



Environmental Laboratory and Consulting Company

Analytical Laboratory - Environmental Consulting - Permit Application and Compliance

Certificate of Analysis

ODEQ ID # 9953

To: MR. JARED L. CARIKER

TULSA DISTRICT CORPS OF ENGINEERS

1645 S 101st EAST AVE

TULSA, OK 74128-4609

Project #:

Date Received: 8/17/2007

Project Name:

Report Date: 8/31/2007

| Lab Number | Sample Identification | Date Sampled | Analysis Date | Time | Analized By | Parameter | Q | Results | Units | MDL | SQL | Method |
|------------|--------------------------|--------------|---------------|-------|-------------|--------------------------|---|---------|-------|--------|----------|-------------|
| 200703439 | GAGE NUMBER: 07331600 | | | | | METALS-TULSA: | | | | | | |
| | | 8/16/2007 | 8/24/2007 | 16:16 | JL | Arsenic, Dissolved | U | BDL | mg/L | 0.009 | 0.00900 | 200.7/6010B |
| | | | 8/27/2007 | 13:43 | JL | Arsenic, Total | U | BDL | mg/L | 0.009 | 0.00900 | 200.7/6010B |
| | | | 8/24/2007 | 16:16 | JL | Barium, Dissolved | | 0.119 | mg/L | 0.0006 | 0.000600 | 200.7/6010B |
| | | | 8/27/2007 | 13:43 | JL | Barium, Total | | 0.115 | mg/L | 0.0006 | 0.000600 | 200.7/6010B |
| | | | 8/24/2007 | 16:16 | JL | Cadmium, Dissolved | U | BDL | mg/L | 0.0009 | 0.000900 | 200.7/6010B |
| | | | 8/27/2007 | 13:43 | JL | Cadmium, Total | U | BDL | mg/L | 0.0009 | 0.000900 | 200.7/6010B |
| | | | 8/24/2007 | 16:16 | JL | Chromium, Dissolved | U | BDL | mg/L | 0.0009 | 0.000900 | 200.7/6010B |
| | | | 8/27/2007 | 13:43 | JL | Chromium, Total | U | BDL | mg/L | 0.0009 | 0.000900 | 200.7/6010B |
| | | | 8/31/2007 | 17:30 | JL | Copper, Dissolved | U | BDL | mg/L | 0.0003 | 0.000300 | 200.7/6010B |
| | | | 8/31/200 | 17:30 | JL | Copper, Total | U | BDL | mg/L | 0.0003 | 0.000300 | 200.7/6010B |
| | | | 8/24/2007 | 16:16 | JL | Iron, Dissolved | | 0.0168 | mg/L | 0.0008 | 0.000800 | 200.7/6010B |
| | | | 8/27/2007 | 13:43 | JL | Iron, Total | | 0.0340 | mg/L | 0.0008 | 0.000800 | 200.7/6010B |
| | | | 8/24/2007 | 16:16 | JL | Lead, Dissolved | U | BDL | mg/L | 0.009 | 0.00900 | 200.7/6010B |
| | | | 8/27/2007 | 13:43 | JL | Lead, Total | | 0.0110 | mg/L | 0.009 | 0.00900 | 200.7/6010B |
| | | | 8/24/2007 | 16:16 | JL | Manganese, Dissolved | | 0.0150 | mg/L | 0.0001 | 0.000100 | 200.7/6010B |
| | | | 8/27/2007 | 13:43 | JL | Manganese, Total | | 0.129 | mg/L | 0.0001 | 0.000100 | 200.7/6010B |
| | | | 8/24/2007 | 16:16 | JL | Nickel, Dissolved | U | BDL | mg/L | 0.0069 | 0.00690 | 200.7/6010B |
| | | | 8/27/2007 | 13:43 | JL | Nickel, Total | U | BDL | mg/L | 0.0069 | 0.00690 | 200.7/6010B |
| | | | 8/24/2007 | 16:16 | JL | Silver, Dissolved | U | BDL | mg/L | 0.0003 | 0.000300 | 200.7/6010B |
| | | | 8/27/2007 | 13:43 | JL | Silver, Total | U | BDL | mg/L | 0.0003 | 0.000300 | 200.7/6010B |
| | | | 8/24/2007 | 16:16 | JL | Zinc, Dissolved | | 0.00400 | mg/L | 0.0006 | 0.000600 | 200.7/6010B |
| | | | 8/27/2007 | 13:43 | JL | Zinc, Total | U | BDL | mg/L | 0.0006 | 0.000600 | 200.7/6010B |
| | | | 8/21/2007 | 15:02 | JL | Mercury, Dissolved | | 0.0008 | mg/l | 0.0002 | 0.0002 | EPA_245.1 |
| | | | 8/28/2007 | 17:20 | JL | Mercury | | 0.0015 | mg/l | 0.0002 | 0.0002 | EPA_245.1 |
| | | | 8/23/2007 | 13:28 | OL | Selenium, Dissolved | U | BDL | mg/l | 0.0014 | 0.00140 | EPA_7440 |
| | | | 8/23/2007 | 9:52 | OL | Selenium | U | BDL | mg/l | 0.0014 | 0.00140 | EPA_7740 |
| | | | 8/27/2007 | 13:43 | JL | Silicon Dioxide (silica) | | 8.3 | mg/l | 0.006 | 0.006 | 200.7/6010B |

