

JUNE 9, 2008

**FINAL REPORT FOR SAMPLES FROM 200 AREA  
GROUND WATER REMEDIATION PROJECT, APRIL 2008**

**Sample Group No. 222S20080396**

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Advanced Technologies and Laboratories International, Inc.

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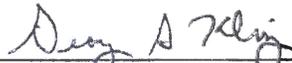


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222-S LABORATORY

FINAL REPORT FOR SAMPLES FROM 200 AREA GROUND WATER  
REMEDIATION PROJECT, APRIL 2008

1.0

INTRODUCTION

Two water samples from the Ground Water Remediation Project, Operable Unit 200-PO-1 were received at the 222-S Laboratory on April 23, 2008, and assigned to group 222S20080396. The samples were analyzed in accordance with ATL-MP-1011, *ATL Quality Assurance Project Plan for 222-S Laboratory* and *Statement of Work for ATL/222-S Laboratory Services for 200-PO-1 Sample Analysis (SOW)*. All known deviations from the requirements in these documents are sited in this narrative.

- Attachment 1 Data Summary Report
- Attachment 2 Analysis Date
- Attachment 3 Receipt Paperwork

2.0 SAMPLE RECEIPT AND HANDLING

The samples were collected and delivered to the laboratory on April 23, 2008. The sample custodian was unable to measure the temperature of the samples, since a temperature blank was not included with the sample shipment. The samples were refrigerated after receipt.

3.0 ANALYTICAL RESULTS

The Data Summary Report, included as Attachment 1, presents the analytical results for the analytes requested on the chain of custody. In this Attachment 1 the column labeled "A#" indicates the aliquot class or the method used for sample preparation before analysis. Since the only analysis required was ion chromatography (IC), a direct analysis without any preparation, this column is blank.

3.1 HOLDING TIME REPORT

The SOW requested that the laboratory strive to meet the holding times specified in SW-846. Holding times are presented in Table 1

Table 1. Holding Times

| Method   | Sampling Date  | Analysis Date  | Elapsed Time | SW-846 Holding Time |
|----------|----------------|----------------|--------------|---------------------|
| Fluoride | 4/23/08, 09:36 | 4/23/08, 18:52 | 9 hr, 17 min | 28 days             |
| Nitrate  | 4/23/08, 09:36 | 4/23/08, 18:52 | 9 hr, 17 min | 48 hours            |
| Nitrite  | 4/23/08, 09:36 | 4/23/08, 18:52 | 9 hr, 17 min | 48 hours            |

### 3.2 ION CHROMATOGRAPHY

The IC analysis was performed on direct aliquots. The laboratory control sample and matrix spike recoveries met the criteria listed in ATL-MP-1011. The relative percent difference between sample and duplicate results were less than 20%. No primary analytes were detected in the method blank.

### 4.0 ANALYTICAL PROCEDURES

Table 2 presents the 222-S Laboratory analytical procedure used to generate the reported results.

**Table 2. Analytical Procedures.**

| Analysis | Preparation Procedure | Analysis Procedure  |
|----------|-----------------------|---------------------|
| IC       | n/a                   | LA-506-102 Rev. D-0 |

### 5.0 REFERENCES

*Statement of Work for ATL/222-S Laboratory Services for 200-PO-1 Sample Analysis*,  
April 23, 2008, Fluor Hanford, Inc., Richland, Washington.

ATL-MP-1011, 2008, *ATL Quality Assurance Project Plan for 222-S Laboratory*,  
Revision 8, Advanced Technologies and Laboratories International, Inc.,  
Richland, Washington.

Attachment 1

DATA SUMMARY REPORT

Data Summary of All Results

Sample Group: 20080396

Riser:

Customer Sample ID: B1V351

Customer Sample ID: B1V351

| Sample#    | R | A# | Analyte  | Unit  | Standard % | Blank   | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Count Err % | Qual Flags |
|------------|---|----|----------|-------|------------|---------|--------|-----------|---------|-------|-----------|-----------|-------------|------------|
| S08M000034 |   |    | Fluoride | ug/mL | 93.4       | <0.0120 | 0.280  | 0.280     | 0.280   | 0.0   | 93.1      | 0.0120    | n/a         |            |
| S08M000034 |   |    | Nitrite  | ug/mL | 94.7       | <0.108  | <0.108 | <0.108    | n/a     | n/a   | 91.3      | 0.108     | n/a         | U          |
| S08M000034 |   |    | Nitrate  | ug/mL | 93.4       | <0.139  | 14.5   | 14.3      | 14.4    | 1.32  | 91.9      | 0.139     | n/a         |            |

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U - Less Than Detection Limit

Data Summary of All Results

Sample Group: 20080396

Riser:

Customer Sample ID: B1V352

Customer Sample ID: B1V352

| Sample#    | R | A# | Analyte  | Unit  | Standard % | Blank   | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Count Err % | Qual Flags |
|------------|---|----|----------|-------|------------|---------|--------|-----------|---------|-------|-----------|-----------|-------------|------------|
| S08M000035 |   |    | Fluoride | ug/mL | 93.4       | <0.0120 | 0.280  | n/a       | n/a     | n/a   | n/a       | 0.0120    | n/a         |            |
| S08M000035 |   |    | Nitrite  | ug/mL | 94.7       | <0.108  | <0.108 | n/a       | n/a     | n/a   | n/a       | 0.108     | n/a         | U          |
| S08M000035 |   |    | Nitrate  | ug/mL | 93.4       | <0.139  | 14.5   | n/a       | n/a     | n/a   | n/a       | 0.139     | n/a         |            |

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U - Less Than Detection Limit

Attachment 2

ANALYSIS DATE

### ANALYSIS DATE REPORT

| Customer Sample ID | Lab Sample ID | Analysis | Preparation Date | Analysis Date |
|--------------------|---------------|----------|------------------|---------------|
| B1V351             | S08M000034    | IC       | NA               | 4/23/2008     |
| B1V352             | S08M000035    | IC       | NA               | 4/23/2008     |

**Attachment 3**

**RECEIPT PAPERWORK**



