



**Analytical Resources, Incorporated**  
Analytical Chemists and Consultants

11, February 2002

Richard A. Poulin  
Smith & Lowney, P.L.L.C.  
2317 East John Street  
Seattle, WA 98112

**RE: Case 2**

Dear Mr. Poulin:

Please find enclosed a sample custody record (COC) and a set of analytical results for the above referenced project. Analytical Resources, Inc. accepted four water samples on 31, January 2002. Samples were received intact and there were no discrepancies between the container labels and the COC.

Analysis for the requested parameters proceeded without incident for metals and conventional's. The glycol's had a continuing calibration outside the acceptable control limits. The samples were re-analyzed outside the recommended holding time. The re-analysis data confirmed the original data. Both sets of data have been reported.

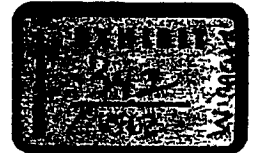
Quality control analysis results are included for your review.

Copies of the reports and all associated raw data will be kept on file at ARI. If you have any questions or require additional information, please contact your project manager.

Sincerely,  
ANALYTICAL RESOURCES, INC.

Client Services  
400 Ninth Avenue North  
Seattle, WA 98109  
Project Manager: Susan Snyder

cc: file EB44



E844

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated  
 Analytical Chemists and Consultants  
 400 Ninth Avenue North  
 Seattle, WA 98109-4708  
 206-621-6490 206-621-7523 (fax)

Page \_\_\_ of \_\_\_

Turn Around Requested: \_\_\_\_\_

| Report to: <i>Greg Wingard</i> |                | Proj Name:                   |               |               | Analyses Requested                                                                                                                      |          |          |          |  | Notes/Comments |  |
|--------------------------------|----------------|------------------------------|---------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------|--|----------------|--|
| Company: <i>CASE</i>           |                | Proj Number:                 |               |               | <i>Alcohol</i><br><i>7-55</i><br><i>Total metals</i><br><i>disolved metals</i><br><i>total metals 7-1</i><br><i>disolved metals 7-1</i> |          |          |          |  |                |  |
| Address: <i>PO Box 4051</i>    |                | Sampler: <i>Greg Wingard</i> |               |               |                                                                                                                                         |          |          |          |  |                |  |
| Phone:                         |                | Shipping Method:             |               |               |                                                                                                                                         |          |          |          |  |                |  |
| Fax:                           |                | AirBill:                     |               |               |                                                                                                                                         |          |          |          |  |                |  |
| Sample ID                      | Sample Date    | Sample Time                  | Sample Matrix | No Containers |                                                                                                                                         |          |          |          |  |                |  |
| <i>010</i>                     | <i>1-31-02</i> | <i>2:58</i>                  | <i>W</i>      | <i>1</i>      | <i>X</i>                                                                                                                                |          |          |          |  |                |  |
| <i>011</i>                     | <i>1-31-02</i> | <i>3:02</i>                  | <i>W</i>      | <i>1</i>      |                                                                                                                                         | <i>X</i> | <i>X</i> |          |  |                |  |
| <i>012</i>                     | <i>1-31-02</i> | <i>3:04</i>                  | <i>W</i>      | <i>1</i>      |                                                                                                                                         | <i>X</i> |          | <i>X</i> |  |                |  |
| <i>013</i>                     | <i>1-31-02</i> | <i>3:09</i>                  | <i>W</i>      | <i>1</i>      | <i>X</i>                                                                                                                                |          |          |          |  |                |  |

