    | 4     | 10    |           |
| Nickel,Dissolved     | 5   | 0.5948        | <1.75     | 112   | 10    |           |
| Potassium,Dissolved  | 5   | 2121.2        | 2546.5    | 20    | 10    |           |
| Selenium,Dissolved   | 5   | 8.5181        | 11.105    | 30    | 10    |           |
| Silver,Dissolved     | 5   | <0.31         | <1.55     |       | 10    |           |
| Sodium,Dissolved     | 5   | 76826         | 86257     | 12    | 10    |           |
| Uranium,Dissolved    | 5   | 3.8706        | 4.2095    | 9     | 10    |           |
| Vanadium,Dissolved   | 5   | 4.3521        | 5.0052    | 15    | 10    |           |
| Zinc,Dissolved       | 5   | 5.6014        | 15.045    | 169   | 10    |           |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 9:07:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

#### Matrix Spike / Matrix Spike Duplicate

L712736-03

| Analyte              | Dil | Spike Value | Sample | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD | Control Limits | RPD |
|----------------------|-----|-------------|--------|--------|-------|--------|-------|----------------|------------|-----|----------------|-----|
| Aluminum,Dissolved   | 1   | 1110        | 34.176 | 1002.9 | 87    | 1010.6 | 88    | 70 - 130       |            | 1   | 20             |     |
| Arsenic,Dissolved    | 1   | 111         | 0.6592 | 99.516 | 89    | 99.864 | 89    | 75 - 125       |            | 0   | 20             |     |
| Barium,Dissolved     | 1   | 111         | 14.446 | 112.45 | 88    | 113.73 | 89    | 75 - 125       |            | 1   | 20             |     |
| Boron,Dissolved      | 1   | 111         | 177.11 | 309.50 | 119   | 302.59 | 113   | 70 - 130       |            | 2   | 20             |     |
| Cadmium,Dissolved    | 1   | 111         | <0.16  | 96.715 | 87    | 98.129 | 88    | 75 - 125       |            | 1   | 20             |     |
| Calcium,Dissolved    | 10  | 1110        | 440108 | 426802 | 0     | 424358 | 0     | 70 - 130       | V          | 1   | 20             |     |
| Chromium,Dissolved   | 1   | 111         | 1.7940 | 99.050 | 88    | 100.73 | 89    | 75 - 125       |            | 2   | 20             |     |
| Cobalt,Dissolved     | 1   | 111         | <0.26  | 96.642 | 87    | 97.498 | 88    | 75 - 125       |            | 1   | 20             |     |
| Copper,Dissolved     | 1   | 111         | 0.5970 | 96.852 | 87    | 97.576 | 87    | 75 - 125       |            | 1   | 20             |     |
| Iron,Dissolved       | 1   | 1110        | <15    | 986.47 | 88    | 1000.8 | 89    | 75 - 125       |            | 1   | 20             |     |
| Lead,Dissolved       | 1   | 111         | <0.24  | 96.814 | 87    | 98.383 | 89    | 75 - 125       |            | 2   | 20             |     |
| Manganese,Dissolved  | 1   | 111         | 0.5617 | 98.699 | 88    | 99.453 | 89    | 75 - 125       |            | 1   | 20             |     |
| Molybdenum,Dissolved | 1   | 111         | 7.1002 | 106.40 | 89    | 107.37 | 90    | 75 - 125       |            | 1   | 20             |     |
| Nickel,Dissolved     | 1   | 111         | 0.5948 | 95.955 | 86    | 96.350 | 86    | 75 - 125       |            | 0   | 20             |     |
| Potassium,Dissolved  | 1   | 11100       | 2121.2 | 11861  | 88    | 11986  | 89    | 70 - 130       |            | 1   | 20             |     |
| Selenium,Dissolved   | 1   | 111         | 8.5181 | 102.14 | 84    | 102.01 | 84    | 75 - 125       |            | 0   | 20             |     |
| Silver,Dissolved     | 1   | 111         | <0.31  | 93.673 | 84    | 98.998 | 89    | 75 - 125       |            | 6   | 20             |     |
| Sodium,Dissolved     | 1   | 11100       | 76826  | 86006  | 83    | 86588  | 88    | 70 - 130       |            | 1   | 20             |     |
| Uranium,Dissolved    | 1   | 111         | 3.8706 | 101.58 | 88    | 103.61 | 90    | 70 - 130       |            | 2   | 20             |     |
| Vanadium,Dissolved   | 1   | 111         | 4.3521 | 104.56 | 90    | 105.52 | 91    | 75 - 125       |            | 1   | 20             |     |
| Zinc,Dissolved       | 1   | 111         | 5.6014 | 94.599 | 80    | 95.177 | 81    | 75 - 125       |            | 1   | 20             |     |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737003</b> |
| Analysis Date:   | 8/13/2014 9:07:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

### Post Digest Spike

L712736-03

| Analyte              | Dil | Spike Value | Sample | Result | % Rec | Control Limits | Qualifier |
|----------------------|-----|-------------|--------|--------|-------|----------------|-----------|
| Aluminum,Dissolved   | 1   | 1110        | 34.176 | 1096.2 | 96    | 70-130         |           |
| Arsenic,Dissolved    | 1   | 111         | 0.6592 | 106.88 | 96    | 85-115         |           |
| Barium,Dissolved     | 1   | 111         | 14.446 | 121.48 | 96    | 85-115         |           |
| Boron,Dissolved      | 1   | 111         | 177.11 | 312.68 | 122   | 70-130         |           |
| Cadmium,Dissolved    | 1   | 111         | <0.16  | 105.74 | 95    | 85-115         |           |
| Chromium,Dissolved   | 1   | 111         | 1.7940 | 107.41 | 95    | 85-115         |           |
| Cobalt,Dissolved     | 1   | 111         | <0.26  | 104.18 | 94    | 85-115         |           |
| Copper,Dissolved     | 1   | 111         | 0.5970 | 104.28 | 93    | 85-115         |           |
| Iron,Dissolved       | 1   | 1110        | <15    | 1074.8 | 96    | 85-115         |           |
| Lead,Dissolved       | 1   | 111         | <0.24  | 105.79 | 95    | 85-115         |           |
| Manganese,Dissolved  | 1   | 111         | 0.5617 | 106.47 | 95    | 85-115         |           |
| Molybdenum,Dissolved | 1   | 111         | 7.1002 | 113.22 | 96    | 85-115         |           |
| Nickel,Dissolved     | 1   | 111         | 0.5948 | 103.24 | 92    | 85-115         |           |
| Potassium,Dissolved  | 1   | 11100       | 2121.2 | 12538  | 94    | 70-130         |           |
| Selenium,Dissolved   | 1   | 111         | 8.5181 | 108.20 | 90    | 85-115         |           |
| Silver,Dissolved     | 1   | 111         | <0.31  | 51.386 | 46    | 85-115         |           |
| Sodium,Dissolved     | 1   | 11100       | 76826  | 87520  | 96    | 70-130         |           |
| Uranium,Dissolved    | 1   | 111         | 3.8706 | 110.42 | 96    | 70-130         |           |
| Vanadium,Dissolved   | 1   | 111         | 4.3521 | 113.19 | 98    | 85-115         |           |
| Zinc,Dissolved       | 1   | 111         | 5.6014 | 105.30 | 90    | 85-115         |           |



## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:36:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

#### Serial Dilution

L712736-05

| Analyte    | Dil | Sample Result | SD Result | % RPD | Limit | Qualifier |
|------------|-----|---------------|-----------|-------|-------|-----------|
| Aluminum   | 5   | 60.325        | 71.083    | 18    | 10    |           |
| Arsenic    | 5   | 0.6651        | <1.25     | 8     | 10    |           |
| Barium     | 5   | 14.999        | 15.944    | 6     | 10    |           |
| Boron      | 5   | 157.19        | 173.81    | 11    | 10    |           |
| Cadmium    | 5   | <0.16         | <0.8      |       | 10    |           |
| Chromium   | 5   | 1.6723        | <2.7      | 40    | 10    |           |
| Cobalt     | 5   | <0.26         | <1.3      |       | 10    |           |
| Copper     | 5   | <0.52         | <2.6      |       | 10    |           |
| Iron       | 5   | 41.965        | <75       | 0     | 10    |           |
| Lead       | 5   | <0.24         | <1.2      |       | 10    |           |
| Manganese  | 5   | 3.8046        | 4.0327    | 6     | 10    |           |
| Molybdenum | 5   | 7.4270        | 7.7612    | 4     | 10    |           |
| Nickel     | 5   | <0.35         | <1.75     |       | 10    |           |
| Potassium  | 5   | 2119.4        | 2392.8    | 13    | 10    |           |
| Selenium   | 5   | 8.4529        | 9.1170    | 8     | 10    |           |
| Silver     | 5   | <0.31         | <1.55     |       | 10    |           |
| Sodium     | 5   | 77721         | 82883     | 7     | 10    |           |
| Uranium    | 5   | 4.0052        | 4.2463    | 6     | 10    |           |
| Vanadium   | 5   | 4.4657        | 4.9237    | 10    | 10    |           |
| Zinc       | 5   | <2.56         | <12.8     |       | 10    |           |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:36:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

#### Matrix Spike / Matrix Spike Duplicate

L712736-05

| Analyte    | Dil | Spike Value | Sample | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD | Control Limits | RPD |
|------------|-----|-------------|--------|--------|-------|--------|-------|----------------|------------|-----|----------------|-----|
| Aluminum   | 1   | 1110        | 60.325 | 1059.7 | 90    | 1044.9 | 89    | 70 - 130       |            | 1   | 20             |     |
| Arsenic    | 1   | 111         | 0.6651 | 100.78 | 90    | 100.60 | 90    | 75 - 125       |            | 0   | 20             |     |
| Barium     | 1   | 111         | 14.999 | 115.92 | 91    | 112.93 | 88    | 75 - 125       |            | 3   | 20             |     |
| Boron      | 1   | 111         | 157.19 | 250.19 | 84    | 251.60 | 85    | 70 - 130       |            | 1   | 20             |     |
| Cadmium    | 1   | 111         | <0.16  | 98.897 | 89    | 97.395 | 88    | 75 - 125       |            | 2   | 20             |     |
| Calcium    | 10  | 1110        | 422811 | 499404 | 690   | 438033 | 137   | 70 - 130       | V          | 13  | 20             |     |
| Chromium   | 1   | 111         | 1.6723 | 101.42 | 90    | 100.92 | 89    | 75 - 125       |            | 0   | 20             |     |
| Cobalt     | 1   | 111         | <0.26  | 99.160 | 89    | 98.269 | 88    | 75 - 125       |            | 1   | 20             |     |
| Copper     | 1   | 111         | <0.52  | 99.403 | 89    | 98.926 | 89    | 75 - 125       |            | 0   | 20             |     |
| Iron       | 1   | 1110        | 41.965 | 1053.8 | 91    | 1054.9 | 91    | 75 - 125       |            | 0   | 20             |     |
| Lead       | 1   | 111         | <0.24  | 100.13 | 90    | 98.885 | 89    | 75 - 125       |            | 1   | 20             |     |
| Manganese  | 1   | 111         | 3.8046 | 103.18 | 90    | 103.38 | 90    | 75 - 125       |            | 0   | 20             |     |
| Molybdenum | 1   | 111         | 7.4270 | 109.85 | 92    | 109.87 | 92    | 75 - 125       |            | 0   | 20             |     |
| Nickel     | 1   | 111         | <0.35  | 97.974 | 88    | 97.444 | 88    | 75 - 125       |            | 1   | 20             |     |
| Potassium  | 1   | 11100       | 2119.4 | 12055  | 90    | 11848  | 88    | 70 - 130       |            | 2   | 20             |     |
| Selenium   | 1   | 111         | 8.4529 | 102.24 | 84    | 102.68 | 85    | 75 - 125       |            | 0   | 20             |     |
| Silver     | 1   | 111         | <0.31  | 94.655 | 85    | 95.186 | 86    | 75 - 125       |            | 1   | 20             |     |
| Sodium     | 1   | 11100       | 77721  | 87339  | 87    | 87082  | 84    | 70 - 130       |            | 0   | 20             |     |
| Uranium    | 1   | 111         | 4.0052 | 106.27 | 92    | 104.32 | 90    | 70 - 130       |            | 2   | 20             |     |
| Vanadium   | 1   | 111         | 4.4657 | 106.18 | 92    | 105.19 | 91    | 75 - 125       |            | 1   | 20             |     |
| Zinc       | 1   | 111         | <2.56  | 97.038 | 86    | 97.032 | 86    | 75 - 125       |            | 0   | 20             |     |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG737007</b> |
| Analysis Date:   | 8/13/2014 7:36:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/13/2014       |
| Sample Numbers:  | L712971-04                            |                        |                 |

### Post Digest Spike

L712736-05

| Analyte    | Dil | Spike Value | Sample | Result | % Rec | Control Limits | Qualifier |
|------------|-----|-------------|--------|--------|-------|----------------|-----------|
| Aluminum   | 1   | 1110        | 60.325 | 1096.7 | 93    | 70-130         |           |
| Arsenic    | 1   | 111         | 0.6651 | 103.93 | 93    | 85-115         |           |
| Barium     | 1   | 111         | 14.999 | 115.84 | 91    | 85-115         |           |
| Boron      | 1   | 111         | 157.19 | 275.36 | 106   | 70-130         |           |
| Cadmium    | 1   | 111         | <0.16  | 100.06 | 90    | 85-115         |           |
| Chromium   | 1   | 111         | 1.6723 | 104.20 | 92    | 85-115         |           |
| Cobalt     | 1   | 111         | <0.26  | 101.01 | 91    | 85-115         |           |
| Copper     | 1   | 111         | <0.52  | 101.59 | 91    | 85-115         |           |
| Iron       | 1   | 1110        | 41.965 | 1072.2 | 93    | 85-115         |           |
| Lead       | 1   | 111         | <0.24  | 101.91 | 92    | 85-115         |           |
| Manganese  | 1   | 111         | 3.8046 | 106.36 | 92    | 85-115         |           |
| Molybdenum | 1   | 111         | 7.4270 | 112.85 | 95    | 85-115         |           |
| Nickel     | 1   | 111         | <0.35  | 100.25 | 90    | 85-115         |           |
| Potassium  | 1   | 11100       | 2119.4 | 12210  | 91    | 70-130         |           |
| Selenium   | 1   | 111         | 8.4529 | 104.50 | 87    | 85-115         |           |
| Silver     | 1   | 111         | <0.31  | 34.135 | 31    | 85-115         |           |
| Sodium     | 1   | 11100       | 77721  | 85009  | 66    | 70-130         |           |
| Uranium    | 1   | 111         | 4.0052 | 107.69 | 93    | 70-130         |           |
| Vanadium   | 1   | 111         | 4.4657 | 109.21 | 94    | 85-115         |           |
| Zinc       | 1   | 111         | <2.56  | 99.558 | 89    | 85-115         |           |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

Test: Trace Metals by Method 6020  
Project No: TX000836.0008.00004  
Project: Navajo Refining Company - Artesia, NM  
Collection Date: 7/29/2014  
Analysis Date: 8/21/2014 11:17:00 AM  
Instrument ID: ICPMS8  
Sample Numbers: L712971-01, -02, -03, -05, -06, -07, -08, -09

Matrix: Water - ug/L  
EPA ID: TN00003  
**Analytic Batch: WG738505**  
Analyst: 664  
Prep Date: 8/20/2014

#### Serial Dilution

L712971-01

| Analyte    | Dil | Sample Result | SD Result | % RPD | Limit | Qualifier |
|------------|-----|---------------|-----------|-------|-------|-----------|
| Aluminum   | 5   | 10.030        | <10       | 218   | 10    |           |
| Arsenic    | 5   | 1.9059        | 2.1950    | 15    | 10    |           |
| Barium     | 5   | 20.597        | 23.448    | 14    | 10    |           |
| Boron      | 5   | 557.71        | 690.48    | 24    | 10    | O1        |
| Cadmium    | 5   | <0.16         | <0.8      |       | 10    |           |
| Calcium    | 100 | 738098        | 770665    | 4     | 10    |           |
| Chromium   | 5   | 0.6757        | <2.7      | 132   | 10    |           |
| Cobalt     | 5   | <0.26         | <1.3      |       | 10    |           |
| Copper     | 5   | 1.9598        | 2.7362    | 40    | 10    |           |
| Iron       | 5   | 975.41        | 1077.4    | 10    | 10    |           |
| Lead       | 5   | <0.24         | <1.2      |       | 10    |           |
| Manganese  | 5   | 87.184        | 99.785    | 14    | 10    |           |
| Molybdenum | 5   | 5.0294        | 5.9009    | 17    | 10    |           |
| Nickel     | 5   | 2.0193        | 2.4324    | 20    | 10    |           |
| Potassium  | 5   | 4704.2        | 5598.3    | 19    | 10    |           |
| Selenium   | 5   | 10.285        | 10.537    | 2     | 10    |           |
| Silver     | 5   | <0.31         | <1.55     |       | 10    |           |
| Sodium     | 100 | 1494552       | 1589540   | 6     | 10    |           |
| Uranium    | 5   | 5.5265        | 5.4142    | 2     | 10    |           |
| Vanadium   | 5   | 2.0713        | 2.5100    | 21    | 10    |           |
| Zinc       | 5   | 4.6938        | <12.8     | 1     | 10    |           |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

Test: Trace Metals by Method 6020  
Project No: TX000836.0008.00004  
Project: Navajo Refining Company - Artesia, NM  
Collection Date: 7/29/2014  
Analysis Date: 8/21/2014 11:17:00 AM  
Instrument ID: ICPMS8  
Sample Numbers: L712971-01, -02, -03, -05, -06, -07, -08, -09

Matrix: Water - ug/L  
EPA ID: TN00003  
**Analytic Batch: WG738505**  
Analyst: 664  
Prep Date: 8/20/2014

#### Matrix Spike / Matrix Spike Duplicate

L712971-01

| Analyte    | Dil | Spike Value | Sample  | MS      | % Rec | MSD     | % Rec | Control Limits | % Rec Qual | RPD | Control Limits | RPD |
|------------|-----|-------------|---------|---------|-------|---------|-------|----------------|------------|-----|----------------|-----|
| Aluminum   | 1   | 1110        | 10.030  | 1113.7  | 99    | 1103.9  | 99    | 70 - 130       |            | 1   | 20             |     |
| Arsenic    | 1   | 111         | 1.9059  | 118.93  | 105   | 117.97  | 105   | 75 - 125       |            | 1   | 20             |     |
| Barium     | 1   | 111         | 20.597  | 135.33  | 103   | 137.48  | 105   | 75 - 125       |            | 2   | 20             |     |
| Boron      | 1   | 111         | 557.71  | 703.86  | 132   | 716.53  | 143   | 70 - 130       | V          | 2   | 20             |     |
| Cadmium    | 1   | 111         | <0.16   | 112.00  | 101   | 112.27  | 101   | 75 - 125       |            | 0   | 20             |     |
| Calcium    | 20  | 555         | 738098  | 773268  | 317   | 832120  | 847   | 70 - 130       | V          | 7   | 20             |     |
| Chromium   | 1   | 111         | 0.6757  | 108.91  | 98    | 109.11  | 98    | 75 - 125       |            | 0   | 20             |     |
| Cobalt     | 1   | 111         | <0.26   | 115.13  | 104   | 113.88  | 102   | 75 - 125       |            | 1   | 20             |     |
| Copper     | 1   | 111         | 1.9598  | 113.39  | 100   | 112.71  | 100   | 75 - 125       |            | 1   | 20             |     |
| Iron       | 1   | 1110        | 975.41  | 2104.3  | 102   | 2107.1  | 102   | 75 - 125       |            | 0   | 20             |     |
| Lead       | 1   | 111         | <0.24   | 105.70  | 95    | 103.51  | 93    | 75 - 125       |            | 2   | 20             |     |
| Manganese  | 1   | 111         | 87.184  | 204.14  | 105   | 203.63  | 105   | 75 - 125       |            | 0   | 20             |     |
| Molybdenum | 1   | 111         | 5.0294  | 119.44  | 103   | 119.30  | 103   | 75 - 125       |            | 0   | 20             |     |
| Nickel     | 1   | 111         | 2.0193  | 113.10  | 100   | 111.92  | 99    | 75 - 125       |            | 1   | 20             |     |
| Potassium  | 1   | 11100       | 4704.2  | 16046   | 102   | 16336   | 105   | 70 - 130       |            | 2   | 20             |     |
| Selenium   | 1   | 111         | 10.285  | 124.99  | 103   | 120.64  | 99    | 75 - 125       |            | 4   | 20             |     |
| Silver     | 1   | 111         | <0.31   | 112.90  | 102   | 113.02  | 102   | 75 - 125       |            | 0   | 20             |     |
| Sodium     | 20  | 555         | 1494552 | 1532622 | 343   | 1657351 | 1467  | 70 - 130       | V          | 8   | 20             |     |
| Uranium    | 1   | 111         | 5.5265  | 113.01  | 97    | 110.75  | 95    | 70 - 130       |            | 2   | 20             |     |
| Vanadium   | 1   | 111         | 2.0713  | 115.87  | 103   | 115.80  | 102   | 75 - 125       |            | 0   | 20             |     |
| Zinc       | 1   | 111         | 4.6938  | 110.54  | 95    | 110.75  | 96    | 75 - 125       |            | 0   | 20             |     |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                               |                        |                 |
|------------------|-----------------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020                   |                        |                 |
| Project No:      | TX000836.0008.00004                           | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM         | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                     | <b>Analytic Batch:</b> | <b>WG738505</b> |
| Analysis Date:   | 8/21/2014 11:17:00 AM                         | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                        | Prep Date:             | 8/20/2014       |
| Sample Numbers:  | L712971-01, -02, -03, -05, -06, -07, -08, -09 |                        |                 |

#### Post Digest Spike

L712971-01

| Analyte    | Dil | Spike Value | Sample  | Result  | % Rec | Control Limits | Qualifier |
|------------|-----|-------------|---------|---------|-------|----------------|-----------|
| Aluminum   | 1   | 1110        | 10.030  | 1036.1  | 92    | 70-130         |           |
| Arsenic    | 1   | 111         | 1.9059  | 107.64  | 95    | 85-115         |           |
| Barium     | 1   | 111         | 20.597  | 128.33  | 97    | 85-115         |           |
| Boron      | 1   | 111         | 557.71  | 673.65  | 104   | 70-130         |           |
| Cadmium    | 1   | 111         | <0.16   | 104.05  | 94    | 85-115         |           |
| Calcium    | 20  | 11100       | 738098  | 810897  | 33    | 70-130         | O1        |
| Chromium   | 1   | 111         | 0.6757  | 104.03  | 93    | 85-115         |           |
| Cobalt     | 1   | 111         | <0.26   | 104.44  | 94    | 85-115         |           |
| Copper     | 1   | 111         | 1.9598  | 102.64  | 91    | 85-115         |           |
| Iron       | 1   | 1110        | 975.41  | 1975.2  | 90    | 85-115         |           |
| Lead       | 1   | 111         | <0.24   | 97.428  | 88    | 85-115         |           |
| Manganese  | 1   | 111         | 87.184  | 190.04  | 93    | 85-115         |           |
| Molybdenum | 1   | 111         | 5.0294  | 109.47  | 94    | 85-115         |           |
| Nickel     | 1   | 111         | 2.0193  | 103.02  | 91    | 85-115         |           |
| Potassium  | 1   | 11100       | 4704.2  | 15625   | 98    | 70-130         |           |
| Selenium   | 1   | 111         | 10.285  | 111.57  | 91    | 85-115         |           |
| Silver     | 1   | 111         | <0.31   | 97.963  | 88    | 85-115         |           |
| Sodium     | 20  | 11100       | 1494552 | 1609133 | 52    | 70-130         | O1        |
| Uranium    | 1   | 111         | 5.5265  | 105.90  | 90    | 70-130         |           |
| Vanadium   | 1   | 111         | 2.0713  | 109.58  | 97    | 85-115         |           |
| Zinc       | 1   | 111         | 4.6938  | 103.11  | 89    | 85-115         |           |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                    |                        |                 |
|------------------|----------------------------------------------------|------------------------|-----------------|
| Test:            | Volatile TPH by Method 8015D/GRO                   |                        |                 |
| Project No:      | TX000836.0008.00004                                | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM              | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                          | <b>Analytic Batch:</b> | <b>WG734878</b> |
| Analysis Date:   | 7/31/2014 10:36:00 PM                              | Analyst:               | 621             |
| Instrument ID:   | VOCGC4                                             |                        |                 |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -08, -09 |                        |                 |

#### Method Blank

| Analyte                   | CAS       | RDL     | MDL      | Qualifier |
|---------------------------|-----------|---------|----------|-----------|
| TPH (GC/FID) Low Fraction | 8006-61-9 | < 0.100 | < 0.0314 |           |

#### Laboratory Control Sample (LCS)

| Analyte                   | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------------|-----|------------|--------|-------|----------------|------|
| TPH (GC/FID) Low Fraction | 1   | 5.5        | 5.9875 | 109   | 67 - 132       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte                   | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------------|-----|------------|--------|-------|----------------|------|
| TPH (GC/FID) Low Fraction | 1   | 5.5        | 6.0094 | 109   | 67 - 132       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte                   | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD | RPD Limits | Qual |
|---------------------------|-----|-------|--------|-------|--------|-------|----------------|------------|-------------|------------|------|
| TPH (GC/FID) Low Fraction | 1   | 5.5   | 5.9875 | 109   | 6.0094 | 109   | 67 - 132       | 0.37       | 20          |            |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                    |                        |                 |
|------------------|----------------------------------------------------|------------------------|-----------------|
| Test:            | Volatile TPH by Method 8015D/GRO                   |                        |                 |
| Project No:      | TX000836.0008.00004                                | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM              | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                          | <b>Analytic Batch:</b> | <b>WG734878</b> |
| Analysis Date:   | 7/31/2014 10:36:00 PM                              | Analyst:               | 621             |
| Instrument ID:   | VOCGC4                                             |                        |                 |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -08, -09 |                        |                 |

### Matrix Spike / Matrix Spike Duplicate

L712949-01

| Analyte                   | Dil | Spike Value | Sample  | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD  | Control Limits | RPD |
|---------------------------|-----|-------------|---------|--------|-------|--------|-------|----------------|------------|------|----------------|-----|
| TPH (GC/FID) Low Fraction | 1   | 5.5         | <0.0314 | 7.3483 | 133   | 7.2878 | 132   | 50 - 143       |            | 0.83 |                | 20  |



## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                    |                        |                 |
|------------------|----------------------------------------------------|------------------------|-----------------|
| Test:            | Volatile TPH by Method 8015D/GRO                   |                        |                 |
| Project No:      | TX000836.0008.00004                                | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM              | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                          | <b>Analytic Batch:</b> | <b>WG734878</b> |
| Analysis Date:   | 7/31/2014 10:36:00 PM                              | Analyst:               | 621             |
| Instrument ID:   | VOCGC4                                             |                        |                 |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -08, -09 |                        |                 |

### Surrogate Summary

#### Laboratory

| Sample ID      | Instrument | File ID | ppm   | % Rec | ppm | % Rec |
|----------------|------------|---------|-------|-------|-----|-------|
| L712971-01     | VOCGC4     | 0731_49 | 0.202 | 101   |     |       |
| L712971-02     | VOCGC4     | 0731_50 | 0.200 | 100   |     |       |
| L712971-03     | VOCGC4     | 0731_55 | 0.201 | 101   |     |       |
| L712971-04     | VOCGC4     | 0731_56 | 0.202 | 101   |     |       |
| L712971-05     | VOCGC4     | 0731_57 | 0.202 | 101   |     |       |
| L712971-06     | VOCGC4     | 0731_58 | 0.202 | 101   |     |       |
| L712971-07     | VOCGC4     | 0731_59 | 0.205 | 102   |     |       |
| L712971-08     | VOCGC4     | 0731_60 | 0.208 | 104   |     |       |
| L712971-09     | VOCGC4     | 0731_61 | 0.212 | 106   |     |       |
| LCS WG734878   | VOCGC4     | 0731_35 | 0.207 | 103   |     |       |
| LCSD WG734878  | VOCGC4     | 0731_36 | 0.208 | 104   |     |       |
| MS WG734878    | VOCGC4     | 0731_37 | 0.209 | 105   |     |       |
| MSD WG734878   | VOCGC4     | 0731_38 | 0.210 | 105   |     |       |
| BLANK WG734878 | VOCGC4     | 0731_40 | 0.201 | 101   |     |       |

--A,A,A-TRIFLUOROTOLUENE(FID)

True Value: 0.2 ppm Limits: 62 - 128

--A,A,A-TRIFLUOROTOLUENE(PID)

True Value: 0.2 ppm Limits: 55 - 122

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

Test: Volatile Organic Compounds by Method 8260B  
 Project No: TX000836.0008.00004 Matrix: Water - mg/L  
 Project: Navajo Refining Company - Artesia, NM EPA ID: TN00003  
 Collection Date: 7/29/2014 Analytic Batch: **WG734780**  
 Analysis Date: 8/1/2014 1:17:00 AM Analyst: 644  
 Instrument ID: VOCMS2  
 Sample Numbers: L712971-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13

#### Method Blank

| Analyte                          | CAS       | RDL       | MDL        | Qualifier |
|----------------------------------|-----------|-----------|------------|-----------|
| <b>1,1,1,2-Tetrachloroethane</b> | 630-20-6  | < 0.00100 | < 0.000385 |           |
| <b>1,1,1-Trichloroethane</b>     | 71-55-6   | < 0.00100 | < 0.000319 |           |
| <b>1,1,2,2-Tetrachloroethane</b> | 79-34-5   | < 0.00100 | < 0.000130 |           |
| <b>1,1,2-Trichloroethane</b>     | 79-00-5   | < 0.00100 | < 0.000383 |           |
| <b>1,1-Dichloroethane</b>        | 75-34-3   | < 0.00100 | < 0.000259 |           |
| <b>1,1-Dichloroethene</b>        | 75-35-4   | < 0.00100 | < 0.000398 |           |
| <b>1,2-Dibromoethane</b>         | 106-93-4  | < 0.00100 | < 0.000381 |           |
| <b>1,2-Dichloroethane</b>        | 107-06-2  | < 0.00100 | < 0.000361 |           |
| <b>Benzene</b>                   | 71-43-2   | < 0.00100 | < 0.000331 |           |
| <b>Carbon tetrachloride</b>      | 56-23-5   | < 0.00100 | < 0.000379 |           |
| <b>Chloroform</b>                | 67-66-3   | < 0.00500 | < 0.000324 |           |
| <b>Ethylbenzene</b>              | 100-41-4  | < 0.00100 | < 0.000384 |           |
| <b>m&amp;p-Xylenes</b>           | 1330-20-7 | < 0.00200 | < 0.000719 |           |
| <b>Methylene Chloride</b>        | 75-09-2   | < 0.00500 | < 0.00100  |           |
| <b>o-Xylene</b>                  | 95-47-6   | < 0.00100 | < 0.000341 |           |
| <b>Tetrachloroethene</b>         | 127-18-4  | < 0.00100 | < 0.000372 |           |
| <b>Toluene</b>                   | 108-88-3  | < 0.00500 | < 0.000780 |           |
| <b>Vinyl chloride</b>            | 75-01-4   | < 0.00100 | < 0.000259 |           |
| <b>Xylenes, Total</b>            | 1330-20-7 | < 0.00300 | < 0.00106  |           |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                                        |                        |                 |
|------------------|------------------------------------------------------------------------|------------------------|-----------------|
| Test:            | Volatile Organic Compounds by Method 8260B                             |                        |                 |
| Project No:      | TX000836.0008.00004                                                    | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM                                  | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                                              | <b>Analytic Batch:</b> | <b>WG734780</b> |
| Analysis Date:   | 8/1/2014 1:17:00 AM                                                    | Analyst:               | 644             |
| Instrument ID:   | VOCMS2                                                                 |                        |                 |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13 |                        |                 |

### Laboratory Control Sample (LCS)

| Analyte                          | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------------------------------|-----|------------|--------|-------|----------------|------|
| <b>1,1,1,2-Tetrachloroethane</b> | 1   | 0.025      | 0.0270 | 108   | 74.2 - 124     |      |
| <b>1,1,1-Trichloroethane</b>     | 1   | 0.025      | 0.0225 | 90.2  | 73.2 - 123     |      |
| <b>1,1,2,2-Tetrachloroethane</b> | 1   | 0.025      | 0.0207 | 83    | 70.7 - 122     |      |
| <b>1,1,2-Trichloroethane</b>     | 1   | 0.025      | 0.0218 | 87.1  | 77.7 - 118     |      |
| <b>1,1-Dichloroethane</b>        | 1   | 0.025      | 0.0256 | 103   | 70.7 - 126     |      |
| <b>1,1-Dichloroethene</b>        | 1   | 0.025      | 0.0265 | 106   | 67.8 - 129     |      |
| <b>1,2-Dibromoethane</b>         | 1   | 0.025      | 0.0217 | 86.6  | 76.6 - 121     |      |
| <b>1,2-Dichloroethane</b>        | 1   | 0.025      | 0.0215 | 85.8  | 68.8 - 124     |      |
| <b>Benzene</b>                   | 1   | 0.025      | 0.0227 | 91    | 74.8 - 121     |      |
| <b>Carbon tetrachloride</b>      | 1   | 0.025      | 0.0233 | 93.2  | 70.2 - 123     |      |
| <b>Chloroform</b>                | 1   | 0.025      | 0.0245 | 98.2  | 76 - 121       |      |
| <b>Ethylbenzene</b>              | 1   | 0.025      | 0.0239 | 95.7  | 78.8 - 122     |      |
| <b>m&amp;p-Xylenes</b>           | 1   | 0.05       | 0.0495 | 99.1  | 78.8 - 121     |      |
| <b>Methylene Chloride</b>        | 1   | 0.025      | 0.0233 | 93    | 70.3 - 120     |      |
| <b>o-Xylene</b>                  | 1   | 0.025      | 0.0255 | 102   | 77.6 - 122     |      |
| <b>Tetrachloroethene</b>         | 1   | 0.025      | 0.0241 | 96.3  | 72.6 - 126     |      |
| <b>Toluene</b>                   | 1   | 0.025      | 0.0227 | 90.6  | 79.7 - 116     |      |
| <b>Vinyl chloride</b>            | 1   | 0.025      | 0.0245 | 97.8  | 65.9 - 128     |      |
| <b>Xylenes, Total</b>            | 1   | 0.075      | 0.0750 | 100   | 78.7 - 121     |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

Test: Volatile Organic Compounds by Method 8260B  
 Project No: TX000836.0008.00004 Matrix: Water - mg/L  
 Project: Navajo Refining Company - Artesia, NM EPA ID: TN00003  
 Collection Date: 7/29/2014 Analytic Batch: **WG734780**  
 Analysis Date: 8/1/2014 1:17:00 AM Analyst: 644  
 Instrument ID: VOCMS2  
 Sample Numbers: L712971-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte                          | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------------------------------|-----|------------|--------|-------|----------------|------|
| <b>1,1,1,2-Tetrachloroethane</b> | 1   | 0.025      | 0.0268 | 107   | 74.2 - 124     |      |
| <b>1,1,1-Trichloroethane</b>     | 1   | 0.025      | 0.0227 | 90.8  | 73.2 - 123     |      |
| <b>1,1,2,2-Tetrachloroethane</b> | 1   | 0.025      | 0.0202 | 80.7  | 70.7 - 122     |      |
| <b>1,1,2-Trichloroethane</b>     | 1   | 0.025      | 0.0219 | 87.7  | 77.7 - 118     |      |
| <b>1,1-Dichloroethane</b>        | 1   | 0.025      | 0.0255 | 102   | 70.7 - 126     |      |
| <b>1,1-Dichloroethene</b>        | 1   | 0.025      | 0.0254 | 102   | 67.8 - 129     |      |
| <b>1,2-Dibromoethane</b>         | 1   | 0.025      | 0.0218 | 87    | 76.6 - 121     |      |
| <b>1,2-Dichloroethane</b>        | 1   | 0.025      | 0.0211 | 84.3  | 68.8 - 124     |      |
| <b>Benzene</b>                   | 1   | 0.025      | 0.0225 | 90.1  | 74.8 - 121     |      |
| <b>Carbon tetrachloride</b>      | 1   | 0.025      | 0.0234 | 93.4  | 70.2 - 123     |      |
| <b>Chloroform</b>                | 1   | 0.025      | 0.0248 | 99    | 76 - 121       |      |
| <b>Ethylbenzene</b>              | 1   | 0.025      | 0.0241 | 96.2  | 78.8 - 122     |      |
| <b>m&amp;p-Xylenes</b>           | 1   | 0.05       | 0.0497 | 99.5  | 78.8 - 121     |      |
| <b>Methylene Chloride</b>        | 1   | 0.025      | 0.0230 | 92    | 70.3 - 120     |      |
| <b>o-Xylene</b>                  | 1   | 0.025      | 0.0246 | 98.3  | 77.6 - 122     |      |
| <b>Tetrachloroethene</b>         | 1   | 0.025      | 0.0243 | 97.2  | 72.6 - 126     |      |
| <b>Toluene</b>                   | 1   | 0.025      | 0.0227 | 90.6  | 79.7 - 116     |      |
| <b>Vinyl chloride</b>            | 1   | 0.025      | 0.0236 | 94.3  | 65.9 - 128     |      |
| <b>Xylenes, Total</b>            | 1   | 0.075      | 0.0743 | 99.1  | 78.7 - 121     |      |

## Quality Control Summary

SDG: L712971

ARCADIS US - TX

Test: Volatile Organic Compounds by Method 8260B  
Project No: TX000836.0008.00004 Matrix: Water - mg/L  
Project: Navajo Refining Company - Artesia, NM EPA ID: TN00003  
Collection Date: 7/29/2014 Analytic Batch: WG734780  
Analysis Date: 8/1/2014 1:17:00 AM Analyst: 644  
Instrument ID: VOCMS2  
Sample Numbers: L712971-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13

### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte                   | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|---------------------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| 1,1,1,2-Tetrachloroethane | 1   | 0.025 | 0.0270 | 108   | 0.0268 | 107   | 74.2 - 124     | 0.71       | 20                 |      |
| 1,1,1-Trichloroethane     | 1   | 0.025 | 0.0225 | 90.2  | 0.0227 | 90.8  | 73.2 - 123     | 0.66       | 20                 |      |
| 1,1,2,2-Tetrachloroethane | 1   | 0.025 | 0.0207 | 83    | 0.0202 | 80.7  | 70.7 - 122     | 2.77       | 20                 |      |
| 1,1,2-Trichloroethane     | 1   | 0.025 | 0.0218 | 87.1  | 0.0219 | 87.7  | 77.7 - 118     | 0.78       | 20                 |      |
| 1,1-Dichloroethane        | 1   | 0.025 | 0.0256 | 103   | 0.0255 | 102   | 70.7 - 126     | 0.33       | 20                 |      |
| 1,1-Dichloroethene        | 1   | 0.025 | 0.0265 | 106   | 0.0254 | 102   | 67.8 - 129     | 4.08       | 20                 |      |
| 1,2-Dibromoethane         | 1   | 0.025 | 0.0217 | 86.6  | 0.0218 | 87    | 76.6 - 121     | 0.47       | 20                 |      |
| 1,2-Dichloroethane        | 1   | 0.025 | 0.0215 | 85.8  | 0.0211 | 84.3  | 68.8 - 124     | 1.8        | 20                 |      |
| Benzene                   | 1   | 0.025 | 0.0227 | 91    | 0.0225 | 90.1  | 74.8 - 121     | 0.95       | 20                 |      |
| Carbon tetrachloride      | 1   | 0.025 | 0.0233 | 93.2  | 0.0234 | 93.4  | 70.2 - 123     | 0.27       | 20                 |      |
| Chloroform                | 1   | 0.025 | 0.0245 | 98.2  | 0.0248 | 99    | 76 - 121       | 0.89       | 20                 |      |
| Ethylbenzene              | 1   | 0.025 | 0.0239 | 95.7  | 0.0241 | 96.2  | 78.8 - 122     | 0.55       | 20                 |      |
| m&p-Xylenes               | 1   | 0.05  | 0.0495 | 99.1  | 0.0497 | 99.5  | 78.8 - 121     | 0.39       | 20                 |      |
| Methylene Chloride        | 1   | 0.025 | 0.0233 | 93    | 0.0230 | 92    | 70.3 - 120     | 1.11       | 20                 |      |
| o-Xylene                  | 1   | 0.025 | 0.0255 | 102   | 0.0246 | 98.3  | 77.6 - 122     | 3.68       | 20                 |      |
| Tetrachloroethene         | 1   | 0.025 | 0.0241 | 96.3  | 0.0243 | 97.2  | 72.6 - 126     | 0.83       | 20                 |      |
| Toluene                   | 1   | 0.025 | 0.0227 | 90.6  | 0.0227 | 90.6  | 79.7 - 116     | 0.01       | 20                 |      |
| Vinyl chloride            | 1   | 0.025 | 0.0245 | 97.8  | 0.0236 | 94.3  | 65.9 - 128     | 3.64       | 20                 |      |
| Xylenes, Total            | 1   | 0.075 | 0.0750 | 100   | 0.0743 | 99.1  | 78.7 - 121     | 0.98       | 20                 |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

Test: Volatile Organic Compounds by Method 8260B  
 Project No: TX000836.0008.00004 Matrix: Water - mg/L  
 Project: Navajo Refining Company - Artesia, NM EPA ID: TN00003  
 Collection Date: 7/29/2014 Analytic Batch: **WG734780**  
 Analysis Date: 8/1/2014 1:17:00 AM Analyst: 644  
 Instrument ID: VOCMS2  
 Sample Numbers: L712971-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13

#### Matrix Spike / Matrix Spike Duplicate

L712971-01

| Analyte                          | Dil | Spike Value | Sample  | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD  | Control Limits | RPD |
|----------------------------------|-----|-------------|---------|--------|-------|--------|-------|----------------|------------|------|----------------|-----|
| <b>1,1,1,2-Tetrachloroethane</b> | 1   | 0.025       | <0.0004 | 0.0256 | 102   | 0.0268 | 107   | 70.5 - 132     |            | 4.76 | 20             |     |
| <b>1,1,1-Trichloroethane</b>     | 1   | 0.025       | <0.0003 | 0.0225 | 90    | 0.0234 | 93.6  | 58.7 - 134     |            | 3.88 | 20             |     |
| <b>1,1,2,2-Tetrachloroethane</b> | 1   | 0.025       | <0.0001 | 0.0213 | 85.3  | 0.0219 | 87.7  | 64.9 - 145     |            | 2.7  | 20             |     |
| <b>1,1,2-Trichloroethane</b>     | 1   | 0.025       | <0.0004 | 0.0211 | 84.3  | 0.0226 | 90.5  | 74.1 - 130     |            | 7.17 | 20             |     |
| <b>1,1-Dichloroethane</b>        | 1   | 0.025       | <0.0003 | 0.0244 | 97.5  | 0.0259 | 104   | 64 - 134       |            | 6.02 | 20             |     |
| <b>1,1-Dichloroethene</b>        | 1   | 0.025       | <0.0004 | 0.0264 | 105   | 0.0269 | 107   | 48.8 - 144     |            | 1.93 | 20             |     |
| <b>1,2-Dibromoethane</b>         | 1   | 0.025       | <0.0004 | 0.0206 | 82.6  | 0.0223 | 89    | 73.8 - 131     |            | 7.54 | 20             |     |
| <b>1,2-Dichloroethane</b>        | 1   | 0.025       | <0.0004 | 0.0207 | 82.7  | 0.0221 | 88.4  | 60.7 - 132     |            | 6.74 | 20             |     |
| <b>Benzene</b>                   | 1   | 0.025       | <0.0003 | 0.0220 | 87.9  | 0.0234 | 93.6  | 58.6 - 133     |            | 6.28 | 20             |     |
| <b>Carbon tetrachloride</b>      | 1   | 0.025       | <0.0004 | 0.0229 | 91.6  | 0.0241 | 96.5  | 60.6 - 139     |            | 5.25 | 20             |     |
| <b>Chloroform</b>                | 1   | 0.025       | <0.0003 | 0.0230 | 91.9  | 0.0244 | 97.7  | 66.1 - 133     |            | 6.13 | 20             |     |
| <b>Ethylbenzene</b>              | 1   | 0.025       | <0.0004 | 0.0231 | 92.3  | 0.0242 | 96.6  | 62.7 - 136     |            | 4.59 | 20             |     |
| <b>m&amp;p-Xylenes</b>           | 1   | 0.05        | <0.0007 | 0.0472 | 94.5  | 0.0500 | 99.9  | 64.1 - 133     |            | 5.58 | 20             |     |
| <b>Methylene Chloride</b>        | 1   | 0.025       | <0.001  | 0.0227 | 90.9  | 0.0239 | 95.6  | 61.5 - 125     |            | 5.04 | 20             |     |
| <b>o-Xylene</b>                  | 1   | 0.025       | <0.0003 | 0.0238 | 95    | 0.0246 | 98.6  | 67.1 - 133     |            | 3.63 | 20             |     |
| <b>Tetrachloroethene</b>         | 1   | 0.025       | <0.0004 | 0.0235 | 94.2  | 0.0242 | 96.8  | 57.4 - 141     |            | 2.74 | 20             |     |
| <b>Toluene</b>                   | 1   | 0.025       | <0.0008 | 0.0224 | 89.6  | 0.0236 | 94.5  | 67.8 - 124     |            | 5.4  | 20             |     |
| <b>Vinyl chloride</b>            | 1   | 0.025       | <0.0003 | 0.0260 | 104   | 0.0259 | 104   | 44.3 - 143     |            | 0.43 | 20             |     |
| <b>Xylenes, Total</b>            | 1   | 0.075       | <0.0011 | 0.0710 | 94.7  | 0.0746 | 99.5  | 65.6 - 133     |            | 4.93 | 20             |     |

