

**UNION  
CARBIDE**

**UCAR CARBON COMPANY INC.** P.O. BOX 513, COLUMBIA, TENNESSEE 38402-0513

October 30, 1989

Mr. Robert J. Mitrey, P.E.  
Associate Sanitary Engineer  
New York State Dept. of  
Environmental Conservation  
600 Delaware Avenue  
Buffalo, New York 14202-1073

Dear Mr. Mitrey:

I have enclosed a copy of the sixth quarter's groundwater analysis. Bedrock well, BW-4, remains the only site which indicates some semi-volatile and volatile organic contamination. Bedrock well, BW-6, upgradient showed no contamination.

The following will summarize the current ground water data from this well, BW-4:

| <u>Date</u> | <u>Contaminants</u>         | <u>Concentration<br/>ppb</u> |
|-------------|-----------------------------|------------------------------|
| 7/88        | Hexachlorobutadine          | 13                           |
| 3/89        | Hexachlorobutadine          | 150                          |
| 6/89        | Hexachlorobutadine          | 22                           |
| 9/89        | Hexachlorobutadine          | 29                           |
| 11/88       | Trichloroethylene           | 30                           |
| 3/89        | Trichloroethylene           | 570                          |
| 6/89        | Trichloroethylene           | 740                          |
| 9/89        | Trichloroethylene           | 350                          |
| 7/88        | 1,1,2,2-Tetrachloroethylene | 44                           |
| 11/88       | 1,1,2,2-Tetrachloroethylene | 1,300                        |
| 3/89        | 1,1,2,2-Tetrachloroethylene | 1,600                        |
| 6/89        | 1,1,2,2-Tetrachloroethylene | 1,500                        |
| 9/89        | 1,1,2,2-Tetrachloroethylene | 510                          |
| 9/89        | Vinyl Chloride              | 34                           |
| 9/89        | Chloroform                  | 5.5                          |

As noted in the Conastoga-Rovers & Associates Report of May 16, 1989, this well, BW-4-86, is located upgradient of the bulk of the SWMF fill in regards to the overburden ground water flow direction; therefore, any contamination

1  
Mr. Robert J. Mitrey, P.E.  
October 30, 1989  
Page 2

in the overburden at this site may be originating off-site to the north.

We do not feel at this point in time that the contamination at BW-4-86 is related to the Republic SWMF.

If you have any further questions regarding this matter, please give me a call at 615-380-4215.

Very truly yours,

UCAR CARBON COMPANY, INC.

A handwritten signature in cursive script that reads "R.A. Bolton".

R. A. Bolton

RAB/bc

cc: Messrs. Jim Devold  
Dave O'Tool  
Al Ogg



REPUBLIC SOLID WASTE MANAGEMENT FACILITY  
POST-CLOSURE MONITORING PROGRAM QUARTERLY REPORT OF  
GROUNDWATER ANALYSIS

Report Prepared For

UNION CARBIDE CORPORATION  
CARBON PRODUCTS DIVISION

*Catherine C. Moenak for:*  
Frank J. Scrivano  
Project Manager

*Paul T. McMahon*  
Paul T. McMahon  
Technical Evaluation

October 11, 1989  
AES Report CTC

COMMITMENT  
TO  
HONESTY - QUALITY - SERVICE

ADVANCED ENVIRONMENTAL SERVICES, INC.

FIELD REPORT

CLIENT: UNION CARBIDE AES JOB CODE: CTC

DATE PURGED: 09/19/89 DATE SAMPLED: 09/19/89

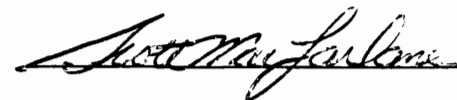
| WELL<br>IDENTIFICATION | TOP OF PIPE<br>ELEVATION | ELEVATION<br>BEFORE PURGING | AMOUNT<br>PURGED | ELEVATION<br>BEFORE SAMPLING |
|------------------------|--------------------------|-----------------------------|------------------|------------------------------|
| B-W-1✓                 | 610.72                   | 590.53                      | 15.0gal          | 590.17                       |
| *** M-W-1✓             | 609.43                   | 595.01                      | 2.5gal           | 585.45                       |
| ** B-W-3✓              | 604.72                   | 587.92                      | 22.0gal          | 587.91                       |
| * M-W-3✓               | 601.61                   | *                           | *                | *                            |
| B-W-2✓                 | 608.43                   | 590.70                      | 15.0gal          | 590.61                       |
| M-W-2✓                 | 607.54                   | 584.64                      | .75 gal          | 583.97 (well dry)            |
| B-W-4✓                 | 607.08                   | 591.27                      | 50.0gal          | 591.14                       |
| B-W-5✓                 | 603.33                   | 588.13                      | 25.0gal          | 587.98                       |
| ** B-W-6✓              | 607.04                   | 588.53                      | 23.0gal          | 588.31                       |
| O-W-1 South            | 608.81                   | 600.11                      | ****N/A          | N/A                          |
| O-W-1 North            | 607.06                   | 597.56                      | N/A              | N/a                          |

\* Bailer logged in well, no samples collected

\*\* Purged and sampled on September 20, 1989.

\*\*\* Purged on September 19, 1989 and sampled  
on September 20, 1989.

\*\*\*\* Not Availiable

 9/25/89  
SCOTT ABEL  
SENIOR FIELD TECHNICIAN

ADVANCED ENVIRONMENTAL SERVICES, INC.  
LABORATORY REPORT

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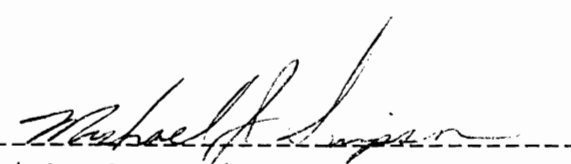
Type of Analysis: INORGANICS

Client: UNION CARBIDE

A.E.S. Job Code CTC

|                               |        |        |               |          |          |          |          |
|-------------------------------|--------|--------|---------------|----------|----------|----------|----------|
|                               |        |        | AES Lab No. - | 12286    | 12287    | 12288    | 12289    |
|                               |        |        | Sample ID -   | BW - 1   | BW - 2   | BW - 4   | BW - 5   |
|                               |        |        |               | GRAB     | GRAB     | GRAB     | GRAB     |
| Analytical                    | Method | Quant. | Sample Date-  | 09-19-89 | 09-19-89 | 09-19-89 | 09-19-89 |
| Parameter(s)                  | No.    | Limits |               |          |          |          |          |
| Ammonia (as N) (mg/l)         | 350.1  | 0.01   |               | 0.70     | 0.81     | 5.86     | 0.20     |
| Nitrate/Nitrite (mg/l)        | 353.2  | 0.01   |               | BQL *    | BQL      | BQL      | BQL      |
| Total Kjeldahl Nitrogen(mg/l) | 351.2  | 0.1    |               | 1.3      | 1.5      | 6.5      | 0.4      |

\* Below Quantifiable Limits.

