

DUNLOP TIRE

**ENVIRONMENTAL MONITORING OF INACTIVE**

**WASTE SITES 915018 A, B, AND C**

**JUNE 1998**

Prepared By:

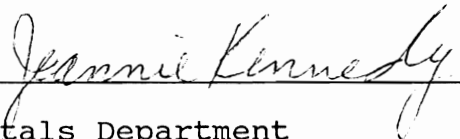
**ADVANCED**  
ENVIRONMENTAL SERVICES INC.

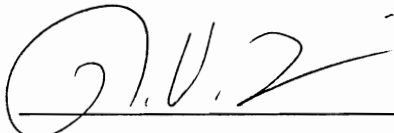
*"A Company Dedicated to Honesty, Quality and Service"*

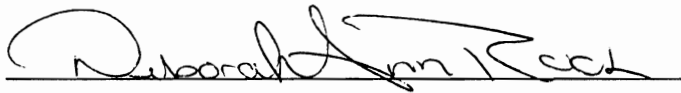
July 7, 1998  
REF: GMU81LF/CLOS  
Lab ID No. 10233

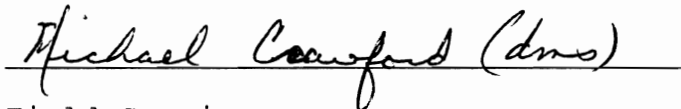
QA/QC VERIFICATION FOR PROJECT ID 81LF

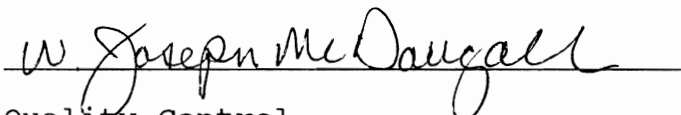
The following report, as well as the supporting data, have been carefully reviewed for accuracy, adherence to the cited methods, and completeness. All data contained in this report was generated in accordance with the AES Laboratory Quality Assurance/Quality Control Program.


  
Metals Department

  
Inorganic Chemistry

  
Organic Chemistry

  
Field Services

  
Quality Control

  
Project Manager

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All 'Total' results on soil matrices are calculated on a dry weight basis, unless otherwise noted. Analyses noted as 'Performed in the laboratory' require immediate testing and should be performed in the field.

The following are standard abbreviations:

BQL - Below Quantifiable Limits  
ND - None Detected  
NG - No Growth of Colonies  
NR - Not Requested  
D - Indicates a dilution was required

Advanced Environmental Services, Inc.  
Groundwater Monitoring Field Log

Site Information

Site Location: Dunlop  
Address: Tonawanda  
Monitoring Location: C-7

AES Job Code:  
Project I.D. #: GMU  
Was Well Locked?  Yes  No

Was Well I.D. Easily Visible?  Yes  No

Physical Condition of Well: Good

Water Table Information

Elevation Taken From:  Inner Casing  Outer Casing  Other:

Depth of Well Bottom (A): 23.26 feet

Depth of Watertable (B): 4.11 feet

Length of Water Column [A-B=C]: 19.15 feet

Diameter of Well (D): 2 inches

Volume of Water in Well: 3.06 gallons

Well Coefficient: .16

Purging Information

Method of Purging: Teflon Bailor

Purge Date: 6/11/98

Weather During Purging: 80° F Sun

Volume of water in well: 3.06

HNU Background: NA

HNU in Well: NA

Purge Start Time: 2:26 P

Purge Stop Time: 2:40 P

Volume of Water Purged: 6.25 Dry gallons

Number of Well Volumes Purged: 2.10

Solids Content:  None  Low  Medium  High

Did the well go dry before the purging was completed:  Yes  No

Was there an odor?:  Yes  No If Yes, describe: \_\_\_\_\_

Observations about Purge Water (i.e. color, types of solids): Clear to Tan

\* This site used as Blind Dup Site

Groundwater Indicators	After 1 Volume	After 2 Volumes	After 3 Volumes	After 4 Volumes	After 5 Volumes
pH (SU)	<u>7.20</u>	<u>7.23</u>	<u>N</u>		
Spec. Conductivity (umhos/cm)	<u>4100</u>	<u>4200</u>			
Temperature (F)	<u>60°</u>	<u>63</u>			
Turbidity (NTU)	<u>44.1</u>	<u>64.4</u>			
Eh (ORP) (Millivolts)	<u>NA</u>	<u>NA</u>			

Purging Technicians Signature: Nick D. C... .. Date: 6/11/98

Advanced Environmental Services, Inc.  
Groundwater Monitoring Field Log

Site Information

Site Location: Dunlop  
 Address: Tonawanda  
 Monitoring Location: OMW B4  
 Was Well I.D. Easily Visible?  Yes  No  
 Physical Condition of Well: Good

AES Job Code:  
 Project I.D. #: GMU  
 Was Well Locked?  Yes  No

Water Table Information

Elevation Taken From:  Inner Casing  Outer Casing  Other:  
 Depth of Well Bottom (A): 22.25 feet  
 Depth of Watertable (B): 5.30 feet  
 Length of Water Column [A-B=C]: 16.95 feet  
 Diameter of Well (D): 2 inches  
 Volume of Water in Well: 2.71 gallons  
 Well Coefficient: .16

Purging Information

Method of Purging: Teflon Bailers  
 Weather During Purging: 80°F sun  
 HNU Background: NA  
 Purge Start Time: 12:00P  
 Volume of Water Purged: 5.25 Dry gallons  
 Solids Content:  None  Low  Medium  High  
 Did the well go dry before the purging was completed:  Yes  No  
 Was there an odor?:  Yes  No If Yes, describe: \_\_\_\_\_  
 Observations about Purge Water (i.e. color, types of solids): clear to tan

Purge Date: 6/10/98  
 Volume of water in well: 2.71  
 HNU in Well: NA  
 Purge Stop Time: 12:10P  
 Number of Well Volumes Purged: 2

Groundwater Indicators	After 1 Volume	After 2 Volumes	After 3 Volumes	After 4 Volumes	After 5 Volumes
pH (SU)	<u>7.33</u>	<u>7.34</u>	<u>N</u>		
Spec. Conductivity (umhos/cm)	<u>2700</u>	<u>3050</u>			
Temperature (F)	<u>54</u>	<u>54</u>			
Turbidity (NTU)	<u>30.5</u>	<u>60.1</u>			
Eh (ORP) (Millivolts)	<u>NA</u>	<u>NA</u>			<u>A</u>