## Quality Control Summary

**SDG: L712971**  
**ARCADIS US - TX**

|                  |                                                                        |                        |                 |
|------------------|------------------------------------------------------------------------|------------------------|-----------------|
| Test:            | Volatile Organic Compounds by Method 8260B                             |                        |                 |
| Project No:      | TX000836.0008.00004                                                    | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM                                  | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                                              | <b>Analytic Batch:</b> | <b>WG734780</b> |
| Analysis Date:   | 8/1/2014 1:17:00 AM                                                    | Analyst:               | 644             |
| Instrument ID:   | VOCMS2                                                                 |                        |                 |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13 |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0731\_33  
Analyzed: 07/31/14 204600

|                    | IS1      |      | IS2      |      | IS3      |      | DCB      |      |
|--------------------|----------|------|----------|------|----------|------|----------|------|
|                    | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| <b>12 Hr. Std</b>  | 497766   | 4.34 | 897443   | 4.67 | 138102   | 5.84 | 423140   | 8.22 |
| <b>Upper Limit</b> | 996000   | 4.84 | 1790000  | 5.17 | 276000   | 6.34 | 846000   | 8.72 |
| <b>Lower Limit</b> | 249000   | 3.84 | 449000   | 4.17 | 69100    | 5.34 | 212000   | 7.72 |
| Sample ID          | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| L712971-10         | 399339   | 4.34 | 755318   | 4.67 | 118741   | 5.84 | 355587   | 8.22 |
| L712971-11         | 400322   | 4.34 | 777118   | 4.67 | 118967   | 5.84 | 365772   | 8.22 |
| L712971-13         | 402176   | 4.34 | 765567   | 4.67 | 119348   | 5.84 | 359636   | 8.22 |
| L712971-01         | 410184   | 4.34 | 799289   | 4.67 | 124873   | 5.84 | 383121   | 8.22 |
| L712971-02         | 392427   | 4.34 | 760311   | 4.67 | 118156   | 5.84 | 371786   | 8.22 |
| L712971-03         | 400465   | 4.34 | 772521   | 4.67 | 121338   | 5.84 | 376376   | 8.22 |
| L712971-04         | 392032   | 4.34 | 755163   | 4.67 | 116462   | 5.84 | 370786   | 8.22 |
| L712971-05         | 392505   | 4.34 | 736550   | 4.67 | 117779   | 5.84 | 358657   | 8.22 |
| L712971-06         | 369169   | 4.34 | 702762   | 4.67 | 110073   | 5.84 | 346390   | 8.22 |
| L712971-07         | 378862   | 4.34 | 716771   | 4.67 | 115693   | 5.84 | 361024   | 8.22 |
| L712971-08         | 362218   | 4.34 | 691843   | 4.67 | 110086   | 5.84 | 340459   | 8.22 |
| L712971-09         | 365138   | 4.34 | 679318   | 4.67 | 105631   | 5.84 | 342072   | 8.22 |
| L712971-12         | 373567   | 4.34 | 718692   | 4.67 | 108633   | 5.84 | 348764   | 8.22 |
| MSD WG734780       | 458000   | 4.34 | 858797   | 4.67 | 140640   | 5.84 | 407483   | 8.22 |
| MS WG734780        | 436916   | 4.34 | 796918   | 4.67 | 130309   | 5.84 | 396829   | 8.22 |
| LCSD WG734780      | 471224   | 4.34 | 867375   | 4.67 | 139635   | 5.84 | 412650   | 8.22 |
| LCS WG734780       | 458063   | 4.34 | 848019   | 4.67 | 134358   | 5.84 | 401441   | 8.22 |
| BLANK WG734780     | 429680   | 4.34 | 828423   | 4.67 | 126454   | 5.84 | 382109   | 8.22 |

### Legend:

IS1 -- PENTAFLUOROBENZENE  
IS2 -- 1,4-DIFLUOROBENZENE  
IS3 -- 2-BROMO-1-CHLOROPROPANE  
DCB -- 1,4-DICHLOROBENZENE-D4

## Quality Control Summary

SDG: L712971

ARCADIS US - TX

|                  |                                                                        |                        |                 |
|------------------|------------------------------------------------------------------------|------------------------|-----------------|
| Test:            | Volatile Organic Compounds by Method 8260B                             |                        |                 |
| Project No:      | TX000836.0008.00004                                                    | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM                                  | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                                              | <b>Analytic Batch:</b> | <b>WG734780</b> |
| Analysis Date:   | 8/1/2014 1:17:00 AM                                                    | Analyst:               | 644             |
| Instrument ID:   | VOCMS2                                                                 |                        |                 |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13 |                        |                 |

## Surrogate Summary

|                |            | BFB     |        | DFM   |        | TD8   |        | TFT   |        |       |
|----------------|------------|---------|--------|-------|--------|-------|--------|-------|--------|-------|
| Laboratory     |            |         |        |       |        |       |        |       |        |       |
| Sample ID      | Instrument | File ID | ppm    | % Rec | ppm    | % Rec | ppm    | % Rec | ppm    | % Rec |
| L712971-01     | VOCMS2     | 0731_46 | 0.0386 | 96.5  | 0.0407 | 102   | 0.0399 | 99.7  |        |       |
| L712971-02     | VOCMS2     | 0731_51 | 0.0394 | 98.6  | 0.0413 | 103   | 0.0404 | 101   |        |       |
| L712971-03     | VOCMS2     | 0731_52 | 0.0390 | 97.4  | 0.0403 | 101   | 0.0414 | 104   |        |       |
| L712971-04     | VOCMS2     | 0731_53 | 0.0394 | 98.6  | 0.0405 | 101   | 0.0408 | 102   |        |       |
| L712971-05     | VOCMS2     | 0731_54 | 0.0389 | 97.3  | 0.0406 | 102   | 0.0415 | 104   |        |       |
| L712971-06     | VOCMS2     | 0731_55 | 0.0389 | 97.2  | 0.0391 | 97.7  | 0.0408 | 102   |        |       |
| L712971-07     | VOCMS2     | 0731_56 | 0.0388 | 97.0  | 0.0408 | 102   | 0.0416 | 104   |        |       |
| L712971-08     | VOCMS2     | 0731_57 | 0.0389 | 97.2  | 0.0400 | 100   | 0.0415 | 104   |        |       |
| L712971-09     | VOCMS2     | 0731_58 | 0.0398 | 99.5  | 0.0403 | 101   | 0.0411 | 103   |        |       |
| L712971-10     | VOCMS2     | 0731_43 | 0.0383 | 95.8  | 0.0395 | 98.8  | 0.0401 | 100   |        |       |
| L712971-11     | VOCMS2     | 0731_44 | 0.0391 | 97.8  | 0.0405 | 101   | 0.0398 | 99.5  |        |       |
| L712971-12     | VOCMS2     | 0731_59 | 0.0393 | 98.3  | 0.0393 | 98.3  | 0.0398 | 99.6  |        |       |
| L712971-13     | VOCMS2     | 0731_45 | 0.0389 | 97.4  | 0.0395 | 98.8  | 0.0403 | 101   |        |       |
| LCS WG734780   | VOCMS2     | 0731_38 | 0.0354 | 88.5  | 0.0414 | 104   | 0.0393 | 98.2  | 0.0421 | 105   |
| LCSD WG734780  | VOCMS2     | 0731_39 | 0.0353 | 88.2  | 0.0406 | 101   | 0.0399 | 99.7  | 0.0423 | 106   |
| MS WG734780    | VOCMS2     | 0731_47 | 0.0355 | 88.8  | 0.0407 | 102   | 0.0399 | 99.8  | 0.0418 | 104   |
| MSD WG734780   | VOCMS2     | 0731_48 | 0.0344 | 86.0  | 0.0410 | 102   | 0.0401 | 100   | 0.0414 | 103   |
| BLANK WG734780 | VOCMS2     | 0731_41 | 0.0390 | 97.4  | 0.0389 | 97.3  | 0.0404 | 101   | 0.0401 | 100   |

BFB --4-BROMOFLUOROBENZENE

True Value: 0.04 ppm Limits: 80.1 - 120

DFM --DIBROMOFLUOROMETHANE

True Value: 0.04 ppm Limits: 79 - 121

TD8 --TOLUENE-D8

True Value: 0.04 ppm Limits: 90 - 115

TFT --A,A,A-TRIFLUOROTOLUENE

True Value: 0.04 ppm Limits: 85 - 114



## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                               |  |  |                        |                 |
|------------------|-----------------------------------------------|--|--|------------------------|-----------------|
| Test:            | Diesel Range Organics by Method 8015          |  |  | Matrix:                | Water - mg/L    |
| Project No:      | TX000836.0008.00004                           |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM         |  |  | <b>Analytic Batch:</b> | <b>WG734853</b> |
| Collection Date: | 7/29/2014                                     |  |  | Analyst:               | 546             |
| Analysis Date:   | 8/1/2014 3:41:00 PM                           |  |  | Prep Date:             | 7/31/2014       |
| Instrument ID:   | SVGC27, SVGC31                                |  |  |                        |                 |
| Sample Numbers:  | L712971-01, -02, -03, -04, -05, -06, -07, -09 |  |  |                        |                 |

#### Method Blank

| Analyte                           | CAS | RDL     | MDL      | Qualifier |
|-----------------------------------|-----|---------|----------|-----------|
| C10-C28 Diesel Range              |     | < 0.100 | < 0.0222 |           |
| C28-C40 Oil Range                 |     | < 0.100 | < 0.0118 |           |
| Extractable Petroleum Hydrocarbon |     | < 0.100 | < 0.0330 |           |

#### Laboratory Control Sample (LCS)

| Analyte                           | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|-----------------------------------|-----|------------|--------|-------|----------------|------|
| Extractable Petroleum Hydrocarbon | 1   | 1.5        | 1.5553 | 104   | 70 - 130       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte                           | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|-----------------------------------|-----|------------|--------|-------|----------------|------|
| Extractable Petroleum Hydrocarbon | 1   | 1.5        | 1.6565 | 110   | 70 - 130       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte                           | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|-----------------------------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Extractable Petroleum Hydrocarbon | 1   | 1.5   | 1.5553 | 104   | 1.6565 | 110   | 70 - 130       | 6.3        | 20                 |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |  |  |                        |                 |
|------------------|---------------------------------------|--|--|------------------------|-----------------|
| Test:            | Diesel Range Organics by Method 8015  |  |  | Matrix:                | Water - mg/L    |
| Project No:      | TX000836.0008.00004                   |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM |  |  | <b>Analytic Batch:</b> | <b>WG735881</b> |
| Collection Date: | 7/29/2014                             |  |  | Analyst:               | 546             |
| Analysis Date:   | 8/7/2014 6:47:00 PM                   |  |  | Prep Date:             | 8/6/2014        |
| Instrument ID:   | SVGC27                                |  |  |                        |                 |
| Sample Numbers:  | L712971-08                            |  |  |                        |                 |

#### Method Blank

| Analyte                           | CAS | RDL     | MDL      | Qualifier |
|-----------------------------------|-----|---------|----------|-----------|
| C10-C28 Diesel Range              |     | < 0.100 | < 0.0222 |           |
| C28-C40 Oil Range                 |     | < 0.100 | < 0.0118 |           |
| Extractable Petroleum Hydrocarbon |     | < 0.100 | < 0.0330 |           |

#### Laboratory Control Sample (LCS)

| Analyte                           | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|-----------------------------------|-----|------------|--------|-------|----------------|------|
| Extractable Petroleum Hydrocarbon | 1   | 1.5        | 1.5427 | 103   | 70 - 130       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte                           | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|-----------------------------------|-----|------------|--------|-------|----------------|------|
| Extractable Petroleum Hydrocarbon | 1   | 1.5        | 1.5832 | 106   | 70 - 130       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte                           | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|-----------------------------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Extractable Petroleum Hydrocarbon | 1   | 1.5   | 1.5427 | 103   | 1.5832 | 106   | 70 - 130       | 2.59       | 20                 |      |



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## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

Test: Diesel Range Organics by Method 8015  
Project No: TX000836.0008.00004  
Project: Navajo Refining Company - Artesia, NM  
Collection Date: 7/29/2014  
Analysis Date: 8/1/2014 3:41:00 PM  
Instrument ID: SVGC27  
Sample Numbers: L712971-01, -02, -03, -04, -05, -06, -07, -09

Matrix: Water - mg/L  
EPA ID: TN00003  
**Analytic Batch: WG734853**  
Analyst: 546  
Prep Date: 7/31/2014

### Surrogate Summary

o-Terphenyl

Laboratory

| Sample ID      | Instrument | File ID | ppm    | % Rec |
|----------------|------------|---------|--------|-------|
| L712971-01     | SVGC27     | 0801_14 | 0.0196 | 98.2  |
| L712971-02     | SVGC27     | 0801_15 | 0.0206 | 103   |
| L712971-03     | SVGC27     | 0801_16 | 0.0206 | 103   |
| L712971-04     | SVGC27     | 0801_17 | 0.0190 | 95.1  |
| L712971-05     | SVGC31     | 0802_05 | 0.0209 | 104   |
| L712971-06     | SVGC31     | 0802_06 | 0.0213 | 106   |
| L712971-07     | SVGC31     | 0802_07 | 0.0206 | 103   |
| L712971-09     | SVGC31     | 0802_09 | 0.0209 | 104   |
| BLANK WG734853 | SVGC27     | 0801_05 | 0.0203 | 101   |
| LCS WG734853   | SVGC27     | 0801_06 | 0.0202 | 101   |
| LCSD WG734853  | SVGC27     | 0801_07 | 0.0208 | 104   |

o-Terphenyl --O-TERPHENYL

True Value: 0.02 ppm Limits: 50 - 150

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Diesel Range Organics by Method 8015  |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                             | <b>Analytic Batch:</b> | <b>WG735881</b> |
| Analysis Date:   | 8/7/2014 6:47:00 PM                   | Analyst:               | 546             |
| Instrument ID:   | SVGC27                                | Prep Date:             | 8/6/2014        |
| Sample Numbers:  | L712971-08                            |                        |                 |

## Surrogate Summary

o-Terphenyl

Laboratory

| Sample ID      | Instrument | File ID | ppm    | % Rec |
|----------------|------------|---------|--------|-------|
| L712971-08     | SVGC27     | 0807_17 | 0.0203 | 102   |
| BLANK WG735881 | SVGC27     | 0807_11 | 0.0200 | 99.9  |
| LCS WG735881   | SVGC27     | 0807_12 | 0.0191 | 95.6  |
| LCSD WG735881  | SVGC27     | 0807_13 | 0.0200 | 100   |

o-Terphenyl --O-TERPHENYL

True Value: 0.02 ppm Limits: 50 - 150

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734919</b> |
| Analysis Date:   | 8/2/2014 5:00:00 AM                              | Analyst:               | 280             |
| Instrument ID:   | BNAMS2, BNAMS11                                  | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-01, -02, -03, -08                        |                        |                 |

#### Method Blank

| Analyte                    | CAS     | RDL    | MDL     | Qualifier |
|----------------------------|---------|--------|---------|-----------|
| <b>1-Methylnaphthalene</b> | 90-12-0 | < 1.00 | < 0.330 |           |
| <b>2-Methylnaphthalene</b> | 91-57-6 | < 1.00 | < 0.311 |           |
| <b>Benzo(a)pyrene</b>      | 50-32-8 | < 1.00 | < 0.340 |           |
| <b>Naphthalene</b>         | 91-20-3 | < 1.00 | < 0.372 |           |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734920</b> |
| Analysis Date:   | 8/2/2014 11:38:00 AM                             | Analyst:               | 377             |
| Instrument ID:   | BNAMS19, BNAMS11                                 | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-04, -05, -06, -07, -09                   |                        |                 |

#### Method Blank

| Analyte                    | CAS     | RDL    | MDL     | Qualifier |
|----------------------------|---------|--------|---------|-----------|
| <b>1-Methylnaphthalene</b> | 90-12-0 | < 1.00 | < 0.330 |           |
| <b>2-Methylnaphthalene</b> | 91-57-6 | < 1.00 | < 0.311 |           |
| <b>Benzo(a)pyrene</b>      | 50-32-8 | < 1.00 | < 0.340 |           |
| <b>Naphthalene</b>         | 91-20-3 | < 1.00 | < 0.372 |           |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734919</b> |
| Analysis Date:   | 8/2/2014 5:00:00 AM                              | Analyst:               | 280             |
| Instrument ID:   | BNAMS2, BNAMS11                                  | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-01, -02, -03, -08                        |                        |                 |

#### Laboratory Control Sample (LCS)

| Analyte             | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------|-----|------------|--------|-------|----------------|------|
| 1-Methylnaphthalene | 1   | 25         | 20.944 | 83.8  | 34.7 - 102     |      |
| 2-Methylnaphthalene | 1   | 25         | 19.238 | 77    | 33.8 - 98.6    |      |
| Benzo(a)pyrene      | 1   | 25         | 20.416 | 81.7  | 45.6 - 106     |      |
| Naphthalene         | 1   | 25         | 20.513 | 82.1  | 32.2 - 101     |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte             | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------|-----|------------|--------|-------|----------------|------|
| 1-Methylnaphthalene | 1   | 25         | 19.881 | 79.5  | 34.7 - 102     |      |
| 2-Methylnaphthalene | 1   | 25         | 17.815 | 71.3  | 33.8 - 98.6    |      |
| Benzo(a)pyrene      | 1   | 25         | 19.769 | 79.1  | 45.6 - 106     |      |
| Naphthalene         | 1   | 25         | 18.965 | 75.9  | 32.2 - 101     |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte             | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|---------------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| 1-Methylnaphthalene | 1   | 25    | 20.944 | 83.8  | 19.881 | 79.5  | 34.7 - 102     | 5.21       | 24.9               |      |
| 2-Methylnaphthalene | 1   | 25    | 19.238 | 77    | 17.815 | 71.3  | 33.8 - 98.6    | 7.68       | 24.2               |      |
| Benzo(a)pyrene      | 1   | 25    | 20.416 | 81.7  | 19.769 | 79.1  | 45.6 - 106     | 3.22       | 20                 |      |
| Naphthalene         | 1   | 25    | 20.513 | 82.1  | 18.965 | 75.9  | 32.2 - 101     | 7.84       | 23.8               |      |

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734920</b> |
| Analysis Date:   | 8/2/2014 11:38:00 AM                             | Analyst:               | 377             |
| Instrument ID:   | BNAMS19, BNAMS11                                 | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-04, -05, -06, -07, -09                   |                        |                 |

#### Laboratory Control Sample (LCS)

| Analyte             | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------|-----|------------|--------|-------|----------------|------|
| 1-Methylnaphthalene | 1   | 25         | 18.463 | 73.9  | 34.7 - 102     |      |
| 2-Methylnaphthalene | 1   | 25         | 16.377 | 65.5  | 33.8 - 98.6    |      |
| Benzo(a)pyrene      | 1   | 25         | 17.816 | 71.3  | 45.6 - 106     |      |
| Naphthalene         | 1   | 25         | 16.372 | 65.5  | 32.2 - 101     |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte             | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------|-----|------------|--------|-------|----------------|------|
| 1-Methylnaphthalene | 1   | 25         | 18.112 | 72.4  | 34.7 - 102     |      |
| 2-Methylnaphthalene | 1   | 25         | 16.321 | 65.3  | 33.8 - 98.6    |      |
| Benzo(a)pyrene      | 1   | 25         | 18.139 | 72.6  | 45.6 - 106     |      |
| Naphthalene         | 1   | 25         | 15.329 | 61.3  | 32.2 - 101     |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte             | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|---------------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| 1-Methylnaphthalene | 1   | 25    | 18.463 | 73.9  | 18.112 | 72.4  | 34.7 - 102     | 1.92       | 24.9               |      |
| 2-Methylnaphthalene | 1   | 25    | 16.377 | 65.5  | 16.321 | 65.3  | 33.8 - 98.6    | 0.34       | 24.2               |      |
| Benzo(a)pyrene      | 1   | 25    | 17.816 | 71.3  | 18.139 | 72.6  | 45.6 - 106     | 1.79       | 20                 |      |
| Naphthalene         | 1   | 25    | 16.372 | 65.5  | 15.329 | 61.3  | 32.2 - 101     | 6.58       | 23.8               |      |



## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734919</b> |
| Analysis Date:   | 8/2/2014 5:00:00 AM                              | Analyst:               | 280             |
| Instrument ID:   | BNAMS11                                          | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-01, -02, -03, -08                        |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0801\_02  
Analyzed: 08/02/14 020700

|                    | DCB      |      | NAP      |      | ACE      |      | PHEN     |      |
|--------------------|----------|------|----------|------|----------|------|----------|------|
|                    | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| <b>12 Hr. Std</b>  | 56535    | 5.43 | 223701   | 6.17 | 124582   | 7.21 | 221439   | 8.09 |
| <b>Upper Limit</b> | 113000   | 5.93 | 447000   | 6.67 | 249000   | 7.71 | 443000   | 8.59 |
| <b>Lower Limit</b> | 28300    | 4.93 | 112000   | 5.67 | 62300    | 6.71 | 111000   | 7.59 |
| Sample ID          | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| LCSD WG734919      | 51083    | 5.43 | 201641   | 6.17 | 113079   | 7.21 | 193230   | 8.09 |
| LCS WG734919       | 52219    | 5.43 | 206248   | 6.17 | 113387   | 7.21 | 194050   | 8.09 |
| BLANK WG734919     | 54073    | 5.43 | 215173   | 6.17 | 121026   | 7.21 | 202334   | 8.09 |

### Legend:

DCB -- 1,4-Dichlorobenzene-d4  
NAP -- Naphthalene-d8  
ACE -- Acenaphthene-d10  
PHEN -- Phenanthrene-d10  
CHR -- Chrysene-d12  
PER -- Perylene-d12

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734919</b> |
| Analysis Date:   | 8/2/2014 5:00:00 AM                              | Analyst:               | 280             |
| Instrument ID:   | BNAMS11                                          | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-01, -02, -03, -08                        |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0801\_02  
Analyzed: 08/02/14 020700

|                    | DCB      |      | CHR      |       | PER      |       |
|--------------------|----------|------|----------|-------|----------|-------|
|                    | Response | RT   | Response | RT    | Response | RT    |
| <b>12 Hr. Std</b>  | 56535    | 5.43 | 197633   | 10.27 | 218739   | 12.54 |
| <b>Upper Limit</b> | 113000   | 5.93 | 395000   | 10.77 | 437000   | 13.04 |
| <b>Lower Limit</b> | 28300    | 4.93 | 98800    | 9.77  | 109000   | 12.04 |
| Sample ID          | Response | RT   | Response | RT    | Response | RT    |
| LCSD WG734919      | 51083    | 5.43 | 178853   | 10.27 | 199058   | 12.54 |
| LCS WG734919       | 52219    | 5.43 | 184519   | 10.27 | 207029   | 12.55 |
| BLANK WG734919     | 54073    | 5.43 | 180896   | 10.27 | 204152   | 12.55 |

### Legend:

DCB -- 1,4-Dichlorobenzene-d4  
NAP -- Naphthalene-d8  
ACE -- Acenaphthene-d10  
PHEN -- Phenanthrene-d10  
CHR -- Chrysene-d12  
PER -- Perylene-d12

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734919</b> |
| Analysis Date:   | 8/2/2014 5:00:00 AM                              | Analyst:               | 280             |
| Instrument ID:   | BNAMS2                                           | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-01, -02, -03, -08                        |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0801B\_02

Analyzed: 08/02/14 032200

|                    | DCB      |      | NAP      |      | ACE      |      | PHEN     |      |
|--------------------|----------|------|----------|------|----------|------|----------|------|
|                    | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| <b>12 Hr. Std</b>  | 188637   | 5.40 | 741714   | 6.15 | 460178   | 7.17 | 683272   | 8.05 |
| <b>Upper Limit</b> | 377000   | 5.90 | 1480000  | 6.65 | 920000   | 7.67 | 1370000  | 8.55 |
| <b>Lower Limit</b> | 94300    | 4.90 | 371000   | 5.65 | 230000   | 6.67 | 342000   | 7.55 |
| Sample ID          | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| L712971-01         | 219605   | 5.40 | 873374   | 6.15 | 531911   | 7.18 | 772243   | 8.06 |
| L712971-02         | 208231   | 5.40 | 820714   | 6.15 | 500169   | 7.18 | 719572   | 8.06 |
| L712971-03         | 204803   | 5.40 | 814654   | 6.15 | 495716   | 7.18 | 718667   | 8.06 |
| L712971-08         | 204031   | 5.40 | 815703   | 6.15 | 496137   | 7.18 | 723500   | 8.06 |

### Legend:

DCB -- 1,4-Dichlorobenzene-d4  
NAP -- Naphthalene-d8  
ACE -- Acenaphthene-d10  
PHEN -- Phenanthrene-d10  
CHR -- Chrysene-d12  
PER -- Perylene-d12

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734919</b> |
| Analysis Date:   | 8/2/2014 5:00:00 AM                              | Analyst:               | 280             |
| Instrument ID:   | BNAMS2                                           | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-01, -02, -03, -08                        |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0801B\_02

Analyzed: 08/02/14 032200

|                    | DCB      |      | CHR      |       | PER      |       |
|--------------------|----------|------|----------|-------|----------|-------|
|                    | Response | RT   | Response | RT    | Response | RT    |
| <b>12 Hr. Std</b>  | 188637   | 5.40 | 537231   | 10.18 | 603620   | 12.44 |
| <b>Upper Limit</b> | 377000   | 5.90 | 1070000  | 10.68 | 1210000  | 12.94 |
| <b>Lower Limit</b> | 94300    | 4.90 | 269000   | 9.68  | 302000   | 11.94 |
| Sample ID          | Response | RT   | Response | RT    | Response | RT    |
| L712971-01         | 219605   | 5.40 | 590101   | 10.19 | 686739   | 12.45 |
| L712971-02         | 208231   | 5.40 | 575525   | 10.19 | 665425   | 12.46 |
| L712971-03         | 204803   | 5.40 | 576184   | 10.18 | 674854   | 12.45 |
| L712971-08         | 204031   | 5.40 | 548401   | 10.19 | 645977   | 12.46 |

### Legend:

DCB -- 1,4-Dichlorobenzene-d4  
NAP -- Naphthalene-d8  
ACE -- Acenaphthene-d10  
PHEN -- Phenanthrene-d10  
CHR -- Chrysene-d12  
PER -- Perylene-d12

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734920</b> |
| Analysis Date:   | 8/2/2014 11:38:00 AM                             | Analyst:               | 377             |
| Instrument ID:   | BNAMS11                                          | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-04, -05, -06, -07, -09                   |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0807\_02  
Analyzed: 08/07/14 110300

|                    | DCB      |      | NAP      |      | ACE      |      | PHEN     |      |
|--------------------|----------|------|----------|------|----------|------|----------|------|
|                    | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| <b>12 Hr. Std</b>  | 56978    | 5.43 | 222802   | 6.17 | 124924   | 7.21 | 213922   | 8.09 |
| <b>Upper Limit</b> | 114000   | 5.93 | 446000   | 6.67 | 250000   | 7.71 | 428000   | 8.59 |
| <b>Lower Limit</b> | 28500    | 4.93 | 111000   | 5.67 | 62500    | 6.71 | 107000   | 7.59 |
| Sample ID          | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| L712971-07         | 66905    | 5.43 | 259265   | 6.17 | 145591   | 7.21 | 249821   | 8.09 |
| L712971-09         | 58988    | 5.43 | 232573   | 6.17 | 127239   | 7.21 | 219607   | 8.09 |

### Legend:

DCB -- 1,4-Dichlorobenzene-d4  
NAP -- Naphthalene-d8  
ACE -- Acenaphthene-d10  
PHEN -- Phenanthrene-d10  
CHR -- Chrysene-d12  
PER -- Perylene-d12

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734920</b> |
| Analysis Date:   | 8/2/2014 11:38:00 AM                             | Analyst:               | 377             |
| Instrument ID:   | BNAMS11                                          | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-04, -05, -06, -07, -09                   |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0807\_02  
Analyzed: 08/07/14 110300

|                    | DCB      |      | CHR      |       | PER      |       |
|--------------------|----------|------|----------|-------|----------|-------|
|                    | Response | RT   | Response | RT    | Response | RT    |
| <b>12 Hr. Std</b>  | 56978    | 5.43 | 203315   | 10.27 | 237487   | 12.54 |
| <b>Upper Limit</b> | 114000   | 5.93 | 407000   | 10.77 | 475000   | 13.04 |
| <b>Lower Limit</b> | 28500    | 4.93 | 102000   | 9.77  | 119000   | 12.04 |
| Sample ID          | Response | RT   | Response | RT    | Response | RT    |
| L712971-07         | 66905    | 5.43 | 241612   | 10.27 | 266386   | 12.54 |
| L712971-09         | 58988    | 5.43 | 207492   | 10.27 | 234265   | 12.54 |

### Legend:

DCB -- 1,4-Dichlorobenzene-d4  
NAP -- Naphthalene-d8  
ACE -- Acenaphthene-d10  
PHEN -- Phenanthrene-d10  
CHR -- Chrysene-d12  
PER -- Perylene-d12

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734920</b> |
| Analysis Date:   | 8/2/2014 11:38:00 AM                             | Analyst:               | 377             |
| Instrument ID:   | BNAMS19                                          | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-04, -05, -06, -07, -09                   |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0801A\_02

Analyzed: 08/02/14 012700

|                    | DCB      |      | NAP      |      | ACE      |      | PHEN     |       |
|--------------------|----------|------|----------|------|----------|------|----------|-------|
|                    | Response | RT   | Response | RT   | Response | RT   | Response | RT    |
| <b>12 Hr. Std</b>  | 108057   | 5.40 | 464982   | 6.67 | 321640   | 8.56 | 646074   | 10.18 |
| <b>Upper Limit</b> | 216000   | 5.90 | 930000   | 7.17 | 643000   | 9.06 | 1290000  | 10.68 |
| <b>Lower Limit</b> | 54000    | 4.90 | 232000   | 6.17 | 161000   | 8.06 | 323000   | 9.68  |
| Sample ID          | Response | RT   | Response | RT   | Response | RT   | Response | RT    |
| L712971-04         | 87781    | 5.40 | 383772   | 6.67 | 259160   | 8.55 | 512013   | 10.18 |
| L712971-05         | 85973    | 5.40 | 363210   | 6.67 | 255483   | 8.55 | 499618   | 10.18 |
| L712971-06         | 83435    | 5.40 | 343993   | 6.67 | 239396   | 8.55 | 472759   | 10.18 |
| LCSD WG734920      | 95097    | 5.40 | 377520   | 6.67 | 263285   | 8.55 | 510914   | 10.18 |
| LCS WG734920       | 91543    | 5.40 | 379623   | 6.67 | 261902   | 8.55 | 503427   | 10.18 |
| BLANK WG734920     | 95299    | 5.40 | 393752   | 6.67 | 274975   | 8.55 | 529379   | 10.18 |

### Legend:

DCB -- 1,4-Dichlorobenzene-d4  
NAP -- Naphthalene-d8  
ACE -- Acenaphthene-d10  
PHEN -- Phenanthrene-d10  
CHR -- Chrysene-d12  
PER -- Perylene-d12

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734920</b> |
| Analysis Date:   | 8/2/2014 11:38:00 AM                             | Analyst:               | 377             |
| Instrument ID:   | BNAMS19                                          | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-04, -05, -06, -07, -09                   |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0801A\_02

Analyzed: 08/02/14 012700

|                    | DCB      |      | CHR      |       | PER      |       |
|--------------------|----------|------|----------|-------|----------|-------|
|                    | Response | RT   | Response | RT    | Response | RT    |
| <b>12 Hr. Std</b>  | 108057   | 5.40 | 835673   | 13.07 | 902384   | 14.94 |
| <b>Upper Limit</b> | 216000   | 5.90 | 1670000  | 13.57 | 1800000  | 15.44 |
| <b>Lower Limit</b> | 54000    | 4.90 | 418000   | 12.57 | 451000   | 14.44 |
| Sample ID          | Response | RT   | Response | RT    | Response | RT    |
| L712971-04         | 87781    | 5.40 | 590320   | 13.07 | 679426   | 14.93 |
| L712971-05         | 85973    | 5.40 | 564311   | 13.07 | 655777   | 14.94 |
| L712971-06         | 83435    | 5.40 | 595670   | 13.07 | 679743   | 14.93 |
| LCSD WG734920      | 95097    | 5.40 | 638649   | 13.07 | 720135   | 14.94 |
| LCS WG734920       | 91543    | 5.40 | 632462   | 13.07 | 737884   | 14.93 |
| BLANK WG734920     | 95299    | 5.40 | 599775   | 13.07 | 694096   | 14.93 |

### Legend:

DCB -- 1,4-Dichlorobenzene-d4  
NAP -- Naphthalene-d8  
ACE -- Acenaphthene-d10  
PHEN -- Phenanthrene-d10  
CHR -- Chrysene-d12  
PER -- Perylene-d12



## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734919</b> |
| Analysis Date:   | 8/2/2014 5:00:00 AM                              | Analyst:               | 280             |
| Instrument ID:   | BNAMS2                                           | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-01, -02, -03, -08                        |                        |                 |

### Surrogate Summary

|                |            | TBP       |        |       | FBP     |       | 2FP     |       | NBZ     |       |
|----------------|------------|-----------|--------|-------|---------|-------|---------|-------|---------|-------|
| Laboratory     |            |           |        |       |         |       |         |       |         |       |
| Sample ID      | Instrument | File ID   | ppm    | % Rec | ppm     | % Rec | ppm     | % Rec | ppm     | % Rec |
| L712971-01     | BNAMS2     | 0801B_05  | 0.0166 | 82.8  | 0.00688 | 68.8  | 0.00846 | 42.3  | 0.00687 | 68.7  |
| L712971-02     | BNAMS2     | 0801B_06  | 0.0185 | 92.3  | 0.00677 | 67.7  | 0.00581 | 29.1  | 0.00655 | 65.5  |
| L712971-03     | BNAMS2     | 0801B_07  | 0.0182 | 90.9  | 0.00688 | 68.8  | 0.00983 | 49.2  | 0.00685 | 68.5  |
| L712971-08     | BNAMS2     | 0801B_08  | 0.0215 | 108   | 0.00822 | 82.2  | 0.0117  | 58.4  | 0.00759 | 75.9  |
| LCS WG734919   | BNAMS11    | 0801_04-2 | 0.0166 | 83.1  | 0.00830 | 83.0  | 0.00979 | 48.9  | 0.00854 | 85.4  |
| LCSD WG734919  | BNAMS11    | 0801_05-2 | 0.0155 | 77.7  | 0.00778 | 77.8  | 0.00902 | 45.1  | 0.00818 | 81.8  |
| BLANK WG734919 | BNAMS11    | 0801_06-2 | 0.0151 | 75.5  | 0.00859 | 85.9  | 0.0115  | 57.6  | 0.00782 | 78.2  |

TBP --2,4,6-TRIBROMOPHENOL

True Value: 0.02 ppm Limits: 11.2 - 130

FBP --2-FLUOROBIPHENYL

True Value: 0.01 ppm Limits: 29.5 - 131

2FP --2-FLUOROPHENOL

True Value: 0.02 ppm Limits: 10 - 77.9

NBZ --NITROBENZENE-D5

True Value: 0.01 ppm Limits: 21.8 - 123

TPH --P-TERPHENYL-D14

True Value: 0.01 ppm Limits: 29.3 - 137

PHL --PHENOL-D5

True Value: 0.02 ppm Limits: 5 - 70.1



YOUR LAB OF CHOICE

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Mt. Juliet, TN 37122  
(615) 758-5858  
(800) 767-5859  
Fax (615) 758-5859  
Tax I.D 62-0814289  
Est. 1970

## Quality Control Summary

### SDG: L712971

### ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734919</b> |
| Analysis Date:   | 8/2/2014 5:00:00 AM                              | Analyst:               | 280             |
| Instrument ID:   | BNAMS2                                           | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-01, -02, -03, -08                        |                        |                 |

### Surrogate Summary

|                |            | TPH       |         | PHL   |              |
|----------------|------------|-----------|---------|-------|--------------|
| Laboratory     |            |           |         |       |              |
| Sample ID      | Instrument | File ID   | ppm     | % Rec | ppm % Rec    |
| L712971-01     | BNAMS2     | 0801B_05  | 0.00783 | 78.3  | 0.00734 36.7 |
| L712971-02     | BNAMS2     | 0801B_06  | 0.00786 | 78.6  | 0.00422 21.1 |
| L712971-03     | BNAMS2     | 0801B_07  | 0.00732 | 73.2  | 0.00828 41.4 |
| L712971-08     | BNAMS2     | 0801B_08  | 0.00792 | 79.2  | 0.00916 45.8 |
| LCS WG734919   | BNAMS11    | 0801_04-2 | 0.00772 | 77.2  | 0.00814 40.7 |
| LCSD WG734919  | BNAMS11    | 0801_05-2 | 0.00761 | 76.1  | 0.00756 37.8 |
| BLANK WG734919 | BNAMS11    | 0801_06-2 | 0.00791 | 79.1  | 0.00865 43.3 |

TBP --2,4,6-TRIBROMOPHENOL

True Value: 0.02 ppm Limits: 11.2 - 130

FBP --2-FLUOROBIPHENYL

True Value: 0.01 ppm Limits: 29.5 - 131

2FP --2-FLUOROPHENOL

True Value: 0.02 ppm Limits: 10 - 77.9

NBZ --NITROBENZENE-D5

True Value: 0.01 ppm Limits: 21.8 - 123

TPH --P-TERPHENYL-D14

True Value: 0.01 ppm Limits: 29.3 - 137

PHL --PHENOL-D5

True Value: 0.02 ppm Limits: 5 - 70.1

## Quality Control Summary

SDG: L712971

ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C |                        |                 |
| Project No:      | TX000836.0008.00004                              | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM            | EPA ID:                | TN00003         |
| Collection Date: | 7/29/2014                                        | <b>Analytic Batch:</b> | <b>WG734920</b> |
| Analysis Date:   | 8/2/2014 11:38:00 AM                             | Analyst:               | 377             |
| Instrument ID:   | BNAMS19                                          | Prep Date:             | 7/31/2014       |
| Sample Numbers:  | L712971-04, -05, -06, -07, -09                   |                        |                 |

## Surrogate Summary

|                |            | TBP       |        |       | FBP     |       | 2FP     |       | NBZ     |       |
|----------------|------------|-----------|--------|-------|---------|-------|---------|-------|---------|-------|
| Laboratory     |            |           |        |       |         |       |         |       |         |       |
| Sample ID      | Instrument | File ID   | ppm    | % Rec | ppm     | % Rec | ppm     | % Rec | ppm     | % Rec |
| L712971-04     | BNAMS19    | 0801A_27  | 0.0184 | 92.2  | 0.00745 | 74.5  | 0.00924 | 46.2  | 0.00500 | 50.0  |
| L712971-05     | BNAMS19    | 0801A_28  | 0.0167 | 83.5  | 0.00740 | 74.0  | 0.0103  | 51.4  | 0.00549 | 54.9  |
| L712971-06     | BNAMS19    | 0801A_29  | 0.0156 | 77.9  | 0.00689 | 68.9  | 0.0102  | 51.0  | 0.00493 | 49.3  |
| L712971-07     | BNAMS11    | 0807_13   | 0.0159 | 79.5  | 0.00854 | 85.4  | 0.0102  | 50.8  | 0.00737 | 73.7  |
| L712971-09     | BNAMS11    | 0807_14   | 0.0146 | 73.0  | 0.00820 | 82.0  | 0.0108  | 54.2  | 0.00722 | 72.2  |
| LCS WG734920   | BNAMS19    | 0801A_04- | 0.0187 | 93.6  | 0.00736 | 73.6  | 0.0100  | 50.1  | 0.00535 | 53.5  |
| LCSD WG734920  | BNAMS19    | 0801A_05- | 0.0177 | 88.5  | 0.00715 | 71.5  | 0.00893 | 44.6  | 0.00494 | 49.4  |
| BLANK WG734920 | BNAMS19    | 0801A_06- | 0.0153 | 76.5  | 0.00708 | 70.8  | 0.00832 | 41.6  | 0.00478 | 47.8  |

TBP --2,4,6-TRIBROMOPHENOL

True Value: 0.02 ppm Limits: 11.2 - 130

FBP --2-FLUOROBIPHENYL

True Value: 0.01 ppm Limits: 29.5 - 131

2FP --2-FLUOROPHENOL

True Value: 0.02 ppm Limits: 10 - 77.9

NBZ --NITROBENZENE-D5

True Value: 0.01 ppm Limits: 21.8 - 123

TPH --P-TERPHENYL-D14

True Value: 0.01 ppm Limits: 29.3 - 137

PHL --PHENOL-D5

True Value: 0.02 ppm Limits: 5 - 70.1



YOUR LAB OF CHOICE

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Fax (615) 758-5859  
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Est. 1970

## Quality Control Summary

SDG: L712971

ARCADIS US - TX

|                  |                                                  |                        |                 |
|------------------|--------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270 C | Matrix:                | Water - ug/L    |
| Project No:      | TX000836.0008.00004                              | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM            | <b>Analytic Batch:</b> | <b>WG734920</b> |
| Collection Date: | 7/29/2014                                        | Analyst:               | 377             |
| Analysis Date:   | 8/2/2014 11:38:00 AM                             | Prep Date:             | 7/31/2014       |
| Instrument ID:   | BNAMS19                                          |                        |                 |
| Sample Numbers:  | L712971-04, -05, -06, -07, -09                   |                        |                 |

## Surrogate Summary

| Laboratory<br>Sample ID | Instrument | File ID   | TPH     |       | PHL     |       |
|-------------------------|------------|-----------|---------|-------|---------|-------|
|                         |            |           | ppm     | % Rec | ppm     | % Rec |
| L712971-04              | BNAMS19    | 0801A_27  | 0.00733 | 73.3  | 0.00714 | 35.7  |
| L712971-05              | BNAMS19    | 0801A_28  | 0.00725 | 72.5  | 0.00712 | 35.6  |
| L712971-06              | BNAMS19    | 0801A_29  | 0.00671 | 67.1  | 0.00711 | 35.5  |
| L712971-07              | BNAMS11    | 0807_13   | 0.00784 | 78.4  | 0.00770 | 38.5  |
| L712971-09              | BNAMS11    | 0807_14   | 0.00741 | 74.1  | 0.00813 | 40.7  |
| LCS WG734920            | BNAMS19    | 0801A_04- | 0.00681 | 68.1  | 0.00675 | 33.7  |
| LCSD WG734920           | BNAMS19    | 0801A_05- | 0.00656 | 65.6  | 0.00611 | 30.5  |
| BLANK WG734920          | BNAMS19    | 0801A_06- | 0.00679 | 67.9  | 0.00599 | 29.9  |

TBP --2,4,6-TRIBROMOPHENOL

True Value: 0.02 ppm Limits: 11.2 - 130

FBP --2-FLUOROBIPHENYL

True Value: 0.01 ppm Limits: 29.5 - 131

2FP --2-FLUOROPHENOL

True Value: 0.02 ppm Limits: 10 - 77.9

NBZ --NITROBENZENE-D5

True Value: 0.01 ppm Limits: 21.8 - 123

TPH --P-TERPHENYL-D14

True Value: 0.01 ppm Limits: 29.3 - 137

PHL --PHENOL-D5

True Value: 0.02 ppm Limits: 5 - 70.1

# ARCADIS US - TX

2929 Briarpark Dr., Suite 300  
Houston, TX 77042

## Billing Information:

Attn: Accounts Payable  
630 Plaza Drive, Suite 600  
Highlands Ranch, CO 80129

Email To: pam.krueger@arcadis-us.com

Report to:  
Project Manager

Project  
Description: Navajo Refining Company - Artesia, NM

Phone: 713-953-4800  
Fax:

Client Project #  
TX000836.0008.00004

City/State  
Collected:  
Lab Project #  
ARCADHTX-NAVAJO

Collected by (print):

Collected by (signature):

Immediately  
Packed on Ice N ☐ Y ☒

Site/Facility ID #

**Rush?** (Lab MUST Be Notified)  
☐ Same Day .....200%  
☐ Next Day .....100%  
☐ Two Day .....50%  
☐ Three Day .....25%

P.O. #

Date Results Needed

Email? ☐ No ☒ Yes  
FAX? ☐ No ☐ Yes

No.  
of  
Cnts

\*\*Cl,F,NO2,NO3,S04\*\* 125mlHDPE-NoPres

8270 100ml Amb NoPres

CN 250mlHDPEAmb-NaOH

DROOROLVI 40mlAmb-HCl-BT

Diss. Metals (Field) 500mlHDPE-HNO3

GRO 40mlAmb HCl

RA226/RA228 1L-HDPE-Add HNO3

TDS 250mlHDPE-NoPres

Total Hg 500mlHDPE-HNO3

V8260 40mlAmb-HCl

## Analysis / Container / Preservative

Chain of Custody Page \_\_\_ of \_\_\_



YOUR LAB OF CHOICE

12065 Lebanon Rd  
Mount Juliet, TN 37122  
Phone: 615-758-5858  
Phone: 800-767-5859  
Fax: 615-758-5859



L# 6712 971

D208

Acctnum: ARCADHTX

Template: T95739

Prelogin: P476834

TSR: 633 - Pam Langford

PB: 7.24 M8

Shipped Via: FedEX Ground

Rem./Contaminant Sample # (lab only)

| Sample ID | Comp/Grab | Matrix * | Depth | Date    | Time | No. of Cnts | **Cl,F,NO2,NO3,S04** 125mlHDPE-NoPres | 8270 100ml Amb NoPres | CN 250mlHDPEAmb-NaOH | DROOROLVI 40mlAmb-HCl-BT | Diss. Metals (Field) 500mlHDPE-HNO3 | GRO 40mlAmb HCl | RA226/RA228 1L-HDPE-Add HNO3 | TDS 250mlHDPE-NoPres | Total Hg 500mlHDPE-HNO3 | V8260 40mlAmb-HCl | Rem./Contaminant | Sample # (lab only) |
|-----------|-----------|----------|-------|---------|------|-------------|---------------------------------------|-----------------------|----------------------|--------------------------|-------------------------------------|-----------------|------------------------------|----------------------|-------------------------|-------------------|------------------|---------------------|
| MW-12     | G         | GW       |       | 7/29/14 | 1530 | 15          | X                                     | X                     | X                    | X                        | X                                   | X               | X                            | X                    | X                       | X                 |                  | 01                  |
| MW-13     | G         | GW       |       | 7/29/14 | 1350 | 15          | X                                     | X                     | X                    | X                        | X                                   | X               | X                            | X                    | X                       | X                 |                  | 02                  |
| MW-25     | C         | GW       |       | 7/29/14 | 1730 | 15          | X                                     | X                     | X                    | X                        | X                                   | X               | X                            | X                    | X                       | X                 |                  | 03                  |
| MW-136    | G         | GW       |       | 7/30/14 | 0810 | 15          | X                                     | X                     | X                    | X                        | X                                   | X               | X                            | X                    | X                       | X                 |                  | 04                  |
| UG-1      | G         | GW       |       | 7/30/14 | 0945 | 15          | X                                     | X                     | X                    | X                        | X                                   | X               | X                            | X                    | X                       | X                 |                  | 05                  |
| UG-3R     | G         | GW       |       | 7/30/14 | 1120 | 15          | X                                     | X                     | X                    | X                        | X                                   | X               | X                            | X                    | X                       | X                 |                  | 06                  |
| UG-2      | G         | GW       |       | 7/30/14 | 1250 | 15          | X                                     | X                     | X                    | X                        | X                                   | X               | X                            | X                    | X                       | X                 |                  | 07                  |
| EB-002    | G         | GW       |       | 7/29/14 | 1835 | 15          | X                                     | X                     | X                    | X                        | X                                   | X               | X                            | X                    | X                       | X                 |                  | 08                  |
| EB-003    | G         | GW       |       | 7/30/14 | 1400 | 15          | X                                     | X                     | X                    | X                        | X                                   | X               | X                            | X                    | X                       | X                 |                  | 09                  |
|           |           | GW       |       |         |      | 15          | X                                     | X                     | X                    | X                        | X                                   | X               | X                            | X                    | X                       | X                 |                  |                     |

\* Matrix: SS - Soil GW - Groundwater WW - Waste Water DW - Drinking Water OT - Other

Remarks: \*\*\*\*Add Uranium (in house)\*\*\*\*

★ Add Total Metals

608971744415 608971748362  
608971744406 608971744414

pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_

Relinquished by: (Signature)

Date: 7/30/14 Time: 1515

Received by: (Signature)

Samples returned via: ☐ UPS

☒ FedEx ☐ Courier ☐ \_\_\_\_\_

Hold #

Condition: (lab use only)

Relinquished by: (Signature)

Date: Time:

Received by: (Signature)

Temp: 3.8 °C Bottles Received: 148

COC Seal Intact: ☒ Y ☐ N ☐ NA

Relinquished by: (Signature)

Date: Time:

Received for lab by: (Signature)

Date: 7/31/14 Time: 0900

pH Checked: NCF:

ARCADIS US - TX

2929 Briarpark Dr., Suite 300  
Houston, TX 77042

Report to:  
Pam Krueger

Project  
Description: Navajo Refining Company - Artesia, NM

Phone: 713-953-4800  
Fax:

Client Project #  
TX000836.0008.00004

City/State  
Collected:

Lab Project #  
ARCADHTX-NAVAJO

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

**Rush?** (Lab MUST Be Notified)  
\_\_\_\_ Same Day .....200%  
\_\_\_\_ Next Day .....100%  
\_\_\_\_ Two Day .....50%  
\_\_\_\_ Three Day .....25%

Date Results Needed

Email? \_\_\_\_ No **X** Yes  
FAX? \_\_\_\_ No \_\_\_\_ Yes

Immediately  
Packed on Ice N \_\_\_\_ Y \_\_\_\_

| Sample ID  | Comp/Grab | Matrix * | Depth | Date | Time | No. of Cntrs |
|------------|-----------|----------|-------|------|------|--------------|
| Trip Blank |           | GW       |       |      |      | 1            |
| Trip Blank |           | GW       |       |      |      | 1            |
| Trip Blank |           | GW       |       |      |      | 1            |
| Trip Blank |           | GW       |       |      |      | 1            |
|            |           | GW       |       |      |      | 1            |
|            |           | GW       |       |      |      | 1            |
|            |           | GW       |       |      |      | 1            |
|            |           | GW       |       |      |      | 1            |
|            |           | GW       |       |      |      | 1            |
|            |           | GW       |       |      |      | 1            |

Total Metals: 500mL HDPE-HNO3

VOCs

Analysis / Container / Preservative

Chain of Custody Page \_\_\_\_ of \_\_\_\_



YOUR LAB OF CHOICE

12065 Lebanon Rd  
Mount Juliet, TN 37122  
Phone: 615-758-5858  
Phone: 800-767-5859  
Fax: 615-758-5859



L# 672971

Table #

Acctnum: ARCADHTX

Template: T95815

Prelogin: P477209

TSR: 633 Pam Langford

PB: 7/28/14 *mb*

Shipped Via: FedEx Standard

Rem./Contaminant Sample # (lab only)

\* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks:

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Hold #

Relinquished by: (Signature)  
*Rachel Wood*

Date:  
7/30/14

Time:

Received by: (Signature)

Samples returned via: ☐ UPS  
☒ FedEx ☐ Courier ☐ \_\_\_\_\_

Condition: 5 (lab use only)

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: 3.8 °C Bottles Received: 148

COC Seal Intact: Y N NA

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: 7/31/14 Time: 0900

pH Checked: 110 of 111



## Pam Langford

---

**From:** Osborne, Melissa <Melissa.Osborne@arcadis-us.com>  
**Sent:** Monday, August 25, 2014 8:51 AM  
**To:** Pam Langford; Turner, Maisha; Osborne, Melissa; Krueger, Pamela  
**Subject:** RE: ESC Lab Sciences Report for TX000836.0008.00004 Navajo Refining Company - Artesia, NM L712971

Pam L.,  
Please revise Sample IDs XX-XX-0714-BG (i.e. MW-12-0714-BG).