|                                                  |                              |                              |                                                                               |
|--------------------------------------------------|------------------------------|------------------------------|-------------------------------------------------------------------------------|
| Relinquished:<br>(Signature) <i>Greg Wingard</i> | Relinquished:<br>(Signature) | Relinquished:<br>(Signature) | Special Instructions/Notes                                                    |
| Printed name:<br><i>Greg Wingard</i>             | Printed name:                | Printed name:                |                                                                               |
| Company:<br><i>CASE</i>                          | Company:                     | Company:                     |                                                                               |
| Date: <i>1-31-02</i> Time: <i>6:10</i>           | Date: Time:                  | Date: Time:                  |                                                                               |
| Received by:<br><i>Deborah Thomas</i>            | Received by:                 | Received by:                 | Number of Coolers:<br>Cooler Temp(s):<br>COC Seals Intact?<br>Bottles Intact? |
| Printed name:<br><i>Deborah Thomas</i>           | Printed name:                | Printed name:                |                                                                               |
| Company:<br><i>AR1</i>                           | Company:                     | Company:                     |                                                                               |
| Date: <i>1/31/02</i> Time: <i>1:58:10</i>        | Date: Time:                  | Date: Time:                  |                                                                               |

**ORGANICS ANALYSIS DATA SHEET  
GLYCOLS by GC-FID**

Sample No: Method Blank

Lab Sample ID: 020602MB  
LIMS ID: 02-1274  
Matrix: Water

QC Report No: EB44-Smith & Lowney, P.L.L.C.  
Project: CASE

Date Sampled: NA  
Date Received: NA

Data Release Authorized: *MA*  
Reported: 02/11/02

Date Analyzed: 02/06/02

Conc/Dilution Factor: 1:1

| CAS Number | Analyte          | mg/L  |
|------------|------------------|-------|
| 107-21-1   | Ethylene Glycol  | 5.0 U |
| 57-55-6    | Propylene Glycol | 5.0 U |

Glycol Surrogate Recovery

Cyclohexanone 70.0%

**Data Qualifiers**

- J Indicates an estimated value when that result is less than the calculated detection limit.
- E Indicates a value above the linear range of the detector.  
Dilution Required
- S Indicates no value reported due to saturation of the detector.
- D Indicates the surrogate was diluted out.
- U Indicates compound was analyzed for, but not detected at the given detection limit.
- B Found in associated method blank
- NA Indicates compound was not analyzed.
- NR Indicates no recovery due to interferences.
- Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

FORM-1

ORGANICS ANALYSIS DATA SHEET  
GLYCOLS by GC-FID

Sample No: 010

Lab Sample ID: EB44A  
LIMS ID: 02-1274  
Matrix: Water

QC Report No: EB44-Smith & Lowney, P.L.L.C.  
Project: CASE

Date Sampled: 01/31/02  
Date Received: 01/31/02

Data Release Authorized: *PK*  
Reported: 02/11/02

Date Analyzed: 02/06/02

Conc/Dilution Factor: 1:1

| CAS Number | Analyte          | mg/L  |
|------------|------------------|-------|
| 107-21-1   | Ethylene Glycol  | 5.0 U |
| 57-55-6    | Propylene Glycol | 11    |

Glycol Surrogate Recovery

Cyclohexanone 120%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
- E Indicates a value above the linear range of the detector.  
Dilution Required
- S Indicates no value reported due to saturation of the detector.
- D Indicates the surrogate was diluted out.
- U Indicates compound was analyzed for, but not detected at the given detection limit.
- B Found in associated method blank
- NA Indicates compound was not analyzed.
- NR Indicates no recovery due to interferences.
- Y Indicates a raised reporting limit due to matrix interferences.  
The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

FORM-1

ORGANICS ANALYSIS DATA SHEET  
GLYCOLS by GC-FID

Sample No: 010

MATRIX SPIKE

Lab Sample ID: EB44A-MS  
LIMS ID: 02-1274  
Matrix: Water

QC Report No: EB44-Smith & Lowney, P.L.L.C.  
Project: CASE

Date Sampled: 01/31/02  
Date Received: 01/31/02

Data Release Authorized: *ph*  
Reported: 02/11/02

Date Analyzed: 02/06/02

Conc/Dilution Factor: 1:1

| CAS Number | Analyte          | mg/L |
|------------|------------------|------|
| 107-21-1   | Ethylene Glycol  | ---  |
| 57-55-6    | Propylene Glycol | ---  |