  
-----  
Michael J. Simpson  
Inorganic Supervisor

ADVANCED ENVIRONMENTAL SERVICES, INC.  
LABORATORY REPORT

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Type of Analysis: INORGANICS

Client: UNION CARBIDE

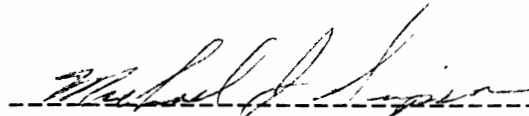
A.E.S. Job Code CTC

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|                               |               |                  |               |           |            |
|-------------------------------|---------------|------------------|---------------|-----------|------------|
|                               |               |                  | AES Lab No. - | 12290     | 12291      |
|                               |               |                  |               | (BW-4)    |            |
|                               |               |                  | Sample ID -   | BLIND DUP | TRIP BLANK |
|                               |               |                  |               | GRAB      | GRAB       |
|                               |               |                  | Sample Date-  | 09-19-89  | 09-19-89   |
| -----                         |               |                  |               |           |            |
| Analytical<br>Parameter(s)    | Method<br>No. | Quant.<br>Limits |               |           |            |
| Ammonia (as N) (mg/l)         | 350.1         | 0.01             |               | 5.92      | BQL *      |
| Nitrate/Nitrite (mg/l)        | 353.2         | 0.01             |               | BQL       | BQL        |
| Total Kjeldahl Nitrogen(mg/l) | 351.2         | 0.1              |               | 6.4       | BQL        |

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\* Below Quantifiable Limits.

  
-----  
Michael J. Simpson  
Inorganic Supervisor

ADVANCED ENVIRONMENTAL SERVICES, INC.  
LABORATORY REPORT  
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Type of Analysis: INORGANICS

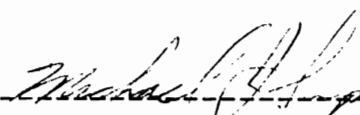
Client: UNION CARBIDE

A.E.S. Job Code CTC

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(All results are in mg/l)

|                            |               |                  | AES Lab No. - | 12286            | 12287            | 12288            | 12289            |
|----------------------------|---------------|------------------|---------------|------------------|------------------|------------------|------------------|
|                            |               |                  | Sample ID -   | BW - 1           | BW - 2           | BW - 4           | BW - 5           |
| Analytical<br>Parameter(s) | Method<br>No. | Quant.<br>Limits | Sample Date-  | GRAB<br>09-19-89 | GRAB<br>09-19-89 | GRAB<br>09-19-89 | GRAB<br>09-19-89 |
| Total Iron (Fe)            | 236.1         | 0.3              |               | 2.58             | 2.78             | 3.92             | 1.04             |
| Soluble Iron (Fe)          | 236.1         | 0.3              |               | 1.45             | 1.97             | 3.38             | 0.72             |
| Total Potassium (K)        | 258.1         | 0.1              |               | 5.20             | 7.32             | 29.8             | 3.37             |
| Soluble Potassium (K)      | 258.1         | 0.1              |               | 4.90             | 6.73             | 27.3             | 3.29             |
| Total Zinc (Zn)            | 289.1         | 0.05             |               | 26.0             | 1.60             | BQL *            | 0.17             |
| Soluble Zinc (Zn)          | 289.1         | 0.05             |               | 16.0             | 0.09             | RQL              | 0.12             |

\* Below Quantifiable Limits.

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Michael J. Simpson  
Inorganic Supervisor

ADVANCED ENVIRONMENTAL SERVICES, INC.  
LABORATORY REPORT

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Type of Analysis: INORGANICS

Client: UNION CARBIDE

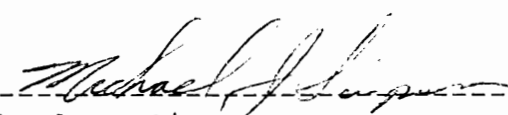
A.E.S. Job Code CTC

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(All results are in mg/l)

|                            |               |                  |               |           |            |
|----------------------------|---------------|------------------|---------------|-----------|------------|
|                            |               |                  | AES Lab No. - | 12290     | 12291      |
|                            |               |                  | Sample ID -   | BLIND DUP | TRIP BLANK |
|                            |               |                  |               | (BW-4)    |            |
|                            |               |                  |               | GRAB      | GRAB       |
|                            |               |                  | Sample Date-  | 09-19-89  | 09-19-89   |
| -----                      | -----         | -----            | -----         | -----     | -----      |
| Analytical<br>Parameter(s) | Method<br>No. | Quant.<br>Limits |               |           |            |
| Total Iron (Fe)            | 236.1         | 0.3              |               | 4.01      | BQL *      |
| Soluble Iron (Fe)          | 236.1         | 0.3              |               | 3.68      | ---        |
| Total Potassium (K)        | 258.1         | 0.1              |               | 29.1      | BQL        |
| Soluble Potassium (K)      | 258.1         | 0.1              |               | 28.0      | ---        |
| Total Zinc (Zn)            | 289.1         | 0.05             |               | 0.05      | BQL        |
| Soluble Zinc (Zn)          | 289.1         | 0.05             |               | 0.05      | ---        |

\* Below Quantifiable Limits.

  
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Michael J. Simpson  
Inorganic Supervisor

ADVANCED ENVIRONMENTAL SERVICES, INC.  
LABORATORY REPORT

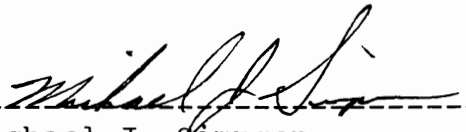
Type of Analysis: INORGANICS

Client: UNION CARBIDE

A.E.S. Job Code CTC

| Analytical<br>Parameter(s)    | Method<br>No. | Quant.<br>Limits | Sample ID -   | Sample Date- |          |          |
|-------------------------------|---------------|------------------|---------------|--------------|----------|----------|
|                               |               |                  |               |              |          |          |
|                               |               |                  | AES Lab No. - | 12322        | 12323    | 12324    |
|                               |               |                  |               | BW-6         | MW-1     | BW-3     |
|                               |               |                  |               | GRAB         | GRAB     | GRAB     |
|                               |               |                  |               | 09/20/89     | 09/20/89 | 09/20/89 |
| Ammonia (as N) (mg/l)         | 350.1         | 0.01             |               | 0.23         | 8.86     | 1.06     |
| Nitrite (as N) (mg/l)         | 353.2         | 0.01             |               | 0.01         | 0.01     | BQL *    |
| Total Kjeldahl Nitrogen(mg/l) | 351.2         | 0.1              |               | 0.4          | 10.0     | 1.5      |

\* Below Quantifiable Limits

  
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Michael J. Simpson  
Inorganic Supervisor