If you have any questions please let me know.  
Thanks,  
Mel

-----Original Message-----

From: Pam Langford [<mailto:plangford@esclabsciences.com>]  
Sent: Friday, August 22, 2014 5:27 PM  
To: Turner, Maisha; Osborne, Melissa; Krueger, Pamela  
Subject: ESC Lab Sciences Report for TX000836.0008.00004 Navajo Refining Company - Artesia, NM L712971

Thank you for choosing ESC Lab Sciences! Please find enclosed PDF files containing your laboratory analysis and chain of custody.

ESC is pleased to announce that we are accepting samples from 21 states for the new 3511 prep technique for PAHs by 8270 and 8270SIM. This technique allows for a 98% reduction in solvent usage, and requires only 2 to 3 40 mL non-preserved amber vials vs. the traditional 1 or 2 amber liter jars. Please contact your Technical Service Representative for details.

ESC is leading the laboratory industry with our On-line Data Management tools. Please contact your Technical Service Representative to learn how to create historical Excel tables or access data in real time using powerful and intuitive software that is only available at <http://www.esclabsciences.com>.

How are we doing? ESC would like to hear from you. Please take a moment and complete our customer feedback survey at <https://www.surveymonkey.com/s/TCGLB7T>.

ESC ... "Your Lab of Choice"

Pam Langford  
Technical Service Representative  
--

ESC Lab Sciences  
12065 Lebanon Rd.  
Mt. Juliet, TN 37122

## LABORATORY REPORT

This report contains 22 pages.  
(including the cover page)

If you have any questions concerning this report, please do not hesitate to call us at  
(800) 332-4345 or (574) 233-4777.

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Eaton Analytical, Inc.*



110 South Hill Street  
 South Bend, IN 46617  
 Tel: (574) 233-4777  
 Fax: (574) 233-8207  
 1 800 332 4345

## Laboratory Report

Client: Environmental Science

Report: 322425

Attn: Janice Cozby  
 12065 Lebanon Road  
 Mount Juliet, TN 37122

Priority: Standard Written

Status: Final

PWS ID: Not Supplied

Copies  
 to: None

| Sample Information |            |           |                       |               |                      |
|--------------------|------------|-----------|-----------------------|---------------|----------------------|
| EEA ID #           | Client ID  | Method    | Collected Date / Time | Collected By: | Received Date / Time |
| 3073820            | L712975-01 | 7500-Ra B | 07/29/14 15:30        | Client        | 08/01/14 10:15       |
| 3073820            | L712975-01 | 7500-Ra D | 07/29/14 15:30        | Client        | 08/01/14 10:15       |
| 3073821            | L712975-02 | 7500-Ra B | 07/29/14 13:50        | Client        | 08/01/14 10:15       |
| 3073821            | L712975-02 | 7500-Ra D | 07/29/14 13:50        | Client        | 08/01/14 10:15       |
| 3073822            | L712975-03 | 7500-Ra B | 07/29/14 17:30        | Client        | 08/01/14 10:15       |
| 3073822            | L712975-03 | 7500-Ra D | 07/29/14 17:30        | Client        | 08/01/14 10:15       |
| 3073823            | L712975-04 | 7500-Ra B | 07/30/14 08:10        | Client        | 08/01/14 10:15       |
| 3073823            | L712975-04 | 7500-Ra D | 07/30/14 08:10        | Client        | 08/01/14 10:15       |
| 3073824            | L712975-05 | 7500-Ra B | 07/30/14 09:45        | Client        | 08/01/14 10:15       |
| 3073824            | L712975-05 | 7500-Ra D | 07/30/14 09:45        | Client        | 08/01/14 10:15       |
| 3073825            | L712975-06 | 7500-Ra B | 07/30/14 11:20        | Client        | 08/01/14 10:15       |
| 3073825            | L712975-06 | 7500-Ra D | 07/30/14 11:20        | Client        | 08/01/14 10:15       |
| 3073826            | L712975-07 | 7500-Ra B | 07/30/14 12:50        | Client        | 08/01/14 10:15       |
| 3073826            | L712975-07 | 7500-Ra D | 07/30/14 12:50        | Client        | 08/01/14 10:15       |
| 3073827            | L712975-08 | 7500-Ra B | 07/29/14 18:35        | Client        | 08/01/14 10:15       |
| 3073827            | L712975-08 | 7500-Ra D | 07/29/14 18:35        | Client        | 08/01/14 10:15       |
| 3073828            | L712975-09 | 7500-Ra B | 07/30/14 14:00        | Client        | 08/01/14 10:15       |
| 3073828            | L712975-09 | 7500-Ra D | 07/30/14 14:00        | Client        | 08/01/14 10:15       |

### Report Summary

Note: Sample containers were provided by the client.

Note: The radium-226 result for sample site L712975-04 is potentially low biased due to high biased barium carrier recovery.

Detailed quantitative results are presented on the following pages. The results presented relate only to the samples provided for analysis.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call Kelly Trott at (574) 233-4777.

Client Name: Environmental Science

Report #: 322425

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

*Kelly Goto* Analytical Services Manager

Authorized Signature

Title

02/07/2015

Date

Client Name: Environmental Science

Report #: 322425

Sampling Point: L712975-01

PWS ID: Not Supplied

| Radionuclides |                 |           |           |          |     |                    |       |                  |                |          |
|---------------|-----------------|-----------|-----------|----------|-----|--------------------|-------|------------------|----------------|----------|
| Analyte ID #  | Analyte         | Method    | Reg Limit | MDA 95** | MRL | Result             | Units | Preparation Date | Analyzed       | EEA ID # |
| 13982-63-3    | Radium-226      | 7500-Ra B | ---       | 0.47     | 1.0 | <b>0.63 ± 0.40</b> | pCi/L | 08/19/14 12:06   | 08/21/14 12:15 | 3073820  |
| 15262-20-1    | Radium-228      | 7500-Ra D | ---       | 0.51     | 1.0 | 0.35 ± 0.31        | pCi/L | 08/08/14 14:35   | 08/22/14 15:03 | 3073820  |
| ---           | Combined Radium | calc.     | 5 *       | 0.51     | --- | <b>0.98 ± 0.51</b> | pCi/L | 08/19/14 12:06   | 08/22/14 15:03 | 3073820  |

\*\* Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

Sampling Point: L712975-02

PWS ID: Not Supplied

| Radionuclides |                 |           |           |          |     |                    |       |                  |                |          |
|---------------|-----------------|-----------|-----------|----------|-----|--------------------|-------|------------------|----------------|----------|
| Analyte ID #  | Analyte         | Method    | Reg Limit | MDA 95** | MRL | Result             | Units | Preparation Date | Analyzed       | EEA ID # |
| 13982-63-3    | Radium-226      | 7500-Ra B | ---       | 0.39     | 1.0 | <b>0.79 ± 0.38</b> | pCi/L | 08/08/14 16:02   | 08/15/14 14:57 | 3073821  |
| 15262-20-1    | Radium-228      | 7500-Ra D | ---       | 0.6      | 1.0 | <b>1.1 ± 0.4</b>   | pCi/L | 08/08/14 14:35   | 08/22/14 15:03 | 3073821  |
| ---           | Combined Radium | calc.     | 5 *       | 0.6      | --- | <b>1.89 ± 0.54</b> | pCi/L | 08/08/14 16:02   | 08/22/14 15:03 | 3073821  |

\*\* Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

Sampling Point: L712975-03

PWS ID: Not Supplied

| Radionuclides |                 |           |           |          |     |                  |       |                  |                |          |
|---------------|-----------------|-----------|-----------|----------|-----|------------------|-------|------------------|----------------|----------|
| Analyte ID #  | Analyte         | Method    | Reg Limit | MDA 95** | MRL | Result           | Units | Preparation Date | Analyzed       | EEA ID # |
| 13982-63-3    | Radium-226      | 7500-Ra B | ---       | 0.3      | 1.0 | <b>1.7 ± 0.8</b> | pCi/L | 08/08/14 16:02   | 08/20/14 14:24 | 3073822  |
| 15262-20-1    | Radium-228      | 7500-Ra D | ---       | 0.6      | 1.0 | <b>1.6 ± 0.4</b> | pCi/L | 08/08/14 14:20   | 08/25/14 14:15 | 3073822  |
| ---           | Combined Radium | calc.     | 5 *       | 0.6      | --- | <b>3.3 ± 0.9</b> | pCi/L | 08/08/14 16:02   | 08/25/14 14:15 | 3073822  |

\*\* Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

Sampling Point: L712975-04

PWS ID: Not Supplied

| Radionuclides |                 |           |           |          |     |                    |       |                  |                |          |
|---------------|-----------------|-----------|-----------|----------|-----|--------------------|-------|------------------|----------------|----------|
| Analyte ID #  | Analyte         | Method    | Reg Limit | MDA 95** | MRL | Result             | Units | Preparation Date | Analyzed       | EEA ID # |
| 13982-63-3    | Radium-226      | 7500-Ra B | ---       | 0.36     | 1.0 | <b>0.64 ± 0.32</b> | pCi/L | 08/08/14 16:02   | 08/15/14 14:57 | 3073823  |
| 15262-20-1    | Radium-228      | 7500-Ra D | ---       | 0.7      | 1.0 | <b>1.0 ± 0.4</b>   | pCi/L | 08/08/14 14:20   | 08/25/14 14:15 | 3073823  |
| ---           | Combined Radium | calc.     | 5 *       | 0.7      | --- | <b>1.64 ± 0.55</b> | pCi/L | 08/08/14 16:02   | 08/25/14 14:15 | 3073823  |

\*\* Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

Client Name: Environmental Science

Report #: 322425

Sampling Point: L712975-05

PWS ID: Not Supplied

| Radionuclides |                 |           |           |          |     |             |       |                  |                |          |
|---------------|-----------------|-----------|-----------|----------|-----|-------------|-------|------------------|----------------|----------|
| Analyte ID #  | Analyte         | Method    | Reg Limit | MDA 95** | MRL | Result      | Units | Preparation Date | Analyzed       | EEA ID # |
| 13982-63-3    | Radium-226      | 7500-Ra B | ---       | 0.39     | 1.0 | 0.24 ± 0.25 | pCi/L | 08/08/14 16:02   | 08/15/14 14:57 | 3073824  |
| 15262-20-1    | Radium-228      | 7500-Ra D | ---       | 0.73     | 1.0 | 0.23 ± 0.43 | pCi/L | 08/26/14 12:30   | 09/03/14 12:55 | 3073824  |
| ---           | Combined Radium | calc.     | 5 *       | 0.73     | --- | 0.47 ± 0.50 | pCi/L | 08/08/14 16:02   | 09/03/14 12:55 | 3073824  |

\*\* Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

Sampling Point: L712975-06

PWS ID: Not Supplied

| Radionuclides |                 |           |           |          |     |                    |       |                  |                |          |
|---------------|-----------------|-----------|-----------|----------|-----|--------------------|-------|------------------|----------------|----------|
| Analyte ID #  | Analyte         | Method    | Reg Limit | MDA 95** | MRL | Result             | Units | Preparation Date | Analyzed       | EEA ID # |
| 13982-63-3    | Radium-226      | 7500-Ra B | ---       | 0.46     | 1.0 | <b>0.98 ± 0.43</b> | pCi/L | 08/08/14 16:02   | 08/15/14 14:57 | 3073825  |
| 15262-20-1    | Radium-228      | 7500-Ra D | ---       | 0.46     | 1.0 | <b>0.57 ± 0.30</b> | pCi/L | 08/08/14 14:20   | 08/25/14 14:15 | 3073825  |
| ---           | Combined Radium | calc.     | 5 *       | 0.46     | --- | <b>1.55 ± 0.52</b> | pCi/L | 08/08/14 16:02   | 08/25/14 14:15 | 3073825  |

\*\* Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

Sampling Point: L712975-07

PWS ID: Not Supplied

| Radionuclides |                 |           |           |          |     |                    |       |                  |                |          |
|---------------|-----------------|-----------|-----------|----------|-----|--------------------|-------|------------------|----------------|----------|
| Analyte ID #  | Analyte         | Method    | Reg Limit | MDA 95** | MRL | Result             | Units | Preparation Date | Analyzed       | EEA ID # |
| 13982-63-3    | Radium-226      | 7500-Ra B | ---       | 0.37     | 1.0 | <b>0.56 ± 0.32</b> | pCi/L | 08/08/14 16:02   | 08/15/14 14:57 | 3073826  |
| 15262-20-1    | Radium-228      | 7500-Ra D | ---       | 0.63     | 1.0 | 0.47 ± 0.38        | pCi/L | 08/08/14 14:20   | 08/25/14 14:15 | 3073826  |
| ---           | Combined Radium | calc.     | 5 *       | 0.63     | --- | <b>1.03 ± 0.50</b> | pCi/L | 08/08/14 16:02   | 08/25/14 14:15 | 3073826  |

\*\* Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

Sampling Point: L712975-08

PWS ID: Not Supplied

| Radionuclides |                 |           |           |          |      |                    |       |                  |                |          |
|---------------|-----------------|-----------|-----------|----------|------|--------------------|-------|------------------|----------------|----------|
| Analyte ID #  | Analyte         | Method    | Reg Limit | MDA 95** | MRL  | Result             | Units | Preparation Date | Analyzed       | EEA ID # |
| 13982-63-3    | Radium-226      | 7500-Ra B | ---       | 0.34     | 1.0  | <b>0.64 ± 0.33</b> | pCi/L | 08/08/14 16:02   | 08/15/14 14:57 | 3073827  |
| 15262-20-1    | Radium-228      | 7500-Ra D | ---       | 0.59     | 1.00 | 0.03 ± 0.33        | pCi/L | 08/08/14 14:20   | 08/25/14 14:15 | 3073827  |
| ---           | Combined Radium | calc.     | 5 *       | 0.59     | ---  | <b>0.67 ± 0.47</b> | pCi/L | 08/08/14 16:02   | 08/25/14 14:15 | 3073827  |

\*\* Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

| Radionuclides |                 |           |           |          |     |             |       |                  |                |          |
|---------------|-----------------|-----------|-----------|----------|-----|-------------|-------|------------------|----------------|----------|
| Analyte ID #  | Analyte         | Method    | Reg Limit | MDA 95** | MRL | Result      | Units | Preparation Date | Analyzed       | EEA ID # |
| 13982-63-3    | Radium-226      | 7500-Ra B | ---       | 0.26     | 1.0 | 0.58 ± 0.30 | pCi/L | 08/08/14 16:02   | 08/15/14 14:57 | 3073828  |
| 15262-20-1    | Radium-228      | 7500-Ra D | ---       | 0.54     | 1.0 | 0.40 ± 0.33 | pCi/L | 08/08/14 14:20   | 08/25/14 14:15 | 3073828  |
| ---           | Combined Radium | calc.     | 5 *       | 0.54     | --- | 0.98 ± 0.45 | pCi/L | 08/08/14 16:02   | 08/25/14 14:15 | 3073828  |

\*\* Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

|                 |     |      |    |
|-----------------|-----|------|----|
| Reg Limit Type: | MCL | SMCL | AL |
| Symbol:         | *   | ^    | !  |

## Lab Definitions

**Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC)** - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis.

**Internal Standards (IS)** - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

**Laboratory Duplicate (LD)** - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

**Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS)** - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control.

**Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB)** - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

**Laboratory Trip Blank (LTB) / Field Reagent Blank (FRB)** - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The FRB/LTB container follows the collection bottles to and from the collection site, but the FRB/LTB is not opened at any time during the trip. The FRB/LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

**Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Sample Matrix Duplicate (LFSMD)** - is a sample aliquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix.

**Matrix Spike Sample (MS) / Laboratory Fortified Sample Matrix (LFSM)** - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results.

**Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV)** - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

**Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS)** - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

**Surrogate Standard (SS) / Surrogate Analyte (SUR)** - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.

# Sub-Contract Chain of Custody

259065  
Environmental Science Corp  
12065 Lebanon Road  
Mt. Juliet, TN 37122  
(615) 773-9756 (615) 758-5859 fax

Sub-Contract Lab : ENVHEALT  
City / State : South Bend, IN

Results Needed by : 8/22/14

ESC Purchase Order # : S20450

Send Reports To : Janice Cozby jcozby@esclabsciences.com

Client Provided Sample Container

(2) per site  
PH22

WORKGROUP **WG734759**  
Date Created : **7/31/2014**

322425

| SAMPLENO<br>Container # | MATRIX | Date / Time<br>Collected | PARAMETER  | Code  | METHOD        | Comments  |
|-------------------------|--------|--------------------------|------------|-------|---------------|-----------|
| L712975-01              | DW     | 7/29/2014 15:30          | Radium 226 | RA226 | 7500Ra B-2001 | NM CLIENT |
| S17087499<br>S17087500  |        |                          |            |       |               |           |
| L712975-01              | DW     | 7/29/2014 15:30          | Radium 228 | RA228 | 7500Ra D-2001 | NM CLIENT |
| S17087500<br>S17087499  |        |                          |            |       |               |           |
| L712975-02              | DW     | 7/29/2014 13:50          | Radium 226 | RA226 | 7500Ra B-2001 | NM CLIENT |
| 17117967<br>17117966    |        |                          |            |       |               |           |
| L712975-02              | DW     | 7/29/2014 13:50          | Radium 228 | RA228 | 7500Ra D-2001 | NM CLIENT |
| 17117966<br>17117967    |        |                          |            |       |               |           |
| L712975-03              | DW     | 7/29/2014 17:30          | Radium 226 | RA226 | 7500Ra B-2001 | NM CLIENT |
| 17117969<br>17117970    |        |                          |            |       |               |           |
| L712975-03              | DW     | 7/29/2014 17:30          | Radium 228 | RA228 | 7500Ra D-2001 | NM CLIENT |
| 17117969<br>17117970    |        |                          |            |       |               |           |
| L712975-04              | DW     | 7/30/2014 8:10           | Radium 226 | RA226 | 7500Ra B-2001 | NM CLIENT |
| 17117972<br>17117973    |        |                          |            |       |               |           |
| L712975-04              | DW     | 7/30/2014 8:10           | Radium 228 | RA228 | 7500Ra D-2001 | NM CLIENT |
| 17117973<br>17117972    |        |                          |            |       |               |           |
| L712975-05              | DW     | 7/30/2014 9:45           | Radium 226 | RA226 | 7500Ra B-2001 | NM CLIENT |
| 17117975<br>17117976    |        |                          |            |       |               |           |
| L712975-05              | DW     | 7/30/2014 9:45           | Radium 228 | RA228 | 7500Ra D-2001 | NM CLIENT |

3073826

3073821

3073822

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Relinquished by y co by

Date: 073114

Received by : K Dipietro

Date: 8-1-14

Relinquished by \_\_\_\_\_

Date: \_\_\_\_\_

Received by : \_\_\_\_\_

Date: \_\_\_\_\_

Sub-Contract Lab : ENVHEALT

City / State : South Bend, IN

Results Needed by : 8/22/14

ESC Purchase Order # : S20450

WORKGROUP

WG734759

Date Created :

7/31/2014

Send Reports To : Janice Cozby jcozby@esclabsciences.com

SAMPLENO

Container #

17117975

17117976

MATRIX

Date / Time

Collected

PARAMETER

Code

METHOD

Comments

|            |    |                 |            |       |               |           |
|------------|----|-----------------|------------|-------|---------------|-----------|
| L712975-06 | DW | 7/30/2014 11:20 | Radium 226 | RA226 | 7500Ra B-2001 | NM CLIENT |
|------------|----|-----------------|------------|-------|---------------|-----------|

17117978

17117979

3073825

|            |    |                 |            |       |               |           |
|------------|----|-----------------|------------|-------|---------------|-----------|
| L712975-06 | DW | 7/30/2014 11:20 | Radium 228 | RA228 | 7500Ra D-2001 | NM CLIENT |
|------------|----|-----------------|------------|-------|---------------|-----------|

17117978

17117979

|            |    |                 |            |       |               |           |
|------------|----|-----------------|------------|-------|---------------|-----------|
| L712975-07 | DW | 7/30/2014 12:50 | Radium 226 | RA226 | 7500Ra B-2001 | NM CLIENT |
|------------|----|-----------------|------------|-------|---------------|-----------|

17117982

17117981

3073826

|            |    |                 |            |       |               |           |
|------------|----|-----------------|------------|-------|---------------|-----------|
| L712975-07 | DW | 7/30/2014 12:50 | Radium 228 | RA228 | 7500Ra D-2001 | NM CLIENT |
|------------|----|-----------------|------------|-------|---------------|-----------|

17117981

17117982

|            |    |                 |            |       |               |           |
|------------|----|-----------------|------------|-------|---------------|-----------|
| L712975-08 | DW | 7/29/2014 18:35 | Radium 226 | RA226 | 7500Ra B-2001 | NM CLIENT |
|------------|----|-----------------|------------|-------|---------------|-----------|

17117985

17117984

3073827

|            |    |                 |            |       |               |           |
|------------|----|-----------------|------------|-------|---------------|-----------|
| L712975-08 | DW | 7/29/2014 18:35 | Radium 228 | RA228 | 7500Ra D-2001 | NM CLIENT |
|------------|----|-----------------|------------|-------|---------------|-----------|

17117984

17117985

|            |    |                 |            |       |               |           |
|------------|----|-----------------|------------|-------|---------------|-----------|
| L712975-09 | DW | 7/30/2014 14:00 | Radium 226 | RA226 | 7500Ra B-2001 | NM CLIENT |
|------------|----|-----------------|------------|-------|---------------|-----------|

17117988

17117987

3073828

|            |    |                 |            |       |               |           |
|------------|----|-----------------|------------|-------|---------------|-----------|
| L712975-09 | DW | 7/30/2014 14:00 | Radium 228 | RA228 | 7500Ra D-2001 | NM CLIENT |
|------------|----|-----------------|------------|-------|---------------|-----------|

17117988

17117987

Relinquished by \_\_\_\_\_

Date: \_\_\_\_\_

Received by : \_\_\_\_\_

Date: \_\_\_\_\_

Relinquished by \_\_\_\_\_

Date: \_\_\_\_\_

Received by : \_\_\_\_\_

Date: \_\_\_\_\_





## Eurofins Eaton Analytical Run Log

Run ID: **193887**    Method: **7500-Ra B**

| <u>Type</u> | <u>Sample Id</u> | <u>Sample Site</u> | <u>Matrix</u> | <u>Instrument ID</u> | <u>Analysis Date</u> | <u>Calibration File</u> |
|-------------|------------------|--------------------|---------------|----------------------|----------------------|-------------------------|
| FS          | 3073821          | L712975-02         | GW            | CI                   | 08/15/2014 14:57     |                         |
| FS          | 3073823          | L712975-04         | GW            | CI                   | 08/15/2014 14:57     |                         |
| FS          | 3073824          | L712975-05         | GW            | CI                   | 08/15/2014 14:57     |                         |
| FS          | 3073825          | L712975-06         | GW            | CI                   | 08/15/2014 14:57     |                         |
| FS          | 3073826          | L712975-07         | GW            | CI                   | 08/15/2014 14:57     |                         |
| FS          | 3073827          | L712975-08         | GW            | CI                   | 08/15/2014 14:57     |                         |
| FS          | 3073828          | L712975-09         | GW            | CI                   | 08/15/2014 14:57     |                         |
| LRB         | 3084068          |                    | RW            | CI                   | 08/15/2014 14:57     |                         |
| LFB         | 3084069          |                    | RW            | CI                   | 08/15/2014 14:57     |                         |

## QC Summary Report

| Sample Type | Analyte    | Method    | MRL  | Client ID  | Result Flag | Amount  | Target | Units      | % Recovery | Recovery Limits | RPD | RPD Limit | Dil Factor | Extracted        | Analyzed         | EEA ID # |
|-------------|------------|-----------|------|------------|-------------|---------|--------|------------|------------|-----------------|-----|-----------|------------|------------------|------------------|----------|
| FS          | Radium-226 | 7500-Ra B | 0.39 | L712975-02 |             | 0.79    |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/08/2014 16:02 | 08/15/2014 14:57 | 3073821  |
| FS          | Radium-226 | 7500-Ra B | 0.36 | L712975-04 |             | 0.64    |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/08/2014 16:02 | 08/15/2014 14:57 | 3073823  |
| FS          | Radium-226 | 7500-Ra B | 0.39 | L712975-05 |             | 0.24    |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/08/2014 16:02 | 08/15/2014 14:57 | 3073824  |
| FS          | Radium-226 | 7500-Ra B | 0.46 | L712975-06 |             | 0.98    |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/08/2014 16:02 | 08/15/2014 14:57 | 3073825  |
| FS          | Radium-226 | 7500-Ra B | 0.37 | L712975-07 |             | 0.56    |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/08/2014 16:02 | 08/15/2014 14:57 | 3073826  |
| FS          | Radium-226 | 7500-Ra B | 0.34 | L712975-08 |             | 0.64    |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/08/2014 16:02 | 08/15/2014 14:57 | 3073827  |
| FS          | Radium-226 | 7500-Ra B | 0.26 | L712975-09 |             | 0.58    |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/08/2014 16:02 | 08/15/2014 14:57 | 3073828  |
| LRB         | Radium-226 | 7500-Ra B | 0.20 | ---        |             | 0.05    |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/08/2014 16:02 | 08/15/2014 14:57 | 3084068  |
| LFB         | Radium-226 | 7500-Ra B | 0.2  | ---        |             | 18.3800 | 18.0   | % Recovery | 102        | 30 - 160        | --- | ---       | 1.0        | 08/08/2014 16:02 | 08/15/2014 14:57 | 3084069  |

**Eurofins Eaton Analytical  
Run Log**

Run ID: **194056**      Method: **7500-Ra B**

| <u>Type</u> | <u>Sample Id</u> | <u>Sample Site</u> | <u>Matrix</u> | <u>Instrument ID</u> | <u>Analysis Date</u> | <u>Calibration File</u> |
|-------------|------------------|--------------------|---------------|----------------------|----------------------|-------------------------|
| FS          | 3073822          | L712975-03         | GW            | CI                   | 08/20/2014 14:24     |                         |

## QC Summary Report

| Sample Type | Analyte    | Method    | MRL | Client ID  | Result Flag | Amount | Target | Units | % Recovery | Recovery Limits | RPD | RPD Limit | Dil Factor | Extracted        | Analyzed         | EEA ID # |
|-------------|------------|-----------|-----|------------|-------------|--------|--------|-------|------------|-----------------|-----|-----------|------------|------------------|------------------|----------|
| FS          | Radium-226 | 7500-Ra B | 0.3 | L712975-03 |             | 1.7    |        | pCi/L | ---        | ---             | --- | ---       | 1.0        | 08/08/2014 16:02 | 08/20/2014 14:24 | 3073822  |

**Eurofins Eaton Analytical**  
**Run Log**

Run ID: **194105**    Method: **7500-Ra B**

| <u>Type</u> | <u>Sample Id</u> | <u>Sample Site</u> | <u>Matrix</u> | <u>Instrument ID</u> | <u>Analysis Date</u> | <u>Calibration File</u> |
|-------------|------------------|--------------------|---------------|----------------------|----------------------|-------------------------|
| FS          | 3073820          | L712975-01         | GW            | CI                   | 08/21/2014 12:15     |                         |
| LRB         | 3088388          |                    | RW            | CI                   | 08/21/2014 12:15     |                         |
| LFB         | 3088389          |                    | RW            | CI                   | 08/21/2014 12:15     |                         |

## QC Summary Report

| Sample Type | Analyte    | Method    | MRL  | Client ID  | Result Flag | Amount  | Target | Units      | % Recovery | Recovery Limits | RPD | RPD Limit | Dil Factor | Extracted        | Analyzed         | EEA ID # |
|-------------|------------|-----------|------|------------|-------------|---------|--------|------------|------------|-----------------|-----|-----------|------------|------------------|------------------|----------|
| FS          | Radium-226 | 7500-Ra B | 0.47 | L712975-01 |             | 0.63    |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/19/2014 12:06 | 08/21/2014 12:15 | 3073820  |
| LRB         | Radium-226 | 7500-Ra B | 0.30 | ---        |             | 0.15    |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/19/2014 12:06 | 08/21/2014 12:15 | 3088388  |
| LFB         | Radium-226 | 7500-Ra B | 0.2  | ---        |             | 19.0400 | 18.0   | % Recovery | 106        | 30 - 160        | --- | ---       | 1.0        | 08/19/2014 12:06 | 08/21/2014 12:15 | 3088389  |

**Eurofins Eaton Analytical**  
**Run Log**

Run ID: **194238**    Method: **7500-Ra D**

| <u>Type</u> | <u>Sample Id</u> | <u>Sample Site</u> | <u>Matrix</u> | <u>Instrument ID</u> | <u>Analysis Date</u> | <u>Calibration File</u> |
|-------------|------------------|--------------------|---------------|----------------------|----------------------|-------------------------|
| FS          | 3073820          | L712975-01         | GW            | DU                   | 08/22/2014 15:03     |                         |
| FS          | 3073821          | L712975-02         | GW            | DU                   | 08/22/2014 15:03     |                         |
| LRB         | 3090804          |                    | RW            | DU                   | 08/22/2014 15:03     |                         |
| LFB         | 3090805          |                    | RW            | DU                   | 08/22/2014 15:03     |                         |

## QC Summary Report

| Sample Type | Analyte    | Method    | MRL  | Client ID  | Result Flag | Amount | Target | Units      | % Recovery | Recovery Limits | RPD | RPD Limit | Dil Factor | Extracted        | Analyzed         | EEA ID # |
|-------------|------------|-----------|------|------------|-------------|--------|--------|------------|------------|-----------------|-----|-----------|------------|------------------|------------------|----------|
| FS          | Radium-228 | 7500-Ra D | 0.51 | L712975-01 |             | 0.35   |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/08/2014 14:35 | 08/22/2014 15:03 | 3073820  |
| FS          | Radium-228 | 7500-Ra D | 0.6  | L712975-02 |             | 1.1    |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/08/2014 14:35 | 08/22/2014 15:03 | 3073821  |
| LRB         | Radium-228 | 7500-Ra D | 0.50 | ---        |             | 0.18   |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/08/2014 14:35 | 08/22/2014 15:03 | 3090804  |
| LFB         | Radium-228 | 7500-Ra D | 0.58 | ---        |             | 9.7100 | 8.62   | % Recovery | 113        | 48 - 139        | --- | ---       | 1.0        | 08/08/2014 14:35 | 08/22/2014 15:03 | 3090805  |



## Eurofins Eaton Analytical Run Log

Run ID: **194239**      Method: **7500-Ra D**

| <u>Type</u> | <u>Sample Id</u> | <u>Sample Site</u> | <u>Matrix</u> | <u>Instrument ID</u> | <u>Analysis Date</u> | <u>Calibration File</u> |
|-------------|------------------|--------------------|---------------|----------------------|----------------------|-------------------------|
| FS          | 3073822          | L712975-03         | GW            | DU                   | 08/25/2014 14:15     |                         |
| FS          | 3073823          | L712975-04         | GW            | DU                   | 08/25/2014 14:15     |                         |
| FS          | 3073825          | L712975-06         | GW            | DU                   | 08/25/2014 14:15     |                         |
| FS          | 3073826          | L712975-07         | GW            | DU                   | 08/25/2014 14:15     |                         |
| FS          | 3073827          | L712975-08         | GW            | DU                   | 08/25/2014 14:15     |                         |
| FS          | 3073828          | L712975-09         | GW            | DU                   | 08/25/2014 14:15     |                         |
| LRB         | 3090808          |                    | RW            | DU                   | 08/25/2014 14:15     |                         |
| LFB         | 3090809          |                    | RW            | DU                   | 08/25/2014 14:15     |                         |

## QC Summary Report

| Sample Type | Analyte    | Method    | MRL  | Client ID  | Result Flag | Amount | Target | Units      | % Recovery | Recovery Limits | RPD | RPD Limit | Dil Factor | Extracted        | Analyzed         | EEA ID # |
|-------------|------------|-----------|------|------------|-------------|--------|--------|------------|------------|-----------------|-----|-----------|------------|------------------|------------------|----------|
| FS          | Radium-228 | 7500-Ra D | 0.6  | L712975-03 |             | 1.6    |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/08/2014 14:20 | 08/25/2014 14:15 | 3073822  |
| FS          | Radium-228 | 7500-Ra D | 0.7  | L712975-04 |             | 1.0    |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/08/2014 14:20 | 08/25/2014 14:15 | 3073823  |
| FS          | Radium-228 | 7500-Ra D | 0.46 | L712975-06 |             | 0.57   |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/08/2014 14:20 | 08/25/2014 14:15 | 3073825  |
| FS          | Radium-228 | 7500-Ra D | 0.63 | L712975-07 |             | 0.47   |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/08/2014 14:20 | 08/25/2014 14:15 | 3073826  |
| FS          | Radium-228 | 7500-Ra D | 0.59 | L712975-08 |             | 0.03   |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/08/2014 14:20 | 08/25/2014 14:15 | 3073827  |
| FS          | Radium-228 | 7500-Ra D | 0.54 | L712975-09 |             | 0.40   |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/08/2014 14:20 | 08/25/2014 14:15 | 3073828  |
| LRB         | Radium-228 | 7500-Ra D | 0.55 | ---        |             | 0.32   |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/08/2014 14:20 | 08/25/2014 14:15 | 3090808  |
| LFB         | Radium-228 | 7500-Ra D | 0.60 | ---        |             | 8.2300 | 8.61   | % Recovery | 96         | 48 - 139        | --- | ---       | 1.0        | 08/08/2014 14:20 | 08/25/2014 14:15 | 3090809  |

**Eurofins Eaton Analytical**  
**Run Log**

Run ID: **194536**    Method: **7500-Ra D**

| <u>Type</u> | <u>Sample Id</u> | <u>Sample Site</u> | <u>Matrix</u> | <u>Instrument ID</u> | <u>Analysis Date</u> | <u>Calibration File</u> |
|-------------|------------------|--------------------|---------------|----------------------|----------------------|-------------------------|
| FS          | 3073824          | L712975-05         | GW            | CI                   | 09/03/2014 12:55     |                         |
| LRB         | 3096483          |                    | RW            | CI                   | 09/03/2014 12:55     |                         |
| LFB         | 3096484          |                    | RW            | CI                   | 09/03/2014 12:55     |                         |

## QC Summary Report

| Sample Type | Analyte    | Method    | MRL  | Client ID  | Result Flag | Amount | Target | Units      | % Recovery | Recovery Limits | RPD | RPD Limit | Dil Factor | Extracted        | Analyzed         | EEA ID # |
|-------------|------------|-----------|------|------------|-------------|--------|--------|------------|------------|-----------------|-----|-----------|------------|------------------|------------------|----------|
| FS          | Radium-228 | 7500-Ra D | 0.73 | L712975-05 |             | 0.23   |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/26/2014 12:30 | 09/03/2014 12:55 | 3073824  |
| LRB         | Radium-228 | 7500-Ra D | 0.45 | ---        |             | 0.19   |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/26/2014 12:30 | 09/03/2014 12:55 | 3096483  |
| LFB         | Radium-228 | 7500-Ra D | 0.44 | ---        |             | 7.5800 | 8.59   | % Recovery | 88         | 48 - 139        | --- | ---       | 1.0        | 08/26/2014 12:30 | 09/03/2014 12:55 | 3096484  |

### Sample Type Key

| <u>Type (Abbr.)</u> | <u>Sample Type</u>         |
|---------------------|----------------------------|
| FS                  | Field Sample               |
| LFB                 | Laboratory Fortified Blank |
| LRB                 | Laboratory Reagent Blank   |

## LABORATORY REPORT

This report contains 16 pages.  
(including the cover page)

If you have any questions concerning this report, please do not hesitate to call us at  
(800) 332-4345 or (574) 233-4777.

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Eaton Analytical, Inc.*

110 South Hill Street  
 South Bend, IN 46617  
 Tel: (574) 233-4777  
 Fax: (574) 233-8207  
 1 800 332 4345

## Laboratory Report

Client: Environmental Science

Report: 323837

Attn: Janice Cozby  
 12065 Lebanon Road  
 Mount Juliet, TN 37122

Priority: Standard Written

Status: Final

PWS ID: Not Supplied

Copies  
 to: None

| Sample Information |            |           |                       |               |                      |
|--------------------|------------|-----------|-----------------------|---------------|----------------------|
| EEA ID #           | Client ID  | Method    | Collected Date / Time | Collected By: | Received Date / Time |
| 3087755            | L716901-01 | 7500-Ra B | 08/18/14 16:10        | Client        | 08/21/14 10:00       |
| 3087755            | L716901-01 | 7500-Ra D | 08/18/14 16:10        | Client        | 08/21/14 10:00       |
| 3087756            | L716901-02 | 7500-Ra B | 08/18/14 17:15        | Client        | 08/21/14 10:00       |
| 3087756            | L716901-02 | 7500-Ra D | 08/18/14 17:15        | Client        | 08/21/14 10:00       |
| 3087757            | L716901-03 | 7500-Ra B | 08/18/14 17:45        | Client        | 08/21/14 10:00       |
| 3087757            | L716901-03 | 7500-Ra D | 08/18/14 17:45        | Client        | 08/21/14 10:00       |
| 3087758            | L716901-04 | 7500-Ra B | 08/19/14 08:55        | Client        | 08/21/14 10:00       |
| 3087758            | L716901-04 | 7500-Ra D | 08/19/14 08:55        | Client        | 08/21/14 10:00       |
| 3087759            | L716901-05 | 7500-Ra B | 08/19/14 10:45        | Client        | 08/21/14 10:00       |
| 3087759            | L716901-05 | 7500-Ra D | 08/19/14 10:45        | Client        | 08/21/14 10:00       |
| 3087760            | L716901-06 | 7500-Ra B | 08/19/14 12:35        | Client        | 08/21/14 10:00       |
| 3087760            | L716901-06 | 7500-Ra D | 08/19/14 12:35        | Client        | 08/21/14 10:00       |

### Report Summary

Note: Sample containers were provided by the client.

Detailed quantitative results are presented on the following pages. The results presented relate only to the samples provided for analysis.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call Kelly Trott at (574) 233-4777.

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

*Kelly Trott* Analytical Services Manager

Authorized Signature

Title

02/07/2015

Date

Client Name: Environmental Science

Report #: 323837

Sampling Point: L716901-01

PWS ID: Not Supplied

| Radionuclides |                 |           |           |          |     |                    |       |                  |                |          |
|---------------|-----------------|-----------|-----------|----------|-----|--------------------|-------|------------------|----------------|----------|
| Analyte ID #  | Analyte         | Method    | Reg Limit | MDA 95** | MRL | Result             | Units | Preparation Date | Analyzed       | EEA ID # |
| 13982-63-3    | Radium-226      | 7500-Ra B | ---       | 0.98     | 1.0 | 0.30 ± 1.23        | pCi/L | 08/25/14 12:10   | 09/04/14 08:47 | 3087755  |
| 15262-20-1    | Radium-228      | 7500-Ra D | ---       | 0.26     | 1.0 | <b>0.61 ± 0.28</b> | pCi/L | 08/25/14 12:10   | 09/15/14 12:58 | 3087755  |
| ---           | Combined Radium | calc.     | 5 *       | 0.98     | --- | 0.91 ± 1.26        | pCi/L | 08/25/14 12:10   | 09/15/14 12:58 | 3087755  |

\*\* Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

Sampling Point: L716901-02

PWS ID: Not Supplied

| Radionuclides |                 |           |           |          |     |                    |       |                  |                |          |
|---------------|-----------------|-----------|-----------|----------|-----|--------------------|-------|------------------|----------------|----------|
| Analyte ID #  | Analyte         | Method    | Reg Limit | MDA 95** | MRL | Result             | Units | Preparation Date | Analyzed       | EEA ID # |
| 13982-63-3    | Radium-226      | 7500-Ra B | ---       | 0.7      | 1.0 | <b>1.9 ± 0.7</b>   | pCi/L | 08/25/14 12:10   | 08/28/14 11:12 | 3087756  |
| 15262-20-1    | Radium-228      | 7500-Ra D | ---       | 0.27     | 1.0 | <b>0.87 ± 0.31</b> | pCi/L | 08/25/14 12:10   | 09/15/14 12:58 | 3087756  |
| ---           | Combined Radium | calc.     | 5 *       | 0.7      | --- | <b>2.77 ± 0.76</b> | pCi/L | 08/25/14 12:10   | 09/15/14 12:58 | 3087756  |

\*\* Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

Sampling Point: L716901-03

PWS ID: Not Supplied

| Radionuclides |                 |           |           |          |     |                    |       |                  |                |          |
|---------------|-----------------|-----------|-----------|----------|-----|--------------------|-------|------------------|----------------|----------|
| Analyte ID #  | Analyte         | Method    | Reg Limit | MDA 95** | MRL | Result             | Units | Preparation Date | Analyzed       | EEA ID # |
| 13982-63-3    | Radium-226      | 7500-Ra B | ---       | 0.94     | 1.0 | 0.92 ± 0.68        | pCi/L | 08/25/14 12:10   | 08/27/14 09:40 | 3087757  |
| 15262-20-1    | Radium-228      | 7500-Ra D | ---       | 0.21     | 1.0 | <b>0.64 ± 0.24</b> | pCi/L | 08/25/14 12:10   | 09/15/14 12:58 | 3087757  |
| ---           | Combined Radium | calc.     | 5 *       | 0.94     | --- | <b>1.56 ± 0.72</b> | pCi/L | 08/25/14 12:10   | 09/15/14 12:58 | 3087757  |

\*\* Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

Sampling Point: L716901-04

PWS ID: Not Supplied

| Radionuclides |                 |           |           |          |     |                    |       |                  |                |          |
|---------------|-----------------|-----------|-----------|----------|-----|--------------------|-------|------------------|----------------|----------|
| Analyte ID #  | Analyte         | Method    | Reg Limit | MDA 95** | MRL | Result             | Units | Preparation Date | Analyzed       | EEA ID # |
| 13982-63-3    | Radium-226      | 7500-Ra B | ---       | 0.9      | 1.0 | <b>1.3 ± 0.7</b>   | pCi/L | 08/25/14 12:10   | 08/27/14 09:40 | 3087758  |
| 15262-20-1    | Radium-228      | 7500-Ra D | ---       | 0.23     | 1.0 | <b>0.73 ± 0.26</b> | pCi/L | 08/25/14 12:10   | 09/15/14 12:58 | 3087758  |
| ---           | Combined Radium | calc.     | 5 *       | 0.9      | --- | <b>2.03 ± 0.75</b> | pCi/L | 08/25/14 12:10   | 09/15/14 12:58 | 3087758  |

\*\* Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.



Sampling Point: L716901-05

PWS ID: Not Supplied

| Radionuclides |                 |           |           |          |     |                  |       |                  |                |          |
|---------------|-----------------|-----------|-----------|----------|-----|------------------|-------|------------------|----------------|----------|
| Analyte ID #  | Analyte         | Method    | Reg Limit | MDA 95** | MRL | Result           | Units | Preparation Date | Analyzed       | EEA ID # |
| 13982-63-3    | Radium-226      | 7500-Ra B | ---       | 0.9      | 1.0 | <b>2.1 ± 0.9</b> | pCi/L | 08/25/14 12:10   | 08/27/14 09:40 | 3087759  |
| 15262-20-1    | Radium-228      | 7500-Ra D | ---       | 0.3      | 1.0 | <b>1.3 ± 0.4</b> | pCi/L | 08/25/14 12:10   | 09/15/14 12:58 | 3087759  |
| ---           | Combined Radium | calc.     | 5 *       | 0.9      | --- | <b>3.4 ± 0.9</b> | pCi/L | 08/25/14 12:10   | 09/15/14 12:58 | 3087759  |

\*\* Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

Sampling Point: L716901-06

PWS ID: Not Supplied

| Radionuclides |                 |           |           |          |     |                    |       |                  |                |          |
|---------------|-----------------|-----------|-----------|----------|-----|--------------------|-------|------------------|----------------|----------|
| Analyte ID #  | Analyte         | Method    | Reg Limit | MDA 95** | MRL | Result             | Units | Preparation Date | Analyzed       | EEA ID # |
| 13982-63-3    | Radium-226      | 7500-Ra B | ---       | 0.97     | 1.0 | 0.22 ± 1.23        | pCi/L | 08/25/14 12:10   | 09/04/14 08:47 | 3087760  |
| 15262-20-1    | Radium-228      | 7500-Ra D | ---       | 0.36     | 1.0 | <b>0.72 ± 0.38</b> | pCi/L | 08/25/14 12:10   | 09/15/14 12:58 | 3087760  |
| ---           | Combined Radium | calc.     | 5 *       | 0.97     | --- | 0.94 ± 1.29        | pCi/L | 08/25/14 12:10   | 09/15/14 12:58 | 3087760  |

\*\* Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

| Reg Limit Type: | MCL | SMCL | AL |
|-----------------|-----|------|----|
| Symbol:         | *   | ^    | !  |

## Lab Definitions

**Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC)** - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis.

**Internal Standards (IS)** - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

**Laboratory Duplicate (LD)** - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

**Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS)** - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control.

**Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB)** - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

**Laboratory Trip Blank (LTB) / Field Reagent Blank (FRB)** - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The FRB/LTB container follows the collection bottles to and from the collection site, but the FRB/LTB is not opened at any time during the trip. The FRB/LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

**Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Sample Matrix Duplicate (LFSMD)** - is a sample aliquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix.

**Matrix Spike Sample (MS) / Laboratory Fortified Sample Matrix (LFSM)** - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results.

**Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV)** - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

**Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS)** - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

**Surrogate Standard (SS) / Surrogate Analyte (SUR)** - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.

# Sub-Contract Chain of Custody

Environmental Science Corp  
12065 Lebanon Road  
Mt. Juliet, TN 37122  
(615) 773-9756 (615) 758-5859 fax

Sub-Contract Lab : ENVHEALT

City / State : South Bend, IN

Results Needed by : 9/12/14

ESC Purchase Order # : S20555

Send Reports To : Janice Cozby jcozby@esclabsciences.com

Client Provided Sample Container

323837

260098

WORKGROUP

WG738425

Date Created :

8/20/2014

| SAMPLENO<br>Container # | MATRIX | Date / Time<br>Collected | PARAMETER  | Code  | METHOD        | Comments  |
|-------------------------|--------|--------------------------|------------|-------|---------------|-----------|
| L716901-01              | DW     | 8/18/2014 16:10          | Radium 226 | RA226 | 7500Ra B-2001 | NM CLIENT |
| 17210032<br>17210031    |        |                          |            |       | 3087755       |           |
| L716901-01              | DW     | 8/18/2014 16:10          | Radium 228 | RA228 | 7500Ra D-2001 | NM CLIENT |
| 17210031<br>17210032    |        |                          |            |       |               |           |
| L716901-02              | DW     | 8/18/2014 17:15          | Radium 226 | RA226 | 7500Ra B-2001 | NM CLIENT |
| 17210287<br>17210288    |        |                          |            |       | 3087756       |           |
| L716901-02              | DW     | 8/18/2014 17:15          | Radium 228 | RA228 | 7500Ra D-2001 | NM CLIENT |
| 17210287<br>17210288    |        |                          |            |       |               |           |
| L716901-03              | DW     | 8/18/2014 17:45          | Radium 226 | RA226 | 7500Ra B-2001 | NM CLIENT |
| 17210289<br>17210290    |        |                          |            |       | 3087757       |           |
| L716901-03              | DW     | 8/18/2014 17:45          | Radium 228 | RA228 | 7500Ra D-2001 | NM CLIENT |
| 17210290<br>17210289    |        |                          |            |       |               |           |
| L716901-04              | DW     | 8/19/2014 8:55           | Radium 226 | RA226 | 7500Ra B-2001 | NM CLIENT |
| 17210292<br>17210291    |        |                          |            |       | 3087758       |           |
| L716901-04              | DW     | 8/19/2014 8:55           | Radium 228 | RA228 | 7500Ra D-2001 | NM CLIENT |
| 17210291<br>17210292    |        |                          |            |       |               |           |
| L716901-05              | DW     | 8/19/2014 10:45          | Radium 226 | RA226 | 7500Ra B-2001 | NM CLIENT |
| 17210294<br>17210293    |        |                          |            |       | 3087759       |           |
| L716901-05              | DW     | 8/19/2014 10:45          | Radium 228 | RA228 | 7500Ra D-2001 | NM CLIENT |

Relinquished by

J Cozby  
dmartis

Date:

082014

Received by :

Date:

8-21-14

Relinquished by

Date:

Received by :

Date:

PH < 2 on all  
1000 bottles dm

Sub-Contract Lab : ENVHEALT

City / State : South Bend, IN

Results Needed by : 9/12/14

ESC Purchase Order # : S20555

Send Reports To : Janice Cozby jcozby@esclabsciences.com

WORKGROUP

WG738425

Date Created :

8/20/2014

| SAMPLENO                            | MATRIX | Date / Time<br>Collected | PARAMETER | Code | METHOD | Comments |
|-------------------------------------|--------|--------------------------|-----------|------|--------|----------|
| Container #<br>17210294<br>17210293 |        |                          |           |      |        |          |

|            |    |                 |            |       |               |           |
|------------|----|-----------------|------------|-------|---------------|-----------|
| L716901-06 | DW | 8/19/2014 12:35 | Radium 226 | RA226 | 7500Ra B-2001 | NM CLIENT |
|------------|----|-----------------|------------|-------|---------------|-----------|

17210296  
17210295

3087160

|            |    |                 |            |       |               |           |
|------------|----|-----------------|------------|-------|---------------|-----------|
| L716901-06 | DW | 8/19/2014 12:35 | Radium 228 | RA228 | 7500Ra D-2001 | NM CLIENT |
|------------|----|-----------------|------------|-------|---------------|-----------|

17210295  
17210296

Client Provided Sample Container

2 Liters per  
site provided

0°  
Wetice

Relinquished by \_\_\_\_\_ Date: \_\_\_\_\_

Received by : \_\_\_\_\_ Date: \_\_\_\_\_

Relinquished by \_\_\_\_\_ Date: \_\_\_\_\_

Received by : \_\_\_\_\_ Date: \_\_\_\_\_



**Eurofins Eaton Analytical**  
**Run Log**

Run ID: **194327**    Method: **7500-Ra B**

| <u>Type</u> | <u>Sample Id</u> | <u>Sample Site</u> | <u>Matrix</u> | <u>Instrument ID</u> | <u>Analysis Date</u> | <u>Calibration File</u> |
|-------------|------------------|--------------------|---------------|----------------------|----------------------|-------------------------|
| FS          | 3087757          | L716901-03         | GW            | DU                   | 08/27/2014 09:40     |                         |
| FS          | 3087758          | L716901-04         | GW            | DU                   | 08/27/2014 09:40     |                         |
| FS          | 3087759          | L716901-05         | GW            | DU                   | 08/27/2014 09:40     |                         |
| LRB         | 3092598          |                    | RW            | DU                   | 08/27/2014 09:40     |                         |
| LFB         | 3092599          |                    | RW            | DU                   | 08/27/2014 09:40     |                         |

## QC Summary Report

| Sample Type | Analyte    | Method    | MRL  | Client ID  | Result Flag | Amount  | Target | Units      | % Recovery | Recovery Limits | RPD | RPD Limit | Dil Factor | Extracted        | Analyzed         | EEA ID # |
|-------------|------------|-----------|------|------------|-------------|---------|--------|------------|------------|-----------------|-----|-----------|------------|------------------|------------------|----------|
| FS          | Radium-226 | 7500-Ra B | 0.94 | L716901-03 |             | 0.92    |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/25/2014 12:10 | 08/27/2014 09:40 | 3087757  |
| FS          | Radium-226 | 7500-Ra B | 0.9  | L716901-04 |             | 1.3     |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/25/2014 12:10 | 08/27/2014 09:40 | 3087758  |
| FS          | Radium-226 | 7500-Ra B | 0.9  | L716901-05 |             | 2.1     |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/25/2014 12:10 | 08/27/2014 09:40 | 3087759  |
| LRB         | Radium-226 | 7500-Ra B | 0.43 | ---        |             | 0.21    |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | ---              | 08/27/2014 09:40 | 3092598  |
| LFB         | Radium-226 | 7500-Ra B | 0.5  | ---        |             | 20.7500 | 18.0   | % Recovery | 115        | 30 - 160        | --- | ---       | 1.0        | ---              | 08/27/2014 09:40 | 3092599  |

**Eurofins Eaton Analytical  
Run Log**

Run ID: **194376**    Method: **7500-Ra B**

| <u>Type</u> | <u>Sample Id</u> | <u>Sample Site</u> | <u>Matrix</u> | <u>Instrument ID</u> | <u>Analysis Date</u> | <u>Calibration File</u> |
|-------------|------------------|--------------------|---------------|----------------------|----------------------|-------------------------|
| FS          | 3087756          | L716901-02         | GW            | DU                   | 08/28/2014 11:12     |                         |

## QC Summary Report

| Sample Type | Analyte    | Method    | MRL | Client ID  | Result Flag | Amount | Target | Units | % Recovery | Recovery Limits | RPD | RPD Limit | Dil Factor | Extracted        | Analyzed         | EEA ID # |
|-------------|------------|-----------|-----|------------|-------------|--------|--------|-------|------------|-----------------|-----|-----------|------------|------------------|------------------|----------|
| FS          | Radium-226 | 7500-Ra B | 0.7 | L716901-02 |             | 1.9    |        | pCi/L | ---        | ---             | --- | ---       | 1.0        | 08/25/2014 12:10 | 08/28/2014 11:12 | 3087756  |



**Eurofins Eaton Analytical**  
**Run Log**

Run ID: **194541**    Method: **7500-Ra B**

| <u>Type</u> | <u>Sample Id</u> | <u>Sample Site</u> | <u>Matrix</u> | <u>Instrument ID</u> | <u>Analysis Date</u> | <u>Calibration File</u> |
|-------------|------------------|--------------------|---------------|----------------------|----------------------|-------------------------|
| FS          | 3087755          | L716901-01         | GW            | CI                   | 09/04/2014 08:47     |                         |
| FS          | 3087760          | L716901-06         | GW            | CI                   | 09/04/2014 08:47     |                         |

## QC Summary Report

| Sample Type | Analyte    | Method    | MRL  | Client ID  | Result Flag | Amount | Target | Units | % Recovery | Recovery Limits | RPD | RPD Limit | Dil Factor | Extracted        | Analyzed         | EEA ID # |
|-------------|------------|-----------|------|------------|-------------|--------|--------|-------|------------|-----------------|-----|-----------|------------|------------------|------------------|----------|
| FS          | Radium-226 | 7500-Ra B | 0.98 | L716901-01 |             | 0.30   |        | pCi/L | ---        | ---             | --- | ---       | 1.0        | 08/25/2014 12:10 | 09/04/2014 08:47 | 3087755  |
| FS          | Radium-226 | 7500-Ra B | 0.97 | L716901-06 |             | 0.22   |        | pCi/L | ---        | ---             | --- | ---       | 1.0        | 08/25/2014 12:10 | 09/04/2014 08:47 | 3087760  |

## Eurofins Eaton Analytical Run Log

Run ID: 194938    Method: 7500-Ra D

| <u>Type</u> | <u>Sample Id</u> | <u>Sample Site</u> | <u>Matrix</u> | <u>Instrument ID</u> | <u>Analysis Date</u> | <u>Calibration File</u> |
|-------------|------------------|--------------------|---------------|----------------------|----------------------|-------------------------|
| FS          | 3087755          | L716901-01         | GW            | DU                   | 09/15/2014 12:58     |                         |
| FS          | 3087756          | L716901-02         | GW            | DU                   | 09/15/2014 12:58     |                         |
| FS          | 3087757          | L716901-03         | GW            | DU                   | 09/15/2014 12:58     |                         |
| FS          | 3087758          | L716901-04         | GW            | DU                   | 09/15/2014 12:58     |                         |
| FS          | 3087759          | L716901-05         | GW            | DU                   | 09/15/2014 12:58     |                         |
| FS          | 3087760          | L716901-06         | GW            | DU                   | 09/15/2014 12:58     |                         |
| LRB         | 3103369          |                    | RW            | DU                   | 09/15/2014 12:58     |                         |
| LFB         | 3103370          |                    | RW            | DU                   | 09/15/2014 12:58     |                         |

## QC Summary Report

| Sample Type | Analyte    | Method    | MRL  | Client ID  | Result Flag | Amount | Target | Units      | % Recovery | Recovery Limits | RPD | RPD Limit | Dil Factor | Extracted        | Analyzed         | EEA ID # |
|-------------|------------|-----------|------|------------|-------------|--------|--------|------------|------------|-----------------|-----|-----------|------------|------------------|------------------|----------|
| FS          | Radium-228 | 7500-Ra D | 0.26 | L716901-01 |             | 0.61   |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/25/2014 12:10 | 09/15/2014 12:58 | 3087755  |
| FS          | Radium-228 | 7500-Ra D | 0.27 | L716901-02 |             | 0.87   |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/25/2014 12:10 | 09/15/2014 12:58 | 3087756  |
| FS          | Radium-228 | 7500-Ra D | 0.21 | L716901-03 |             | 0.64   |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/25/2014 12:10 | 09/15/2014 12:58 | 3087757  |
| FS          | Radium-228 | 7500-Ra D | 0.23 | L716901-04 |             | 0.73   |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/25/2014 12:10 | 09/15/2014 12:58 | 3087758  |
| FS          | Radium-228 | 7500-Ra D | 0.3  | L716901-05 |             | 1.3    |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/25/2014 12:10 | 09/15/2014 12:58 | 3087759  |
| FS          | Radium-228 | 7500-Ra D | 0.36 | L716901-06 |             | 0.72   |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/25/2014 12:10 | 09/15/2014 12:58 | 3087760  |
| LRB         | Radium-228 | 7500-Ra D | 0.34 | ---        |             | 0.52   |        | pCi/L      | ---        | ---             | --- | ---       | 1.0        | 08/25/2014 12:10 | 09/15/2014 12:58 | 3103369  |
| LFB         | Radium-228 | 7500-Ra D | 0.44 | ---        |             | 6.8800 | 8.55   | % Recovery | 80         | 48 - 139        | --- | ---       | 1.0        | 08/25/2014 12:10 | 09/15/2014 12:58 | 3103370  |

### Sample Type Key

| <u>Type (Abbr.)</u> | <u>Sample Type</u>         |
|---------------------|----------------------------|
| FS                  | Field Sample               |
| LFB                 | Laboratory Fortified Blank |
| LRB                 | Laboratory Reagent Blank   |

## Quality Control Summary

### SDG: L716903

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,**

**August 11, 2015**

---

#### **Sample Receiving and Handling**

All sample aliquots were received at the correct temperature, in the proper containers, and with the appropriate preservatives. All method specified holding times were met.

#### **Anions by Method 9056MOD**

##### **Laboratory Control Sample**

Samples L716903-01, -02, -03, -04, -05, and -06 were analyzed in analytical batch WG738360. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Samples L716903-01, -02, -03, and -04 were analyzed in analytical batch WG738581. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Samples L716903-05 and 06 were analyzed in analytical batch WG738675. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Sample Duplicate Analysis**

For analytical batch WG738360 sample duplicate analysis was performed on sample L716926-03. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG738360 sample duplicate analysis was performed on sample L716802-03. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG738581 sample duplicate analysis was performed on sample L717024-02. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG738581 sample duplicate analysis was performed on sample L717033-01. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG738675 sample duplicate analysis was performed on sample L717235-01. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG738675 sample duplicate analysis was performed on sample L716903-05. The relative percent differences were within the method limits for target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG738360 matrix spike/matrix spike duplicate analysis was performed on sample L716864-01. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

For analytical batch WG738581 matrix spike/matrix spike duplicate analysis was performed on sample L717024-03. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

## Quality Control Summary

### SDG: L716903

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,**

**August 11, 2015**

For analytical batch WG738675 matrix spike/matrix spike duplicate analysis was performed on sample L717232-01. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Total Dissolved Solids by Method 2540 C-2011**

##### **Laboratory Control Sample**

Samples L716903-01, -02, and -03 were analyzed in analytical batch WG738498. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Samples L716903-04, -05, and -06 were analyzed in analytical batch WG738500. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

#### **Sample Duplicate Analysis**

For analytical batch WG738498 sample duplicate analysis was performed on sample L716822-01. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG738500 sample duplicate analysis was performed on sample L716852-02. The relative percent difference exceeded the method limits for Dissolved Solids.

#### **Matrix Spike/Matrix Spike Duplicate**

Precision for batch WG738498 was evaluated using the LCS/LCSD. The RPDs were within method limits.

Precision for batch WG738500 was evaluated using the LCS/LCSD. The RPDs were within method limits.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Cyanide by Method 9012B**

##### **Laboratory Control Sample**

Sample L716903-06 was analyzed in analytical batch WG739809. The laboratory control sample associated with this sample was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Samples L716903-01, -02, -03, -04, and -05 were analyzed in analytical batch WG739942. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

## Quality Control Summary

### SDG: L716903

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,**

**August 11, 2015**

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#### Sample Duplicate Analysis

For analytical batch WG739809 sample duplicate analysis was performed on sample L716986-02. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG739809 sample duplicate analysis was performed on sample L716871-02. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG739942 sample duplicate analysis was performed on sample L716903-01. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG739942 sample duplicate analysis was performed on sample L716903-04. The relative percent differences were within the method limits for target analytes reported from this batch.

#### Matrix Spike/Matrix Spike Duplicate

For analytical batch WG739809 matrix spike/matrix spike duplicate analysis was performed on sample L716888-02. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

For analytical batch WG739942 matrix spike/matrix spike duplicate analysis was performed on sample L717757-01. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

#### Blank Analysis

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### Mercury by Method 7470A

##### Laboratory Control Sample

Samples L716903-01, -02, -03, -04, -05, and -06 were analyzed in analytical batch WG738361. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch.

#### Sample Duplicate Analysis

For analytical batch WG738361 sample duplicate analysis was performed on sample L716643-02. The relative percent differences were within the method limits for target analytes reported from this batch.

#### Matrix Spike/Matrix Spike Duplicate

For analytical batch WG738361 matrix spike/matrix spike duplicate analysis was performed on sample L716643-02. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

For analytical batch WG738361 matrix spike/matrix spike duplicate analysis was performed on sample L716837-01. The matrix spike recoveries were below laboratory control limits for Mercury. The relative percent difference was within laboratory limits for all target analytes reported from this batch. Mercury did not meet the method limit criteria for the post digest spike.



## Quality Control Summary

### SDG: L716903

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,  
September 25, 2014**

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#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Trace Metals by Method 6020**

##### **Laboratory Control Sample**

Samples L716903-01, -02, -03, -04, -05, and -06 were analyzed in analytical batch WG738880. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Samples L716903-01, -02, -03, -04, -05, and -06 were analyzed in analytical batch WG738881. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Samples L716903-01, -02, -04, -05, and -06 were analyzed in analytical batch WG739363. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG738880 matrix spike/matrix spike duplicate analysis was performed on sample L716903-02. The matrix spike recoveries were above laboratory control limits for Calcium,Dissolved and Sodium,Dissolved. The spike recoveries were within limits for the remaining target compounds reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch. Calcium,Dissolved did not meet the method limit criteria for the post digest spike.

For analytical batch WG738881 matrix spike/matrix spike duplicate analysis was performed on sample L716903-01. The matrix spike recoveries were above laboratory control limits for Calcium and Sodium. The spike recoveries were within limits for the remaining target compounds reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch. Calcium and Sodium did not meet the method limit criteria for the post digest spike.

For analytical batch WG739363 matrix spike/matrix spike duplicate analysis was performed on sample L716903-01. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

#### **Blank Analysis**

For batch WG738880, the concentration of Copper,Dissolved was above the method reporting limit.

The remaining method blanks, initial calibration blank, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Volatile TPH by Method 8015D/GRO**

##### **Laboratory Control Sample**

Samples L716903-01, -02, -03, -04, -05, and -06 were analyzed in analytical batch WG738557. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

## Quality Control Summary

### SDG: L716903

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,**

**August 11, 2015**

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#### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG738557 matrix spike/matrix spike duplicate analysis was performed on sample L716903-01. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Volatile Organic Compounds by Method 8260B**

##### **Laboratory Control Sample**

Samples L716903-01, -02, -03, -04, -05, -06, -07, and -08 were analyzed in analytical batch WG738484. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

#### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG738484 matrix spike/matrix spike duplicate analysis was performed on sample L716903-01. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Semi-Volatile Organic Compounds by Method 8270C**

##### **Laboratory Control Sample**

Samples L716903-01, -02, and -03 were analyzed in analytical batch WG738310. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Samples L716903-04, -05, and -06 were analyzed in analytical batch WG738440. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

#### **Matrix Spike/Matrix Spike Duplicate**

Precision for batch WG738310 was evaluated using the LCS/LCSD. The RPDs were within method limits.

Precision for batch WG738440 was evaluated using the LCS/LCSD. The RPDs were within method limits.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Diesel Range Organics by Method 8015**

##### **Laboratory Control Sample**

Samples L716903-01, -02, -03, -04, -05, and -06 were analyzed in analytical batch WG738790. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch.

## Quality Control Summary

### SDG: L716903

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,**

**August 11, 2015**

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The relative percent difference was within laboratory limits for all target analytes reported from this batch.

#### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG738790 matrix spike/matrix spike duplicate analysis was performed on sample L717314-02. The spiked sample was evaluated only for the parameters requested on that sample and did not require the parameters reported in this SDG. Therefore, no data is included in this report for this MS/D sample.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

Nancy F. McLain  
ESC Representative  
ESC Lab Sciences



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Est. 1970

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

## Report Summary

Monday August 10, 2015

Report Number: L716903

Samples Received: 08/20/14

Client Project: TX000836.0008.00004

Description: Navajo Refining Company - Artesia, NM

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Pam Langford , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : August 20, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L716903-01

Sample ID : MW-13-0814-BG

Site ID :

Collected By :  
Collection Date : 08/18/14 16:10

Project # : TX000836.0008.00004

| Parameter             | Result  | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|---------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 1800000 | 2600 | 50000  | ug/l  |           | 9056MOD | 08/20/14 | 50   |
| Fluoride              | 560     | 9.9  | 100    | ug/l  |           | 9056MOD | 08/22/14 | 1    |
| Nitrate               | U       | 23.  | 100    | ug/l  |           | 9056MOD | 08/20/14 | 1    |
| Nitrite               | U       | 28.  | 100    | ug/l  |           | 9056MOD | 08/20/14 | 1    |
| Sulfate               | 2500000 | 3900 | 250000 | ug/l  |           | 9056MOD | 08/20/14 | 50   |
| Cyanide               | U       | 1.8  | 5.0    | ug/l  |           | 9012B   | 08/28/14 | 1    |
| Dissolved Solids      | 5800000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/22/14 | 1    |
| Aluminum              | 16.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/25/14 | 1    |
| Aluminum, Dissolved   | 17.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/22/14 | 1    |
| Arsenic               | 1.4     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Arsenic, Dissolved    | 1.2     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Barium                | 30.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Barium, Dissolved     | 27.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Boron                 | 550     | 1.5  | 20.    | ug/l  |           | 6020    | 08/27/14 | 1    |
| Boron, Dissolved      | 630     | 1.5  | 20.    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Cadmium               | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/25/14 | 1    |
| Cadmium, Dissolved    | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/22/14 | 1    |
| Calcium               | 740000  | 2300 | 50000  | ug/l  | 01V       | 6020    | 08/27/14 | 50   |
| Calcium, Dissolved    | 770000  | 920  | 20000  | ug/l  |           | 6020    | 08/25/14 | 20   |
| Chromium              | U       | 0.54 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Chromium, Dissolved   | 0.78    | 0.54 | 1.0    | ug/l  | J         | 6020    | 08/22/14 | 1    |
| Copper                | 1.1     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Copper, Dissolved     | 1.1     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/26/14 | 1    |
| Cobalt                | 0.30    | 0.26 | 1.0    | ug/l  | J         | 6020    | 08/25/14 | 1    |
| Cobalt, Dissolved     | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Iron                  | 320     | 50.  | 50.    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Iron, Dissolved       | 55.     | 50.  | 50.    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Lead                  | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Lead, Dissolved       | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Manganese             | 390     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Manganese, Dissolved  | 270     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Molybdenum            | 3.3     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Molybdenum, Dissolved | 2.9     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Nickel                | 1.0     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Nickel, Dissolved     | 1.7     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Potassium             | 5800    | 37.  | 1000   | ug/l  |           | 6020    | 08/25/14 | 1    |
| Potassium, Dissolved  | 6000    | 37.  | 1000   | ug/l  |           | 6020    | 08/22/14 | 1    |
| Selenium              | 0.70    | 0.38 | 2.0    | ug/l  | J         | 6020    | 08/25/14 | 1    |
| Selenium, Dissolved   | 0.59    | 0.38 | 2.0    | ug/l  | J         | 6020    | 08/22/14 | 1    |
| Silver                | U       | 0.31 | 0.50   | ug/l  |           | 6020    | 08/25/14 | 1    |

U = ND (Not Detected)

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MDL = Minimum Detection Limit = LOD = TRRP SDL

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Reported: 08/10/15 17:03 Printed: 08/10/15 17:04



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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : August 20, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L716903-01

Sample ID : MW-13-0814-BG

Site ID :

Collected By :  
Collection Date : 08/18/14 16:10

Project # : TX000836.0008.00004

| Parameter                                             | Result  | MDL   | RDL   | Units  | Qualifier | Method  | Date     | Dil. |
|-------------------------------------------------------|---------|-------|-------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                     | U       | 0.31  | 0.50  | ug/l   |           | 6020    | 08/22/14 | 1    |
| Sodium                                                | 1200000 | 5500  | 50000 | ug/l   | 01V       | 6020    | 08/27/14 | 50   |
| Sodium, Dissolved                                     | 1100000 | 2200  | 20000 | ug/l   |           | 6020    | 08/25/14 | 20   |
| Uranium                                               | 9.1     | 0.33  | 10.   | ug/l   | J         | 6020    | 08/25/14 | 1    |
| Uranium, Dissolved                                    | 8.6     | 0.33  | 10.   | ug/l   | J         | 6020    | 08/22/14 | 1    |
| Vanadium                                              | 4.8     | 0.18  | 1.0   | ug/l   |           | 6020    | 08/25/14 | 1    |
| Vanadium, Dissolved                                   | 4.2     | 0.18  | 1.0   | ug/l   |           | 6020    | 08/22/14 | 1    |
| Zinc                                                  | 4.1     | 2.6   | 10.   | ug/l   | J         | 6020    | 08/25/14 | 1    |
| Zinc, Dissolved                                       | U       | 2.6   | 10.   | ug/l   |           | 6020    | 08/22/14 | 1    |
| Mercury                                               | U       | 0.049 | 0.20  | ug/l   |           | 7470A   | 08/25/14 | 1    |
| TPH (GC/FID) Low Fraction                             | U       | 31.   | 100   | ug/l   |           | 8015D/G | 08/23/14 | 1    |
| Surrogate Recovery-%<br>a, a, a-Trifluorotoluene(FID) | 98.3    |       |       | % Rec. |           | 8015D/G | 08/23/14 | 1    |
| Volatile Organics                                     |         |       |       |        |           |         |          |      |
| Benzene                                               | U       | 0.33  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Carbon tetrachloride                                  | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Chloroform                                            | U       | 0.32  | 5.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,2-Dibromoethane                                     | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1-Dichloroethane                                    | U       | 0.26  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,2-Dichloroethane                                    | U       | 0.36  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1-Dichloroethene                                    | U       | 0.40  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Ethylbenzene                                          | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Methylene Chloride                                    | U       | 1.0   | 5.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1,1,2-Tetrachloroethane                             | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1,2,2-Tetrachloroethane                             | U       | 0.13  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Toluene                                               | U       | 0.78  | 5.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1,1-Trichloroethane                                 | U       | 0.32  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Tetrachloroethene                                     | U       | 0.37  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1,2-Trichloroethane                                 | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Vinyl chloride                                        | U       | 0.26  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| o-Xylene                                              | U       | 0.34  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| m&p-Xylene                                            | U       | 0.72  | 2.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Xylenes, Total                                        | U       | 1.1   | 3.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Surrogate Recovery                                    |         |       |       |        |           |         |          |      |
| Toluene-d8                                            | 100.    |       |       | % Rec. |           | 8260B   | 08/22/14 | 1    |
| Dibromofluoromethane                                  | 97.2    |       |       | % Rec. |           | 8260B   | 08/22/14 | 1    |
| 4-Bromofluorobenzene                                  | 99.1    |       |       | % Rec. |           | 8260B   | 08/22/14 | 1    |
| Diesel and Oil Ranges                                 |         |       |       |        |           |         |          |      |
| C10-C28 Diesel Range                                  | 30.     | 22.   | 100   | ug/l   | J         | 8015    | 08/21/14 | 1    |

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : August 20, 2014  
Description : Navajo Refining Company - Artesia, NM

Sample ID : MW-13-0814-BG

Collected By :  
Collection Date : 08/18/14 16:10

ESC Sample # : L716903-01

Site ID :

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| C28-C40 Oil Range         | 12.    | 12.  | 100 | ug/l   | J         | 8015   | 08/21/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| o-Terphenyl               | 111.   |      |     | % Rec. |           | 8015   | 08/21/14 | 1    |
| Base/Neutral Extractables |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene            | U      | 0.34 | 1.0 | ug/l   |           | 8270C  | 08/23/14 | 1    |
| 1-Methylnaphthalene       | U      | 0.33 | 1.0 | ug/l   |           | 8270C  | 08/23/14 | 1    |
| 2-Methylnaphthalene       | U      | 0.31 | 1.0 | ug/l   |           | 8270C  | 08/23/14 | 1    |
| Naphthalene               | U      | 0.37 | 1.0 | ug/l   |           | 8270C  | 08/23/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| Nitrobenzene-d5           | 85.2   |      |     | % Rec. |           | 8270C  | 08/23/14 | 1    |
| 2-Fluorobiphenyl          | 72.5   |      |     | % Rec. |           | 8270C  | 08/23/14 | 1    |
| p-Terphenyl-d14           | 78.9   |      |     | % Rec. |           | 8270C  | 08/23/14 | 1    |

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# REPORT OF ANALYSIS

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2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : August 20, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L716903-02

Sample ID : MW-12-0814-BG

Site ID :

Collected By :  
Collection Date : 08/18/14 17:15

Project # : TX000836.0008.00004

| Parameter             | Result  | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|---------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 1500000 | 2600 | 50000  | ug/l  |           | 9056MOD | 08/20/14 | 50   |
| Fluoride              | 1000    | 9.9  | 100    | ug/l  |           | 9056MOD | 08/22/14 | 1    |
| Nitrate               | 7000    | 23.  | 100    | ug/l  |           | 9056MOD | 08/20/14 | 1    |
| Nitrite               | U       | 28.  | 100    | ug/l  |           | 9056MOD | 08/20/14 | 1    |
| Sulfate               | 3200000 | 3900 | 250000 | ug/l  |           | 9056MOD | 08/20/14 | 50   |
| Cyanide               | U       | 1.8  | 5.0    | ug/l  |           | 9012B   | 08/28/14 | 1    |
| Dissolved Solids      | 6200000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/22/14 | 1    |
| Aluminum              | 16.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/25/14 | 1    |
| Aluminum, Dissolved   | 14.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/22/14 | 1    |
| Arsenic               | 1.9     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Arsenic, Dissolved    | 1.2     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Barium                | 23.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Barium, Dissolved     | 22.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Boron                 | 600     | 1.5  | 20.    | ug/l  |           | 6020    | 08/27/14 | 1    |
| Boron, Dissolved      | 600     | 1.5  | 20.    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Cadmium               | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/25/14 | 1    |
| Cadmium, Dissolved    | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/22/14 | 1    |
| Calcium               | 740000  | 2300 | 50000  | ug/l  |           | 6020    | 08/27/14 | 50   |
| Calcium, Dissolved    | 740000  | 920  | 20000  | ug/l  | 01V       | 6020    | 08/25/14 | 20   |
| Chromium              | U       | 0.54 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Chromium, Dissolved   | U       | 0.54 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Copper                | 1.8     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Copper, Dissolved     | 2.2     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/26/14 | 1    |
| Cobalt                | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Cobalt, Dissolved     | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Iron                  | 850     | 50.  | 50.    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Iron, Dissolved       | 120     | 50.  | 50.    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Lead                  | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Lead, Dissolved       | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Manganese             | 110     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Manganese, Dissolved  | 100     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Molybdenum            | 4.3     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Molybdenum, Dissolved | 4.5     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Nickel                | 1.8     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Nickel, Dissolved     | 1.9     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Potassium             | 5000    | 37.  | 1000   | ug/l  |           | 6020    | 08/25/14 | 1    |
| Potassium, Dissolved  | 4900    | 37.  | 1000   | ug/l  |           | 6020    | 08/22/14 | 1    |
| Selenium              | 11.     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Selenium, Dissolved   | 9.6     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Silver                | U       | 0.31 | 0.50   | ug/l  |           | 6020    | 08/25/14 | 1    |

U = ND (Not Detected)

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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : August 20, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L716903-02

Sample ID : MW-12-0814-BG

Site ID :

Collected By :  
Collection Date : 08/18/14 17:15

Project # : TX000836.0008.00004

| Parameter                                           | Result  | MDL   | RDL   | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|---------|-------|-------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U       | 0.31  | 0.50  | ug/l   |           | 6020    | 08/22/14 | 1    |
| Sodium                                              | 1500000 | 5500  | 50000 | ug/l   |           | 6020    | 08/27/14 | 50   |
| Sodium, Dissolved                                   | 1400000 | 2200  | 20000 | ug/l   | V         | 6020    | 08/25/14 | 20   |
| Uranium                                             | 5.8     | 0.33  | 10.   | ug/l   | J         | 6020    | 08/25/14 | 1    |
| Uranium, Dissolved                                  | 5.9     | 0.33  | 10.   | ug/l   | J         | 6020    | 08/22/14 | 1    |
| Vanadium                                            | 2.6     | 0.18  | 1.0   | ug/l   |           | 6020    | 08/25/14 | 1    |
| Vanadium, Dissolved                                 | 2.1     | 0.18  | 1.0   | ug/l   |           | 6020    | 08/22/14 | 1    |
| Zinc                                                | U       | 2.6   | 10.   | ug/l   |           | 6020    | 08/25/14 | 1    |
| Zinc, Dissolved                                     | U       | 2.6   | 10.   | ug/l   |           | 6020    | 08/22/14 | 1    |
| Mercury                                             | U       | 0.049 | 0.20  | ug/l   |           | 7470A   | 08/25/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U       | 31.   | 100   | ug/l   |           | 8015D/G | 08/23/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 98.8    |       |       | % Rec. |           | 8015D/G | 08/23/14 | 1    |
| Volatile Organics                                   |         |       |       |        |           |         |          |      |
| Benzene                                             | U       | 0.33  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Carbon tetrachloride                                | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Chloroform                                          | U       | 0.32  | 5.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,2-Dibromoethane                                   | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1-Dichloroethane                                  | U       | 0.26  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,2-Dichloroethane                                  | U       | 0.36  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1-Dichloroethene                                  | U       | 0.40  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Ethylbenzene                                        | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Methylene Chloride                                  | U       | 1.0   | 5.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U       | 0.13  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Toluene                                             | U       | 0.78  | 5.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1,1-Trichloroethane                               | U       | 0.32  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Tetrachloroethene                                   | U       | 0.37  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1,2-Trichloroethane                               | U       | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Vinyl chloride                                      | U       | 0.26  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| o-Xylene                                            | U       | 0.34  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| m&p-Xylene                                          | U       | 0.72  | 2.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Xylenes, Total                                      | U       | 1.1   | 3.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Surrogate Recovery                                  |         |       |       |        |           |         |          |      |
| Toluene-d8                                          | 102.    |       |       | % Rec. |           | 8260B   | 08/22/14 | 1    |
| Dibromofluoromethane                                | 98.1    |       |       | % Rec. |           | 8260B   | 08/22/14 | 1    |
| 4-Bromofluorobenzene                                | 95.7    |       |       | % Rec. |           | 8260B   | 08/22/14 | 1    |
| Diesel and Oil Ranges                               |         |       |       |        |           |         |          |      |
| C10-C28 Diesel Range                                | U       | 22.   | 100   | ug/l   |           | 8015    | 08/21/14 | 1    |

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : August 20, 2014  
Description : Navajo Refining Company - Artesia, NM

Sample ID : MW-12-0814-BG

Collected By :  
Collection Date : 08/18/14 17:15

ESC Sample # : L716903-02

Site ID :

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| C28-C40 Oil Range         | U      | 12.  | 100 | ug/l   |           | 8015   | 08/21/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| o-Terphenyl               | 107.   |      |     | % Rec. |           | 8015   | 08/21/14 | 1    |
| Base/Neutral Extractables |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene            | U      | 0.34 | 1.0 | ug/l   |           | 8270C  | 08/23/14 | 1    |
| 1-Methylnaphthalene       | U      | 0.33 | 1.0 | ug/l   |           | 8270C  | 08/23/14 | 1    |
| 2-Methylnaphthalene       | U      | 0.31 | 1.0 | ug/l   |           | 8270C  | 08/23/14 | 1    |
| Naphthalene               | U      | 0.37 | 1.0 | ug/l   |           | 8270C  | 08/23/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| Nitrobenzene-d5           | 85.8   |      |     | % Rec. |           | 8270C  | 08/23/14 | 1    |
| 2-Fluorobiphenyl          | 70.7   |      |     | % Rec. |           | 8270C  | 08/23/14 | 1    |
| p-Terphenyl-d14           | 73.3   |      |     | % Rec. |           | 8270C  | 08/23/14 | 1    |

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Houston, TX 77042

August 10, 2015

Date Received : August 20, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L716903-03

Sample ID : EB-04-0814-BG

Site ID :

Collected By :  
Collection Date : 08/18/14 17:45

Project # : TX000836.0008.00004

| Parameter             | Result | MDL  | RDL   | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|--------|------|-------|-------|-----------|---------|----------|------|
| Chloride              | 59.    | 52.  | 1000  | ug/l  | J         | 9056MOD | 08/20/14 | 1    |
| Fluoride              | U      | 9.9  | 100   | ug/l  |           | 9056MOD | 08/22/14 | 1    |
| Nitrate               | U      | 23.  | 100   | ug/l  |           | 9056MOD | 08/20/14 | 1    |
| Nitrite               | U      | 28.  | 100   | ug/l  |           | 9056MOD | 08/20/14 | 1    |
| Sulfate               | 150    | 77.  | 5000  | ug/l  | J         | 9056MOD | 08/20/14 | 1    |
| Cyanide               | U      | 1.8  | 5.0   | ug/l  |           | 9012B   | 08/28/14 | 1    |
| Dissolved Solids      | 3000   | 2800 | 10000 | ug/l  | JT4       | 2540 C- | 08/22/14 | 1    |
| Aluminum              | 14.    | 2.0  | 50.   | ug/l  | J         | 6020    | 08/25/14 | 1    |
| Aluminum, Dissolved   | 15.    | 2.0  | 50.   | ug/l  | J         | 6020    | 08/22/14 | 1    |
| Arsenic               | U      | 0.25 | 1.0   | ug/l  |           | 6020    | 08/25/14 | 1    |
| Arsenic, Dissolved    | U      | 0.25 | 1.0   | ug/l  |           | 6020    | 08/22/14 | 1    |
| Barium                | U      | 0.36 | 2.0   | ug/l  |           | 6020    | 08/25/14 | 1    |
| Barium, Dissolved     | U      | 0.36 | 2.0   | ug/l  |           | 6020    | 08/22/14 | 1    |
| Boron                 | 39.    | 1.5  | 20.   | ug/l  |           | 6020    | 08/27/14 | 1    |
| Boron, Dissolved      | 35.    | 1.5  | 20.   | ug/l  |           | 6020    | 08/22/14 | 1    |
| Cadmium               | U      | 0.16 | 0.50  | ug/l  |           | 6020    | 08/25/14 | 1    |
| Cadmium, Dissolved    | U      | 0.16 | 0.50  | ug/l  |           | 6020    | 08/22/14 | 1    |
| Calcium               | U      | 46.  | 1000  | ug/l  |           | 6020    | 08/25/14 | 1    |
| Calcium, Dissolved    | U      | 46.  | 1000  | ug/l  |           | 6020    | 08/25/14 | 1    |
| Chromium              | U      | 0.54 | 1.0   | ug/l  |           | 6020    | 08/25/14 | 1    |
| Chromium, Dissolved   | U      | 0.54 | 1.0   | ug/l  |           | 6020    | 08/22/14 | 1    |
| Copper                | U      | 0.52 | 1.0   | ug/l  |           | 6020    | 08/25/14 | 1    |
| Copper, Dissolved     | U      | 0.52 | 1.0   | ug/l  |           | 6020    | 08/22/14 | 1    |
| Cobalt                | U      | 0.26 | 1.0   | ug/l  |           | 6020    | 08/25/14 | 1    |
| Cobalt, Dissolved     | U      | 0.26 | 1.0   | ug/l  |           | 6020    | 08/22/14 | 1    |
| Iron                  | U      | 50.  | 50.   | ug/l  |           | 6020    | 08/25/14 | 1    |
| Iron, Dissolved       | U      | 50.  | 50.   | ug/l  |           | 6020    | 08/22/14 | 1    |
| Lead                  | U      | 0.24 | 1.0   | ug/l  |           | 6020    | 08/25/14 | 1    |
| Lead, Dissolved       | U      | 0.24 | 1.0   | ug/l  |           | 6020    | 08/22/14 | 1    |
| Manganese             | 0.30   | 0.25 | 2.0   | ug/l  | J         | 6020    | 08/25/14 | 1    |
| Manganese, Dissolved  | U      | 0.25 | 2.0   | ug/l  |           | 6020    | 08/22/14 | 1    |
| Molybdenum            | U      | 0.14 | 2.0   | ug/l  |           | 6020    | 08/25/14 | 1    |
| Molybdenum, Dissolved | U      | 0.14 | 2.0   | ug/l  |           | 6020    | 08/22/14 | 1    |
| Nickel                | U      | 0.35 | 1.0   | ug/l  |           | 6020    | 08/25/14 | 1    |
| Nickel, Dissolved     | 0.39   | 0.35 | 1.0   | ug/l  | J         | 6020    | 08/22/14 | 1    |
| Potassium             | 52.    | 37.  | 1000  | ug/l  | J         | 6020    | 08/25/14 | 1    |
| Potassium, Dissolved  | 44.    | 37.  | 1000  | ug/l  | J         | 6020    | 08/22/14 | 1    |
| Selenium              | 0.47   | 0.38 | 2.0   | ug/l  | J         | 6020    | 08/25/14 | 1    |
| Selenium, Dissolved   | U      | 0.38 | 2.0   | ug/l  |           | 6020    | 08/22/14 | 1    |
| Silver                | U      | 0.31 | 0.50  | ug/l  |           | 6020    | 08/25/14 | 1    |

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August 10, 2015

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ESC Sample # : L716903-03

Sample ID : EB-04-0814-BG

Site ID :

Collected By :  
Collection Date : 08/18/14 17:45

Project # : TX000836.0008.00004

| Parameter                                           | Result | MDL   | RDL  | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|--------|-------|------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U      | 0.31  | 0.50 | ug/l   |           | 6020    | 08/22/14 | 1    |
| Sodium                                              | 1000   | 110   | 1000 | ug/l   |           | 6020    | 08/27/14 | 1    |
| Sodium, Dissolved                                   | 1700   | 110   | 1000 | ug/l   |           | 6020    | 08/22/14 | 1    |
| Uranium                                             | U      | 0.33  | 10.  | ug/l   |           | 6020    | 08/25/14 | 1    |
| Uranium, Dissolved                                  | U      | 0.33  | 10.  | ug/l   |           | 6020    | 08/22/14 | 1    |
| Vanadium                                            | U      | 0.18  | 1.0  | ug/l   |           | 6020    | 08/25/14 | 1    |
| Vanadium, Dissolved                                 | U      | 0.18  | 1.0  | ug/l   |           | 6020    | 08/22/14 | 1    |
| Zinc                                                | U      | 2.6   | 10.  | ug/l   |           | 6020    | 08/25/14 | 1    |
| Zinc, Dissolved                                     | U      | 2.6   | 10.  | ug/l   |           | 6020    | 08/22/14 | 1    |
| Mercury                                             | U      | 0.049 | 0.20 | ug/l   |           | 7470A   | 08/25/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U      | 31.   | 100  | ug/l   |           | 8015D/G | 08/23/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 99.2   |       |      | % Rec. |           | 8015D/G | 08/23/14 | 1    |
| Volatile Organics                                   |        |       |      |        |           |         |          |      |
| Benzene                                             | U      | 0.33  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Carbon tetrachloride                                | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Chloroform                                          | U      | 0.32  | 5.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,2-Dibromoethane                                   | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1-Dichloroethane                                  | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,2-Dichloroethane                                  | U      | 0.36  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1-Dichloroethene                                  | U      | 0.40  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Ethylbenzene                                        | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Methylene Chloride                                  | U      | 1.0   | 5.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U      | 0.13  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Toluene                                             | U      | 0.78  | 5.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1,1-Trichloroethane                               | U      | 0.32  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Tetrachloroethene                                   | U      | 0.37  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1,2-Trichloroethane                               | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Vinyl chloride                                      | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| o-Xylene                                            | U      | 0.34  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| m&p-Xylene                                          | U      | 0.72  | 2.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Xylenes, Total                                      | U      | 1.1   | 3.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Surrogate Recovery                                  |        |       |      |        |           |         |          |      |
| Toluene-d8                                          | 101.   |       |      | % Rec. |           | 8260B   | 08/22/14 | 1    |
| Dibromofluoromethane                                | 95.8   |       |      | % Rec. |           | 8260B   | 08/22/14 | 1    |
| 4-Bromofluorobenzene                                | 94.7   |       |      | % Rec. |           | 8260B   | 08/22/14 | 1    |
| Diesel and Oil Ranges                               |        |       |      |        |           |         |          |      |
| C10-C28 Diesel Range                                | 90.    | 22.   | 100  | ug/l   | J         | 8015    | 08/21/14 | 1    |

U = ND (Not Detected)

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Mt. Juliet, TN 37122  
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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : August 20, 2014  
Description : Navajo Refining Company - Artesia, NM

Sample ID : EB-04-0814-BG

Collected By :  
Collection Date : 08/18/14 17:45

ESC Sample # : L716903-03

Site ID :

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| C28-C40 Oil Range         | 35.    | 12.  | 100 | ug/l   | J         | 8015   | 08/21/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| o-Terphenyl               | 108.   |      |     | % Rec. |           | 8015   | 08/21/14 | 1    |
| Base/Neutral Extractables |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene            | U      | 0.34 | 1.0 | ug/l   |           | 8270C  | 08/23/14 | 1    |
| 1-Methylnaphthalene       | U      | 0.33 | 1.0 | ug/l   |           | 8270C  | 08/23/14 | 1    |
| 2-Methylnaphthalene       | U      | 0.31 | 1.0 | ug/l   |           | 8270C  | 08/23/14 | 1    |
| Naphthalene               | U      | 0.37 | 1.0 | ug/l   |           | 8270C  | 08/23/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| Nitrobenzene-d5           | 89.6   |      |     | % Rec. |           | 8270C  | 08/23/14 | 1    |
| 2-Fluorobiphenyl          | 76.2   |      |     | % Rec. |           | 8270C  | 08/23/14 | 1    |
| p-Terphenyl-d14           | 80.3   |      |     | % Rec. |           | 8270C  | 08/23/14 | 1    |