Purging Technicians Signature: Mihl D. Aull Date: 6/11/98

Sampling Statistics:

Monitoring Location: OMW -A4

Sample Number: \_\_\_\_\_

Sampling Time: 3:08 P

Sampling Date: 6/10/98

Depth of Watertable: 19.0 feet

Weather during Sampling: 80°F

Method of Sampling: Teflon Bailor

Solids Content:  None  Low  Medium  High

Did the sample have an odor?:  Yes  No If Yes, describe: \_\_\_\_\_

Did the well go dry during sampling:  Yes  No

Sample Observations/Comments (i.e. color, types of solid): clear

Groundwater Indicator	Units	Results	Groundwater Indicator	Units	Results
pH	Standard Units	<u>6.90</u>	Turbidity	NTU	<u>49.1</u>
Temperature	F	<u>52</u>	Eh (ORP)	millivolts	
Specific Conductivity	umhos/cm	<u>6800</u>	Dissolved Oxygen	ppm	

Filter Time: NA

Parameter(s) Collected

- |   |  |   |
|---|--|---|
| <input type="checkbox"/> Total Metals                                   | <input type="checkbox"/> Total Recoverable Phenols                       | <input type="checkbox"/> Ammonia                      |
| <input type="checkbox"/> Nitrate  | <input type="checkbox"/> COD   | <input type="checkbox"/> TDS                          |
| <input type="checkbox"/> Total Organic Carbon (TOC)                     | <input type="checkbox"/> Chlorides                                       | <input type="checkbox"/> Alkalinity                   |
| <input type="checkbox"/> Hardness                                       | <input type="checkbox"/> Sulfate   | <input type="checkbox"/> BOD                          |
| <input type="checkbox"/> Cyanide(s)                                     | <input type="checkbox"/> TKN   | <input type="checkbox"/> Soluble Metals               |
| <input type="checkbox"/> Nitrite  | <input type="checkbox"/> Total Hexachrome                                | <input type="checkbox"/> Soluble Hexachrome           |
| <input type="checkbox"/> Apparent Color                                 | <input type="checkbox"/> True Color                                      | <input type="checkbox"/> Odor                         |
| <input type="checkbox"/> Bromide  | <input type="checkbox"/> Sulfite   | <input type="checkbox"/> Sulfide                      |
| <input type="checkbox"/> Part 360 Baseline Volatiles                    | <input type="checkbox"/> Volatile Organics (601, 602)                    | <input type="checkbox"/> Semi-Volatile Organics       |
| <input type="checkbox"/> Purgeable Organic Halogens                     | <input type="checkbox"/> Pesticides & PCBs                               | <input type="checkbox"/> Total Organic Halogens (TOX) |
| <input type="checkbox"/> App. 33-Non-Halogenated Volatiles (SW846 8015) | <input type="checkbox"/> App. 33- Semi-Volatiles (SW 846 8270)           |   |
| <input type="checkbox"/> App. 33-Organochlorine Pesticides (SW846 8080) | <input type="checkbox"/> App. 33-Organophosphate Pesticides (SW846 8140) |   |
| <input type="checkbox"/> App. 33 - Volatiles (SW846 8240)               | <input type="checkbox"/> App. 33 - Herbicides (SW 846 8150)              |   |

Sampling Technicians Signature: Neil D. Call

Date: 6/11/98

Sampling Technicians Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Advanced Environmental Services, Inc.  
Groundwater Monitoring Field Log

Site Information

Site Location: Dunlop

AES Job Code:

Address: Tenawanda

Project I.D. #:

Monitoring Location: OMW - AG

Was Well Locked?  Yes  No

Was Well I.D. Easily Visible?  Yes  No

Physical Condition of Well: Good

Water Table Information

Elevation Taken From:  Inner Casing  Outer Casing  Other:

Depth of Well Bottom (A): 23.05 feet

Depth of Watertable (B): 6.0 feet

Length of Water Column [A-B=C]: 17.25 feet

Diameter of Well (D): 2" inches

Volume of Water in Well: 2.73 gallons

Well Coefficient: .16

Purging Information

Method of Purging: Teflon Bailor

Purge Date: 6/10/98

Weather During Purging: 80°F Sun

Volume of water in well: 2.73

HNU Background: NA

HNU in Well: NA

Purge Start Time: 1:40 P

Purge Stop Time: 2:00 P

Volume of Water Purged: 5.23 Dry gallons

Number of Well Volumes Purged: 2

Solids Content:  None  Low  Medium  High

Did the well go dry before the purging was completed:  Yes  No

Was there an odor?:  Yes  No If Yes, describe: \_\_\_\_\_

Observations about Purge Water (i.e. color, types of solids): Clear - to Tan

Groundwater Indicators	After 1 Volume	After 2 Volumes	After 3 Volumes	After 4 Volumes	After 5 Volumes
pH (SU)	<u>7.41</u>	<u>7.41</u>	<u>N</u>		
Spec. Conductivity (umhos/cm)	<u>1050</u>	<u>980</u>			
Temperature (F)	<u>64</u>	<u>62.6</u>			
Turbidity (NTU)	<u>262.0</u>	<u>397</u>			
Eh (ORP) (Millivolts)	<u>NA</u>	<u>NA</u>			<u>A</u>

Purging Technicians Signature: Richard O. Cull

Date: 6/11/98

Advanced Environmental Services, Inc.  
Groundwater Monitoring Field Log

Site Information

Site Location: Dunlop  
 Address: Tonawanda  
 Monitoring Location: 0 MW-B3  
 Was Well I.D. Easily Visible?  Yes  No  
 Physical Condition of Well: Good

AES Job Code:  
 Project I.D. #: GMU  
 Was Well Locked?  Yes  No

Water Table Information

Elevation Taken From:  Inner Casing  Outer Casing  Other:  
 Depth of Well Bottom (A): 16.96 feet  
 Depth of Watertable (B): 5.85 feet  
 Length of Water Column [A-B=C]: 11.11 feet  
 Diameter of Well (D): 2" inches  
 Volume of Water in Well: 1.77 gallons  
 Well Coefficient: .16