Laboratory Authorized Signature



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Certificate of Analysis

ODEQ ID # 9953

To: MR. JARED L. CARIKER
TULSA DISTRICT CORPS OF ENGINEERS
1645 S 101st EAST AVE
TULSA, OK 74128-4609

Project #:
Project Name:

Date Received: 8/17/2007
Report Date: 8/31/2007

Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, Analyzed By, Parameter, Q Results, Units, MDL, SQL Method. Contains two main sections: SALTS-TULSA and METALS-TULSA.

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Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, Analyzed By, Parameter, Q Results, Units, MDL, SQL, Method. Contains two main sections of data for Lab 200703440.

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Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, Analyzed By, Parameter, Q, Results, Units, MDL, SQL Method. Includes data for sample 200703440 (Nitrate/nitrite As Nitrogen, pH, Sulfate, etc.) and sample 200703441 (METALS-TULSA: Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Nickel, Silver).

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| Lab Number | Sample Identification | Date Sampled | Analysis Date | Time | Analized By | Parameter | Q | Results | Units | MDL | SQL | Method |
|------------|--------------------------|--------------|------------------------|-------|-------------|----------------------------|-------|---------|-----------|--------|----------|-------------|
| 200703441 | GAGE NUMBER: 07331000 | 8/16/2007 | 8/24/2007 | 16:16 | JL | Zinc, Dissolved | U | BDL | mg/L | 0.0006 | 0.000600 | 200.7/6010B |
| | | | 8/27/2007 | 13:43 | JL | Zinc, Total | | 0.0150 | mg/L | 0.0006 | 0.000600 | 200.7/6010B |
| | | | 8/21/2007 | 15:02 | JL | Mercury, Dissolved | U | BDL | mg/l | 0.0002 | 0.0002 | EPA_245.1 |
| | | | 8/28/2007 | 17:20 | JL | Mercury | U | BDL | mg/l | 0.0002 | 0.0002 | EPA_245.1 |
| | | | 8/23/2007 | 13:41 | OL | Selenium, Dissolved | U | BDL | mg/l | 0.0014 | 0.00140 | EPA_7440 |
| | | | 8/23/2007 | 10:09 | OL | Selenium | U | BDL | mg/l | 0.0014 | 0.00140 | EPA_7740 |
| | | | 8/27/2007 | 13:43 | JL | Silicon Dioxide (silica) | | 16.47 | mg/l | 0.006 | 0.006 | 200.7/6010B |
| 200703441 | GAGE NUMBER: 07331000 | 8/16/2007 | SALTS-TULSA: | | | | | | | | | |
| | | | 8/24/2007 | 14:33 | JL | Calcium, Dissolved | | 144 | mg/L | 0.0039 | 0.00390 | 200.7/6010B |
| | | | 8/24/2007 | 14:33 | JL | Magnesium, Dissolved | | 56.5 | mg/L | 0.0006 | 0.000600 | 200.7/6010B |
| | | | 8/24/2007 | 14:33 | JL | Phosphorus, Total | | 0.320 | mg/L | 0.0096 | 0.00960 | 200.7/6010B |
| | | | 8/24/2007 | 14:33 | JL | Potassium, Dissolved | | 14.2 | mg/L | 0.0009 | 0.000900 | 200.7/6010B |
| | | | 8/24/2007 | 14:33 | JL | Sodium, Dissolved | | 85.8 | mg/L | 0.0018 | 0.00180 | 200.7/6010B |
| | | | 8/24/2007 | 14:33 | JL | Total Hardness | | 645.3 | mg/l | 0.06 | 0.06 | 200.7/6010B |
| | | | 8/28/2007 | | ap | Total Alkalinity | | 200 | mg/l | 2 | 2 | EPA_310.1 |
| | | | 8/27/2007 | | ms | Chloride | | 66.5 | mg/l | 0.383 | 0.383 | EPA_9253 |
| | | | 8/16/2007 | 10:23 | JL | Dissolved Oxygen | | 9.6 | mg/l | 0.1 | 0.1 | EPA_360.1 |
| | | | 8/31/2007 | 10:30 | KK | Fluoride | | 0.780 | mg/L | | | EPA_340.1 |
| | | | 8/23/2007 | 13:15 | KK | Nitrate/nitrite As Nitroge | U | BDL | mg/l | 1.2 | 1.2 | EPA_353.3 |
| | | | 8/16/2007 | 10:23 | JL | pH | | 8.4 | s.u. | | | EPA_150.1 |
| | | | 8/21/2007 | 15:30 | AP | Sulfate | | 8000 | mg/l | 1.2 | 1.2 | EPA_375.2 |
| | | | 8/20/2007 | 17:10 | AP | Total Dissolved Solids | | 802 | mg/l | 5.5 | 5.5 | EPA_160.1 |
| | | | 8/23/2007 | 10:30 | AP | Total Kjeldahl Nitrogen | | 4.03 | mg/l | 0.4 | 0.4 | EPA_351.3M |
| 8/23/2007 | 11:15 | AP | Total Suspended Solids | | 3075 | mg/l | 1.7 | 1.7 | EPA_160.2 | | | |
| 8/28/2007 | | kk | Turbidity | | 7.72 | NTU | 0.078 | 0.078 | EPA_180.1 | | | |
| 200703442 | GAGE NUMBER: 07308500 | 8/16/2007 | METALS-TULSA: | | | | | | | | | |
| | | | 8/24/2007 | 16:16 | JL | Arsenic, Dissolved | | 0.0120 | mg/L | 0.009 | 0.00900 | 200.7/6010B |