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Client: UNION CARBIDE

(All results are in mg/l)

  
-----  
Michael J. Simpson  
Inorganic Supervisor

Michael J. Simpson  
Inorganic Supervisor

ADVANCED ENVIRONMENTAL SERVICES, INC.  
LABORATORY REPORT  
QUALITY CONTROL - PRECISION

=====

Type of Analysis: Duplicate Analysis  
Units of Analysis: Milligrams/Liter, or ppm  
Client: UNION CARBIDE                      A.E.S. Job Code:CTC

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| Analytical Parameters | Sample<br>No. | Original<br>Conc. | Duplicate<br>Conc. | Average<br>Conc. | Range | Rel. %<br>Difference |
|-----------------------|---------------|-------------------|--------------------|------------------|-------|----------------------|
| -----                 |               |                   |                    |                  |       |                      |
| Total Iron (Fe)       | 12286         | 2.57              | 2.58               | 2.58             | .01   | 0.4                  |
| Soluble Iron (Fe)     | 12286         | 1.44              | 1.46               | 1.45             | .02   | 1.4                  |
| Total Potassium (K)   | 12286         | 5.19              | 5.20               | 5.20             | .01   | 0.2                  |
| Soluble Potassium (K) | 12286         | 4.92              | 4.89               | 4.90             | .03   | 0.6                  |
| Total Zinc (Zn)       | 12286         | 26.0              | 27.0               | 26.0             | 1.0   | 3.8                  |
| Soluble Zinc (Zn)     | 12286         | 16.0              | 16.0               | 16.0             | None  | None                 |

Relative Percent Difference =  
Range/Average X 100

## ADVANCED ENVIRONMENTAL SERVICES, INC.

## LABORATORY REPORT

## QUALITY CONTROL - ACCURACY

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Type of Analysis: Matrix Spikes and E.P.A. Standards  
 Client: UNION CARBIDE A.E.S. Job Code: CTC

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(Units:mg/l or ppm)

| Analytical Parameters | Sample No. | Type   | Observed Conc. | Original Conc. | Added Conc. | Percent Recovery* |
|-----------------------|------------|--------|----------------|----------------|-------------|-------------------|
| Total Iron (Fe)       | 12286      | SPK    | 6.92           | 2.58           | 5.0         | 87                |
| Soluble Iron (Fe)     | 12286      | SPK    | 5.92           | 1.45           | 5.0         | 89                |
| Check (Fe) STD        | ---        | STD    | 1.03           | 1.00           | ---         | 103               |
| Total Potassium (K)   | 12286      | SPK    | 23.48          | 5.20           | 20.0        | 91                |
| Soluble Potassium (K) | 12286      | SPK    | 23.28          | 4.90           | 20.0        | 92                |
| EPA (K) STD           | 988-1      | EPA    | 10.36          | 10.00          | ---         | 104               |
| Total Zinc (Zn)       | 12286      | SPK ** | 1.34           | 0.26           | 1.00        | 108               |
| Soluble Zinc (Zn)     | 12286      | SPK ** | 1.24           | 0.16           | 1.00        | 108               |
| Check (Zn) STD        | ---        | STD    | 0.51           | 0.50           | ---         | 102               |

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\* % Recovery=100 x ((Observed Conc. - "background" Original Conc.)/"Spike" Added Conc.)

\*\* Sample diluted before spiking

ADVANCED ENVIRONMENTAL SERVICES, INC.  
LABORATORY REPORT  
QUALITY CONTROL - PRECISION

=====

Type of Analysis: Duplicate Analysis  
Units of Analysis: Milligrams/Liter or ppm  
Client: UNION CARBIDE            A.E.S. Job Code:CTC

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| Analytical Parameters   | Sample<br>No. | Original<br>Conc. | Duplicate<br>Conc. | Average<br>Conc. | Range | Rel. %<br>Difference |
|-------------------------|---------------|-------------------|--------------------|------------------|-------|----------------------|
| Total Kjeldahl Nitrogen | 12286         | 1.3               | 1.3                | 1.3              | None  | None                 |
| Total Ammonia           | 12286         | 0.70              | 0.70               | 0.70             | None  | None                 |
| Total Nitrite           | 12324         | BQL *             | BQL                | BQL              | None  | None                 |

Relative Percent Difference =  
Range/Average X 100  
\* Below Quantifiable Limits.

## ADVANCED ENVIRONMENTAL SERVICES, INC.

## LABORATORY REPORT

## QUALITY CONTROL - ACCURACY

=====

Type of Analysis: Matrix Spikes and E.P.A. Standards  
Client: UNION CARBIDE                      A.E.S. Job Code: CTC

-----

(Units:mg/l or ppm)

| Analytical Parameters   | Sample<br>No. | Type | Observed<br>Conc. | Original<br>Conc. | Added<br>Conc. | Percent<br>Recovery* |
|-------------------------|---------------|------|-------------------|-------------------|----------------|----------------------|
| Total Kjeldahl Nitrogen | ---           | EPA  | 4.5               | 5.0               | ---            | 90                   |
| Total Kjeldahl Nitrogen | 12286         | SPK  | 6.8               | 1.3               | 5.0            | 110                  |
| Total Ammonia           | ---           | EPA  | 1.91              | 2.00              | ---            | 96                   |
| Total Ammonia           | 12286         | SPK  | 1.53              | 0.70              | 0.75           | 111                  |
| Total Nitrite           | 12324         | SPK  | 0.24              | BQL **            | 0.25           | 96                   |

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\* % Recovery=100 x ((Observed Conc. - "background" Original Conc.)/"Spike" Added Conc.)

\*\* Below Quantifiable Limits.

ADVANCED ENVIRONMENTAL SERVICES, INC.  
PARAMETER TRACEABILITY REPORT  
WET CHEMISTRY DEPARTMENT

AES JOB CODE CTC

| <u>ANALYST</u>     | <u>ANALYTICAL METHOD</u> | <u>SAMPLE CODE</u> | <u>DATE OF ANALYSIS</u> | <u>TIME OF ANALYSIS</u> |
|--------------------|--------------------------|--------------------|-------------------------|-------------------------|
| <u>A. FRATELLO</u> | <u>351.2</u>             | <u>12286-91</u>    | <u>9-27-89</u>          | <u>0600-0430</u>        |
| <u>A. FRATELLO</u> | <u>350.1</u>             | <u>12286-91</u>    | <u>9-27-89</u>          | <u>0515-0815</u>        |
| <u>T. SKOWRON</u>  | <u>353.2</u>             | <u>12286-91</u>    | <u>9-20-89</u>          | <u>1700-1500</u>        |
|                    |                          |                    |                         |                         |
|                    |                          |                    |                         |                         |
|                    |                          |                    |                         |                         |
|                    |                          |                    |                         |                         |
|                    |                          |                    |                         |                         |