Purging Information

Method of Purging: Teflon Bailor  
 Weather During Purging: 80° F sun  
 HNU Background: NA  
 Purge Start Time: 12:40P  
 Volume of Water Purged: 4.5 dry gallons  
 Solids Content:  None  Low  Medium  High  
 Did the well go dry before the purging was completed:  Yes  No  
 Was there an odor?:  Yes  No If Yes, describe: Solvent Odor  
 Observations about Purge Water (i.e. color, types of solids): Frothy - Clear

Purge Date: 6/10/98  
 Volume of water in well: 1.77  
 HNU in Well: NA  
 Purge Stop Time: 1:00P  
 Number of Well Volumes Purged: 2.75

Groundwater Indicators	After 1 Volume	After 2 Volumes	After 3 Volumes	After 4 Volumes	After 5 Volumes
pH (SU)	<u>6.69</u>	<u>6.60</u>	<u>N</u>		
Spec. Conductivity (umhos/cm)	<u>1650</u>	<u>1650</u>			
Temperature (F)	<u>57°</u>	<u>54.</u>			
Turbidity (NTU)	<u>45.7</u>	<u>27.7</u>			
Eh (ORP) (Millivolts)	<u>NA</u>	<u>NA</u>			<u>A</u>

Purging Technicians Signature: Richard D. Gabel Date: 6/11/98

Advanced Environmental Services, Inc.  
Groundwater Monitoring Field Log

Site Information

Site Location: Dunlop

Address: Tonawanda

Monitoring Location: C-1

Was Well I.D. Easily Visible?  Yes  No

Physical Condition of Well: Excellent

AES Job Code: 73 M.C.

Project I.D. #: GMU

Was Well Locked?  Yes  No

Water Table Information

Elevation Taken From:  Inner Casing  Outer Casing  Other:

Depth of Well Bottom (A): 19.52 feet

Depth of Watertable (B): 3.21 feet

Length of Water Column [A-B=C]: 16.31 feet

Diameter of Well (D): 2" inches

Volume of Water in Well: 2.60 gallons

Well Coefficient: .16

Purging Information

Method of Purging: Teflon Bailers

Purge Date: 6/11/98

Weather During Purging: Sunny 68°F

Volume of water in well: 2.60

HNU Background: NA

HNU in Well: NA

Purge Start Time: 3:08

Purge Stop Time: 3:18

Volume of Water Purged: Dry @ 5.30 gallons

Number of Well Volumes Purged: 2.5

Solids Content:  None  Low  Medium  High

Did the well go dry before the purging was completed:  Yes  No

Was there an odor?:  Yes  No If Yes, describe: \_\_\_\_\_

Observations about Purge Water (i.e. color, types of solids): Cloudy, Tan.

Groundwater Indicators	After 1 Volume	After 2 Volumes	After 3 Volumes	After 4 Volumes	After 5 Volumes
pH (SU)	<u>7.21</u>	<u>7.39</u>	<u>N</u>		
Spec. Conductivity (umhos/cm)	<u>3206</u>	<u>3210</u>			
Temperature (F)	<u>63°F</u>	<u>63°F</u>			
Turbidity (NTU)	<u>118.0</u>	<u>193.0</u>			
Eh (ORP) (Millivolts)	<u>NA</u>	<u>NA</u>			<u>A</u>

Purging Technicians Signature: M. D. C. [Signature]

Date: 6/11/98



Advanced Environmental Services, Inc.  
Groundwater Monitoring Field Log

Site Information

Site Location: Dunlop AES Job Code:  
 Address: Tonawanda Project I.D. #: 6M4  
 Monitoring Location: MW - C5 Was Well Locked?  Yes  No  
 Was Well I.D. Easily Visible?  Yes  No  
 Physical Condition of Well: Good

Water Table Information

Elevation Taken From:  Inner Casing  Outer Casing  Other:  
 Depth of Well Bottom (A): 29.32 feet Depth of Watertable (B): 4.99 feet  
 Length of Water Column [A-B=C]: 24.33 feet Diameter of Well (D): 2 inches  
 Volume of Water in Well: 3.90 gallons Well Coefficient: -16

Purging Information

Method of Purging: Teflon Bailor Purge Date: 6/11/98  
 Weather During Purging: 80° F Volume of water in well: 3.90  
 HNU Background: NA HNU in Well: NA  
 Purge Start Time: 1:18 P Purge Stop Time: 2:00 P  
 Volume of Water Purged: 12.0 gallons Number of Well Volumes Purged: 3  
 Solids Content:  None  Low  Medium  High  
 Did the well go dry before the purging was completed:  Yes  No  
 Was there an odor?:  Yes  No If Yes, describe: Clear  
 Observations about Purge Water (i.e. color, types of solids): \_\_\_\_\_

Groundwater Indicators	After 1 Volume	After 2 Volumes	After 3 Volumes	After 4 Volumes	After 5 Volumes
pH (SU)	<u>7.25</u>	<u>7.31</u>	<u>7.16</u>	<u>N</u>	/
Spec. Conductivity (umhos/cm)	<u>3250</u>	<u>3400</u>	<u>3330</u>		
Temperature (F)	<u>60° F</u>	<u>60° F</u>	<u>60° F</u>		
Turbidity (NTU)	<u>28.5</u>	<u>88.9</u>	<u>129.1</u>		
Eh (ORP) (Millivolts)	<u>NA</u>	<u>NA</u>	<u>NA</u>		

Purging Technicians Signature: [Signature] Date: 6/11/98

CLIENT: Dunlop Tire  
 SAMPLE ID: OMW-A6  
 COLLECTION METHOD: Grab  
 COLLECTION DATE(S): 06/10/98  
 SAMPLE TYPE: Wastewater

AES CLIENT ID: DUNLOP  
 AES SAMPLE ID: 81LF-1

PROJECT ID: 81LF

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Total Recoverable Phenolics	ND	mg/L	0.004	EPA 9066
Turbidity *	45.0	NTU	0.1	EPA 180.1

\* Analysis performed in the field.

CLIENT: Dunlop Tire  
 SAMPLE ID: OMW-C1  
 COLLECTION METHOD: Grab  
 COLLECTION DATE(S): 06/11/98  
 SAMPLE TYPE: Wastewater

AES CLIENT ID: DUNLOP  
 AES SAMPLE ID: 81LF-2

PROJECT ID: 81LF

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Total Recoverable Phenolics	ND	mg/L	0.004	EPA 9066
Turbidity *	38.8	NTU	0.1	EPA 180.1

\* Analysis performed in the field.