Glycol Surrogate Recovery

Cyclohexanone 76.0%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
- E Indicates a value above the linear range of the detector.  
Dilution Required
- S Indicates no value reported due to saturation of the detector.
- D Indicates the surrogate was diluted out.
- U Indicates compound was analyzed for, but not detected at the given detection limit.
- B Found in associated method blank
- NA Indicates compound was not analyzed.
- NR Indicates no recovery due to interferences.
- Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

FORM-1

AR 021114

ORGANICS ANALYSIS DATA SHEET  
GLYCOLS by GC-FID

Sample No: 010  
SPIKE DUPLICATE

Lab Sample ID: EB44A-MSD  
LIMS ID: 02-1274  
Matrix: Water

QC Report No: EB44-Smith & Lowney, P.L.L.C.  
Project: CASE

Date Sampled: 01/31/02  
Date Received: 01/31/02

Data Release Authorized: *pk*  
Reported: 02/11/02

Date Analyzed: 02/06/02

Conc/Dilution Factor: 1:1

| CAS Number | Analyte          | mg/L |
|------------|------------------|------|
| 107-21-1   | Ethylene Glycol  | ---  |
| 57-55-6    | Propylene Glycol | ---  |

Glycol Surrogate Recovery

Cyclohexanone 126%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
- E Indicates a value above the linear range of the detector.  
Dilution Required
- S Indicates no value reported due to saturation of the detector.
- D Indicates the surrogate was diluted out.
- U Indicates compound was analyzed for, but not detected at the given detection limit.
- B Found in associated method blank
- NA Indicates compound was not analyzed.
- NR Indicates no recovery due to interferences.
- Y Indicates a raised reporting limit due to matrix interferences.  
The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

FORM-1

ORGANICS ANALYSIS DATA SHEET  
GLYCOLS by GC-FID



Lab Sample ID: EB44A  
LIMS ID: 02-1274  
Matrix: Water

Sample No: 010  
QC Report No: EB44-Smith & Lowney, P.L.L.C.  
Project: CASE

Date Received: 01/31/02

Data Release Authorized: *[Signature]*  
Reported: 02/11/02

MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

| CONSTITUENT            | SAMPLE VALUE | SPIKE FOUND | SPIKE ADDED | % RECOVERY | RPD |
|------------------------|--------------|-------------|-------------|------------|-----|
| MATRIX SPIKE           |              |             |             |            |     |
| Ethylene Glycol        | < 5.0        | 46.0        | 50.0        | 92.0%      |     |
| Propylene Glycol       | 11.0         | 54.0        | 50.0        | 86.0%      |     |
| MATRIX SPIKE DUPLICATE |              |             |             |            |     |
| Ethylene Glycol        | < 5.0        | 66.0        | 50.0        | 132%       | 36% |
| Propylene Glycol       | 11.0         | 71.0        | 50.0        | 120%       | 33% |

Values reported in parts per million (mg/L)

Glycol SPIKE CONTROL LIMITS  
Percent Recovery 30-160%

FORM-III

AR 021116

ORGANICS ANALYSIS DATA SHEET  
GLYCOLS by GC-FID



Lab Sample ID: EB44SB  
LIMS ID: 02-1274  
Matrix: Water

QC Report No: EB44-Smith & Lowney, P.L.L.C.  
Project: CASE

Data Release Authorized: *[Signature]*  
Reported: 02/11/02

LABORATORY CONTROL SAMPLE

| CONSTITUENT      | SPIKE<br>FOUND | SPIKE<br>ADDED | %<br>RECOVERY |
|------------------|----------------|----------------|---------------|
| Ethylene Glycol  | 37.0           | 50.0           | 74.0%         |
| Propylene Glycol | 45.0           | 50.0           | 90.0%         |

GLYCOL SURROGATE RECOVERIES

Cyclohexanone 106 %

Values reported in parts per million (mg/L)