AES JOB CODE CTC

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AES JOB CODE CTC

AES JOB CODE

CTC

| <u>ANALYST</u>     | <u>ANALYTICAL METHOD</u> | <u>SAMPLE CODE</u> | <u>DATE OF ANALYSIS</u> | <u>TIME OF ANALYSIS</u> |
|--------------------|--------------------------|--------------------|-------------------------|-------------------------|
| <u>A. FRATELLO</u> | <u>351.2</u>             | <u>12322-24</u>    | <u>9-27-89</u>          | <u>0000-0430</u>        |
| <u>A. FRATELLO</u> | <u>350.1</u>             | <u>12322-24</u>    | <u>9-27-89</u>          | <u>0515-0815</u>        |
| <u>T. Skowron</u>  | <u>353.2</u>             | <u>12322-24</u>    | <u>9-20-84</u>          | <u>1504-1547</u>        |
|                    |                          |                    |                         |                         |
|                    |                          |                    |                         |                         |
|                    |                          |                    |                         |                         |
|                    |                          |                    |                         |                         |
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AES JOB CODE CTC

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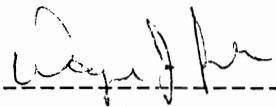
ADVANCED ENVIRONMENTAL SERVICES, INC.  
LABORATORY REPORT

=====  
Type of Analysis: TCL VOLATILES

Units of Measure: Micrograms/ Liter or ppb  
Client: UNION CARBIDE A.E.S. Job Code CTC

|                            |        |        | AES Lab No.- | 12288    | 12291    | 12322    |
|----------------------------|--------|--------|--------------|----------|----------|----------|
|                            |        |        | Sample ID -  | BW - 4   | TRIP     | BW - 6   |
|                            |        |        |              |          | BLANK    |          |
|                            |        |        |              | GRAB     | GRAB     | GRAB     |
| Analytical                 | Method | Quant. | Sample Date- | 09/19/89 | 09/19/89 | 09/20/89 |
| Parameter(s)               | No.    | Limits |              |          |          |          |
| Chloromethane              | 8240   | 10.0   |              | BQL *    | BQL      | BQL      |
| Vinyl Chloride             | "      | "      |              | 34       | BQL      | BQL      |
| Chloroethane               | "      | "      |              | BQL      | BQL      | BQL      |
| Bromomethane               | "      | "      |              | BQL      | BQL      | BQL      |
| 2-Chloroethyl Vinyl Ether  | "      | "      |              | BQL      | BQL      | BQL      |
| Ethylbenzene               | "      | 5.0    |              | BQL      | BQL      | BQL      |
| Methylene Chloride         | "      | "      |              | BQL      | BQL      | BQL      |
| Chlorobenzene              | "      | "      |              | BQL      | BQL      | BQL      |
| 1,1-Dichloroethylene       | "      | "      |              | BQL      | BQL      | BQL      |
| 1,1-Dichloroethane         | "      | "      |              | BQL      | BQL      | BQL      |
| trans-1,2-Dichloroethylene | "      | "      |              | BQL      | BQL      | BQL      |
| Chloroform                 | "      | "      |              | 5.5      | BQL      | BQL      |
| 1,2-Dichloroethane         | "      | "      |              | BQL      | BQL      | BQL      |
| 1,1,1-Trichloroethane      | "      | "      |              | BQL      | BQL      | BQL      |
| Carbon Tetrachloride       | "      | "      |              | BQL      | BQL      | BQL      |
| Bromodichloromethane       | "      | "      |              | BQL      | BQL      | BQL      |
| 1,2-Dichloropropane        | "      | "      |              | BQL      | BQL      | BQL      |
| trans-1,3-Dichloropropene  | "      | "      |              | BQL      | BQL      | BQL      |
| Trichloroethylene          | "      | "      |              | 350      | BQL      | BQL      |
| Benzene                    | "      | "      |              | BQL      | BQL      | BQL      |
| cis-1,3-Dichloropropene    | "      | "      |              | BQL      | BQL      | BQL      |
| 1,1,2-Trichloroethane      | "      | "      |              | BQL      | BQL      | BQL      |
| Dibromochloromethane       | "      | "      |              | BQL      | BQL      | BQL      |
| Bromoform                  | "      | "      |              | BQL      | BQL      | BQL      |

\* Below Quantifiable Limits

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Wayne J. Juda  
Organic Supervisor

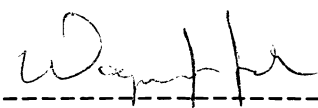
ADVANCED ENVIRONMENTAL SERVICES, INC.  
LABORATORY REPORT

=====  
Type of Analysis: TCL VOLATILES

Units of Measure: Micrograms/ Liter or ppb  
Client: UNION CARBIDE A.E.S. Job Code CTC  
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|                             |        |        |              |          |          |          |
|-----------------------------|--------|--------|--------------|----------|----------|----------|
|                             |        |        | AES Lab No.- | 12288    | 12291    | 12322    |
|                             |        |        | Sample ID -  | BW - 4   | TRIP     | BW - 6   |
|                             |        |        |              |          | BLANK    |          |
|                             |        |        |              | GRAB     | GRAB     | GRAB     |
| Analytical                  | Method | Quant. | Sample Date- | 09/19/89 | 09/19/89 | 09/20/89 |
| Parameter(s)                | No.    | Limits |              |          |          |          |
| -----                       | -----  | -----  | -----        | -----    | -----    | -----    |
| 1,1,2,2-Tetrachloroethylene | 8240   | 5.0    |              | 510      | BQL *    | BQL      |
| 1,1,2,2-Tetrachloroethane   | "      | "      |              | BQL      | BQL      | BQL      |
| Toluene                     | "      | "      |              | BQL      | BQL      | BQL      |
| Acetone                     | "      | 50     |              | BQL      | BQL      | BQL      |
| Carbon Disulfide            | "      | 5.0    |              | BQL      | BQL      | BQL      |
| 2-Butanone                  | "      | 50     |              | BQL      | BQL      | BQL      |
| Vinyl Acetate               | "      | 10     |              | BQL      | BQL      | BQL      |
| 2-Hexanone                  | "      | 50     |              | BQL      | BQL      | BQL      |
| 4-Methyl-2-Pentanone        | "      | 50     |              | BQL      | BQL      | BQL      |
| Styrene                     | "      | 5.0    |              | BQL      | BQL      | BQL      |
| o-Xylene                    | "      | 5.0    |              | BQL      | BQL      | BQL      |
| m/p-Xylene                  | "      | 5.0    |              | BQL      | BQL      | BQL      |

\* Below Quantifiable Limits

  
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Wayne J. Juda  
Organic Supervisor

ADVANCED ENVIRONMENTAL SERVICES, INC.  
LABORATORY REPORT  
QUALITY CONTROL - PRECISION

=====

Type of Analysis: Duplicate Analysis  
Units of Analysis: Micrograms/ Liters or ppb  
Client: UNION CARBIDE                      A.E.S. Job Code:CTC

