

TE TRIAD
ENGINEERING
INCORPORATED

December 1, 1993

COPY

FID# 230004500
ERR IERP
KENDSHA CO.

Mr. Ron Dilahunt
Wisconsin Department of Natural Resources
Southeast District Office
2300 North Dr. Martin Luther King, Jr. Drive
P.O. Box 12436
Milwaukee, WI 53212

**RE: Analytical Results for Groundwater
at Sump 6 Air Diffuser
Triad Engineering Project No. W943046**

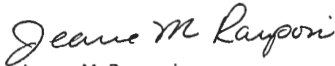
Dear Mr. Dilahunt,

Please find enclosed, the analytical results for groundwater samples collected at the Sump 6 Air Diffuser. The enclosed table summarizes the analytical results for the two latest sampling rounds, and includes mass loading calculations of constituents into the air.

I trust this information meets your needs. If you have any questions or comments, please do not hesitate to call me at (414) 291-8840.

Sincerely,

TRIAD ENGINEERING INC.



Jeanne M. Ramponi
Project Hydrogeologist

Enclosure
W943046/943046-0

cc: Rick Binder
cc/enc: Greg Rose
Jack Bugno
Pam Mylotta
File

325 east chicago street
milwaukee, wisconsin 53202
414/291-8840
fax: 414/291-8841

**ESTIMATED AIR EMISSIONS FROM SUMP 6
AIR DIFFUSER
(FLOW RATE 4 GPM)**

| | Influent (mg/l) | Effluent (mg/l) | Mass Loading of Constituents Into the Air (lbs/yr) |
|------------|--------------------|--------------------|---|
| 10-04-93 | | | |
| Benzene | < 2.5 | < 2.5 | -- |
| Total VOCs | 4.6 | .81 | 66.5 |
| 10-26-93 | | | |
| Benzene | .001 | .0009 | 0.002 |
| Total VOCs | 5.4 | .70 | 82.5 |

Sample Equation:

$$\begin{aligned}
 &.001 \text{ mg/L} \times 3.785 \text{ L/gal} \times \text{lb}/453,515 \text{ mg} \times 4.0 \text{ gal/min} \times 525,600 \text{ min/yr} \\
 &= 1.8 \times 10^{-2} \text{ lb/yr}
 \end{aligned}$$

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WDNR Certification #268181760

ANALYTICAL REPORT

REPORT NUMBER: B4369

Triad Engineering, Inc.
 325 East Chicago Street
 Milwaukee, WI 53202

Attn: Mr. Rick Binder
 Project #W943046

DATE: October 14, 1993
 PURCHASE ORDER:
 SEI NO: WL7641
 DATE COLLECTED: 10/04&06/93
 DATE RECEIVED: 10/06/93
 DATE ANALYZED: 10/12/93

Matrix: Groundwater
 Source: Chrysler

Units: ug/l (ppb)

| DNR # | Analyte | SEI ID | 7641-1* | 7641-2* |
|-----------------|-----------------------------|-----------|--------------------|--------------------|
| | | Sample ID | Sump 6 Influent | Sump 6 Effluent |
| EPA Method 8021 | | | | |
| 78124 | Benzene | | <2.5 | <2.5 |
| 81555 | Bromobenzene | | <2.5 | <2.5 |
| 77297 | Bromochloromethane | | <2.5 | <2.5 |
| 32101 | Bromodichloromethane | | <2.5 | <2.5 |
| 32104 | Bromoform | | <2.5 | <2.5 |
| 34413 | Bromomethane | | 20 | <2.5 |
| 77342 | n-Butylbenzene | | <2.5 | <2.5 |
| 77350 | sec-Butylbenzene | | <4.0 | <4.0 |
| 77353 | tert-Butylbenzene | | <2.5 | <2.5 |
| 32102 | Carbon tetrachloride | | <2.5 | <2.5 |
| 34301 | Chlorobenzene | | <2.5 | <2.5 |
| 34306 | Chlorodibromomethane | | <2.5 | <2.5 |
| 34311 | Chloroethane | | <2.5 | <2.5 |
| 32106 | Chloroform | | <2.5 | <2.5 |
| 34418 | Chloromethane | | <2.5 | <2.5 |
| 77275 | 2-Chlorotoluene | | <2.5 | <2.5 |
| 77277 | 4-Chlorotoluene | | <2.5 | <2.5 |
| 38437 | 1,2-Dibromo-3-chloropropane | | <2.5 | <2.5 |
| 77651 | 1,2-Dibromoethane | | <2.5 | <2.5 |
| 77596 | Dibromomethane | | <2.5 | <2.5 |