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : August 20, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L716903-04

Sample ID : MW-25-0814-BG

Site ID :

Collected By :  
Collection Date : 08/19/14 08:55

Project # : TX000836.0008.00004

| Parameter             | Result   | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|----------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 4500000  | 2600 | 50000  | ug/l  |           | 9056MOD | 08/20/14 | 50   |
| Fluoride              | 650      | 9.9  | 100    | ug/l  |           | 9056MOD | 08/22/14 | 1    |
| Nitrate               | U        | 23.  | 100    | ug/l  |           | 9056MOD | 08/20/14 | 1    |
| Nitrite               | U        | 28.  | 100    | ug/l  |           | 9056MOD | 08/20/14 | 1    |
| Sulfate               | 3600000  | 3900 | 250000 | ug/l  |           | 9056MOD | 08/20/14 | 50   |
| Cyanide               | U        | 1.8  | 5.0    | ug/l  |           | 9012B   | 08/28/14 | 1    |
| Dissolved Solids      | 14000000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/22/14 | 1    |
| Aluminum              | 15.      | 2.0  | 50.    | ug/l  | J         | 6020    | 08/25/14 | 1    |
| Aluminum, Dissolved   | 15.      | 2.0  | 50.    | ug/l  | J         | 6020    | 08/22/14 | 1    |
| Arsenic               | 5.2      | 0.25 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Arsenic, Dissolved    | 5.2      | 0.25 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Barium                | 24.      | 0.36 | 2.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Barium, Dissolved     | 23.      | 0.36 | 2.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Boron                 | 220      | 1.5  | 20.    | ug/l  |           | 6020    | 08/27/14 | 1    |
| Boron, Dissolved      | 220      | 1.5  | 20.    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Cadmium               | U        | 0.16 | 0.50   | ug/l  |           | 6020    | 08/25/14 | 1    |
| Cadmium, Dissolved    | U        | 0.16 | 0.50   | ug/l  |           | 6020    | 08/22/14 | 1    |
| Calcium               | 1000000  | 4600 | 100000 | ug/l  |           | 6020    | 08/27/14 | 100  |
| Calcium, Dissolved    | 1200000  | 2300 | 50000  | ug/l  |           | 6020    | 08/25/14 | 50   |
| Chromium              | U        | 0.54 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Chromium, Dissolved   | U        | 0.54 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Copper                | 0.59     | 0.52 | 1.0    | ug/l  | J         | 6020    | 08/25/14 | 1    |
| Copper, Dissolved     | 1.2      | 0.52 | 1.0    | ug/l  |           | 6020    | 08/26/14 | 1    |
| Cobalt                | 0.43     | 0.26 | 1.0    | ug/l  | J         | 6020    | 08/25/14 | 1    |
| Cobalt, Dissolved     | 0.45     | 0.26 | 1.0    | ug/l  | J         | 6020    | 08/22/14 | 1    |
| Iron                  | U        | 50.  | 50.    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Iron, Dissolved       | U        | 50.  | 50.    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Lead                  | U        | 0.24 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Lead, Dissolved       | U        | 0.24 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Manganese             | 130      | 0.25 | 2.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Manganese, Dissolved  | 130      | 0.25 | 2.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Molybdenum            | 15.      | 0.14 | 2.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Molybdenum, Dissolved | 16.      | 0.14 | 2.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Nickel                | 2.6      | 0.35 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Nickel, Dissolved     | 2.8      | 0.35 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Potassium             | 7500     | 37.  | 1000   | ug/l  |           | 6020    | 08/25/14 | 1    |
| Potassium, Dissolved  | 7400     | 37.  | 1000   | ug/l  |           | 6020    | 08/22/14 | 1    |
| Selenium              | 12.      | 0.38 | 2.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Selenium, Dissolved   | 10.      | 0.38 | 2.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Silver                | U        | 0.31 | 0.50   | ug/l  |           | 6020    | 08/25/14 | 1    |

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : August 20, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L716903-04

Sample ID : MW-25-0814-BG

Site ID :

Collected By :  
Collection Date : 08/19/14 08:55

Project # : TX000836.0008.00004

| Parameter                                           | Result  | MDL   | RDL    | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|---------|-------|--------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U       | 0.31  | 0.50   | ug/l   |           | 6020    | 08/22/14 | 1    |
| Sodium                                              | 2400000 | 11000 | 100000 | ug/l   |           | 6020    | 08/27/14 | 100  |
| Sodium, Dissolved                                   | 2500000 | 5500  | 50000  | ug/l   |           | 6020    | 08/25/14 | 50   |
| Uranium                                             | 12.     | 0.33  | 10.    | ug/l   |           | 6020    | 08/25/14 | 1    |
| Uranium, Dissolved                                  | 13.     | 0.33  | 10.    | ug/l   |           | 6020    | 08/22/14 | 1    |
| Vanadium                                            | 10.     | 0.18  | 1.0    | ug/l   |           | 6020    | 08/25/14 | 1    |
| Vanadium, Dissolved                                 | 10.     | 0.18  | 1.0    | ug/l   |           | 6020    | 08/22/14 | 1    |
| Zinc                                                | U       | 2.6   | 10.    | ug/l   |           | 6020    | 08/25/14 | 1    |
| Zinc, Dissolved                                     | U       | 2.6   | 10.    | ug/l   |           | 6020    | 08/22/14 | 1    |
| Mercury                                             | U       | 0.049 | 0.20   | ug/l   |           | 7470A   | 08/25/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U       | 31.   | 100    | ug/l   |           | 8015D/G | 08/24/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 98.3    |       |        | % Rec. |           | 8015D/G | 08/24/14 | 1    |
| Volatile Organics                                   |         |       |        |        |           |         |          |      |
| Benzene                                             | U       | 0.33  | 1.0    | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Carbon tetrachloride                                | U       | 0.38  | 1.0    | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Chloroform                                          | U       | 0.32  | 5.0    | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,2-Dibromoethane                                   | U       | 0.38  | 1.0    | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1-Dichloroethane                                  | U       | 0.26  | 1.0    | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,2-Dichloroethane                                  | U       | 0.36  | 1.0    | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1-Dichloroethene                                  | U       | 0.40  | 1.0    | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Ethylbenzene                                        | U       | 0.38  | 1.0    | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Methylene Chloride                                  | U       | 1.0   | 5.0    | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U       | 0.38  | 1.0    | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U       | 0.13  | 1.0    | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Toluene                                             | U       | 0.78  | 5.0    | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1,1-Trichloroethane                               | U       | 0.32  | 1.0    | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Tetrachloroethene                                   | U       | 0.37  | 1.0    | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1,2-Trichloroethane                               | U       | 0.38  | 1.0    | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Vinyl chloride                                      | U       | 0.26  | 1.0    | ug/l   |           | 8260B   | 08/22/14 | 1    |
| o-Xylene                                            | U       | 0.34  | 1.0    | ug/l   |           | 8260B   | 08/22/14 | 1    |
| m&p-Xylene                                          | U       | 0.72  | 2.0    | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Xylenes, Total                                      | U       | 1.1   | 3.0    | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Surrogate Recovery                                  |         |       |        |        |           |         |          |      |
| Toluene-d8                                          | 101.    |       |        | % Rec. |           | 8260B   | 08/22/14 | 1    |
| Dibromofluoromethane                                | 98.2    |       |        | % Rec. |           | 8260B   | 08/22/14 | 1    |
| 4-Bromofluorobenzene                                | 99.0    |       |        | % Rec. |           | 8260B   | 08/22/14 | 1    |
| Diesel and Oil Ranges                               |         |       |        |        |           |         |          |      |
| C10-C28 Diesel Range                                | 280     | 22.   | 100    | ug/l   |           | 8015    | 08/21/14 | 1    |

U = ND (Not Detected)

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Est. 1970

REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : August 20, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : MW-25-0814-BG  
Collected By :  
Collection Date : 08/19/14 08:55

ESC Sample # : L716903-04

Site ID :

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| C28-C40 Oil Range         | 59.    | 12.  | 100 | ug/l   | J         | 8015   | 08/21/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| o-Terphenyl               | 103.   |      |     | % Rec. |           | 8015   | 08/21/14 | 1    |
| Base/Neutral Extractables |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene            | U      | 0.34 | 1.0 | ug/l   |           | 8270C  | 08/22/14 | 1    |
| 1-Methylnaphthalene       | U      | 0.33 | 1.0 | ug/l   |           | 8270C  | 08/22/14 | 1    |
| 2-Methylnaphthalene       | U      | 0.31 | 1.0 | ug/l   |           | 8270C  | 08/22/14 | 1    |
| Naphthalene               | U      | 0.37 | 1.0 | ug/l   |           | 8270C  | 08/22/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| 2-Fluorophenol            | 57.6   |      |     | % Rec. |           | 8270C  | 08/22/14 | 1    |
| Phenol-d5                 | 46.3   |      |     | % Rec. |           | 8270C  | 08/22/14 | 1    |
| Nitrobenzene-d5           | 78.2   |      |     | % Rec. |           | 8270C  | 08/22/14 | 1    |
| 2-Fluorobiphenyl          | 89.0   |      |     | % Rec. |           | 8270C  | 08/22/14 | 1    |
| 2,4,6-Tribromophenol      | 104.   |      |     | % Rec. |           | 8270C  | 08/22/14 | 1    |
| p-Terphenyl-d14           | 91.0   |      |     | % Rec. |           | 8270C  | 08/22/14 | 1    |

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# REPORT OF ANALYSIS

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ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : August 20, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L716903-05

Sample ID : MW-17-0814-BG

Site ID :

Collected By :  
Collection Date : 08/19/14 10:45

Project # : TX000836.0008.00004

| Parameter             | Result  | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|---------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 130000  | 1000 | 20000  | ug/l  |           | 9056MOD | 08/20/14 | 20   |
| Fluoride              | 1000    | 9.9  | 100    | ug/l  |           | 9056MOD | 08/24/14 | 1    |
| Nitrate               | 1400    | 23.  | 100    | ug/l  |           | 9056MOD | 08/20/14 | 1    |
| Nitrite               | U       | 28.  | 100    | ug/l  |           | 9056MOD | 08/20/14 | 1    |
| Sulfate               | 1200000 | 1500 | 100000 | ug/l  |           | 9056MOD | 08/20/14 | 20   |
| Cyanide               | U       | 1.8  | 5.0    | ug/l  |           | 9012B   | 08/28/14 | 1    |
| Dissolved Solids      | 2200000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/22/14 | 1    |
| Aluminum              | 30.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/25/14 | 1    |
| Aluminum, Dissolved   | 19.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/22/14 | 1    |
| Arsenic               | 0.78    | 0.25 | 1.0    | ug/l  | J         | 6020    | 08/25/14 | 1    |
| Arsenic, Dissolved    | 0.78    | 0.25 | 1.0    | ug/l  | J         | 6020    | 08/22/14 | 1    |
| Barium                | 14.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Barium, Dissolved     | 14.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Boron                 | 110     | 1.5  | 20.    | ug/l  |           | 6020    | 08/27/14 | 1    |
| Boron, Dissolved      | 130     | 1.5  | 20.    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Cadmium               | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/25/14 | 1    |
| Cadmium, Dissolved    | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/22/14 | 1    |
| Calcium               | 390000  | 460  | 10000  | ug/l  |           | 6020    | 08/27/14 | 10   |
| Calcium, Dissolved    | 440000  | 230  | 5000   | ug/l  |           | 6020    | 08/25/14 | 5    |
| Chromium              | 1.6     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Chromium, Dissolved   | 1.4     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Copper                | U       | 0.52 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Copper, Dissolved     | 0.88    | 0.52 | 1.0    | ug/l  | J         | 6020    | 08/26/14 | 1    |
| Cobalt                | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Cobalt, Dissolved     | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Iron                  | U       | 50.  | 50.    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Iron, Dissolved       | U       | 50.  | 50.    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Lead                  | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Lead, Dissolved       | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Manganese             | 2.7     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Manganese, Dissolved  | 0.69    | 0.25 | 2.0    | ug/l  | J         | 6020    | 08/22/14 | 1    |
| Molybdenum            | 8.4     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Molybdenum, Dissolved | 8.9     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Nickel                | U       | 0.35 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Nickel, Dissolved     | U       | 0.35 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Potassium             | 2200    | 37.  | 1000   | ug/l  |           | 6020    | 08/25/14 | 1    |
| Potassium, Dissolved  | 2200    | 37.  | 1000   | ug/l  |           | 6020    | 08/22/14 | 1    |
| Selenium              | 7.6     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Selenium, Dissolved   | 8.2     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Silver                | U       | 0.31 | 0.50   | ug/l  |           | 6020    | 08/25/14 | 1    |

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

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Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : August 20, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L716903-05

Sample ID : MW-17-0814-BG

Site ID :

Collected By :  
Collection Date : 08/19/14 10:45

Project # : TX000836.0008.00004

| Parameter                                           | Result | MDL   | RDL  | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|--------|-------|------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U      | 0.31  | 0.50 | ug/l   |           | 6020    | 08/22/14 | 1    |
| Sodium                                              | 68000  | 110   | 1000 | ug/l   |           | 6020    | 08/27/14 | 1    |
| Sodium, Dissolved                                   | 72000  | 110   | 1000 | ug/l   |           | 6020    | 08/22/14 | 1    |
| Uranium                                             | 2.8    | 0.33  | 10.  | ug/l   | J         | 6020    | 08/25/14 | 1    |
| Uranium, Dissolved                                  | 2.9    | 0.33  | 10.  | ug/l   | J         | 6020    | 08/22/14 | 1    |
| Vanadium                                            | 5.0    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/25/14 | 1    |
| Vanadium, Dissolved                                 | 4.9    | 0.18  | 1.0  | ug/l   |           | 6020    | 08/22/14 | 1    |
| Zinc                                                | U      | 2.6   | 10.  | ug/l   |           | 6020    | 08/25/14 | 1    |
| Zinc, Dissolved                                     | U      | 2.6   | 10.  | ug/l   |           | 6020    | 08/22/14 | 1    |
| Mercury                                             | U      | 0.049 | 0.20 | ug/l   |           | 7470A   | 08/25/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U      | 31.   | 100  | ug/l   |           | 8015D/G | 08/24/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 99.1   |       |      | % Rec. |           | 8015D/G | 08/24/14 | 1    |
| Volatile Organics                                   |        |       |      |        |           |         |          |      |
| Benzene                                             | U      | 0.33  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Carbon tetrachloride                                | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Chloroform                                          | U      | 0.32  | 5.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,2-Dibromoethane                                   | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1-Dichloroethane                                  | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,2-Dichloroethane                                  | U      | 0.36  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1-Dichloroethene                                  | U      | 0.40  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Ethylbenzene                                        | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Methylene Chloride                                  | U      | 1.0   | 5.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U      | 0.13  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Toluene                                             | U      | 0.78  | 5.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1,1-Trichloroethane                               | U      | 0.32  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Tetrachloroethene                                   | U      | 0.37  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1,2-Trichloroethane                               | U      | 0.38  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Vinyl chloride                                      | U      | 0.26  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| o-Xylene                                            | U      | 0.34  | 1.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| m&p-Xylene                                          | U      | 0.72  | 2.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Xylenes, Total                                      | U      | 1.1   | 3.0  | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Surrogate Recovery                                  |        |       |      |        |           |         |          |      |
| Toluene-d8                                          | 99.9   |       |      | % Rec. |           | 8260B   | 08/22/14 | 1    |
| Dibromofluoromethane                                | 95.9   |       |      | % Rec. |           | 8260B   | 08/22/14 | 1    |
| 4-Bromofluorobenzene                                | 94.7   |       |      | % Rec. |           | 8260B   | 08/22/14 | 1    |
| Diesel and Oil Ranges                               |        |       |      |        |           |         |          |      |
| C10-C28 Diesel Range                                | 48.    | 22.   | 100  | ug/l   | J         | 8015    | 08/21/14 | 1    |

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Est. 1970

# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : August 20, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : MW-17-0814-BG  
Collected By :  
Collection Date : 08/19/14 10:45

ESC Sample # : L716903-05

Site ID :

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| C28-C40 Oil Range         | 28.    | 12.  | 100 | ug/l   | J         | 8015   | 08/21/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| o-Terphenyl               | 109.   |      |     | % Rec. |           | 8015   | 08/21/14 | 1    |
| Base/Neutral Extractables |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene            | U      | 0.34 | 1.0 | ug/l   |           | 8270C  | 08/22/14 | 1    |
| 1-Methylnaphthalene       | U      | 0.33 | 1.0 | ug/l   |           | 8270C  | 08/22/14 | 1    |
| 2-Methylnaphthalene       | U      | 0.31 | 1.0 | ug/l   |           | 8270C  | 08/22/14 | 1    |
| Naphthalene               | U      | 0.37 | 1.0 | ug/l   |           | 8270C  | 08/22/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| 2-Fluorophenol            | 51.0   |      |     | % Rec. |           | 8270C  | 08/22/14 | 1    |
| Phenol-d5                 | 39.2   |      |     | % Rec. |           | 8270C  | 08/22/14 | 1    |
| Nitrobenzene-d5           | 68.4   |      |     | % Rec. |           | 8270C  | 08/22/14 | 1    |
| 2-Fluorobiphenyl          | 77.3   |      |     | % Rec. |           | 8270C  | 08/22/14 | 1    |
| 2,4,6-Tribromophenol      | 75.1   |      |     | % Rec. |           | 8270C  | 08/22/14 | 1    |
| p-Terphenyl-d14           | 77.2   |      |     | % Rec. |           | 8270C  | 08/22/14 | 1    |

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : August 20, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L716903-06

Sample ID : NP-5-0814-BG

Site ID :

Collected By :  
Collection Date : 08/19/14 12:35

Project # : TX000836.0008.00004

| Parameter             | Result  | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|---------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 380000  | 2600 | 50000  | ug/l  |           | 9056MOD | 08/20/14 | 50   |
| Fluoride              | 2100    | 9.9  | 100    | ug/l  |           | 9056MOD | 08/24/14 | 1    |
| Nitrate               | U       | 23.  | 100    | ug/l  |           | 9056MOD | 08/20/14 | 1    |
| Nitrite               | U       | 28.  | 100    | ug/l  |           | 9056MOD | 08/20/14 | 1    |
| Sulfate               | 3300000 | 3900 | 250000 | ug/l  |           | 9056MOD | 08/20/14 | 50   |
| Cyanide               | U       | 1.8  | 5.0    | ug/l  |           | 9012B   | 08/28/14 | 1    |
| Dissolved Solids      | 5500000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/22/14 | 1    |
| Aluminum              | 93.     | 2.0  | 50.    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Aluminum, Dissolved   | 14.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/22/14 | 1    |
| Arsenic               | 3.4     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Arsenic, Dissolved    | 3.2     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Barium                | 9.2     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Barium, Dissolved     | 7.8     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Boron                 | 1500    | 1.5  | 20.    | ug/l  |           | 6020    | 08/27/14 | 1    |
| Boron, Dissolved      | 1600    | 1.5  | 20.    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Cadmium               | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/25/14 | 1    |
| Cadmium, Dissolved    | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/22/14 | 1    |
| Calcium               | 550000  | 920  | 20000  | ug/l  |           | 6020    | 08/27/14 | 20   |
| Calcium, Dissolved    | 630000  | 460  | 10000  | ug/l  |           | 6020    | 08/25/14 | 10   |
| Chromium              | 1.6     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Chromium, Dissolved   | U       | 0.54 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Copper                | 0.94    | 0.52 | 1.0    | ug/l  | J         | 6020    | 08/25/14 | 1    |
| Copper, Dissolved     | 1.1     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/26/14 | 1    |
| Cobalt                | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Cobalt, Dissolved     | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Iron                  | 66.     | 50.  | 50.    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Iron, Dissolved       | U       | 50.  | 50.    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Lead                  | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Lead, Dissolved       | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Manganese             | 0.67    | 0.25 | 2.0    | ug/l  | J         | 6020    | 08/25/14 | 1    |
| Manganese, Dissolved  | U       | 0.25 | 2.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Molybdenum            | 30.     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Molybdenum, Dissolved | 31.     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Nickel                | 0.97    | 0.35 | 1.0    | ug/l  | J         | 6020    | 08/25/14 | 1    |
| Nickel, Dissolved     | 0.74    | 0.35 | 1.0    | ug/l  | J         | 6020    | 08/22/14 | 1    |
| Potassium             | 420     | 37.  | 1000   | ug/l  | J         | 6020    | 08/25/14 | 1    |
| Potassium, Dissolved  | 340     | 37.  | 1000   | ug/l  | J         | 6020    | 08/22/14 | 1    |
| Selenium              | 8.3     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Selenium, Dissolved   | 7.1     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Silver                | U       | 0.31 | 0.50   | ug/l  |           | 6020    | 08/25/14 | 1    |

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : August 20, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L716903-06

Sample ID : NP-5-0814-BG

Site ID :

Collected By :  
Collection Date : 08/19/14 12:35

Project # : TX000836.0008.00004

| Parameter                                           | Result | MDL   | RDL   | Units  | Qualifier | Method  | Date     | Dil. |
|-----------------------------------------------------|--------|-------|-------|--------|-----------|---------|----------|------|
| Silver, Dissolved                                   | U      | 0.31  | 0.50  | ug/l   |           | 6020    | 08/22/14 | 1    |
| Sodium                                              | 230000 | 2200  | 20000 | ug/l   |           | 6020    | 08/27/14 | 20   |
| Sodium, Dissolved                                   | 240000 | 1100  | 10000 | ug/l   |           | 6020    | 08/25/14 | 10   |
| Uranium                                             | 190    | 0.33  | 10.   | ug/l   |           | 6020    | 08/25/14 | 1    |
| Uranium, Dissolved                                  | 180    | 0.33  | 10.   | ug/l   |           | 6020    | 08/22/14 | 1    |
| Vanadium                                            | 20.    | 0.18  | 1.0   | ug/l   |           | 6020    | 08/25/14 | 1    |
| Vanadium, Dissolved                                 | 19.    | 0.18  | 1.0   | ug/l   |           | 6020    | 08/22/14 | 1    |
| Zinc                                                | U      | 2.6   | 10.   | ug/l   |           | 6020    | 08/25/14 | 1    |
| Zinc, Dissolved                                     | U      | 2.6   | 10.   | ug/l   |           | 6020    | 08/22/14 | 1    |
| Mercury                                             | U      | 0.049 | 0.20  | ug/l   |           | 7470A   | 08/25/14 | 1    |
| TPH (GC/FID) Low Fraction                           | U      | 31.   | 100   | ug/l   |           | 8015D/G | 08/24/14 | 1    |
| Surrogate Recovery-%<br>a,a,a-Trifluorotoluene(FID) | 98.7   |       |       | % Rec. |           | 8015D/G | 08/24/14 | 1    |
| Volatile Organics                                   |        |       |       |        |           |         |          |      |
| Benzene                                             | U      | 0.33  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Carbon tetrachloride                                | U      | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Chloroform                                          | U      | 0.32  | 5.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,2-Dibromoethane                                   | U      | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1-Dichloroethane                                  | U      | 0.26  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,2-Dichloroethane                                  | U      | 0.36  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1-Dichloroethene                                  | U      | 0.40  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Ethylbenzene                                        | U      | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Methylene Chloride                                  | U      | 1.0   | 5.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1,1,2-Tetrachloroethane                           | U      | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1,2,2-Tetrachloroethane                           | U      | 0.13  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Toluene                                             | U      | 0.78  | 5.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1,1-Trichloroethane                               | U      | 0.32  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Tetrachloroethene                                   | U      | 0.37  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| 1,1,2-Trichloroethane                               | U      | 0.38  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Vinyl chloride                                      | U      | 0.26  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| o-Xylene                                            | U      | 0.34  | 1.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| m&p-Xylene                                          | U      | 0.72  | 2.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Xylenes, Total                                      | U      | 1.1   | 3.0   | ug/l   |           | 8260B   | 08/22/14 | 1    |
| Surrogate Recovery                                  |        |       |       |        |           |         |          |      |
| Toluene-d8                                          | 101.   |       |       | % Rec. |           | 8260B   | 08/22/14 | 1    |
| Dibromofluoromethane                                | 93.4   |       |       | % Rec. |           | 8260B   | 08/22/14 | 1    |
| 4-Bromofluorobenzene                                | 94.4   |       |       | % Rec. |           | 8260B   | 08/22/14 | 1    |
| Diesel and Oil Ranges                               |        |       |       |        |           |         |          |      |
| C10-C28 Diesel Range                                | 40.    | 22.   | 100   | ug/l   | J         | 8015    | 08/22/14 | 1    |

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : August 20, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : NP-5-0814-BG  
Collected By :  
Collection Date : 08/19/14 12:35

ESC Sample # : L716903-06

Site ID :

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL  | RDL | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|------|-----|--------|-----------|--------|----------|------|
| C28-C40 Oil Range         | 39.    | 12.  | 100 | ug/l   | J         | 8015   | 08/22/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| o-Terphenyl               | 105.   |      |     | % Rec. |           | 8015   | 08/22/14 | 1    |
| Base/Neutral Extractables |        |      |     |        |           |        |          |      |
| Benzo(a)pyrene            | U      | 0.34 | 1.0 | ug/l   |           | 8270C  | 08/23/14 | 1    |
| 1-Methylnaphthalene       | U      | 0.33 | 1.0 | ug/l   |           | 8270C  | 08/23/14 | 1    |
| 2-Methylnaphthalene       | U      | 0.31 | 1.0 | ug/l   |           | 8270C  | 08/23/14 | 1    |
| Naphthalene               | U      | 0.37 | 1.0 | ug/l   |           | 8270C  | 08/23/14 | 1    |
| Surrogate Recovery        |        |      |     |        |           |        |          |      |
| 2-Fluorophenol            | 62.5   |      |     | % Rec. |           | 8270C  | 08/23/14 | 1    |
| Phenol-d5                 | 49.6   |      |     | % Rec. |           | 8270C  | 08/23/14 | 1    |
| Nitrobenzene-d5           | 92.6   |      |     | % Rec. |           | 8270C  | 08/23/14 | 1    |
| 2-Fluorobiphenyl          | 78.9   |      |     | % Rec. |           | 8270C  | 08/23/14 | 1    |
| 2,4,6-Tribromophenol      | 93.8   |      |     | % Rec. |           | 8270C  | 08/23/14 | 1    |
| p-Terphenyl-d14           | 74.7   |      |     | % Rec. |           | 8270C  | 08/23/14 | 1    |

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

MDL = Minimum Detection Limit = LOD = TRRP SDL

Note:

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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : August 20, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L716903-07

Sample ID : TRIPBLANK 05

Site ID :

Collected By :  
Collection Date : 08/18/14 00:00

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL     | RDL    | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|---------|--------|--------|-----------|--------|----------|------|
| Volatile Organics         |        |         |        |        |           |        |          |      |
| Benzene                   | U      | 0.00033 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| Carbon tetrachloride      | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| Chloroform                | U      | 0.00032 | 0.0050 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| 1,2-Dibromoethane         | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| 1,1-Dichloroethane        | U      | 0.00026 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| 1,2-Dichloroethane        | U      | 0.00036 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| 1,1-Dichloroethene        | U      | 0.00040 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| Ethylbenzene              | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| Methylene Chloride        | U      | 0.0010  | 0.0050 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| 1,1,1,2-Tetrachloroethane | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| 1,1,2,2-Tetrachloroethane | U      | 0.00013 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| Toluene                   | U      | 0.00078 | 0.0050 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| 1,1,1-Trichloroethane     | U      | 0.00032 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| Tetrachloroethene         | U      | 0.00037 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| 1,1,2-Trichloroethane     | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| Vinyl chloride            | U      | 0.00026 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| o-Xylene                  | U      | 0.00034 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| m&p-Xylene                | U      | 0.00072 | 0.0020 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| Xylenes, Total            | U      | 0.0011  | 0.0030 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| Surrogate Recovery        |        |         |        |        |           |        |          |      |
| Toluene-d8                | 101.   |         |        | % Rec. |           | 8260B  | 08/22/14 | 1    |
| Dibromofluoromethane      | 94.1   |         |        | % Rec. |           | 8260B  | 08/22/14 | 1    |
| 4-Bromofluorobenzene      | 98.0   |         |        | % Rec. |           | 8260B  | 08/22/14 | 1    |

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD = TRRP SDL

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : August 20, 2014  
Description : Navajo Refining Company - Artesia, NM  
Sample ID : TRIPBLANK 06  
Collected By :  
Collection Date : 08/18/14 00:00

ESC Sample # : L716903-08

Site ID :

Project # : TX000836.0008.00004

| Parameter                 | Result | MDL     | RDL    | Units  | Qualifier | Method | Date     | Dil. |
|---------------------------|--------|---------|--------|--------|-----------|--------|----------|------|
| <b>Volatile Organics</b>  |        |         |        |        |           |        |          |      |
| Benzene                   | U      | 0.00033 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| Carbon tetrachloride      | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| Chloroform                | U      | 0.00032 | 0.0050 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| 1,2-Dibromoethane         | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| 1,1-Dichloroethane        | U      | 0.00026 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| 1,2-Dichloroethane        | U      | 0.00036 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| 1,1-Dichloroethene        | U      | 0.00040 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| Ethylbenzene              | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| Methylene Chloride        | U      | 0.0010  | 0.0050 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| 1,1,1,2-Tetrachloroethane | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| 1,1,2,2-Tetrachloroethane | U      | 0.00013 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| Toluene                   | U      | 0.00078 | 0.0050 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| 1,1,1-Trichloroethane     | U      | 0.00032 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| Tetrachloroethene         | U      | 0.00037 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| 1,1,2-Trichloroethane     | U      | 0.00038 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| Vinyl chloride            | U      | 0.00026 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| o-Xylene                  | U      | 0.00034 | 0.0010 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| m&p-Xylene                | U      | 0.00072 | 0.0020 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| Xylenes, Total            | U      | 0.0011  | 0.0030 | mg/l   |           | 8260B  | 08/22/14 | 1    |
| <b>Surrogate Recovery</b> |        |         |        |        |           |        |          |      |
| Toluene-d8                | 101.   |         |        | % Rec. |           | 8260B  | 08/22/14 | 1    |
| Dibromofluoromethane      | 97.6   |         |        | % Rec. |           | 8260B  | 08/22/14 | 1    |
| 4-Bromofluorobenzene      | 98.0   |         |        | % Rec. |           | 8260B  | 08/22/14 | 1    |

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD = TRRP SDL

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

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Attachment A  
List of Analytes with QC Qualifiers

| Sample Number | Work Group | Sample Type | Analyte              | Run ID   | Qualifier |
|---------------|------------|-------------|----------------------|----------|-----------|
| L716903-01    | WG738790   | SAMP        | C10-C28 Diesel Range | R2979506 | J         |
|               | WG738790   | SAMP        | C28-C40 Oil Range    | R2979506 | J         |
|               | WG738881   | SAMP        | Aluminum             | R2980986 | J         |
|               | WG738880   | SAMP        | Aluminum, Dissolved  | R2980422 | J         |
|               | WG738881   | SAMP        | Calcium              | R2981803 | 01V       |
|               | WG738880   | SAMP        | Chromium, Dissolved  | R2980422 | J         |
|               | WG738881   | SAMP        | Cobalt               | R2980986 | J         |
|               | WG738881   | SAMP        | Selenium             | R2980986 | J         |
|               | WG738880   | SAMP        | Selenium, Dissolved  | R2980422 | J         |
|               | WG738881   | SAMP        | Sodium               | R2981803 | 01V       |
|               | WG738881   | SAMP        | Uranium              | R2980986 | J         |
|               | WG738880   | SAMP        | Uranium, Dissolved   | R2980422 | J         |
|               | WG738881   | SAMP        | Zinc                 | R2980986 | J         |
|               | WG738881   | SAMP        | Aluminum             | R2980986 | J         |
|               | WG738880   | SAMP        | Aluminum, Dissolved  | R2980422 | J         |
| L716903-02    | WG738880   | SAMP        | Calcium, Dissolved   | R2980985 | 01V       |
|               | WG738880   | SAMP        | Sodium, Dissolved    | R2980985 | V         |
|               | WG738881   | SAMP        | Uranium              | R2980986 | J         |
|               | WG738880   | SAMP        | Uranium, Dissolved   | R2980422 | J         |
|               | WG738881   | SAMP        | Zinc                 | R2980986 | J         |
| L716903-03    | WG738790   | SAMP        | C10-C28 Diesel Range | R2979506 | J         |
|               | WG738790   | SAMP        | C28-C40 Oil Range    | R2979506 | J         |
|               | WG738360   | SAMP        | Chloride             | R2978977 | J         |
|               | WG738360   | SAMP        | Sulfate              | R2978977 | J         |
|               | WG738498   | SAMP        | Dissolved Solids     | R2979748 | JT4       |
|               | WG738881   | SAMP        | Aluminum             | R2980986 | J         |
|               | WG738880   | SAMP        | Aluminum, Dissolved  | R2980422 | J         |
|               | WG738881   | SAMP        | Manganese            | R2980986 | J         |
|               | WG738880   | SAMP        | Nickel, Dissolved    | R2980422 | J         |
|               | WG738881   | SAMP        | Potassium            | R2980986 | J         |
|               | WG738880   | SAMP        | Potassium, Dissolved | R2980422 | J         |
|               | WG738881   | SAMP        | Selenium             | R2980986 | J         |
|               | WG738790   | SAMP        | C28-C40 Oil Range    | R2979506 | J         |
|               | WG738881   | SAMP        | Aluminum             | R2980986 | J         |
|               | WG738880   | SAMP        | Aluminum, Dissolved  | R2980422 | J         |
| L716903-04    | WG738881   | SAMP        | Copper               | R2980986 | J         |
|               | WG738881   | SAMP        | Cobalt               | R2980986 | J         |
|               | WG738880   | SAMP        | Cobalt, Dissolved    | R2980422 | J         |
|               | WG738790   | SAMP        | C10-C28 Diesel Range | R2979506 | J         |
|               | WG738790   | SAMP        | C28-C40 Oil Range    | R2979506 | J         |
| L716903-05    | WG738881   | SAMP        | Aluminum             | R2980986 | J         |
|               | WG738880   | SAMP        | Aluminum, Dissolved  | R2980422 | J         |
|               | WG738881   | SAMP        | Arsenic              | R2980986 | J         |
|               | WG738880   | SAMP        | Arsenic, Dissolved   | R2980422 | J         |
|               | WG739363   | SAMP        | Copper, Dissolved    | R2981311 | J         |
|               | WG738880   | SAMP        | Manganese, Dissolved | R2980422 | J         |
|               | WG738881   | SAMP        | Uranium              | R2980986 | J         |
|               | WG738880   | SAMP        | Uranium, Dissolved   | R2980422 | J         |
|               | WG738790   | SAMP        | C10-C28 Diesel Range | R2979506 | J         |
|               | WG738790   | SAMP        | C28-C40 Oil Range    | R2979506 | J         |
| L716903-06    | WG738880   | SAMP        | Aluminum, Dissolved  | R2980422 | J         |
|               | WG738881   | SAMP        | Copper               | R2980986 | J         |
|               | WG738881   | SAMP        | Manganese            | R2980986 | J         |
|               | WG738881   | SAMP        | Nickel               | R2980986 | J         |
|               | WG738880   | SAMP        | Nickel, Dissolved    | R2980422 | J         |
|               | WG738881   | SAMP        | Potassium            | R2980986 | J         |
|               | WG738880   | SAMP        | Potassium, Dissolved | R2980422 | J         |

Attachment B  
Explanation of QC Qualifier Codes

| Qualifier | Meaning                                                                                                                                               |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| J         | (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.                                                 |
| 01        | (ESC) The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference. |
| T4        | (ESC) - Additional method/sample information: QNS - Quantity Not Sufficient                                                                           |
| V         | (ESC) - Additional QC Info: The sample concentration is too high to evaluate accurate spike recoveries.                                               |

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy** - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision** - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate** - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC** - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Anions by Method 9056MOD              |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                             | <b>Analytic Batch:</b> | <b>WG738360</b> |
| Analysis Date:   | 8/20/2014 12:17:00 PM                 | Analyst:               | 577             |
| Instrument ID:   | IC-9                                  |                        |                 |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06   |                        |                 |

#### Method Blank

| Analyte         | CAS        | RDL     | MDL      | Qualifier |
|-----------------|------------|---------|----------|-----------|
| <b>Chloride</b> | 16887-00-6 | < 1.00  | < 0.0519 |           |
| <b>Nitrate</b>  | 14797-55-8 | < 0.100 | < 0.0227 |           |
| <b>Nitrite</b>  | 14797-65-0 | < 0.100 | < 0.0277 |           |
| <b>Sulfate</b>  | 14808-79-8 | < 5.00  | < 0.0774 |           |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Anions by Method 9056MOD              |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                             | <b>Analytic Batch:</b> | <b>WG738581</b> |
| Analysis Date:   | 8/22/2014 2:59:00 AM                  | Analyst:               | 236             |
| Instrument ID:   | IC-8                                  |                        |                 |
| Sample Numbers:  | L716903-01, -02, -03, -04             |                        |                 |

#### Method Blank

| Analyte         | CAS        | RDL     | MDL       | Qualifier |
|-----------------|------------|---------|-----------|-----------|
| Chloride        | 16887-00-6 | < 1.00  | < 0.0519  |           |
| <b>Fluoride</b> | 16984-48-8 | < 0.100 | < 0.00990 |           |
| Sulfate         | 14808-79-8 | < 5.00  | < 0.0774  |           |

#### Laboratory Control Sample (LCS)

| Analyte         | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|-----------------|-----|------------|--------|-------|----------------|------|
| Chloride        | 1   | 40         | 39.538 | 99    | 90 - 110       |      |
| <b>Fluoride</b> | 1   | 8          | 7.9411 | 99    | 90 - 110       |      |
| Sulfate         | 1   | 40         | 38.970 | 97    | 90 - 110       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte         | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|-----------------|-----|------------|--------|-------|----------------|------|
| Chloride        | 1   | 40         | 39.538 | 99    | 90 - 110       |      |
| <b>Fluoride</b> | 1   | 8          | 7.9553 | 99    | 90 - 110       |      |
| Sulfate         | 1   | 40         | 38.979 | 97    | 90 - 110       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte         | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | RPD Qual |
|-----------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|----------|
| Chloride        | 1   | 40    | 39.538 | 99    | 39.538 | 99    | 90 - 110       | 0          | 20                 |          |
| <b>Fluoride</b> | 1   | 8     | 7.9411 | 99    | 7.9553 | 99    | 90 - 110       | 0          | 20                 |          |
| Sulfate         | 1   | 40    | 38.970 | 97    | 38.979 | 97    | 90 - 110       | 0          | 20                 |          |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Anions by Method 9056MOD              |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                             | <b>Analytic Batch:</b> | <b>WG738675</b> |
| Analysis Date:   | 8/24/2014 11:07:00 AM                 | Analyst:               | 236             |
| Instrument ID:   | IC-8                                  |                        |                 |
| Sample Numbers:  | L716903-05, -06                       |                        |                 |

#### Method Blank

| Analyte         | CAS        | RDL     | MDL       | Qualifier |
|-----------------|------------|---------|-----------|-----------|
| Chloride        | 16887-00-6 | < 1.00  | < 0.0519  |           |
| <b>Fluoride</b> | 16984-48-8 | < 0.100 | < 0.00990 |           |
| Sulfate         | 14808-79-8 | < 5.00  | < 0.0774  |           |

#### Laboratory Control Sample (LCS)

| Analyte         | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|-----------------|-----|------------|--------|-------|----------------|------|
| Chloride        | 1   | 40         | 40.363 | 101   | 90 - 110       |      |
| <b>Fluoride</b> | 1   | 8          | 8.1336 | 102   | 90 - 110       |      |
| Sulfate         | 1   | 40         | 39.912 | 100   | 90 - 110       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte         | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|-----------------|-----|------------|--------|-------|----------------|------|
| Chloride        | 1   | 40         | 40.396 | 101   | 90 - 110       |      |
| <b>Fluoride</b> | 1   | 8          | 8.0999 | 101   | 90 - 110       |      |
| Sulfate         | 1   | 40         | 39.864 | 100   | 90 - 110       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte         | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec | Control RPD | Qual |
|-----------------|-----|-------|--------|-------|--------|-------|----------------|-------|-------------|------|
| Chloride        | 1   | 40    | 40.363 | 101   | 40.396 | 101   | 90 - 110       | 0     | 20          |      |
| <b>Fluoride</b> | 1   | 8     | 8.1336 | 102   | 8.0999 | 101   | 90 - 110       | 0     | 20          |      |
| Sulfate         | 1   | 40    | 39.912 | 100   | 39.864 | 100   | 90 - 110       | 0     | 20          |      |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |  |  |                        |                 |
|------------------|---------------------------------------|--|--|------------------------|-----------------|
| Test:            | Anions by Method 9056MOD              |  |  | Matrix:                | Water - mg/L    |
| Project No:      | TX000836.0008.00004                   |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM |  |  | <b>Analytic Batch:</b> | <b>WG738360</b> |
| Collection Date: | 8/18/2014                             |  |  | Analyst:               | 577             |
| Analysis Date:   | 8/20/2014 12:17:00 PM                 |  |  |                        |                 |
| Instrument ID:   | IC-9                                  |  |  |                        |                 |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06   |  |  |                        |                 |

#### Laboratory Control Sample (LCS)

| Analyte  | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------|-----|------------|--------|-------|----------------|------|
| Chloride | 1   | 40         | 39.633 | 99    | 90 - 110       |      |
| Nitrate  | 1   | 8          | 8.1119 | 101   | 90 - 110       |      |
| Nitrite  | 1   | 8          | 7.876  | 98    | 90 - 110       |      |
| Sulfate  | 1   | 40         | 39.698 | 99    | 90 - 110       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte  | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------|-----|------------|--------|-------|----------------|------|
| Chloride | 1   | 40         | 39.626 | 99    | 90 - 110       |      |
| Nitrate  | 1   | 8          | 8.1139 | 101   | 90 - 110       |      |
| Nitrite  | 1   | 8          | 7.9176 | 99    | 90 - 110       |      |
| Sulfate  | 1   | 40         | 39.687 | 99    | 90 - 110       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte  | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|----------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Chloride | 1   | 40    | 39.633 | 99    | 39.626 | 99    | 90 - 110       | 0          | 20                 |      |
| Nitrate  | 1   | 8     | 8.1119 | 101   | 8.1139 | 101   | 90 - 110       | 0          | 20                 |      |
| Nitrite  | 1   | 8     | 7.876  | 98    | 7.9176 | 99    | 90 - 110       | 1          | 20                 |      |
| Sulfate  | 1   | 40    | 39.698 | 99    | 39.687 | 99    | 90 - 110       | 0          | 20                 |      |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |  |  |                        |                 |
|------------------|---------------------------------------|--|--|------------------------|-----------------|
| Test:            | Anions by Method 9056MOD              |  |  | Matrix:                | Water - mg/L    |
| Project No:      | TX000836.0008.00004                   |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM |  |  | <b>Analytic Batch:</b> | <b>WG738360</b> |
| Collection Date: | 8/18/2014                             |  |  | Analyst:               | 577             |
| Analysis Date:   | 8/20/2014 12:17:00 PM                 |  |  |                        |                 |
| Instrument ID:   | IC-9                                  |  |  |                        |                 |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06   |  |  |                        |                 |

#### Sample Duplicate

L716926-03

| Analyte  | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|----------|-----|---------------|------------|-------|-------|-----------|
| Chloride | 1   | 0.8573        | 0.8603     | 0     | 20    |           |
| Nitrate  | 1   | <0.0227       | <0.0227    |       | 20    |           |
| Nitrite  | 1   | <0.0277       | <0.0277    |       | 20    |           |
| Sulfate  | 1   | 6.58          | 6.674      | 1     | 20    |           |

#### Sample Duplicate

L716802-03

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Nitrate | 1   | 0.2928        | 0.3089     | 5     | 20    |           |
| Nitrite | 1   | <0.0277       | <0.0277    |       | 20    |           |

#### Matrix Spike / Matrix Spike Duplicate

L716864-01

| Analyte | Dil | Spike Value | Sample  | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD | Control Limits | RPD Qual |
|---------|-----|-------------|---------|--------|-------|--------|-------|----------------|------------|-----|----------------|----------|
| Nitrate | 1   | 5           | 2.5127  | 7.2817 | 95    | 7.2596 | 95    | 80 - 120       |            | 0   | 20             |          |
| Nitrite | 1   | 5           | <0.0277 | 4.9496 | 99    | 4.9298 | 99    | 80 - 120       |            | 0   | 20             |          |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |  |  |                        |                 |
|------------------|---------------------------------------|--|--|------------------------|-----------------|
| Test:            | Anions by Method 9056MOD              |  |  | Matrix:                | Water - mg/L    |
| Project No:      | TX000836.0008.00004                   |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM |  |  | <b>Analytic Batch:</b> | <b>WG738581</b> |
| Collection Date: | 8/18/2014                             |  |  | Analyst:               | 236             |
| Analysis Date:   | 8/22/2014 2:59:00 AM                  |  |  |                        |                 |
| Instrument ID:   | IC-8                                  |  |  |                        |                 |
| Sample Numbers:  | L716903-01, -02, -03, -04             |  |  |                        |                 |

#### Sample Duplicate

L717024-02

| Analyte  | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|----------|-----|---------------|------------|-------|-------|-----------|
| Chloride | 1   | 20.205        | 20.413     | 1     | 20    |           |

#### Sample Duplicate

L717033-01

| Analyte         | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|-----------------|-----|---------------|------------|-------|-------|-----------|
| Chloride        | 1   | 21.124        | 21.024     | 0     | 20    |           |
| <b>Fluoride</b> | 1   | 0.1259        | 0.1231     | 2     | 20    |           |
| Sulfate         | 1   | 12.381        | 12.357     | 0     | 20    |           |

#### Matrix Spike / Matrix Spike Duplicate

L717024-03

| Analyte  | Dil | Spike Value | Sample | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD | Control Limits | RPD Qual |
|----------|-----|-------------|--------|--------|-------|--------|-------|----------------|------------|-----|----------------|----------|
| Chloride | 1   | 50          | 14.367 | 63.539 | 98    | 62.971 | 97    | 80 - 120       |            | 1   | 20             |          |



## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |  |  |                        |                 |
|------------------|---------------------------------------|--|--|------------------------|-----------------|
| Test:            | Anions by Method 9056MOD              |  |  | Matrix:                | Water - mg/L    |
| Project No:      | TX000836.0008.00004                   |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM |  |  | <b>Analytic Batch:</b> | <b>WG738675</b> |
| Collection Date: | 8/18/2014                             |  |  | Analyst:               | 236             |
| Analysis Date:   | 8/24/2014 11:07:00 AM                 |  |  |                        |                 |
| Instrument ID:   | IC-8                                  |  |  |                        |                 |
| Sample Numbers:  | L716903-05, -06                       |  |  |                        |                 |