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| Analytical Parameters      | Method | Sample No. | Original Conc. | Duplicate Conc. | Average Conc. | Range | Rel. % Difference |
|----------------------------|--------|------------|----------------|-----------------|---------------|-------|-------------------|
| Chloromethane              | 8240   | 12288      | <10            | <10             | <10           | None  | None              |
| Vinyl Chloride             | "      | "          | 35             | 32              | 34            | 3.0   | 9                 |
| Chloroethane               | "      | "          | <10            | <10             | <10           | None  | None              |
| Bromomethane               | "      | "          | <10            | <10             | <10           | None  | None              |
| 2-Chloroethylvinylether    | "      | "          | <10            | <10             | <10           | None  | None              |
| Ethylbenzene               | "      | "          | <5.0           | <5.0            | <5.0          | None  | None              |
| Methylene Chloride         | "      | "          | <5.0           | <5.0            | <5.0          | None  | None              |
| Chlorobenzene              | "      | "          | <5.0           | <5.0            | <5.0          | None  | None              |
| 1,1-Dichloroethylene       | "      | "          | <5.0           | <5.0            | <5.0          | None  | None              |
| 1,1-Dichloroethane         | "      | "          | <5.0           | <5.0            | <5.0          | None  | None              |
| trans-1,2-dichloroethylene | "      | "          | <5.0           | <5.0            | <5.0          | None  | None              |
| Chloroform                 | "      | "          | 5.5            | 5.5             | 5.5           | None  | None              |
| 1,2-Dichloroethane         | "      | "          | <5.0           | <5.0            | <5.0          | None  | None              |
| 1,1,1-Trichloroethane      | "      | "          | <5.0           | <5.0            | <5.0          | None  | None              |
| Carbon Tetrachloride       | "      | "          | <5.0           | <5.0            | <5.0          | None  | None              |
| Bromodichloromethane       | "      | "          | <5.0           | <5.0            | <5.0          | None  | None              |
| 1,2-Dichloropropane        | "      | "          | <5.0           | <5.0            | <5.0          | None  | None              |
| trans-1,3-Dichloropropene  | "      | "          | <5.0           | <5.0            | <5.0          | None  | None              |
| Trichloropropene           | "      | "          | 360            | 340             | 350           | 20    | 6                 |
| Benzene                    | "      | "          | <5.0           | <5.0            | <5.0          | None  | None              |
| cis-1,3-Dichloropropene    | "      | "          | <5.0           | <5.0            | <5.0          | None  | None              |
| 1,1,2-Trichloroethane      | "      | "          | <5.0           | <5.0            | <5.0          | None  | None              |
| Dibromochloromethane       | "      | "          | <5.0           | <5.0            | <5.0          | None  | None              |
| Bromoform                  | "      | "          | <5.0           | <5.0            | <5.0          | None  | None              |

Relative Percent Difference =  
Range/Average X 100

ADVANCED ENVIRONMENTAL SERVICES, INC.  
LABORATORY REPORT  
QUALITY CONTROL - PRECISION

=====

Type of Analysis: Duplicate Analysis  
Units of Analysis: Micrograms/ Liters or ppb  
Client: UNION CARBIDE A.E.S. Job Code:CTC

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| Analytical Parameters       | Method | Sample No. | Original Conc. | Duplicate Conc. | Average Conc. | Range | Rel. % Difference |
|-----------------------------|--------|------------|----------------|-----------------|---------------|-------|-------------------|
| 1,1,2,2-Tetrachloroethylene | 8240   | 12288      | 530            | 480             | 510           | 50    | 10                |
| 1,1,2,2-Tetrachloroethane   | "      | "          | <5.0           | <5.0            | <5.0          | None  | None              |
| Toluene                     | "      | "          | <5.0           | <5.0            | <5.0          | None  | None              |
| Acetone                     | "      | "          | <50            | <50             | <50           | None  | None              |
| Carbon Disulfide            | "      | "          | <5.0           | <5.0            | <5.0          | None  | None              |
| 2-Butanone                  | "      | "          | <50            | <50             | <50           | None  | None              |
| Vinyl Acetate               | "      | "          | <5.0           | <5.0            | <5.0          | None  | None              |
| 2-Hexanone                  | "      | "          | <50            | <50             | <50           | None  | None              |
| 4-Methyl-2-Pentanone        | "      | "          | <50            | <50             | <50           | None  | None              |
| Styrene                     | "      | "          | <5.0           | <5.0            | <5.0          | None  | None              |
| Xylenes (total)             | "      | "          | <5.0           | <5.0            | <5.0          | None  | None              |

Relative Percent Difference =  
Range/Average X 100

ADVANCED ENVIRONMENTAL SERVICES, INC.  
LABORATORY REPORT

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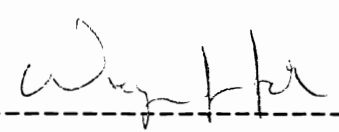
Type of Analysis: TCL SEMI-VOLS

Units of Measure: Micrograms/ Liter or ppb  
Client: UNION CARBIDE A.E.S. Job Code CTC

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| Analytical<br>Parameter(s)      | Method<br>No. | Quant.<br>Limits | AES Lab No.-<br>Sample ID - |                        |                  |  |
|---------------------------------|---------------|------------------|-----------------------------|------------------------|------------------|--|
|                                 |               |                  | 12288<br>BW - 4             | 12291<br>TRIP<br>BLANK | 12322<br>BW - 6  |  |
|                                 |               |                  | GRAB<br>09/19/89            | GRAB<br>09/19/89       | GRAB<br>09/20/89 |  |
| 2-Methylnaphthalene             | 8270          | 10               | BQL *                       | BQL                    | BQL              |  |
| Bis(2-Chloroethyl) Ether        | "             | "                | BQL                         | BQL                    | BQL              |  |
| 1,3-Dichlorobenzene             | "             | "                | BQL                         | BQL                    | BQL              |  |
| 1,4-Dichlorobenzene             | "             | "                | BQL                         | BQL                    | BQL              |  |
| 1,2-Dichlorobenzene             | "             | "                | BQL                         | BQL                    | BQL              |  |
| Bis(2-Chloroisopropyl)<br>Ether | "             | "                | BQL                         | BQL                    | BQL              |  |
| Hexachloroethane                | "             | "                | BQL                         | BQL                    | BQL              |  |
| N-Nitrosodi-N-Propylamine       | "             | "                | BQL                         | BQL                    | BQL              |  |
| Nitrobenzene                    | "             | "                | BQL                         | BQL                    | BQL              |  |
| Isophorone                      | "             | "                | BQL                         | BQL                    | BQL              |  |
| Bis(2-Chloroethoxy) Methane     | "             | "                | BQL                         | BQL                    | BQL              |  |
| 1,2,4-Trichlorobenzene          | "             | "                | BQL                         | BQL                    | BQL              |  |
| Naphthalene                     | "             | "                | BQL                         | BQL                    | BQL              |  |
| Hexachlorobutadiene             | "             | "                | 29                          | BQL                    | BQL              |  |
| Hexachlorocyclopentadiene       | "             | "                | BQL                         | BQL                    | BQL              |  |
| 2-Chloronaphthalene             | "             | "                | BQL                         | BQL                    | BQL              |  |
| Dimethylphthalate               | "             | "                | BQL                         | BQL                    | BQL              |  |
| Acenaphthylene                  | "             | "                | BQL                         | BQL                    | BQL              |  |
| 2,6-Dinitrotoluene              | "             | "                | BQL                         | BQL                    | BQL              |  |
| Acenaphthene                    | "             | "                | BQL                         | BQL                    | BQL              |  |
| 2,4-Dinitrotoluene              | "             | "                | BQL                         | BQL                    | BQL              |  |
| Diethylphthalate                | "             | "                | BQL                         | BQL                    | BQL              |  |

