

1-0436

add to 1-0436-91595

**FOLEY, HOAG & ELIOT**

1615 L STREET, N.W.  
WASHINGTON, D.C. 20036  
TELEPHONE (202) 775-0600  
TELECOPIER (202) 857-0140

**SCANNED**

IN BOSTON  
ONE POST OFFICE SQUARE  
BOSTON, MASSACHUSETTS 02109  
TELEPHONE: (617) 482-1390  
CABLE ADDRESS "FOLEYHOAG"  
TELECOPIER (617) 482-7347  
TELEX 940693

**RECEIVED**

September 6, 1991

DEP  
Western Region

Ms. Lisa Jones  
Bureau of Waste Site Cleanup  
Department of Environmental Protection  
Western Region  
436 Dwight Street  
Springfield, MA 01103

Re: Former Uniroyal Complex

Dear Ms. Jones:

In response to your inquiry, I have obtained the additional information you requested from Transformer Services Inc., ("TSI"). The following are TSI's PCB test results for the numbers you identified:

| <u>Test Date</u> | <u>TSI #</u> | <u>PPM</u> |
|------------------|--------------|------------|
| 5/88             | 61           | 6          |
| 7/88             | 62           | 4          |
| 7/88             | 63           | 4          |
| 4/88             | 64           | 62         |
| 5/88             | 65           | 3          |
| 5/88             | 66           | 110        |
| 5/88             | 67           | 3          |
| 5/88             | 68           | 37         |
| 5/88             | 69           | 11         |
| 4/88             | 70           | ND         |
| 4/88             | 71           | ND         |
| 4/88             | 72           | ND         |
| 4/88             | 73           | 2          |
| 4/88             | 74           | ND         |
| 9/88             | 75           | ND         |
| 11/88            | 78           | ND         |

No test #5

?

Ms. Lisa Jones  
September 6, 1991  
Page 2

With respect to the other TSI numbers you inquired about, numbers 11, 12, 25, 26, 44, 46 and 47 were all removed. Number 42 was a Uniroyal transformer which according to TSI's records is not in the site. Number 43 was a Uniroyal switch removed in 1973. Number 45 was an Askeral Uniroyal switch tested in 4/79. The last TSI number is 78.

Very truly yours,



Ellyn R. Weiss

ERW/ad

cc: Mr. Walter Mrozinski  
Mr. Gilbert Barrett  
Ms. Sarah Walen  
Laurie Burt, Esq.

Where is TSI No. 42 if  
not at the site?

Where are maintenance  
records for the  
removed transform  
and switches

1-0436  
91595

**FOLEY, HOAG & ELIOT**

1615 L STREET, N.W.  
WASHINGTON, D.C. 20036  
TELEPHONE (202) 775-0600  
TELECOPIER (202) 857-0140

IN BOSTON  
ONE POST OFFICE SQUARE  
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TELEPHONE: (617) 482-1390  
CABLE ADDRESS "FOLEYHOAG"  
TELECOPIER (617) 482-7347  
TELEX 940693

July 30, 1991

RECEIVED

JUL 31 1991

DEP  
Western Region

FEDERAL EXPRESS

Mr. Stephen F. Joyce, Regional Engineer  
Bureau of Waste Site Cleanup  
Department of Environmental Protection  
Western Region  
436 Dwight Street  
Springfield, MA 01103

Attn: Lisa Jones

Re: Chicopee #1-0436  
Former Uniroyal Complex

Dear Mr. Joyce:

In conjunction with the Department's June 25, 1991 Review of Report on the Short Term Measures required at this site, a request was made for information and records pertaining to the service and maintenance of transformers. I am enclosing herewith documentation received from Transformer Services, Inc. responsive to your request.

Very truly yours,

  
Eilyn R. Weiss

ERW/ad  
Enclosures

cc: Mr. Gilbert A. Barrett  
Mr. Walter Mrozinski  
Laurie Burt, Esquire  
Ms. Sarah Walen



Five West Main Street  
 Chicopee, Mass. 01020  
 (413) 594-6661  
 FAX (413) 594-2982

1-0436  
 This number must appear on all invoices, packing slips, packages and correspondence.  
 91595  
 30410

VENDOR 097

ENTRY DATE 7/15/91  
 SHIP TO

PAGE

TRANSFORMER SERVICE, INC  
 P.O. BOX 1077

CHICOPEE INDUSTRIAL PARK  
 154 GROVE STREET  
 CHICOPEE

CONCORD

01301

RECEIVED

TAX EXEMPT #  
 04-2564730

JUL 31 1991

TERMS: 30 NET 30

BUYER:

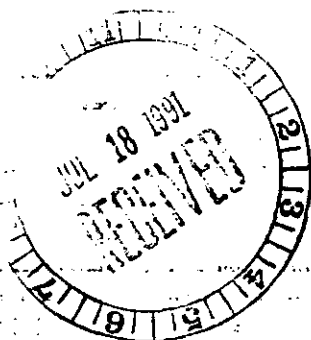
DEP BY SITE

| LINE | QTY ORDER W/H | U/M ITEM NUMBER VENDORS # | DESCRIPTION COMMENTS | EXPECTED COSTS | AMOUNT | DUE DATE TAX |
|------|---------------|---------------------------|----------------------|----------------|--------|--------------|
|------|---------------|---------------------------|----------------------|----------------|--------|--------------|

|   |         |               |                               |          |         |                  |
|---|---------|---------------|-------------------------------|----------|---------|------------------|
| 1 | 1.00 EA | REPAIRS<br>UR | REPAIRS BY OUTSIDE CONTRACTOR | 425.0000 | 7425.00 | 7/17/91<br>.0000 |
|---|---------|---------------|-------------------------------|----------|---------|------------------|

PURCHASE ORDER TOTAL 7425.00

REPAIRS AS SPECIFIED TO UR'S #21, TSI #35 AND  
UR'S #17, TSI #37  
 PURPOSE: ENVIRONMENT REQUIREMENT  
 ORDERED BY: EDWARD & M. PROZINSKI  
 CONFIRMED WITH: PETER  
 PROFIT CENTER: 600  
 NOTE: QUOTED 2 MEN FOR 2 1/2 DAYS STARTING NOON  
 7/17 & COMPLETING BY 7/19/91  
 PROFIT CENTER: 600



**SPECIAL INSTRUCTIONS**

1. Except as provided by specific agreement or in accordance with accepted industry standard. Do not overship or undership.
2. This order is subject to the terms and conditions as stated on the face and reverse side hereof.
3. Detailed packing list must accompany all shipments.
4. Show itemized prices, unit and extension, on all invoices.

**ORIGINAL PUF**

**DELIVERY ACCEPTED AFTER 11 AM**  
  
 AUTHORIZED SIGNATURE

3 pages



**TRANSFORMER SERVICE, INC.**

74 REGIONAL DR. • P.O. BOX 1077 • CONCORD, N.H. 03302-1077  
(603) 224-4006  
FAX (603) 228-2430

July 16, 1991

Ms. Joann Mrozinski  
Facemate Corporation  
5 West Main Street  
Chicopee, MA 01020

RE: Repairs and PCB Cleanups  
TSI Quotation Number 20189

Dear Ms. Mrozinski,

In reference to your request, Transformer Service, Inc. is pleased to submit this quotation to repair various leaks on two 1500kVA transformers and their associated primary switches (TSI Test Nos. 35 (& 36) and 37 (& 38)). Our proposed scope of work for this operation is as follows:

*Unroyal #21*

— TSI Test Nos. 35 & 36: Lower liquid level in main tank by approximately fifty gallons; replace existing top valve and sample tap with new 1" valve and end plug; drain fluid from primary switch and termination cabinet (approximately seventy gallons total); replace top sample tap on switch, teflon tape bottom plug in termination cabinet, clean leak area at bottom corner of side plate and apply epoxy patch; clean stain on riser to switch and inspect for signs of active leaking; tighten packing nuts and end plugs on all valves, no load tap changer handle and switch handle; refill all compartments with original fluid; clean all visible liquid residue from tank walls and cement pad around unit; take wipe samples for PCB analysis after cleanup from four locations around the pad (one at center of spill area, two at opposite edges of area cleaned and one at a point one foot outside of the original spill area).

*Unroyal #17*

— TSI Test Nos. 37 & 38: Lower liquid level in main tank by approximately fifty gallons; replace existing top valve and sample tap with new 1" valve and end plug; drain fluid from primary switch (approximately sixty gallons total); replace top sample tap on switch; remove outer frame from flange between switch and main tank, tighten inner flange bolts and apply epoxy around flange; when epoxy has set, replace flange frame; tighten packing nuts and end plugs on all valves, no load tap changer handle and switch handle; refill all compartments with original fluid; clean all visible liquid residue from tank walls and cement pad, and attempt to remove solidified residue from pad as well as possible; take wipe samples for PCB analysis after cleanup from four locations around the pad (same sampling pattern as above).

Facemate Corporation  
Chicopee, MA  
July 16, 1991  
Page Two

The cost for this service is \$7,425.00, plus PCB wipe samples at \$60.00 each. We have specified that a minimum of eight wipe samples to be taken, as our cleanup procedure is an initial operation only and these samples will help us determine the need for, and extent of additional cleaning. We can also provide an EPA-style grid sampling of the spill areas, if you wish (this will involve approximately twenty to thirty wipe samples per location, and will provide a more accurate determination of the PCB concentrations throughout these areas).

This price is firm in its rates for 30 days. Please refer to the enclosed Field Repair and Fluid Treatment Terms and Conditions and Bulletin No. 401 "PCB Disposal Terms and Conditions".

Should you have any questions concerning this quotation, please do not hesitate to contact Mr. Greg Willey, Inside Sales Representative, or myself at our office.

Sincerely,

*Peter Yvanovich*  
(KSS)

Peter Yvanovich  
Sales Representative

PY/kss  
Enclosures

**TRANSFORMER SERVICE, INC.**  
P.O. BOX 1077  
CONCORD, NEW HAMPSHIRE 03302  
603-224-4006

CUSTOMER  
NUMBER  
15600

INVOICE  
DATE  
03/09/90

INVOICE  
NUMBER  
0007

PAGE 1

SOLD TO  
FACEMATE CORPORATION  
ATTN: ACCOUNTS PAY.  
5 WEST MAIN ST  
CHICOPEE MA 01020

SHIP TO  
FACEMATE CORPORATION  
5 WEST MAIN ST  
CHICOPEE MA

|  |             |           |                      |             |                        |
|--|-------------|-----------|----------------------|-------------|------------------------|
| CUSTOMER PURCHASE ORDER NO.<br>VERBAL/J. WROZINSKI | SHIPPED VIA | SHIP DATE | TERMS<br>NET 10 DAYS | SLSMN<br>35 | JOB ORDER NO.<br>18302 |
|--|-------------|-----------|----------------------|-------------|------------------------|

| SALES CODE | DESCRIPTION   | QUANTITY SHIPPED | UNIT | UNIT PRICE | AMOUNT     |
|------------|---|------------------|------|------------|------------|
| 14         | FOR ELECTRICALLY TESTING ONE 1500 KVA. G.E. TRANSFORMER. SERIAL NO. C-502077<br><br>COMPLETED 3/03/90<br><br>EXEMPT USE CERT. #04-2564230 | 1.00             | EA   | 1920.00    | \$ 1920.00 |

A SERVICE CHARGE OF 1 1/2% PER MONTH, WHICH IS AN ANNUAL PERCENTAGE RATE OF 18%, WILL BE ADDED TO THIS INVOICE IF NOT PAID WITHIN 30 DAYS OF INVOICE DATE.

SUB TOTAL \$ 1920.00

SALES TAX

FREIGHT

TOTAL DUE \$ 1920.00

PLEASE SHOW OUR INVOICE NO. ON YOUR CHECK  
SENT TO  
**TRANSFORMER SERVICE, INC.**  
P.O. BOX 1077  
CONCORD, N.H. 03302

*Thank You For  
Your Order*  
**ACCOUNTING FILE**

| MODE | CONNECTION TEL | CONNECTION ID | START TIME  | USAGE T. | PAGES  |
|------|----------------|---------------|-------------|----------|--------|
| TW   | 14135942982    | 6-3           | 03/07 11:05 | 02'31    | 04(00) |

FACSIMILE COVER SHEET

DATE: March 7, 1990

FROM: Clarence Lewicki

TO : Joann Mroczynski

COMPANY: Facemate Corporation

REF: Transformer test results

TOTAL NUMBER OF PAGES, INCLUDING COVER SHEET:  
4

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL US IMMEDIATELY. THANK YOU.

MESSAGE:

Tests performed were insulation  
resistance, ratio, and dielectric  
absorption, all good  
Transformer can be energized

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Transformer Services Inc.  
 Box 1077  
 Concord, New Hampshire 03301  
 Telephone: (603) 224-4006

Customer FACONATE CORP.  
 Plant CHICOPEE, MA  
 P.O. # \_\_\_\_\_  
 Test By DHL & SV  
 Date 3/3/90

**TRANSFORMER  
 DIELECTRIC ABSORPTION  
 TEST REPORT**

MFG. GENERAL ELECTRIC TRANSFORMER TEMP. 12°C PRIMARY VOLT. & CONN. \_\_\_\_\_  
 SERIAL # C-502077 HUMIDITY 66% 13.8 KV DELTA  
 INVENTORY # \_\_\_\_\_ GALLONS 500 SECONDARY VOLT. & CONN. \_\_\_\_\_  
 KVA 1,500 TYPE PYRANOL 600 WYE/347

| TIME  | PRIMARY TO GROUND  |         | PRIMARY TO SECONDARY |         | SECONDARY TO GROUND |         |
|---|--------------------|---------|----------------------|---------|---------------------|---------|
|   | TEST VOLTAGE = 5KV |         | TEST VOLTAGE = 5KV   |         | TEST VOLTAGE = 1KV  |         |
|   | METER READING      | MEGOHMS | METER READING        | MEGOHMS | METER READING       | MEGOHMS |
| 0   | 6 x 10 x 1         | 60      | 1 x 1K x 1           | 1,000   | 4 x 100 x .4        | 160     |
| 15 SEC.   | 9 x 10 x 1         | 90      | 5 x 1K x 1           | 5,000   | 8 x 100 x .4        | 320     |
| 30 SEC.   | 15 x 10 x 1        | 150     | 10 x 1K x 1          | 10,000  | 8 x 100 x .4        | 320     |
| 1 MIN.  | 15 x 10 x 1        | 150     | 15 x 1K x 1          | 15,000  | 10 x 100 x .4       | 400     |
| 2 MIN.  | 15 x 10 x 1        | 150     | 17 x 1K x 1          | 17,000  | 20 x 100 x .4       | 800     |
| 3 MIN.  | 19 x 10 x 1        | 190     | 20 x 1K x 1          | 20,000  | 20 x 100 x .4       | 800     |
| 4 MIN.  | 20 x 10 x 1        | 200     | 20 x 1K x 1          | 20,000  | 20 x 100 x .4       | 800     |
| 5 MIN.  | 20 x 10 x 1        | 200     | 20 x 1K x 1          | 20,000  | 20 x 100 x .4       | 800     |
| 6 MIN.  | 20 x 10 x 1        | 200     | 20 x 1K x 1          | 20,000  | 20 x 100 x .4       | 800     |
| 7 MIN.  | 20 x 10 x 1        | 200     | 20 x 1K x 1          | 20,000  | 20 x 100 x .4       | 800     |
| 8 MIN.  | 20 x 10 x 1        | 200     | 20 x 1K x 1          | 20,000  | 20 x 100 x .4       | 800     |
| 9 MIN.  | 20 x 10 x 1        | 200     | 20 x 1K x 1          | 20,000  | 20 x 100 x .4       | 800     |
| 10 MIN.   | 20 x 10 x 1        | 200     | 20 x 1K x 1          | 20,000  | 20 x 100 x .4       | 800     |
| POLARIZATION INDEX = $\frac{\text{TEN MIN.}}{\text{ONE MIN.}} = 1.33$ |                    |         | P.I. = 1.33          |         | P.I. = 2.0          |         |

| POLARIZATION INDEX | CONDITION    |
|--------------------|--------------|
| LESS THAN 1        | DANGEROUS    |
| 1.0 - 1.25         | POOR         |
| 1.25 - 1.5         | QUESTIONABLE |
| 1.5 - 2.0          | FAIR         |
| ABOVE 2.0          | GOOD         |

REMARKS: TRANSFORMER HI TEMP= 60°C  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



Transformer Serv. Inc.  
 Box 1077  
 Concord, New Hampshire 03301  
 Telephone: (603) 224-4006

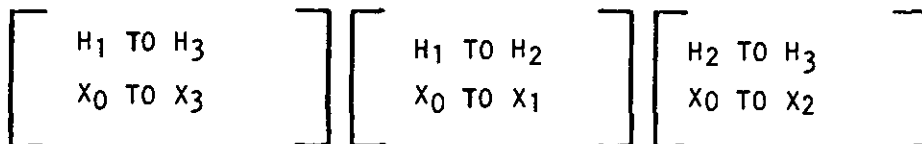
Customer FACEMATE CORP.  
 Plant CHICOPEE, MA  
 P.O. # \_\_\_\_\_  
 Test By DHL & SV  
 Date 3/3/90

TEMP. 48°F  
 HUMIDITY 66%  
 TAP USED 3

**TRANSFORMER TURNS RATIO TEST**

|                         |                  |  |  |
|-------------------------|------------------|--|--|
| TEST NO.                |                  |  |  |
| MAKE                    | GENERAL ELECTRIC |  |  |
| SERIAL #                | C-502077         |  |  |
| INVENTORY #             |                  |  |  |
| KVA                     | 1,500            |  |  |
| PRIMARY VOLT. & CONN.   | 13.8 KV DELTA    |  |  |
| SECONDARY VOLT. & CONN. | 600 WYE/347      |  |  |
| POLARITY                |                  |  |  |
| GALLONS/TYPE            | 500/PYRANOL      |  |  |

**TEST CONNECTIONS:**



| TAP | VOLTAGE | CALCULATED RATIO | PHASE A | PHASE B | PHASE C |
|-----|---------|------------------|---------|---------|---------|
| 1   | 14490   | 41.758           | 41.718  | 41.729  | 41.723  |
| 2   | 14145   | 40.764           | 40.718  | 40.728  | 40.724  |
| 3   | 13,800  | 39.769           | 39.714  | 39.724  | 39.720  |
| 4   | 13,455  | 38.775           | 38.765  | 38.775  | 38.770  |
| 5   | 13,110  | 37.781           | 37.766  | 37.776  | 37.771  |

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_





**TRANSFORMER SERVICE, INC.**

74 REGIONAL DR. • P.O. BOX 1077 • CONCORD, N.H. 03302-1077  
(603) 224-4006

June 7, 1989

Ms. Joann Mrozinski  
Facemate Corporation  
5 West Main Street  
Chicopee, MA 01020

RE: PCB Disposal Sites

Dear Ms. Mrozinski:

On December 21, 1988 Peter Yvanovich of TSI's Sales Department wrote a letter to you indicating the disposal sites to be used for liquids and solids including the transformers.

From the time the quotation was issued in 1988 and when the transformers were removed in April from your facility, disposal costs at various sites have increased. TSI is trying to keep the final price within the costs used in our quotation. To do this we will be sending the fluids to the G.E. incinerator in Pittsfield, Massachusetts through Clean Harbors, Inc. The empty transformers will be landfilled at USPCI, a Division of the Union Pacific Railroad, in Utah. Both of these facilities are EPA approved and licensed for PCB disposal.

Please contact Richard Casarano, or myself if you have any questions on these sites.

We are making arrangements now for the disposal of the remaining liquid and the transformers based on the commitment made by Facemate to TSI for the first payment by June 12th as outlined in Mr. Casarano's letter to you of May 12th.

Sincerely,

Stephen W. Booth  
President

SWB/jp

cc: Peter Yvanovich  
Richard Casarano



**TRANSFORMER SERVICE, INC.**

74 REGIONAL DR. • P.O. BOX 1077 • CONCORD, N.H. 03302-1077  
(603) 224-4006

December, 21, 1988

Ms. JoAnn Mrozinski  
Facemate Corporation  
5 West Main Street  
Chicopee, MA 01020

RE: Various Purchase Orders to TSI

Dear Ms. Mrozinski:

Based on our various telephone discussions and site visit last week, this letter is written to try to clear up any confusion that may exist in carrying out these projects. I am addressing each order separately as follows:

ITEM 1 - PURCHASE ORDER NUMBER 23270 AND QUOTE NUMBER 15243

- A) Disposal of TSI Test Numbers 23, 25 and 44  
and the respective switches. \$51,715.00
  
- B) Travel and Mobilization at \$400.00 per trip.  
The units appear to weigh between 20,000 and  
25,000 pounds each. At 20,000 pounds each,  
we can transport two units during one trip  
and one unit on a second trip. If the units  
weigh 25,000 pounds each, it will take three  
trips. Legal weight for the road is 80,000  
pounds. The tractor and trailer weight is  
approximately 35,000 pounds leaving a net load  
maximum of 45,000 pounds. The worst case is  
three (3) trips at \$400.00 each. \$ 1,200.00
  
- C) PCB cleanup - The Purchase Order states not to  
exceed \$8,000.00 per unit. This is consistant  
with our quotation estimate of \$7,929.00. TSI's  
estimate is per site not per unit. That is if  
a site has two units instead of one unit, we felt  
\$7,927.00 or \$8,000.00 per site would be a reason-  
able estimate based on time and material rates.  
TSI's time and material rates include soil and  
wipe test rates. If you have an outside lab per-  
form the testing, then TSI will not apply our test

(continued)

Facemate Corporation  
Chicopee, Massachusetts  
December 21, 1988  
Page 2

- C) rates. You will pay only for the items provided. (See attached Time and Material rates schedule). The travel and mobilization charge for the clean-up should be based on two (2) trips, however, based on cleanup test data, it could be three (3) or four (4) trips.
  
- D) Disposal - The Purchase Order states disposal by incineration at CWM Chemical Services in Chicago, Illinois. The following is the disposal steps with options that the quotation is based on.
  - 1) Askarel and flush from transformers and switches Numbers 23, 25 and 44 to be incinerated at:
    - a) CWM Chemical Services - Chicago, Illinois
    - b) ENSCO - El Dorado, Arkansas
    - c) Aptus - Coffeyville, Kansas
  
  - 2) Drained and flushed transformers (cannot be incinerated)
    - a) Landfilled at CWM Chemical Services - Model City, New York
    - b) Aptus - Coffeyville, Kansas
    - c) Ensco - El Dorado, Arkansas
  
  - 3) Cleanup material - soils, etc.
    - a) Landfill at CWM Chemical Services - Model City, New York
    - b) Aptus - Coffeyville, Kansas

These facilities are the largest in the country and we use the closest, but we need to have alternates in case of scheduling problems. Incineration of soils can be performed. If you prefer incineration we would recommend Ensco or Aptus. The cost increase is \$1.22 per pound, estimated weight 4,000 pounds of soil.

ITEM 2 - PURCHASE ORDER NUMBER 23273 - QUOTE NUMBER 15211

- 1) Retrofill TSI Test Numbers 1, 2 and 3. Stage one price on

(continued)

Facemate Corporation  
Chicopee, Massachusetts  
December 21, 1988  
Page 3

- 1) order is \$9,724.00. This agrees with our quote.
- 2) Repairs to units 1, 2 and 3 per quote, plus repair sight gauge leak on unit number 6. Purchase Order is for \$370.00. This agrees with quote under retro-fill option.
- 3) Disposal

The fluid from the transformer being retrofilled will be disposed of by detoxification at one of the following:

- a) PPM, Inc. - Philadelphia, Pennsylvania
- b) Aptus - Coffeyville, Kansas
- c) Our price for any retrofill is based on disposal by detoxification. You have stated on the order that fluid disposal for this order is to be by incineration. We can do this, however, the cost would be an additional \$1,198.00.
- d) Disposal of cleanup and repair materials was based on landfilling at CWM Chemical Services - Model City, New York. This material can be incinerated at CWM Chemical Services - Chicago, Illinois, however, the cost difference is \$1.22 per pound. ALTERNATE: APTUS OR ENSCO.

ITEM 3 - PURCHASE ORDER NUMBER 23272 - TSI QUOTE NUMBER 15131  
DATED AUGUST 23, 1988

- A) The order covers units 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75 and 78. TSI's Quote covered units 61, 62, 63, 64, 65, 66, 68 and 69. This quote did not cover unit numbers 67, 70, 71, 72, 73, 74, 75 and 78.

*16 wall-mounted units*

TSI will do the above units at the price quoted with excess fluid above 230 gallons and less than 500 PPM PCB at \$3.50 per gallon and excess weight over 3,200 pounds and under 500 PPM PCB at .44¢ per pound empty weight. We estimate the gallons for units 67, 70, 71, 72, 73, 74, 75 and 78 at 200 gallons with weights of 1,000 pounds.