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Matrix: Groundwater
 Source: Chrysler

Units: ug/l (ppb)

| DNR # | Analyte | SEI ID | 7641-1* | 7641-2* |
|-----------------|--------------------------|-----------|--------------------|--------------------|
| | | Sample ID | Sump 6 Influent | Sump 6 Effluent |
| EPA Method 8021 | | | | |
| 34536 | 1,2-Dichlorobenzene | | <2.5 | <2.5 |
| 34566 | 1,3-Dichlorobenzene | | <2.5 | <2.5 |
| 34571 | 1,4-Dichlorobenzene | | <3.0 | <3.0 |
| 34668 | Dichlorodifluoromethane | | <2.5 | <2.5 |
| 34496 | 1,1-Dichloroethane | | 20 | <3.0 |
| 32103 | 1,2-Dichloroethane | | <2.5 | <2.5 |
| 34501 | 1,1-Dichloroethene | | 9.0 | <2.5 |
| 77093 | cis-1,2-Dichloroethene | | 1,700 | 400 |
| 34546 | trans-1,2-Dichloroethene | | 150 | 24 |
| 34541 | 1,2-Dichloropropane | | <2.5 | <2.5 |
| 77173 | 1,3-Dichloropropane | | <2.5 | <2.5 |
| 77170 | 2,2-Dichloropropane | | <3.5 | <3.5 |
| 77168 | 1,1-Dichloropropene | | 9.0 | 7.0 |
| 78113 | Ethylbenzene | | <2.5 | <2.5 |
| 34391 | Hexachlorobutadiene | | <3.5 | <3.5 |
| 77223 | Isopropylbenzene | | <2.5 | <2.5 |
| 77356 | p-Isopropyltoluene | | <2.5 | <2.5 |
| 34423 | Methylene chloride | | 10 | 8 |
| 34696 | Naphthalene | | <3.5 | <3.5 |

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Attn: Mr. Rick Binder
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DATE: October 14, 1993
 PURCHASE ORDER:
 SEI NO: WL7641
 DATE COLLECTED: 10/04&06/93
 DATE RECEIVED: 10/08/93
 DATE ANALYZED: 10/12/93

Matrix: Groundwater
 Source: Chrysler

Units: ug/l (ppb)

| DNR # | Analyte | SEI ID | 7641-1* | 7641-2* |
|-----------------|---------------------------|-----------|--------------------|--------------------|
| | | Sample ID | Sump 6 Influent | Sump 6 Effluent |
| EPA Method 8021 | | | | |
| 77224 | n-Propylbenzene | | <3.0 | <3.0 |
| 77128 | Styrene | | <3.0 | <3.0 |
| 77562 | 1,1,1,2-Tetrachloroethane | | <2.5 | <2.5 |
| 34516 | 1,1,2,2-Tetrachloroethane | | <2.5 | <2.5 |
| 34475 | Tetrachloroethene | | <2.5 | <2.5 |
| 78131 | Toluene | | <2.5 | <2.5 |
| 77613 | 1,2,3-Trichlorobenzene | | <2.5 | <2.5 |
| 34551 | 1,2,4-Trichlorobenzene | | <2.5 | <2.5 |
| 34506 | 1,1,1-Trichloroethane | | 7.0 | <2.5 |
| 34511 | 1,1,2-Trichloroethane | | <2.5 | <2.5 |
| 39180 | Trichloroethene | | 2,600 | 360 |
| 34488 | Trichlorofluoromethane | | <2.5 | <2.5 |
| 77443 | 1,2,3-Trichloropropane | | <2.5 | <2.5 |
| 77222 | 1,2,4-Trimethylbenzene | | <4.5 | <4.5 |
| 77226 | 1,3,5-Trimethylbenzene | | <2.5 | <2.5 |
| 39175 | Vinyl chloride | | 100 | 12 |
| 77135 | o-Xylenes | | <2.5 | <2.5 |
| 85795 | m & p Xylenes | | <2.5 | <2.5 |