\* Below Quantifiable Limits

  
-----  
Wayne J. Juda  
Organic Supervisor

ADVANCED ENVIRONMENTAL SERVICES, INC.  
LABORATORY REPORT

=====

Type of Analysis: TCL SEMI-VOLS

Units of Measure: Micrograms/ Liter or ppb  
Client: UNION CARBIDE A.E.S. Job Code CTC

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|                             |        |        |              | AES Lab No.- | 12288    | 12291    | 12322  |
|-----------------------------|--------|--------|--------------|--------------|----------|----------|--------|
|                             |        |        |              | Sample ID -  | BW - 4   | TRIP     | BW - 6 |
|                             |        |        |              |              |          | BLANK    |        |
| Analytical                  | Method | Quant. | Sample Date- | GRAB         | GRAB     | GRAB     |        |
| Parameter(s)                | No.    | Limits |              | 09/19/89     | 09/19/89 | 09/20/89 |        |
| Fluorene                    | 8270   | 10     |              | BQL *        | BQL      | BQL      |        |
| 4-Chlorophenylphenylether   | "      | "      |              | BQL          | BQL      | BQL      |        |
| N-Nitrosodiphenylether      | "      | "      |              | BQL          | BQL      | BQL      |        |
| Benzyl Alcohol              | "      | "      |              | BQL          | BQL      | BQL      |        |
| 4-Chloroaniline             | "      | "      |              | BQL          | BQL      | BQL      |        |
| 4-Bromophenylphenylether    | "      | "      |              | BQL          | BQL      | BQL      |        |
| Hexachlorobenzene           | "      | "      |              | BQL          | BQL      | BQL      |        |
| Phenanthrene                | "      | "      |              | BQL          | BQL      | BQL      |        |
| Anthracene                  | "      | "      |              | BQL          | BQL      | BQL      |        |
| Di-N-Butylphthalate         | "      | "      |              | BQL          | BQL      | BQL      |        |
| Fluoranthene                | "      | "      |              | BQL          | BQL      | BQL      |        |
| 2-Nitroaniline              | "      | "      |              | BQL          | BQL      | BQL      |        |
| Pyrene                      | "      | "      |              | BQL          | BQL      | BQL      |        |
| Butylbenzylphthalate        | "      | "      |              | BQL          | BQL      | BQL      |        |
| Benzo(a)Anthracene          | "      | "      |              | BQL          | BQL      | BQL      |        |
| 3,3'-Dichlorobenzidine      | "      | 20     |              | BQL          | BQL      | BQL      |        |
| Chrysene                    | "      | 10     |              | BQL          | BQL      | BQL      |        |
| Bis(2-Ethylhexyl) Phthalate | "      | "      |              | BQL          | BQL      | BQL      |        |
| Di-N-Octylphthalate         | "      | "      |              | BQL          | BQL      | BQL      |        |
| Benzo(b) Fluoranthene       | "      | "      |              | BQL          | BQL      | BQL      |        |
| Benzo(k) Fluoranthene       | "      | "      |              | BQL          | BQL      | BQL      |        |
| Benzo(a) Pyrene             | "      | "      |              | BQL          | BQL      | BQL      |        |
| Indeno(1,2,3-C,D) Pyrene    | "      | 20     |              | BQL          | BQL      | BQL      |        |
| Dibenzo(a,h) Anthracene     | "      | 20     |              | BQL          | BQL      | BQL      |        |
| Benzo(g,h,i) Perylene       | "      | 20     |              | BQL          | BQL      | BQL      |        |

\* Below Quantifiable Limits

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Wayne J. Juda  
Organic Supervisor

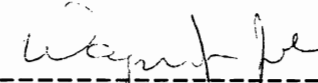
ADVANCED ENVIRONMENTAL SERVICES, INC.  
LABORATORY REPORT

=====  
Type of Analysis: TCL SEMI-VOLS

Units of Measure: Micrograms/ Liter or ppb  
Client: UNION CARBIDE A.E.S. Job Code CTC  
-----

|                            |               |                  | AES Lab No.- | 12288    | 12291    | 12322    |
|----------------------------|---------------|------------------|--------------|----------|----------|----------|
|                            |               |                  | Sample ID -  | BW - 4   | TRIP     | BW - 6   |
|                            |               |                  |              | GRAB     | BLANK    |          |
|                            |               |                  | Sample Date- | 09/19/89 | 09/19/89 | 09/20/89 |
| Analytical<br>Parameter(s) | Method<br>No. | Quant.<br>Limits |              |          |          |          |
| Phenol                     | 8270          | 10               |              | BQL *    | BQL      | BQL      |
| 2-Chlorophenol             | "             | "                |              | BQL      | BQL      | BQL      |
| 2-Nitrophenol              | "             | "                |              | BQL      | BQL      | BQL      |
| 2,4-Dimethylphenol         | "             | "                |              | BQL      | BQL      | BQL      |
| 4-Chloro-3-Methylphenol    | "             | "                |              | BQL      | BQL      | BQL      |
| 2,4,6-Trichlorophenol      | "             | "                |              | BQL      | BQL      | BQL      |
| 2,4-Dinitrophenol          | "             | 20               |              | BQL      | BQL      | BQL      |
| 4-Nitrophenol              | "             | 20               |              | BQL      | BQL      | BQL      |
| 4,6-Dinitro-2-Methylphenol | "             | 20               |              | BQL      | BQL      | BQL      |
| Pentachlorophenol          | "             | 20               |              | BQL      | BQL      | BQL      |
| 2,4-Dichlorophenol         | "             | 10               |              | BQL      | BQL      | BQL      |
| 4-Methylphenol             | "             | 10               |              | BQL      | BQL      | BQL      |
| Benzoic Acid               | "             | 20               |              | BQL      | BQL      | BQL      |
| 2,4,5-Trichlorophenol      | "             | 10               |              | BQL      | BQL      | BQL      |
| 3-Nitroaniline             | "             | 10               |              | BQL      | BQL      | BQL      |
| Dibenzofuran               | "             | 10               |              | BQL      | BQL      | BQL      |
| 4-Nitroaniline             | "             | 10               |              | BQL      | BQL      | BQL      |
| 2-Methylphenol             | "             | 10               |              | BQL      | BQL      | BQL      |
| Benzidine                  | "             | 20               |              | BQL      | BQL      | BQL      |
| 1,2-Diphenylhydrazine      | "             | 10               |              | BQL      | BQL      | BQL      |
| Aniline                    | "             | 10               |              | BQL      | BQL      | BQL      |