#### Sample Duplicate

L717235-01

| Analyte  | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|----------|-----|---------------|------------|-------|-------|-----------|
| Chloride | 1   | 36.545        | 35.780     | 2     | 20    |           |
| Sulfate  | 1   | 13.189        | 14.395     | 9     | 20    |           |

#### Sample Duplicate

L716903-05

| Analyte  | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|----------|-----|---------------|------------|-------|-------|-----------|
| Fluoride | 1   | 1.0175        | 1.0298     | 1     | 20    |           |

#### Matrix Spike / Matrix Spike Duplicate

L717232-01

| Analyte  | Dil | Spike Value | Sample | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD | Control Limits | RPD Qual |
|----------|-----|-------------|--------|--------|-------|--------|-------|----------------|------------|-----|----------------|----------|
| Chloride | 1   | 50          | 3.8931 | 50.153 | 93    | 50.713 | 94    | 80 - 120       |            | 1   | 20             |          |
| Sulfate  | 1   | 50          | 0.4054 | 47.063 | 93    | 47.958 | 95    | 80 - 120       |            | 2   | 20             |          |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Cyanide by Method 9012B               |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                             | <b>Analytic Batch:</b> | <b>WG739809</b> |
| Analysis Date:   | 8/28/2014 7:12:00 PM                  | Analyst:               | 183             |
| Instrument ID:   | LACHAT4                               |                        |                 |
| Sample Numbers:  | L716903-06                            |                        |                 |

#### Method Blank

| Analyte | CAS     | RDL       | MDL       | Qualifier |
|---------|---------|-----------|-----------|-----------|
| Cyanide | 57-12-5 | < 0.00500 | < 0.00180 |           |

#### Laboratory Control Sample (LCS)

| Analyte | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------|-----|------------|--------|-------|----------------|------|
| Cyanide | 1   | 0.1        | 0.0963 | 96.3  | 90 - 110       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------|-----|------------|--------|-------|----------------|------|
| Cyanide | 1   | 0.1        | 0.0934 | 93.4  | 90 - 110       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD % RPD | Control RPD Limits | Control RPD Qual |
|---------|-----|-------|--------|-------|--------|-------|----------------|------------|-------------------|--------------------|------------------|
| Cyanide | 1   | 0.1   | 0.0963 | 96.3  | 0.0934 | 93.4  | 90 - 110       | 3.06       | 20                |                    |                  |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Cyanide by Method 9012B               |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                             | <b>Analytic Batch:</b> | <b>WG739942</b> |
| Analysis Date:   | 8/28/2014 2:32:00 PM                  | Analyst:               | 578             |
| Instrument ID:   | LACHAT4                               |                        |                 |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05        |                        |                 |

#### Method Blank

| Analyte | CAS     | RDL       | MDL       | Qualifier |
|---------|---------|-----------|-----------|-----------|
| Cyanide | 57-12-5 | < 0.00500 | < 0.00180 |           |

#### Laboratory Control Sample (LCS)

| Analyte | Dil | True Value | Found | % Rec | Control Limits | Qual |
|---------|-----|------------|-------|-------|----------------|------|
| Cyanide | 1   | 0.1        | 0.105 | 105   | 90 - 110       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte | Dil | True Value | Found | % Rec | Control Limits | Qual |
|---------|-----|------------|-------|-------|----------------|------|
| Cyanide | 1   | 0.1        | 0.104 | 104   | 90 - 110       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte | Dil | Spike | LCS   | % Rec | LCSD  | % Rec | Control Limits | % Rec Qual | Control RPD % RPD | Control RPD Limits | Control RPD Qual |
|---------|-----|-------|-------|-------|-------|-------|----------------|------------|-------------------|--------------------|------------------|
| Cyanide | 1   | 0.1   | 0.105 | 105   | 0.104 | 104   | 90 - 110       | 0.96       | 20                |                    |                  |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |  |  |                        |                 |
|------------------|---------------------------------------|--|--|------------------------|-----------------|
| Test:            | Cyanide by Method 9012B               |  |  | Matrix:                | Water - mg/L    |
| Project No:      | TX000836.0008.00004                   |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM |  |  | <b>Analytic Batch:</b> | <b>WG739809</b> |
| Collection Date: | 8/18/2014                             |  |  | Analyst:               | 183             |
| Analysis Date:   | 8/28/2014 7:12:00 PM                  |  |  |                        |                 |
| Instrument ID:   | LACHAT4                               |  |  |                        |                 |
| Sample Numbers:  | L716903-06                            |  |  |                        |                 |

#### Sample Duplicate

L716986-02

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Cyanide | 1   | <0.0018       | <0.0018    |       | 20    |           |

#### Sample Duplicate

L716871-02

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Cyanide | 1   | <0.0018       | <0.0018    |       | 20    |           |

#### Matrix Spike / Matrix Spike Duplicate

L716888-02

| Analyte | Dil | Spike Value | Sample  | MS    | % Rec | MSD   | % Rec | Control Limits | % Rec Qual | RPD  | Control Limits | RPD Qual |
|---------|-----|-------------|---------|-------|-------|-------|-------|----------------|------------|------|----------------|----------|
| Cyanide | 1   | 0.2         | <0.0018 | 0.194 | 97    | 0.189 | 94.5  | 90 - 110       |            | 2.61 | 20             |          |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |  |  |                        |                 |
|------------------|---------------------------------------|--|--|------------------------|-----------------|
| Test:            | Cyanide by Method 9012B               |  |  | Matrix:                | Water - mg/L    |
| Project No:      | TX000836.0008.00004                   |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM |  |  | <b>Analytic Batch:</b> | <b>WG739942</b> |
| Collection Date: | 8/18/2014                             |  |  | Analyst:               | 578             |
| Analysis Date:   | 8/28/2014 2:32:00 PM                  |  |  |                        |                 |
| Instrument ID:   | LACHAT4                               |  |  |                        |                 |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05        |  |  |                        |                 |

#### Sample Duplicate

L716903-01

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Cyanide | 1   | <0.0018       | <0.0018    |       | 20    |           |

#### Sample Duplicate

L716903-04

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Cyanide | 1   | <0.0018       | <0.0018    |       | 20    |           |

#### Matrix Spike / Matrix Spike Duplicate

L717757-01

| Analyte | Dil | Spike Value | Sample  | MS    | % Rec | MSD   | % Rec | Control Limits | % Rec Qual | RPD  | Control Limits | RPD Qual |
|---------|-----|-------------|---------|-------|-------|-------|-------|----------------|------------|------|----------------|----------|
| Cyanide | 1   | 0.2         | <0.0018 | 0.207 | 104   | 0.196 | 98    | 90 - 110       |            | 5.46 | 20             |          |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                              |                        |                 |
|------------------|----------------------------------------------|------------------------|-----------------|
| Test:            | Total Dissolved Solids by Method 2540 C-2011 |                        |                 |
| Project No:      | TX000836.0008.00004                          | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM        | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                    | <b>Analytic Batch:</b> | <b>WG738498</b> |
| Analysis Date:   | 8/22/2014 4:36:00 PM                         | Analyst:               | 519             |
| Instrument ID:   | WETBAL2                                      |                        |                 |
| Sample Numbers:  | L716903-01, -02, -03                         |                        |                 |

#### Method Blank

| Analyte          | CAS     | RDL    | MDL    | Qualifier |
|------------------|---------|--------|--------|-----------|
| Dissolved Solids | DSOLIDS | < 10.0 | < 2.82 |           |

#### Laboratory Control Sample (LCS)

| Analyte          | Dil | True Value | Found | % Rec | Control Limits | Qual |
|------------------|-----|------------|-------|-------|----------------|------|
| Dissolved Solids | 1   | 8800       | 8760  | 99.5  | 85 - 115       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte          | Dil | True Value | Found | % Rec | Control Limits | Qual |
|------------------|-----|------------|-------|-------|----------------|------|
| Dissolved Solids | 1   | 8800       | 8750  | 99.4  | 85 - 115       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte          | Dil | Spike | LCS  | % Rec | LCSD | % Rec | Control Limits | % Rec Qual | Control RPD % RPD | Control RPD Limits | Control RPD Qual |
|------------------|-----|-------|------|-------|------|-------|----------------|------------|-------------------|--------------------|------------------|
| Dissolved Solids | 1   | 8800  | 8760 | 99.5  | 8750 | 99.4  | 85 - 115       | 0.11       | 5                 |                    |                  |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                              |                        |                 |
|------------------|----------------------------------------------|------------------------|-----------------|
| Test:            | Total Dissolved Solids by Method 2540 C-2011 |                        |                 |
| Project No:      | TX000836.0008.00004                          | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM        | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                    | <b>Analytic Batch:</b> | <b>WG738500</b> |
| Analysis Date:   | 8/22/2014 4:32:00 PM                         | Analyst:               | 36              |
| Instrument ID:   | WETBAL1                                      |                        |                 |
| Sample Numbers:  | L716903-04, -05, -06                         |                        |                 |

#### Method Blank

| Analyte          | CAS     | RDL    | MDL    | Qualifier |
|------------------|---------|--------|--------|-----------|
| Dissolved Solids | DSOLIDS | < 10.0 | < 2.82 |           |

#### Laboratory Control Sample (LCS)

| Analyte          | Dil | True Value | Found | % Rec | Control Limits | Qual |
|------------------|-----|------------|-------|-------|----------------|------|
| Dissolved Solids | 1   | 8800       | 8780  | 99.8  | 85 - 115       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte          | Dil | True Value | Found | % Rec | Control Limits | Qual |
|------------------|-----|------------|-------|-------|----------------|------|
| Dissolved Solids | 1   | 8800       | 8840  | 100   | 85 - 115       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte          | Dil | Spike | LCS  | % Rec | LCSD | % Rec | Control Limits | % Rec Qual | Control RPD % RPD | Control RPD Limits | Control RPD Qual |
|------------------|-----|-------|------|-------|------|-------|----------------|------------|-------------------|--------------------|------------------|
| Dissolved Solids | 1   | 8800  | 8780 | 99.8  | 8840 | 100   | 85 - 115       | 0.68       | 5                 |                    |                  |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                              |                        |                 |
|------------------|----------------------------------------------|------------------------|-----------------|
| Test:            | Total Dissolved Solids by Method 2540 C-2011 |                        |                 |
| Project No:      | TX000836.0008.00004                          | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM        | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                    | <b>Analytic Batch:</b> | <b>WG738498</b> |
| Analysis Date:   | 8/22/2014 4:36:00 PM                         | Analyst:               | 519             |
| Instrument ID:   | WETBAL2                                      |                        |                 |
| Sample Numbers:  | L716903-01, -02, -03                         |                        |                 |

### Sample Duplicate

L716822-01

| Analyte          | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|------------------|-----|---------------|------------|-------|-------|-----------|
| Dissolved Solids | 1   | 148           | 150        | 1.34  | 5     |           |



## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                              |                        |                 |
|------------------|----------------------------------------------|------------------------|-----------------|
| Test:            | Total Dissolved Solids by Method 2540 C-2011 |                        |                 |
| Project No:      | TX000836.0008.00004                          | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM        | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                    | <b>Analytic Batch:</b> | <b>WG738500</b> |
| Analysis Date:   | 8/22/2014 4:32:00 PM                         | Analyst:               | 36              |
| Instrument ID:   | WETBAL1                                      |                        |                 |
| Sample Numbers:  | L716903-04, -05, -06                         |                        |                 |

### Sample Duplicate

L716852-02

| Analyte          | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|------------------|-----|---------------|------------|-------|-------|-----------|
| Dissolved Solids | 1   | 55            | 60         | 8.7   | 5     | J3        |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Mercury by Method 7470A               |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                             | <b>Analytic Batch:</b> | <b>WG738361</b> |
| Analysis Date:   | 8/25/2014 11:54:00 AM                 | Analyst:               | 628             |
| Instrument ID:   | CVAA3                                 | Prep Date:             | 8/20/2014       |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06   |                        |                 |

#### Method Blank

| Analyte | CAS       | RDL     | MDL      | Qualifier |
|---------|-----------|---------|----------|-----------|
| Mercury | 7439-97-6 | < 0.200 | < 0.0490 |           |

#### Laboratory Control Sample (LCS)

| Analyte | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------|-----|------------|--------|-------|----------------|------|
| Mercury | 1   | 3          | 2.6908 | 90    | 85 - 115       |      |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |  |  |                        |                 |
|------------------|---------------------------------------|--|--|------------------------|-----------------|
| Test:            | Mercury by Method 7470A               |  |  | Matrix:                | Water - ug/L    |
| Project No:      | TX000836.0008.00004                   |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM |  |  | <b>Analytic Batch:</b> | <b>WG738361</b> |
| Collection Date: | 8/18/2014                             |  |  | Analyst:               | 628             |
| Analysis Date:   | 8/25/2014 11:54:00 AM                 |  |  | Prep Date:             | 8/20/2014       |
| Instrument ID:   | CVAA3                                 |  |  |                        |                 |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06   |  |  |                        |                 |

#### Sample Duplicate

L716643-02

| Analyte | Dil | Sample Result | DUP Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|------------|-------|-------|-----------|
| Mercury | 1   | <0.049        | <0.049     |       | 20    |           |

#### Serial Dilution

L716643-02

| Analyte | Dil | Sample Result | SD Result | % RPD | Limit | Qualifier |
|---------|-----|---------------|-----------|-------|-------|-----------|
| Mercury | 5   | <0.049        | <0.245    |       | 10    |           |

#### Matrix Spike / Matrix Spike Duplicate

L716643-02

| Analyte | Dil | Spike Value | Sample | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD | Control Limits | RPD Qual |
|---------|-----|-------------|--------|--------|-------|--------|-------|----------------|------------|-----|----------------|----------|
| Mercury | 1   | 3           | <0.049 | 2.5489 | 84    | 2.4560 | 81    | 80 - 120       |            | 4   | 20             |          |

#### Matrix Spike / Matrix Spike Duplicate

L716837-01

| Analyte | Dil | Spike Value | Sample | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD | Control Limits | RPD Qual |
|---------|-----|-------------|--------|--------|-------|--------|-------|----------------|------------|-----|----------------|----------|
| Mercury | 1   | 3           | <0.049 | 2.4647 | 82    | 2.2006 | 73    | 80 - 120       | J6         | 11  | 20             |          |

#### Post Digest Spike

L716837-01

| Analyte | Dil | Spike Value | Sample | Result | % Rec | Control Limits | Qualifier |
|---------|-----|-------------|--------|--------|-------|----------------|-----------|
| Mercury | 1   | 3           | <0.049 | 3.5938 | 119   | 85-115         | O1        |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                             | <b>Analytic Batch:</b> | <b>WG738880</b> |
| Analysis Date:   | 8/22/2014 4:50:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/22/2014       |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06   |                        |                 |

#### Method Blank

| Analyte              | CAS       | RDL    | MDL     | Qualifier |
|----------------------|-----------|--------|---------|-----------|
| Aluminum,Dissolved   | 7429-90-5 | < 100  | 2.67    |           |
| Arsenic,Dissolved    | 7440-38-2 | < 2.00 | < 0.250 |           |
| Barium,Dissolved     | 7440-39-3 | < 5.00 | < 0.360 |           |
| Boron,Dissolved      | 7440-42-8 | < 20.0 | 2.02    |           |
| Cadmium,Dissolved    | 7440-43-9 | < 1.00 | < 0.160 |           |
| Calcium,Dissolved    | 7440-70-2 | < 1000 | < 46.0  |           |
| Chromium,Dissolved   | 7440-47-3 | < 1.00 | < 0.540 |           |
| Cobalt,Dissolved     | 7440-48-4 | < 2.00 | < 0.260 |           |
| Copper,Dissolved     | 7440-50-8 | 3.09   | 3.09    | B         |
| Iron,Dissolved       | 7439-89-6 | < 100  | < 15.0  |           |
| Lead,Dissolved       | 7439-92-1 | < 2.00 | < 0.240 |           |
| Manganese,Dissolved  | 7439-96-5 | < 5.00 | < 0.250 |           |
| Molybdenum,Dissolved | 7439-98-7 | < 5.00 | < 0.140 |           |
| Nickel,Dissolved     | 7440-02-0 | < 2.00 | < 0.350 |           |
| Potassium,Dissolved  | 7440-09-7 | < 1000 | < 37.0  |           |
| Selenium,Dissolved   | 7782-49-2 | < 2.00 | < 0.380 |           |
| Silver,Dissolved     | 7440-22-4 | < 2.00 | < 0.310 |           |
| Sodium,Dissolved     | 7440-23-5 | < 1000 | 251     |           |
| Uranium,Dissolved    | 7440-61-1 | < 10.0 | < 0.330 |           |
| Vanadium,Dissolved   | 7440-62-2 | < 5.00 | < 0.180 |           |
| Zinc,Dissolved       | 7440-66-6 | < 25.0 | < 2.56  |           |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                             | <b>Analytic Batch:</b> | <b>WG738881</b> |
| Analysis Date:   | 8/25/2014 2:38:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/22/2014       |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06   |                        |                 |

#### Method Blank

| Analyte    | CAS       | RDL    | MDL     | Qualifier |
|------------|-----------|--------|---------|-----------|
| Aluminum   | 7429-90-5 | < 100  | 4.14    |           |
| Arsenic    | 7440-38-2 | < 2.00 | < 0.250 |           |
| Barium     | 7440-39-3 | < 5.00 | < 0.360 |           |
| Boron      | 7440-42-8 | < 20.0 | 5.38    |           |
| Cadmium    | 7440-43-9 | < 1.00 | < 0.160 |           |
| Calcium    | 7440-70-2 | < 1000 | < 46.0  |           |
| Chromium   | 7440-47-3 | < 1.00 | 0.669   |           |
| Cobalt     | 7440-48-4 | < 2.00 | < 0.260 |           |
| Copper     | 7440-50-8 | < 5.00 | < 0.520 |           |
| Iron       | 7439-89-6 | < 100  | < 15.0  |           |
| Lead       | 7439-92-1 | < 2.00 | < 0.240 |           |
| Manganese  | 7439-96-5 | < 5.00 | < 0.250 |           |
| Molybdenum | 7439-98-7 | < 5.00 | < 0.140 |           |
| Nickel     | 7440-02-0 | < 2.00 | < 0.350 |           |
| Potassium  | 7440-09-7 | < 1000 | < 37.0  |           |
| Selenium   | 7782-49-2 | < 2.00 | < 0.380 |           |
| Silver     | 7440-22-4 | < 2.00 | < 0.310 |           |
| Sodium     | 7440-23-5 | < 1000 | < 110   |           |
| Uranium    | 7440-61-1 | < 10.0 | < 0.330 |           |
| Vanadium   | 7440-62-2 | < 5.00 | < 0.180 |           |
| Zinc       | 7440-66-6 | < 25.0 | < 2.56  |           |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |  |  |                        |                 |
|------------------|---------------------------------------|--|--|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |  |  | Matrix:                | Water - ug/L    |
| Project No:      | TX000836.0008.00004                   |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM |  |  | <b>Analytic Batch:</b> | <b>WG739363</b> |
| Collection Date: | 8/18/2014                             |  |  | Analyst:               | 664             |
| Analysis Date:   | 8/26/2014 1:17:00 PM                  |  |  | Prep Date:             | 8/25/2014       |
| Instrument ID:   | ICPMS8                                |  |  |                        |                 |
| Sample Numbers:  | L716903-01, -02, -04, -05, -06        |  |  |                        |                 |

#### Method Blank

| Analyte          | CAS       | RDL    | MDL     | Qualifier |
|------------------|-----------|--------|---------|-----------|
| Copper,Dissolved | 7440-50-8 | < 5.00 | < 0.520 |           |

#### Laboratory Control Sample (LCS)

| Analyte          | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|------------------|-----|------------|--------|-------|----------------|------|
| Copper,Dissolved | 1   | 111        | 115.11 | 104   | 85 - 115       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte          | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|------------------|-----|------------|--------|-------|----------------|------|
| Copper,Dissolved | 1   | 111        | 114.08 | 103   | 85 - 115       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte          | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|------------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Copper,Dissolved | 1   | 111   | 115.11 | 104   | 114.08 | 103   | 85 - 115       | 1          | 20                 |      |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                             | <b>Analytic Batch:</b> | <b>WG738880</b> |
| Analysis Date:   | 8/22/2014 4:50:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/22/2014       |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06   |                        |                 |

### Laboratory Control Sample (LCS)

| Analyte              | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------------------|-----|------------|--------|-------|----------------|------|
| Aluminum,Dissolved   | 1   | 1110       | 1174.6 | 106   | 70 - 130       |      |
| Arsenic,Dissolved    | 1   | 111        | 114.37 | 103   | 85 - 115       |      |
| Barium,Dissolved     | 1   | 111        | 115.45 | 104   | 85 - 115       |      |
| Boron,Dissolved      | 1   | 111        | 118.43 | 107   | 70 - 130       |      |
| Cadmium,Dissolved    | 1   | 111        | 113.35 | 102   | 85 - 115       |      |
| Calcium,Dissolved    | 1   | 11100      | 12354  | 111   | 70 - 130       |      |
| Chromium,Dissolved   | 1   | 111        | 110.69 | 100   | 85 - 115       |      |
| Cobalt,Dissolved     | 1   | 111        | 116.26 | 105   | 85 - 115       |      |
| Copper,Dissolved     | 1   | 111        | 114.64 | 103   | 85 - 115       |      |
| Iron,Dissolved       | 1   | 1110       | 1178.9 | 106   | 85 - 115       |      |
| Lead,Dissolved       | 1   | 111        | 111.19 | 100   | 85 - 115       |      |
| Manganese,Dissolved  | 1   | 111        | 120.35 | 108   | 85 - 115       |      |
| Molybdenum,Dissolved | 1   | 111        | 115.39 | 104   | 85 - 115       |      |
| Nickel,Dissolved     | 1   | 111        | 116.06 | 105   | 85 - 115       |      |
| Potassium,Dissolved  | 1   | 11100      | 11661  | 105   | 70 - 130       |      |
| Selenium,Dissolved   | 1   | 111        | 114.09 | 103   | 85 - 115       |      |
| Silver,Dissolved     | 1   | 111        | 112.20 | 101   | 85 - 115       |      |
| Sodium,Dissolved     | 1   | 11100      | 12023  | 108   | 70 - 130       |      |
| Uranium,Dissolved    | 1   | 111        | 110.32 | 99    | 70 - 130       |      |
| Vanadium,Dissolved   | 1   | 111        | 112.74 | 102   | 85 - 115       |      |
| Zinc,Dissolved       | 1   | 111        | 113.39 | 102   | 85 - 115       |      |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                             | <b>Analytic Batch:</b> | <b>WG738880</b> |
| Analysis Date:   | 8/22/2014 4:50:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/22/2014       |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06   |                        |                 |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte              | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------------------|-----|------------|--------|-------|----------------|------|
| Aluminum,Dissolved   | 1   | 1110       | 1156.8 | 104   | 70 - 130       |      |
| Arsenic,Dissolved    | 1   | 111        | 110.82 | 100   | 85 - 115       |      |
| Barium,Dissolved     | 1   | 111        | 113.81 | 103   | 85 - 115       |      |
| Boron,Dissolved      | 1   | 111        | 127.75 | 115   | 70 - 130       |      |
| Cadmium,Dissolved    | 1   | 111        | 110.38 | 99    | 85 - 115       |      |
| Calcium,Dissolved    | 1   | 11100      | 12377  | 112   | 70 - 130       |      |
| Chromium,Dissolved   | 1   | 111        | 109.37 | 99    | 85 - 115       |      |
| Cobalt,Dissolved     | 1   | 111        | 113.48 | 102   | 85 - 115       |      |
| Copper,Dissolved     | 1   | 111        | 110.71 | 100   | 85 - 115       |      |
| Iron,Dissolved       | 1   | 1110       | 1146.1 | 103   | 85 - 115       |      |
| Lead,Dissolved       | 1   | 111        | 109.52 | 99    | 85 - 115       |      |
| Manganese,Dissolved  | 1   | 111        | 118.54 | 107   | 85 - 115       |      |
| Molybdenum,Dissolved | 1   | 111        | 113.67 | 102   | 85 - 115       |      |
| Nickel,Dissolved     | 1   | 111        | 113.70 | 102   | 85 - 115       |      |
| Potassium,Dissolved  | 1   | 11100      | 11577  | 104   | 70 - 130       |      |
| Selenium,Dissolved   | 1   | 111        | 109.94 | 99    | 85 - 115       |      |
| Silver,Dissolved     | 1   | 111        | 110.73 | 100   | 85 - 115       |      |
| Sodium,Dissolved     | 1   | 11100      | 11759  | 106   | 70 - 130       |      |
| Uranium,Dissolved    | 1   | 111        | 108.65 | 98    | 70 - 130       |      |
| Vanadium,Dissolved   | 1   | 111        | 111.48 | 100   | 85 - 115       |      |
| Zinc,Dissolved       | 1   | 111        | 109.78 | 99    | 85 - 115       |      |



## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                             | <b>Analytic Batch:</b> | <b>WG738880</b> |
| Analysis Date:   | 8/22/2014 4:50:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/22/2014       |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06   |                        |                 |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte              | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|----------------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Aluminum,Dissolved   | 1   | 1110  | 1174.6 | 106   | 1156.8 | 104   | 70 - 130       | 2          | 20                 |      |
| Arsenic,Dissolved    | 1   | 111   | 114.37 | 103   | 110.82 | 100   | 85 - 115       | 3          | 20                 |      |
| Barium,Dissolved     | 1   | 111   | 115.45 | 104   | 113.81 | 103   | 85 - 115       | 1          | 20                 |      |
| Boron,Dissolved      | 1   | 111   | 118.43 | 107   | 127.75 | 115   | 70 - 130       | 8          | 20                 |      |
| Cadmium,Dissolved    | 1   | 111   | 113.35 | 102   | 110.38 | 99    | 85 - 115       | 3          | 20                 |      |
| Calcium,Dissolved    | 1   | 11100 | 12354  | 111   | 12377  | 112   | 70 - 130       | 0          | 20                 |      |
| Chromium,Dissolved   | 1   | 111   | 110.69 | 100   | 109.37 | 99    | 85 - 115       | 1          | 20                 |      |
| Cobalt,Dissolved     | 1   | 111   | 116.26 | 105   | 113.48 | 102   | 85 - 115       | 2          | 20                 |      |
| Copper,Dissolved     | 1   | 111   | 114.64 | 103   | 110.71 | 100   | 85 - 115       | 3          | 20                 |      |
| Iron,Dissolved       | 1   | 1110  | 1178.9 | 106   | 1146.1 | 103   | 85 - 115       | 3          | 20                 |      |
| Lead,Dissolved       | 1   | 111   | 111.19 | 100   | 109.52 | 99    | 85 - 115       | 2          | 20                 |      |
| Manganese,Dissolved  | 1   | 111   | 120.35 | 108   | 118.54 | 107   | 85 - 115       | 2          | 20                 |      |
| Molybdenum,Dissolved | 1   | 111   | 115.39 | 104   | 113.67 | 102   | 85 - 115       | 1          | 20                 |      |
| Nickel,Dissolved     | 1   | 111   | 116.06 | 105   | 113.70 | 102   | 85 - 115       | 2          | 20                 |      |
| Potassium,Dissolved  | 1   | 11100 | 11661  | 105   | 11577  | 104   | 70 - 130       | 1          | 20                 |      |
| Selenium,Dissolved   | 1   | 111   | 114.09 | 103   | 109.94 | 99    | 85 - 115       | 4          | 20                 |      |
| Silver,Dissolved     | 1   | 111   | 112.20 | 101   | 110.73 | 100   | 85 - 115       | 1          | 20                 |      |
| Sodium,Dissolved     | 1   | 11100 | 12023  | 108   | 11759  | 106   | 70 - 130       | 2          | 20                 |      |
| Uranium,Dissolved    | 1   | 111   | 110.32 | 99    | 108.65 | 98    | 70 - 130       | 2          | 20                 |      |
| Vanadium,Dissolved   | 1   | 111   | 112.74 | 102   | 111.48 | 100   | 85 - 115       | 1          | 20                 |      |
| Zinc,Dissolved       | 1   | 111   | 113.39 | 102   | 109.78 | 99    | 85 - 115       | 3          | 20                 |      |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                             | <b>Analytic Batch:</b> | <b>WG738881</b> |
| Analysis Date:   | 8/25/2014 2:38:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/22/2014       |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06   |                        |                 |

### Laboratory Control Sample (LCS)

| Analyte    | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|------------|-----|------------|--------|-------|----------------|------|
| Aluminum   | 1   | 1110       | 1141.0 | 103   | 70 - 130       |      |
| Arsenic    | 1   | 111        | 111.46 | 100   | 85 - 115       |      |
| Barium     | 1   | 111        | 113.69 | 102   | 85 - 115       |      |
| Boron      | 1   | 111        | 112.58 | 101   | 70 - 130       |      |
| Cadmium    | 1   | 111        | 112.64 | 101   | 85 - 115       |      |
| Calcium    | 1   | 11100      | 12934  | 117   | 70 - 130       |      |
| Chromium   | 1   | 111        | 112.51 | 101   | 85 - 115       |      |
| Cobalt     | 1   | 111        | 112.99 | 102   | 85 - 115       |      |
| Copper     | 1   | 111        | 110.82 | 100   | 85 - 115       |      |
| Iron       | 1   | 1110       | 1095.8 | 99    | 85 - 115       |      |
| Lead       | 1   | 111        | 115.27 | 104   | 85 - 115       |      |
| Manganese  | 1   | 111        | 113.15 | 102   | 85 - 115       |      |
| Molybdenum | 1   | 111        | 111.10 | 100   | 85 - 115       |      |
| Nickel     | 1   | 111        | 111.26 | 100   | 85 - 115       |      |
| Potassium  | 1   | 11100      | 11469  | 103   | 70 - 130       |      |
| Selenium   | 1   | 111        | 112.60 | 101   | 85 - 115       |      |
| Silver     | 1   | 111        | 119.18 | 107   | 85 - 115       |      |
| Sodium     | 1   | 11100      | 12325  | 111   | 70 - 130       |      |
| Uranium    | 1   | 111        | 114.35 | 103   | 70 - 130       |      |
| Vanadium   | 1   | 111        | 115.51 | 104   | 85 - 115       |      |
| Zinc       | 1   | 111        | 109.01 | 98    | 85 - 115       |      |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                             | <b>Analytic Batch:</b> | <b>WG738881</b> |
| Analysis Date:   | 8/25/2014 2:38:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/22/2014       |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06   |                        |                 |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte    | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|------------|-----|------------|--------|-------|----------------|------|
| Aluminum   | 1   | 1110       | 1171.2 | 106   | 70 - 130       |      |
| Arsenic    | 1   | 111        | 113.44 | 102   | 85 - 115       |      |
| Barium     | 1   | 111        | 113.44 | 102   | 85 - 115       |      |
| Boron      | 1   | 111        | 104.78 | 94    | 70 - 130       |      |
| Cadmium    | 1   | 111        | 113.63 | 102   | 85 - 115       |      |
| Calcium    | 1   | 11100      | 13048  | 118   | 70 - 130       |      |
| Chromium   | 1   | 111        | 113.28 | 102   | 85 - 115       |      |
| Cobalt     | 1   | 111        | 114.55 | 103   | 85 - 115       |      |
| Copper     | 1   | 111        | 113.34 | 102   | 85 - 115       |      |
| Iron       | 1   | 1110       | 1109.9 | 100   | 85 - 115       |      |
| Lead       | 1   | 111        | 115.98 | 104   | 85 - 115       |      |
| Manganese  | 1   | 111        | 115.37 | 104   | 85 - 115       |      |
| Molybdenum | 1   | 111        | 112.14 | 101   | 85 - 115       |      |
| Nickel     | 1   | 111        | 113.26 | 102   | 85 - 115       |      |
| Potassium  | 1   | 11100      | 11615  | 105   | 70 - 130       |      |
| Selenium   | 1   | 111        | 114.98 | 104   | 85 - 115       |      |
| Silver     | 1   | 111        | 119.70 | 108   | 85 - 115       |      |
| Sodium     | 1   | 11100      | 12397  | 112   | 70 - 130       |      |
| Uranium    | 1   | 111        | 116.03 | 105   | 70 - 130       |      |
| Vanadium   | 1   | 111        | 116.17 | 105   | 85 - 115       |      |
| Zinc       | 1   | 111        | 112.28 | 101   | 85 - 115       |      |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                             | <b>Analytic Batch:</b> | <b>WG738881</b> |
| Analysis Date:   | 8/25/2014 2:38:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/22/2014       |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06   |                        |                 |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte    | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Aluminum   | 1   | 1110  | 1141.0 | 103   | 1171.2 | 106   | 70 - 130       | 3          | 20                 |      |
| Arsenic    | 1   | 111   | 111.46 | 100   | 113.44 | 102   | 85 - 115       | 2          | 20                 |      |
| Barium     | 1   | 111   | 113.69 | 102   | 113.44 | 102   | 85 - 115       | 0          | 20                 |      |
| Boron      | 1   | 111   | 112.58 | 101   | 104.78 | 94    | 70 - 130       | 7          | 20                 |      |
| Cadmium    | 1   | 111   | 112.64 | 101   | 113.63 | 102   | 85 - 115       | 1          | 20                 |      |
| Calcium    | 1   | 11100 | 12934  | 117   | 13048  | 118   | 70 - 130       | 1          | 20                 |      |
| Chromium   | 1   | 111   | 112.51 | 101   | 113.28 | 102   | 85 - 115       | 1          | 20                 |      |
| Cobalt     | 1   | 111   | 112.99 | 102   | 114.55 | 103   | 85 - 115       | 1          | 20                 |      |
| Copper     | 1   | 111   | 110.82 | 100   | 113.34 | 102   | 85 - 115       | 2          | 20                 |      |
| Iron       | 1   | 1110  | 1095.8 | 99    | 1109.9 | 100   | 85 - 115       | 1          | 20                 |      |
| Lead       | 1   | 111   | 115.27 | 104   | 115.98 | 104   | 85 - 115       | 1          | 20                 |      |
| Manganese  | 1   | 111   | 113.15 | 102   | 115.37 | 104   | 85 - 115       | 2          | 20                 |      |
| Molybdenum | 1   | 111   | 111.10 | 100   | 112.14 | 101   | 85 - 115       | 1          | 20                 |      |
| Nickel     | 1   | 111   | 111.26 | 100   | 113.26 | 102   | 85 - 115       | 2          | 20                 |      |
| Potassium  | 1   | 11100 | 11469  | 103   | 11615  | 105   | 70 - 130       | 1          | 20                 |      |
| Selenium   | 1   | 111   | 112.60 | 101   | 114.98 | 104   | 85 - 115       | 2          | 20                 |      |
| Silver     | 1   | 111   | 119.18 | 107   | 119.70 | 108   | 85 - 115       | 0          | 20                 |      |
| Sodium     | 1   | 11100 | 12325  | 111   | 12397  | 112   | 70 - 130       | 1          | 20                 |      |
| Uranium    | 1   | 111   | 114.35 | 103   | 116.03 | 105   | 70 - 130       | 1          | 20                 |      |
| Vanadium   | 1   | 111   | 115.51 | 104   | 116.17 | 105   | 85 - 115       | 1          | 20                 |      |
| Zinc       | 1   | 111   | 109.01 | 98    | 112.28 | 101   | 85 - 115       | 3          | 20                 |      |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                             | <b>Analytic Batch:</b> | <b>WG738880</b> |
| Analysis Date:   | 8/22/2014 4:50:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/22/2014       |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06   |                        |                 |

#### Serial Dilution

L716903-02

| Analyte              | Dil | Sample Result | SD Result | % RPD | Limit | Qualifier |
|----------------------|-----|---------------|-----------|-------|-------|-----------|
| Aluminum,Dissolved   | 5   | 14.027        | 21.356    | 52    | 10    |           |
| Arsenic,Dissolved    | 5   | 1.2069        | 1.5070    | 25    | 10    |           |
| Barium,Dissolved     | 5   | 21.590        | 23.419    | 8     | 10    |           |
| Boron,Dissolved      | 5   | 602.96        | 702.69    | 17    | 10    |           |
| Cadmium,Dissolved    | 5   | <0.16         | <0.8      |       | 10    |           |
| Calcium,Dissolved    | 100 | 744082        | 761636    | 2     | 10    |           |
| Chromium,Dissolved   | 5   | <0.54         | <2.7      |       | 10    |           |
| Cobalt,Dissolved     | 5   | <0.26         | <1.3      |       | 10    |           |
| Iron,Dissolved       | 5   | 119.26        | 137.34    | 15    | 10    |           |
| Lead,Dissolved       | 5   | <0.24         | <1.2      |       | 10    |           |
| Manganese,Dissolved  | 5   | 101.00        | 116.45    | 15    | 10    |           |
| Molybdenum,Dissolved | 5   | 4.5389        | 5.1278    | 13    | 10    |           |
| Nickel,Dissolved     | 5   | 1.9191        | <1.75     | 34    | 10    |           |
| Potassium,Dissolved  | 5   | 4886.0        | 5793.6    | 19    | 10    |           |
| Selenium,Dissolved   | 5   | 9.6229        | 12.660    | 32    | 10    |           |
| Silver,Dissolved     | 5   | <0.31         | <1.55     |       | 10    |           |
| Sodium,Dissolved     | 100 | 1403056       | 1489020   | 6     | 10    |           |
| Uranium,Dissolved    | 5   | 5.9134        | 6.9255    | 17    | 10    |           |
| Vanadium,Dissolved   | 5   | 2.1375        | 2.3646    | 11    | 10    |           |
| Zinc,Dissolved       | 5   | <2.56         | <12.8     |       | 10    |           |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                             | <b>Analytic Batch:</b> | <b>WG738880</b> |
| Analysis Date:   | 8/22/2014 4:50:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/22/2014       |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06   |                        |                 |

#### Matrix Spike / Matrix Spike Duplicate

L716903-02

| Analyte              | Dil | Spike Value | Sample   | MS      | % Rec | MSD     | % Rec | Control Limits | % Rec Qual | RPD | Control Limits | RPD |
|----------------------|-----|-------------|----------|---------|-------|---------|-------|----------------|------------|-----|----------------|-----|
| Aluminum,Dissolved   | 1   | 1110        | 14.027   | 1144.6  | 102   | 1142.5  | 102   | 70 - 130       |            | 0   | 20             |     |
| Arsenic,Dissolved    | 1   | 111         | 1.2069   | 112.28  | 100   | 114.61  | 102   | 75 - 125       |            | 2   | 20             |     |
| Barium,Dissolved     | 1   | 111         | 21.590   | 138.63  | 105   | 140.19  | 107   | 75 - 125       |            | 1   | 20             |     |
| Boron,Dissolved      | 1   | 111         | 602.96   | 741.95  | 125   | 687.90  | 77    | 70 - 130       |            | 8   | 20             |     |
| Cadmium,Dissolved    | 1   | 111         | <0.16    | 112.99  | 102   | 112.03  | 101   | 75 - 125       |            | 1   | 20             |     |
| Calcium,Dissolved    | 20  | 555         | 744082   | 776068  | 288   | 768111  | 216   | 70 - 130       | V          | 1   | 20             |     |
| Chromium,Dissolved   | 1   | 111         | <0.54    | 107.65  | 97    | 104.88  | 94    | 75 - 125       |            | 3   | 20             |     |
| Cobalt,Dissolved     | 1   | 111         | <0.26    | 109.39  | 98    | 111.33  | 100   | 75 - 125       |            | 2   | 20             |     |
| Iron,Dissolved       | 1   | 1110        | 119.26   | 1179.7  | 96    | 1156.2  | 93    | 75 - 125       |            | 2   | 20             |     |
| Lead,Dissolved       | 1   | 111         | <0.24    | 104.30  | 94    | 103.07  | 93    | 75 - 125       |            | 1   | 20             |     |
| Manganese,Dissolved  | 1   | 111         | 101.00   | 212.91  | 101   | 219.30  | 107   | 75 - 125       |            | 3   | 20             |     |
| Molybdenum,Dissolved | 1   | 111         | 4.5389   | 112.93  | 98    | 115.43  | 100   | 75 - 125       |            | 2   | 20             |     |
| Nickel,Dissolved     | 1   | 111         | 1.9191   | 109.02  | 96    | 110.08  | 97    | 75 - 125       |            | 1   | 20             |     |
| Potassium,Dissolved  | 1   | 11100       | 4886.0   | 16525   | 105   | 16204   | 102   | 70 - 130       |            | 2   | 20             |     |
| Selenium,Dissolved   | 1   | 111         | 9.6229   | 118.68  | 98    | 122.65  | 102   | 75 - 125       |            | 3   | 20             |     |
| Silver,Dissolved     | 1   | 111         | <0.31    | 109.51  | 99    | 109.18  | 98    | 75 - 125       |            | 0   | 20             |     |
| Sodium,Dissolved     | 20  | 555         | 14030561 | 1445048 | 378   | 1434736 | 285   | 70 - 130       | V          | 1   | 20             |     |
| Uranium,Dissolved    | 1   | 111         | 5.9134   | 111.43  | 95    | 110.44  | 94    | 70 - 130       |            | 1   | 20             |     |
| Vanadium,Dissolved   | 1   | 111         | 2.1375   | 114.92  | 102   | 112.76  | 100   | 75 - 125       |            | 2   | 20             |     |
| Zinc,Dissolved       | 1   | 111         | <2.56    | 105.58  | 93    | 107.66  | 95    | 75 - 125       |            | 2   | 20             |     |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                             | <b>Analytic Batch:</b> | <b>WG738880</b> |
| Analysis Date:   | 8/22/2014 4:50:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/22/2014       |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06   |                        |                 |

#### Post Digest Spike

L716903-02

| Analyte              | Dil | Spike Value | Sample  | Result  | % Rec | Control Limits | Qualifier |
|----------------------|-----|-------------|---------|---------|-------|----------------|-----------|
| Aluminum,Dissolved   | 1   | 1110        | 14.027  | 1079.4  | 96    | 70-130         |           |
| Arsenic,Dissolved    | 1   | 111         | 1.2069  | 108.71  | 97    | 85-115         |           |
| Barium,Dissolved     | 1   | 111         | 21.590  | 131.34  | 99    | 85-115         |           |
| Boron,Dissolved      | 1   | 111         | 602.96  | 673.72  | 64    | 70-130         |           |
| Cadmium,Dissolved    | 1   | 111         | <0.16   | 105.76  | 95    | 85-115         |           |
| Calcium,Dissolved    | 20  | 11100       | 744082  | 864237  | 54    | 70-130         | O1        |
| Chromium,Dissolved   | 1   | 111         | <0.54   | 100.99  | 91    | 85-115         |           |
| Cobalt,Dissolved     | 1   | 111         | <0.26   | 106.08  | 95    | 85-115         |           |
| Iron,Dissolved       | 1   | 1110        | 119.26  | 1094.0  | 88    | 85-115         |           |
| Lead,Dissolved       | 1   | 111         | <0.24   | 98.551  | 89    | 85-115         |           |
| Manganese,Dissolved  | 1   | 111         | 101.00  | 211.40  | 99    | 85-115         |           |
| Molybdenum,Dissolved | 1   | 111         | 4.5389  | 110.94  | 96    | 85-115         |           |
| Nickel,Dissolved     | 1   | 111         | 1.9191  | 104.75  | 93    | 85-115         |           |
| Potassium,Dissolved  | 1   | 11100       | 4886.0  | 15656   | 97    | 70-130         |           |
| Selenium,Dissolved   | 1   | 111         | 9.6229  | 118.64  | 98    | 85-115         |           |
| Silver,Dissolved     | 1   | 111         | <0.31   | 103.29  | 93    | 85-115         |           |
| Sodium,Dissolved     | 20  | 11100       | 1403056 | 1596997 | 87    | 70-130         |           |
| Uranium,Dissolved    | 1   | 111         | 5.9134  | 106.28  | 90    | 70-130         |           |
| Vanadium,Dissolved   | 1   | 111         | 2.1375  | 107.95  | 95    | 85-115         |           |
| Zinc,Dissolved       | 1   | 111         | <2.56   | 103.92  | 91    | 85-115         |           |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                             | <b>Analytic Batch:</b> | <b>WG738881</b> |
| Analysis Date:   | 8/25/2014 2:38:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/22/2014       |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06   |                        |                 |

#### Serial Dilution

L716903-01

| Analyte    | Dil | Sample Result | SD Result | % RPD | Limit | Qualifier |
|------------|-----|---------------|-----------|-------|-------|-----------|
| Aluminum   | 5   | 15.787        | 17.236    | 9     | 10    |           |
| Arsenic    | 5   | 1.4569        | 1.5420    | 6     | 10    |           |
| Barium     | 5   | 29.729        | 28.919    | 3     | 10    |           |
| Boron      | 5   | 552.67        | 548.36    | 1     | 10    |           |
| Cadmium    | 5   | <0.16         | <0.8      |       | 10    |           |
| Calcium    | 250 | 740004        | 711633    | 4     | 10    |           |
| Chromium   | 5   | <0.54         | <2.7      |       | 10    |           |
| Cobalt     | 5   | 0.3041        | <1.3      | 24    | 10    |           |
| Copper     | 5   | 1.1358        | <2.6      | 5     | 10    |           |
| Iron       | 5   | 318.71        | 331.58    | 4     | 10    |           |
| Lead       | 5   | <0.24         | <1.2      |       | 10    |           |
| Manganese  | 5   | 386.82        | 395.40    | 2     | 10    |           |
| Molybdenum | 5   | 3.2989        | 3.2542    | 1     | 10    |           |
| Nickel     | 5   | 1.0553        | <1.75     | 29    | 10    |           |
| Potassium  | 5   | 5800.6        | 5931.3    | 2     | 10    |           |
| Selenium   | 5   | 0.7058        | <1.9      | 137   | 10    |           |
| Silver     | 5   | <0.31         | <1.55     |       | 10    |           |
| Sodium     | 250 | 1219681       | 1230664   | 1     | 10    |           |
| Uranium    | 5   | 9.1405        | 9.1563    | 0     | 10    |           |
| Vanadium   | 5   | 4.8429        | 4.7170    | 3     | 10    |           |
| Zinc       | 5   | 4.1460        | <12.8     | 23    | 10    |           |



## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |  |  |                        |                 |
|------------------|---------------------------------------|--|--|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |  |  | Matrix:                | Water - ug/L    |
| Project No:      | TX000836.0008.00004                   |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM |  |  | <b>Analytic Batch:</b> | <b>WG738881</b> |
| Collection Date: | 8/18/2014                             |  |  | Analyst:               | 664             |
| Analysis Date:   | 8/25/2014 2:38:00 PM                  |  |  | Prep Date:             | 8/22/2014       |
| Instrument ID:   | ICPMS8                                |  |  |                        |                 |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06   |  |  |                        |                 |