- B) Travel and Mobilization charge \$400.00 - TSI expects no more than one trip for this phase.

(continued)

Facemate Corporation  
Chicopee, Massachusetts  
December 21, 1988  
Page 4

- C) Liquid to be detoxified at PPM, Inc. - Philadelphia, Pennsylvania or Aptus - Coffeyville, Kansas. Transformers to be scrapped at H.E.L.P.E.R., Inc. - Madison, South Dakota.

Incineration of transformers can be done at Aptus - Coffeyville, Kansas or at Rollins Environmental Services, (TX), Inc. - Deer Park, Texas. This is only for units under 500 PPM PCB and the increased cost is \$1.28 per pound of drained transformers. CWM Chemical Services - Chicago, Illinois cannot take transformers for incineration.

Incineration of fluid at CWM Chemical Services - Chicago, Illinois add .95¢ per gallon.

ITEM 4 - PURCHASE ORDER NUMBER 23271 - TSI QUOTE NUMBER 15131  
DATED AUGUST 23, 1988

- A) The Purchase Order is for a "not to exceed" price of \$14,000.00. This is consistent with TSI's Quote sections "A" and "B".

B) Disposal

Cleanup and repair wastes from this type of service are priced on disposal at CWM Chemical Services - Model City, New York landfill. The material could be incinerated at CWM Chemical Services - Chicago, Illinois, however, the incineration price is better at Aptus or ENSCO and the additional cost would be \$1.22 per pound.

ITEM 5 - GENERAL COMMENTS

- A) The cost of disposal of liquids 0-50 PPM, 40-499 PPM and over 500 PPM but less than 2000 PPM is the same at all levels for detoxification. The incineration costs also are the same at all levels through 10,000 PPM PCB.
- B) TSI will manifest all PCB cleanup materials and repair wastes as we do with transformers and fluids.

I think this will address all of the areas in question. If you have any questions or need further information please do not hesitate to contact me at our office.

Sincerely,



Peter Yvanovich  
Sales Representative

PY/mbf

Enclosure - Time and Material Schedule

Total Service: Electrical • Mechanical • Insulating Fluids • PCB Handling • Cleaning & Painting • Consulting  
Transformer Service, Inc., 74 Regional Dr., PO Box 1077, Concord, NH 03302-1077 (603) 224-4006



**TRANSFORMER SERVICE, INC.**  
**P.O. BOX 1077**  
**CONCORD, NEW HAMPSHIRE 03302**

21

CUSTOMER NUMBER  
 17500  
 PAGE

INVOICE DATE  
 NOV 8 1988

INVOICE NUMBER  
 11195

S  
 O FACEMATE CORPORATION  
 D ADTN: WOODS BLDG  
 T 100 WEST MAIN ST  
 O CHICAGO, MA 01610

S  
 H I P  
 T O FACEMATE CORPORATION  
 8 WEST MAIN STREET  
 CHICAGO, MA

|                                      |             |           |                      |             |                        |
|--------------------------------------|-------------|-----------|----------------------|-------------|------------------------|
| CUSTOMER PURCHASE ORDER NO.<br>00000 | SHIPPED VIA | SHIP DATE | TERMS<br>NET 10 DATE | SLSMN<br>14 | JOB ORDER NO.<br>10001 |
|--------------------------------------|-------------|-----------|----------------------|-------------|------------------------|

| SALES CODE | DESCRIPTION   | QUANTITY SHIPPED | UNIT | UNIT PRICE | AMOUNT     |
|------------|---|------------------|------|------------|------------|
|            | REPAIRS TO INCOMING LINE NO. 4 PER TSI QUOTATION NO. 11445-REV. 1 DATED 8/03/88 |                  |      |            |            |
| 14         | LABOR - NON-TAXABLE   | 1.00             | EA   | 7319.00    | \$ 7319.00 |
| 14         | MATERIAL - TAXABLE  | 1.00             | EA   | 3746.00    | \$ 3746.00 |
| 14         | ADDITIONAL LABOR NOT COVERED BY P.O. #00095<br>NON-TAXABLE                      | 1.00             | EA   | 350.00     | \$ 350.00  |
|            | COMPLETED 11/26/88  |                  |      |            |            |
|            | 5825.<br>33- 3746. (TAX)<br>14- 1844.   |                  |      |            |            |

A SERVICE CHARGE OF 1 1/2% PER MONTH, WHICH IS AN ANNUAL PERCENTAGE RATE OF 18%, WILL BE ADDED TO THIS INVOICE IF NOT PAID WITHIN 30 DAYS OF INVOICE DATE.

5%

PLEASE SHOW OUR INVOICE NO. ON YOUR CHECK  
 REMIT TO:  
**TRANSFORMER SERVICE, INC.**  
 P.O. BOX 1077  
 CONCORD, N.H. 03302

*Thank You For Your Order*  
**ACCOUNTING FILE**

|                  |                    |
|------------------|--------------------|
| SUB TOTAL        | \$ 11415.00        |
| SALES TAX        | \$ 187.30          |
| FREIGHT          |                    |
| <b>TOTAL DUE</b> | <b>\$ 11602.30</b> |

**TRANSFORMER SERVICE, INC.**  
 P.O. BOX 1077  
 CONCORD, NEW HAMPSHIRE 03302

(21)

CUSTOMER NUMBER

INVOICE DATE

INVOICE NUMBER

PAGE 1

SOLD TO SHEILA'S USE ONLY  
 NO CORRECTIONS

SHIP TO FACEMATE CORPORATION  
 CHICPEE, MA

|                                      |             |           |                      |             |                        |
|--------------------------------------|-------------|-----------|----------------------|-------------|------------------------|
| CUSTOMER PURCHASE ORDER NO.<br>00895 | SHIPPED VIA | SHIP DATE | TERMS<br>NET 10 DAYS | SLSMN<br>01 | JOB ORDER NO.<br>10001 |
|--------------------------------------|-------------|-----------|----------------------|-------------|------------------------|

| SALES CODE | DESCRIPTION                | QUANTITY SHIPPED | UNIT | UNIT PRICE | AMOUNT     |
|------------|----------------------------|------------------|------|------------|------------|
| 01         | SHRIST LARGE AND MATERIALS | 1.00             | PC   | 9571.00    | \$ 9571.00 |

A SERVICE CHARGE OF 1 1/2% PER MONTH, WHICH IS AN ANNUAL PERCENTAGE RATE OF 18%, WILL BE ADDED TO THIS INVOICE IF NOT PAID WITHIN 30 DAYS OF INVOICE DATE.

|                  |                   |
|------------------|-------------------|
| SUB TOTAL        | \$ 9571.00        |
| SALES TAX        |                   |
| FREIGHT          |                   |
| <b>TOTAL DUE</b> | <b>\$ 9571.00</b> |

PLEASE SHOW OUR INVOICE NO. ON YOUR CHECK  
 REMIT TO:  
 TRANSFORMER SERVICE, INC.  
 P.O. BOX 1077  
 CONCORD, N.H. 03302

*Thank You For  
 Your Order*  
**ACCOUNTING FILE**

**TRANSFORMER SERVICE, INC.**  
 P.O. BOX 1077  
 CONCORD, NEW HAMPSHIRE 03302

(21)

CUSTOMER NUMBER

INVOICE DATE

INVOICE NUMBER

12/08/88

11136

PAGE 1

S  
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 SELLER'S USE ONLY  
 FOR COLLECTIONS

S  
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 P  
 T  
 O

FACEMATE CORPORATION  
 CHICOFEB, MA

|                                      |             |           |                      |             |                        |
|--------------------------------------|-------------|-----------|----------------------|-------------|------------------------|
| CUSTOMER PURCHASE ORDER NO.<br>00690 | SHIPPED VIA | SHIP DATE | TERMS<br>NET 10 DAYS | SLSM#<br>11 | JOB ORDER NO.<br>11521 |
|--------------------------------------|-------------|-----------|----------------------|-------------|------------------------|

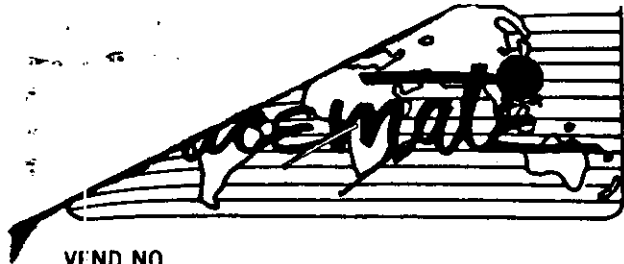
| SALES CODE | DESCRIPTION  | QUANTITY SHIPPED | U<br>N<br>I<br>T | UNIT PRICE | AMOUNT      |
|------------|--|------------------|------------------|------------|-------------|
| 11         | DEDIT TO ALL BSE FUELLED LABOR AND MATERIALS FROM SALESMAN SUMMARY | 1.00-            | EA               | 9571.00    | \$ 9571.00- |

A SERVICE CHARGE OF 1 1/2% PER MONTH, WHICH IS AN ANNUAL PERCENTAGE RATE OF 18%, WILL BE ADDED TO THIS INVOICE IF NOT PAID WITHIN 30 DAYS OF INVOICE DATE.

PLEASE SHOW OUR INVOICE NO. ON YOUR CHECK  
 REMIT TO:  
**TRANSFORMER SERVICE, INC.**  
 P.O. BOX 1077  
 CONCORD, N.H. 03302

*Thank You For  
 Your Order*  
**ACCOUNTING FILE**

|                  |                    |
|------------------|--------------------|
| SUB TOTAL        | \$ 9571.00-        |
| SALES TAX        |                    |
| FREIGHT          |                    |
| <b>TOTAL DUE</b> | <b>\$ 9571.00-</b> |



Facemate Corporation  
 Five West Main Street  
 Chicopee, Mass. 01020  
 (413) 594-6661  
 Cable Address: FACEMATE COPE  
 Telex: 955-460

NO. 22593

This number must appear on all invoices, packing slips, packages and correspondence.

VEND NO.

00397

TO:

TRANSFORMER SERVICE, INC

SHIP

TO: CIP

F.O. BOX 1077  
 CONCORD

NH 03301

|   |                 |                    |   |   |
|---|-----------------|--------------------|---|---|
| DATE<br>8/23/88                               | TERMS<br>NET 30 | F.O.B.<br>CHICOPEE | SHIP VIA<br>ST  | <input checked="" type="checkbox"/> TAXABLE<br><input type="checkbox"/> TAX EXEMPT 04-2564730 |
| SHIP/ARRIVAL DATE REQUIRED<br>ARRIVE 10/28/88 |                 |                    | <input type="checkbox"/> NON-CONFIRMED . . . PLEASE ACKNOWLEDGE<br><input checked="" type="checkbox"/> CONFIRMED WITH CLARENCE ON 8/16/88 |   |

| ITEM NO.                         | ACCOUNT NO. | DESCRIPTION  | QUANTITY | U/M | PRICE                   |
|----------------------------------|-------------|--|----------|-----|-------------------------|
| 1                                | 8831-000    | REPAIR DAMAGE TO POTHEAD ON INCOMING LINE #4 PER QUOTE 2-24-88 | 1        | JOB | XXX/TOT<br>11,065.00/TC |
| NO DELIVERY ACCEPTED AFTER 11 AM |             |  |          |     |                         |



**SPECIAL INSTRUCTIONS**

1. This order is subject to the terms and conditions as stated on the face and reverse side hereof.
2. Detailed packing list must accompany all shipments.
3. Show itemized prices, unit and extension, on all invoices.
4. Except as provided by specific agreement or in accordance with accepted industry standards, ship exact quantities as shown. Do not overship or undership.

AUTHORIZED SIGNATURE

J. PROZINSKI

ORIGINAL PURCHASE ORDER

**TSI<sup>®</sup>**  
**TRANSFORMER SERVICE, INC.**

74 REGIONAL DR. • P.O. BOX 1077 • CONCORD, N.H. 03302-1077  
(603) 224-4006

August 23, 1988

Ms. Joann Mrozinski  
Facemate Corporation  
5 West Main Street  
Chicopee, MA 01020

RE: Incoming Line Number 4 Repairs  
TSI Quotation Number: 14455, Revision Number 1

Dear Ms. Mrozinski:

This will confirm our telephone conversation of August 22, 1988.

Due to increased cost of parts, the price for this repair is now \$11,065.00. Delivery will be made 8 to 10 weeks.

Thank you very much for your Purchase Order Number 22593 to cover this work.

Sincerely,

*Clarence R. Levister*

Clarence R. Levister  
Manager of Electrical Services

CRL/mbi



**TRANSFORMER SERVICE, INC.**

REGIONAL DR. • P.O. BOX 1077 • CONCORD, N.H. 03301-1077  
(603) 224-4006

February 24, 1988

Ms. Joann Mrozinski  
Facemate Corporation  
5 West Main Street  
Chicopee, Massachusetts 01020

RE: Incoming Line Number 4 Repairs  
TSI Quotation Number: 14455

Dear Ms. Mrozinski:

This will confirm our verbal quotation of \$10,497.00 to repair damage caused by failure of the pothead on Incoming Line Number 4.

The following repairs will be made:

- A. Furnish and install one new 400 Amps, 15 KV, 3 phase air break switch on structure.
- B. Remove existing damaged pothead and cables.
- C. Furnish and install new 1/0 URD Cable from new air break switch and terminate cables in Line Number 4 Cable Compartment.

Thank you very much for this opportunity to be of service. If you should have any questions regarding this proposal, please do not hesitate to contact me.

Sincerely,

Clarence R. Levister  
Manager of Electrical  
Services

CRL/mew

cc: Mr. Kenneth G. Price  
Assistant Sales Manager

**TRANSFORMER SERVICE, INC.**  
 BOX 1077  
 CONCORD, NEW HAMPSHIRE 03302

CUSTOMER NUMBER  
15500

INVOICE DATE  
04/19/89

INVOICE NUMBER  
4946

PAGE 1

SOLD TO  
 FACSMATE CORPORATION  
 ATTN: ACCOUNTS PAY.  
 5 WEST MAIN ST  
 CHICOFFEE MA 01029

SHIP TO

FACSMATE CORPORATION

164 BELLEVUE STREET  
 CHICOFFEE MA

*Unroyal address*

|                                      |             |           |                      |             |                        |
|--------------------------------------|-------------|-----------|----------------------|-------------|------------------------|
| CUSTOMER PURCHASE ORDER NO.<br>23270 | SHIPPED VIA | SHIP DATE | TERMS<br>NET 10 DAYS | SLSMN<br>35 | JOB ORDER NO.<br>16225 |
|--------------------------------------|-------------|-----------|----------------------|-------------|------------------------|

| SALES CODE | DESCRIPTION  | QUANTITY SHIPPED | UNIT | UNIT PRICE | AMOUNT      |
|------------|--|------------------|------|------------|-------------|
|            | DISPOSAL OF THE FOLLOWING ITEMS. PER TSI QUOTATION NUMBERS: 15243. DATED DECEMBER 21, 1988.                                  |                  |      |            |             |
| 16         | THREE (3) TRANSFORMERS (1414.3 c.f.), 1707 GALLONS ASKABEL FLUID, (1707 GALLONS). AND THREE (3) DRUMS SOLID WASTE (730 LBS). | 1.00             | EA   | 51715.00   | \$ 51715.00 |
| 16         | TRANSPORTATION<br>THREE (3) SEPARATE TRIPS TO YOUR FACILITY.   | 3.00             | EA   | 400.00     | \$ 1200.00  |
|            | A D D I T I O N A L C H A R G E  |                  |      |            |             |
| 15         | DISPOSAL OF SEVEN (7) DRUMS WITH ASKABEL, INCLUDING LABOR. (335 GALLONS)   | 1.00             | EA   | 5993.00    | \$ 5993.00  |
|            | PICKED UP: 04/13/89  |                  |      |            |             |
|            | MANIFEST NUMBERS: NH C 0013032 AND NH C 0013056  |                  |      |            |             |

*Partial*

*Remainder  
 OAE  
 9/28/89*

*# 20521.41  
 owed  
 9-19-89*

|                  |  |
|------------------|--|
| SUB TOTAL        |  |
| SALES TAX        |  |
| FREIGHT          |  |
| <b>TOTAL DUE</b> |  |

PLEASE SHOW OUR INVOICE NO. ON YOUR CHECK  
 PERMIT TO:  
 TRANSFORMER SERVICE, INC  
 P.O. BOX 1077  
 CONCORD, N.H. 03302

Thank You For  
 Your Order  
 ACCOUNTING FILE

**TRANSFORMER SERVICE, INC.**  
 BOX 1077  
 CONCORD, NEW HAMPSHIRE 03302

CUSTOMER NUMBER  
 15570

INVOICE DATE  
 04-19-89

INVOICE NUMBER  
 1546

PAGE 2

S  
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FAIRMATE CORPORATION  
 ATTN: ACCOUNTS PAY.  
 1 WEST MAIN ST  
 CHICOPPEE MA 01020

S  
H  
I  
P  
T  
O

FAIRMATE CORPORATION  
 134 GROVE STREET  
 CHICOPPEE, MA

|                                      |             |           |                      |             |                        |
|--------------------------------------|-------------|-----------|----------------------|-------------|------------------------|
| CUSTOMER PURCHASE ORDER NO.<br>03300 | SHIPPED VIA | SHIP DATE | TERMS<br>NET 10 DAYS | SLSM#<br>00 | JOB ORDER NO.<br>10025 |
|--------------------------------------|-------------|-----------|----------------------|-------------|------------------------|

| SALES CODE | DESCRIPTION   | QUANTITY SHIPPED | UNIT | UNIT PRICE | AMOUNT |
|------------|---|------------------|------|------------|--------|
|            | CONTINUED - PAGE 2  |                  |      |            |        |
|            | SALES & USP TAX EXEMPTION NUMBER: 94-2564730                  |                  |      |            |        |
|            | MASSACHUSETTS HAZARDOUS WASTE TRANSPORTER FEE:<br>(SEE BELOW) |                  |      |            |        |
|            | <i>Partial</i>  |                  |      |            |        |
|            | <i>Remainder</i>  |                  |      |            |        |
|            | <i>CANC</i>   |                  |      |            |        |
|            | <i>9/28/89</i>  |                  |      |            |        |

A SERVICE CHARGE OF 1 1/2% PER MONTH, WHICH IS AN ANNUAL PERCENTAGE RATE OF 18%, WILL BE ADDED TO THIS INVOICE IF NOT PAID WITHIN 30 DAYS OF INVOICE DATE.

# 3052411  
 6/20  
 9-19-89

|                  |                    |
|------------------|--------------------|
| SUB TOTAL        | \$ 58000.00        |
| SALES TAX        |                    |
| FEE: XXXXXX      | \$ 624.61          |
| PREMIUM          |                    |
| <b>TOTAL DUE</b> | <b>\$ 58624.61</b> |

PLEASE SHOW OUR INVOICE NO. ON YOUR CHECK  
 REMIT TO:  
**TRANSFORMER SERVICE, INC.**  
 P.O. BOX 1077  
 CONCORD, N.H. 03302

Thank You For  
 Your Order  
 ACCOUNTING FILE





**TRANSFORMER SERVICE, INC.**

74 REGIONAL DR. • P.O. BOX 1077 • CONCORD, N.H. 03302-1077  
(603) 224-4006

April 21, 1989

Ms. JoAnn Mrozinski  
Facemate Corporation  
5 West Main Street  
Chicopee, Massachusetts 01020

Dear Ms. Mrozinski:

Enclosed herewith please find your completed copy of Waste Manifest Number: NH C 0013127, covering the solid waste that we removed from your facility on April 13, 1989.

Should you have any questions concerning this manifest, please do not hesitate to contact either myself or Mr. Peter Yvanovich, Area Sales Representative, at our Concord, New Hampshire office.

Thank you for giving us this opportunity to be of service.

Sincerely,

*Andris Serzans (pew)*

Andris Serzans  
Project Supervisor  
PCB Services

AS/mew  
Enclosure



**WASTE MANAGEMENT DIVISION**  
**Health and Human Services Building**  
**6 Hazen Drive**  
**Concord, NH 03301-6509**

Form Approved OMB No. 2050-0039, Expires 9-30-88

Please print or type. (Form designed for use on elite (12 pitch) typewriter.)

TO REPORT A SPILL, CONTACT: NATIONAL EMERGENCY RESPONSE CENTER (1-800-424-8802), THE N.H. DEPT. OF SAFETY (1-800-852-3411) AND THE NH WASTE MANAGEMENT DIVISION (271-2942). TO REPORT AN OIL SPILL: NHWSPCD (271-3440).

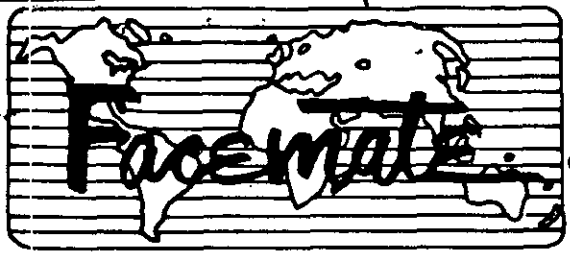
COPY 3: GENERATOR COMPLETED COPY

|  |   |   |  |  |   |  |
|--|---|---|--|--|---|--|
| <b>UNIFORM HAZARDOUS WASTE MANIFEST</b>  |   | 1. Generator's US EPA ID No.<br>NH000039168 | Manifest No.<br>00001                              | 2. Page 1 of 1                         | Information in the shaded areas is not required by Federal law, but may be required by State Law. |  |
| 3. Generator's Name and Mailing Address<br>Facemate Corp.<br>5 West Main St.<br>Chicopee, Mass.  |   |   | A. State Manifest Document Number<br>NH: C-0013127 |  | B. State Generator's ID (Location)  |  |
| 4. Generator's Phone<br>413-594-6661   | 5. Transporter 1 Company Name<br>Transformer Service Inc. |   | 6. US EPA ID Number<br>NH0018902874                | C. State Transporter's ID<br>NH 192279 |   | D. Transporter's Phone<br>413-224-1006 |
| 7. Transporter 2 Company Name  | 8. US EPA ID Number                                       |   | E. State Transporter's ID                          |  | F. Transporter's Phone  |  |
| 9. Designated Facility Name and Site Address<br>Transformer Service Inc.<br>74 Regional Dr.<br>Concord, N.H. 03301   |   |   | 10. US EPA ID Number<br>NH0089902874               |  | G. State Facility's ID<br>NH 192279   |  |
| 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)   |   |   | 12. Containers                                     | 13. Total Quantity                     | 14. Unit W/Vol  | 15. Waste No.                          |
| a. RQ Waste Hazardous Substance, Solid, N.O.S., ORM-E, NA9188 (Polychlorinated Biphenyls)  |   |   | No. 003  | Type TP                                | 36,615  | P H002                                 |
| b. <del>RQ Waste Hazardous Substance, Solid, N.O.S., ORM-E, NA9188 (Polychlorinated Biphenyls)</del>   |   |   |  | <del>DM</del>                          |   | <del>P H002</del>                      |
| J. Additional Descriptions for Materials Listed Above  |   |   | K. Handling Codes for Wastes Listed Above          |  |   |  |
| a. Transformer<br>b. Solid   |   |   | a. D-81<br>b. T06 (Solid)                          |  |   |  |
| 15. Special Handling Instructions and Additional Information<br>Dike and contain.  |   |   |  |  |   |  |
| 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.<br>If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford. |   |   |  |  |   |  |
| Printed/Typed Name<br>JoAnn Prozinski  |   | Signature<br><i>JoAnn Prozinski</i>         |  | Month Day Year<br>14 13 89             |   |  |
| 17. Transporter 1 Acknowledgement of Receipt of Materials  |   | Printed/Typed Name<br>Richard A. Dye        |  | Signature<br><i>Richard A. Dye</i>     |   | Month Day Year<br>04 13 89             |
| 18. Transporter 2 Acknowledgement or Receipt of Materials  |   | Printed/Typed Name                          |  | Signature                              |   | Month Day Year                         |
| 19. Discrepancy Indication Space<br>11a. REMOVED Additional 52 gals of PCB liquid.<br>11b. THIS LINE NOT USED. 11a(13) SHOULD BE 39,393 LBS.   |   |   |  |  |   |  |
| 20. Facility Owner, or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.  |   | Printed/Typed Name<br>A. SERZANS            |  | Signature<br><i>A. Serzans</i>         |   | Month Day Year<br>04 14 89             |

MEET ENVIRONMENTAL REGULATIONS ON  
CB'S

DELIVER TO  
ON SITE

ORDERED BY  
WALTER



Facemate Corporation  
Five West Main Street  
Chicopee, Mass. 01020  
(413) 594-6661  
Cable Address: FACEMATE COPE  
Telex: 955-460

**PURCHASE ORDER**

NO. 23270

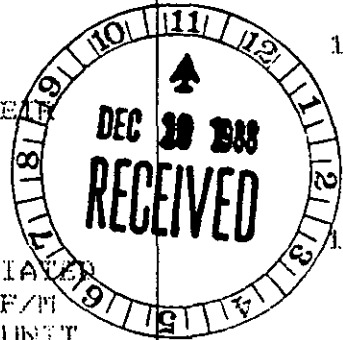
This number must appear on all invoices, packing slips, packages and correspondence.