\* Below Quantifiable Limits

  
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Wayne J. Juda  
Organic Supervisor

ADVANCED ENVIRONMENTAL SERVICES, INC.  
LABORATORY REPORT  
QUALITY CONTROL - PRECISION

=====

Type of Analysis: Duplicate Analysis  
Units of Analysis: Micrograms/ Liters or ppb  
Client: UNION CARBIDE                      A.E.S. Job Code:CTC

-----

| Analytical Parameters        | Method | Sample No. | Original Conc. | Duplicate Conc. | Average Conc. | Range | Rel. % Difference |
|------------------------------|--------|------------|----------------|-----------------|---------------|-------|-------------------|
| 2-Methylnaphthalene          | 8270   | 12288      | <10            | <10             | <10           | None  | None              |
| Bis(2-Chloroethyl) Ether     | "      | "          | <10            | <10             | <10           | None  | None              |
| 1,3-Dichlorobenzene          | "      | "          | <10            | <10             | <10           | None  | None              |
| 1,4-Dichlorobenzene          | "      | "          | <10            | <10             | <10           | None  | None              |
| 1,2-Dichlorobenzene          | "      | "          | <10            | <10             | <10           | None  | None              |
| Bis(2-Chloroisopropyl) Ether | "      | "          | <10            | <10             | <10           | None  | None              |
| Hexachloroethane             | "      | "          | <10            | <10             | <10           | None  | None              |
| N-Nitrosdi-N-Propylamine     | "      | "          | <10            | <10             | <10           | None  | None              |
| Nitrobenzene                 | "      | "          | <10            | <10             | <10           | None  | None              |
| Isophorone                   | "      | "          | <10            | <10             | <10           | None  | None              |
| Bis(2-Chloroethoxy) Methane  | "      | "          | <10            | <10             | <10           | None  | None              |
| 1,2,4-Trichlorobenzene       | "      | "          | <10            | <10             | <10           | None  | None              |
| Naphthalene                  | "      | "          | <10            | <10             | <10           | None  | None              |
| Naphthalene                  | "      | "          | <10            | <10             | <10           | None  | None              |
| Hexachlorobutadiene          | "      | "          | 30             | 28              | 29            | 2.0   | 7                 |
| Hexachlorocyclopentadiene    | "      | "          | <10            | <10             | <10           | None  | None              |
| 2-Chloronaphthalene          | "      | "          | <10            | <10             | <10           | None  | None              |
| Dimethylphthalate            | "      | "          | <10            | <10             | <10           | None  | None              |
| Acenphthylene                | "      | "          | <10            | <10             | <10           | None  | None              |
| 2,6-Dinitrotoluene           | "      | "          | <10            | <10             | <10           | None  | None              |
| Acenphthene                  | "      | "          | <10            | <10             | <10           | None  | None              |
| 2,4-Dinitrotoluene           | "      | "          | <10            | <10             | <10           | None  | None              |
| Diethylphthalate             | "      | "          | <10            | <10             | <10           | None  | None              |

Relative Percent. Difference =  
Range/Average X 100

ADVANCED ENVIRONMENTAL SERVICES, INC.  
LABORATORY REPORT  
QUALITY CONTROL - PRECISION

=====

Type of Analysis: Duplicate Analysis  
Units of Analysis: Micrograms/ Liters or ppb  
Client: UNION CARBIDE                      A.E.S. Job Code:CTC

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| Analytical Parameters       | Method | Sample No. | Original Conc. | Duplicate Conc. | Average Conc. | Range | Rel. % Difference |
|-----------------------------|--------|------------|----------------|-----------------|---------------|-------|-------------------|
| Fluorene                    | 8270   | 12288      | <10            | <10             | <10           | None  | None              |
| 4-Chlorophenylphenylether   | "      | "          | <10            | <10             | <10           | None  | None              |
| N-Nitrosdiphenylamine       | "      | "          | <10            | <10             | <10           | None  | None              |
| Benzyl Alcohol              | "      | "          | <10            | <10             | <10           | None  | None              |
| 4-Chloroaniline             | "      | "          | <10            | <10             | <10           | None  | None              |
| 4-BromophenylphenylEther    | "      | "          | <10            | <10             | <10           | None  | None              |
| Hexachlorobenzene           | "      | "          | <10            | <10             | <10           | None  | None              |
| Phenanthrenen               | "      | "          | <10            | <10             | <10           | None  | None              |
| Anthracene                  | "      | "          | <10            | <10             | <10           | None  | None              |
| Di-N-Butylphthalate         | "      | "          | <10            | <10             | <10           | None  | None              |
| Fluoranthene                | "      | "          | <10            | <10             | <10           | None  | None              |
| 2-Nitroaniline              | "      | "          | <10            | <10             | <10           | None  | None              |
| Pyrene                      | "      | "          | <10            | <10             | <10           | None  | None              |
| Butylbenzylphthalate        | "      | "          | <10            | <10             | <10           | None  | None              |
| Benzo(a)Anthracene          | "      | "          | <10            | <10             | <10           | None  | None              |
| 3,3'Dichlorobenzidine       | "      | "          | <20            | <20             | <20           | None  | None              |
| Chrysene                    | "      | "          | <10            | <10             | <10           | None  | None              |
| Bis(2-Ethylhexyl) Phthalate | "      | "          | <10            | <10             | <10           | None  | None              |
| Di-N-Octylphthalate         | "      | "          | <10            | <10             | <10           | None  | None              |
| Benzo(b) Fluoranthene       | "      | "          | <10            | <10             | <10           | None  | None              |
| Benzo(k) Fluoranthene       | "      | "          | <10            | <10             | <10           | None  | None              |
| Benzo(a) Pyrene             | "      | "          | <10            | <10             | <10           | None  | None              |
| Indeno(1,2,3-C,D) Pyrene    | "      | "          | <20            | <20             | <20           | None  | None              |
| Dibenzo(a,h) Anthracene     | "      | "          | <20            | <20             | <20           | None  | None              |

Relative Percent Difference =  
Range/Average X 100

ADVANCED ENVIRONMENTAL SERVICES, INC.  
LABORATORY REPORT  
QUALITY CONTROL - PRECISION

=====

Type of Analysis: Duplicate Analysis  
Units of Analysis: Micrograms/ Liters or ppb  
Client: UNION CARBIDE                      A.E.S. Job Code:CTC