GLYCOL SPIKE CONTROL LIMITS  
Percent Recovery 30-160%

FORM-III

AR 021117



ORGANICS ANALYSIS DATA SHEET  
GLYCOLS by GC-FID

Sample No: Method Blank

Lab Sample ID: 020802MB  
LIMS ID: 02-1690  
Matrix: Water

QC Report No: EB44-Smith & Lowney, P.L.L.C.  
Project: CASE

Date Sampled: NA  
Date Received: NA

Data Release Authorized:  
Reported: 02/11/02

Date Analyzed: 02/08/02

Conc/Dilution Factor: 1:1

| CAS Number | Analyte          | mg/L  |
|------------|------------------|-------|
| 107-21-1   | Ethylene Glycol  | 5.0 U |
| 57-55-6    | Propylene Glycol | 5.0 U |

Glycol Surrogate Recovery

Cyclohexanone 132%

Data Qualifiers


- J Indicates an estimated value when that result is less than the calculated detection limit.
- E Indicates a value above the linear range of the detector.  
Dilution Required
- S Indicates no value reported due to saturation of the detector.
- D Indicates the surrogate was diluted out.
- U Indicates compound was analyzed for, but not detected at the given detection limit.
- B Found in associated method blank
- NA Indicates compound was not analyzed.
- NR Indicates no recovery due to interferences.
- Y Indicates a raised reporting limit due to matrix interferences.  
The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

FORM-1

AR 021118

ORGANICS ANALYSIS DATA SHEET  
GLYCOLS by GC-FID

Sample No: 010

Lab Sample ID: EB44A  
LIMS ID: 02-1690  
Matrix: WaterQC Report No: EB44-Smith & Lowney, P.L.L.C.  
Project: CASEDate Sampled: 01/31/02  
Date Received: 01/31/02Data Release Authorized:   
Reported: 02/11/02

Date Analyzed: 02/09/02

Conc/Dilution Factor: 1:1

| CAS Number | Analyte          | mg/L  |
|------------|------------------|-------|
| 107-21-1   | Ethylene Glycol  | 5.0 U |
| 57-55-6    | Propylene Glycol | 11    |

Glycol Surrogate Recovery

Cyclohexanone 80.0%

## Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
- E Indicates a value above the linear range of the detector.  
Dilution Required
- S Indicates no value reported due to saturation of the detector.
- D Indicates the surrogate was diluted out.
- U Indicates compound was analyzed for, but not detected at the given detection limit.
- B Found in associated method blank
- NA Indicates compound was not analyzed.
- NR Indicates no recovery due to interferences.
- Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

FORM-1

AR 021119

ORGANICS ANALYSIS DATA SHEET  
GLYCOLS by GC-FID

Sample No: 010  
MATRIX SPIKE

Lab Sample ID: EB44A-MS  
LIMS ID: 02-1690  
Matrix: Water

QC Report No: EB44-Smith & Lowney, P.L.L.C.  
Project: CASE

Date Sampled: 01/31/02  
Date Received: 01/31/02

Data Release Authorized: *[Signature]*  
Reported: 02/11/02

Date Analyzed: 02/09/02

Conc/Dilution Factor: 1:1

| CAS Number | Analyte          | mg/L |
|------------|------------------|------|
| 107-21-1   | Ethylene Glycol  | ---  |
| 57-55-6    | Propylene Glycol | ---  |

Glycol Surrogate Recovery

Cyclohexanone 90.0%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
- E Indicates a value above the linear range of the detector.  
Dilution Required
- S Indicates no value reported due to saturation of the detector.
- D Indicates the surrogate was diluted out.
- U Indicates compound was analyzed for, but not detected at the given detection limit.
- B Found in associated method blank
- NA Indicates compound was not analyzed.
- NR Indicates no recovery due to interferences.
- Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