#### Matrix Spike / Matrix Spike Duplicate

L716903-01

| Analyte    | Dil | Spike Value | Sample  | MS      | % Rec | MSD     | % Rec | Control Limits | % Rec Qual | RPD | Control Limits | RPD |
|------------|-----|-------------|---------|---------|-------|---------|-------|----------------|------------|-----|----------------|-----|
| Aluminum   | 1   | 1110        | 15.787  | 1137.0  | 101   | 1156.7  | 103   | 70 - 130       |            | 2   | 20             |     |
| Arsenic    | 1   | 111         | 1.4569  | 114.47  | 102   | 115.39  | 103   | 75 - 125       |            | 1   | 20             |     |
| Barium     | 1   | 111         | 29.729  | 157.61  | 115   | 156.40  | 114   | 75 - 125       |            | 1   | 20             |     |
| Boron      | 1   | 111         | 552.67  | 666.07  | 102   | 645.67  | 84    | 70 - 130       |            | 3   | 20             |     |
| Cadmium    | 1   | 111         | <0.16   | 118.40  | 107   | 117.87  | 106   | 75 - 125       |            | 0   | 20             |     |
| Calcium    | 50  | 222         | 740004  | 806552  | 600   | 784015  | 396   | 70 - 130       | V          | 3   | 20             |     |
| Chromium   | 1   | 111         | <0.54   | 102.99  | 92    | 102.54  | 92    | 75 - 125       |            | 0   | 20             |     |
| Cobalt     | 1   | 111         | 0.3041  | 106.76  | 96    | 107.39  | 96    | 75 - 125       |            | 1   | 20             |     |
| Copper     | 1   | 111         | 1.1358  | 103.29  | 92    | 104.03  | 93    | 75 - 125       |            | 1   | 20             |     |
| Iron       | 1   | 1110        | 318.71  | 1423.0  | 99    | 1430.3  | 100   | 75 - 125       |            | 1   | 20             |     |
| Lead       | 1   | 111         | <0.24   | 102.31  | 92    | 102.69  | 92    | 75 - 125       |            | 0   | 20             |     |
| Manganese  | 1   | 111         | 386.82  | 496.67  | 99    | 503.05  | 105   | 75 - 125       |            | 1   | 20             |     |
| Molybdenum | 1   | 111         | 3.2989  | 110.40  | 96    | 111.23  | 97    | 75 - 125       |            | 1   | 20             |     |
| Nickel     | 1   | 111         | 1.0553  | 103.55  | 92    | 104.20  | 93    | 75 - 125       |            | 1   | 20             |     |
| Potassium  | 1   | 11100       | 5800.6  | 16980   | 101   | 17132   | 102   | 70 - 130       |            | 1   | 20             |     |
| Selenium   | 1   | 111         | 0.7058  | 118.92  | 106   | 117.83  | 106   | 75 - 125       |            | 1   | 20             |     |
| Silver     | 1   | 111         | <0.31   | 118.28  | 107   | 118.28  | 107   | 75 - 125       |            | 0   | 20             |     |
| Sodium     | 50  | 222         | 1219681 | 1324236 | 942   | 1278770 | 532   | 70 - 130       | V          | 3   | 20             |     |
| Uranium    | 1   | 111         | 9.1405  | 113.50  | 94    | 113.36  | 94    | 70 - 130       |            | 0   | 20             |     |
| Vanadium   | 1   | 111         | 4.8429  | 113.66  | 98    | 115.02  | 99    | 75 - 125       |            | 1   | 20             |     |
| Zinc       | 1   | 111         | 4.1460  | 108.38  | 94    | 107.67  | 93    | 75 - 125       |            | 1   | 20             |     |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                             | <b>Analytic Batch:</b> | <b>WG738881</b> |
| Analysis Date:   | 8/25/2014 2:38:00 PM                  | Analyst:               | 664             |
| Instrument ID:   | ICPMS8                                | Prep Date:             | 8/22/2014       |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06   |                        |                 |

#### Post Digest Spike

L716903-01

| Analyte    | Dil | Spike Value | Sample  | Result  | % Rec | Control Limits | Qualifier |
|------------|-----|-------------|---------|---------|-------|----------------|-----------|
| Aluminum   | 1   | 1110        | 15.787  | 1090.4  | 97    | 70-130         |           |
| Arsenic    | 1   | 111         | 1.4569  | 106.28  | 94    | 85-115         |           |
| Barium     | 1   | 111         | 29.729  | 148.03  | 107   | 85-115         |           |
| Boron      | 1   | 111         | 552.67  | 717.51  | 149   | 70-130         |           |
| Cadmium    | 1   | 111         | <0.16   | 107.94  | 97    | 85-115         |           |
| Calcium    | 50  | 11100       | 740004  | 747827  | 1     | 70-130         | O1        |
| Chromium   | 1   | 111         | <0.54   | 97.060  | 87    | 85-115         |           |
| Cobalt     | 1   | 111         | 0.3041  | 98.935  | 89    | 85-115         |           |
| Copper     | 1   | 111         | 1.1358  | 96.699  | 86    | 85-115         |           |
| Iron       | 1   | 1110        | 318.71  | 1350.1  | 93    | 85-115         |           |
| Lead       | 1   | 111         | <0.24   | 94.686  | 85    | 85-115         |           |
| Manganese  | 1   | 111         | 386.82  | 492.47  | 95    | 85-115         |           |
| Molybdenum | 1   | 111         | 3.2989  | 103.53  | 90    | 85-115         |           |
| Nickel     | 1   | 111         | 1.0553  | 96.357  | 86    | 85-115         |           |
| Potassium  | 1   | 11100       | 5800.6  | 16291   | 95    | 70-130         |           |
| Selenium   | 1   | 111         | 0.7058  | 110.78  | 99    | 85-115         |           |
| Silver     | 1   | 111         | <0.31   | 107.44  | 97    | 85-115         |           |
| Sodium     | 50  | 11100       | 1219681 | 1219978 | 0     | 70-130         | O1        |
| Uranium    | 1   | 111         | 9.1405  | 106.22  | 87    | 70-130         |           |
| Vanadium   | 1   | 111         | 4.8429  | 107.98  | 93    | 85-115         |           |
| Zinc       | 1   | 111         | 4.1460  | 101.74  | 88    | 85-115         |           |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |  |  |                        |                 |
|------------------|---------------------------------------|--|--|------------------------|-----------------|
| Test:            | Trace Metals by Method 6020           |  |  | Matrix:                | Water - ug/L    |
| Project No:      | TX000836.0008.00004                   |  |  | EPA ID:                | TN00003         |
| Project:         | Navajo Refining Company - Artesia, NM |  |  | <b>Analytic Batch:</b> | <b>WG739363</b> |
| Collection Date: | 8/18/2014                             |  |  | Analyst:               | 664             |
| Analysis Date:   | 8/26/2014 1:17:00 PM                  |  |  | Prep Date:             | 8/25/2014       |
| Instrument ID:   | ICPMS8                                |  |  |                        |                 |
| Sample Numbers:  | L716903-01, -02, -04, -05, -06        |  |  |                        |                 |

#### Serial Dilution

L716903-01

| Analyte          | Dil | Sample Result | SD Result | % RPD | Limit | Qualifier |
|------------------|-----|---------------|-----------|-------|-------|-----------|
| Copper,Dissolved | 5   | 1.1344        | <2.6      | 8     | 10    |           |

#### Matrix Spike / Matrix Spike Duplicate

L716903-01

| Analyte          | Dil | Spike Value | Sample | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD | Control Limits | RPD Qual |
|------------------|-----|-------------|--------|--------|-------|--------|-------|----------------|------------|-----|----------------|----------|
| Copper,Dissolved | 1   | 111         | 1.1344 | 111.10 | 99    | 112.06 | 100   | 75 - 125       |            | 1   | 20             |          |

#### Post Digest Spike

L716903-01

| Analyte          | Dil | Spike Value | Sample | Result | % Rec | Control Limits | Qualifier |
|------------------|-----|-------------|--------|--------|-------|----------------|-----------|
| Copper,Dissolved | 1   | 111         | 1.1344 | 105.22 | 94    | 85-115         |           |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Volatile TPH by Method 8015D/GRO      |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                             | <b>Analytic Batch:</b> | <b>WG738557</b> |
| Analysis Date:   | 8/23/2014 11:09:00 PM                 | Analyst:               | 621             |
| Instrument ID:   | VOCGC4                                |                        |                 |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06   |                        |                 |

#### Method Blank

| Analyte                   | CAS       | RDL     | MDL      | Qualifier |
|---------------------------|-----------|---------|----------|-----------|
| TPH (GC/FID) Low Fraction | 8006-61-9 | < 0.100 | < 0.0314 |           |

#### Laboratory Control Sample (LCS)

| Analyte                   | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------------|-----|------------|--------|-------|----------------|------|
| TPH (GC/FID) Low Fraction | 1   | 5.5        | 6.1987 | 113   | 67 - 132       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte                   | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------------|-----|------------|--------|-------|----------------|------|
| TPH (GC/FID) Low Fraction | 1   | 5.5        | 5.8338 | 106   | 67 - 132       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte                   | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|---------------------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| TPH (GC/FID) Low Fraction | 1   | 5.5   | 6.1987 | 113   | 5.8338 | 106   | 67 - 132       | 6.07       | 20                 |      |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Volatile TPH by Method 8015D/GRO      |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                             | <b>Analytic Batch:</b> | <b>WG738557</b> |
| Analysis Date:   | 8/23/2014 11:09:00 PM                 | Analyst:               | 621             |
| Instrument ID:   | VOCGC4                                |                        |                 |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06   |                        |                 |

### Matrix Spike / Matrix Spike Duplicate

L716903-01

| Analyte                          | Dil | Spike Value | Sample  | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD  | Control Limits | RPD |
|----------------------------------|-----|-------------|---------|--------|-------|--------|-------|----------------|------------|------|----------------|-----|
| <b>TPH (GC/FID) Low Fraction</b> | 1   | 5.5         | <0.0314 | 5.3244 | 96.8  | 5.6813 | 103   | 50 - 143       |            | 6.49 | 20             |     |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Volatile TPH by Method 8015D/GRO      |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                             | <b>Analytic Batch:</b> | <b>WG738557</b> |
| Analysis Date:   | 8/23/2014 11:09:00 PM                 | Analyst:               | 621             |
| Instrument ID:   | VOCGC4                                |                        |                 |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06   |                        |                 |

### Surrogate Summary

#### Laboratory

| Sample ID      | Instrument | File ID | ppm   | % Rec | ppm   | % Rec |
|----------------|------------|---------|-------|-------|-------|-------|
| L716903-01     | VOCGC4     | 0823_10 | 0.197 | 98.3  |       |       |
| L716903-02     | VOCGC4     | 0823_11 | 0.198 | 98.8  |       |       |
| L716903-03     | VOCGC4     | 0823_12 | 0.198 | 99.2  |       |       |
| L716903-04     | VOCGC4     | 0823_13 | 0.197 | 98.3  |       |       |
| L716903-05     | VOCGC4     | 0823_14 | 0.198 | 99.1  |       |       |
| L716903-06     | VOCGC4     | 0823_15 | 0.197 | 98.7  |       |       |
| LCS WG738557   | VOCGC4     | 0823_04 | 0.205 | 102   | 0.232 | 116   |
| LCSD WG738557  | VOCGC4     | 0823_05 | 0.205 | 102   | 0.235 | 118   |
| MS WG738557    | VOCGC4     | 0823_06 | 0.205 | 102   | 0.234 | 117   |
| MSD WG738557   | VOCGC4     | 0823_07 | 0.205 | 102   | 0.237 | 118   |
| BLANK WG738557 | VOCGC4     | 0823_09 | 0.198 | 99.1  | 0.211 | 105   |

--A,A,A-TRIFLUOROTOLUENE(FID)

True Value: 0.2 ppm Limits: 62 - 128

--A,A,A-TRIFLUOROTOLUENE(PID)

True Value: 0.2 ppm Limits: 55 - 122

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                               |                        |                 |
|------------------|-----------------------------------------------|------------------------|-----------------|
| Test:            | Volatile Organic Compounds by Method 8260B    |                        |                 |
| Project No:      | TX000836.0008.00004                           | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM         | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                     | <b>Analytic Batch:</b> | <b>WG738484</b> |
| Analysis Date:   | 8/22/2014 2:25:00 AM                          | Analyst:               | 644             |
| Instrument ID:   | VOCMS2                                        |                        |                 |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06, -07, -08 |                        |                 |

#### Method Blank

| Analyte                          | CAS       | RDL       | MDL        | Qualifier |
|----------------------------------|-----------|-----------|------------|-----------|
| <b>1,1,1,2-Tetrachloroethane</b> | 630-20-6  | < 0.00100 | < 0.000385 |           |
| <b>1,1,1-Trichloroethane</b>     | 71-55-6   | < 0.00100 | < 0.000319 |           |
| <b>1,1,2,2-Tetrachloroethane</b> | 79-34-5   | < 0.00100 | < 0.000130 |           |
| <b>1,1,2-Trichloroethane</b>     | 79-00-5   | < 0.00100 | < 0.000383 |           |
| <b>1,1-Dichloroethane</b>        | 75-34-3   | < 0.00100 | < 0.000259 |           |
| <b>1,1-Dichloroethene</b>        | 75-35-4   | < 0.00100 | < 0.000398 |           |
| <b>1,2-Dibromoethane</b>         | 106-93-4  | < 0.00100 | < 0.000381 |           |
| <b>1,2-Dichloroethane</b>        | 107-06-2  | < 0.00100 | < 0.000361 |           |
| <b>Benzene</b>                   | 71-43-2   | < 0.00100 | < 0.000331 |           |
| <b>Carbon tetrachloride</b>      | 56-23-5   | < 0.00100 | < 0.000379 |           |
| <b>Chloroform</b>                | 67-66-3   | < 0.00500 | < 0.000324 |           |
| <b>Ethylbenzene</b>              | 100-41-4  | < 0.00100 | < 0.000384 |           |
| <b>m&amp;p-Xylenes</b>           | 1330-20-7 | < 0.00200 | < 0.000719 |           |
| <b>Methylene Chloride</b>        | 75-09-2   | < 0.00500 | < 0.00100  |           |
| <b>o-Xylene</b>                  | 95-47-6   | < 0.00100 | < 0.000341 |           |
| <b>Tetrachloroethene</b>         | 127-18-4  | < 0.00100 | < 0.000372 |           |
| <b>Toluene</b>                   | 108-88-3  | < 0.00500 | < 0.000780 |           |
| <b>Vinyl chloride</b>            | 75-01-4   | < 0.00100 | < 0.000259 |           |
| <b>Xylenes, Total</b>            | 1330-20-7 | < 0.00300 | < 0.00106  |           |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                               |                        |                 |
|------------------|-----------------------------------------------|------------------------|-----------------|
| Test:            | Volatile Organic Compounds by Method 8260B    |                        |                 |
| Project No:      | TX000836.0008.00004                           | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM         | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                     | <b>Analytic Batch:</b> | <b>WG738484</b> |
| Analysis Date:   | 8/22/2014 2:25:00 AM                          | Analyst:               | 644             |
| Instrument ID:   | VOCMS2                                        |                        |                 |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06, -07, -08 |                        |                 |

### Laboratory Control Sample (LCS)

| Analyte                          | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------------------------------|-----|------------|--------|-------|----------------|------|
| <b>1,1,1,2-Tetrachloroethane</b> | 1   | 0.025      | 0.0268 | 107   | 74.2 - 124     |      |
| <b>1,1,1-Trichloroethane</b>     | 1   | 0.025      | 0.0235 | 93.9  | 73.2 - 123     |      |
| <b>1,1,2,2-Tetrachloroethane</b> | 1   | 0.025      | 0.0271 | 108   | 70.7 - 122     |      |
| <b>1,1,2-Trichloroethane</b>     | 1   | 0.025      | 0.0257 | 103   | 77.7 - 118     |      |
| <b>1,1-Dichloroethane</b>        | 1   | 0.025      | 0.0224 | 89.7  | 70.7 - 126     |      |
| <b>1,1-Dichloroethene</b>        | 1   | 0.025      | 0.0197 | 78.8  | 67.8 - 129     |      |
| <b>1,2-Dibromoethane</b>         | 1   | 0.025      | 0.0246 | 98.4  | 76.6 - 121     |      |
| <b>1,2-Dichloroethane</b>        | 1   | 0.025      | 0.0223 | 89.1  | 68.8 - 124     |      |
| <b>Benzene</b>                   | 1   | 0.025      | 0.0221 | 88.5  | 74.8 - 121     |      |
| <b>Carbon tetrachloride</b>      | 1   | 0.025      | 0.0235 | 94.1  | 70.2 - 123     |      |
| <b>Chloroform</b>                | 1   | 0.025      | 0.0237 | 95    | 76 - 121       |      |
| <b>Ethylbenzene</b>              | 1   | 0.025      | 0.0253 | 101   | 78.8 - 122     |      |
| <b>m&amp;p-Xylenes</b>           | 1   | 0.05       | 0.0517 | 103   | 78.8 - 121     |      |
| <b>Methylene Chloride</b>        | 1   | 0.025      | 0.0207 | 83    | 70.3 - 120     |      |
| <b>o-Xylene</b>                  | 1   | 0.025      | 0.0247 | 98.6  | 77.6 - 122     |      |
| <b>Tetrachloroethene</b>         | 1   | 0.025      | 0.0253 | 101   | 72.6 - 126     |      |
| <b>Toluene</b>                   | 1   | 0.025      | 0.0239 | 95.7  | 79.7 - 116     |      |
| <b>Vinyl chloride</b>            | 1   | 0.025      | 0.0195 | 77.9  | 65.9 - 128     |      |
| <b>Xylenes, Total</b>            | 1   | 0.075      | 0.0764 | 102   | 78.7 - 121     |      |



## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                               |                        |                 |
|------------------|-----------------------------------------------|------------------------|-----------------|
| Test:            | Volatile Organic Compounds by Method 8260B    |                        |                 |
| Project No:      | TX000836.0008.00004                           | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM         | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                     | <b>Analytic Batch:</b> | <b>WG738484</b> |
| Analysis Date:   | 8/22/2014 2:25:00 AM                          | Analyst:               | 644             |
| Instrument ID:   | VOCMS2                                        |                        |                 |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06, -07, -08 |                        |                 |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte                          | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|----------------------------------|-----|------------|--------|-------|----------------|------|
| <b>1,1,1,2-Tetrachloroethane</b> | 1   | 0.025      | 0.0266 | 106   | 74.2 - 124     |      |
| <b>1,1,1-Trichloroethane</b>     | 1   | 0.025      | 0.0228 | 91.1  | 73.2 - 123     |      |
| <b>1,1,2,2-Tetrachloroethane</b> | 1   | 0.025      | 0.0261 | 105   | 70.7 - 122     |      |
| <b>1,1,2-Trichloroethane</b>     | 1   | 0.025      | 0.0253 | 101   | 77.7 - 118     |      |
| <b>1,1-Dichloroethane</b>        | 1   | 0.025      | 0.0217 | 86.7  | 70.7 - 126     |      |
| <b>1,1-Dichloroethene</b>        | 1   | 0.025      | 0.0184 | 73.8  | 67.8 - 129     |      |
| <b>1,2-Dibromoethane</b>         | 1   | 0.025      | 0.0247 | 98.6  | 76.6 - 121     |      |
| <b>1,2-Dichloroethane</b>        | 1   | 0.025      | 0.0218 | 87.2  | 68.8 - 124     |      |
| <b>Benzene</b>                   | 1   | 0.025      | 0.0219 | 87.8  | 74.8 - 121     |      |
| <b>Carbon tetrachloride</b>      | 1   | 0.025      | 0.0227 | 90.6  | 70.2 - 123     |      |
| <b>Chloroform</b>                | 1   | 0.025      | 0.0226 | 90.5  | 76 - 121       |      |
| <b>Ethylbenzene</b>              | 1   | 0.025      | 0.0258 | 103   | 78.8 - 122     |      |
| <b>m&amp;p-Xylenes</b>           | 1   | 0.05       | 0.0515 | 103   | 78.8 - 121     |      |
| <b>Methylene Chloride</b>        | 1   | 0.025      | 0.0201 | 80.3  | 70.3 - 120     |      |
| <b>o-Xylene</b>                  | 1   | 0.025      | 0.0245 | 97.9  | 77.6 - 122     |      |
| <b>Tetrachloroethene</b>         | 1   | 0.025      | 0.0255 | 102   | 72.6 - 126     |      |
| <b>Toluene</b>                   | 1   | 0.025      | 0.0236 | 94.3  | 79.7 - 116     |      |
| <b>Vinyl chloride</b>            | 1   | 0.025      | 0.0192 | 76.6  | 65.9 - 128     |      |
| <b>Xylenes, Total</b>            | 1   | 0.075      | 0.0760 | 101   | 78.7 - 121     |      |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                               |                        |                 |
|------------------|-----------------------------------------------|------------------------|-----------------|
| Test:            | Volatile Organic Compounds by Method 8260B    |                        |                 |
| Project No:      | TX000836.0008.00004                           | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM         | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                     | <b>Analytic Batch:</b> | <b>WG738484</b> |
| Analysis Date:   | 8/22/2014 2:25:00 AM                          | Analyst:               | 644             |
| Instrument ID:   | VOCMS2                                        |                        |                 |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06, -07, -08 |                        |                 |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte                   | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control    | % Rec | Control RPD |             |
|---------------------------|-----|-------|--------|-------|--------|-------|------------|-------|-------------|-------------|
|                           |     |       |        |       |        |       | Limits     | Qual  | % RPD       | Limits Qual |
| 1,1,1,2-Tetrachloroethane | 1   | 0.025 | 0.0268 | 107   | 0.0266 | 106   | 74.2 - 124 |       | 0.85        | 20          |
| 1,1,1-Trichloroethane     | 1   | 0.025 | 0.0235 | 93.9  | 0.0228 | 91.1  | 73.2 - 123 |       | 2.93        | 20          |
| 1,1,2,2-Tetrachloroethane | 1   | 0.025 | 0.0271 | 108   | 0.0261 | 105   | 70.7 - 122 |       | 3.68        | 20          |
| 1,1,2-Trichloroethane     | 1   | 0.025 | 0.0257 | 103   | 0.0253 | 101   | 77.7 - 118 |       | 1.7         | 20          |
| 1,1-Dichloroethane        | 1   | 0.025 | 0.0224 | 89.7  | 0.0217 | 86.7  | 70.7 - 126 |       | 3.33        | 20          |
| 1,1-Dichloroethene        | 1   | 0.025 | 0.0197 | 78.8  | 0.0184 | 73.8  | 67.8 - 129 |       | 6.59        | 20          |
| 1,2-Dibromoethane         | 1   | 0.025 | 0.0246 | 98.4  | 0.0247 | 98.6  | 76.6 - 121 |       | 0.21        | 20          |
| 1,2-Dichloroethane        | 1   | 0.025 | 0.0223 | 89.1  | 0.0218 | 87.2  | 68.8 - 124 |       | 2.13        | 20          |
| Benzene                   | 1   | 0.025 | 0.0221 | 88.5  | 0.0219 | 87.8  | 74.8 - 121 |       | 0.85        | 20          |
| Carbon tetrachloride      | 1   | 0.025 | 0.0235 | 94.1  | 0.0227 | 90.6  | 70.2 - 123 |       | 3.78        | 20          |
| Chloroform                | 1   | 0.025 | 0.0237 | 95    | 0.0226 | 90.5  | 76 - 121   |       | 4.86        | 20          |
| Ethylbenzene              | 1   | 0.025 | 0.0253 | 101   | 0.0258 | 103   | 78.8 - 122 |       | 1.92        | 20          |
| m&p-Xylenes               | 1   | 0.05  | 0.0517 | 103   | 0.0515 | 103   | 78.8 - 121 |       | 0.46        | 20          |
| Methylene Chloride        | 1   | 0.025 | 0.0207 | 83    | 0.0201 | 80.3  | 70.3 - 120 |       | 3.34        | 20          |
| o-Xylene                  | 1   | 0.025 | 0.0247 | 98.6  | 0.0245 | 97.9  | 77.6 - 122 |       | 0.73        | 20          |
| Tetrachloroethene         | 1   | 0.025 | 0.0253 | 101   | 0.0255 | 102   | 72.6 - 126 |       | 0.63        | 20          |
| Toluene                   | 1   | 0.025 | 0.0239 | 95.7  | 0.0236 | 94.3  | 79.7 - 116 |       | 1.47        | 20          |
| Vinyl chloride            | 1   | 0.025 | 0.0195 | 77.9  | 0.0192 | 76.6  | 65.9 - 128 |       | 1.74        | 20          |
| Xylenes, Total            | 1   | 0.075 | 0.0764 | 102   | 0.0760 | 101   | 78.7 - 121 |       | 0.55        | 20          |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                               |                        |                 |
|------------------|-----------------------------------------------|------------------------|-----------------|
| Test:            | Volatile Organic Compounds by Method 8260B    |                        |                 |
| Project No:      | TX000836.0008.00004                           | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM         | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                     | <b>Analytic Batch:</b> | <b>WG738484</b> |
| Analysis Date:   | 8/22/2014 2:25:00 AM                          | Analyst:               | 644             |
| Instrument ID:   | VOCMS2                                        |                        |                 |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06, -07, -08 |                        |                 |

#### Matrix Spike / Matrix Spike Duplicate

L716903-01

| Analyte                          | Dil | Spike Value | Sample  | MS     | % Rec | MSD    | % Rec | Control Limits | % Rec Qual | RPD  | Control Limits | RPD |
|----------------------------------|-----|-------------|---------|--------|-------|--------|-------|----------------|------------|------|----------------|-----|
| <b>1,1,1,2-Tetrachloroethane</b> | 1   | 0.025       | <0.0004 | 0.0274 | 109   | 0.0267 | 107   | 70.5 - 132     |            | 2.31 | 20             |     |
| <b>1,1,1-Trichloroethane</b>     | 1   | 0.025       | <0.0003 | 0.0252 | 101   | 0.0222 | 88.6  | 58.7 - 134     |            | 12.8 | 20             |     |
| <b>1,1,2,2-Tetrachloroethane</b> | 1   | 0.025       | <0.0001 | 0.0317 | 127   | 0.0301 | 120   | 64.9 - 145     |            | 5.39 | 20             |     |
| <b>1,1,2-Trichloroethane</b>     | 1   | 0.025       | <0.0004 | 0.0249 | 99.4  | 0.0257 | 103   | 74.1 - 130     |            | 3.38 | 20             |     |
| <b>1,1-Dichloroethane</b>        | 1   | 0.025       | <0.0003 | 0.0227 | 90.9  | 0.0216 | 86.2  | 64 - 134       |            | 5.29 | 20             |     |
| <b>1,1-Dichloroethene</b>        | 1   | 0.025       | <0.0004 | 0.0203 | 81.2  | 0.0187 | 74.9  | 48.8 - 144     |            | 8.09 | 20             |     |
| <b>1,2-Dibromoethane</b>         | 1   | 0.025       | <0.0004 | 0.0251 | 100   | 0.0247 | 98.8  | 73.8 - 131     |            | 1.43 | 20             |     |
| <b>1,2-Dichloroethane</b>        | 1   | 0.025       | <0.0004 | 0.0220 | 88.1  | 0.0214 | 85.8  | 60.7 - 132     |            | 2.69 | 20             |     |
| <b>Benzene</b>                   | 1   | 0.025       | <0.0003 | 0.0229 | 91.8  | 0.0217 | 87    | 58.6 - 133     |            | 5.36 | 20             |     |
| <b>Carbon tetrachloride</b>      | 1   | 0.025       | <0.0004 | 0.0252 | 101   | 0.0225 | 90.1  | 60.6 - 139     |            | 11   | 20             |     |
| <b>Chloroform</b>                | 1   | 0.025       | <0.0003 | 0.0234 | 93.7  | 0.0219 | 87.8  | 66.1 - 133     |            | 6.49 | 20             |     |
| <b>Ethylbenzene</b>              | 1   | 0.025       | <0.0004 | 0.0261 | 104   | 0.0258 | 103   | 62.7 - 136     |            | 1.11 | 20             |     |
| <b>m&amp;p-Xylenes</b>           | 1   | 0.05        | <0.0007 | 0.0538 | 108   | 0.0520 | 104   | 64.1 - 133     |            | 3.3  | 20             |     |
| <b>Methylene Chloride</b>        | 1   | 0.025       | <0.001  | 0.0206 | 82.4  | 0.0199 | 79.5  | 61.5 - 125     |            | 3.57 | 20             |     |
| <b>o-Xylene</b>                  | 1   | 0.025       | <0.0003 | 0.0256 | 102   | 0.0247 | 98.7  | 67.1 - 133     |            | 3.74 | 20             |     |
| <b>Tetrachloroethene</b>         | 1   | 0.025       | <0.0004 | 0.0266 | 106   | 0.0258 | 103   | 57.4 - 141     |            | 3.05 | 20             |     |
| <b>Toluene</b>                   | 1   | 0.025       | <0.0008 | 0.0245 | 98.1  | 0.0235 | 94    | 67.8 - 124     |            | 4.35 | 20             |     |
| <b>Vinyl chloride</b>            | 1   | 0.025       | <0.0003 | 0.0206 | 82.3  | 0.0183 | 73.2  | 44.3 - 143     |            | 11.7 | 20             |     |
| <b>Xylenes, Total</b>            | 1   | 0.075       | <0.0011 | 0.0794 | 106   | 0.0767 | 102   | 65.6 - 133     |            | 3.44 | 20             |     |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                               |                        |                 |
|------------------|-----------------------------------------------|------------------------|-----------------|
| Test:            | Volatile Organic Compounds by Method 8260B    |                        |                 |
| Project No:      | TX000836.0008.00004                           | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM         | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                     | <b>Analytic Batch:</b> | <b>WG738484</b> |
| Analysis Date:   | 8/22/2014 2:25:00 AM                          | Analyst:               | 644             |
| Instrument ID:   | VOCMS2                                        |                        |                 |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06, -07, -08 |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0821\_34  
Analyzed: 08/21/14 213700

|                    | IS1      |      | IS2      |      | IS3      |      | DCB      |      |
|--------------------|----------|------|----------|------|----------|------|----------|------|
|                    | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| <b>12 Hr. Std</b>  | 364376   | 4.34 | 643411   | 4.67 | 102127   | 5.84 | 310381   | 8.22 |
| <b>Upper Limit</b> | 729000   | 4.84 | 1290000  | 5.17 | 204000   | 6.34 | 621000   | 8.72 |
| <b>Lower Limit</b> | 182000   | 3.84 | 322000   | 4.17 | 51100    | 5.34 | 155000   | 7.72 |
| Sample ID          | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| L716903-07         | 326488   | 4.34 | 629703   | 4.67 | 92558    | 5.84 | 262921   | 8.22 |
| L716903-08         | 315911   | 4.34 | 609898   | 4.67 | 91500    | 5.84 | 260200   | 8.22 |
| L716903-01         | 322005   | 4.34 | 628509   | 4.67 | 93385    | 5.84 | 276846   | 8.22 |
| L716903-02         | 300567   | 4.34 | 577436   | 4.67 | 87863    | 5.84 | 245732   | 8.22 |
| L716903-03         | 311539   | 4.34 | 609469   | 4.67 | 91230    | 5.84 | 257272   | 8.22 |
| L716903-04         | 292108   | 4.34 | 576572   | 4.67 | 86930    | 5.84 | 247938   | 8.22 |
| L716903-05         | 314630   | 4.34 | 617017   | 4.67 | 91070    | 5.84 | 250836   | 8.22 |
| L716903-06         | 337666   | 4.34 | 649054   | 4.67 | 97009    | 5.84 | 263729   | 8.22 |
| MSD WG738484       | 379574   | 4.34 | 678851   | 4.67 | 106560   | 5.84 | 306181   | 8.22 |
| MS WG738484        | 344325   | 4.34 | 610055   | 4.67 | 97323    | 5.84 | 289337   | 8.22 |
| LCSD WG738484      | 383041   | 4.34 | 690304   | 4.67 | 108298   | 5.84 | 310217   | 8.22 |
| LCS WG738484       | 378965   | 4.34 | 672981   | 4.67 | 107670   | 5.84 | 304552   | 8.22 |
| BLANK WG738484     | 331471   | 4.34 | 621519   | 4.67 | 93726    | 5.84 | 268868   | 8.22 |

### Legend:

IS1 -- PENTAFLUOROBENZENE  
IS2 -- 1,4-DIFLUOROBENZENE  
IS3 -- 2-BROMO-1-CHLOROPROPANE  
DCB -- 1,4-DICHLOROBENZENE-D4

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                               |                        |                 |
|------------------|-----------------------------------------------|------------------------|-----------------|
| Test:            | Volatile Organic Compounds by Method 8260B    |                        |                 |
| Project No:      | TX000836.0008.00004                           | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM         | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                     | <b>Analytic Batch:</b> | <b>WG738484</b> |
| Analysis Date:   | 8/22/2014 2:25:00 AM                          | Analyst:               | 644             |
| Instrument ID:   | VOCMS2                                        |                        |                 |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06, -07, -08 |                        |                 |

### Surrogate Summary

|                |            | BFB     |        |       | DFM    |       | TD8    |       | TFT    |       |
|----------------|------------|---------|--------|-------|--------|-------|--------|-------|--------|-------|
| Laboratory     |            |         |        |       |        |       |        |       |        |       |
| Sample ID      | Instrument | File ID | ppm    | % Rec | ppm    | % Rec | ppm    | % Rec | ppm    | % Rec |
| L716903-01     | VOCMS2     | 0821_47 | 0.0397 | 99.1  | 0.0389 | 97.2  | 0.0401 | 100   |        |       |
| L716903-02     | VOCMS2     | 0821_48 | 0.0383 | 95.7  | 0.0392 | 98.1  | 0.0410 | 102   |        |       |
| L716903-03     | VOCMS2     | 0821_49 | 0.0379 | 94.7  | 0.0383 | 95.8  | 0.0404 | 101   |        |       |
| L716903-04     | VOCMS2     | 0821_50 | 0.0396 | 99.0  | 0.0393 | 98.2  | 0.0405 | 101   |        |       |
| L716903-05     | VOCMS2     | 0821_51 | 0.0379 | 94.7  | 0.0384 | 95.9  | 0.0400 | 99.9  |        |       |
| L716903-06     | VOCMS2     | 0821_52 | 0.0378 | 94.4  | 0.0373 | 93.4  | 0.0405 | 101   |        |       |
| L716903-07     | VOCMS2     | 0821_44 | 0.0392 | 98.0  | 0.0376 | 94.1  | 0.0403 | 101   |        |       |
| L716903-08     | VOCMS2     | 0821_45 | 0.0392 | 98.0  | 0.0391 | 97.6  | 0.0404 | 101   |        |       |
| LCS WG738484   | VOCMS2     | 0821_35 | 0.0364 | 90.9  | 0.0386 | 96.5  | 0.0402 | 101   | 0.0406 | 101   |
| LCSD WG738484  | VOCMS2     | 0821_36 | 0.0365 | 91.2  | 0.0375 | 93.8  | 0.0405 | 101   | 0.0407 | 102   |
| MS WG738484    | VOCMS2     | 0821_37 | 0.0375 | 93.6  | 0.0382 | 95.4  | 0.0394 | 98.5  | 0.0412 | 103   |
| MSD WG738484   | VOCMS2     | 0821_38 | 0.0370 | 92.5  | 0.0373 | 93.4  | 0.0395 | 98.9  | 0.0405 | 101   |
| BLANK WG738484 | VOCMS2     | 0821_43 | 0.0387 | 96.8  | 0.0383 | 95.8  | 0.0402 | 101   | 0.0406 | 101   |

BFB --4-BROMOFLUOROBENZENE

True Value: 0.04 ppm Limits: 80.1 - 120

DFM --DIBROMOFLUOROMETHANE

True Value: 0.04 ppm Limits: 79 - 121

TD8 --TOLUENE-D8

True Value: 0.04 ppm Limits: 90 - 115

TFT --A,A,A-TRIFLUOROTOLUENE

True Value: 0.04 ppm Limits: 85 - 114

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Diesel Range Organics by Method 8015  |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                             | <b>Analytic Batch:</b> | <b>WG738790</b> |
| Analysis Date:   | 8/21/2014 10:36:00 PM                 | Analyst:               | 546             |
| Instrument ID:   | SVGC31                                | Prep Date:             | 8/21/2014       |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06   |                        |                 |

#### Method Blank

| Analyte                           | CAS | RDL     | MDL      | Qualifier |
|-----------------------------------|-----|---------|----------|-----------|
| C10-C28 Diesel Range              |     | < 0.100 | < 0.0222 |           |
| C28-C40 Oil Range                 |     | < 0.100 | < 0.0118 |           |
| Extractable Petroleum Hydrocarbon |     | < 0.100 | < 0.0330 |           |

#### Laboratory Control Sample (LCS)

| Analyte                           | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|-----------------------------------|-----|------------|--------|-------|----------------|------|
| Extractable Petroleum Hydrocarbon | 1   | 1.5        | 1.6202 | 108   | 70 - 130       |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte                           | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|-----------------------------------|-----|------------|--------|-------|----------------|------|
| Extractable Petroleum Hydrocarbon | 1   | 1.5        | 1.5739 | 105   | 70 - 130       |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte                           | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|-----------------------------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| Extractable Petroleum Hydrocarbon | 1   | 1.5   | 1.6202 | 108   | 1.5739 | 105   | 70 - 130       | 2.9        | 20                 |      |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                       |                        |                 |
|------------------|---------------------------------------|------------------------|-----------------|
| Test:            | Diesel Range Organics by Method 8015  |                        |                 |
| Project No:      | TX000836.0008.00004                   | Matrix:                | Water - mg/L    |
| Project:         | Navajo Refining Company - Artesia, NM | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                             | <b>Analytic Batch:</b> | <b>WG738790</b> |
| Analysis Date:   | 8/21/2014 10:36:00 PM                 | Analyst:               | 546             |
| Instrument ID:   | SVGC31                                | Prep Date:             | 8/21/2014       |
| Sample Numbers:  | L716903-01, -02, -03, -04, -05, -06   |                        |                 |

### Surrogate Summary

o-Terphenyl

Laboratory

| Sample ID      | Instrument | File ID | ppm    | % Rec |
|----------------|------------|---------|--------|-------|
| L716903-01     | SVGC31     | 0821_37 | 0.0223 | 111   |
| L716903-02     | SVGC31     | 0821_38 | 0.0214 | 107   |
| L716903-03     | SVGC31     | 0821_39 | 0.0216 | 108   |
| L716903-04     | SVGC31     | 0821_40 | 0.0207 | 103   |
| L716903-05     | SVGC31     | 0821_41 | 0.0218 | 109   |
| L716903-06     | SVGC31     | 0821_42 | 0.0209 | 105   |
| BLANK WG738790 | SVGC31     | 0821_32 | 0.0215 | 108   |
| LCS WG738790   | SVGC31     | 0821_33 | 0.0230 | 115   |
| LCSD WG738790  | SVGC31     | 0821_34 | 0.0218 | 109   |
| MS WG738790    | SVGC31     | 0821_57 | 0.0219 | 109   |
| MSD WG738790   | SVGC31     | 0821_58 | 0.0213 | 107   |

o-Terphenyl --O-TERPHENYL

True Value: 0.02 ppm Limits: 50 - 150

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                                 |                        |                 |
|------------------|-------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270C |                        |                 |
| Project No:      | TX000836.0008.00004                             | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM           | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                       | <b>Analytic Batch:</b> | <b>WG738310</b> |
| Analysis Date:   | 8/23/2014 4:23:00 PM                            | Analyst:               | 280             |
| Instrument ID:   | BNAMS2, BNAMS4                                  | Prep Date:             | 8/19/2014       |
| Sample Numbers:  | L716903-01, -02, -03                            |                        |                 |

#### Method Blank

| Analyte                    | CAS     | RDL    | MDL     | Qualifier |
|----------------------------|---------|--------|---------|-----------|
| <b>1-Methylnaphthalene</b> | 90-12-0 | < 1.00 | < 0.330 |           |
| <b>2-Methylnaphthalene</b> | 91-57-6 | < 1.00 | < 0.311 |           |
| <b>Benzo(a)pyrene</b>      | 50-32-8 | < 1.00 | < 0.340 |           |
| <b>Naphthalene</b>         | 91-20-3 | < 1.00 | < 0.372 |           |



## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                                 |                        |                 |
|------------------|-------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270C |                        |                 |
| Project No:      | TX000836.0008.00004                             | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM           | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                       | <b>Analytic Batch:</b> | <b>WG738440</b> |
| Analysis Date:   | 8/22/2014 7:31:00 AM                            | Analyst:               | 280             |
| Instrument ID:   | BNAMS4, BNAMS2, BNAMS1                          | Prep Date:             | 8/20/2014       |
| Sample Numbers:  | L716903-04, -05, -06                            |                        |                 |

#### Method Blank

| Analyte                    | CAS     | RDL    | MDL     | Qualifier |
|----------------------------|---------|--------|---------|-----------|
| <b>1-Methylnaphthalene</b> | 90-12-0 | < 1.00 | < 0.330 |           |
| <b>2-Methylnaphthalene</b> | 91-57-6 | < 1.00 | < 0.311 |           |
| <b>Benzo(a)pyrene</b>      | 50-32-8 | < 1.00 | < 0.340 |           |
| <b>Naphthalene</b>         | 91-20-3 | < 1.00 | < 0.372 |           |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                                 |                        |                 |
|------------------|-------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270C |                        |                 |
| Project No:      | TX000836.0008.00004                             | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM           | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                       | <b>Analytic Batch:</b> | <b>WG738310</b> |
| Analysis Date:   | 8/23/2014 4:23:00 PM                            | Analyst:               | 280             |
| Instrument ID:   | BNAMS2, BNAMS4                                  | Prep Date:             | 8/19/2014       |
| Sample Numbers:  | L716903-01, -02, -03                            |                        |                 |

#### Laboratory Control Sample (LCS)

| Analyte             | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------|-----|------------|--------|-------|----------------|------|
| 1-Methylnaphthalene | 1   | 25         | 20.548 | 82.2  | 34.7 - 102     |      |
| 2-Methylnaphthalene | 1   | 25         | 18.838 | 75.4  | 33.8 - 98.6    |      |
| Benzo(a)pyrene      | 1   | 25         | 21.241 | 85    | 45.6 - 106     |      |
| Naphthalene         | 1   | 25         | 17.297 | 69.2  | 32.2 - 101     |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte             | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------|-----|------------|--------|-------|----------------|------|
| 1-Methylnaphthalene | 1   | 25         | 21.897 | 87.6  | 34.7 - 102     |      |
| 2-Methylnaphthalene | 1   | 25         | 19.889 | 79.6  | 33.8 - 98.6    |      |
| Benzo(a)pyrene      | 1   | 25         | 20.733 | 82.9  | 45.6 - 106     |      |
| Naphthalene         | 1   | 25         | 18.544 | 74.2  | 32.2 - 101     |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte             | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|---------------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| 1-Methylnaphthalene | 1   | 25    | 20.548 | 82.2  | 21.897 | 87.6  | 34.7 - 102     | 6.36       | 24.9               |      |
| 2-Methylnaphthalene | 1   | 25    | 18.838 | 75.4  | 19.889 | 79.6  | 33.8 - 98.6    | 5.43       | 24.2               |      |
| Benzo(a)pyrene      | 1   | 25    | 21.241 | 85    | 20.733 | 82.9  | 45.6 - 106     | 2.42       | 20                 |      |
| Naphthalene         | 1   | 25    | 17.297 | 69.2  | 18.544 | 74.2  | 32.2 - 101     | 6.96       | 23.8               |      |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                                 |                        |                 |
|------------------|-------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270C |                        |                 |
| Project No:      | TX000836.0008.00004                             | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM           | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                       | <b>Analytic Batch:</b> | <b>WG738440</b> |
| Analysis Date:   | 8/22/2014 7:31:00 AM                            | Analyst:               | 280             |
| Instrument ID:   | BNAMS4, BNAMS2, BNAMS1                          | Prep Date:             | 8/20/2014       |
| Sample Numbers:  | L716903-04, -05, -06                            |                        |                 |

#### Laboratory Control Sample (LCS)

| Analyte             | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------|-----|------------|--------|-------|----------------|------|
| 1-Methylnaphthalene | 1   | 25         | 20.969 | 83.9  | 34.7 - 102     |      |
| 2-Methylnaphthalene | 1   | 25         | 20.126 | 80.5  | 33.8 - 98.6    |      |
| Benzo(a)pyrene      | 1   | 25         | 20.386 | 81.5  | 45.6 - 106     |      |
| Naphthalene         | 1   | 25         | 18.504 | 74    | 32.2 - 101     |      |

#### Laboratory Control Sample Duplicate (LCSD)

| Analyte             | Dil | True Value | Found  | % Rec | Control Limits | Qual |
|---------------------|-----|------------|--------|-------|----------------|------|
| 1-Methylnaphthalene | 1   | 25         | 21.220 | 84.9  | 34.7 - 102     |      |
| 2-Methylnaphthalene | 1   | 25         | 20.087 | 80.3  | 33.8 - 98.6    |      |
| Benzo(a)pyrene      | 1   | 25         | 19.654 | 78.6  | 45.6 - 106     |      |
| Naphthalene         | 1   | 25         | 18.353 | 73.4  | 32.2 - 101     |      |

#### Laboratory Control Sample / Laboratory Control Sample Duplicate

| Analyte             | Dil | Spike | LCS    | % Rec | LCSD   | % Rec | Control Limits | % Rec Qual | Control RPD Limits | Qual |
|---------------------|-----|-------|--------|-------|--------|-------|----------------|------------|--------------------|------|
| 1-Methylnaphthalene | 1   | 25    | 20.969 | 83.9  | 21.220 | 84.9  | 34.7 - 102     | 1.19       | 24.9               |      |
| 2-Methylnaphthalene | 1   | 25    | 20.126 | 80.5  | 20.087 | 80.3  | 33.8 - 98.6    | 0.2        | 24.2               |      |
| Benzo(a)pyrene      | 1   | 25    | 20.386 | 81.5  | 19.654 | 78.6  | 45.6 - 106     | 3.66       | 20                 |      |
| Naphthalene         | 1   | 25    | 18.504 | 74    | 18.353 | 73.4  | 32.2 - 101     | 0.82       | 23.8               |      |

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                                 |                        |                 |
|------------------|-------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270C |                        |                 |
| Project No:      | TX000836.0008.00004                             | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM           | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                       | <b>Analytic Batch:</b> | <b>WG738310</b> |
| Analysis Date:   | 8/23/2014 4:23:00 PM                            | Analyst:               | 280             |
| Instrument ID:   | BNAMS2                                          | Prep Date:             | 8/19/2014       |
| Sample Numbers:  | L716903-01, -02, -03                            |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0823a\_02

Analyzed: 08/23/14 143900

|                    | DCB      |      | NAP      |      | ACE      |      | PHEN     |      |
|--------------------|----------|------|----------|------|----------|------|----------|------|
|                    | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| <b>12 Hr. Std</b>  | 113398   | 5.37 | 462870   | 6.12 | 296061   | 7.14 | 457913   | 8.03 |
| <b>Upper Limit</b> | 227000   | 5.87 | 926000   | 6.62 | 592000   | 7.64 | 916000   | 8.53 |
| <b>Lower Limit</b> | 56700    | 4.87 | 231000   | 5.62 | 148000   | 6.64 | 229000   | 7.53 |
| Sample ID          | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| L716903-01         | 109527   | 5.37 | 415766   | 6.12 | 268661   | 7.14 | 398202   | 8.02 |
| L716903-02         | 103772   | 5.37 | 408849   | 6.12 | 251425   | 7.14 | 379180   | 8.03 |
| L716903-03         | 100255   | 5.37 | 389165   | 6.12 | 243857   | 7.14 | 372232   | 8.02 |