-----

| Analytical Parameters      | Method | Sample No. | Original Conc. | Duplicate Conc. | Average Conc. | Range | Rel. % Difference |
|----------------------------|--------|------------|----------------|-----------------|---------------|-------|-------------------|
| Benzo(g,h,i)Perylene       | 8270   | 12288      | <20            | <20             | <20           | None  | None              |
| Benaidine                  | "      | "          | <20            | <20             | <20           | None  | None              |
| 4-Nitroaniline             | "      | "          | <10            | <10             | <10           | None  | None              |
| 3-Nitroaniline             | "      | "          | <10            | <10             | <10           | None  | None              |
| Dibenzofuran               | "      | "          | <10            | <10             | <10           | None  | None              |
| ***** ACIDS *****          |        |            |                |                 |               |       |                   |
| Phenols                    | 8270   | 12288      | <10            | <10             | <10           | None  | None              |
| 2-Chlorophenol             | "      | "          | <10            | <10             | <10           | None  | None              |
| 2-Nitrophenol              | "      | "          | <10            | <10             | <10           | None  | None              |
| 2,4-Dimethylphenol         | "      | "          | <10            | <10             | <10           | None  | None              |
| 4-Chloro-3-Methylphenol    | "      | "          | <10            | <10             | <10           | None  | None              |
| 2,4,6-Trichlorophenol      | "      | "          | <10            | <10             | <10           | None  | None              |
| 2,4-Dinitrophenol          | "      | "          | <20            | <20             | <20           | None  | None              |
| 4-Nitrophenol              | "      | "          | <20            | <20             | <20           | None  | None              |
| 4,6-Dinitro-2-Methylphenol | "      | "          | <20            | <20             | <20           | None  | None              |
| Pentachlorophenol          | "      | "          | <20            | <20             | <20           | None  | None              |
| 2,4-Dichlorophenol         | "      | "          | <10            | <10             | <10           | None  | None              |
| 4-Methyphenol              | "      | "          | <10            | <10             | <10           | None  | None              |
| 2,4,5-Trichlorophenol      | "      | "          | <10            | <10             | <10           | None  | None              |
| 2-Methylphenol             | "      | "          | <10            | <10             | <10           | None  | None              |
| Benzoic Acid               | "      | "          | <20            | <20             | <20           | None  | None              |
| 1,2-Diphenylhydrazine      | "      | "          | <10            | <10             | <10           | None  | None              |
| Aniline                    | "      | "          | <10            | <10             | <10           | None  | None              |

Relative Percent Difference =  
Range/Average X 100

ADVANCED ENVIRONMENTAL SERVICES, INC.  
LABORATORY REPORT  
QUALITY CONTROL - ACCURACY

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Type of Analysis: Matrix Spikes and E.P.A. Standards  
Client: UNION CARBIDE A.E.S. Job Code: CTC

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(Units: ug/l , or ppb)

| Analytical Parameters       | Method | Sample No. | Type | Observed Conc. | Original Conc. | Added Conc. | Percent Recovery* |
|-----------------------------|--------|------------|------|----------------|----------------|-------------|-------------------|
| Bis(2-Chloroethyl) Ether    | 8270   | 12288      | SPK  | 55             | <10            | 50          | 110               |
| 1,3-Dichlorobenzene         | "      | "          | SPK  | 53             | <10            | 50          | 106               |
| 1,2-Dichlorobenzene         | "      | "          | SPK  | 54             | <10            | 50          | 108               |
| Hexachlorobutadiene         | "      | "          | SPK  | 68             | 15             | 50          | 106               |
| Bis(2-chloroethoxy) methane | "      | "          | SPK  | 52             | <10            | 50          | 104               |
| 1,1-Dichloroethylene        | 8240   | 12288      | SPK  | 40             | <5.0           | 40          | 100               |
| trans-1,2-dichloroethylene  | "      | "          | SPK  | 39             | <5.0           | 40          | 98                |
| Methylene Chloride          | "      | "          | SPK  | 40             | <5.0           | 40          | 100               |
| 1,2-Dichloroethane          | "      | "          | SPK  | 37             | <5.0           | 40          | 92                |

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\* % Recovery=100 x ((Observed Conc. - "background" Original Conc.)/"Spike" Added Conc.)

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Portia Form.

8240

12288 12289 12322

9/25/89

1400 - 2000

Philip C. Stearns

8270

12288, 12291, 12322

9/25/89

1400-2200

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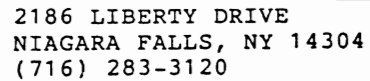
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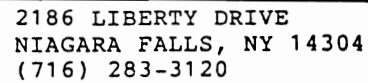
APPENDIX A  
CHAIN OF CUSTODY RECORDS



|                            |                 |                               |
|----------------------------|-----------------|-------------------------------|
| CHAIN OF CUSTODY<br>RECORD | JOB CODE<br>CTC | PROJECT NAME<br>UNION CARBIDE |
|----------------------------|-----------------|-------------------------------|

[illegible]

|                                                |                 |                 |                                            |
|------------------------------------------------|-----------------|-----------------|--------------------------------------------|
| RELINQUISHED BY (Sign)<br>1 <u>[Signature]</u> | DATE<br>9/12/89 | TIME<br>4:00 pm | RECEIVED BY (Sign)<br>2 <u>[Signature]</u> |
| RELINQUISHED BY (Sign)<br>2 _____              | DATE            | TIME            | RECEIVED BY (Sign)<br>3 _____              |
| RELINQUISHED BY (Sign)<br>3 _____              | DATE            | TIME            | RECEIVED BY (Sign)<br>4 _____              |
| RELINQUISHED BY (Sign)<br>4 _____              | DATE            | TIME            | RECEIVED BY (Sign)<br>5 _____              |
| REMARKS:                                       |                 |                 |                                            |



PROJECT NAME  
UNION CARBIDE

[illegible]

|                                                |                        |                        |                                         |
|------------------------------------------------|------------------------|------------------------|-----------------------------------------|
| ELINQUISHED BY (Sign)<br><u>Scott My Salva</u> | DATE<br><u>9/20/89</u> | TIME<br><u>3:30 pm</u> | RECEIVED BY (Sign)<br><u>Matthew C.</u> |
| INQUISHED BY (Sign)<br>_____<br>_____          | DATE<br>_____          | TIME<br>_____          | RECEIVED BY (Sign)<br>③ _____           |
| QUISHED BY (Sign)<br>_____<br>_____            | DATE<br>_____          | TIME<br>_____          | RECEIVED BY (Sign)<br>④ _____           |
| ISHED BY (Sign)<br>_____<br>_____              | DATE<br>_____          | TIME<br>_____          | RECEIVED BY (Sign)<br>⑤ _____           |