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Report Date: 8/31/2007

Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, Analyzed By, Parameter, Q Results, Units, MDL, SQL, Method. Contains multiple rows of chemical analysis data for various elements like Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Nickel, Silver, Zinc, Mercury, and Selenium.

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| Lab Number | Sample Identification | Date Sampled | Analysis Date | Time | Analized By | Parameter | Q | Results | Units | MDL | SQL | Method |
|------------|--------------------------|--------------|---------------|-------|-------------|----------------------------|---|---------|-------|--------|----------|-------------|
| 200703442 | GAGE NUMBER: 07308500 | 8/16/2007 | 8/24/2007 | 14:33 | JL | Phosphorus, Total | | 0.200 | mg/L | 0.0096 | 0.00960 | 200.7/6010B |
| | | | 8/24/2007 | 14:33 | JL | Potassium, Dissolved | | 27.8 | mg/L | 0.0009 | 0.000900 | 200.7/6010B |
| | | | 8/24/2007 | 14:33 | JL | Sodium, Dissolved | | 1350 | mg/L | 0.0018 | 0.00180 | 200.7/6010B |
| | | | 8/24/2007 | 14:33 | JL | Total Hardness | | 985.4 | mg/l | 0.06 | 0.06 | 200.7/6010B |
| | | | 8/28/2007 | | ap | Total Alkalinity | | 123 | mg/l | 2 | 2 | EPA_310.1 |
| | | | 8/27/2007 | | ms | Chloride | | 1200 | mg/l | 0.383 | 0.383 | EPA 9253 |
| | | | 8/16/2007 | 17:51 | JL | Dissolved Oxygen | | 7.96 | mg/l | 0.1 | 0.1 | EPA_360.1 |
| | | | 8/31/2007 | 10:30 | KK | Fluoride | | 0.850 | mg/L | | | EPA 340.1 |
| | | | 8/23/2007 | 13:15 | KK | Nitrate/nitrite As Nitroge | U | BDL | mg/l | 1.2 | 1.2 | EPA 353.3 |
| | | | 8/16/2007 | 17:51 | JL | pH | | 8.4 | s.u. | | | EPA_150.1 |
| | | | 8/29/2007 | 16:00 | ap | Sulfate | | 825 | mg/l | 1.2 | 1.2 | EPA_375.2 |
| | | | 8/20/2007 | 17:10 | AP | Total Dissolved Solids | | 3330 | mg/l | 5.5 | 5.5 | EPA_160.1 |
| | | | 8/23/2007 | 10:30 | AP | Total Kjeldahl Nitrogen | | 3.98 | mg/l | 0.4 | 0.4 | EPA_351.3M |
| | | | 8/23/2007 | 11:15 | AP | Total Suspended Solids | | 917 | mg/l | 1.7 | 1.7 | EPA_160.2 |
| | | | 8/28/2007 | | kk | Turbidity | | 4.95 | NTU | 0.078 | 0.078 | EPA_180.1 |
| 200703443 | GAGE NUMBER: 07312100 | 8/17/2007 | METALS-TULSA: | | | | | | | | | |
| | | | 8/24/2007 | 16:16 | JL | Arsenic, Dissolved | | 0.0100 | mg/L | 0.009 | 0.00900 | 200.7/6010B |
| | | | 8/27/2007 | 13:43 | JL | Arsenic, Total | | 0.0110 | mg/L | 0.009 | 0.00900 | 200.7/6010B |
| | | | 8/24/2007 | 16:16 | JL | Barium, Dissolved | | 0.149 | mg/L | 0.0006 | 0.000600 | 200.7/6010B |
| | | | 8/27/2007 | 13:43 | JL | Barium, Total | | 0.141 | mg/L | 0.0006 | 0.000600 | 200.7/6010B |
| | | | 8/24/2007 | 16:16 | JL | Cadmium, Dissolved | U | BDL | mg/L | 0.0009 | 0.000900 | 200.7/6010B |
| | | | 8/27/2007 | 13:43 | JL | Cadmium, Total | U | BDL | mg/L | 0.0009 | 0.000900 | 200.7/6010B |
| | | | 8/24/2007 | 16:16 | JL | Chromium, Dissolved | U | BDL | mg/L | 0.0009 | 0.000900 | 200.7/6010B |
| | | | 8/27/2007 | 13:43 | JL | Chromium, Total | U | BDL | mg/L | 0.0009 | 0.000900 | 200.7/6010B |
| | | | 8/31/200 | 17:30 | JL | Copper, Dissolved | U | BDL | mg/L | 0.0003 | 0.000300 | 200.7/6010B |
| | | | 8/31/200 | 17:30 | JL | Copper, Total | | 0.0130 | mg/L | 0.0003 | 0.000300 | 200.7/6010B |
| | | | 8/24/2007 | 16:16 | JL | Iron, Dissolved | | 0.0198 | mg/L | 0.0008 | 0.000800 | 200.7/6010B |
| | | | 8/27/2007 | 13:43 | JL | Iron, Total | | 0.0210 | mg/L | 0.0008 | 0.000800 | 200.7/6010B |