* Elevated detection level due to high analyte concentration; a 5x dilution necessary.

CHAIN OF CUSTODY RECORD

| PROJ. NO. W1113046 | | PROJECT NAME TRIAL ENGINEERING | | | | TEST PARAMETERS | | | | | | | | | | SAMPLE TYPE | | | | | | | | | |
|------------------------------------|----------|-----------------------------------|------|------------------|------|-------------------|------------|--|--|--|---|------------------|--|--|--|-------------|---|--|--|--|--|--|--|--|-----------------------------|
| SAMPLERS: <i>R. Hume</i> | | | | | | NO. OF CONTAINERS | VIG (1021) | | | | | | | | | | (Specify groundwater, soil, wastewater, sludge, etc.) | | | | | | | | |
| SEI # | STA. NO. | DATE | TIME | COMP. | GRAB | STATION LOCATION | | | | | | | | | | | | | | | | | | | |
| | | 11/6/93 | 1200 | | 1 | Sample / Influent | | | | | 3 | 1 | | | | | | | | | | | | | Soil Groundwater |
| | | 11/6/93 | 1200 | | 1 | Sample / Effluent | | | | | 3 | 1 | | | | | | | | | | | | | Groundwater |
| | | 11/6/93 | 1220 | | 1 | CCP-W-CL | | | | | 2 | 1 | | | | | | | | | | | | | Soil |
| SAMPLE CONDITION: | | | | | | | | | | | | SAMPLE LOCATION: | | | | | | | | | | | | | |
| RELINQUISHED BY: <i>R. Hume</i> | | DATE / TIME 11/6/93 1200P | | RELINQUISHED BY: | | DATE / TIME | | SPECIAL REQUESTS: RUSH TIME GROUND ON CCP-W-CL | | | | | | | | | | | | | | | | | |
| RECEIVED BY: <i>R. F. Hume</i> | | DATE / TIME " " " | | RECEIVED BY: | | DATE / TIME | | REPORT TO: NAME: <i>R. Bindert Wind Engineering</i> ADDRESS: <i>325 E. Chicago St. Milwaukee</i> PHONE: <i>(414) 271-8840</i> | | | | | | | | | | | | | | | | | |



LABORATORY
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SWANSON ENVIRONMENTAL INC.

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 Brookfield, Wisconsin 53045
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WDNR Certification #268161760

ANALYTICAL REPORT

REPORT NUMBER: B4791

Triad Engineering, Inc.
 325 East Chicago Street
 Milwaukee, WI 53202

Attn: Mr. Randy Kraemer
 Project #943046

DATE: November 22, 1993
 PURCHASE ORDER:
 SEI NO: WL7985
 DATE COLLECTED: 10/26/93
 DATE RECEIVED: 10/26/93
 DATE ANALYZED: 11/02/93