CLIENT: Dunlop Tire  
 SAMPLE ID: OMW-C7  
 COLLECTION METHOD: Grab  
 COLLECTION DATE(S): 06/11/98  
 SAMPLE TYPE: Wastewater

AES CLIENT ID: DUNLOP  
 AES SAMPLE ID: 81LF-3

PROJECT ID: 81LF

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
1,1-Dichloroethane	ND	µg/L	10	SW 846 8260
1,1,1-Trichloroethane	ND	µg/L	10	SW 846 8260
1,2-Dichloroethylene (total)	ND	µg/L	10	SW 846 8260
Benzene	ND	µg/L	10	SW 846 8260
2-Butanone	ND	µg/L	10	SW 846 8260
Total Recoverable Phenolics	ND	mg/L	0.004	EPA 9066
Total Arsenic	ND	mg/L	0.002	EPA 206.2
Total Cadmium	ND	mg/L	0.016	EPA 200.7
Total Chromium	0.017	mg/L	0.014	EPA 200.7
Total Lead	ND	mg/L	0.002	EPA 239.2
Turbidity *	48.9	NTU	0.1	EPA 180.1

\* Analysis performed in the field.

CLIENT: Dunlop Tire  
 SAMPLE ID: OMW-C5  
 COLLECTION METHOD: Grab  
 COLLECTION DATE(S): 06/11/98  
 SAMPLE TYPE: Wastewater

AES CLIENT ID: DUNLOP  
 AES SAMPLE ID: 81LF-4

PROJECT ID: 81LF

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
1,1-Dichloroethane	ND	µg/L	10	SW 846 8260
1,1,1-Trichloroethane	ND	µg/L	10	SW 846 8260
1,2-Dichloroethylene (total)	ND	µg/L	10	SW 846 8260
Benzene	ND	µg/L	10	SW 846 8260
2-Butanone	ND	µg/L	10	SW 846 8260
Total Recoverable Phenolics	ND	mg/L	0.004	EPA 9066
Total Arsenic	ND	mg/L	0.002	EPA 206.2
Total Cadmium	ND	mg/L	0.016	EPA 200.7
Total Chromium	0.039	mg/L	0.014	EPA 200.7
Total Lead	ND	mg/L	0.002	EPA 239.2
Turbidity *	36.1	NTU	0.1	EPA 180.1

\* Analysis performed in the field.

CLIENT: Dunlop Tire  
 SAMPLE ID: OMW-A4  
 COLLECTION METHOD: Grab  
 COLLECTION DATE(S): 06/10/98  
 SAMPLE TYPE: Wastewater

AES CLIENT ID: DUNLOP  
 AES SAMPLE ID: 81LF-5

PROJECT ID: 81LF

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
1,1-Dichloroethane	ND	µg/L	10	SW 846 8260
1,1,1-Trichloroethane	ND	µg/L	10	SW 846 8260
1,2-Dichloroethylene (total)	ND	µg/L	10	SW 846 8260
Benzene	ND	µg/L	10	SW 846 8260
2-Butanone	ND	µg/L	10	SW 846 8260
Total Recoverable Phenolics	ND	mg/L	0.004	EPA 9066
Total Arsenic	ND	mg/L	0.002	EPA 206.2
Soluble Arsenic	ND	mg/L	0.005	EPA 206.2
Total Cadmium	ND	mg/L	0.016	EPA 200.7
Soluble Cadmium	ND	mg/L	0.016	EPA 200.7
Total Chromium	0.020	mg/L	0.014	EPA 200.7
Soluble Chromium	ND	mg/L	0.014	EPA 200.7
Total Lead	ND	mg/L	0.002	EPA 239.2
Soluble Lead	ND	mg/L	0.002	EPA 239.2
Turbidity *	49.1	NTU	0.1	EPA 180.1

\* Analysis performed in the field.

CLIENT: Dunlop Tire  
 SAMPLE ID: OMW-B4  
 COLLECTION METHOD: Grab  
 COLLECTION DATE(S): 06/10/98  
 SAMPLE TYPE: Wastewater

AES CLIENT ID: DUNLOP  
 AES SAMPLE ID: 81LF-6

PROJECT ID: 81LF

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
1,1-Dichloroethane	ND	µg/L	10	SW 846 8260
1,1,1-Trichloroethane	ND	µg/L	10	SW 846 8260
1,2-Dichloroethylene (total)	ND	µg/L	10	SW 846 8260
Benzene	ND	µg/L	10	SW 846 8260
2-Butanone	ND	µg/L	10	SW 846 8260
Total Recoverable Phenolics	ND	mg/L	0.004	EPA 9066
Total Arsenic	ND	mg/L	0.002	EPA 206.2
Total Cadmium	ND	mg/L	0.016	EPA 200.7
Total Chromium	ND	mg/L	0.014	EPA 200.7
Total Lead	ND	mg/L	0.002	EPA 239.2
Turbidity *	38.8	NTU	0.1	EPA 180.1

\* Analysis performed in the field.

CLIENT: Dunlop Tire SAMPLE ID: OMW-B3 COLLECTION METHOD: Grab COLLECTION DATE(S): 06/10/98 SAMPLE TYPE: Wastewater	AES CLIENT ID: DUNLOP AES SAMPLE ID: 81LF-7  PROJECT ID: 81LF
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Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
1,1-Dichloroethane	ND	µg/L	10	SW 846 8260
1,1,1-Trichloroethane	ND	µg/L	10	SW 846 8260
1,2-Dichloroethylene (total)	ND	µg/L	10	SW 846 8260
Benzene	ND	µg/L	10	SW 846 8260
2-Butanone	ND	µg/L	10	SW 846 8260
Total Recoverable Phenolics	ND	mg/L	0.004	EPA 9066
Total Arsenic	0.004	mg/L	0.002	EPA 206.2
Total Cadmium	ND	mg/L	0.016	EPA 200.7
Total Chromium	ND	mg/L	0.014	EPA 200.7
Total Lead	ND	mg/L	0.002	EPA 239.2
Turbidity *	31.1	NTU	0.1	EPA 180.1

\* Analysis performed in the field.