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| Lab Number | Sample Identification | Date Sampled | Analysis Date | Time | Analized By | Parameter | Q | Results | Units | MDL | SQL | Method |
|------------|--------------------------|--------------|---------------|-------|-------------|----------------------------|---|---------|-------|--------|----------|-------------|
| 200703443 | GAGE NUMBER: 07312100 | 8/17/2007 | 8/24/2007 | 16:16 | JL | Lead, Dissolved | U | BDL | mg/L | 0.009 | 0.00900 | 200.7/6010B |
| | | | 8/27/2007 | 13:43 | JL | Lead, Total | U | BDL | mg/L | 0.009 | 0.00900 | 200.7/6010B |
| | | | 8/24/2007 | 16:16 | JL | Manganese, Dissolved | | 0.00800 | mg/L | 0.0001 | 0.000100 | 200.7/6010B |
| | | | 8/27/2007 | 13:43 | JL | Manganese, Total | | 0.0220 | mg/L | 0.0001 | 0.000100 | 200.7/6010B |
| | | | 8/24/2007 | 16:16 | JL | Nickel, Dissolved | U | BDL | mg/L | 0.0069 | 0.00690 | 200.7/6010B |
| | | | 8/27/2007 | 13:43 | JL | Nickel, Total | U | BDL | mg/L | 0.0069 | 0.00690 | 200.7/6010B |
| | | | 8/24/2007 | 16:16 | JL | Silver, Dissolved | U | BDL | mg/L | 0.0003 | 0.000300 | 200.7/6010B |
| | | | 8/27/2007 | 13:43 | JL | Silver, Total | U | BDL | mg/L | 0.0003 | 0.000300 | 200.7/6010B |
| | | | 8/24/2007 | 16:16 | JL | Zinc, Dissolved | U | BDL | mg/L | 0.0006 | 0.000600 | 200.7/6010B |
| | | | 8/27/2007 | 13:43 | JL | Zinc, Total | U | BDL | mg/L | 0.0006 | 0.000600 | 200.7/6010B |
| | | | 8/21/2007 | 15:02 | JL | Mercury, Dissolved | U | BDL | mg/l | 0.0002 | 0.0002 | EPA_245.1 |
| | | | 8/28/2007 | 17:20 | JL | Mercury | | 0.0017 | mg/l | 0.0002 | 0.0002 | EPA_245.1 |
| | | | 8/23/2007 | 13:48 | OL | Selenium, Dissolved | U | BDL | mg/l | 0.0014 | 0.00140 | EPA_7440 |
| | | | 8/23/2007 | 10:22 | OL | Selenium | U | BDL | mg/l | 0.0014 | 0.00140 | EPA_7740 |
| | | | 8/27/2007 | 13:43 | JL | Silicon Dioxide (silica) | | 6.1 | mg/l | 0.006 | 0.006 | 200.7/6010B |
| 200703443 | GAGE NUMBER: 07312100 | 8/17/2007 | SALTS-TULSA: | | | | | | | | | |
| | | | 8/24/2007 | 14:33 | JL | Calcium, Dissolved | | 233 | mg/L | 0.0039 | 0.00390 | 200.7/6010B |
| | | | 8/24/2007 | 14:33 | JL | Magnesium, Dissolved | | 69.0 | mg/L | 0.0006 | 0.000600 | 200.7/6010B |
| | | | 8/24/2007 | 14:33 | JL | Phosphorus, Total | | 0.110 | mg/L | 0.0096 | 0.00960 | 200.7/6010B |
| | | | 8/24/2007 | 14:33 | JL | Potassium, Dissolved | | 21.0 | mg/L | 0.0009 | 0.000900 | 200.7/6010B |
| | | | 8/24/2007 | 14:33 | JL | Sodium, Dissolved | | 1080 | mg/L | 0.0018 | 0.00180 | 200.7/6010B |
| | | | 8/24/2007 | 14:33 | JL | Total Hardness | | 871.7 | mg/l | 0.06 | 0.06 | 200.7/6010B |
| | | | 8/28/2007 | | ap | Total Alkalinity | | 96.6 | mg/l | 2 | 2 | EPA_310.1 |
| | | | 8/27/2007 | | ms | Chloride | | 980 | mg/l | 0.383 | 0.383 | EPA_9253 |
| | | | 8/17/2007 | 9:00 | AP | Dissolved Oxygen | | 9.38 | mg/l | 0.1 | 0.1 | EPA_360.1 |
| | | | 8/31/2007 | 10:30 | KK | Fluoride | | 0.820 | mg/L | | | EPA_340.1 |
| | | | 8/27/2007 | | kk | Nitrate/nitrite As Nitroge | U | BDL | mg/l | 1.2 | 1.2 | EPA_353.3 |
| | | | 8/17/2007 | 9:00 | AP | pH | | 8.3 | s.u. | | | EPA_150.1 |
| | | | 8/29/2007 | 16:00 | ap | Sulfate | | 775 | mg/l | 1.2 | 1.2 | EPA_375.2 |

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Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, Analyzed By, Parameter, Q Results, Units, MDL, SQL Method. Includes data for sample 200703443 and 200703444 (METALS-TULSA).

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Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, Analyzed By, Parameter, Q Results, Units, MDL, SQL, Method. Includes data for GAGE NUMBER: 07311900 and METALS-TULSA.

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Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, Analyzed By, Parameter, Q Results, Units, MDL, SQL, Method. Contains two main sections of data for sample 200703445.