Matrix: Groundwater

Units: ug/l (ppb)

| DNR # | Analyte | SEI ID | 7985-3 | 7985-4 |
|-----------------|-----------------------------|-----------|---------------------|---------------------|
| | | Sample ID | Influent Sump #6 | Effluent Sump #6 |
| EPA Method 8021 | | | | |
| 78124 | Benzene | | 1.0 | 0.9 |
| 81555 | Bromobenzene | | <0.5 | <0.5 |
| 77297 | Bromochloromethane | | <0.5 | <0.5 |
| 32101 | Bromodichloromethane | | <0.5 | <0.5 |
| 32104 | Bromoform | | <0.5 | <0.5 |
| 34413 | Bromomethane | | <0.5 | <0.5 |
| 77342 | n-Butylbenzene | | <0.5 | <0.5 |
| 77350 | sec-Butylbenzene | | <0.8 | <0.8 |
| 77353 | tert-Butylbenzene | | <0.5 | <0.5 |
| 32102 | Carbon tetrachloride | | <0.5 | <0.5 |
| 34301 | Chlorobenzene | | <0.5 | <0.5 |
| 34306 | Chlorodibromomethane | | <0.5 | <0.5 |
| 34311 | Chloroethane | | <0.5 | <0.5 |
| 32106 | Chloroform | | <0.5 | <0.5 |
| 34418 | Chloromethane | | <0.5 | <0.5 |
| 77275 | 2-Chlorotoluene | | <0.5 | <0.5 |
| 77277 | 4-Chlorotoluene | | <0.5 | <0.5 |
| 32437 | 1,2-Dibromo-3-chloropropane | | <0.5 | <0.5 |
| 77651 | 1,2-Dibromoethane | | <0.5 | <0.5 |
| 77596 | Dibromomethane | | <0.5 | <0.5 |

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Attn: Mr. Randy Kraemer
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DATE: November 22, 1993
 PURCHASE ORDER:
 SEI NO: WL7985
 DATE COLLECTED: 10/26/93
 DATE RECEIVED: 10/26/93
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Matrix: Groundwater

Units: ug/l (ppb)

| DNR # | Analyte | SEI ID Sample ID | 7985-3 | 7985-4 |
|-----------------|--------------------------|---------------------|---------------------|---------------------|
| | | | Influent Sump #6 | Effluent Sump #6 |
| EPA Method 8021 | | | | |
| 34536 | 1,2-Dichlorobenzene | | <0.5 | <0.5 |
| 34566 | 1,3-Dichlorobenzene | | <0.5 | <0.5 |
| 34571 | 1,4-Dichlorobenzene | | <0.6 | <0.6 |
| 34663 | Dichlorodifluoromethane | | <0.5 | <0.5 |
| 34496 | 1,1-Dichloroethane | | 23 | 1.4 |
| 32103 | 1,2-Dichloroethane | | <0.5 | <0.5 |
| 34501 | 1,1-Dichloroethene | | 6.5 | <0.5 |
| 77093 | cis-1,2-Dichloroethene | | 2,500 | 340 |
| 34546 | trans-1,2-Dichloroethene | | 170 | 9.4 |
| 34541 | 1,2-Dichloropropane | | <0.5 | <0.5 |
| 77173 | 1,3-Dichloropropane | | <0.5 | <0.5 |
| 77170 | 2,2-Dichloropropane | | <0.7 | <0.7 |
| 77103 | 1,1-Dichloropropane | | 4.7 | 1.0 |
| 78113 | Ethylbenzene | | <0.5 | <0.5 |
| 34391 | Hexachlorobutadiene | | <0.7 | <0.7 |
| 77223 | Isopropylbenzene | | <0.5 | <0.5 |
| 77356 | p-Isopropyltoluene | | <0.5 | <0.5 |
| 34423 | Methylene chloride | | 12* | <2.0 |
| 34696 | Naphthalene | | <0.7 | <0.7 |

* Methylene chloride is a commonly used solvent in the laboratory. This result may be biased high.