CLIENT: Dunlop Tire  
 SAMPLE ID: Blind Duplicate \*  
 COLLECTION METHOD: Grab  
 COLLECTION DATE(S): 06/11/98  
 SAMPLE TYPE: Wastewater

AES CLIENT ID: DUNLOP  
 AES SAMPLE ID: 81LF-8

PROJECT ID: 81LF

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
1,1-Dichloroethane	ND	µg/L	10	SW 846 8260
1,1,1-Trichloroethane	ND	µg/L	10	SW 846 8260
1,2-Dichloroethylene (total)	ND	µg/L	10	SW 846 8260
Benzene	ND	µg/L	10	SW 846 8260
2-Butanone	ND	µg/L	10	SW 846 8260
Total Recoverable Phenolics	ND	mg/L	0.004	EPA 9066
Total Arsenic	ND	mg/L	0.002	EPA 206.2
Total Cadmium	ND	mg/L	0.016	EPA 200.7
Total Chromium	ND	mg/L	0.014	EPA 200.7
Total Lead	ND	mg/L	0.002	EPA 239.2

\* Blind Duplicate site was OMW-C7.

CLIENT: Dunlop Tire  
 SAMPLE ID: Trip Blank  
 COLLECTION METHOD: Grab  
 COLLECTION DATE(S): 06/11/98  
 SAMPLE TYPE: DI Water

AES CLIENT ID: DUNLOP  
 AES SAMPLE ID: 81LF-9

PROJECT ID: 81LF

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Chloromethane	ND	µg/L	10	SW 846 8260
Bromomethane	ND	µg/L	10	SW 846 8260
Vinyl chloride	ND	µg/L	10	SW 846 8260
Chloroethane	ND	µg/L	10	SW 846 8260
Methylene chloride	ND	µg/L	10	SW 846 8260
Acetone	ND	µg/L	10	SW 846 8260
Carbon disulfide	ND	µg/L	10	SW 846 8260
1,1-Dichloroethene	ND	µg/L	10	SW 846 8260
1,1-Dichloroethane	ND	µg/L	10	SW 846 8260
1,2-Dichloroethylene (total)	ND	µg/L	10	SW 846 8260
Chloroform	ND	µg/L	10	SW 846 8260
1,2-Dichloroethane	ND	µg/L	10	SW 846 8260
2-Butanone	ND	µg/L	10	SW 846 8260
1,1,1-Trichloroethane	ND	µg/L	10	SW 846 8260
Carbon tetrachloride	ND	µg/L	10	SW 846 8260
Bromodichloromethane	ND	µg/L	10	SW 846 8260
1,2-Dichloropropane	ND	µg/L	10	SW 846 8260
cis-1,3-Dichloropropene	ND	µg/L	10	SW 846 8260
Trichloroethene	ND	µg/L	10	SW 846 8260
Chlorodibromomethane	ND	µg/L	10	SW 846 8260
1,1,2-Trichloroethane	ND	µg/L	10	SW 846 8260
Benzene	ND	µg/L	10	SW 846 8260
trans-1,3-Dichloropropene	ND	µg/L	10	SW 846 8260
Bromoform	ND	µg/L	10	SW 846 8260
4-Methyl-2-pentanone	ND	µg/L	10	SW 846 8260
2-Hexanone	ND	µg/L	10	SW 846 8260
Tetrachloroethene	ND	µg/L	10	SW 846 8260
Toluene	ND	µg/L	10	SW 846 8260
1,1,2,2-Tetrachloroethane	ND	µg/L	10	SW 846 8260

CLIENT: Dunlop Tire  
 SAMPLE ID: Trip Blank  
 COLLECTION METHOD: Grab  
 COLLECTION DATE(S): 06/11/98  
 SAMPLE TYPE: DI Water

AES CLIENT ID: DUNLOP  
 AES SAMPLE ID: 81LF-9

PROJECT ID: 81LF

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Chlorobenzene	ND	µg/L	10	SW 846 8260
Ethylbenzene	ND	µg/L	10	SW 846 8260
Styrene	ND	µg/L	10	SW 846 8260
m-Xylene	ND	µg/L	10	SW 846 8260
o/p-Xylene	ND	µg/L	10	SW 846 8260

CLIENT: Dunlop Tire SAMPLE ID: METHOD BLANK COLLECTION METHOD: COLLECTION DATE(S): SAMPLE TYPE:	AES CLIENT ID: DUNLOP     PROJECT ID: 81LF
---	---

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
1,1-Dichloroethane	ND	µg/L	10	SW 846 8260
1,1,1-Trichloroethane	ND	µg/L	10	SW 846 8260
1,2-Dichloroethylene (total)	ND	µg/L	10	SW 846 8260
Benzene	ND	µg/L	10	SW 846 8260
2-Butanone	ND	µg/L	10	SW 846 8260
Total Recoverable Phenolics	ND	mg/L	0.004	EPA 9066
Total Arsenic	ND	mg/L	0.002	EPA 206.2
Soluble Arsenic	ND	mg/L	0.005	EPA 206.2
Total Cadmium	ND	mg/L	0.016	EPA 200.7
Soluble Cadmium	ND	mg/L	0.016	EPA 200.7
Total Chromium	ND	mg/L	0.014	EPA 200.7
Soluble Chromium	ND	mg/L	0.014	EPA 200.7
Total Lead	ND	mg/L	0.002	EPA 239.2
Soluble Lead	ND	mg/L	0.002	EPA 239.2
Chloromethane	ND	µg/L	10	SW 846 8260
Bromomethane	ND	µg/L	10	SW 846 8260
Vinyl chloride	ND	µg/L	10	SW 846 8260
Chloroethane	ND	µg/L	10	SW 846 8260
Methylene chloride	ND	µg/L	10	SW 846 8260
Acetone	ND	µg/L	10	SW 846 8260
Carbon disulfide	ND	µg/L	10	SW 846 8260
1,1-Dichloroethene	ND	µg/L	10	SW 846 8260
1,1-Dichloroethane	ND	µg/L	10	SW 846 8260
1,2-Dichloroethylene (total)	ND	µg/L	10	SW 846 8260
Chloroform	ND	µg/L	10	SW 846 8260
1,2-Dichloroethane	ND	µg/L	10	SW 846 8260
2-Butanone	ND	µg/L	10	SW 846 8260
1,1,1-Trichloroethane	ND	µg/L	10	SW 846 8260
Carbon tetrachloride	ND	µg/L	10	SW 846 8260

CLIENT: Dunlop Tire SAMPLE ID: METHOD BLANK COLLECTION METHOD: COLLECTION DATE(S): SAMPLE TYPE:	AES CLIENT ID: DUNLOP    PROJECT ID: 81LF
---	---