FORM-1

AR 021120

**ORGANICS ANALYSIS DATA SHEET**  
GLYCOLS by GC-FID

Sample No: 010

SPIKE DUPLICATE

Lab Sample ID: EB44A-MSD  
LIMS ID: 02-1690  
Matrix: Water

QC Report No: EB44-Smith & Lowney, P.L.L.C.  
Project: CASE

Date Sampled: 01/31/02  
Date Received: 01/31/02

Data Release Authorized  
Reported: 02/11/02

Date Analyzed: 02/09/02

Conc/Dilution Factor: 1:1

| CAS Number | Analyte          | mg/L |
|------------|------------------|------|
| 107-21-1   | Ethylene Glycol  | ---  |
| 57-55-6    | Propylene Glycol | ---  |

Glycol Surrogate Recovery

Cyclohexanone 90.0%

**Data Qualifiers**

- J Indicates an estimated value when that result is less than the calculated detection limit.
- E Indicates a value above the linear range of the detector.  
Dilution Required
- S Indicates no value reported due to saturation of the detector.
- D Indicates the surrogate was diluted out.
- U Indicates compound was analyzed for, but not detected at the given detection limit.
- B Found in associated method blank
- NA Indicates compound was not analyzed.
- NR Indicates no recovery due to interferences.
- Y Indicates a raised reporting limit due to matrix interferences.  
The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

FORM-1

AR 021121

ORGANICS ANALYSIS DATA SHEET  
GLYCOLS by GC-FID



Lab Sample ID: EB44A  
LIMS ID: 02-1690  
Matrix: Water

Sample No: 010  
QC Report No: EB44-Smith & Lowney, P.L.L.C.  
Project: CASE

Date Received: 01/31/02

Data Release Authorized *[Signature]*  
Reported: 02/11/02

MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

| CONSTITUENT            | SAMPLE VALUE | SPIKE FOUND | SPIKE ADDED | % RECOVERY | RPD |
|------------------------|--------------|-------------|-------------|------------|-----|
| MATRIX SPIKE           |              |             |             |            |     |
| Ethylene Glycol        | < 5.0        | 62.0        | 50.0        | 124%       |     |
| Propylene Glycol       | 11.0         | 60.0        | 50.0        | 98.0%      |     |
| MATRIX SPIKE DUPLICATE |              |             |             |            |     |
| Ethylene Glycol        | < 5.0        | 47.0        | 50.0        | 94.0%      | 28% |
| Propylene Glycol       | 11.0         | 55.0        | 50.0        | 88.0%      | 11% |

Values reported in parts per million (mg/L)

Glycol SPIKE CONTROL LIMITS  
Percent Recovery 30-160%

FORM-III

AR 021122

ORGANICS ANALYSIS DATA SHEET  
GLYCOLS by GC-FID



Lab Sample ID: EB44SB  
LIMS ID: 02-1690  
Matrix: Water

QC Report No: EB44-Smith & Lowney, P.L.L.C.  
Project: CASE

Data Release Authorized *(Signature)*  
Reported: 02/11/02

LABORATORY CONTROL SAMPLE

| CONSTITUENT      | SPIKE<br>FOUND | SPIKE<br>ADDED | %<br>RECOVERY |
|------------------|----------------|----------------|---------------|
| Ethylene Glycol  | 47.0           | 50.0           | 94.0%         |
| Propylene Glycol | 48.0           | 50.0           | 96.0%         |

GLYCOL SURROGATE RECOVERIES

Cyclohexanone 76.0%

Values reported in parts per million (mg/L)

GLYCOL SPIKE CONTROL LIMITS  
Percent Recovery 30-160%

FORM-III

AR 021123

**INORGANICS ANALYSIS DATA SHEET  
TOTAL METALS**

Sample No: Method Blank

Lab Sample ID: EB44MB  
LIMS ID: 02-1276  
Matrix: Water

QC Report No: EB44-Smith & Lowney, P.L.L.C.  
Project: CASE

Date Sampled: NA  
Date Received: NA

Data Release Authorized: *[Signature]*  
Reported: 02/07/02

| Prep Meth | Prep Date | Analysis Method | Analysis Date | CAS Number | Analyte   | RL  | ng/L  |
|-----------|-----------|-----------------|---------------|------------|-----------|-----|-------|
| 3010A     | 02/04/02  | 6010B           | 02/06/02      | 7440-70-2  | Calcium   | 50  | 50 U  |
| 200.8     | 02/04/02  | 200.8           | 02/05/02      | 7440-50-8  | Copper    | 0.5 | 0.5 U |
| 3010A     | 02/04/02  | 6010B           | 02/06/02      | 7439-95-4  | Magnesium | 50  | 50 U  |
| 200.8     | 02/04/02  | 200.8           | 02/05/02      | 7440-66-6  | Zinc      | 4   | 4 U   |