VEND NO. 00397 TO: TRANSFORMER SERVICE, INC  
P.O. BOX 1077  
CONCORD NH 03301

SHIP TO: CHICOPEE INDUSTRIA  
154 GROVE ST  
CHICOPEE, MA 01020

|   |                 |                    |  |  |
|---|-----------------|--------------------|--|--|
| DATE<br>12/16/88                          | TERMS<br>NET 30 | F.O.B.<br>CHICOPEE | SHIP VIA<br>ST   | <input type="checkbox"/> TAXABLE<br><input checked="" type="checkbox"/> TAX EXEMPT 04. |
| SHIP/ARRIVAL DATE REQUIRED<br>ARRIVE 1/89 |                 |                    | <input type="checkbox"/> NON-CONFIRMED . . . PLEASE ACKNOWLEDGE<br><input checked="" type="checkbox"/> CONFIRMED WITH KEN PRICE ON |  |

| ITEM NO. | ACCOUNT NO. | DESCRIPTION  | QUANTITY | U/M  |  |
|----------|-------------|--|----------|------|--|
| 1        | 8839-000    | PHASE 1<br>DISPOSE OF TSI TEST #23, 25 AND #44 AND THE<br>SWITCHES<br><br><i>Unroyal Locations #13, #14, #25</i>   | 1        | JOB  | \$51715.00/UNIT<br>(NOT TO EXCEED)     |
| 2        | 8839-000    | PCB CLEANUP OF THE CONCRETE PADS AND ASSOCIATED<br>SOIL FOR EACH TRANSFORMER. TSI TO NOTIFY F/M<br>PURCHASING DEPT. IF CLEANUP EXCEEDS \$8000/UNIT<br>BEFORE WORK IS PERFORMED.                            | 1        | JOB  | 8000.00/PER<br>UNIT - NOT<br>TO EXCEED |
| 3        | 8839-000    | TRAVEL AND MOBILIZATION CHARGE<br><br>WORK TO BE DONE PER QUOTE DATED 11-11-88<br>TSI MUST PROVIDE CERTIFICATES OF DISPOSAL AND<br>TRACKING MANIFESTS PCB MATERIAL TO BE INCINERATED<br>AT SCA IN CHICAGO. | 1        | TIME | 400.00/TOT                             |



*Part  
A-19-89*

**NO DELIVERY ACCEPTED AFTER 11 AM**

SPECIAL INSTRUCTIONS

1. This order is subject to the terms and conditions as stated on the face and reverse side hereof.
2. Detailed packing list must accompany all shipments.
3. Show itemized prices, unit and extension, on all invoices.
4. Except as provided by specific agreement or in accordance with accepted industry standards, ship exact quantities as shown. Do not overship or undership.

AUTHORIZED SIGNATURE

*[Handwritten Signature]*

PROZINSKI

ORIGINAL PURCHASE ORDER



WASTE MANAGEMENT DIVISION  
Health and Human Services Building  
6 Hazen Drive  
Concord, NH 03301-6509

Form Approved OMB No. 2050-0039 Expires 9-30-88

Please print or type (Form designed for use on a 12-pitch typewriter)

1. Generator's US EPA ID No. **MAP000039168** Manifest Document No. **00001**

2. Page 1 of 1 Information in the shaded areas is not required by Federal law, but may be required by State Law.

3. Generator's Name and Mailing Address: **Facemate Corp., 5 West Main St., Chicopee, Ma.**

4. Generator's Phone: **413-594-6661**

5. Transporter 1 Company Name: **Transformer Service Inc.**

6. US EPA ID Number: **NH018902874**

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address: **Transformer Service Inc., 74 Regional Dr., Concord, N.H. 03301**

10. US EPA ID Number: **NH018902874**

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)

| 12. Containers No. | Type | 13. Total Quantity | 14. Unit Mt/Vol | 15. Waste No. |
|--------------------|------|--------------------|-----------------|---------------|
| a. 32              | DM   | 1590               | G               | M002          |
| b. 07              | DM   | 325                | P               | M002          |
| c. 02              | DM   | 380                | P               | M002          |
| d.                 |      |                    |                 |               |

12. Containers No. Type Total Quantity Unit Mt/Vol Waste No.

13. Total Quantity

14. Unit Mt/Vol

15. Waste No.

J. Additional Descriptions for Materials Listed Above

a. 1590 lbs. of 19.8 lbs. c. T Solids

b. 7 Empty contaminated Barrels of

K. Handling Codes for Wastes Listed Above

a. T-06

b. D-81

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

17. Transporter 1 Acknowledgment of Receipt of Materials

Printed/Typed Name: **Richard A. De-** Signature: **Richard A. De-** Month Day Year: **01 28 89**

18. Transporter 2 Acknowledgment of Receipt of Materials

Printed/Typed Name: Signature: Month Day Year:

19. Discrepancy Indication: None

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name: **A. SERTANS** Signature: **A. Sertans** Month Day Year: **01 31 89**

TO REPORT A SPILL, CONTACT: NATIONAL EMERGENCY RESPONSE CENTER (1-800-424-8802) THE N.H. DEPT. OF SAFETY (1-800-852-3411) AND THE N.H. WASTE MANAGEMENT DIVISION (271-2942). TO REPORT OIL SPILL: NHWSPCD (271-3440).

COPY 4: TSDf COPY



**TRANSFORMER SERVICE, INC.**

74 REGIONAL DR. • P.O. BOX 1077 • CONCORD, N.H. 03302-1077  
(603) 224-4008

April 21, 1989

Ms. Joann Mrozinski  
Facemate Corporation  
5 West Main Street  
Chicopee, Massachusetts 01020

Dear Ms. Mrozinski:

Enclosed herewith please find your completed copy of Waste Manifest Numbers:  
NH C 0013042 and NH C 0013056, covering the various items that we removed from your  
facility on April 13, 1989.

Should you have any questions concerning this manifest, please do not hesitate  
to contact either myself or Mr. Peter Yvanovich, Area Sales Representative, at our  
Concord, New Hampshire office.

Thank you for giving us this opportunity to be of service.

Sincerely,

*Andris Serzans (mew)*

Andris Serzans  
Project Supervisor  
PCB Services

AS/mew  
Enclosure



NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES

WASTE MANAGEMENT DIVISION

Health and Human Services Building

6 Hazen Drive

Concord, NH 03301-6509

1590 gals Ask

7 DR - Empty - Crush

2 DR (340 GALS) Solids

Form Approved OMB No. 2050-0039, Expires 9-30-88

Please print or type (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MAPO00039168 Manifest Document No. 00001

2. Page 1 of 1 Information in the shaded areas is not required by Federal law, but may be required by State law.

3. Generator's Name and Mailing Address: Facomate Corp. 5 West Main St. Chicopee, Ma.

A. State Manifest Document Number: NH C 0013042

4. Generator's Phone: 413-594-6461

B. State Generator's ID (Location): Same as 3

5. Transporter 1 Company Name: Transformer Service Inc. 6. US EPA ID Number: NHD018902874

C. State Transporter's ID: NH AC 1951 D. Transporter's Phone: 603-224-4006

7. Transporter 2 Company Name: 8. US EPA ID Number:

E. State Transporter's ID: F. Transporter's Phone:

9. Designated Facility Name and Site Address: Transformer Service Inc. 74 Regional Dr. Concord, N.H. 03301 10. US EPA ID Number: NHD018902874

G. State Facility's ID: Same as 9 H. Facility's Phone: 603-224-4006

Table with 5 columns: 11. US DOT Description, 12. Containers No., 13. Total Quantity, 14. Unit W/Vol, 15. Waste No. Rows include: a. RQ Waste Hazardous Substance, Liquid, N.O.S., ORM-E, NA9188 (Polychlorinated Biphenyls) 32 DM 1590 G M002; b. RQ Waste Hazardous Substance, Solid, (Empty) N.O.S., ORM-E, NA9188 (Polychlorinate Biphenyls) 07 DM 325 P M002; c. RQ Waste Hazardous Substance, Solid, N.O.S., ORM-E, NA9188 (Polychlorinate Biphenyls) 02 DM 380 P M002

J. Additional Descriptions for Materials Listed Above: a. 1590 gals. x 13.5 lbs. c. T Solids b. 7 Empty contaminated Burells d.

K. Handling Codes for Wastes Listed Above: a. T-06 c. D-81 b. D-81 d.

15. Special Handling Instructions and Additional Information: Dike and contain.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Printed/Typed Name: JOAN MROZIASKI Signature: Joan Mrozinski Month Day Year: 1 20 89

17. Transporter 1 Acknowledgement of Receipt of Materials: Printed/Typed Name: Richard A. Dye Signature: Richard A. Dye Month Day Year: 01 28 89

18. Transporter 2 Acknowledgement or Receipt of Materials: Printed/Typed Name: Signature: Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner, or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19. Printed/Typed Name: ASERTZANS Signature: ASERTZANS Month Day Year: 01 31 89

TO REPORT A SPILL, CONTACT: NATIONAL EMERGENCY RESPONSE CENTER (1-800-424-8802), THE N.H. DEPT. OF SAFETY (1-800-852-3411) AND NH WASTE MANAGEMENT DIVISION (271-2942) TO REPORT OIL SPILL: NHWSPCD (271-3440)

COPY 4: TSDP COPY

NH C 0013042



415 gal ASK  
7 DR (350 lbs) Solids

NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES  
WASTE MANAGEMENT DIVISION  
Health and Human Services-Build  
6 Hazen Drive  
Concord, NH 03301-6509

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved OMB No. 2050-0039, Expires 8-30-88

TO REPORT A SPILL, CONTACT: NATIONAL EMERGENCY RESPONSE CENTER (1-800-424-8802), THE N.H. DEPT. OF SAFETY (1-800-852-3417) AND THE NH WASTE MANAGEMENT DIVISION (271-2942). TO REPORT OIL SPILL: NHWSPCD (271-3440).

COPY 4: TSDF COPY

|  |  |  |                                  |  |   |   |                    |                                   |              |      |
|--|--|--|----------------------------------|--|---|---|--------------------|-----------------------------------|--------------|------|
| <b>UNIFORM HAZARDOUS WASTE MANIFEST</b>  |  | 1. Generator's US EPA ID No.<br><b>NA000039168</b> | Manifest Doc No.<br><b>00002</b> | 2. Page 1 of 1   | Information in the shaded areas is not required by Federal law, but may be required by State law. |   |                    |                                   |              |      |
| 3. Generator's Name and Mailing Address<br><b>Facemate Corp.<br/>5 West Main St.<br/>Chicopee, Ma.</b>   |  |  |                                  | A. State Manifest Document Number<br><b>NH C 0013056</b> |   |   |                    |                                   |              |      |
| 4. Generator's Phone<br><b>413-594-6661</b>  |  |  |                                  | B. State Generator's ID (Location)<br><b>Same as 3</b>   |   |   |                    |                                   |              |      |
| 5. Transporter 1 Company Name<br><b>Transformer Service Inc.</b>   |  | 6. US EPA ID Number<br><b>NH0018902874</b>         |                                  | C. State Transporter's ID<br><b>NA1957</b>               |   |   |                    |                                   |              |      |
| 7. Transporter 2 Company Name  |  | 8. US EPA ID Number                                |                                  | D. Transporter's Phone<br><b>603-224-4006</b>            |   |   |                    |                                   |              |      |
| 9. Designated Facility Name and Site Address<br><b>Transformer Service Inc.<br/>74 Regional Dr.<br/>Concord, N.H. 03301</b>  |  | 10. US EPA ID Number<br><b>NH0018902874</b>        |                                  | E. State Transporter's ID                                |   |   |                    |                                   |              |      |
|  |  |  |                                  | F. Transporter's Phone                                   |   |   |                    |                                   |              |      |
|  |  |  |                                  | G. State Facility's ID<br><b>Same as 9</b>               |   |   |                    |                                   |              |      |
|  |  |  |                                  | H. Facility's Phone<br><b>603-224-4006</b>               |   |   |                    |                                   |              |      |
| 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)   |  |  |                                  |  |   | 12. Containers No.                        | 13. Total Quantity | 14. Unit Wt/Vol                   | 1. Waste No. |      |
| a. RQ Waste Hazardous Substance, Liquid,<br>N.O.S., ORM-E, NA9188 (Polychlorinated Biphenyls)  |  |  |                                  |  |   | 09  | DM                 | 415                               | G            | M002 |
| b. RQ Waste Hazardous Substance, Solid,<br>N.O.S., ORM-E, NA9188 (Polychlorinated Biphenyls)   |  |  |                                  |  |   | 01  | DM                 | 350                               | P            | M002 |
| c.   |  |  |                                  |  |   |   |                    |                                   |              |      |
| d.   |  |  |                                  |  |   |   |                    |                                   |              |      |
| J. Additional Descriptions for Materials Listed Above  |  |  |                                  |  |   | K. Handling Codes for Wastes Listed Above |                    |                                   |              |      |
| a. <b>415 gals. x 13.5 lbs.</b>  |  |  |                                  |  |   | a. <b>T-06</b>                            |                    |                                   |              |      |
| b. <b>Solids</b>   |  |  |                                  |  |   | b. <b>D-81</b>                            |                    |                                   |              |      |
| 15. Special Handling Instructions and Additional Information<br><b>Dike and contain.</b>   |  |  |                                  |  |   |   |                    |                                   |              |      |
| 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.<br>If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford. |  |  |                                  |  |   |   |                    |                                   |              |      |
| Printed/Typed Name<br><b>Ann Mrozinski</b>   |  |  |                                  | Signature<br><i>Ann Mrozinski</i>                        |   | Month Day Year<br><b>2 3 89</b>           |                    |                                   |              |      |
| 17. Transporter 1 Acknowledgement of Receipt of Materials  |  |  |                                  | Printed/Typed Name<br><b>Richard A. Dye</b>              |   | Signature<br><i>Richard A. Dye</i>        |                    | Month Day Year<br><b>02 03 89</b> |              |      |
| 18. Transporter 2 Acknowledgement of Receipt of Materials  |  |  |                                  | Printed/Typed Name                                       |   | Signature                                 |                    | Month Day Year                    |              |      |
| 19. Discrepancy Indication Space   |  |  |                                  |  |   |   |                    |                                   |              |      |
| 20. Facility Owner, or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.  |  |  |                                  |  |   |   |                    |                                   |              |      |
| Printed/Typed Name<br><b>A. SERZANS</b>  |  |  |                                  | Signature<br><i>A. Serzans</i>                           |   | Month Day Year<br><b>02 08 89</b>         |                    |                                   |              |      |

NH C 0013056

● **SENDER:** Complete items 1, 2, 3, and 4. Add your address in the "RETURN TO" space on reverse.

**(CONSULT POSTMASTER FOR FEES)**

1. The following services is requested (check one):  
 Show to whom and date delivered ..... **.90**  
 Show to whom, date, and address of delivery ..  
 **RESTRICTED DELIVERY** (The restricted delivery fee is charged in addition to the return receipt fee.)

2. **ARTICLE ADDRESSED TO:** Ms. J. Mrozinski  
 Facemate Corporation  
 5 West Main Street  
 Chicopee, MA

4. **TYPE OF SERVICE:** 01020  
 REGISTERED  INSURED  COD  
 CERTIFIED  COO  
 EXPRESS MAIL

**TOTAL \$** P 326 263 965

5. **ARTICLE NUMBER**

I have received the article described above.  
**SIGNATURE** *M. J. Mrozinski* Authorized agent  
**DATE OF DELIVERY** 1989 MA  
**POSTMARK** (Stamp for on reverse side)

6. **ADDRESSEE'S ADDRESS (only if not on reverse)**

7. **UNABLE TO DELIVER BECAUSE:**

7a. **EMPLOYEE'S INITIALS**

P 326 263 965

RECEIPT FOR CERTIFIED MAIL

U.S. POSTAL SERVICE  
 MAIL PERMIT NO. 1000  
 CHICOPEE, MA 01020

(See Reverse)

Delivered to: Ms. JoAnn Mrozinski  
 Facemate Corporation  
 5 West Main Street  
 Chicopee, MA 01020

Postage: .25  
 Insurance: .85  
 Other: .90

Total: 2.00

U.S. POSTAL SERVICE  
 MAIL PERMIT NO. 1000  
 CHICOPEE, MA 01020





**TSI<sup>®</sup>**  
**TRANSFORMER SERVICE, INC.**

74 REGIONAL DR. • P.O. BOX 1077 • CONCORD, N.H. 03302-1077  
(603) 224-4006

August 22, 1989

Certified Mail No. P326 263 965

Ms. JoAnn Mrozinski  
Facemate Corporation  
5 West Main Street  
Chicopee, MA 01020

RE: Your Purchase Order Number 23270 And  
TSI Invoice Number 4046 Dated April 19, 1989

Dear Ms. Mrozinski:

Enclosed herewith please find the signed copies for N.H. Manifest Number NHC0016316 and Massachusetts Manifest Number MAC430268 showing delivery to the end disposers.

As stated in our letter dated May 12, 1989, thirty percent (30%) or \$17,589.78 is now due (Payment 2) upon receipt of the above mentioned documentation.

Your prompt attention to this matter is appreciated.

Should you have any questions, please do not hesitate to contact the undersigned.

Sincerely,

  
Richard J. Casarano  
Project Manager  
Corporate Staff

RJC/kss  
Enclosures

cc: Sheila P. LaSalle, Business Manager

# TSSI<sup>®</sup>

## TRANSFORMER SERVICE, INC.

74 REGIONAL DR. • P.O. BOX 1077 • CONCORD, N.H. 03302-1077  
(603) 224-4006

P.O. #8222

July 6, 1989

The following shipment of 4841 gallons of PCB liquid was transported by Clean Harbors of Kingston, Inc. for incineration at Clean Incineration Services, Pittsfield, MA by manifest number MAC430268 and represents PCB liquid from the following companies:

| <u>DATE RECEIVED</u> | <u>MANIFEST NUMBER</u>                | <u>GALLONS</u> |
|----------------------|---------------------------------------|----------------|
| 01/28/89             | NHC0013042                            | 1590           |
| 02/03/89             | NHC0013056                            | 415            |
| 04/13/89             | NHC0013127                            | Flush 1752     |
| 04/27/89             | NHC0013137                            | Balance 152    |
| 04/27/89             | NHC0013137                            | Flush 160      |
| 04/28/89             | NHC0013138                            | 95             |
| 04/28/89             | NHC0013138                            | Flush 95       |
| 05/08/89             | NHC0013149                            | 5              |
| 05/08/89             | NHC0013149                            | Flush 5        |
| 05/11/89             | NHC0013155                            | 100            |
| 05/11/89             | NHCOC13155                            | Flush 100      |
| 05/17/89             | NHC0013160                            | 30             |
| 05/11/89             | BILL OF LADING N.H. El. Coop Part.342 |                |



COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING  
DIVISION OF SOLID AND HAZARDOUS WASTE

One Winter Street  
Boston, Massachusetts 02108

#152  
VT306  
N.H. # NH 4074 C150  
S. Boston # 35575

Print or type. (Form designed for use on elite (12-pitch) typewriter.)

In case of emergency or spill, immediately call National Response Center (800) 424-8802.

|   |  |  |                                      |  |   |                               |
|---|--|--|--------------------------------------|--|---|-------------------------------|
| <b>UNIFORM HAZARDOUS WASTE MANIFEST</b>   |  | 1. Generator US EPA ID No.<br>NHDD18902874600011 | Manifest Document No.                | 2. Page 1 of 1                         | Information in the shaded areas is not required by Federal law. |                               |
| 3. Generator's Name and Mailing Address<br>Transformer Service Inc. (Broker)<br>74 Regional Dr.<br>Concord, N.H. 03301  |  |  | 4. Generator's Phone<br>603-224-4006 |  | A. State Manifest Document Number<br>MA C 430268                | B. State Gen. ID<br>Same as 3 |
| 5. Transporter 1 Company Name<br>Clean Harbors of Kingston Inc.   |  | 6. US EPA ID Number<br>HADD039322250             |                                      | C. State Trans. ID<br>022043           |   |                               |
| 7. Transporter 2 Company Name   |  | B. US EPA ID Number                              |                                      | D. Transporter's Phone<br>617 585 5111 |   |                               |
| 9. Designated Facility Name and Site Address<br>Clean Incineration Services<br>100 Woodlawn Ave.<br>Pittsfield, Mass. 01201   |  | 10. US EPA ID Number<br>MAP0000A0093             |                                      | E. State Trans. ID                     |   |                               |
| 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  |  | 12. Containers                                   |                                      | 13. Total Quantity                     | 14. Unit Wt/Vol   | 15. Waste No.                 |
| RQ Waste Hazardous Substance, Liquid,<br>N.O.S. ORM-E,,NA9188 (Polychlorinated Biphenyls)   |  | No. Type   |                                      | 4499                                   | G   | MA02                          |
| J. Additional Descriptions for Materials Listed Above (include physical state and hazard code.)   |  | K. Handling Codes for Wastes Listed Above        |                                      |  |   |                               |
| a. PCB Liquid >500PPM   |  | b. T 10 B  |                                      |  |   |                               |
| 15. Special Handling Instructions and Additional Information<br>Dike and contain.<br>DOT/E 8552   |  |  |                                      |  |   |                               |
| 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway, according to applicable international and national government regulations.<br><br>If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford. |  |  |                                      |  |   |                               |
| Printed/Typed Name<br>A. SERZANS  |  | Signature<br><i>A. Serzans</i>                   |                                      | Date<br>07 07 89                       |   |                               |
| 17. Transporter 1 Acknowledgement of Receipt of Materials   |  | Printed/Typed Name<br>Richard Lucier             |                                      | Signature<br><i>Richard Lucier</i>     |   | Date<br>07 07 89              |
| 18. Transporter 2 Acknowledgement of Receipt of Materials   |  | Printed/Typed Name                               |                                      | Signature                              |   | Date                          |
| 19. Discrepancy Indication Space  |  |  |                                      |  |   |                               |
| 20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.  |  |  |                                      |  |   |                               |
| Printed/Typed Name<br>NICK DE NOVELLIS  |  | Signature<br><i>Nick De Novellis</i>             |                                      | Date<br>07 07 89                       |   |                               |



**TRANSFORMER SERVICE, INC.**

74 REGIONAL DR. • P.O. BOX 1077 • CONCORD, N.H. 03302-1077  
(603) 224-4006

DATE: August 7, 1989

FROM: TSI, Concord, NH (Broker)  
CODE: GB89-221-89

RE: Transformers - Over 500 PPM PCB, Flushed

| <u>ACCUM.</u><br><u>START DATE</u> | <u>MANIFEST NUMBER</u> | <u>SERIAL NO.</u> | <u>TSI NO.</u> | <u>MEASUREMENTS</u>    | <u>PPM</u> | <u>WEIGHT</u> |
|------------------------------------|------------------------|-------------------|----------------|------------------------|------------|---------------|
| 08/11/88                           | NHCO010618             | 66C13225          | 17512          | 32 X 33 X 48 (33.0)    | 820        | 1810          |
| 08/25/88                           | NHCO010641             | C783575           | 17554          | 40 X 43 X 63 (62.7)    | ASK        | 1200          |
| 04/13/89                           | NHCO013107             | NONE ✓            | 19180          | 75 X 101 X 111 (486.6) | ASK        | 13574         |
| 04/13/89                           | NHCO013107             | 1850625 ✓         | 19181          | 75 X 101 X 106 (464.7) | ASK        | 13574         |
| 04/13/89                           | NHCO013107             | 1BP5652           | 19182          | 85 X 95 X 105 (484.9)  | ASK        | 12245         |
|                                    |                        | √BP56521          |                |                        |            |               |



**WASTE MANAGEMENT DIVISION**  
**Health and Human Services Building**  
**6 Hazen Drive**  
**Concord, NH 03301-6509**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved OMB No. 2050-0039, Expires 9/30/91

TO REPORT A SPILL, CONTACT: NATIONAL EMERGENCY RESPONSE CENTER (1-800-424-8802), THE N.H. DEPT. OF SAFETY (1-800-852-3411) AND THE NH WASTE MANAGEMENT DIVISION (271-2842). TO REPORT AN OIL SPILL: NHWSPCO (271-3440).