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Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, Analyzed By, Parameter, Q, Results, Units, MDL, SQL, Method. Contains two main sections of data for lab numbers 200703445 and 200703446.

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| Lab Number | Sample Identification | Date Sampled | Analysis Date | Time | Analized By | Parameter | Q | Results | Units | MDL | SQL | Method |
|------------|--------------------------|--------------|---------------|--------------------------|-------------|----------------------------|---|---------|-------|--------|----------|-------------|
| 200703446 | GAGE NUMBER: 07311782 | 8/17/2007 | 8/27/2007 | 13:43 | JL | Manganese, Total | | 0.200 | mg/L | 0.0001 | 0.000100 | 200.7/6010B |
| | | | 8/24/2007 | 16:16 | JL | Nickel, Dissolved | U | BDL | mg/L | 0.0069 | 0.00690 | 200.7/6010B |
| | | | 8/27/2007 | 13:43 | JL | Nickel, Total | U | BDL | mg/L | 0.0069 | 0.00690 | 200.7/6010B |
| | | | 8/24/2007 | 16:16 | JL | Silver, Dissolved | U | BDL | mg/L | 0.0003 | 0.000300 | 200.7/6010B |
| | | | 8/27/2007 | 13:43 | JL | Silver, Total | U | BDL | mg/L | 0.0003 | 0.000300 | 200.7/6010B |
| | | | 8/24/2007 | 16:16 | JL | Zinc, Dissolved | | 0.0800 | mg/L | 0.0006 | 0.000600 | 200.7/6010B |
| | | | 8/27/2007 | 13:43 | JL | Zinc, Total | | 0.100 | mg/L | 0.0006 | 0.000600 | 200.7/6010B |
| | | | 8/21/2007 | 15:02 | JL | Mercury, Dissolved | U | BDL | mg/l | 0.0002 | 0.0002 | EPA_245.1 |
| | | | 8/28/2007 | 17:20 | JL | Mercury | U | BDL | mg/l | 0.0002 | 0.0002 | EPA_245.1 |
| | | | 8/23/2007 | 14:04 | OL | Selenium, Dissolved | < | 0.028 | mg/l | 0.0014 | 0.028 | EPA_7440 |
| | | | 8/23/2007 | 12:27 | OL | Selenium | < | 0.028 | mg/l | 0.0014 | 0.028 | EPA_7740 |
| | | | 8/27/2007 | 13:43 | JL | Silicon Dioxide (silica) | | 16.2 | mg/l | 0.006 | 0.006 | 200.7/6010B |
| | | | 200703446 | GAGE NUMBER: 07311782 | 8/17/2007 | SALTS-TULSA: | | | | | | |
| 8/24/2007 | 14:33 | JL | | | | Calcium, Dissolved | | 1270 | mg/L | 0.0039 | 0.00390 | 200.7/6010B |
| 8/24/2007 | 14:33 | JL | | | | Magnesium, Dissolved | | 355 | mg/L | 0.0006 | 0.000600 | 200.7/6010B |
| 8/24/2007 | 14:33 | JL | | | | Phosphorus, Total | | 1.10 | mg/L | 0.0096 | 0.00960 | 200.7/6010B |
| 8/24/2007 | 14:33 | JL | | | | Potassium, Dissolved | | 144 | mg/L | 0.0009 | 0.000900 | 200.7/6010B |
| 8/24/2007 | 14:33 | JL | | | | Sodium, Dissolved | | 21400 | mg/L | 0.0018 | 0.00180 | 200.7/6010B |
| 8/24/2007 | 14:33 | JL | | | | Total Hardness | | 5481 | mg/l | 0.06 | 0.06 | 200.7/6010B |
| 8/28/2007 | | ap | | | | Total Alkalinity | | 94.6 | mg/l | 2 | 2 | EPA_310.1 |
| 8/27/2007 | | ms | | | | Chloride | | 16500 | mg/l | 0.383 | 0.383 | EPA 9253 |
| 8/17/2007 | 14:50 | AP | | | | Dissolved Oxygen | | 8.41 | mg/l | 0.1 | 0.1 | EPA_360.1 |
| 8/31/2007 | 10:30 | KK | | | | Fluoride | | 1.76 | mg/L | | | EPA 340.1 |
| 8/27/2007 | | kk | | | | Nitrate/nitrite As Nitroge | U | BDL | mg/l | 1.2 | 1.2 | EPA 353.3 |
| 8/17/2007 | 14:50 | AP | | | | pH | | 7.8 | s.u. | | | EPA_150.1 |
| 8/29/2007 | 16:00 | ap | | | | Sulfate | | 3350 | mg/l | 1.2 | 1.2 | EPA_375.2 |
| 8/23/2007 | 16:40 | ap | | | | Total Dissolved Solids | B | 32804 | mg/l | 5.5 | 5.5 | EPA_160.1 |
| 8/23/2007 | 10:30 | AP | | | | Total Kjeldahl Nitrogen | | 4.2 | mg/l | 0.4 | 0.4 | EPA_351.3M |
| 8/24/2007 | 16:15 | AP | | | | Total Suspended Solids | | 53.8 | mg/l | 1.7 | 1.7 | EPA_160.2 |