U Analyte undetected at given RL

RL Reporting Limit

FORM-I


**INORGANICS ANALYSIS DATA SHEET  
TOTAL METALS**

Sample No: 012

Lab Sample ID: EB44C  
LIMS ID: 02-1276  
Matrix: Water

QC Report No: EB44-Smith & Lowney, P.L.L.C.  
Project: CASE

Date Sampled: 01/31/02  
Date Received: 01/31/02

Data Release Authorized:   
Reported: 02/07/02

| Prep Meth | Prep Date | Analysis Method | Analysis Date | CAS Number | Analyte   | RL  | ug/L   |
|-----------|-----------|-----------------|---------------|------------|-----------|-----|--------|
| 3010A     | 02/04/02  | 6010B           | 02/06/02      | 7440-70-2  | Calcium   | 50  | 15,600 |
| 200.8     | 02/04/02  | 200.8           | 02/05/02      | 7440-50-8  | Copper    | 0.5 | 41.1   |
| 3010A     | 02/04/02  | 6010B           | 02/06/02      | 7439-95-4  | Magnesium | 50  | 2,000  |
| 200.8     | 02/04/02  | 200.8           | 02/05/02      | 7440-66-6  | Zinc      | 4   | 36     |

Calculated Hardness (mg-CaCO3/L): 47

U Analyte undetected at given RL


RL Reporting Limit

FORM-I



METALS ANALYSIS DATA SHEET  
TOTAL METALS



Lab Sample ID: EB44LCS      Sample No: 012  
LIMS ID: 02-1276      QC Report No: EB44-Smith & Lowney, P.L.L.C.  
Matrix: Water      Project: CASE  
Date Received: 01/31/02  
Data Release Authorized:   
Reported: 02/07/02

BLANK SPIKE QUALITY CONTROL REPORT

| Analyte   | Spike<br>ug/L | Spike<br>Added | %<br>Recovery | Q |
|-----------|---------------|----------------|---------------|---|
| Calcium   | 10100         | 10000          | 101%          |   |
| Copper    | 26.6          | 25.0           | 106%          |   |
| Magnesium | 10200         | 10000          | 102%          |   |
| Zinc      | 81.0          | 80.0           | 101%          |   |

'Q' codes:      N = control limit not met

Control Limits:      80-120%

FORM-VII

AR 021126


INORGANICS ANALYSIS DATA SHEET  
DISSOLVED METALS

Sample No: Method Blank

Lab Sample ID: EB44MB  
LIMS ID: 02-1275  
Matrix: Water

QC Report No: EB44-Smith & Lowney, P.L.L.C.  
Project: CASE

Date Sampled: NA  
Date Received: NA

Data Release Authorized:   
Reported: 02/07/02

| Prep Meth | Prep Date | Analysis Method | Analysis Date | CAS Number | Analyte   | RL  | ug/L  |
|-----------|-----------|-----------------|---------------|------------|-----------|-----|-------|
| 6010B     | 02/04/02  | 6010B           | 02/06/02      | 7440-70-2  | Calcium   | 50  | 50 U  |
| 200.8     | 02/04/02  | 200.8           | 02/05/02      | 7440-50-8  | Copper    | 0.5 | 0.5 U |
| 6010B     | 02/04/02  | 6010B           | 02/06/02      | 7439-95-4  | Magnesium | 50  | 50 U  |
| 200.8     | 02/04/02  | 200.8           | 02/05/02      | 7440-66-6  | Zinc      | 4   | 4 U   |