|  |    |   |  |  |   |   |  |  |  |  |    |    |    |    |
|--|----|---|--|--|---|---|--|--|--|--|----|----|----|----|
| <b>UNIFORM HAZARDOUS WASTE MANIFEST</b>  |    | 1. Generator's US EPA ID No.<br><b>NH0018902874</b> | Manifest Document No.<br><b>80001</b>  | 2. Page 1 of <b>1</b>                        | Information in the shaded areas is not required by Federal law, but may be required by State Law. |   |  |  |  |  |    |    |    |    |
| 3. Generator's Name and Mailing Address<br><b>Transformer Service Inc. (Broker)<br/>74 Regional Dr.<br/>Concord, N.H. 03301</b>  |    |   | A. State Manifest Document Number<br><b>NH C 0016316</b>   |  | B. State Generator's ID (Location)<br><b>Same as 3</b>  |   |  |  |  |  |    |    |    |    |
| 4. Generator's Phone<br><b>603-224-4006</b>  |    | 6. US EPA ID Number<br><b>NYD980769947</b>          |  | C. State Transporter's ID<br><b>10251P/A</b> |   | D. Transporter's Phone<br><b>716-871-5533</b>           |  |  |  |  |    |    |    |    |
| 5. Transporter 1 Company Name<br><b>Hazmat Environmental Group, Inc.</b>   |    | 7. Transporter 2 Company Name                       |  | E. State Transporter's ID                    |   |   |  |  |  |  |    |    |    |    |
| 9. Designated Facility Name and Site Address<br><b>U. S. Pollution Control Inc.<br/>Greyback Facility - 3 miles East, 7 miles North of Knolls, Exit 41 off I-80.<br/>Clive, Utah</b>   |    | 10. US EPA ID Number<br><b>UTD991301748</b>         |  | F. Transporter's Phone                       |   | G. State Facility's ID Not Required<br><b>Same as 9</b> |  |  |  |  |    |    |    |    |
|  |    |   |  | H. Facility's Phone<br><b>801-534-0054</b>   |   |   |  |  |  |  |    |    |    |    |
| 11. US Dot Description (Including Proper Shipping Name, Hazard Class, and ID Number)   |    | 12. Containers No.                                  | Type   | 13. Total Quantity                           | 14. Unit Wt/Vol   | I. Waste No.  |  |  |  |  |    |    |    |    |
| a. <b>RQ Waste Hazardous Substance, Solid, N.O.S., ORM-E, NA9188 (Polychlorinated Biphenyls)</b>   |    | <b>005</b>  | <b>TP</b>  | <b>42,403</b>                                | <b>P</b>  | EPA <b>D000</b><br>STATE <b>S002</b>                    |  |  |  |  |    |    |    |    |
| b.   |    |   |  |  |   | EPA<br>STATE  |  |  |  |  |    |    |    |    |
| c.   |    |   |  |  |   | EPA<br>STATE  |  |  |  |  |    |    |    |    |
| d.   |    |   |  |  |   | EPA<br>STATE  |  |  |  |  |    |    |    |    |
| J. Additional Descriptions for Materials Listed Above  |    |   | K. Handling Codes for Wastes Listed Above  |  |   |   |  |  |  |  |    |    |    |    |
| a. <b>T Transformers</b>   |    |   | Interim  |  | Final   |   |  |  |  |  |    |    |    |    |
| b.   |    |   | c.   |  | d.  |   |  |  |  |  |    |    |    |    |
| 15. Special Handling Instructions and Additional Information<br><b>Dike end contain.<br/>GB 89-221-89</b>  |    |   | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:25%;"></td> <td style="width:25%;"></td> <td style="width:25%;"></td> <td style="width:25%;"></td> </tr> <tr> <td>a.</td> <td>b.</td> <td>c.</td> <td>d.</td> </tr> </table> |  |   |   |  |  |  |  | a. | b. | c. | d. |
|  |    |   |  |  |   |   |  |  |  |  |    |    |    |    |
| a.   | b. | c.  | d.   |  |   |   |  |  |  |  |    |    |    |    |
| 16. GENERATOR'S CERTIFICATION. I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.<br>If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment. OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford. |    |   |  |  |   |   |  |  |  |  |    |    |    |    |
| Printed/Typed Name<br><b>A. Serzans</b>  |    | Signature<br><i>A. Serzans</i>                      |  |  | Month Day Year<br><b>08/07/89</b>   |   |  |  |  |  |    |    |    |    |
| 17. Transporter 1 Acknowledgement of Receipt of Materials  |    | Printed/Typed Name<br><b>RICHARD ROOK</b>           |  |  | Signature<br><i>R. Rook</i>   |   |  |  |  |  |    |    |    |    |
|  |    |   |  |  | Month Day Year<br><b>08/07/89</b>   |   |  |  |  |  |    |    |    |    |
| 18. Transporter 2 Acknowledgement of Receipt of Materials  |    | Printed/Typed Name                                  |  |  | Signature   |   |  |  |  |  |    |    |    |    |
|  |    |   |  |  | Month Day Year  |   |  |  |  |  |    |    |    |    |
| 19. Discrepancy Indication Space   |    |   |  |  |   |   |  |  |  |  |    |    |    |    |
| 20. Facility Owner, or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.  |    |   |  |  |   |   |  |  |  |  |    |    |    |    |
| Printed/Typed Name<br><b>USPCT MARK L. GRIFFIN</b>   |    | Signature<br><i>Mark L. Griffin</i>                 |  |  | Month Day Year<br><b>08/12/89</b>   |   |  |  |  |  |    |    |    |    |

GENERATOR COMPLETED COPY

NH  
C  
016316

| MODE | CONNECTION TEL | CONNECTION ID | START TIME  | USAGE T. | PAGES  |
|------|----------------|---------------|-------------|----------|--------|
| TX   | 14135942982    | G-3           | 05/12 08:44 | 01'25    | 02(00) |

FACSIMILE COVER SHEET

DATE: 5-12-89

FROM: R. J. CASARANO

TO : JOANN MROZINSKI

COMPANY: Face mate CORP

REF: Inv. NO. 4046  
PAYMENT Schedule

TOTAL NUMBER OF PAGES, INCLUDING COVER SHEET:  
2

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL US IMMEDIATELY. THANK YOU.

MESSAGE:

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**TSII<sup>®</sup>**  
**TRANSFORMER SERVICE, INC.**

74 REGIONAL DR. • P.O. BOX 1077 • CONCORD, N.H. 03302-1077  
(603) 224-4008

May 12, 1989

Ms. JoAnn Mrozinski  
Facemate Corporation  
5 West Main Street  
Chicopee, Massachusetts 01020

Re: TSI Invoice Number 4046 Dated April 19, 1989

Dear Ms. Mrozinski:

Per our telephone conversation of May 9th, a payment program must be initiated for the above captioned invoice.

TSI is willing to adopt the following schedule for this invoice:

|   |               |
|---|---------------|
| Payment 1 - Sixty-five percent (65%)<br>Net 30 Days   | - \$38,111.20 |
| Payment 2 - Thirty percent (30%) due on<br>receipt of signed copy(s) of<br>applicable manifest(s) show-<br>ing delivery to the end<br>disposer(s) | - \$17,589.78 |
| Payment 3 - Five percent (5%) due on<br>receipt of applicable<br>destruction certificate(s)   | - \$ 2,931.63 |

NOTES: NO WASTE WILL BE SHIPPED WITHOUT RECEIPT OF PAYMENT  
1. (INTEREST CHARGES WILL BE APPLIED AFTER 30 DAYS)  
PAYMENTS 2 AND 3 ARE DUE ON RECEIPT OF  
THE APPLICABLE DOCUMENTATION.

Should you have any questions, please do not hesitate to contact me.

Sincerely,



Richard J. Casarano  
Project Manager  
Corporate Staff

RJC/jmc

cc: Peter Yvanovich, Sales Representative  
Sheila LaSalle, Business Manager



Corrected Copy 9/12/89

**TRANSFORMER SERVICE, INC.**

74 REGIONAL DR. • P.O. BOX 1077 • CONCORD, N.H. 03302-1077  
(603) 224-4006

DATE: August 7, 1989

FROM: TSI, Concord, NH (Broker)

CODE: GB89-221-89

RE: Transformers - Over 500 PPM PCB, Flushed

| <u>ACCUM.</u><br><u>START DATE</u> | <u>MANIFEST NUMBER</u> | <u>SERIAL NO.</u> | <u>TSI NO.</u> | <u>MEASUREMENTS</u>    | <u>PPM</u> | <u>WEIGHT</u> |
|------------------------------------|------------------------|-------------------|----------------|------------------------|------------|---------------|
| 08/11/89                           | NHC0010618             | 66C13225          | 17512          | 32 X 33 X 48 (33.0)    | 820        | 1810          |
| 08/25/89                           | NHC0010641             | C783575           | 17554          | 40 X 43 X 63 (62.7)    | ASK        | 1200          |
| 04/13/89                           | NHC0013127             | NONE              | 19180          | 75 X 101 X 111 (486.6) | ASK        | 13574         |
| 04/13/89                           | NHC0013127             | 1850625           | 19181          | 75 X 101 X 106 (464.7) | ASK        | 13574         |
| 04/13/89                           | NHC0013127             | 1BP5652           | 19182          | 85 X 95 X 105 (484.9)  | ASK        | 12245         |

NOTE: ITEM 5 - TSI'S RECORDS INDICATE THE SERIAL NUMBER TO BE VBP56521



Is your RETURN ADDRESS completed on the reverse side?

**SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.  
 Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1.  Show to whom delivered, date, and addressee's address. (Extra charge)      2.  Restricted Delivery (Extra charge)

3. Article Addressed to:  
*Facemate  
 Chicopee, MA*

4. Article Number  
 Type of Service:  
 Registered       Insured  
 Certified       COD  
 Express Mail       Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature - Addressee  
 *John Mazurowski*

6. Signature - Agent

7. Date of Delivery

CHICOPPEE MA 01020  
 JUN 1 1989

Thank you for using Return Receipt Service

PS Form 3811, Apr. 1989

DOMESTIC RETURN RECEIPT

**SENDER:** Complete items 1, 2, 3 and 4.  
 Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1.  Show to whom, date and address of delivery.  
 2.  Restricted Delivery.

3. Article Addressed to:  
 MS. JOANN Mrozinski  
 Facemate Corporation  
 5 West Main Street  
 Chicopee, MA 01020

4. Type of Service:  
 Registered       Insured  
 Certified       COD  
 Express Mail       Return Receipt for Merchandise

Article Number: P 272 313 989

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature - Addressee

6. Signature - Agent

7. Date of Delivery

8. Addressee's Address (ONLY if requested and fee paid)

PS Form 3811, July 1983 447-845

PS Form 3800 June 1985

U.S.G.P.O. 1985-480-794

Facemate Corporation  
 5 West Main Street  
 Chicopee, MA 01020

RECEIPT FOR CERTIFIED MAIL

P 272 313 989

45  
 85  
 70  
 20



**TRANSFORMER SERVICE, INC.**

74 REGIONAL DR. • P.O. BOX 1077 • CONCORD, N.H. 03302-1077  
(603) 224-4006

CERTIFIED MAIL NO. P 272 313 989

February 26, 1990

Ms. JoAnn Mrozinski  
Facemate Corporation  
5 West Main Street  
Chicopee, MA 01020

Re: Your Purchase Order Number 23270 and  
TSI's Invoice Number 4046 Dated April 19, 1989

Dear Ms. Mrozinski:

Enclosed herewith is the documentation covering the incineration of the liquid waste that was removed from your facility under manifest numbers NHC0013042, NHC0013056 and NHC0013127, plus the documentation covering the disposal of the the transformers that were removed from your facility under manifest number NHC0013127.

As stated in our letter dated May 12, 1989 five percent, or \$2,931.63 is now due (Payment No. 3).

Your prompt attention to this matter will be appreciated.

Should you have any questions, please do not hesitate to contact me.

Sincerely,

Richard J. Casarano  
Project Manager  
Corporate Staff

RJC/jmc  
Enclosures

cc: Sheila LaSalle, Business Manager



Corrected Copy 9/12/89

**TRANSFORMER SERVICE, INC.**

74 REGIONAL DR. • P.O. BOX 1077 • CONCORD, N.H. 03302-1077  
(603) 224-4006

DATE: August 7, 1989

FROM: TSI, Concord, NH (Broker)

CODE: GB89-221-89

RE: Transformers - Over 500 PPM PCB, Flushed

| <u>ACCUM.</u><br><u>START DATE</u> | <u>MANIFEST NUMBER</u> | <u>SERIAL NO.</u> | <u>TSI NO.</u> | <u>MEASUREMENTS</u>    | <u>PPM</u> | <u>WEIGHT</u> |
|------------------------------------|------------------------|-------------------|----------------|------------------------|------------|---------------|
| 08/11/89                           | NHC0010618             | 66C13225          | 17512          | 32 X 33 X 48 (33.0)    | 820        | 1810          |
| 08/25/89                           | NHC0010641             | C783575           | 17554          | 40 X 43 X 63 (62.7)    | ASK        | 1200          |
| 04/13/89                           | NHC0013127             | NONE              | 19180          | 75 X 101 X 111 (486.6) | ASK        | 13574         |
| 04/13/89                           | NHC0013127             | 1850625           | 19181          | 75 X 101 X 106 (464.7) | ASK        | 13574         |
| 04/13/89                           | NHC0013127             | 1BP5652           | 19182          | 85 X 95 X 105 (484.9)  | ASK        | 12245         |

3 transformers  
2 switches



**Health and Human Services Building  
6 Hazen Drive  
Concord, NH 03301-6509**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved OMB No. 2050-0039. Expires 9/30/91

|  |  |   |  |   |   |
|--|--|---|--|---|---|
| <b>UNIFORM HAZARDOUS WASTE MANIFEST</b>  |  | 1. Generator's US EPA ID No.<br><b>NHDO18902874</b>   | Manifest Document No.<br><b>80001</b>                    | 2. Page 1 of 1  | Information in the shaded areas is not required by Federal law, but may be required by State Law. |
| 3. Generator's Name and Mailing Address<br><b>Transformer Service Inc. (Broker)<br/>74 Regional Dr.<br/>Concord, N.H. 03301</b>  |  |   | A. State Manifest Document Number<br><b>NH G 0016316</b> |   | B. State Generator's ID (Location)<br><b>SA 415</b>   |
| 4. Generator's Phone<br><b>603-224-4006</b>  |  | 6. US EPA ID Number<br><b>NYD980769947</b>  |  | C. State Transporter's ID<br><b>10251P-1</b>  |   |
| 5. Transporter 1 Company Name<br><b>Hazmat Environmental Group, Inc.</b>   |  | 7. Transporter 2 Company Name   |  | D. Transporter's Phone<br><b>716-877-5533</b>   |   |
| 9. Designated Facility Name and Site Address<br><b>U. S. Pollution Control Inc.<br/>Grayback Facility - 3 miles East, 7 miles North of Knolls, Exit 41 off I-80.<br/>Clive, Utah</b>   |  | 10. US EPA ID Number<br><b>UTD991301748</b>   |  | E. State Transporter's ID   |   |
| 11. US Dot Description (Including Proper Shipping Name, Hazard Class, and ID Number)<br><b>RG Waste Hazardous Substance, Solid, N.O.S., ORM-E, NA9188 (Polychlorinated Biphenyls)</b>  |  | 12. Containers No.<br><b>005</b>  | Type<br><b>TP</b>  | 13. Total Quantity<br><b>42,403</b>   | 14. Unit Wt/Vol<br><b>P</b>   |
| 15. Special Handling Instructions and Additional Information<br><b>Dike and contain.<br/>GB 89-221-89</b>  |  | K. Handling Codes for Wastes Listed Above   |  | I. Waste No.<br><b>EPA D000<br/>STATE S002</b>  |   |
| 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.<br><br>If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford. |  | J. Additional Descriptions for Materials Listed Above<br><b>Y Transformers</b>  |  | K. Handling Codes for Wastes Listed Above<br>Interim Final Interim Final<br><b>D3 344</b>   |   |
| 17. Transporter 1 Acknowledgement of Receipt of Materials  |  | 18. Transporter 2 Acknowledgement of Receipt of Materials   |  | 19. Discrepancy Indication Space  |   |
| Printed/Typed Name<br><b>A. Serzans</b>  |  | Signature<br><i>A. Serzans</i>  |  | Month Day Year<br><b>08/07/89</b>   |   |
| Printed/Typed Name<br><b>RICHARD ROOK</b>  |  | Signature<br><i>R. Rook</i>   |  | Month Day Year<br><b>08/07/89</b>   |   |
| Printed/Typed Name   |  | Signature   |  | Month Day Year  |   |
| 20. Facility Owner, or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.  |  | 20. Facility Owner, or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. |  | 20. Facility Owner, or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. |   |
| Printed/Typed Name<br><b>USPC MARK L. GRIFFIN</b>  |  | Signature<br><i>Mark L. Griffin</i>   |  | Month Day Year<br><b>08/17/89</b>   |   |

TO REPORT A SPILL, CONTACT: NATIONAL EMERGENCY RESPONSE CENTER (1-800-424-8802), THE N.H. DEPT. OF SAFETY (1-800-852-3411) AND THE NH WASTE MANAGEMENT DIVISION (271-2942). TO REPORT AN OIL SPILL: NHWSPCD (271-3440).

COPY: GENERATOR COMPLETED COPY

NH G 0016316



P.O. #8222

**TRANSFORMER SERVICE, INC.**74 REGIONAL DR. • P.O. BOX 1077 • CONCORD, N.H. 03302-1077  
(603) 224-4006

July 6, 1989

The following shipment of 4841 gallons of PCB liquid was transported by Clean Harbors of Kingston, Inc. for incineration at Clean Incineration Services, Pittsfield, MA by manifest number MAC430268 and represents PCB liquid from the following companies:

| <u>DATE RECEIVED</u> | <u>MANIFEST NUMBER</u>                | <u>GALLONS</u> |
|----------------------|---------------------------------------|----------------|
| 01/28/89             | NHC0013042                            | 1590           |
| 02/03/89             | NHC0013056                            | 415            |
| 04/13/89             | NHCOC13127                            | Flush 1752     |
| 04/27/89             | NHC0013137                            | Balance 152    |
| 04/27/89             | NHC0013137                            | Flush 160      |
| 04/28/89             | NHC0013138                            | 95             |
| 04/28/89             | NHC0013138                            | Flush 95       |
| 05/08/89             | NHC0013149                            | 5              |
| 05/08/89             | NHC0013149                            | Flush 5        |
| 05/11/89             | NHC0013155                            | 100            |
| 05/11/89             | NHCOC13155                            | Flush 100      |
| 05/17/89             | NHC0013160                            | 30             |
| 05/11/89             | BILL OF LADING N.H. El. Coop Part.342 |                |

A  
JUL 20 1989  
RECEIVED

## CERTIFICATE OF COMPLIANCE

In compliance with Federal Regulations 40 CFR, Part 761, the Polychlorinated Biphenyl (PCB or PCB contaminated) liquids, received from:

Generator Location: Transformer Service, Inc.  
74 Regional Drive  
Concord, NH 03301

Shipping Manifest Number: MAC430268  
Dated: 07/07/89

were disposed by the Clean Incineration Services Annex I facility, in Pittsfield, Massachusetts, in accordance with applicable federal, state and local regulations on/or prior to:

Date: 07/14/89

Signed:   
Officer Clean Incineration Services



COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING  
DIVISION OF SOLID AND HAZARDOUS WASTE

One Winter Street  
Boston, Massachusetts 02108

#152  
VT306  
N.H. # NH 4074 C1507  
S. Boston # B5575

Print or type. (Form designed for use on elite (12-pitch) typewriter.)

|   |  |   |  |   |  |  |  |   |  |
|---|--|---|--|---|--|--|--|---|--|
| <b>UNIFORM HAZARDOUS WASTE MANIFEST</b>   |  | 1. Generator US EPA ID No.<br>NHDD1B902B74b0001                 |  | Manifest Document No.   |  | 2. Page 1 of 1                                   |  | Information in the shaded areas is not required by Federal law. |  |
| 3. Generator's Name and Mailing Address<br>Transformer Service Inc. (Broker)<br>74 Regional Dr.<br>Concord, N.H. 03301  |  |   |  | 6. US EPA ID Number<br>NHDD1B902B74b0001  |  | A. State Manifest Document Number<br>MA C 430268 |  | B. State Gen. ID<br>Same as 3                                   |  |
| 4. Generator's Phone<br>603-224-4006  |  | 5. Transporter 1 Company Name<br>Clean Harbors of Kingston Inc. |  | 6. US EPA ID Number<br>NHDD1B902B74b0001  |  | C. State Trans. ID<br>022143                     |  | D. Transporter's Phone<br>617-585-5111                          |  |
| 7. Transporter 2 Company Name   |  | 8. US EPA ID Number   |  | 9. Designated Facility Name and Site Address<br>Clean Incineration Services<br>100 Woodlawn Ave.<br>Pittsfield, Mass. 01201 |  | 10. US EPA ID Number<br>MAP0000A00093            |  | E. State Trans. ID  |  |
| 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  |  | 12. Containers  |  | 13. Total Quantity  |  | 14. Unit Wt/Vol                                  |  | 15. Waste No.   |  |
| RO Waste Hazardous Substance, Liquid,<br>N.O.S. ORM-E,,NA9188 (Polychlorinated Biphenyls)   |  | No. Type  |  | Quantity  |  | Unit Wt/Vol                                      |  | Waste No.   |  |
|   |  | 0 0 1 T T   |  | 4 4 9 9   |  | G  |  | MA 0 2  |  |
| J. Additional Descriptions for Materials Listed Above (include physical state and hazard code.)   |  | K. Handling Codes for Wastes Listed Above                       |  |   |  |  |  |   |  |
| a. T PCB Liquid >500PPM   |  | b. T 10 6   |  |   |  |  |  |   |  |
| c.  |  | d.  |  |   |  |  |  |   |  |
| 15. Special Handling Instructions and Additional Information<br>Dike and contain.<br>DOT/E 8552   |  |   |  |   |  |  |  |   |  |
| 16. GENERATOR'S CERTIFICATION I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.<br><br>If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford. |  |   |  |   |  |  |  |   |  |
| Printed/Typed Name<br>A. SERZANS  |  |   |  | Signature<br><i>A. Serzans</i>  |  | Date<br>07/07/89                                 |  |   |  |
| 17. Transporter 1 Acknowledgement of Receipt of Materials   |  |   |  | Signature<br><i>Richard Lucier</i>  |  | Date<br>07/07/89                                 |  |   |  |
| Printed/Typed Name<br>Richard Lucier  |  |   |  | Signature<br><i>Richard Lucier</i>  |  | Date<br>07/07/89                                 |  |   |  |
| 18. Transporter 2 Acknowledgement of Receipt of Materials   |  |   |  | Signature   |  | Date   |  |   |  |
| Printed/Typed Name  |  |   |  | Signature   |  | Date   |  |   |  |
| 19. Discrepancy Indication Space  |  |   |  |   |  |  |  |   |  |
| 20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.  |  |   |  |   |  |  |  |   |  |
| Printed/Typed Name<br>Nick De Novellis  |  |   |  | Signature<br><i>Nick De Novellis</i>  |  | Date<br>07/07/89                                 |  |   |  |

In case of emergency or spill, immediately call National Response Center (800) 424-8802.

In case of emergency or spill, immediately call National Response Center (800) 424-8802.

MA 430268 COPY>3: GENERATOR-MAILED BY TSDF



**TRANSFORMER SERVICE, INC.**

74 REGIONAL DR. • P.O. BOX 1077 • CONCORD, N.H. 03302-1077  
(603) 224-4006

February 15, 1989

Ms. JoAnn Mrozinski  
Facemate Corporation  
5 West Main Street  
Chicopee, Massachusetts 01020

Dear Ms. Mrozinski:

Enclosed herewith please find your completed copy of Waste Manifest Number: NH C 0013056, covering the various items that we removed from your facility on February 3, 1989.

Should you have any questions concerning this manifest, please do not hesitate to contact either myself or Mr. Peter Yvanovich, Sales Representative, at our Concord, New Hampshire office.

Thank you for giving us this opportunity to be of service.

Sincerely,

*Andris Serzans (new)*

Andris Serzans  
Project Supervisor  
PCB Services

AS/mew  
Enclosure





**NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES**  
**WASTE MANAGEMENT DIVISION**  
 Health and Human Services Building  
 6 Hazen Drive  
 Concord, NH 03301-6509

Use print or type. (Form designed for use on elite (12-pitch) typewriter) Form Approved OMB No. 2050-0039, Expires 9-30-88

TO REPORT A SPILL, CONTACT: NATIONAL EMERGENCY RESPONSE CENTER (1-800-424-8802), THE N.H. DEPT. OF SAFETY (1-800-852-3411) AND THE NH WASTE MANAGEMENT DIVISION (271-2942). TO REPORT AN OIL SPILL: NHWSPCD (271-3440).