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DATE: November 22, 1993
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Matrix: Groundwater

Units: ug/l (ppb)

| DNR # | Analyte | SEI ID | 7985-3 | 7985-4 |
|-----------------|---------------------------|-----------|---------------------|---------------------|
| | | Sample ID | Influent Sump #6 | Effluent Sump #6 |
| EPA Method 8021 | | | | |
| 77224 | n-Propylbenzene | | <0.6 | <0.6 |
| 77128 | Styrene | | <0.6 | <0.6 |
| 77562 | 1,1,1,2-Tetrachloroethane | | <0.5 | <0.5 |
| 34516 | 1,1,2,2-Tetrachloroethane | | <0.5 | <0.5 |
| 34475 | Tetrachloroethene | | <0.5 | <0.5 |
| 76131 | Toluene | | 0.9 | <0.5 |
| 77613 | 1,2,3-Trichlorobenzene | | <0.5 | <0.5 |
| 34551 | 1,2,4-Trichlorobenzene | | <0.5 | <0.5 |
| 34506 | 1,1,1-Trichloroethane | | 2.4 | <0.5 |
| 34511 | 1,1,2-Trichloroethane | | <0.5 | <0.5 |
| 39180 | Trichloroethene | | 2,500 | 340 |
| 34488 | Trichlorofluoromethane | | <0.5 | <0.5 |
| 77443 | 1,2,3-Trichloropropane | | <0.5 | <0.5 |
| 77222 | 1,2,4-Trimethylbenzene | | <0.9 | <0.9 |
| 77226 | 1,3,5-Trimethylbenzene | | <0.5 | <0.5 |
| 39175 | Vinyl chloride | | 170 | 4.2 |
| 77135 | c-Xylenes | | <0.5 | <0.5 |
| 85795 | m & p Xylenes | | <0.5 | <0.5 |

Gary E. Barry
 Gary E. Barry

Projects Coordinator

CHAIN OF CUSTODY RECORD

| PROJ. NO. W943046 | | PROJECT NAME TRAD ENGINEERING 325 E. CHICAGO ST. MILWAUKEE, WI 53202 | | | | NO. OF CONTAINERS | TEST PARAMETERS | | | | | SAMPLE TYPE (Specify groundwater, soil, wastewater, sludge, etc.) |
|----------------------|----------|---|------|-------|------|-----------------------|---|---|---|--|--|--|
| SAMPLERS: R. Kraemer | | | | | | | BTEX (8020) G80 (USE DIVE METHOD) VOC (ROL) | | | | | |
| SEI # | STA. NO. | DATE | TIME | COMP. | GRAB | STATION LOCATION | | | | | | |
| 1 | | 10/24/93 | 1310 | ✓ | ✓ | Sump 2 | 3 | / | / | | | Groundwater |
| 2 | | 10/24/93 | 1350 | ✓ | ✓ | Sump 3 | 3 | / | / | | | Groundwater |
| | | 10/24/93 | | ✓ | ✓ | Sump 4 | 2 | | | | | Groundwater |
| 3 | | 10/24/93 | 1240 | ✓ | ✓ | Sample Influent to AS | 3 | | / | | | Groundwater |
| 4 | | 10/24/93 | 1250 | ✓ | ✓ | Sump 6 Effluent to AS | 3 | | / | | | Groundwater |

| | |
|---------------------------------------|------------------|
| SAMPLE CONDITION: <i>R. on Ice</i> | SAMPLE LOCATION: |
|---------------------------------------|------------------|

| | | | | |
|--|---------------------------------|------------------|-------------|-------------------|
| RELINQUISHED BY: <i>[Signature]</i> | DATE / TIME 10/24/93 3:15 PM | RELINQUISHED BY: | DATE / TIME | SPECIAL REQUESTS: |
| RECEIVED BY: <i>[Signature]</i> | DATE / TIME 10/24/93 3:15 PM | RECEIVED BY: | DATE / TIME | REPORT TO: |

LABORATORY
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Brookfield, WI 53045
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| |
|----------|
| NAME: ✓ |
| ADDRESS: |
| PHONE: |



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