U Analyte undetected at given RL

RL Reporting Limit

FORM-I


INORGANICS ANALYSIS DATA SHEET  
DISSOLVED METALS

Sample No: 011

Lab Sample ID: EB44B  
LIMS ID: 02-1275  
Matrix: Water

QC Report No: EB44-Smith & Lowney, P.L.L.C.  
Project: CASE

Date Sampled: 01/31/02  
Date Received: 01/31/02

Data Release Authorized  
Reported: 02/07/02 

| Prep Meth                                   | Prep Date | Analysis Method | Analysis Date | CAS Number | Analyte   | RL  | ug/L   |
|---------------------------------------------|-----------|-----------------|---------------|------------|-----------|-----|--------|
| 6010B                                       | 02/04/02  | 6010B           | 02/06/02      | 7440-70-2  | Calcium   | 50  | 16,000 |
| 200.8                                       | 02/04/02  | 200.8           | 02/05/02      | 7440-50-8  | Copper    | 0.5 | 35.4   |
| 6010B                                       | 02/04/02  | 6010B           | 02/06/02      | 7439-95-4  | Magnesium | 50  | 2,040  |
| 200.8                                       | 02/04/02  | 200.8           | 02/05/02      | 7440-66-6  | Zinc      | 4   | 24     |
| Calculated Dissolved Hardness (mg-CaCO3/L): |           |                 |               |            | 48        |     |        |

U Analyte undetected at given RL

RL Reporting Limit

FORM-I

METALS ANALYSIS DATA SHEET  
DISSOLVED METALS



Sample No: 011  
Lab Sample ID: EB44LCS      QC Report No: EB44-Smith & Lowney, P.L.L.C.  
LIMS ID: 02-1275      Project: CASE  
Matrix: Water  
Date Received: 01/31/02  
Data Release Authorized *[Signature]*  
Reported: 02/07/02

BLANK SPIKE QUALITY CONTROL REPORT

| Analyte   | Spike<br>ug/L | Spike<br>Added | %<br>Recovery | Q |
|-----------|---------------|----------------|---------------|---|
| Calcium   | 10300         | 10000          | 103%          |   |
| Copper    | 24.0          | 25.0           | 96.0%         |   |
| Magnesium | 10500         | 10000          | 105%          |   |
| Zinc      | 80            | 80.0           | 100%          |   |

'Q' codes:      N = control limit not met  
Control Limits:      80-120%

FORM-VII

AR 021129

QA Report - Method Blank Analysis

Matrix: Water                                      QC Report No: EB44-Smith & Lowney, P.L.L.C.  
                                                                                                  Project: CASE

Data Release Authorized: *MP*                                      Date Received: NA  
 Reported: 02/08/02    Dr. M.A. Perkins

METHOD BLANK RESULTS  
 CONVENTIONALS

| Analysis                |                        |              |               |   |
|-------------------------|------------------------|--------------|---------------|---|
| <u>Date &amp; Batch</u> | <u>Constituent</u>     | <u>Units</u> | <u>Result</u> |   |
| 02/05/02<br>02052#1     | Total Suspended Solids | mg/L         | < 1.0         | U |

**Final Report  
Laboratory Analysis of Conventional Parameters**

Sample No: 013

Lab Sample ID: EB44D  
LIMS ID: 02-1277  
Matrix: Water

QC Report No: EB44-Smith & Lowney, P.L.L.C.  
Project: CASE

Data Release Authorized: *mb* Date Sampled: 01/31/02  
Date Received: 01/31/02  
Reported: 02/08/02 Dr. M.A. Perkins

| Analyte                | Analysis            |           |     | Units | Result |
|------------------------|---------------------|-----------|-----|-------|--------|
|                        | Date & Batch        | Method    | RL  |       |        |
| Total Suspended Solids | 02/05/02<br>02052#1 | EPA 160.2 | 1.1 | mg/L  | 3.3    |

RL Analytical reporting limit  
U Undetected at reported detection limit

Report for EB44 received 01/31/02