COPY 3: GENERATOR COMPLETED COPY

|  |  |   |  |  |   |   |
|--|--|---|--|--|---|---|
| <b>UNIFORM HAZARDOUS WASTE MANIFEST</b>  |  | 1. Generator's US EPA ID No.<br>NH000039168 | Manifest No.<br>D0002                                    | 2. Page 1 of 1                             | Information in the shaded areas is not required by Federal law, but may be required by State Law. |   |
| 3. Generator's Name and Mailing Address<br><b>Facemate Corp.<br/>5 West Main St.<br/>Chicopee, Ma.</b>   |  |   | A. State Manifest Document Number<br><b>NH C 0013056</b> |  | B. State Generator's ID (Location)<br><b>Same as 3</b>  |   |
| 4. Generator's Phone<br><b>413-594-6661</b>  |  | 6. US EPA ID Number<br>MHDO18902874         |  | C. State Transporter's ID<br><b>AL1957</b> |   | D. Transporter's Phone<br><b>603-224-4006</b> |
| 5. Transporter 1 Company Name<br><b>Transformer Service Inc.</b>   |  | 7. Transporter 2 Company Name               |  | E. State Transporter's ID                  |   | F. Transporter's Phone                        |
| 9. Designated Facility Name and Site Address<br><b>Transformer Service Inc.<br/>74 Regional Dr.<br/>Concord, N.H. 03301</b>  |  | 10. US EPA ID Number<br>MHDO18902874        |  | G. State Facility's ID<br><b>Same as 9</b> |   | H. Facility's Phone<br><b>603-224-4006</b>    |
| 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)   |  |   | 12. Containers No.                                       | 13. Total Quantity                         | 14. Unit (Vol)  | 1. Waste No.                                  |
| a. <b>RQ Waste Hazardous Substance, Liquid, M.O.S., ORM-E, NA9188 (Polychlorinated Biphenyls)</b>  |  |   | <b>09</b>  | <b>DM</b>                                  | <b>415</b>  | <b>G M002</b>                                 |
| b. <b>RQ Waste Hazardous Substance, Solid, M.O.S., ORM-E, NA9188 (Polychlorinated Biphenyls)</b>   |  |   | <b>01</b>  | <b>DM</b>                                  | <b>350</b>  | <b>P M002</b>                                 |
| c.   |  |   |  |  |   |   |
| d.   |  |   |  |  |   |   |
| J. Additional Descriptions for Materials Listed Above  |  |   | K. Handling Codes for Wastes Listed Above                |  |   |   |
| a. <b>T 415 Gals. x 13.5 Lbs.</b>  |  |   | a. <b>T-06</b>   |  |   |   |
| b. <b>T Solids</b>   |  |   | b. <b>D-81</b>   |  |   |   |
| 15. Special Handling Instructions and Additional Information<br><b>Dike and contain.</b>   |  |   |  |  |   |   |
| 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.<br><br>If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford. |  |   |  |  |   |   |
| Printed/Typed Name<br><b>JoAnn Mrozinski</b>   |  | Signature<br><i>JoAnn Mrozinski</i>         |  | Month Day Year<br><b>2 3 89</b>            |   |   |
| 17. Transporter 1 Acknowledgement of Receipt of Materials  |  | Printed/Typed Name<br><b>Richard A. Dye</b> |  | Signature<br><i>Richard A. Dye</i>         |   | Month Day Year<br><b>02 03 89</b>             |
| 18. Transporter 2 Acknowledgement of Receipt of Materials  |  | Printed/Typed Name                          |  | Signature                                  |   | Month Day Year<br><b>1 1 89</b>               |
| 19. Discrepancy Indication Space   |  |   |  |  |   |   |
| 20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.   |  |   |  |  |   |   |
| Printed/Typed Name<br><b>A. SERZANS</b>  |  | Signature<br><i>A. Serzans</i>              |  | Month Day Year<br><b>02 08 89</b>          |   |   |

NH C 0013056



**TRANSFORMER SERVICE, INC.**

74 REGIONAL DR. • P.O. BOX 1077 • CONCORD, N.H. 03302-1077  
(603) 224-4006

February 2, 1989

Ms. JoAnn Mrozinski  
Facemate Corporation  
5 West Main Street  
Chicopee, Massachusetts 01020

Dear Ms. Mrozinski:

Enclosed herewith please find your completed copy of Waste Manifest Number: NH C 0013042, covering the various items that we removed from your facility on January 28, 1989.

Should you have any questions concerning this manifest, please do not hesitate to contact either myself or Mr. Peter Yvanovich, Sales Representative, at our Concord, New Hampshire office.

Thank you for giving us this opportunity to be of service.

Sincerely,

*Andris Serzans (mew)*

Andris Serzans  
Project Supervisor  
PCB Services

AS/mew  
Enclosure

*Facemate  
40T  
Uniroyal*



**WASTE MANAGEMENT DIVISION**  
**Health and Human Services Building**  
**6 Hazen Drive**  
**Concord, NH 03301-6509**

Please print or type. (Form designed for use on elite (12-pitch) typewriter)

Form Approved OMB No. 2050-0039, Expires 9-30-88

TO REPORT A SPILL, CONTACT: NATIONAL EMERGENCY RESPONSE CENTER (1-800-424-8802), THE N.H. DEPT. OF SAFETY (1-800-852-3411) AND THE NH WASTE MANAGEMENT DIVISION (271-2942). TO REPORT AN OIL SPILL: NHWSRCD (271-3440).

COPY 3: GENERATOR COMPLETED COPY

|  |  |  |  |   |   |  |
|--|--|--|--|---|---|--|
| <b>UNIFORM HAZARDOUS WASTE MANIFEST</b>  |  | 1. Generator's US EPA ID No.<br><b>MAP000039168</b>              | Manifest Document No.<br><b>00001</b>                    | 2. Page 1 of 1                                | Information in the shaded areas is not required by Federal law, but may be required by State Law. |  |
| 3. Generator's Name and Mailing Address:<br><b>Facemate Corp.<br/>5 West Main St.<br/>Chicopee, Ma.</b>  |  |  | A. State Manifest Document Number<br><b>NH C 0013042</b> |   | B. State Generator's ID (Location)<br><b>Same as 3</b>  |  |
| 4. Generator's Phone<br><b>(413-594-6661)</b>  |  | 5. Transporter 1 Company Name<br><b>Transformer Service Inc.</b> |  | 6. US EPA ID Number<br><b>MH0018902874</b>    |   | C. State Transporter's ID<br><b>NH AC 1951</b> |
| 7. Transporter 2 Company Name  |  | 8. US EPA ID Number  |  | D. Transporter's Phone<br><b>603-224-4006</b> |   | E. State Transporter's ID                      |
| 9. Designated Facility Name and Site Address<br><b>Transformer Service Inc.<br/>74 Regional Dr.<br/>Concord, N.H. 03301</b>  |  | 10. US EPA ID Number<br><b>MH0018902874</b>                      |  | F. Transporter's Phone                        |   | G. State Facility's ID<br><b>Same as 9</b>     |
|  |  |  |  | H. Facility's Phone<br><b>603-224-4006</b>    |   |  |
| 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)   |  |  | 12. Containers No.                                       | 13. Total Quantity                            | 14. Unit Wt/Vol   | 1. Waste No.                                   |
| a. RQ Waste Hazardous Substance, Liquid, N.O.S., ORM-E, NA9188 (Polychlorinated Biphenyls)   |  |  | 32   | DM 1590                                       | G   | M002   |
| b. RQ Waste Hazardous Substance, Solid, (Empty) N.O.S., ORM-E, NA9188 (Polychlorinated Biphenyls)  |  |  | 07   | DM 325  | P   | M002   |
| c. RQ Waste Hazardous Substance, Solid, N.O.S., ORM-E, NA9188 (Polychlorinated Biphenyls)  |  |  | 02   | DA 380  | P   | M002   |
| d.   |  |  |  |   |   |  |
| J. Additional Descriptions for Materials Listed Above  |  |  | K. Handling Codes for Wastes Listed Above                |   |   |  |
| a. T 1590 Gals. x 13.5 Lbs. c. T Solids  |  |  | a. T-06 c. D-81  |   |   |  |
| b. 7 Empty Contaminated Burells d.   |  |  | b. D-81 d.   |   |   |  |
| 15. Special Handling Instructions and Additional Information<br><b>Dike and contain.</b>   |  |  |  |   |   |  |
| 16. GENERATOR'S CERTIFICATION. I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.<br>If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford. |  |  |  |   |   |  |
| Printed/Typed Name<br><b>JOAN MROZINSKI</b>  |  |  | Signature<br><i>Joan Mrozinski</i>                       |   | Month Day Year<br><b>1 20 89</b>  |  |
| 17. Transporter 1 Acknowledgement of Receipt of Materials  |  |  | Printed/Typed Name<br><b>Richard A. Dyer</b>             |   | Signature<br><i>Richard A. Dyer</i>   |  |
|  |  |  |  |   | Month Day Year<br><b>01 28 89</b>   |  |
| 18. Transporter 2 Acknowledgement or Receipt of Materials  |  |  | Printed/Typed Name                                       |   | Signature   |  |
|  |  |  |  |   | Month Day Year  |  |
| 19. Discrepancy Indication Space   |  |  |  |   |   |  |
| 20. Facility Owner, or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.  |  |  |  |   |   |  |
| Printed/Typed Name<br><b>ASERZANS</b>  |  |  | Signature<br><i>ASERZANS</i>                             |   | Month Day Year<br><b>01 31 89</b>   |  |

COPY 1: GENERATOR COMPLETED COPY

# TRANSFORMER SERVICE, INC.

P.O. BOX 1077  
CONCORD, NEW HAMPSHIRE 03302

(221)

CUSTOMER NUMBER  
15500

PAGE 1

INVOICE DATE  
09/11/88

NUMBER  
9066

TO: FACEMATE CORPORATION  
ATTN: ACCOUNTS PAY  
5 WEST MAIN ST  
CHICOPEE MA 01002

SHIP TO

FACEMATE CORPORATION  
5 WEST MAIN ST  
CHICOPEE, MA

|                                      |             |           |                      |             |                        |
|--------------------------------------|-------------|-----------|----------------------|-------------|------------------------|
| CUSTOMER PURCHASE ORDER NO.<br>15500 | SHIPPED VIA | SHIP DATE | TERMS<br>NET 10 DAYS | SLSMN<br>14 | JOB ORDER NO.<br>15244 |
|--------------------------------------|-------------|-----------|----------------------|-------------|------------------------|

| SALES CODE | DESCRIPTION   | QUANTITY SHIPPED | UNIT PRICE | AMOUNT    |
|------------|---|------------------|------------|-----------|
| 55         | OIL SAMPLES-INSPECTION & LIQUID TESTING<br><br>TESTING COMPLETED 8.88<br><br>SALES & USE TAX EXEMPTION NO. 04-2564730 | 8.00             | 20.00      | \$ 160.00 |

A SERVICE CHARGE OF 1 1/2% PER MONTH, WHICH IS AN ANNUAL PERCENTAGE RATE OF 18%, WILL BE ADDED TO THIS INVOICE IF NOT PAID WITHIN 30 DAYS OF INVOICE DATE.

|                  |                  |
|------------------|------------------|
| SUB TOTAL        | \$ 160.00        |
| SALES TAX        |                  |
| FREIGHT          |                  |
| <b>TOTAL DUE</b> | <b>\$ 160.00</b> |

PLEASE SHOW OUR INVOICE NO. ON YOUR CHECK  
REMIT TO:  
TRANSFORMER SERVICE, INC.  
P.O. BOX 1077  
CONCORD, N.H. 03302

*Thank You For  
Your Order*  
ACCOUNTING FILE

- 2.
- 3.
- 4.

J.



Facemate Corporation  
 Five West Main Street  
 Chicopee, Mass. 01020  
 (413) 594-6661  
 Cable Address: FACEMATE COPE  
 Telex: 955-460

**PURCHASE ORDER**

**NO. 22320**

This number must appear on all invoices, packing slips, packages and correspondence.

VEND NO.

00397

TO:

TRANSFORMER SERVICE, INC

P.O. BOX 1077  
 CONCORD

NH 03301

SHIP

TO: FACEMATE CORP.

5 WEST MAIN STREET  
 CHICOPEE, MA 01020

|   |                 |                    |   |   |
|---|-----------------|--------------------|---|---|
| DATE<br>6/21/88                           | TERMS<br>NET 30 | F.O.B.<br>CHICOPSE | SHIP VIA<br>ST  | <input type="checkbox"/> TAXABLE<br><input checked="" type="checkbox"/> TAX EXEMPT 04-2564730 |
| SHIP-ARRIVAL DATE REQUIRED<br>ARRIVE 6/28 |                 |                    | <input type="checkbox"/> NON-CONFIRMED . . . PLEASE ACKNOWLEDGE<br><input checked="" type="checkbox"/> CONFIRMED WITH CAROL WALTER ON 6/13/88 |   |

| ITEM NO.                         | ACCOUNT NO. | DESCRIPTION  | QUANTITY | U/M  | PRICE     |
|----------------------------------|-------------|--|----------|------|-----------|
| 1                                | 5032-000    | STANDARD SCREEN TESTS W/ INSPECTIONS A,B,C, FOR 6 UNITS AND FAULT GAS ANALYSIS | 6        | UNIT | 400.00/TO |
| NO DELIVERY ACCEPTED AFTER 10 AM |             |  |          |      |           |
|                                  |             |  |          |      |           |

SPECIAL INSTRUCTIONS

1. This order is subject to the terms and conditions as stated on the face and reverse side hereof.
2. Detailed packing list must accompany all shipments.
3. Show itemized prices, unit and extension, on all invoices.
4. Except as provided by specific agreement or in accordance with accepted industry standards, ship exact quantities as shown. Do not overshoot or undershoot.

AUTHORIZED SIGNATURE

J. MROZINSKI

ORIGINAL PURCHASE ORDER



**TRANSFORMER SERVICE, INC.**

74 REGIONAL DR. • P.O. BOX 1077 • CONCORD, N.H. 03302-1077  
(603) 224-4006

September 14, 1988

Ms. Joann Mrozinski  
Facemate Crop.  
5 West Main Street  
Chicopee, MA 01020

RE: Transformer Inspection & Liquid Test Data, 1988  
Location: Facemate Plant, Main Substation

Dear Ms. Mrozinski:

The analysis of the field inspection and liquid test data for your facility has indicated various problems which require your attention. We have enclosed an itemized report which details any deficiencies that we have encountered along with recommendations to service your equipment.

Due to the high PCB contents of TSI Test numbers 1, 2 and 3, we strongly recommend retrofilling at this time. This process will not only reduce the PCB contents, but will also improve the overall fluid quality in these units. Retrofilling will also reduce your PCB liability on these units.

We have enclosed quotations for the recommended services per the enclosed report. These prices are given for your consideration. Please note: due to the high PCB concentrations of TSI Test numbers 1, 2 and 3, we feel that a single step retrofill will not sufficiently reduce the PCB content to less than 50 ppm. A second stage retrofill will most likely be needed, to be performed at least ninety days after the initial process.

Should you have any questions concerning this report, please do not hesitate to contact me at our office.

Thank you for giving us this opportunity to be of service to you.

Sincerely,

Peter Yvanovich  
Sales Representative

PY/jp  
Enclosures

FIELD INSPECTION  
&  
LIQUID ANALYSIS REPORT

FACEMATE CORP.  
CHICOPEE, MA

*Facemate  
Main Substation*

TSI TEST  
NUMBER

PROBLEM

RECOMMENDED SERVICE

|   |   |  |
|---|---|--|
| 1 | <u>LEAKS</u> -OLD STAINS<br><u>LIQUID LEVEL</u> -LOW<br><u>FLUID</u> -PCB (>500 PPM)              | CLEAN STAIN & CHECK FOR ACTIVE<br>LEAKS; ADD COMPATIBLE LIQUID TO<br>PROPER LEVEL RETROFILL  |
| 2 | <u>LEAKS</u> -PRESSURE REGULATOR *(1)<br><u>LIQUID LEVEL</u> -LOW<br><u>FLUID</u> -PCB (>500 PPM) | CLEAN STAIN & CHECK FOR ACTIVE<br>LEAKS; ADD COMPATIBLE LIQUID TO<br>PROPER LEVEL; RETROFILL |
| 3 | <u>LIQUID LEVEL</u> -SLIGHTLY LOW<br><u>FLUID</u> -PCB (>500 PPM)                                 | ADD COMPATIBLE LIQUID TO PROPER LEVEL;<br>RETROFILL  |
| 4 | <u>PAINT</u> -FAIR, FLAKING WITH MINOR<br>RUST<br><u>FLUID</u> -BORDERLINE MOISTURE               | CLEAN, PRIME AS NEEDED AND PAINT<br>UNIT; DEHYDRATE  |
| 5 | <u>FLUID</u> -BORDERLINE MOISUTRE   | DEHYDRATE  |
| 6 | <u>LEAKS</u> -LEVEL GAUGE *(2)<br><u>FLUID</u> -BORDERLINE MOISTURE                               | CLEAN & REPAIR LEAK; DEHYDRATE   |

This report makes reference to the cleaning of liquid PCB residues which are in accessible areas. Our reported cleanup may not meet the standard as set forth by the EPA under their PCB Spill Cleanup Policy dated Thursday, April 2, 1987. TSI can supply you with complete cleanup service, if necessary, and at your request.

**TRANSFORMER SERVICE, INC.**

BOX 1077

CONCORD, NEW HAMPSHIRE 03302

21

CUSTOMER NUMBER  
15500

INVOICE DATE  
08/10/88

INVOICE NUMBER  
8805

PAGE 1

TO: STATE ELECTRIC  
1000 WASHINGTON ST  
WEST WINDY ST  
WESTPORT, MA 01088

SHIP TO: STATE ELECTRIC  
1000 WASHINGTON ST  
WEST WINDY ST  
WESTPORT, MA 01088

| CUSTOMER PURCHASE ORDER NO. |  | SHIPPED VIA      | SHIP DATE | TERMS       | SLSMN            | JOB ORDER NO. |
|-----------------------------|--|------------------|-----------|-------------|------------------|---------------|
|                             |  |                  |           | NET 10 DAYS |                  |               |
| SALES CODE                  | DESCRIPTION  | QUANTITY SHIPPED | UNIT      | UNIT PRICE  | AMOUNT           |               |
|                             | <p>TESTED &amp; RE</p> <p>SALES AND USE TAX EXEMPTION NO. 88-0000000</p> |                  |           |             |                  |               |
|                             |  |                  |           |             | <b>SUB TOTAL</b> | \$ 40.00      |
|                             |  |                  |           |             | <b>SALES TAX</b> |               |
|                             |  |                  |           |             | <b>FREIGHT</b>   |               |
|                             |  |                  |           |             | <b>TOTAL DUE</b> | \$ 40.00      |

PLEASE CONTACT SALES REPRESENTATIVE FOR THESE DETAILS IF NOT PAID WITHIN 10 DAYS OF INVOICE DATE.

PLEASE SHOW OUR INVOICE NO. ON YOUR CHECK  
 REMIT TO:  
**TRANSFORMER SERVICE, INC.**  
 P.O. BOX 1077  
 CONCORD, N.H. 03302

*Thank You For  
Your Order*  
**ACCOUNTING FILE**

RE  
DIR



**Faceplate Corporation**

Five West Main Street  
Chicopee, Massachusetts 01020  
Area Code 413, 594-6661

TO: Carol Croteno  
Transformer Service Inc.

DATE: 8-3-88

SUBJECT: Sample enclosed

PLEASE REPLY:

- URGENT
- AS SOON AS POSSIBLE
- NO REPLY NECESSARY

Please have the sample tested for PCB content and send me a photo on it but call ahead with results.  
Mark this sample TSI #75  
It is a 15 gal mineral oil transformer

REPLY TO: Jack - you

Received 8/11/88  
PCB BP  
5/11/88 \*ND 8/11/88  
John Muzyski

SIGNED:

DATE:

RECIPIENT — REPLY AND RETAIN THIS COPY. DETACH AND RETURN PINK COPY TO SENDER.

# TISI

## VERBAL PURCHASE ORDER FORM

DATE: 8-1-78

WHO TOOK CALL: CC

WORK LOCATION:

BILL TO:

COMPANY: Facemate

COMPANY: Same

ADDRESS: 5 W. Main St  
Chicopee, Ma 01020

ADDRESS:

DOES CUSTOMER HAVE  
EPA ID NO. NO YES NUMBERDOES CUSTOMER SALES TAX  
EXEMPTION OR DIRECT PAY  
NUMBER? NO YES NUMBER

GENERATOR TEL. #

WHO CALLED:

PHONE NO./EXT.:

SCHEDULING CONTACT: James Mazajski

PHONE NO./EXT.: 413-594-6661

PURCHASE ORDER NO.: Verbal 21799

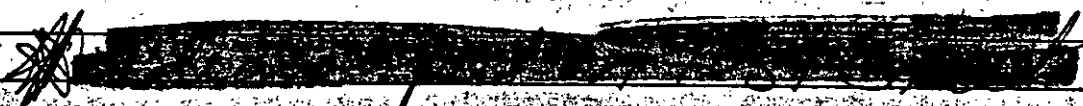
WILL SEND? YES  NO 

(SCREEN TESTS) # original PCB order 2/21 3-14-88 (ANALYTICAL LAB TESTS)

| QUANTITY | PRICE | QUANTITY | PRICE |
|----------|-------|----------|-------|
| OIL      |       | PCB      |       |
| ASKAREL  |       | 1        | 43.00 |
| SILICONE |       | GAS      |       |
| OTHER    |       | MOISTURE |       |
|          |       | OTHER    |       |

WORK DESCRIPTION (INCLUDE QUOTE NUMBER AND DATE IF APPLICABLE): 15969

1 mail-in PCB sample



Please mark TST #75

PRICE(S): \$43.00

SPECIAL PAYMENT TERMS?

REQUESTED SCHEDULING DATE(S):

DIRECTIONS:

**TRANSFORMER SERVICE, INC.**  
**CONCORD, NEW HAMPSHIRE 03302**

21

CUSTOMER NUMBER  
16500

INVOICE DATE  
06/03/88

INVOICE NUMBER  
6122

PAGE 1

SOLD TO  
 FACOM CORPORATION  
 5 WEST MAIN ST  
 CHICOPEE MA 01002

S  
H  
I  
P  
T  
O

FACOM CORPORATION

5 WEST MAIN ST  
 CHICOPEE MA

|                                     |             |           |                      |             |                        |
|-------------------------------------|-------------|-----------|----------------------|-------------|------------------------|
| CUSTOMER PURCHASE ORDER NO.<br>1173 | SHIPPED VIA | SHIP DATE | TERMS<br>NET 10 DAYS | SLSMN<br>14 | JOB ORDER NO.<br>14710 |
|-------------------------------------|-------------|-----------|----------------------|-------------|------------------------|

| SALES CODE | DESCRIPTION                                | QUANTITY SHIPPED | UNIT | UNIT PRICE | AMOUNT     |
|------------|--|------------------|------|------------|------------|
|            | INSPECTION ONLY OF ASBARD BOARD EQUIPMENT  | 03.00            | EA   | 23.00      | \$ 734.00  |
|            | PCB ANALYSES IN PCB                        | 03.00            | EA   | 47.00      | \$ 1417.00 |
|            | PCB ANALYSIS IN PCB - 5000 SERVICE         | 1.00             | EA   | 60.00      | \$ 60.00   |
|            | TESTING COMPLETED 6/03                     |                  |      |            |            |
|            | SALES AND USE TAX EXEMPTION NO. 84-0604700 |                  |      |            |            |

A SERVICE CHARGE OF 1 1/2% PER MONTH, WHICH IS AN ANNUAL PERCENTAGE RATE OF 18%, WILL BE ADDED TO THIS INVOICE IF NOT PAID WITHIN 30 DAYS OF INVOICE DATE.

|           |            |
|-----------|------------|
| SUB TOTAL | \$ 2021.00 |
| SALES TAX |            |
| FREIGHT   |            |
| TOTAL DUE | \$ 2021.00 |

PLEASE SHOW OUR INVOICE NO. ON YOUR CHECK  
 REMIT TO:  
**TRANSFORMER SERVICE, INC.**  
 P.O. BOX 1077  
 CONCORD, N.H. 03302

*Thank You For  
 Your Order*  
**ACCOUNTING FILE**

J  
 Send field report receiv



Facemate Corporation  
 Five West Main Street  
 Chicopee, Mass. 01020  
 (413) 594-6661  
 Cable Address: FACEMATE COPE  
 Telex: 955-460

NO. 21799

This number must appear on all invoices, packing slips, packages and correspondence.