Laboratory Authorized Signature



Environmental Laboratory and Consulting Company

Analytical Laboratory - Environmental Consulting - Permit Application and Compliance

Certificate of Analysis

ODEQ ID # 9953

To: MR. JARED L. CARIKER
TULSA DISTRICT CORPS OF ENGINEERS
1645 S 101st EAST AVE
TULSA, OK 74128-4609

Project #:
Project Name:

Date Received: 8/17/2007
Report Date: 8/31/2007

Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, Analyzed By, Parameter, Q, Results, Units, MDL, SQL, Method. Includes data for GAGE NUMBER: 07311782 and METALS-TULSA.

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Date Received: 8/17/2007
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Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, Analyzed By, Parameter, Q Results, Units, MDL, SQL, Method. Contains two main sections of data for sample 200703448.

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1645 S 101st EAST AVE
TULSA, OK 74128-4609

Project #:

Date Received: 8/17/2007

Project Name:

Report Date: 8/31/2007

| Lab Number | Sample Identification | Date Sampled | Analysis Date | Time | By | Parameter | Q | Results | Units | MDL | SQL | Method | | |
|------------|--------------------------|--------------|---------------|-------|-----|----------------------------|--------|---------|-------------|--------|----------|-------------|-----------|------------|
| 200703448 | GAGE NUMBER: 07311700 | 8/17/2007 | 8/17/2007 | 11:24 | AP | Dissolved Oxygen | | 8.47 | mg/l | 0.1 | 0.1 | EPA_360.1 | | |
| | | | 8/31/2007 | 10:30 | KK | Fluoride | | 1.26 | mg/L | | | | EPA 340.1 | |
| | | | 8/27/2007 | | kk | Nitrate/nitrite As Nitroge | U | BDL | mg/l | 1.2 | 1.2 | | | EPA 353.3 |
| | | | 8/17/2007 | 11:24 | AP | pH | | 8.2 | s.u. | | | | | EPA_150.1 |
| | | | 8/29/2007 | 16:00 | ap | Sulfate | | 2000 | mg/l | 1.2 | 1.2 | | | EPA_375.2 |
| | | | 8/23/2007 | 16:40 | ap | Total Dissolved Solids | B | 8168 | mg/l | 5.5 | 5.5 | | | EPA_160.1 |
| | | | 8/23/2007 | 10:30 | AP | Total Kjeldahl Nitrogen | | 4.48 | mg/l | 0.4 | 0.4 | | | EPA_351.3M |