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Bromodichloromethane	ND	µg/L	10	SW 846 8260
1,2-Dichloropropane	ND	µg/L	10	SW 846 8260
cis-1,3-Dichloropropene	ND	µg/L	10	SW 846 8260
Trichloroethene	ND	µg/L	10	SW 846 8260
Chlorodibromomethane	ND	µg/L	10	SW 846 8260
1,1,2-Trichloroethane	ND	µg/L	10	SW 846 8260
Benzene	ND	µg/L	10	SW 846 8260
trans-1,3-Dichloropropene	ND	µg/L	10	SW 846 8260
Bromoform	ND	µg/L	10	SW 846 8260
4-Methyl-2-pentanone	ND	µg/L	10	SW 846 8260
2-Hexanone	ND	µg/L	10	SW 846 8260
Tetrachloroethene	ND	µg/L	10	SW 846 8260
Toluene	ND	µg/L	10	SW 846 8260
1,1,2,2-Tetrachloroethane	ND	µg/L	10	SW 846 8260
Chlorobenzene	ND	µg/L	10	SW 846 8260
Ethylbenzene	ND	µg/L	10	SW 846 8260
Styrene	ND	µg/L	10	SW 846 8260
m-Xylene	ND	µg/L	10	SW 846 8260
o/p-Xylene	ND	µg/L	10	SW 846 8260

CLIENT: Dunlop Tire

AES CLIENT ID: DUNLOP  
PROJECT ID: 81LF

ACCURACY

Analytical Parameter(s)	Method	Sample ID	Type	Percent Recovery
Soluble Arsenic	EPA 206.2	---	Independent Standard	103
Soluble Cadmium	EPA 200.7	---	Independent Standard	104
Soluble Chromium	EPA 200.7	---	Independent Standard	107
Soluble Lead	EPA 239.2	---	Independent Standard	96

APPENDIX A  
SUMMARY DATA

**Table 1**  
**Summary of Groundwater Analytical Results - Detected Compounds**  
**(All results in ug/L)**

Parameter	ARAR + (ppb)	Action * Level	OMW-A6 (UPGRADIENT)										
			5/30/91 **	4/28/95	10/4/95	5/1/96	11/13/96	4/25/97	10/30/97	6/10/98			
1,1-Dichloroethene	5		5										
1,1-Dichloroethane	5		17										
1,2-Dichloroethene (Total)	5												
Chloroform	100		0.6 J										
1,1,1-Trichloroethane	5		80										
Benzene	0.7												
2-Butanone	N												
Acenaphthene	20G												
Fluorene	50												
Pnenanthrene	50												
Anthracene	50												
Dibenzofuran	50												
Total Phenols	1			8	12		U	U	4	7		U	
4,4'-DDE	ND												
Arsenic	25												
Cadmium	10												
Chromium	50			2.3B	1.4B								
Lead	25		25	3.9	4.4J								

+ NYSDEC Ambient Water Quality Standards and Guidance Values, September 1990.

\* Action levels are from the Long Term Monitoring Plan dated July 1994.

\*\* Results from former upgradient monitoring well OMW-A3

G Guidance value.

J Indicates the value is less than the sample quantification limit but greater than zero.

B Indicates the value is less than the quantification limit but greater than or equal to the instrument detection limit.

U Indicates the value is not detected.



**Table 1**  
**Summary of Groundwater Analytical Results - Detected Compounds**  
**(All results in ug/L)**

Parameter	ARAR + (ppb)	Action * Level	OMW-C1 (UPGRADIENT)								
			5/29/91	4/28/95	10/4/95	5/1/96	11/13/96	4/25/97	10/30/97	6/11/98	
1,1-Dichloroethene	5										
1,1-Dichloroethane	5										
1,2-Dichloroethene (Total)	5										
Chloroform	100										
1,1,1-Trichloroethane	5										
Benzene	0.7										
2-Butanone	N										
Acenaphthene	20G										
Fluorene	50										
Pnenanthrene	50										
Anthracene	50										
Dibenzofuran	50										
Total Phenols	1			15	U	U	U	U	U	U	U
4,4'-DDE	ND										
Arsenic	25										
Cadmium	10										
Chromium	50		6.6 B	2.1 B							
Lead	25		14								

+ NYSDEC Ambient Water Quality Standards and Guidance Values, September 1990.  
\* Action levels are from the Long Term Monitoring Plan dated July 1994.  
\*\* Results from former upgradient monitoring well OMW-A3  
G Guidance value.  
J Indicates the value is less than the sample quantification limit but greater than zero.  
B Indicates the value is less than the quantification limit but greater than or equal to the instrument detection limit.  
U Indicates the value is not detected.

**Table 1**  
**Summary of Groundwater Analytical Results - Detected Compounds**  
**(All results in ug/L)**

Parameter	ARAR + (ppb)	Action * Level	OMW-C7						
			5/1/96	11/13/96	4/25/97	10/30/97	6/11/98		
1,1-Dichloroethene	5								
1,1-Dichloroethane	5		U	U	U	U	U	U	
1,2-Dichloroethene (Total)	5		U	U	U	U	U	U	
Chloroform	100								
1,1,1-Trichloroethane	5		U	U	U	U	U	U	
Benzene	0.7		U	U	U	U	U	U	
2-Butanone	N		U	U	U	U	U	U	
Acenaphthene	20G								
Fluorene	50								
Phenanthrene	50								
Anthracene	50								
Dibenzofuran	50								
Total Phenols	1		U	U	U	U	U	U	
4,4'-DDE	ND								
Arsenic	25		U	U	U	U	U	U	
Cadmium	10		U	U	U	U	U	U	
Chromium	50		30	U	7 B	U	U	17 B	
Lead	25		U	U	2 B	U	U	U	

+ NYSDEC Ambient Water Quality Standards and Guidance Values, September 1990.

\* Action levels are from the Long Term Monitoring Plan dated July 1994.

\*\* Results from former upgradient monitoring well OMW-A3

G Guidance value.

J Indicates the value is less than the sample quantification limit but greater than zero.

B Indicates the value is less than the quantification limit but greater than or equal to the instrument detection limit.

U Indicates the value is not detected.