15800  
5129

J NO. 00397 TO: TRANSFORMER SERVICE, INC

P.O. BOX 1077  
 CONCORD NH 03301

SHIP TO:

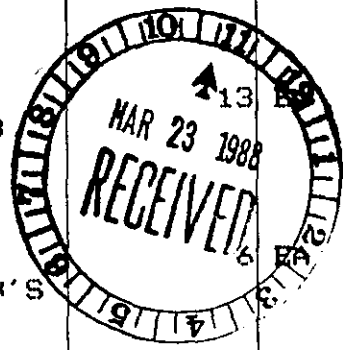
FACEMATE CORP.

5 WEST MAIN STREET  
 CHICOPEE, MA 01020

|                 |                 |                    |                     |   |
|-----------------|-----------------|--------------------|---------------------|---|
| DATE<br>3/22/88 | TERMS<br>NET 30 | F.O.B.<br>CHICOPEE | SHIP VIA<br>ON SITE | <input type="checkbox"/> TAXABLE<br><input checked="" type="checkbox"/> TAX EXEMPT 04-2564730 |
|-----------------|-----------------|--------------------|---------------------|---|

|  |   |
|--|---|
| SHIP ARRIVAL DATE REQUIRED<br>ARRIVE 4/01/88 | <input type="checkbox"/> NON-CONFIRMED . . . PLEASE ACKNOWLEDGE<br><input checked="" type="checkbox"/> CONFIRMED WITH KEN PRICE (603) 3/14/88 |
|--|---|

| ITEM NO. | ACCOUNT NO. | DESCRIPTION   | QUANTITY | U/M | PRICE    |
|----------|-------------|---|----------|-----|----------|
| 1        | 8831-000    | INSPECT ONLY 13 TRANSFORMERS AND ASSORTED SWITCHES AT OLD <u>UNIROYAL</u>                   | 13       | EA  | 21.00/EA |
| 2        | 8831-000    | DRAW SAMPLES PCB ANALYSIS OF OIL AND INSPECT 13 MINERAL OIL TRANSFORMERS AT <u>UNIROYAL</u> | 13       | EA  | 43.00/EA |
| 3        | 5032-000    | 6 TRANSFORMERS AT FACEMATE TO BE TESTED FOR PCB'S CONCENTRATION                             | 6        | EA  | 43.00/EA |



NO DELIVERY ACCEPTED AFTER 11 AM

SPECIAL INSTRUCTIONS

1. This order is subject to the terms and conditions as stated on the face and reverse side hereof.
2. Detailed packing list must accompany all shipments.
3. Show itemized prices, unit and extension, on all invoices.
4. Except as provided by specific agreement or in accordance with accepted industry standards, ship exact quantities as shown. Do not overship or undership.

AUTHORIZED SIGNATURE

*J. Prozinski*

J. PROZINSKI

ORIGINAL PURCHASE ORDER



**TRANSFORMER SERVICE, INC.**

74 REGIONAL DR. • P.O. BOX 1077 • CONCORD, N.H. 03302-1077  
(603) 224-4008

June 3, 1988

Ms. Joann Mrozinski  
Facemate Corp.  
5 West Main Street  
Chicopee, MA 01020

RE: PCB Test and Site Inspection

Dear Ms. Mrozinski:

Analysis of the field report for your two facilities (Facemate Plant and Old Uniroyal Plant) has indicated several problem areas. We will address these items in order of priority, using PCB content and possible environment hazards posed as our criteria for determining precedence.

I. Old Uniroyal Plant - Askarel Equipment - There are thirty-seven pieces of askarel (pure PCB) filled electrical equipment (transformer and switches). Of these, thirty-one are reported as having moderate to critical leaks. Regasketing, replacement of valves sample taps and gauges, and epoxing of weld leaks are one option; disposal of these units is another. Either way, an extensive clean-up of the spilled fluid is definitely required ( a soil sample from an empty transformer pad revealed a PCB content of 640,000 parts per million). We have enclosed a copy of the Federal Regulator Reminder, regarding the Federal EPA's PCB spill clean-up policy.

II. Old Uniroyal Plant - Mineral Oil Equipment - Twenty-five mineral oil units at this plant were sampled for PCB analysis: sixteen units are classified "non contaminated," six are "PCB-contaminated" (50-499 ppm), and three are "PCB" (500 + ppm). Those units which were inspected all show poor bushing and paint condition and various leaks. Again, major repairs or disposal are the options present, with clean-ups of the contaminated liquid spilled.

III. Facemate Plant - Mineral Oil Equipment - Two of the four units sampled here were reported to be "PCB-contaminated." Only one unit showed any active leaks, but all four were reported to have paint and bushings in poor condition. Service may be more viable than disposal in the case of these units.

Should you have any questions concerning this report, please do not hesitate to contact me at our office.

Thank you for giving us this opportunity to be of service to you.

Sincerely,

*Kenneth Price (JP)*  
Kenneth Price  
Assistant Sales Manager

KP/jp  
Enclosures

JRP.  
ROYAL PLANT)  
PEE, MA

FIELD INSPECTION  
&  
LIQUID ANALYSIS REPORT

| TSI TEST NUMBER | PCB | PROBLEM   | RECOMMENDED SERVICE                               |
|-----------------|-----|---|---|
| 5               | ASK | LEAK-BOTTOM VALVE OUTBOARD *(4);<br>TOP SAMPLE TAP *(2)   | CLEAN & REPAIR LEAKS                              |
| 6               | ASK | LEAK-SWITCH CABINET AT TANK *(4)  | CLEAN & REPAIR LEAK (REGASKET AS NEEDED)          |
| 7               | ASK | LEAKS-SIGHT GAUGE *(4); BOTTOM VALVE OUTBOARD *(4); TOP SAMPLE TAP *(2)                               | CLEAN & REPAIR LEAKS (REGASKET AS NEEDED)         |
| 8               | ASK | LEAKS-BOTTOM VALVE OUTBOARD *(4); CABINET VAULT *(4)  | CLEAN & REPAIR LEAKS (REGASKET AS NEEDED)         |
| 9               | ASK | LEAKS-TEMPERATURE GAUGE *(4)<br>TOP VALVE *(4)  | CLEAN & REPAIR LEAKS (REGASKET/REPLACE AS NEEDED) |
| 10              | ASK | LEAK-SWITCH CABINET AT TANK *(4)  | CLEAN & REPAIR LEAKS (REGASKET AS NEEDED)         |
| 13              | ASK | LEAKS-BOTTOM VALVE PACKING NUT *(4)   | CLEAN & REPAIR LEAK (REPACK IF NEEDED)            |
| 14              | ASK | LEAKS-BOTTOM VALVE PACKING NUT *(3); LEVEL GAUGE *(1)   | CLEAN & REPAIR LEAKS (REPACK IF NEEDED)           |
| 15              | ASK | LEAKS-LEVEL GAUGE *(5); TOP VALVE PACKING NUT *(4); BOTTOM VALVE *(1)                                 | CLEAN & REPAIR LEAKS (REPACK/REPLACE AS NEEDED)   |
| 16              | ASK | LEAKS-SWITCH CABINET AT TANK (4 TO 5); BOTTOM VALVE *(4); BOTTOM SAMPLE TAP *(4); TOP SAMPLE TAP *(2) | CLEAN & REPAIR LEAKS (REGASKET/REPLACE AS NEEDED) |
| 17              | ASK | LEAKS-BOTTOM VALVE OUTBOARD *(3)  | CLEAN & REPAIR LEAK                               |
| 18              | ASK | LEAKS-TOP SAMPLE TAP *(3)   | CLEAN & REPAIR LEAK (REPLACE AS NEEDED)           |
| 21              | ASK | LEAKS-TOP COVER OUTBOARD *(4); TAP CHANGER *(2); BOTTOM VALVE *(1)                                    | CLEAN & REPAIR LEAKS (REGASKET AS NEEDED)         |
| 22              | ASK | POOR CONDITION<br>LEAK-BOTTOM VALVE OUTBOARD *(4)   | CLEAN & REPAIR LEAK                               |
| 24              | ASK | LEAKS-SWITCH CABINET AT TANK  | CLEAN & REPAIR LEAKS (REGASKET AS NEEDED)         |
| 25              | ASK | LEAKS-TOP VALVE *(4); TOP SAMPLE TAP *(4); SWITCH CABINET AT TANK *(4)                                | CLEAN & REPAIR LEAKS (REGASKET/REPLACE AS NEEDED) |

| ISI TEST NUMBER | PCB | PROBLEM   | RECOMMENDED SERVICE                       |
|-----------------|-----|---|---|
| 26              | ASK | <u>LEAKS</u> -TAP CHANGER HANDLE *(4)   | CLEAN & REPAIR LEAK (REGASKET AS NEEDED)  |
| 27              | ASK | <u>LEAKS</u> -SIGHT GAUGE *(4); BOTTOM VALVE OUTBOARD *(4); TOP VALVE OUTBOARD *(4)                   | CLEAN & REPAIR LEAKS (REGASKET AS NEEDED) |
| 29              | ASK | <u>LEAKS</u> -SWITCH CABINET AT TANK *(5); TOP VALVE OUTBOARD *(5) SIGHT GAUGE *(2); BOTTOM VALVE (1) | CLEAN & REPAIR LEAKS (REGASKET AS NEEDED) |
| 30              | ASK | <u>LEAKS</u> -BOTTOM VALVE PACKING NUT *(5); TAP CHANGER HANDLE *(5)                                  | CLEAN & REPAIR LEAKS (REPLACE AS NEEDED)  |
| 31              | ASK | <u>LEAKS</u> -TOP VALVE OUTBOARD *(4); TOP SAMPLE TAP *(3)  | CLEAN & REPAIR LEAKS (REPLACE AS NEEDED)  |
| 32              | ASK | <u>LEAKS</u> -SWITCH CABINET AT TANK *(4)   | CLEAN & REPAIR LEAK (REGASKET AS NEEDED)  |
| 33              | ASK | <u>LEAKS</u> -LEVEL GAUGE *(4); BOTTOM SAMPLE TAP *(2)  | CLEAN & REPAIR LEAKS (REPLACE AS NEEDED)  |
| 34              | ASK | <u>LEAKS</u> -SWITCH CABINET AT TANK *(5)   | CLEAN & REPAIR LEAK (REGASKET AS NEEDED)  |
| 35              | ASK | <u>LEAKS</u> -TOP VALVE OUTBOARD *(4) TOP SAMPLE TAP *(4)   | CLEAN & REPAIR LEAK (REPLACE AS NEEDED)   |
| 36              | ASK | <u>LEAKS</u> -BOTTOM VALVE PACKING NUT *(4)   | CLEAN & REPAIR LEAK (REPACK IF NEEDED)    |
| 37              | ASK | <u>LEAKS</u> -TOP VALVE OUTBOARD & PACKING NUT *(5); BOTTOM VALVE *(1)                                | CLEAN & REPAIR LEAK (REPACK IF NEEDED)    |
| 38              | ASK | <u>LEAKS</u> -SWITCH CABINET AT TANK *(3); BOTTOM VALVE OUTBOARD *(3)                                 | CLEAN & REPAIR LEAK (REGASKET IF NEEDED)  |
| 39              | ASK | <u>LEAKS</u> -BOTTOM VALVE PACKING NUT *(4)   | CLEAN & REPAIR LEAK (REPACK IF NEEDED)    |
| 40              | ASK | <u>LEAKS</u> -BOTTOM VALVE *(1)   | CLEAN & REPAIR LEAK                       |
| 41              | ASK | <u>LEAKS</u> -BOTTOM VALVE *(1)   | CLEAN STAIN & CHECK FOR ACTIVE LEAKS      |
| 7 - 44          | ASK | <u>LEAKS</u> -BOTTOM VALVE PACKING NUT *(2)   | CLEAN & REPAIR LEAKS (REPACK IF NEEDED)   |

FIELD INSPECTION  
 &  
 LIQUID ANALYSIS REPORT

| TSI TEST NUMBER | PCB | PROBLEM  | RECOMMENDED SERVICE                                  |
|-----------------|-----|--|--|
| 45              | ASK | <u>LEAKS</u> -TAP CHANGER HANDLE *(4);<br>TOP SAMPLE TAP *(3)          | CLEAN & REPAIR LEAK (REGASKET/<br>REPLACE AS NEEDED) |
| 49              | 550 | <u>GIL</u> -PCB  | RETROFILL OR DISPOSE UNITS 49<br>THROUGH 54          |
| 51              | 960 | <u>OIL</u> -PCB  |  |
| 52              | 380 | <u>GIL</u> -PCB-CONTAMINATED   |  |
| 53              | 360 | <u>GIL</u> -PCB-CONTAMINATED   |  |
| 54              | 360 | <u>OIL</u> -PCB-CONTAMINATED   |  |
| 57              | 31  | <u>LEAKS</u> -POTHEAD *(4) <u>PAINT</u> -VERY RUSTY                    | DISPOSE  |
| 58              | 360 | <u>PAINT</u> -VERY RUSTY- <u>OIL</u> -PCB CONTAMINATED                 | DISPOSE  |
| 61              | 6   | <u>LEAKS</u> -BOTTOM SAMPLE TAP *(4);<br>BUSHINGS SYPHONING            | CLEAN & REPAIR LEAKS                                 |
| 62              | 22  | <u>LEAKS</u> -BUSHINGS SYPHONING                                       | CLEAN & REPAIR LEAKS                                 |
| 63              | 530 | <u>LEAKS</u> -BUSHING SYPHONING-OIL-PCB                                | CLEAN & REPAIR LEAK; RETROFILL                       |
| 64              | 62  | <u>LEAKS</u> -TOP COVER *(4); BUSHING<br>SYPHONING-OIL-PCB-COTAMINATED | CLEAN & REPAIR LEAKS;RETROFILL                       |
| 65              | 3   | <u>LEAKS</u> -UNIT SATURATED WITH OIL                                  | CLEAN UNIT & LOCATE ACTIVE LEAKS.                    |
| 66              | 110 | <u>LEAKS</u> -BUSHINGS SYPHONING-OIL-<br>PCB CONTAMINATED              | CLEAN & REPAIR LEAKS; RETROFILL                      |
| 68              | 37  | <u>LEAKS</u> -BUSHINGS SYPHONING                                       | CLEAN & REPAIR LEAKS                                 |
| 69              | 11  | <u>LEAKS</u> -UNIT SATURATED WITH OIL                                  | CLEAN UNIT & LOCATE ACTIVE LEAKS                     |

\*THE NUMBER AFTER A LEAK INDICATES THE SEVERITY OF THE LEAK. PLEASE SEE BULLETIN 304 ENCLOSED.



EMATE CORP.  
EMATE PLATN  
CHICOPEE, MA

FIELD INSPECTION  
&  
LIQUID ANALYSIS REPORT

| TSI TEST<br>NUMBER | PROBLEM  | RECOMMENDED SERVICE            |
|--------------------|--|--------------------------------|
| 9                  | <u>LEAKS</u> -BUSHINGS SYPHONING<br><u>OIL</u> -PCB-CONTAMINATED | CLEAN & REPAIR LEAK; RETROFILL |
| 10                 | <u>OIL</u> -PCB-COTNAMINATED                                     | RETROFILL                      |

ATE CORP.

Based on the PCB Tests performed on oil samples from your equipment, we have enclosed 18 Blue "non PCB" labels to be affixed, 8 green "PCB contaminated" labels to be affixed and 40 yellow "PCB" labels to be affixed to the correct units.

CONCORD, NH  
(603) 224-4006

# TSI TRANSFORMER SERVICE, INC.

TSI NO. 1  
CUSTOMER NO. CMC 01-40842  
LOCATION MAIN SUB.  
FACEMATE

## Transformer Inspection Service

CUSTOMER FACEMATE CORP. CITY CHICOPEE STATE MASS.

### NAME PLATE & LOCATION DATA

|               |           |                             |   |                      |    |                            |                    |  |
|---------------|-----------|-----------------------------|---|----------------------|----|----------------------------|--------------------|--|
| Make/Rewind   | G.E.      | High Voltage                | 13.8  | No. Radiators        | 13 | 5 TUBES EA.<br>6" L X 2" D | Special Conditions | WITH ROOF  |
| Serial No.    | C503937   | Low Voltage                 | 438   | Supplemental Cooling |    | Type/No. NONE              | Outside Inside     | <input checked="" type="checkbox"/> <input type="checkbox"/> |
| Paint Color   | DARK GRAY | Phase/Cycle                 | 1/60  | Bushings T-Top       |    | #HV 2T #LV 2T              | Ground Roof        | <input checked="" type="checkbox"/> <input type="checkbox"/> |
| Impedance     | 5.88%     | Type of Headspace           | SEALED  | No Load Tap Changer  |    | #Top #Side 1               | Radiators          | Welded Flanged <input checked="" type="checkbox"/>           |
| KVA           | 833       | Sample energ. Filter energ. | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Accessory Equipment  |    | TSI No(s).                 | Top Cover          | Welded Bolted <input checked="" type="checkbox"/>            |
| Filter Valves | BST TV/BV | Hose (one way)              | 150'  | Gal./Type            |    | 335/OIL                    | Valves             | Threaded Flanged <input checked="" type="checkbox"/>         |

### FIELD INSPECTION DATA

| Date  | Purchase Order No. | AMBIENT  |          | TRANSFORMER |       | High Temp. | Liquid Level | Bush. Cond. | Paint Cond. | Leaks      | Quality Factor | Recommended Service |
|-------|--------------------|--|----------|-------------|-------|------------|--------------|-------------|-------------|------------|----------------|---------------------|
|       |                    | Temp.  | Humidity | Press.      | Temp. |            |              |             |             |            |                |                     |
| 6/83  | 5678               | 70°  | 60%      | +1          | 32°   |            | OK           | GOOD        | GOOD        | BTM VALVE  | F              | REPAIR              |
| 7/84  | V/ROSE             | 84°  | 62%      | +1½         | 42°   | 60°        | LOW          | DUSTY       | OK          | NONE       | F              | REPAIR              |
| 4/85  | 12548              | REPAIRED RED LEAK AT BOTTOM VALVE, ADDED TWO GALLONS OF OIL - INSTALLED NEW PRESSURE/VACUUM GAUGE AND REGULATOR, PURGED WITH NITROGEN AND CLEANED UP |          |             |       |            |              |             |             |            |                |                     |
| 11/86 | 18027              | 30°  | 70%      | 0           | 30°   | 60°        | S.LOW        | DIRTY       | DIRTY       | NONE       |                |                     |
| 6/87  | 18027              | 75°  | 20%      | 1           | 35°   | 49°        | S.LOW        | OK          | OK          | OLD STAINS |                |                     |
| 7/88  | 22320              | 90°  | 40%      | +1          | 40°   | 50°        | LOW          | OK          | OK          | OLD STAINS |                |                     |

These pertain to the facemate plants according to letter 9/14/88 re: retrofills

### LIQUID TEST DATA

| Date  | Color | Visual | PCB Content | IFT  | Neut. No. | Diel. | Moisture Content | Power Factor | TCG Content | Specific Gravity | Quality Factor | Recommended Service |
|-------|-------|--------|-------------|------|-----------|-------|------------------|--------------|-------------|------------------|----------------|---------------------|
| 6/83  | 1.5   | CLEAR  | 6/81<br>960 | 35.4 | .02       | 32.5  |                  |              |             |                  | G              | TEST 6/84           |
| 7/84  | 1.5   | CLEAR  |             | 38.4 | .02       | 34.0  |                  |              |             |                  | G              | TEST 6/85           |
| 11/86 | 2.0   | CLEAR  |             | 35.4 | .025      | 43    | 24               |              | 198         |                  | G              | RETROFILL           |
| 6/87  | 1.0   | CLEAR  |             | 33.6 | .025      | 45    | 18               |              | 100         | .880             | G              | RETROFILL           |
| 8/88  | 1.0   | TRACE  |             | 34.0 | .02       | 33    | 26               |              |             | .881             | G              | RETROFILL           |

E-estimated PCB-Polychlorinated Biphenyl by electron capture in parts per million IFT-Interfacial Tension in dynes/cm  
 Neut. No.-mg KOH/g oil Diel.-dielectric in kilo volts Moisture content in parts per million Power Factor in percent corrected to 20°C  
 TCG-Total Combustible Gas by gas chromatography in parts per million Quality Factor-G, Good F, Fair B, Borderline P, Poor C, Critical

**Transformer Inspection Service**

CUSTOMER FACEMATE CORP. CITY CHICOPEE STATE MASS.

**NAME PLATE & LOCATION DATA**

|               |           |                             |   |                      |    |                         |   |  |
|---------------|-----------|-----------------------------|---|----------------------|----|-------------------------|---|--|
| Make/Rewind   | G.E.      | High Voltage                | 13.8  | No. Radiators        | 13 | 5 TUBES EA<br>6'L X 2'D | Special Conditions  | WITH ROOF  |
| Serial No.    | C503938   | Low Voltage                 | 480   | Supplemental Cooling |    | Type/No.<br>NONE        | Outside <input checked="" type="checkbox"/> Inside <input type="checkbox"/> | Platform Pole <input type="checkbox"/>             |
| Paint Color   | DARK GRAY | Phase/Cycle                 | 1/60  | Bushings T-Top       |    | #HV 2 T #LV 2T          | Ground Roof <input checked="" type="checkbox"/>                             | Vault Cage <input type="checkbox"/>                |
| Impedance     | 5.90%     | Type of Headspace           | SEALED  | No Load Tap Changer  |    | #Top #Side 1            | Radiators   | Welded Flanged <input checked="" type="checkbox"/> |
| KVA           | 833       | Sample energ. Filter energ. | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Accessory Equipment  |    | TSI No(s).              | Top Cover   | Welded Bolted <input checked="" type="checkbox"/>  |
| Filter Valves | BST TV/BV | Hose (one way)              | 150'  | Gal./Type            |    | 335/OIL                 | Valves  | Threaded Flanged <input type="checkbox"/>          |

**FIELD INSPECTION DATA**

| Date  | Purchase Order No. | AMBIENT   |          | TRANSFORMER |       | High Temp. | Liquid Level | Bush. Cond. | Paint Cond. | Leaks      | Quality Factor | Recommended Service |
|-------|--------------------|---|----------|-------------|-------|------------|--------------|-------------|-------------|------------|----------------|---------------------|
|       |                    | Temp.   | Humidity | Press.      | Temp. |            |              |             |             |            |                |                     |
| 6/83  | 5678               | 70°   | 60%      | 0           | 35°   |            | OK           | GOOD        | GOOD        | BTM VALVE  | F              | FIELD SERV.         |
| 7/84  | V/ROSE             | 84°   | 62%      | +½          | 45°   | 65°        | LOW          | DUSTY       | OK          | NONE       | F              | FIELD SERVICE       |
| 4/35  | 12548              | REPAIRED LEAK AT BOTTOM VALVE, ADDED TWO GALLONS OF OIL, INSTALLED NEW PRESSURE/VACUUM GAUGE AND REGULATOR, PURGED WITH NITROGEN AND CLEANED UP |          |             |       |            |              |             |             |            |                |                     |
| 11/86 | 18027              | 30°   | 70%      | +½          | 35°   | 65°        | S.LOW        | DIRTY       | DIRTY       | NONE       | F              | FIELD SERVICE       |
| 6/87  | 18027              | 75°   | 20%      | +½          | 40°   | 68°        | S.LOW        | OK          | DIRTY       | NONE       | F              | FIELD SERVICE       |
| 7/88  | 22320              | 90°   | 40%      | +½          | 45°   | 50°        | LOW          | OK          | OK          | SEE REPORT | F              | FIELD SERV          |

**LIQUID TEST DATA**

| Date  | Color | Visual | PCB Content  | IFT  | Neut. No. | Diel. | Moisture Content | Power Factor | TCG Content | Specific Gravity | Quality Factor | Recommended Service |
|-------|-------|--------|--------------|------|-----------|-------|------------------|--------------|-------------|------------------|----------------|---------------------|
| 6/83  | 1.5   | CLEAR  | 6/81<br>1100 | 34.7 | .02       | 45.5  |                  |              |             |                  | G              | TEST 6/84           |
| 7/84  | 1.5   | CLEAR  |              | 37.9 | .02       | 35.0  |                  |              |             |                  | G              | TEST 6/85           |
| 11/86 | 1.5   | CLEAR  |              | 33.6 | .02       | 45    | 16               |              | 107         |                  | G              | RETROFILL           |
| 6/37  | 1.0   | CLEAR  |              | 32.9 | .025      | 43    | 21               |              | 109         | .880             | G              | RETROFILL           |
| 8/88  | 1.0   | TRACE  |              | 33.0 | .025      | 34    | 25               |              |             | .878             | G              | RETROFILL           |

E-estimated PCB-Polychlorinated Biphenyl by electron capture in parts per million IFT-Interfacial Tension in dynes/cm  
Neut. No.-mg KOH/g oil Diel.-dielectric in kilo volts Moisture content in parts per million Power Factor In percent corrected to 20 °C  
TCG-Total Combustible Gas by gas chromatography in parts per million Quality Factor-G, Good F, Fair B, Borderline P, Poor C, Critical

### Transformer Inspection Service

CUSTOMER FACEMATE CORP. CITY CHICOPEE STATE MASS.