| | | | 8/24/2007 | 16:15 | AP | Total Suspended Solids | U | BDL | mg/l | 1.7 | 1.7 | | | EPA_160.2 |
| | | | 8/28/2007 | | kk | Turbidity | | 1.02 | NTU | 0.078 | 0.078 | EPA_180.1 | | |
| 200703449 | GAGE NUMBER: 07311630 | 8/17/2007 | METALS-TULSA: | | | | | | | | | | | |
| | | | 8/24/2007 | 16:16 | JL | Arsenic, Dissolved | U | BDL | mg/L | 0.009 | 0.00900 | 200.7/6010B | | |
| | | | 8/27/2007 | 13:43 | JL | Arsenic, Total | U | BDL | mg/L | 0.009 | 0.00900 | 200.7/6010B | | |
| | | | 8/24/2007 | 16:16 | JL | Barium, Dissolved | U | BDL | mg/L | 0.0006 | 0.000600 | 200.7/6010B | | |
| | | | 8/27/2007 | 13:43 | JL | Barium, Total | U | BDL | mg/L | 0.0006 | 0.000600 | 200.7/6010B | | |
| | | | 8/24/2007 | 16:16 | JL | Cadmium, Dissolved | U | BDL | mg/L | 0.0009 | 0.000900 | 200.7/6010B | | |
| | | | 8/27/2007 | 13:43 | JL | Cadmium, Total | U | BDL | mg/L | 0.0009 | 0.000900 | 200.7/6010B | | |
| | | | 8/24/2007 | 16:16 | JL | Chromium, Dissolved | U | BDL | mg/L | 0.0009 | 0.000900 | 200.7/6010B | | |
| | | | 8/27/2007 | 13:43 | JL | Chromium, Total | U | BDL | mg/L | 0.0009 | 0.000900 | 200.7/6010B | | |
| | | | 8/31/200 | 17:30 | JL | Copper, Dissolved | U | BDL | mg/L | 0.0003 | 0.000300 | 200.7/6010B | | |
| | | | 8/31/200 | 17:30 | JL | Copper, Total | U | BDL | mg/L | 0.0003 | 0.000300 | 200.7/6010B | | |
| | | | 8/24/2007 | 16:16 | JL | Iron, Dissolved | U | BDL | mg/L | 0.0008 | 0.000800 | 200.7/6010B | | |
| | | | 8/27/2007 | 13:43 | JL | Iron, Total | | 0.130 | mg/L | 0.0008 | 0.000800 | 200.7/6010B | | |
| | | | 8/24/2007 | 16:16 | JL | Lead, Dissolved | U | BDL | mg/L | 0.009 | 0.00900 | 200.7/6010B | | |
| | | | 8/27/2007 | 13:43 | JL | Lead, Total | U | BDL | mg/L | 0.009 | 0.00900 | 200.7/6010B | | |
| | | | 8/24/2007 | 16:16 | JL | Manganese, Dissolved | U | BDL | mg/L | 0.0001 | 0.000100 | 200.7/6010B | | |
| | | | 8/27/2007 | 13:43 | JL | Manganese, Total | U | BDL | mg/L | 0.0001 | 0.000100 | 200.7/6010B | | |
| | | | 8/24/2007 | 16:16 | JL | Nickel, Dissolved | U | BDL | mg/L | 0.0069 | 0.00690 | 200.7/6010B | | |
| 8/27/2007 | 13:43 | JL | Nickel, Total | U | BDL | mg/L | 0.0069 | 0.00690 | 200.7/6010B | | | | | |