**Table 1**  
**Summary of Groundwater Analytical Results - Detected Compounds**  
**(All results in ug/L)**

Parameter	ARAR + (ppb)	Action * Level	OMW-C5						
			5/1/96	11/13/96	4/25/97	10/30/97	6/11/98		
1,1-Dichloroethene	5								
1,1-Dichloroethane	5		U	U	U	U	U	U	
1,2-Dichloroethene (Total)	5		U	U	U	U	U	U	
Chloroform	100								
1,1,1-Trichloroethane	5		U	U	U	U	U	U	
Benzene	0.7		U	U	U	U	U	U	
2-Butanone	N		U	U	U	U	U	U	
Acenaphthene	20G								
Fluorene	50								
Phenanthrene	50								
Anthracene	50								
Dibenzofuran	50								
Total Phenols	1		U	4	U	U	U	U	
4,4'-DDE	ND								
Arsenic	25		U	U	U	U	U	U	
Cadmium	10		U	U	U	U	U	U	
Chromium	50		20	U	24	17	39		
Lead	25		U	U	2 B	7	U		

+ NYSDEC Ambient Water Quality Standards and Guidance Values, September 1990.  
\* Action levels are from the Long Term Monitoring Plan dated July 1994.  
\*\* Results from former upgradient monitoring well OMW-A3  
G Guidance value.  
J Indicates the value is less than the sample quantification limit but greater than zero.  
B Indicates the value is less than the quantification limit but greater than or equal to the instrument detection limit.  
U Indicates the value is not detected.

**Table 1**  
**Summary of Groundwater Analytical Results - Detected Compounds**  
**(All results in ug/L)**

Parameter	ARAR + (ppb)	Action * Level	OMW-A4 (DOWNGRADIANT)										
			5/30/91 **	4/28/95	10/4/95	5/1/96	11/13/96	4/25/97	10/30/97	6/10/98			
1,1-Dichloroethene	5												
1,1-Dichloroethane	5						U	U	U	U	U	U	U
1,2-Dichloroethene (Total)	5						U	U	U	U	U	U	U
Chloroform	100												
1,1,1-Trichloroethane	5						U	U	U	U	U	U	U
Benzene	0.7						U	U	U	U	U	U	U
2-Butanone	N						U	U	U	U	U	U	U
Acenaphthene	20G												
Fluorene	50												
Phenanthrene	50												
Anthracene	50												
Dibenzofuran	50												
Total Phenols	1				19		U	U	U	U	U	U	U
4,4'-DDE	ND												
Arsenic	25						69		U	U	U	U	U
Cadmium	10						330		22	U	U	U	U
Chromium	50						365	4.1 B	20	U	U	U	20
Lead	25						46		U	U	U	U	U

+ NYSDEC Ambient Water Quality Standards and Guidance Values, September 1990.  
\* Action levels are from the Long Term Monitoring Plan dated July 1994.  
\*\* Results from former upgradient monitoring well OMW-A3  
G Guidance value.  
J Indicates the value is less than the sample quantification limit but greater than zero.  
B Indicates the value is less than the quantification limit but greater than or equal to the instrument detection limit.  
U Indicates the value is not detected.



**Table 1**  
**Summary of Groundwater Analytical Results - Detected Compounds**  
**(All results in ug/L)**

Parameter	ARAR + (ppb)	Action * Level	OMW-B4 (DOWNGRADIANT)										
			5/29/91 **	4/28/95	10/4/95	5/1/96	11/13/96	4/25/97	10/30/97	6/10/98			
1,1-Dichloroethene	5												
1,1-Dichloroethane	5	5				U		U		U		U	U
1,2-Dichloroethene (Total)	5	5				U		U		U		U	U
Chloroform	100												
1,1,1-Trichloroethane	5	5				U		U		U		U	U
Benzene	0.7	2	1			U		U		U		U	U
2-Butanone	N					U		U		U		U	U
Acenaphthene	20G												
Fluorene	50												
Phenanthrene	50												
Anthracene	50												
Dibenzofuran	50												
Total Phenols	1	1			8	U		U		2 B		U	U
4,4'-DDE	ND												
Arsenic	25	25				U		U		U		U	U
Cadmium	10	28	14			U		U		U		U	U
Chromium	50	178	89		1.1 B	20		U		U		U	U
Lead	25	52	26			U		U		U		U	U

+ NYSDEC Ambient Water Quality Standards and Guidance Values, September 1990.

\* Action levels are from the Long Term Monitoring Plan dated July 1994.

\*\* Results from former upgradient monitoring well OMW-A3

G Guidance value.

J Indicates the value is less than the sample quantification limit but greater than zero.

B Indicates the value is less than the quantification limit but greater than or equal to the instrument detection limit.

U Indicates the value is not detected.

**Table 1**  
**Summary of Groundwater Analytical Results - Detected Compounds**  
**(All results in ug/L)**

Parameter	ARAR + (ppb)	Action * Level	OMW-B3 (DOWNGRADIENT)										
			5/29/91	5/16/95	10/4/95	5/1/96	11/13/96	4/25/97	10/30/97	6/10/98			
1,1-Dichloroethene	5					U							
1,1-Dichloroethane	5						U	U	U	U	U	U	U
1,2-Dichloroethene (Total)	5						U	U	U	U	U	U	U
Chloroform	100						U						
1,1,1-Trichloroethane	5						U	U	U	U	U	U	U
Benzene	0.7						U	U	U	U	U	U	U
2-Butanone	N						U	U	U	U	U	U	U
Acenaphthene	20G		2 J	3 J	2 J								
Fluorene	50			2 J	1 J								
Pnenanthrene	50			3 J	0.3 J								
Anthracene	50			0.7 J	0.2 J								
Dibenzofuran	50			1 J	0.6 J								
Total Phenols	1			5	17		U	4	2 B	U	U	U	U
4,4'-DDE	ND		0.12 J										
Arsenic	25		7 B	2.2 B	8.1 B		6	10	14	14	4 B	U	U
Cadmium	10						U	U	U	U	U	U	U
Chromium	50			1.6 B	5 B		U	U	U	U	U	U	U
Lead	25		16	3.1	15.3 J		U	U	1 B	U	U	U	U

+ NYSDEC Ambient Water Quality Standards and Guidance Values, September 1990.

\* Action levels are from the Long Term Monitoring Plan dated July 1994.

\*\* Results from former upgradient monitoring well OMW-A3

G Guidance value.

J Indicates the value is less than the sample quantification limit but greater than zero.

B Indicates the value is less than the quantification limit but greater than or equal to the instrument detection limit.

U Indicates the value is not detected.