#### NAME PLATE & LOCATION DATA

|               |           |                             |   |                      |                 |                            |   |            |   |
|---------------|-----------|-----------------------------|---|----------------------|-----------------|----------------------------|---|------------|---|
| Make/Rewind   | G.E.      | High Voltage                | 13.8  | No. Radiators        | 13              | 5 TUBES EA.<br>6' L X 2' D | Special Conditions  | WIT        | <i>at Facemate?</i>   |
| Serial No.    | C503936   | Low Voltage                 | 480   | Supplemental Cooling | NONE            | Type/No.                   | Outside <input checked="" type="checkbox"/> Inside <input type="checkbox"/>   | Plat Pole  |   |
| Paint Color   | DARK GRAY | Phase/Cycle                 | 1/60  | Bushings T-Top       | #HV 2 T. #LV 2T | #Top #Side                 | Ground <input checked="" type="checkbox"/> Roof <input type="checkbox"/>      | Vaul Cagi  | <i>no unroyal at S. no series 1 &amp; 2 S. to old reports</i> |
| Impedance     | 5.88%     | Type of Headspace           | SEALED  | No Load Tap Changer  |                 |                            | Radiators   | Weic Fian  |   |
| KVA           | 833       | Sample energ. Filter energ. | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Accessory Equipment  |                 | TSI No(s).                 | Top Cover   | Weld Bolte |   |
| Filter Valves | BST TV/BV | Hose (one way)              | 150'  | Gal./Type            | 335/OIL         | Valves                     | Threaded <input type="checkbox"/> Flanged <input checked="" type="checkbox"/> |            |   |

#### FIELD INSPECTION DATA

| Date  | Purchase Order No. | AMBIENT   |          | TRANSFORMER |       | High Temp. | Liquid Level | Bush. Cond. | Paint Cond. | Leaks     | Quality Factor | Recommended Service |            |
|-------|--------------------|---|----------|-------------|-------|------------|--------------|-------------|-------------|-----------|----------------|---------------------|------------|
|       |                    | Temp.   | Humidity | Press.      | Temp. |            |              |             |             |           |                |                     |            |
| 6/33  | 5678               | 70°   | 60%      | +1          | 25°   |            | OK           | GOOD        | GOOD        | BTM VALVE | F              | REPAIR LEAK         |            |
| 7/84  | V/ROSE             | 84°   | 62%      | +1½         | 40°   | 45°        | LOW          | DUSTY       | OK          | NONE      | F              | FIELD SERVICE       |            |
| 4/85  | 12548              | REPAIRED LEAK AT BOTTOM VALVE. ADDED TWO GALLONS OF OIL, INSTALLED NEW PRESSURE/VACUUM GAUGE AND REGULATOR, PURGED WITH NITROGEN AND CLEARED UP SPILLAGE. |          |             |       |            |              |             |             |           |                | G                   | INSP. 1985 |
| 11/86 | 18027              | 30°   | 70%      | +½          | 20°   | 46°        | OK           | DIRTY       | DIRTY       | NONE      | F              | FIELD SERVICE       |            |
| 6/87  | 18027              | 75°   | 20%      | +1          | 30°   | 42°        | S.LOW        | OK          | DIRTY       | NONE      | F              | FIELD SERVICE       |            |
| 7/88  | 22320              | 90°   | 40%      | +1          | 40°   | 45°        | S.LOW        | OK          | DIRTY       | NONE      | F              | FIELD SERV.         |            |
|       |                    |   |          |             |       |            |              |             |             |           |                |                     |            |
|       |                    |   |          |             |       |            |              |             |             |           |                |                     |            |
|       |                    |   |          |             |       |            |              |             |             |           |                |                     |            |

#### LIQUID TEST DATA

| Date  | Color | Visual | PCB Content  | IFT  | Neut. No. | Diel. | Moisture Content | Power Factor | TCG Content | Specific Gravity | Quality Factor | Recommended Service |
|-------|-------|--------|--------------|------|-----------|-------|------------------|--------------|-------------|------------------|----------------|---------------------|
| 6/83  | 1.5   | CLEAR  | 6/81<br>1000 | 35.4 | .02       | 36    |                  |              |             |                  | G              | TEST 6/84           |
| 7/84  | 1.5   | CLEAR  |              | 39.5 | .03       | 34    |                  |              |             |                  | G              | TEST 6/85           |
| 11/86 | 1.5   | CLEAR  |              | 36.0 | .015      | 35    | 19               |              | 120         |                  | B              | RETROFILL           |
| 6/87  | 1.5   | CLEAR  |              | 33.9 | .020      | 40    | 24               |              | 213         | .880             | G              | RETROFILL           |
| 8/88  | 1.0   | CLEAR  |              | 35.1 | .025      | 33    | 23               |              |             | .878             | G              | RETROFILL           |
|       |       |        |              |      |           |       |                  |              |             |                  |                |                     |
|       |       |        |              |      |           |       |                  |              |             |                  |                |                     |
|       |       |        |              |      |           |       |                  |              |             |                  |                |                     |
|       |       |        |              |      |           |       |                  |              |             |                  |                |                     |

E-estimated PCB-Polychlorinated Biphenyl by electron capture in parts per million IFT-Interfacial Tension in dynes/cm  
 Neut. No.-mg KOH/g oil Diel.-dielectric in kilo volts Moisture content in parts per million Power Factor in percent corrected to 20°C  
 TCG-Total Combustible Gas by gas chromatography in parts per million Quality Factor-G, Good F, Fair B, Borderline P, Poor C, Critical

**Transformer Inspection Service**

CUSTOMER FACEMATE CORP. CITY CHICOPEE STATE MASS.

**NAME PLATE & LOCATION DATA**

|               |                      |                             |  |                      |                        |                    |  |
|---------------|----------------------|-----------------------------|--|----------------------|------------------------|--------------------|--|
| Make/Rewind   | ELECTRIC MOTOR & REP | High Voltage                | 13.8   | No. Radiators        | 5'H - 2"D<br>30' TUBES | Special Conditions | 2'   |
| Serial No.    | SHOP 12196           | Low Voltage                 | 480  | Supplemental Cooling | Type/No.<br>NONE       | Outside Inside     | <input checked="" type="checkbox"/> Platform Pole <input type="checkbox"/> |
| Paint Color   | DARK GRAY            | Phase/Cycle                 | 1/60   | Bushings T-Top       | #HV 2T #LV 2T          | Ground Roof        | <input checked="" type="checkbox"/> Vault Cage <input type="checkbox"/>    |
| Impedance     | 4.0                  | Type of Headspace           | FREE BREATHING   | No Load Tap Changer  | #Top 1 #Side           | Radiators          | Welded Flanged <input checked="" type="checkbox"/>                         |
| KVA           | 500                  | Sample energ. Filter energ. | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/><br>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Accessory Equipment  | TSI No(s).             | Top Cover          | Welded Bolted <input type="checkbox"/>                                     |
| Filter Valves | TP BV/ST             | Hose (one way)              | 50'  | Gal./Type            | 308/01L                | Valves             | Threaded Flanged <input checked="" type="checkbox"/>                       |

**FIELD INSPECTION DATA**

| Date  | Purchase Order No. | AMBIENT   |          | TRANSFORMER   |       | High Temp. | Liquid Level | Bush. Cond. | Paint Cond. | Leaks            | Quality Factor | Recommended Service |
|-------|--------------------|---|----------|---|-------|------------|--------------|-------------|-------------|------------------|----------------|---------------------|
|       |                    | Temp.   | Humidity | Press.  | Temp. |            |              |             |             |                  |                |                     |
| 6/83  | 5678               | 70°   | 60%      | NO GA   | 20°   |            | OK           | DIRTY       | OK          | NONE             | F              | FIELD SERV.         |
| 7/84  | V/ROSE             | 84°   | 62%      | NO GA   | 30°   | 70°        | OK           | DIRTY       | OK          | SIGHT GAUGE MOD. | F              | FIELD SERVICE       |
| 4/85  | 12548              | REGASKETED SIGHT GAUGE, REPAIRED LEAK AT UP SPILLAGE. |          | CLEANED AND WAXED BUSHINGS, REPAIRED LEAK AT BOTTOM VALVE AND CLEANED |       |            |              | OK DIRTY    | OK          |                  | G              | INSP. 1985          |
| 11/86 | 18027              | 30°   | 70%      | NO GA   | <20°  | 70°        | OK           | DIRTY       | OK          | NONE             | F              | FIELD SERVICE       |
| 6/87  | 18027              | 75°   | 20%      | NO GA   | 25°   | 70°        | OK           | OK          | OK          | NONE             | G              | INSP. 6/88          |
| 7/88  | 22320              | 90°   | 40%      | NO GA   | 35°   | 70°        | OK           | OK          | OK          | NONE             | F              | FIELD SERV.         |

**LIQUID TEST DATA**

| Date  | Color | Visual | PCB Content | IFT  | Neut. No. | Diel. | Moisture Content | Power Factor | TCG Content | Specific Gravity | Quality Factor | Recommended Service |
|-------|-------|--------|-------------|------|-----------|-------|------------------|--------------|-------------|------------------|----------------|---------------------|
| 6/83  | 2.0   | CLEAR  | 6/81<br>7   | 34.6 | .02       | 37.5  |                  |              |             |                  | G              | TEST 6/84           |
| 7/84  | 2.0   | CLEAR  |             | 37.0 | .02       | 36.0  |                  |              |             |                  | G              | TEST 6/85           |
| 11/86 | 2.0   | CLEAR  |             | 34.2 | .02       | 45    | 22               |              |             |                  | G              | TEST 11/87          |
| 6/87  | 1.5   | CLEAR  |             | 32.2 | .030      | 30    | 28               |              | <10         | .884             | G              | TEST 6/88           |
| 8/88  | 1.5   | CLEAR  |             | 33.4 | .03       | 31    | 37               |              |             | .880             | B              | DEHYDRATE           |

E-estimated PCB-Polychlorinated Biphenyl by electron capture in parts per million IFT-Interfacial Tension in dynes/cm  
Neut. No.-mg KOH/g oil Diel.-dielectric in kilo volts Moisture content in parts per million Power Factor in percent corrected to 20°C  
TCG-Total Combustible Gas by gas chromatography in parts per million Quality Factor-G, Good F, Fair B, Borderline P, Poor C, Critical

CONCORD, NH  
(603) 224-4006

# TSI

## TRANSFORMER SERVICE, INC.

TSI NO. 5  
CUSTOMER NO.  
LOCATION MAIN SUB  
FACEMATE

### Transformer Inspection Service

CUSTOMER FACEMATE CORP. CITY CHICOPEE STATE MASS.

#### NAME PLATE & LOCATION DATA

|               |                      |                             |  |                      |                        |                    |   |  |
|---------------|----------------------|-----------------------------|--|----------------------|------------------------|--------------------|---|--|
| Make/Rewind   | ELECTRIC MOTOR & REP | High Voltage                | 13.8   | No. Radiators        | 5'H - 2"ID<br>30 TUBES | Special Conditions | 2'  |  |
| Serial No.    | SHOP 12197           | Low Voltage                 | 480  | Supplemental Cooling | Type/No.<br>NONE       | Outside Inside     | <input checked="" type="checkbox"/> <input type="checkbox"/> Platform Pole <input checked="" type="checkbox"/> <input type="checkbox"/> |  |
| Paint Color   | DARK GRAY            | Phase/Cycle                 | 1/60   | Bushings T-Top       | #HV<br>2 T             | #LV<br>2T          | Ground Roof   | <input checked="" type="checkbox"/> <input type="checkbox"/> Vault Cage <input type="checkbox"/> <input checked="" type="checkbox"/> |
| Impedance     | 4.0                  | Type of Headspace           | FREE BREATHING   | No Load Tap Changer  | #Top<br>1              | #Side              | Radiators   | Weided Flanged <input checked="" type="checkbox"/> <input type="checkbox"/>  |
| KVA           | 500                  | Sample energ. Filter energ. | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/><br>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Accessory Equipment  | TSI No(s).             |                    | Top Cover   | Weided Boited <input type="checkbox"/> <input checked="" type="checkbox"/>   |
| Filter Valves | BV/ST                | Hose (one way)              | 50'  | Gai./Type            | 308/011                |                    | Valves  | Threaded Flanged <input checked="" type="checkbox"/> <input type="checkbox"/>  |

#### FIELD INSPECTION DATA

| Date  | Purchase Order No. | AMBIENT   |          | TRANSFORMER |       | High Temp. | Liquid Level | Bush. Cond. | Paint Cond. | Leaks                                 | Quality Factor | Recommended Service                  |
|-------|--------------------|---|----------|-------------|-------|------------|--------------|-------------|-------------|---------------------------------------|----------------|--------------------------------------|
|       |                    | Temp.   | Humidity | Press.      | Temp. |            |              |             |             |                                       |                |                                      |
| 6/83  | 5678               | 70°   | 60%      | NO GA       | 20°   |            | OK           | DIRTY       | OK          | SEE QUOTE                             | F              | FIELD SERV.                          |
| 7/84  | V/ROSE             | 84°   | 62%      | NO GA       | 30°   | 70°        | OK           | DIRTY       | OK          | SIGHT GAUGE MIN.<br>BOTTOM VALVE MIN. | F              | FIELD SERVICE                        |
| 4/85  | 12548              | ATTEMPTED TO REPAIR LEAK AT SIGHT GAUGE, REMOVED GAUGE AND INSTALLED PLUGS. CLEANED AND WAXED BUSHINGS AND REPAIRED LEAK AT BOTTOM VALVE. |          |             |       |            |              |             |             |                                       |                |                                      |
| 11/36 | 18027              | 30°   | 70%      | NO GA       | 20°   | 54°        | NO GA        | FAIR DIRTY  | OK          | NONE                                  | F              | REPLACE SIGHT GAUGE<br>FIELD SERVICE |
| 6/87  | 18027              | 75°   | 20%      | NO GA       | 20°   | 35°        | NO GA        | OK          | OK          | NONE                                  | G              | INSP. 6/88                           |
| 7/88  | 22320              | 90°   | 40%      | NO GA       | 30°   | 36°        | NO GA        | OK          | OK          | NONE                                  | G              | INSP 7/89                            |

#### LIQUID TEST DATA

| Date  | Color | Visual | PCB Content | IFT  | Neut. No. | Diel. | Moisture Content | Power Factor | TCG Content | Specific Gravity | Quality Factor | Recommended Service |
|-------|-------|--------|-------------|------|-----------|-------|------------------|--------------|-------------|------------------|----------------|---------------------|
| 6/83  | 1.5   | CLEAR  | 6/80<br>4   | 31.5 | .03       | 46.0  |                  |              |             |                  | G              | TEST 6/84           |
| 7/84  | 1.5   | CLEAR  |             | 34.6 | .03       | 37.0  |                  |              |             |                  | G              | TEST 6/85           |
| 11/36 | 1.5   | CLEAR  |             | 32.9 | .03       | 44    | 25               |              |             |                  | G              | TEST 11/87          |
| 6/87  | 1.5   | CLEAR  |             | 31.7 | .03       | 44    | 25               |              | 14          | .884             | G              | TEST 6/88           |
| 8/88  | 1.5   | TRACE  |             | 32.3 | .03       | 41    | 38               |              |             | .880             | B              | DEHYDRATE           |

E-estimated PCB-Polychlorinated Biphenyl by electron capture in parts per million IFT-Interfacial Tension in dynes/cm  
Neut. No.-mg KOH/g oil Diel.-dielectric in kilo volts Moisture content in parts per million Power Factor in percent corrected to 20°C  
TOG-Total Combustible Gas by gas chromatography in parts per million Quality Factor-G, Good F, Fair B, Borderline P, Poor C, Critical

CONCORD, NH  
(603) 224-4006

# TSI

## TRANSFORMER SERVICE, INC.

TSI NO. 6  
 CUSTOMER NO.  
 LOCATION MAIN SUB.  
 FACEMATE

### Transformer Inspection Service

CUSTOMER FACEMATE CORP. CITY CHICOPEE STATE MASS.

#### NAME PLATE & LOCATION DATA

|               |                      |                             |  |                      |                       |   |   |
|---------------|----------------------|-----------------------------|--|----------------------|-----------------------|---|---|
| Make/RewInd   | ELECTRIC MOTOR & REP | High Voltage                | 13.8   | No. Radiators        | 5'H - 2"D<br>30 TUBES | Special Conditions  | 2'  |
| Serial No.    | SHOP 12198           | Low Voltage                 | 480  | Supplemental Cooling | Type/No.<br>NONE      | Outside <input checked="" type="checkbox"/> Inside <input type="checkbox"/> | Platform <input checked="" type="checkbox"/> Pole <input type="checkbox"/>  |
| Paint Color   | DARK GRAY            | Phase/Cycle                 | 1/60   | Bushings T-Top       | #HV<br>2 T            | #LV<br>2 T  | Ground <input checked="" type="checkbox"/> Vault <input type="checkbox"/><br>Roof <input type="checkbox"/> Cage <input checked="" type="checkbox"/> |
| Impedance     | 4.0                  | Type of Headspace           | FREE BREATHING   | No Load Tap Changer  | #Top<br>1             | #Side   | Radiators <input checked="" type="checkbox"/> Welded Flanged <input type="checkbox"/>   |
| KVA           | 500                  | Sample energ. Filter energ. | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/><br>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Accessor. Equipment  | TSI No(s).            | Top Cover   | Welded <input type="checkbox"/> Bolted <input checked="" type="checkbox"/>  |
| Filter Valves | BV/ST                | Hose (one way)              | 50'  | Gal./Type            | 308/OIL               | Valves  | Threaded <input checked="" type="checkbox"/> Flanged <input type="checkbox"/>   |

#### FIELD INSPECTION DATA

| Date  | Purchase Order No. | AMBIENT  |          | TRANSFORMER |       | High Temp. | Liquid Level | Bush. Cond. | Paint Cond. | Leaks                | Quality Factor | Recommended Service |                      |
|-------|--------------------|--|----------|-------------|-------|------------|--------------|-------------|-------------|----------------------|----------------|---------------------|----------------------|
|       |                    | Temp.  | Humidity | Press.      | Temp. |            |              |             |             |                      |                |                     |                      |
| 6/83  | 5678               | 70°  | 60%      | NO GA       | 20°   |            | OK           | DIRTY       | OK          | SEE QUOTE            | F              | FIELD SERV.         |                      |
| 7/84  | V/ROSE             | 84°  | 62%      | NO GA       | 32°   | 50°        | OK           | OK          | DIRTY       | OK                   | F              | FIELD SERVICE       |                      |
| 4/85  | 12548              | ATTEMPTED TO REPAIR LEAK AT SLIGHT GAUGE, REMOVED GAUGE AND INSTALLED PLUGS, CLEANED AND WAXED BUSHINGS AND REPAIRED LEAK AT BOTTOM VALVE. |          |             |       |            |              |             |             |                      |                | F                   | REPLACE SLIGHT GAUGE |
| 11/86 | 18027              | 30°  | 70%      | NO GA       | 20°   | 60°        | OK           | FAIR DIRTY  | FAIR DIRTY  | LEVEL GAUGE MODERATE | F              | FIELD SERVICE       |                      |
| 6/87  | 18027              | 75°  | 20%      | NO GA       | 22°   | 36°        | OK           | OK          | OK          | LEVEL GAUGE STAIN    | F              | FIELD SERVICE       |                      |
| 7/88  | 22320              | 90°  | 40%      | NO GA       | 35°   | 40°        | OK           | OK          | OK          | LEVEL GAUGE          | F              | FIELD SERV.         |                      |

#### LIQUID TEST DATA

| Date  | Color | Visual | PCB Content | IFT  | Neut. No. | Diel. | Molsture Content | Power Factor | TCG Content | Specific Gravity | Quality Factor | Recommended Service |
|-------|-------|--------|-------------|------|-----------|-------|------------------|--------------|-------------|------------------|----------------|---------------------|
| 6/83  | 1.5   | CLEAR  | 6/80<br>9   | 30.0 | .03       | 36.0  |                  |              |             |                  | G              | TEST 6/84           |
| 7/84  | 1.5   | CLEAR  |             | 32.1 | .03       | 45.0  |                  |              |             |                  | G              | TEST 6/85           |
| 11/86 | 1.5   | CLEAR  |             | 31.5 | .03       | 44    | 18               |              |             |                  | G              | TEST 11/87          |
| 6/87  | 1.5   | CLEAR  |             | 29.6 | .03       | 40    | 28               |              | < 10        | .882             | G              | TEST 6/88           |
| 8/88  | 1.5   | CLEAR  |             | 30.6 | .03       | 36    | 40               |              |             | .881             | B              | DEHYDRATE           |

\*E-estimated PCB-Polychlorinated Biphenyl by electron capture in parts per million IFT-Interfacial Tension in dynes/cm  
 Neut. No.-mg KOH/g oil Diel.-dielectric in kilo volts Molsture content in parts per million Power Factor in percent corrected to 20°C  
 TCG-Total Combustible Gas by gas chromatography in parts per million Quality Factor-G, Good F, Fair B, Borderline P, Poor C, Critical



CONCORD, NH  
(603) 224-4008

# TSI TRANSFORMER SERVICE, INC.

TSI NO. 7  
CUSTOMER NO.  
LOCATION ABOVE DOOR

## Transformer Inspection Service

CUSTOMER FACEMATE CORP. CITY CHICOPEE STATE MA

### NAME PLATE & LOCATION DATA

|               |         |                             |  |                       |            |   |  |
|---------------|---------|-----------------------------|--|-----------------------|------------|---|--|
| Make/Rewind   | G. E.   | High Voltage                |  | No. Radiators         |            | Special Conditions  | 15 FT  |
| Serial No.    | 4855201 | Low Voltage                 |  | Supplemental Cooling  | Type/No.   | Outside inside <input checked="" type="checkbox"/> <input type="checkbox"/> | Platform Pole <input type="checkbox"/> <input type="checkbox"/>            |
| Paint Color   | BLACK   | Phase/Cycle                 |  | Bushings T-Top S-Side | #HV #LV    | Ground Roof <input type="checkbox"/> <input type="checkbox"/>               | Vault Cage <input type="checkbox"/> <input type="checkbox"/>               |
| Impedance     |         | Type of Headspace           |  | No Load Tap Changer   | #Top #Side | Radiators   | Welded Flanged <input type="checkbox"/> <input type="checkbox"/>           |
| KVA           |         | Sample energ. Fliter energ. | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/><br>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Accessory Equipment   | TSI No(s). | Top Cover   | Welded Bolted <input type="checkbox"/> <input checked="" type="checkbox"/> |
| Filter Valves | BST/TC  | Hoss (one way)              |  | Gal./Type             | 50E/OIL    | Valves  | Threaded Flanged <input type="checkbox"/> <input type="checkbox"/>         |

### FIELD INSPECTION DATA

| Date | Purchase Order No. | AMBIENT |          | TRANSFORMER |       | High Temp. | Liquid Level | Bush. Cond. | Paint Cond. | Leaks | Quality Factor | Recommended Service |
|------|--------------------|---------|----------|-------------|-------|------------|--------------|-------------|-------------|-------|----------------|---------------------|
|      |                    | Temp.   | Humidity | Press.      | Temp. |            |              |             |             |       |                |                     |
| 4/88 | 21799              | 40°     | 90%      |             |       |            |              | POOR        | POOR        | NONE  |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |

### LIQUID TEST DATA

| Date | Color | Visual | PCB Content | IFT | Neut. No. | Diel. | Moisture Content | Power Factor | TCG Content | Specific Gravity | Quality Factor | Recommended Service |
|------|-------|--------|-------------|-----|-----------|-------|------------------|--------------|-------------|------------------|----------------|---------------------|
| 5/88 |       |        | 23          |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |

E-estimated PCB-Polychlorinated Biphenyl by electron capture in parts per million IFT-Interfacial Tension in dynes/cm  
 Neut. No.-mg KOH/g oil Diel.-dielectric in kilo volts Moisture content in parts per million Power Factor in percent corrected to 20°C  
 TCG-Total Combustible Gas by gas chromatography in parts per million Quality Factor-G, Good F, Fair B, Borderline P, Poor C, Critical