### Legend:

DCB -- 1,4-Dichlorobenzene-d4

NAP -- Naphthalene-d8

ACE -- Acenaphthene-d10

PHEN -- Phenanthrene-d10

CHR -- Chrysene-d12

PER -- Perylene-d12

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                                 |                        |                 |
|------------------|-------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270C |                        |                 |
| Project No:      | TX000836.0008.00004                             | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM           | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                       | <b>Analytic Batch:</b> | <b>WG738310</b> |
| Analysis Date:   | 8/23/2014 4:23:00 PM                            | Analyst:               | 280             |
| Instrument ID:   | BNAMS2                                          | Prep Date:             | 8/19/2014       |
| Sample Numbers:  | L716903-01, -02, -03                            |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0823a\_02

Analyzed: 08/23/14 143900

|                    | DCB      |      | CHR      |       | PER      |       |
|--------------------|----------|------|----------|-------|----------|-------|
|                    | Response | RT   | Response | RT    | Response | RT    |
| <b>12 Hr. Std</b>  | 113398   | 5.37 | 371275   | 10.14 | 425665   | 12.40 |
| <b>Upper Limit</b> | 227000   | 5.87 | 743000   | 10.64 | 851000   | 12.90 |
| <b>Lower Limit</b> | 56700    | 4.87 | 186000   | 9.64  | 213000   | 11.90 |
| Sample ID          | Response | RT   | Response | RT    | Response | RT    |
| L716903-01         | 109527   | 5.37 | 306853   | 10.13 | 350197   | 12.39 |
| L716903-02         | 103772   | 5.37 | 303339   | 10.13 | 339423   | 12.40 |
| L716903-03         | 100255   | 5.37 | 279665   | 10.13 | 324172   | 12.39 |

### Legend:

DCB -- 1,4-Dichlorobenzene-d4  
NAP -- Naphthalene-d8  
ACE -- Acenaphthene-d10  
PHEN -- Phenanthrene-d10  
CHR -- Chrysene-d12  
PER -- Perylene-d12

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                                 |                        |                 |
|------------------|-------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270C |                        |                 |
| Project No:      | TX000836.0008.00004                             | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM           | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                       | <b>Analytic Batch:</b> | <b>WG738310</b> |
| Analysis Date:   | 8/23/2014 4:23:00 PM                            | Analyst:               | 280             |
| Instrument ID:   | BNAMS4                                          | Prep Date:             | 8/19/2014       |
| Sample Numbers:  | L716903-01, -02, -03                            |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0821B\_04

Analyzed: 08/21/14 205500

|                    | DCB      |      | NAP      |      | ACE      |      | PHEN     |      |
|--------------------|----------|------|----------|------|----------|------|----------|------|
|                    | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| <b>12 Hr. Std</b>  | 103839   | 5.29 | 413467   | 6.05 | 239957   | 7.09 | 384539   | 7.96 |
| <b>Upper Limit</b> | 208000   | 5.79 | 827000   | 6.55 | 480000   | 7.59 | 769000   | 8.46 |
| <b>Lower Limit</b> | 51900    | 4.79 | 207000   | 5.55 | 120000   | 6.59 | 192000   | 7.46 |
| Sample ID          | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| LCSD WG738310      | 93226    | 5.30 | 387443   | 6.05 | 224791   | 7.08 | 345746   | 7.96 |
| LCS WG738310       | 99250    | 5.29 | 403926   | 6.05 | 229973   | 7.08 | 356331   | 7.96 |
| BLANK WG738310     | 104530   | 5.29 | 426651   | 6.05 | 242323   | 7.08 | 385164   | 7.96 |

### Legend:

DCB -- 1,4-Dichlorobenzene-d4  
NAP -- Naphthalene-d8  
ACE -- Acenaphthene-d10  
PHEN -- Phenanthrene-d10  
CHR -- Chrysene-d12  
PER -- Perylene-d12

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                                 |                        |                 |
|------------------|-------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270C |                        |                 |
| Project No:      | TX000836.0008.00004                             | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM           | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                       | <b>Analytic Batch:</b> | <b>WG738310</b> |
| Analysis Date:   | 8/23/2014 4:23:00 PM                            | Analyst:               | 280             |
| Instrument ID:   | BNAMS4                                          | Prep Date:             | 8/19/2014       |
| Sample Numbers:  | L716903-01, -02, -03                            |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0821B\_04  
Analyzed: 08/21/14 205500

|                    | DCB      |      | CHR      |       | PER      |       |
|--------------------|----------|------|----------|-------|----------|-------|
|                    | Response | RT   | Response | RT    | Response | RT    |
| <b>12 Hr. Std</b>  | 103839   | 5.29 | 312058   | 10.06 | 312538   | 12.32 |
| <b>Upper Limit</b> | 208000   | 5.79 | 624000   | 10.56 | 625000   | 12.82 |
| <b>Lower Limit</b> | 51900    | 4.79 | 156000   | 9.56  | 156000   | 11.82 |
| Sample ID          | Response | RT   | Response | RT    | Response | RT    |
| LCSD WG738310      | 93226    | 5.30 | 286919   | 10.06 | 303621   | 12.32 |
| LCS WG738310       | 99250    | 5.29 | 294462   | 10.05 | 308379   | 12.31 |
| BLANK WG738310     | 104530   | 5.29 | 317834   | 10.05 | 336253   | 12.32 |

### Legend:

DCB -- 1,4-Dichlorobenzene-d4  
NAP -- Naphthalene-d8  
ACE -- Acenaphthene-d10  
PHEN -- Phenanthrene-d10  
CHR -- Chrysene-d12  
PER -- Perylene-d12

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                                 |                        |                 |
|------------------|-------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270C |                        |                 |
| Project No:      | TX000836.0008.00004                             | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM           | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                       | <b>Analytic Batch:</b> | <b>WG738440</b> |
| Analysis Date:   | 8/22/2014 7:31:00 AM                            | Analyst:               | 280             |
| Instrument ID:   | BNAMS1                                          | Prep Date:             | 8/20/2014       |
| Sample Numbers:  | L716903-04, -05, -06                            |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0826A\_05

Analyzed: 08/26/14 125600

|                    | DCB      |      | NAP      |      | ACE      |      | PHEN     |      |
|--------------------|----------|------|----------|------|----------|------|----------|------|
|                    | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| <b>12 Hr. Std</b>  | 96359    | 4.81 | 404843   | 5.56 | 186782   | 6.59 | 269394   | 7.46 |
| <b>Upper Limit</b> | 193000   | 5.31 | 810000   | 6.06 | 374000   | 7.09 | 539000   | 7.96 |
| <b>Lower Limit</b> | 48200    | 4.31 | 202000   | 5.06 | 93400    | 6.09 | 135000   | 6.96 |
| Sample ID          | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| BLANK WG738440     | 93183    | 4.81 | 348620   | 5.56 | 162950   | 6.59 | 257437   | 7.46 |

### Legend:

DCB -- 1,4-Dichlorobenzene-d4  
NAP -- Naphthalene-d8  
ACE -- Acenaphthene-d10  
PHEN -- Phenanthrene-d10  
CHR -- Chrysene-d12  
PER -- Perylene-d12



## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                                 |                        |                 |
|------------------|-------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270C |                        |                 |
| Project No:      | TX000836.0008.00004                             | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM           | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                       | <b>Analytic Batch:</b> | <b>WG738440</b> |
| Analysis Date:   | 8/22/2014 7:31:00 AM                            | Analyst:               | 280             |
| Instrument ID:   | BNAMS1                                          | Prep Date:             | 8/20/2014       |
| Sample Numbers:  | L716903-04, -05, -06                            |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0826A\_05

Analyzed: 08/26/14 125600

|                    | DCB      |      | CHR      |      | PER      |       |
|--------------------|----------|------|----------|------|----------|-------|
|                    | Response | RT   | Response | RT   | Response | RT    |
| <b>12 Hr. Std</b>  | 96359    | 4.81 | 259965   | 9.01 | 167996   | 10.17 |
| <b>Upper Limit</b> | 193000   | 5.31 | 520000   | 9.51 | 336000   | 10.67 |
| <b>Lower Limit</b> | 48200    | 4.31 | 130000   | 8.51 | 84000    | 9.67  |

| Sample ID      | Response | RT   | Response | RT   | Response | RT    |
|----------------|----------|------|----------|------|----------|-------|
| BLANK WG738440 | 93183    | 4.81 | 217818   | 9.01 | 86552    | 10.16 |

### Legend:

DCB -- 1,4-Dichlorobenzene-d4  
NAP -- Naphthalene-d8  
ACE -- Acenaphthene-d10  
PHEN -- Phenanthrene-d10  
CHR -- Chrysene-d12  
PER -- Perylene-d12

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                                 |                        |                 |
|------------------|-------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270C |                        |                 |
| Project No:      | TX000836.0008.00004                             | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM           | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                       | <b>Analytic Batch:</b> | <b>WG738440</b> |
| Analysis Date:   | 8/22/2014 7:31:00 AM                            | Analyst:               | 280             |
| Instrument ID:   | BNAMS2                                          | Prep Date:             | 8/20/2014       |
| Sample Numbers:  | L716903-04, -05, -06                            |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0823a\_02

Analyzed: 08/23/14 143900

|                    | DCB      |      | NAP      |      | ACE      |      | PHEN     |      |
|--------------------|----------|------|----------|------|----------|------|----------|------|
|                    | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| <b>12 Hr. Std</b>  | 113398   | 5.37 | 462870   | 6.12 | 296061   | 7.14 | 457913   | 8.03 |
| <b>Upper Limit</b> | 227000   | 5.87 | 926000   | 6.62 | 592000   | 7.64 | 916000   | 8.53 |
| <b>Lower Limit</b> | 56700    | 4.87 | 231000   | 5.62 | 148000   | 6.64 | 229000   | 7.53 |
| Sample ID          | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| L716903-06         | 104834   | 5.37 | 422103   | 6.12 | 253755   | 7.14 | 379494   | 8.02 |

### Legend:

DCB -- 1,4-Dichlorobenzene-d4  
NAP -- Naphthalene-d8  
ACE -- Acenaphthene-d10  
PHEN -- Phenanthrene-d10  
CHR -- Chrysene-d12  
PER -- Perylene-d12

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                                 |                        |                 |
|------------------|-------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270C |                        |                 |
| Project No:      | TX000836.0008.00004                             | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM           | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                       | <b>Analytic Batch:</b> | <b>WG738440</b> |
| Analysis Date:   | 8/22/2014 7:31:00 AM                            | Analyst:               | 280             |
| Instrument ID:   | BNAMS2                                          | Prep Date:             | 8/20/2014       |
| Sample Numbers:  | L716903-04, -05, -06                            |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0823a\_02

Analyzed: 08/23/14 143900

|                    | DCB      |      | CHR      |       | PER      |       |
|--------------------|----------|------|----------|-------|----------|-------|
|                    | Response | RT   | Response | RT    | Response | RT    |
| <b>12 Hr. Std</b>  | 113398   | 5.37 | 371275   | 10.14 | 425665   | 12.40 |
| <b>Upper Limit</b> | 227000   | 5.87 | 743000   | 10.64 | 851000   | 12.90 |
| <b>Lower Limit</b> | 56700    | 4.87 | 186000   | 9.64  | 213000   | 11.90 |

| Sample ID  | Response | RT   | Response | RT    | Response | RT    |
|------------|----------|------|----------|-------|----------|-------|
| L716903-06 | 104834   | 5.37 | 292391   | 10.13 | 348147   | 12.39 |

### Legend:

DCB -- 1,4-Dichlorobenzene-d4  
NAP -- Naphthalene-d8  
ACE -- Acenaphthene-d10  
PHEN -- Phenanthrene-d10  
CHR -- Chrysene-d12  
PER -- Perylene-d12

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                                 |                        |                 |
|------------------|-------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270C |                        |                 |
| Project No:      | TX000836.0008.00004                             | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM           | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                       | <b>Analytic Batch:</b> | <b>WG738440</b> |
| Analysis Date:   | 8/22/2014 7:31:00 AM                            | Analyst:               | 280             |
| Instrument ID:   | BNAMS4                                          | Prep Date:             | 8/20/2014       |
| Sample Numbers:  | L716903-04, -05, -06                            |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0821B\_04

Analyzed: 08/21/14 205500

|                    | DCB      |      | NAP      |      | ACE      |      | PHEN     |      |
|--------------------|----------|------|----------|------|----------|------|----------|------|
|                    | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| <b>12 Hr. Std</b>  | 103839   | 5.29 | 413467   | 6.05 | 239957   | 7.09 | 384539   | 7.96 |
| <b>Upper Limit</b> | 208000   | 5.79 | 827000   | 6.55 | 480000   | 7.59 | 769000   | 8.46 |
| <b>Lower Limit</b> | 51900    | 4.79 | 207000   | 5.55 | 120000   | 6.59 | 192000   | 7.46 |
| Sample ID          | Response | RT   | Response | RT   | Response | RT   | Response | RT   |
| L716903-04         | 94660    | 5.29 | 380175   | 6.05 | 216228   | 7.09 | 323431   | 7.96 |
| L716903-05         | 99332    | 5.30 | 394115   | 6.05 | 229663   | 7.09 | 349586   | 7.97 |
| LCSD WG738440      | 97293    | 5.29 | 389586   | 6.05 | 230139   | 7.08 | 355245   | 7.96 |
| LCS WG738440       | 97347    | 5.29 | 391232   | 6.05 | 231358   | 7.08 | 351968   | 7.96 |
| BLANK WG738440     | 98494    | 5.29 | 399517   | 6.05 | 228220   | 7.08 | 354640   | 7.96 |

### Legend:

DCB -- 1,4-Dichlorobenzene-d4  
NAP -- Naphthalene-d8  
ACE -- Acenaphthene-d10  
PHEN -- Phenanthrene-d10  
CHR -- Chrysene-d12  
PER -- Perylene-d12

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                                 |                        |                 |
|------------------|-------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270C |                        |                 |
| Project No:      | TX000836.0008.00004                             | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM           | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                       | <b>Analytic Batch:</b> | <b>WG738440</b> |
| Analysis Date:   | 8/22/2014 7:31:00 AM                            | Analyst:               | 280             |
| Instrument ID:   | BNAMS4                                          | Prep Date:             | 8/20/2014       |
| Sample Numbers:  | L716903-04, -05, -06                            |                        |                 |

## Internal Standard Response and Retention Time Summary

File ID: 0821B\_04

Analyzed: 08/21/14 205500

|                    | DCB      |      | CHR      |       | PER      |       |
|--------------------|----------|------|----------|-------|----------|-------|
|                    | Response | RT   | Response | RT    | Response | RT    |
| <b>12 Hr. Std</b>  | 103839   | 5.29 | 312058   | 10.06 | 312538   | 12.32 |
| <b>Upper Limit</b> | 208000   | 5.79 | 624000   | 10.56 | 625000   | 12.82 |
| <b>Lower Limit</b> | 51900    | 4.79 | 156000   | 9.56  | 156000   | 11.82 |
| Sample ID          | Response | RT   | Response | RT    | Response | RT    |
| L716903-04         | 94660    | 5.29 | 272112   | 10.06 | 318493   | 12.33 |
| L716903-05         | 99332    | 5.30 | 287424   | 10.06 | 329715   | 12.33 |
| LCSD WG738440      | 97293    | 5.29 | 295116   | 10.06 | 318136   | 12.32 |
| LCS WG738440       | 97347    | 5.29 | 282488   | 10.05 | 304935   | 12.31 |
| BLANK WG738440     | 98494    | 5.29 | 291038   | 10.06 | 317320   | 12.32 |

### Legend:

DCB -- 1,4-Dichlorobenzene-d4  
NAP -- Naphthalene-d8  
ACE -- Acenaphthene-d10  
PHEN -- Phenanthrene-d10  
CHR -- Chrysene-d12  
PER -- Perylene-d12

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                                 |                        |                 |
|------------------|-------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270C |                        |                 |
| Project No:      | TX000836.0008.00004                             | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM           | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                       | <b>Analytic Batch:</b> | <b>WG738310</b> |
| Analysis Date:   | 8/23/2014 4:23:00 PM                            | Analyst:               | 280             |
| Instrument ID:   | BNAMS2                                          | Prep Date:             | 8/19/2014       |
| Sample Numbers:  | L716903-01, -02, -03                            |                        |                 |

### Surrogate Summary

|                |            | TBP              |        |       | FBP     |       | 2FP     |       | NBZ     |       |
|----------------|------------|------------------|--------|-------|---------|-------|---------|-------|---------|-------|
| Laboratory     |            |                  |        |       |         |       |         |       |         |       |
| Sample ID      | Instrument | File ID          | ppm    | % Rec | ppm     | % Rec | ppm     | % Rec | ppm     | % Rec |
| L716903-01     | BNAMS2     | 0823A_07         | 0.0190 | 95.1  | 0.00725 | 72.5  | 0.00843 | 42.2  | 0.00852 | 85.2  |
| L716903-02     | BNAMS2     | 0823A_08         | 0.0175 | 87.7  | 0.00707 | 70.7  | 0.0100  | 50.2  | 0.00858 | 85.8  |
| L716903-03     | BNAMS2     | 0823A_09         | 0.0196 | 98.0  | 0.00762 | 76.2  | 0.0112  | 55.9  | 0.00896 | 89.6  |
| LCS WG738310   | BNAMS4     | 0821B_09-20.0207 | 104    |       | 0.00827 | 82.7  | 0.0107  | 53.4  | 0.00862 | 86.2  |
| LCSD WG738310  | BNAMS4     | 0821B_10-20.0199 | 99.6   |       | 0.00824 | 82.4  | 0.0113  | 56.6  | 0.00874 | 87.4  |
| BLANK WG738310 | BNAMS4     | 0821B_11-20.0177 | 88.7   |       | 0.00793 | 79.3  | 0.0103  | 51.6  | 0.00665 | 66.5  |

TBP --2,4,6-TRIBROMOPHENOL

True Value: 0.02 ppm Limits: 11.2 - 130

FBP --2-FLUOROBIPHENYL

True Value: 0.01 ppm Limits: 29.5 - 131

2FP --2-FLUOROPHENOL

True Value: 0.02 ppm Limits: 10 - 77.9

NBZ --NITROBENZENE-D5

True Value: 0.01 ppm Limits: 21.8 - 123

TPH --P-TERPHENYL-D14

True Value: 0.01 ppm Limits: 29.3 - 137

PHL --PHENOL-D5

True Value: 0.02 ppm Limits: 5 - 70.1



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Est. 1970

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                                 |                        |                 |
|------------------|-------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270C |                        |                 |
| Project No:      | TX000836.0008.00004                             | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM           | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                       | <b>Analytic Batch:</b> | <b>WG738310</b> |
| Analysis Date:   | 8/23/2014 4:23:00 PM                            | Analyst:               | 280             |
| Instrument ID:   | BNAMS2                                          | Prep Date:             | 8/19/2014       |
| Sample Numbers:  | L716903-01, -02, -03                            |                        |                 |

### Surrogate Summary

|                |            | TPH               |         | PHL   |              |
|----------------|------------|-------------------|---------|-------|--------------|
| Laboratory     |            |                   |         |       |              |
| Sample ID      | Instrument | File ID           | ppm     | % Rec | ppm % Rec    |
| L716903-01     | BNAMS2     | 0823A_07          | 0.00789 | 78.9  | 0.00654 32.7 |
| L716903-02     | BNAMS2     | 0823A_08          | 0.00733 | 73.3  | 0.00784 39.2 |
| L716903-03     | BNAMS2     | 0823A_09          | 0.00803 | 80.3  | 0.00848 42.4 |
| LCS WG738310   | BNAMS4     | 0821B_09-20.00835 | 83.5    |       | 0.00871 43.6 |
| LCSD WG738310  | BNAMS4     | 0821B_10-20.00943 | 94.3    |       | 0.00890 44.5 |
| BLANK WG738310 | BNAMS4     | 0821B_11-20.00906 | 90.6    |       | 0.00770 38.5 |

TBP --2,4,6-TRIBROMOPHENOL

True Value: 0.02 ppm Limits: 11.2 - 130

FBP --2-FLUOROBIPHENYL

True Value: 0.01 ppm Limits: 29.5 - 131

2FP --2-FLUOROPHENOL

True Value: 0.02 ppm Limits: 10 - 77.9

NBZ --NITROBENZENE-D5

True Value: 0.01 ppm Limits: 21.8 - 123

TPH --P-TERPHENYL-D14

True Value: 0.01 ppm Limits: 29.3 - 137

PHL --PHENOL-D5

True Value: 0.02 ppm Limits: 5 - 70.1

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                                 |                        |                 |
|------------------|-------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270C |                        |                 |
| Project No:      | TX000836.0008.00004                             | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM           | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                       | <b>Analytic Batch:</b> | <b>WG738440</b> |
| Analysis Date:   | 8/22/2014 7:31:00 AM                            | Analyst:               | 280             |
| Instrument ID:   | BNAMS4                                          | Prep Date:             | 8/20/2014       |
| Sample Numbers:  | L716903-04, -05, -06                            |                        |                 |

### Surrogate Summary

|                |            | TBP              |        |       | FBP     |       | 2FP    |       | NBZ     |       |
|----------------|------------|------------------|--------|-------|---------|-------|--------|-------|---------|-------|
| Laboratory     |            |                  |        |       |         |       |        |       |         |       |
| Sample ID      | Instrument | File ID          | ppm    | % Rec | ppm     | % Rec | ppm    | % Rec | ppm     | % Rec |
| L716903-04     | BNAMS4     | 0821B_34         | 0.0207 | 104   | 0.00890 | 89.0  | 0.0115 | 57.6  | 0.00782 | 78.2  |
| L716903-05     | BNAMS4     | 0821B_35         | 0.0150 | 75.1  | 0.00773 | 77.3  | 0.0102 | 51.0  | 0.00684 | 68.4  |
| L716903-06     | BNAMS2     | 0823A_15         | 0.0188 | 93.8  | 0.00789 | 78.9  | 0.0125 | 62.5  | 0.00926 | 92.6  |
| LCS WG738440   | BNAMS4     | 0821B_12-20.0200 | 100    |       | 0.00852 | 85.2  | 0.0121 | 60.7  | 0.00898 | 89.8  |
| LCSD WG738440  | BNAMS4     | 0821B_13-20.0205 | 102    |       | 0.00836 | 83.6  | 0.0120 | 60.1  | 0.00838 | 83.8  |
| BLANK WG738440 | BNAMS4     | 0821B_14-20.0174 | 86.8   |       | 0.00833 | 83.3  | 0.0113 | 56.7  | 0.00731 | 73.1  |

TBP --2,4,6-TRIBROMOPHENOL

True Value: 0.02 ppm Limits: 11.2 - 130

FBP --2-FLUOROBIPHENYL

True Value: 0.01 ppm Limits: 29.5 - 131

2FP --2-FLUOROPHENOL

True Value: 0.02 ppm Limits: 10 - 77.9

NBZ --NITROBENZENE-D5

True Value: 0.01 ppm Limits: 21.8 - 123

TPH --P-TERPHENYL-D14

True Value: 0.01 ppm Limits: 29.3 - 137

PHL --PHENOL-D5

True Value: 0.02 ppm Limits: 5 - 70.1





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Est. 1970

## Quality Control Summary

### SDG: L716903

### ARCADIS US - TX

|                  |                                                 |                        |                 |
|------------------|-------------------------------------------------|------------------------|-----------------|
| Test:            | Semi-Volatile Organic Compounds by Method 8270C |                        |                 |
| Project No:      | TX000836.0008.00004                             | Matrix:                | Water - ug/L    |
| Project:         | Navajo Refining Company - Artesia, NM           | EPA ID:                | TN00003         |
| Collection Date: | 8/18/2014                                       | <b>Analytic Batch:</b> | <b>WG738440</b> |
| Analysis Date:   | 8/22/2014 7:31:00 AM                            | Analyst:               | 280             |
| Instrument ID:   | BNAMS4                                          | Prep Date:             | 8/20/2014       |
| Sample Numbers:  | L716903-04, -05, -06                            |                        |                 |

### Surrogate Summary

|                |            |                   | TPH     |       | PHL     |       |
|----------------|------------|-------------------|---------|-------|---------|-------|
| Laboratory     |            |                   |         |       |         |       |
| Sample ID      | Instrument | File ID           | ppm     | % Rec | ppm     | % Rec |
| L716903-04     | BNAMS4     | 0821B_34          | 0.00910 | 91.0  | 0.00926 | 46.3  |
| L716903-05     | BNAMS4     | 0821B_35          | 0.00772 | 77.2  | 0.00783 | 39.2  |
| L716903-06     | BNAMS2     | 0823A_15          | 0.00747 | 74.7  | 0.00991 | 49.6  |
| LCS WG738440   | BNAMS4     | 0821B_12-20.00923 | 92.3    |       | 0.00905 | 45.2  |
| LCSD WG738440  | BNAMS4     | 0821B_13-20.00888 | 88.8    |       | 0.00927 | 46.4  |
| BLANK WG738440 | BNAMS4     | 0821B_14-20.00817 | 81.7    |       | 0.00870 | 43.5  |

TBP --2,4,6-TRIBROMOPHENOL

True Value: 0.02 ppm Limits: 11.2 - 130

FBP --2-FLUOROBIPHENYL

True Value: 0.01 ppm Limits: 29.5 - 131

2FP --2-FLUOROPHENOL

True Value: 0.02 ppm Limits: 10 - 77.9

NBZ --NITROBENZENE-D5

True Value: 0.01 ppm Limits: 21.8 - 123

TPH --P-TERPHENYL-D14

True Value: 0.01 ppm Limits: 29.3 - 137

PHL --PHENOL-D5

True Value: 0.02 ppm Limits: 5 - 70.1

|                                                                                            |           |                                                |       |                                                                                                                      |      |                       |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                     |   |   |   |   |   |                                       |  |
|--------------------------------------------------------------------------------------------|-----------|------------------------------------------------|-------|----------------------------------------------------------------------------------------------------------------------|------|-----------------------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|---------------------------------------|--|
| <b>ARCADIS US - TX</b><br><br>2929 Briarpark Dr., Suite 300<br>Houston, TX 77042           |           |                                                |       | Billing Information:<br><br><b>Attn: Accounts Payable</b><br>630 Plaza Drive, Suite 600<br>Highlands Ranch, CO 80129 |      |                       |   | Analysis / Container / Preservative                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                     |   |   |   |   |   | Chain of Custody    Page ____ of ____ |  |
|                                                                                            |           |                                                |       | Report to:<br><b>Pam Krueger</b>                                                                                     |      |                       |   | Email To: <a href="mailto:pam.krueger@arcadis-us.com">pam.krueger@arcadis-us.com</a> ; <a href="mailto:maisha.turner@arcadis-us.com">maisha.turner@arcadis-us.com</a> ;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |   |   | <div style="display: flex; justify-content: space-between;"> <div> <br/> <b>ESC</b><br/> <small>L · A · B   S · C · I · E · N · C · E · S</small><br/> <b>YOUR LAB OF CHOICE</b><br/>           12065 Lebanon Rd<br/>           Mount Juliet, TN 37122<br/>           Phone: 615-758-5858<br/>           Phone: 800-767-5859<br/>           Fax: 615-758-5859         </div> </div> |   |   |   |   |   |                                       |  |
| Project Description: <b>Navajo Refining Company - Artesia, NM</b>                          |           |                                                |       | City/State Collected:                                                                                                |      |                       |   | <div style="display: flex; justify-content: space-between;"> <div> <b>**Cl,F,NO2,NO3,SO4** 125mlHDPE-NoPres</b><br/><br/> <b>8270 100ml Amb NoPres</b><br/><br/> <b>CN 250mlHDPEAmb-NaOH 7/2</b><br/><br/> <b>DROOROLVI 40mlAmb-HCl-BT</b><br/><br/> <b>Diss. Metals (Field) 500mlHDPE-HNO3 &lt;2</b><br/><br/> <b>GRO 40mlAmb HCl</b><br/><br/> <b>RA226/RA228 1L-HDPE-Add HNO3 &lt;2</b><br/><br/> <b>TDS 250mlHDPE-NoPres</b><br/><br/> <b>Total Hg 500mlHDPE-HNO3 &lt;2</b><br/><br/> <b>Total Metals 500mlHDPE-HNO3 &lt;2</b> </div> <div> <b>L # 716901</b><br/><br/> <b>C166</b><br/><br/> <b>Acctnum: ARCADHTX</b><br/> <b>Template: T96164</b><br/> <b>Prelogin: P479194</b><br/> <b>TSR: 633 / Pam Langford</b><br/> <b>PB: 8/13/14 mo</b><br/> <b>Shipped Via: FedEx Ground</b> </div> </div> |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                     |   |   |   |   |   |                                       |  |
| Phone: <b>713-953-4800</b><br>Fax:                                                         |           | Client Project #<br><b>TX000836.0008.00004</b> |       | Lab Project #<br><b>ARCADHTX-NAVAJO</b>                                                                              |      | Collected by (print): |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                     |   |   |   |   |   | Site/Facility ID #                    |  |
| Immediately Packed on Ice N <input type="checkbox"/> Y <input checked="" type="checkbox"/> |           |                                                |       |                                                                                                                      |      |                       |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                     |   |   |   |   |   |                                       |  |
| Sample ID                                                                                  | Comp/Grab | Matrix *                                       | Depth | Date                                                                                                                 | Time | Cntrs                 |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                     |   |   |   |   |   |                                       |  |
| MW-13-0814                                                                                 | G         | GW                                             |       | 8/18/14                                                                                                              | 1610 | 16                    | X | X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | X | X | X | X                                                                                                                                                                                                                                                                                                                                                                                   | X | X | X | X | X | -61                                   |  |
| MW-12-0814                                                                                 | G         | GW                                             |       | 8/18/14                                                                                                              | 1715 | 16                    | X | X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | X | X | X | X                                                                                                                                                                                                                                                                                                                                                                                   | X | X | X | X | X | 02                                    |  |
| EB-04-0814                                                                                 | G         | GW                                             |       | 8/18/14                                                                                                              | 1745 | 15                    | X | X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | X | X | X | X                                                                                                                                                                                                                                                                                                                                                                                   | X | X | X | X | X | 03                                    |  |
| MW-25-0814                                                                                 | G         | GW                                             |       | 8/19/14                                                                                                              | 0855 | 16                    | X | X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | X | X | X | X                                                                                                                                                                                                                                                                                                                                                                                   | X | X | X | X | X | 04                                    |  |
| MW-17-0814                                                                                 | G         | GW                                             |       | 8/19/14                                                                                                              | 1045 | 16                    | X | X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | X | X | X | X                                                                                                                                                                                                                                                                                                                                                                                   | X | X | X | X | X | 05                                    |  |
| NP-5-0814                                                                                  | G         | GW                                             |       | 8/19/14                                                                                                              | 1235 | 6                     | X | X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | X | X | X | X                                                                                                                                                                                                                                                                                                                                                                                   | X | X | X | X | X | 06                                    |  |
| Trip Blank 05                                                                              |           | GW                                             |       |                                                                                                                      |      | 1                     |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                     |   |   |   |   |   | 07                                    |  |
| Trip Blank 06                                                                              |           | GW                                             |       |                                                                                                                      |      | 1                     |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                     |   |   |   |   |   | 08                                    |  |
| Trip Blank 07                                                                              |           | GW                                             |       |                                                                                                                      |      | 0                     |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                     |   |   |   |   |   |                                       |  |
|                                                                                            |           | GW                                             |       |                                                                                                                      |      | 2                     |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |   |   |                                                                                                                                                                                                                                                                                                                                                                                     |   |   |   |   |   |                                       |  |

\* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: **Also Run V8260**

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Koid # \_\_\_\_\_

|                                                     |                  |               |                                                                                    |                                                                                                                                                                 |                                                                                                    |
|-----------------------------------------------------|------------------|---------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Relinquished by : (Signature)<br><i>[Signature]</i> | Date:<br>8/19/14 | Time:<br>1500 | Received by: (Signature)<br><i>[Signature]</i><br>6089 7177 8917<br>6089 7177 8928 | Samples returned via: <input type="checkbox"/> UPS<br><input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____ | Condition: (lab use only)<br><b>SWS</b>                                                            |
| Relinquished by : (Signature)                       | Date:            | Time:         | Received by: (Signature)<br><i>[Signature]</i><br>6089 7177 8939                   | Temp: _____ °C Bottles Received:<br>3.4 97                                                                                                                      | COC Seal Intact: <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA |
| Relinquished by : (Signature)                       | Date:            | Time:         | Received by lab by: (Signature)<br><i>[Signature]</i>                              | Date: 8/20/14 Time: 09:00                                                                                                                                       | pH Checked: 93.0796 <b>Y65</b>                                                                     |

## ESC Lab Sciences Non-Conformance Form

|                  |                  |                |                        |
|------------------|------------------|----------------|------------------------|
| Login #: L716903 | Client: ARCADHTX | Date: 08/20/14 | Evaluated by: Brian L. |
|------------------|------------------|----------------|------------------------|

### Non-Conformance (check applicable items)

| Sample Integrity                                              | Chain of Custody Clarification                                 |                                                                                      |
|---------------------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Parameter(s) past holding time                                | <input checked="" type="checkbox"/> Login Clarification Needed | <b>If Broken Container:</b>                                                          |
| Improper temperature                                          | Chain of custody is incomplete                                 |                                                                                      |
| Improper container type                                       | Please specify Metals requested.                               |                                                                                      |
| Improper preservation                                         | Please specify TCLP requested.                                 |                                                                                      |
| Insufficient sample volume.                                   | Received additional samples not listed on coc.                 | <input checked="" type="checkbox"/> Improper handling by carrier (FedEx / UPS / Cour |
| Sample is biphasic.                                           | Sample ids on containers do not match ids on coc               | Sample was frozen                                                                    |
| Vials received with headspace.                                | Trip Blank not received.                                       | Container lid not intact                                                             |
| Broken container                                              | Client did not "X" analysis.                                   | <b>If no Chain of Custody:</b>                                                       |
| <input checked="" type="checkbox"/> Broken container:         | Chain of Custody is missing                                    | Received by:                                                                         |
| <input checked="" type="checkbox"/> Sufficient sample remains |                                                                | Date/Time:                                                                           |
|                                                               |                                                                | Temp./Cont. Rec./pH:                                                                 |
|                                                               |                                                                | Carrier:                                                                             |
|                                                               |                                                                | Tracking#                                                                            |

**Login Comments:** 1. Did not receive Trip Blank 07. 2. Received one broken vial for MW-25-0814.

|                     |                        |       |            |               |            |
|---------------------|------------------------|-------|------------|---------------|------------|
| Client informed by: | Call                   | Email | Voice Mail | Date: 8/20/14 | Time: 1130 |
| TSR Initials: MB    | Client Contact: Pam K. |       |            |               |            |

### Login Instructions:

Client notified

## Pam Langford

---

**From:** Osborne, Melissa <Melissa.Osborne@arcadis-us.com>  
**Sent:** Thursday, August 21, 2014 1:37 PM  
**To:** Pam Langford  
**Cc:** Krueger, Pamela; Turner, Maisha  
**Subject:** FW: ESC Lab Sciences Login for TX000836.0008.00004 Navajo Refining Company - Artesia, NM L716903  
**Attachments:** COCL716903.pdf; ln01L716903.pdf

Pam L.,  
The "BG" was left off the Sample IDs please update all Sample IDs in this data deliverable to be consistent (i.e. MW-13-0814-BG).

If you have any questions please let me know.  
Thanks,  
Mel

Melissa Osborne | Senior Project Assistant (Database Manager) | [melissa.osborne@arcadis-us.com](mailto:melissa.osborne@arcadis-us.com)

ARCADIS U.S., Inc. | 2929 Briarpark Drive, Suite 300 | Houston, TX, 77042  
T: 409.313.7074 | M: 409.988.9885 | O: 713.9534719 Connect with us! [www.arcadis-us.com](http://www.arcadis-us.com) | LinkedIn | Twitter | Facebook

ARCADIS, Imagine the result

Please consider the environment before printing this email.

-----Original Message-----

From: Pam Langford [<mailto:plangford@esclabsciences.com>]  
Sent: Thursday, August 21, 2014 1:33 PM  
To: Turner, Maisha; Osborne, Melissa; Krueger, Pamela  
Subject: ESC Lab Sciences Login for TX000836.0008.00004 Navajo Refining Company - Artesia, NM L716903

Thank you for choosing ESC Lab Sciences! Please find enclosed PDF files containing your laboratory login confirmation and chain of custody.

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ESC ... "Your Lab of Choice"

Pam Langford  
Technical Service Representative

--

ESC Lab Sciences  
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Notice: This communication and any attached files may contain privileged or other confidential information. If you have received this in error, please contact the sender immediately via reply email and immediately delete the message and any attachments without copying or disclosing the contents. Thank you.

## Quality Control Summary

### SDG: L717200

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,**

**August 11, 2015**

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#### **Sample Receiving and Handling**

All sample aliquots were received at the correct temperature, in the proper containers, and with the appropriate preservatives. All method specified holding times were met.

#### **Anions by Method 9056MOD**

##### **Laboratory Control Sample**

Samples L717200-01, -02, -03, -04, -05, -06, -07, and -08 were analyzed in analytical batch WG738638. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Sample Duplicate Analysis**

For analytical batch WG738638 sample duplicate analysis was performed on sample L717210-03. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG738638 sample duplicate analysis was performed on sample L717200-03. The relative percent difference exceeded the method limits for Chloride and Sulfate.

##### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG738638 matrix spike/matrix spike duplicate analysis was performed on sample L717210-01. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

##### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Total Dissolved Solids by Method 2540 C-2011**

##### **Laboratory Control Sample**

Samples L717200-01, -02, and -03 were analyzed in analytical batch WG738744. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Samples L717200-04, -05, -06, -07, and -08 were analyzed in analytical batch WG738745. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Sample Duplicate Analysis**

For analytical batch WG738744 sample duplicate analysis was performed on sample L716986-01. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG738745 sample duplicate analysis was performed on sample L716988-01. The relative percent differences were within the method limits for target analytes reported from this batch.



## Quality Control Summary

### SDG: L717200

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,**

**August 11, 2015**

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#### **Matrix Spike/Matrix Spike Duplicate**

Precision for batch WG738744 was evaluated using the LCS/LCSD. The RPDs were within method limits.

Precision for batch WG738745 was evaluated using the LCS/LCSD. The RPDs were within method limits.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Cyanide by Method 9012B**

##### **Laboratory Control Sample**

Samples L717200-01, -02, -03, -04, -05, -06, -07, and -08 were analyzed in analytical batch WG739278. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Sample Duplicate Analysis**

For analytical batch WG739278 sample duplicate analysis was performed on sample L717200-02. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG739278 sample duplicate analysis was performed on sample L717200-07. The relative percent differences were within the method limits for target analytes reported from this batch.

#### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG739278 matrix spike/matrix spike duplicate analysis was performed on sample L717162-02. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Mercury by Method 7470A**

##### **Laboratory Control Sample**

Samples L717200-01, -02, -03, -04, -05, -06, and -07 were analyzed in analytical batch WG738777. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch.

Sample L717200-08 was analyzed in analytical batch WG739225. The laboratory control sample associated with this sample was within the laboratory control limits for all target analytes reported from this batch.

##### **Sample Duplicate Analysis**

For analytical batch WG738777 sample duplicate analysis was performed on sample L717200-07. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG739225 sample duplicate analysis was performed on sample L717298-01. The relative percent differences were within the method limits for target analytes reported from this batch.

## Quality Control Summary

### SDG: L717200

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,  
September 02, 2014**

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#### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG738777 matrix spike/matrix spike duplicate analysis was performed on sample L717200-07. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

For analytical batch WG739225 matrix spike/matrix spike duplicate analysis was performed on sample L717298-01. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

#### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Trace Metals by Method 6020**

##### **Laboratory Control Sample**

Samples L717200-01, -02, -03, -04, -05, -06, -07, and -08 were analyzed in analytical batch WG738880. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Samples L717200-01, -02, -03, -04, -05, -06, -07, and -08 were analyzed in analytical batch WG738881. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Samples L717200-01, -02, -04, -05, -06, and -08 were analyzed in analytical batch WG739363. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

#### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG738880 matrix spike/matrix spike duplicate analysis was performed on sample L716903-02. The matrix spike recoveries were above laboratory control limits for Calcium,Dissolved and Sodium,Dissolved. The spike recoveries were within limits for the remaining target compounds reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch. Calcium,Dissolved did not meet the method limit criteria for the post digest spike.

For analytical batch WG738881 matrix spike/matrix spike duplicate analysis was performed on sample L716903-01. The matrix spike recoveries were above laboratory control limits for Calcium and Sodium. The spike recoveries were within limits for the remaining target compounds reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch. Calcium and Sodium did not meet the method limit criteria for the post digest spike.

For analytical batch WG739363 matrix spike/matrix spike duplicate analysis was performed on sample L716903-01. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

#### **Blank Analysis**

For batch WG738880, the concentration of Copper,Dissolved was above the method reporting limit.

The remaining method blanks, initial calibration blank, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.



## Quality Control Summary

### SDG: L717200

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,**

**August 11, 2015**

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#### **Volatile TPH by Method 8015D/GRO**

##### **Laboratory Control Sample**

Samples L717200-01, -02, -03, -04, -05, -06, -07, and -08 were analyzed in analytical batch WG738755. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG738755 matrix spike/matrix spike duplicate analysis was performed on sample L717200-01. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

##### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Volatile Organic Compounds by Method 8260B**

##### **Laboratory Control Sample**

Samples L717200-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, and -12 were analyzed in analytical batch WG738775. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG738775 matrix spike/matrix spike duplicate analysis was performed on sample L717200-04. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

##### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

#### **Semi-Volatile Organic Compounds by Method 8270C**

##### **Laboratory Control Sample**

Samples L717200-01, -02, -03, -04, -05, -06, -07, and -08 were analyzed in analytical batch WG738716. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

##### **Matrix Spike/Matrix Spike Duplicate**

Precision for batch WG738716 was evaluated using the LCS/LCSD. The RPDs were within method limits.

## Quality Control Summary SDG: L717200

**For: ARCADIS US - TX**

**Project: Navajo Refining Company - Artesia,**

**August 11, 2015**

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### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

### **Diesel Range Organics by Method 8015**

#### **Laboratory Control Sample**

Samples L717200-01, -02, -03, -05, -06, -07, and -08 were analyzed in analytical batch WG738790. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Sample L717200-04 was analyzed in analytical batch WG738815. The laboratory control sample associated with this sample was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

#### **Matrix Spike/Matrix Spike Duplicate**

For analytical batch WG738790 matrix spike/matrix spike duplicate analysis was performed on sample L717314-02. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported

from this batch.

Precision for batch WG738815 was evaluated using the LCS/LCSD. The RPDs were within method limits.

### **Blank Analysis**

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

Nancy F. McLain  
ESC Representative  
ESC Lab Sciences



12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
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1-800-767-5859  
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Tax I.D. 62-0814289

Est. 1970

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

## Report Summary

Monday August 10, 2015

Report Number: L717200

Samples Received: 08/21/14

Client Project: TX000836.0008.00004

Description: Navajo Refining Company - Artesia, NM

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Entire Report Reviewed By:

Pam Langford , ESC Representative

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# REPORT OF ANALYSIS

Pam Krueger  
ARCADIS US - TX  
2929 Briarpark Dr., Suite 300  
Houston, TX 77042

August 10, 2015

Date Received : August 21, 2014  
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L717200-01

Sample ID : MW-55-0814-BG

Site ID :

Collected By : Ron Wood  
Collection Date : 08/19/14 16:50

Project # : TX000836.0008.00004

| Parameter             | Result  | MDL  | RDL    | Units | Qualifier | Method  | Date     | Dil. |
|-----------------------|---------|------|--------|-------|-----------|---------|----------|------|
| Chloride              | 320000  | 2600 | 50000  | ug/l  |           | 9056MOD | 08/21/14 | 50   |
| Fluoride              | 1700    | 9.9  | 100    | ug/l  |           | 9056MOD | 08/21/14 | 1    |
| Nitrate               | 7300    | 23.  | 100    | ug/l  |           | 9056MOD | 08/21/14 | 1    |
| Nitrite               | U       | 28.  | 100    | ug/l  |           | 9056MOD | 08/21/14 | 1    |
| Sulfate               | 2700000 | 3900 | 250000 | ug/l  |           | 9056MOD | 08/21/14 | 50   |
| Cyanide               | U       | 1.8  | 5.0    | ug/l  |           | 9012B   | 08/27/14 | 1    |
| Dissolved Solids      | 5400000 | 2800 | 10000  | ug/l  |           | 2540 C- | 08/25/14 | 1    |
| Aluminum              | 190     | 2.0  | 50.    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Aluminum, Dissolved   | 16.     | 2.0  | 50.    | ug/l  | J         | 6020    | 08/22/14 | 1    |
| Arsenic               | 5.1     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Arsenic, Dissolved    | 5.0     | 0.25 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Barium                | 15.     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Barium, Dissolved     | 9.4     | 0.36 | 2.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Boron                 | 950     | 1.5  | 20.    | ug/l  |           | 6020    | 08/27/14 | 1    |
| Boron, Dissolved      | 1100    | 1.5  | 20.    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Cadmium               | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/25/14 | 1    |
| Cadmium, Dissolved    | U       | 0.16 | 0.50   | ug/l  |           | 6020    | 08/22/14 | 1    |
| Calcium               | 600000  | 920  | 20000  | ug/l  |           | 6020    | 08/27/14 | 20   |
| Calcium, Dissolved    | 640000  | 460  | 10000  | ug/l  |           | 6020    | 08/25/14 | 10   |
| Chromium              | 2.2     | 0.54 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Chromium, Dissolved   | 0.82    | 0.54 | 1.0    | ug/l  | J         | 6020    | 08/22/14 | 1    |
| Copper                | 0.99    | 0.52 | 1.0    | ug/l  | J         | 6020    | 08/25/14 | 1    |
| Copper, Dissolved     | 1.4     | 0.52 | 1.0    | ug/l  |           | 6020    | 08/26/14 | 1    |
| Cobalt                | 2.3     | 0.26 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Cobalt, Dissolved     | U       | 0.26 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Iron                  | 100     | 50.  | 50.    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Iron, Dissolved       | U       | 50.  | 50.    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Lead                  | 0.45    | 0.24 | 1.0    | ug/l  | J         | 6020    | 08/25/14 | 1    |
| Lead, Dissolved       | U       | 0.24 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Manganese             | 260     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Manganese, Dissolved  | 94.     | 0.25 | 2.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Molybdenum            | 26.     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Molybdenum, Dissolved | 26.     | 0.14 | 2.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Nickel                | 5.5     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Nickel, Dissolved     | 4.6     | 0.35 | 1.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Potassium             | 1000    | 37.  | 1000   | ug/l  | J         | 6020    | 08/25/14 | 1    |
| Potassium, Dissolved  | 960     | 37.  | 1000   | ug/l  | J         | 6020    | 08/22/14 | 1    |
| Selenium              | 24.     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/25/14 | 1    |
| Selenium, Dissolved   | 23.     | 0.38 | 2.0    | ug/l  |           | 6020    | 08/22/14 | 1    |
| Silver                | U       | 0.31 | 0.50   | ug/l  |           | 6020    | 08/25/14 | 1    |

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

MDL = Minimum Detection Limit = LOD = TRRP SDL

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 08/10/15 17:09 Printed: 08/10/15 17:10