Laboratory Authorized Signature



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Certificate of Analysis

ODEQ ID # 9953

To: MR. JARED L. CARIKER
TULSA DISTRICT CORPS OF ENGINEERS
1645 S 101st EAST AVE
TULSA, OK 74128-4609

Project #:
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Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, By, Parameter, Q Results, Units, MDL, SQL Method. Contains two main sections of data for Lab 200703449.

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Report Date: 8/31/2007

Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, Analyzed By, Parameter, Q, Results, Units, MDL, SQL, Method. Contains two main sections of data for lab numbers 200703450 and 200703451.

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1645 S 101st EAST AVE
TULSA, OK 74128-4609

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Project Name:

Date Received: 8/17/2007
Report Date: 8/31/2007

Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, Analyzed By, Parameter, Q Results, Units, MDL, SQL, Method. Contains two main sections of data for samples 200703451 and 200703451.

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1645 S 101st EAST AVE
TULSA, OK 74128-4609

Project #:
Project Name:

Date Received: 8/17/2007
Report Date: 8/31/2007

Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, Analyzed By, Parameter, Q Results, Units, MDL, SQL Method. Includes data for pH, Sulfate, Total Dissolved Solids, Total Kjeldahl Nitrogen, Total Suspended Solids, and Turbidity.

Note:

MDL = Method Detection Limit. SQL* = Sample Quantitation Level. BDL = Analyte was analyzed for but not detected above MDL.
B = Analyte was detected in both the sample and associated blank. J = Analyte was detected above the MDL but below the PQL.
OL2 = Subcontracted to ODEQ Lab #7211. Q = Surrogate recovery fell outside acceptance limits.

* When a sample contains a high concentration of either a target or non-target compound(s) or interference, it must be diluted.
SQL = Dilution factor x MDL. Samples are disposed of 20 days after the sample is reported.

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