**Table 1**  
**Summary of Groundwater Analytical Results - Detected Compounds**  
**(All results in ug/L)**

Parameter	ARAR + (ppb)	Action * Level	BLIND DUPLICATE						
			5/1/96	11/13/96	4/25/97	10/30/97	6/11/98		
1,1-Dichloroethene	5								
1,1-Dichloroethane	5		U	U	U	U	U	U	
1,2-Dichloroethene (Total)	5		U	U	U	U	U	U	
Chloroform	100								
1,1,1-Trichloroethane	5		U	U	U	U	U	U	
Benzene	0.7		U	U	U	U	U	U	
2-Butanone	N		U	U	U	U	U	U	
Acenaphthene	20G								
Fluorene	50								
Prnenanthrene	50								
Anthracene	50								
Dibenzofuran	50								
Total Phenols	1		U	U	2 B	U	U	U	
4,4'-DDE	ND								
Arsenic	25		U	90	U	U	U	U	
Cadmium	10		U	6	U	U	U	U	
Chromium	50		40	U	6 B	15	U	U	
Lead	25		U	8	U	5	U	U	

+ NYSDEC Ambient Water Quality Standards and Guidance Values, September 1990.

\* Action levels are from the Long Term Monitoring Plan dated July 1994.

\*\* Results from former upgradient monitoring well OMW-A3

G Guidance value.

J Indicates the value is less than the sample quantification limit but greater than zero.

B Indicates the value is less than the quantification limit but greater than or equal to the instrument detection limit.

U Indicates the value is not detected.



**Table 1**  
**Summary of Groundwater Analytical Results - Detected Compounds**  
**(All results in ug/L)**

Parameter	ARAR + (ppb)	Action * Level	TRIP BLANK						
			5/1/96	11/13/96	4/25/97	10/30/97	6/11/98		
1,1-Dichloroethene	5								
1,1-Dichloroethane	5		U	U	U	U	U	U	
1,2-Dichloroethene (Total)	5		U	U	U	U	U	U	
Chloroform	100								
1,1,1-Trichloroethane	5		U	U	U	U	U	U	
Benzene	0.7		U	U	U	U	U	U	
2-Butanone	N		U	U	U	U	U	U	
Acenaphthene	20G								
Fluorene	50								
Pnenanthrene	50								
Anthracene	50								
Dibenzofuran	50								
Total Phenols	1								
4,4'-DDE	ND								
Arsenic	25								
Cadmium	10								
Chromium	50								
Lead	25								

+ NYSDEC Ambient Water Quality Standards and Guidance Values, September 1990.

\* Action levels are from the Long Term Monitoring Plan dated July 1994.

\*\* Results from former upgradient monitoring well OMW-A3

G Guidance value.

J Indicates the value is less than the sample quantification limit but greater than zero.

B Indicates the value is less than the quantification limit but greater than or equal to the instrument detection limit.

U Indicates the value is not detected.

**Table 1**  
**Summary of Groundwater Analytical Results - Detected Compounds**  
**(All results in ug/L)**

Parameter	ARAR + (ppb)	Action * Level	METHOD BLANK						
			5/1/96	11/13/96	4/25/97	10/30/97	6/11/98		
1,1-Dichloroethene	5								
1,1-Dichloroethane	5		U	U	U	U	U	U	
1,2-Dichloroethene (Total)	5		U	U	U	U	U	U	
Chloroform	100		U						
1,1,1-Trichloroethane	5		U	U	U	U	U	U	
Benzene	0.7		U	U	U	U	U	U	
2-Butanone	N		U	U	U	U	U	U	
Acenaphthene	20G								
Fluorene	50								
Phenanthrene	50								
Anthracene	50								
Dibenzofuran	50								
Total Phenols	1		U	U	U	U	U	U	
4,4'-DDE	ND								
Arsenic	25		U	U	U	U	U	U	
Cadmium	10		U	U	U	U	U	U	
Chromium	50		U	U	U	U	U	U	
Lead	25		U	U	U	U	U	U	

+ NYSDEC Ambient Water Quality Standards and Guidance Values, September 1990.  
\* Action levels are from the Long Term Monitoring Plan dated July 1994.  
\*\* Results from former upgradient monitoring well OMW-A3  
G Guidance value.  
J Indicates the value is less than the sample quantification limit but greater than zero.  
B Indicates the value is less than the quantification limit but greater than or equal to the instrument detection limit.  
U Indicates the value is not detected.











# CHAIN OF CUSTODY RECORD



ENVIRONMENTAL SERVICES, INC.  
 2186 Liberty Drive  
 Niagara Falls, NY 14304  
 (716) 283-3120  
 (800) 791-3120  
 Fax (716) 283-4727

CUSTOMER NAME: Dunlop

PROJECT NAME: Wells

SAMPLER'S SIGNATURE: [Signature]

PROJECT I.D.#: 81LF

JOB CODE: GMU

DATE	TIME	SAMPLE IDENTIFICATION	GRAB COMP	SAMPLE TYPE	CONTAINER CLASSIFICATION					TOTAL	PARAMETERS / REMARKS
					UNRESERVED	HNO <sub>3</sub>	HCL	VIAL (PRES.)	VIAL (UNPRES.)		
6/11/98	2:00P	C-5	X	H <sub>2</sub> O	X					1	Metal
	↓ ↓ ↓	↓ ↓ ↓	↓	↓ ↓ ↓	X					1	Phen
							X			2	TCLVB
6/11/98	2:26P	C-7	X	H <sub>2</sub> O	X					1	Metal
					X					1	Phen
							X			2	TCLVB
6/11/98	3:50P	C-1	X	H <sub>2</sub> O	X					1	Phen
6/11/98	—	Blind Dup	X	H <sub>2</sub> O	X					1	Metal
					X					1	Phen.
							X			2	TCLVB
TOTAL NUMBER OF CONTAINERS										13	

NOTE: Please indicate required analysis, and whom we may contact with questions, if you have not yet done so through your customer service representative.

1. RELINQUISHED BY: <u>[Signature]</u>	DATE: <u>6/11/98</u>	TIME: <u>5:00PM</u>	RECEIVED BY: <u>[Signature]</u>
2. RELINQUISHED BY: _____	DATE: _____	TIME: _____	RECEIVED BY: _____
3. RELINQUISHED BY: _____	DATE: _____	TIME: _____	RECEIVED BY: _____