CONCORD, NH  
(603) 224-4666

# TSI TRANSFORMER SERVICE, INC.

TSI NO. 8  
CUSTOMER NO.  
LOCATION MILL #5

## Transformer Inspection Service

CUSTOMER FACEMATE CORP. CITY CHICOPEE STATE MA

### NAME PLATE & LOCATION DATA

|               |         |                             |   |                       |            |   |  |
|---------------|---------|-----------------------------|---|-----------------------|------------|---|--|
| Make/Rewind   | G. E.   | High Voltage                |   | No. Radiators         |            | Special Conditions  |  |
| Serial No.    | 485520A | Low Voltage                 |   | Supplemental Cooling  | Type/No.   | Outside <input checked="" type="checkbox"/> Inside <input type="checkbox"/> | Platform Pole <input type="checkbox"/>               |
| Paint Color   |         | Phase/Cycle                 |   | Bushings T-Top S-Side | #HV #LV    | Ground Roof <input type="checkbox"/>  | Vault Cage <input type="checkbox"/>                  |
| Impedance     |         | Type of Headspace           | SEALED  | No Load Tap Changer   | #Top #Side | Radiators   | Welded Flanged <input type="checkbox"/>              |
| KVA           |         | Sample energ. Filter energ. | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Accessory Equipment   | TSI No(s). | Top Cover   | Welded Bolted <input checked="" type="checkbox"/>    |
| Filter Valves | BST/TC  | Hose (one way)              |   | Gal./Type             | 50E/OIL    | Valves  | Threaded Flanged <input checked="" type="checkbox"/> |

### FIELD INSPECTION DATA

| Date | Purchase Order No. | AMBIENT |          | TRANSFORMER |       | High Temp. | Liquid Level | Bush. Cond. | Paint Cond. | Leaks | Quality Factor | Recommended Service |
|------|--------------------|---------|----------|-------------|-------|------------|--------------|-------------|-------------|-------|----------------|---------------------|
|      |                    | Temp.   | Humidity | Press.      | Temp. |            |              |             |             |       |                |                     |
| 4/88 | 21799              | 40°     | 90%      |             |       |            |              | POOR        | POOR        | NONE  |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |

### LIQUID TEST DATA

| Date | Color | Visual | PCB Content | IFT | Neut. No. | Diei. | Moisture Content | Power Factor | TCG Content | Specific Gravity | Quality Factor | Recommended Service |
|------|-------|--------|-------------|-----|-----------|-------|------------------|--------------|-------------|------------------|----------------|---------------------|
| 5/88 |       |        | 3           |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |

E-estimated PCB-Polychlorinated Biphenyl by electron capture in parts per million IFT-Interfacial Tension in dynes/cm  
 Neut. No.-mg KOH/g oil Diei.-dielectric in kilo volts Moisture content in parts per million Power Factor in percent corrected to 20°C  
 TCG Total Combustible Gas by gas chromatography in parts per million Quality Factor-G, Good F, Fair B, Borderline P, Poor C, Critical

CONCORD, NH  
(603) 224-4006

# TSI

## TRANSFORMER SERVICE, INC.

TSI NO. 9  
CUSTOMER NO.  
LOCATION PAINT SHOP

### Transformer Inspection Service

CUSTOMER FACEMATE COPR CITY CHICOPEE STATE MA

#### NAME PLATE & LOCATION DATA

|               |         |                             |  |                       |            |   |   |
|---------------|---------|-----------------------------|--|-----------------------|------------|---|---|
| Make/Rewind   | G. E.   | High Voltage                |  | No. Radiators         |            | Special Conditions  |   |
| Serial No.    | 3031506 | Low Voltage                 |  | Supplemental Cooling  | Type/No.   | Outside <input checked="" type="checkbox"/> Inside <input type="checkbox"/> | Platform Pole <input type="checkbox"/>            |
| Paint Color   | BLACK   | Phase/Cycle                 |  | Bushings T-Top S-Side | #HV #LV    | Ground Roof <input checked="" type="checkbox"/> <input type="checkbox"/>    | Vault Cage <input type="checkbox"/>               |
| Impedance     |         | Type of Headspace           |  | No Load Tap Changer   | #Top #Side | Radiators   | Welded Flanged <input type="checkbox"/>           |
| KVA           |         | Sample energ. Filter energ. | Yes <input type="checkbox"/> No <input type="checkbox"/> | Accessory Equipment   | TSI No(s). | Top Cover   | Welded Bolted <input checked="" type="checkbox"/> |
| Filter Valves | TC/BP   | Hose (one way)              |  | Gal./Type             | 34/OIL     | Valves  | Threaded Flanged <input type="checkbox"/>         |

#### FIELD INSPECTION DATA

| Date | Purchase Order No. | AMBIENT |          | TRANSFORMER |       | High Temp. | Liquid Level | Bush. Cond. | Paint Cond. | Leaks      | Quality Factor | Recommended Service |
|------|--------------------|---------|----------|-------------|-------|------------|--------------|-------------|-------------|------------|----------------|---------------------|
|      |                    | Temp.   | Humidity | Press.      | Temp. |            |              |             |             |            |                |                     |
| 4/88 | 21799              | 40°     | 90%      |             |       |            |              | POOR        | POOR        | SEE REPORT |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |

#### LIQUID TEST DATA

| Date | Color | Visual | PCB Content | IFT | Neut. No. | Diei. | Moisture Content | Power Factor | TCG Content | Specific Gravity |  | Quality Factor | Recommended Service |
|------|-------|--------|-------------|-----|-----------|-------|------------------|--------------|-------------|------------------|--|----------------|---------------------|
| 5/88 |       |        | 57          |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |

E-estimated PCB-Polychlorinated Biphenyl by electron capture in parts per million IFT-Interfacial Tension in dynes/cm  
Neut. No.-mg KOH/g diei. dielectric in kilo volts Moisture content in parts per million Power Factor in percent corrected to 20°C  
TCG Total Content in parts per million Quality Factor-G Good F Fair B Borderline P Poor C Critical

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts TEST NO.: 5

#15X

### NAME PLATE & LOCATION DATA

|                  |              |               |        |                   |   |                       |          |              |
|------------------|--------------|---------------|--------|-------------------|---|-----------------------|----------|--------------|
| Make/Rewind      | AC           | High Voltage  | 13800  | No. Radiators     | 5 | 2 SETS OF 11 FINS EA. | Ground   | NO           |
| Serial No.       | 1978151      | Low Voltage   | 2300   | No. Fans          |   | NO                    | Outside  | YES          |
| Inventory Number | 7746         | Phase/Cycle   | 3/60   | Bushings Top/Side |   | ENCLOSED              | Inside   | NO           |
| Impedance        | 5.3          | Gas Headspace | SEALED | Location          |   | #15 BLDG 42           | Platform | 10' CONCRETE |
| KVA              | 1500         | Water Cooled  | NO     | Environment       |   | OUTSIDE               | Pole     | NO           |
| FILTER Valves    | TOP & BOTTOM | Hose          | 50'    | Gal./Type         |   | 574A                  | Roof     | NO           |

### FIELD INSPECTION DATA

| Date  | P.O. No.      | TEST                |          | TRANSFORMER |       | Oil Level    | Bush. | Paint | Leaks              | Quality Factor | Recommended Service       |
|-------|---------------|---------------------|----------|-------------|-------|--------------|-------|-------|--------------------|----------------|---------------------------|
|       |               | Temp.               | Humidity | Press       | Temp. |              |       |       |                    |                |                           |
| 6/73  | 00330-3-57717 | 78°                 | 60%      |             | 55°   | LOW          |       | GOOD  | NONE               | FAIR           | ADD ASKAREL               |
| 5/75  | 0030-5-02170  | 75°                 | 65%      |             | 50°   | LOW          |       | GOOD  | 2 HAND HOLE COVERS | FAIR           | FIELD SERVICE ADD ASKAREL |
| 7/75  | 0030-5-06350  |                     |          |             |       | +25GAL       |       |       | REPAIRED           | GOOD           | INSP. 5/76                |
| 4/76  | 0030-6-17555  | 90°                 | 80%      |             | 62°   | OK           |       | GOOD  | NONE               | GOOD           | INSP. 4/77                |
| 6/77  | 0030-7-31795  | 75°                 | 60%      |             | 50°   | OK           | ENCL. | FAIR  | NONE               | FAIR           | CLEAN&PAINT               |
| 4/78  | 0030-8-45421  | 50°                 | 85%      |             | 62°   | OK           | ENCL. | FAIR  | NONE               | FAIR           | CLEAN&PAINT               |
| 8/78  |               | PAINTED BY UNIROYAL |          |             |       |              |       |       |                    |                |                           |
| 2/79  | 0030-9-61899  | 38°                 | 70%      |             | 19°   | OK           | ENCL. | GOOD  | NONE               | GOOD           | INSP. 4/80                |
| 10/79 | 0030-9-66526  |                     |          |             |       | ADDED 10 GAL |       |       |                    | GOOD           | INSP. 4/80                |
| 5/88  | 21799         |                     |          |             |       | OK           |       |       | SEE REPORT         | P              | FIELD SERV.               |

### LIQUID TEST DATA

| Date | Color | Sludge | I.F.T. | S.R. | Neut # | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|--------|--------|------|--------|-------|------------------|------|----------------|---------------------|
| 6/73 | WWG   | TRACE  |        | 45.8 | .025   | 36.4  | 1.552            | 53.3 | GOOD           | TEST 6/74           |
| 5/75 | WWG   | TRACE  |        | 44.0 | .026   | 41.0  | 1.552            | 52.5 | GOOD           | TEST 5/76           |
| 4/76 | WWG   | TRACE  |        | 51.1 | .015   | 42.4  | 1.546            | 51.1 | GOOD           | TEST 4/77           |
| 6/77 | WWBR  | CLEAR  |        | 12.9 | .013   | 45    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | WWG   | CLEAR  |        |      | .015   | 42    | 1.549            |      | GOOD           | TEST 4/79           |
| 4/79 | WWG   | CLEAR  |        |      | .015   | 43    | 1.555            |      | GOOD           | TEST 4/80           |
|      |       |        |        |      |        |       |                  |      |                |                     |
|      |       |        |        |      |        |       |                  |      |                |                     |
|      |       |        |        |      |        |       |                  |      |                |                     |

Retyped.  
Removed from  
originals 1/89

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10° ohm-cm askarel only  
Neut. No.-mg KQH/g oil Diel.-kilo volts SSU-viscosity @ 100°f



# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts

TEST NO.: 6

#155

### NAME PLATE & LOCATION DATA

|                  |                      |               |     |                   |          |          |          |
|------------------|----------------------|---------------|-----|-------------------|----------|----------|----------|
| Make/Rewind      | AC                   | High Voltage  |     | No. Radiators     |          | Ground   | NO       |
| Serial No.       | TRANS. #15<br>FEEDER | Low Voltage   |     | No. Fans          |          | Outside  | YES      |
| Inventory Number | SWITCH               | Phase/Cycle   |     | Bushings Top/Side | ENCLOSED | Inside   | NO       |
| Impedance        |                      | Gas Headspace |     | Location          |          | Platform | 10' HIGH |
| KVA              |                      | Water Cooled  |     | Environment       | GOOD     | Pole     | NO       |
| FILTER Valves    | TOP & BOTTOM         | Hose          | 50' | Gal./Type         | 56A      | Roof     | NO       |

### FIELD INSPECTION DATA

| Date  | P.O. No.      | TEST                |          | TRANSFORMER |       | Oil Level          | Bush. | Paint | Leaks       | Quality Factor | Recommended Service |
|-------|---------------|---------------------|----------|-------------|-------|--------------------|-------|-------|-------------|----------------|---------------------|
|       |               | Temp.               | Humidity | Press       | Temp. |                    |       |       |             |                |                     |
| 6/73  | 00330-3-57717 | 78°                 | 60%      |             |       | LOW                |       | GOOD  |             | FAIR           | ADD OIL             |
| 5/75  | 0030-5-02170  | 75°                 | 65%      |             |       | OK                 |       | GOOD  | SIDE PLATES | FAIR           | FIELD SERVICE       |
| 7/75  | 0030-5-06350  |                     |          |             |       |                    |       |       | REPAIRED    | GOOD           | INSP. 5/76          |
| 4/76  | D030-6-17555  | 90°                 | 80%      |             |       | OK                 |       | GOOD  | NONE        | GOOD           | INSP. 4/77          |
| 6/77  | 0030-7-31795  | 75°                 | 60%      |             |       | OK                 |       | POOR  | NONE        | FAIR           | CLEAN&PAINT         |
| 4/78  | 0030-8-45421  | 50°                 | 85%      |             |       | OK                 |       | POOR  | NONE        | POOR           | CLEAN&PAINT         |
| 8/78  |               | PAINTED BY UNIROYAL |          |             |       |                    |       |       |             |                |                     |
| 2/79  | 0030-9-61899  | 38°                 | 70%      |             |       | OK                 |       | GOOD  | NONE        | GOOD           | INSP. 4/80          |
| 10/79 | 0030-9-66526  |                     |          |             |       | ADDED<br>2 1/2 GAL |       |       |             | GOOD           | INSP. 4/80          |
| 5/88  | 21799         |                     |          |             |       |                    |       |       | SEE REPORT  | P              | FIELD SERV.         |

### LIQUID TEST DATA

| Date | Color           | Sludge | I.F.T. | S.R. | Neut # | Diel. | Specific Gravity | SSU | Quality Factor | Recommended Service |
|------|-----------------|--------|--------|------|--------|-------|------------------|-----|----------------|---------------------|
| 6/73 | 1.5             | CLEAR  | 28.2   |      | .03    | 26.8  |                  |     | GOOD           | TEST 6/74           |
| 5/75 | 2.0             | TRACE  |        |      | .08    | 25.1  | .992             |     |                | CHANGE OIL          |
| 7/75 | CHANGED ASKAREL |        |        |      |        |       |                  |     |                |                     |
| 4/76 | DS              | MOD.   |        | 84.6 | .013   | 37.1  | 1.519            |     | GOOD           | TEST 4/77           |
| 6/77 | DS              | CLEAR  |        | 77.8 | .015   | 42    |                  |     | GOOD           | TEST 6/78           |
| 4/78 | DS              | CLEAR  |        |      | .015   | 38    | 1.521            |     | GOOD           | TEST 4/79           |
| 4/79 | DS              | CLEAR  |        |      | .020   | 44    | 1.516            |     | GOOD           | TEST 4/80           |
|      |                 |        |        |      |        |       |                  |     |                |                     |
|      |                 |        |        |      |        |       |                  |     |                |                     |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10° ohm-cm askarel only  
Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

CONCORD, NH  
(603) 224-4006

# TSI TRANSFORMER SERVICE, INC.

TSI NO. 6  
CUSTOMER NO.  
LOCATION

## Transformer Inspection Service

CUSTOMER FACEMATE CORPORATION CITY CHICOPEE STATE MA

### NAME PLATE & LOCATION DATA

|               |                       |  |  |                          |            |   |   |
|---------------|-----------------------|--|--|--------------------------|------------|---|---|
| Make/Rewind   | ALLIS<br>CHALMERS     | High Voltage   |  | No. Radiators            |            | Special Conditions  |   |
| Serial No.    | TRANS. # 15<br>FEEDER | Low Voltage  |  | Supplemental Cooling     | Type/No.   | Outside <input type="checkbox"/><br>Inside <input type="checkbox"/> | Platform <input type="checkbox"/><br>Pole <input type="checkbox"/>    |
| Paint Color   | SWITCH                | Phase/Cycle  |  | Bushings<br>T-Top S-Side | #HV #LV    | Ground <input type="checkbox"/><br>Roof <input type="checkbox"/>    | Vault <input type="checkbox"/><br>Cage <input type="checkbox"/>       |
| Impedance     |                       | Type of Headspace  |  | No Load Tap Changer      | #Top #Side | Radiators   | Welded <input type="checkbox"/><br>Flanged <input type="checkbox"/>   |
| KVA           |                       | Sample energ. <input type="checkbox"/><br>Filter energ. <input type="checkbox"/> | Yes <input type="checkbox"/> No <input type="checkbox"/><br>Yes <input type="checkbox"/> No <input type="checkbox"/> | Accessory Equipment      | TSI No(s). | Top Cover   | Welded <input type="checkbox"/><br>Bolted <input type="checkbox"/>    |
| Filter Valves | TV & BV               | Hose (one way)   | 50'  | Gal./Type                | 56/ASKAREL | Valves  | Threaded <input type="checkbox"/><br>Flanged <input type="checkbox"/> |

### FIELD INSPECTION DATA

| Date | Purchase Order No. | AMBIENT |          | TRANSFORMER |       | High Temp. | Liquid Level | Bush. Cond. | Paint Cond. | Leaks      | Quality Factor | Recommended Service |
|------|--------------------|---------|----------|-------------|-------|------------|--------------|-------------|-------------|------------|----------------|---------------------|
|      |                    | Temp.   | Humidity | Press.      | Temp. |            |              |             |             |            |                |                     |
| 4/88 | 21799              |         |          |             |       |            |              |             |             | SEE REPORT | P              | FIELD SERVICE       |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |

### LIQUID TEST DATA

| Date | Color | Visual | PCB Content | IFT | Neut. No. | Diel. | Moisture Content | Power Factor | TCG Content | Specific Gravity | Quality Factor | Recommended Service |
|------|-------|--------|-------------|-----|-----------|-------|------------------|--------------|-------------|------------------|----------------|---------------------|
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |

E-estimated PCB-Polychlorinated Biphenyl by electron capture in parts per million IFT-Interfacial Tension in dynes/cm  
 Neut. No.-mg KOH/g oil Diel.-dielectric in kilo volts Moisture content in parts per million Power Factor in percent corrected to 20°C  
 TCG-Total Combustible Gas by gas chromatography in parts per million Quality Factor-G, Good F, Fair B, Borderline P, Poor C, Critical

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts

TEST NO.: 7

### NAME PLATE & LOCATION DATA

#10X

|                  |              |               |        |                   |   |                           |          |          |
|------------------|--------------|---------------|--------|-------------------|---|---------------------------|----------|----------|
| Make/Rewind      | AC           | High Voltage  | 13800  | No. Radiators     | 5 | 2 SETS EA.<br>10 FINS EA. | Ground   | NO       |
| Serial No.       | 1850519      | Low Voltage   | 2300   | No. Fans          | 2 |                           | Outside  | YES      |
| Inventory Number | 10           | Phase/Cycle   | 3/60   | Bushings Top/Side |   | ENCLOSED                  | Inside   | NO       |
| Impedance        | 5.4%         | Gas Headspace | SEALED | Location          |   | #10 BLDG 42               | Platform | 10' HIGH |
| KVA              | 1500         | Water Cooled  | NO     | Environment       |   | G000                      | Pole     | NO       |
| FILTER Valves    | TOP & BOTTOM | Hose          | 50'    | Gal./Type         |   | 576A                      | Roof     | NO       |

### FIELD INSPECTION DATA

| Date | P.O. No.      | TEST  |          | TRANSFORMER |       | Oil Level | Bush. | Paint | Leaks      | Quality Factor | Recommended Service |
|------|---------------|-------|----------|-------------|-------|-----------|-------|-------|------------|----------------|---------------------|
|      |               | Temp. | Humidity | Press       | Temp. |           |       |       |            |                |                     |
| 6/73 | 00330-3-57717 | 78°   | 60%      |             | 46°   | LOW       |       | GOOD  | CASE WELD  | POOR           | FIELD SERVICE       |
| 5/75 | 0030-5-02170  | 75°   | 65%      |             | 45°   | LOW       |       | GOOD  | CASE WELD  | POOR           | FIELD SERVICE       |
| 7/75 | 0030-5-06350  |       |          |             |       | +15GAL    |       |       | EPOXIED    | GOOD           | INSP. 5/76          |
| 4/76 | 0030-6-17555  | 90°   | 80%      |             | 48°   | OK        |       | GOOD  | NONE       | GOOD           | INSP. 4/77          |
| 6/77 | 0030-7-31795  | 75°   | 60%      |             | 38°   | OK        | ENCL. | GOOD  | SEE LETTER | FAIR           | FIELD SERVICE       |
| 4/78 | 0030-8-45421  | 50°   | 85%      |             | 30°   | OK        | ENCL. | FAIR  | NONE       | FAIR           | INSP 4/79           |
| 4/79 | 0030-9-61899  | 50°   | 50%      |             | 30°   | OK        | ENCL. | GOOD  | NONE       | GOOD           | INSP. 4/80          |
| 4/83 | 21799         |       |          |             |       |           |       |       | SEE REPORT | P              | FIELD SERV.         |

### LIQUID TEST DATA

| Date | Color | Sludge   | I.F.T. | S.R. | Neut# | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|----------|--------|------|-------|-------|------------------|------|----------------|---------------------|
| 6/73 | WW    | TRACE    |        | 44.0 | .009  | 39.2  | 1.393            |      | GOOD           | TEST 6/74           |
| 5/75 | WW    | TRACE    |        | 49.9 | .010  | +50   | 1.392            |      | GOOD           | TEST 5/76           |
| 4/76 | VLS   | TRACE    |        | 55.0 | .010  | 41.7  | 1.392            | 63.5 | GOOD           | TEST 4/77           |
| 6/77 | VLS   | CLEAR    |        | 12.2 | .01   | 41    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | LS    | S. TRACE |        |      | .012  | 37    | 1.390            |      | GOOD           | TEST 4/79           |
| 4/79 | VLS   | TRACE    |        |      | .015  | 42    | 1.394            |      | GOOD           | TEST 4/80           |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10° ohm-cm askarel only  
Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f



CONCORD, NH  
(603) 224-4006

# TSI

## TRANSFORMER SERVICE, INC.

TSI NO. 7  
CUSTOMER NO.  
LOCATION #10  
BLDG: #42

### Transformer Inspection Service

CUSTOMER FACEMATE CORPORATION CITY CHICOPEE STATE MA

#### NAME PLATE & LOCATION DATA

|               |                   |                             |  |                       |   |                             |   |   |
|---------------|-------------------|-----------------------------|--|-----------------------|---|-----------------------------|---|---|
| Make/Rewind   | ALLIS<br>CHALMERS | High Voltage                | 13800  | No. Radiators         | 5 | 2 SETS EACH<br>10 FINS EACH | Special Conditions  |   |
| Serial No.    | 1850519           | Low Voltage                 | 2300   | Supplemental Cooling  |   | Type/No.                    | Outside <input type="checkbox"/><br>Inside <input type="checkbox"/> | Platform Pole <input type="checkbox"/>    |
| Paint Color   |                   | Phase/Cycle                 | 3/60   | Bushings T-Top S-Side |   | #HV #LV                     | Ground Roof <input type="checkbox"/>                                | Vault Cage <input type="checkbox"/>       |
| Impedance     | 5.4%              | Type of Headspace           | SEALED   | No Load Tap Changer   |   | #Top #Side                  | Radiators   | Welded Flanged <input type="checkbox"/>   |
| KVA           | 1500              | Sample energ. Filter energ. | Yes <input type="checkbox"/> No <input type="checkbox"/><br>Yes <input type="checkbox"/> No <input type="checkbox"/> | Accessory Equipment   |   | TSI No(s).                  | Top Cover   | Welded Bolted <input type="checkbox"/>    |
| Filter Valves | TV & BV           | Hose (one way)              | 50'  | Gal./Type             |   | 576/ASKAREL                 | Valves  | Threaded Flanged <input type="checkbox"/> |

#### FIELD INSPECTION DATA

| Date | Purchase Order No. | AMBIENT |          | TRANSFORMER |       | High Temp. | Liquid Level | Bush. Cond. | Paint Cond. | Leaks      | Quality Factor | Recommended Service |
|------|--------------------|---------|----------|-------------|-------|------------|--------------|-------------|-------------|------------|----------------|---------------------|
|      |                    | Temp.   | Humidity | Press.      | Temp. |            |              |             |             |            |                |                     |
| 4/88 | 21799              |         |          |             |       |            |              |             |             | SEE REPORT | P              | FIELD SERVICE       |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |

#### LIQUID TEST DATA

| Date | Color | Visual | PCB Content | IFT | Neut. No. | Diel. | Moisture Content | Power Factor | TCG Content | Specific Gravity | Quality Factor | Recommended Service |
|------|-------|--------|-------------|-----|-----------|-------|------------------|--------------|-------------|------------------|----------------|---------------------|
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |

E-estimated PCB-Polychlorinated Biphenyl by electron capture in parts per million IFT-Interfacial Tension in dynes/cm  
 Neut. No.-mg KOH/g oil Diel.-dielectric in kilo volts Moisture content in parts per million Power Factor in percent corrected to 20°C  
 TCG-Total Combustible Gas by gas chromatography in parts per million Quality Factor-G, Good F, Fair B, Borderline P, Poor C, Critical

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts TEST NO.: 8

### NAME PLATE & LOCATION DATA

#10S

|                  |              |               |     |                   |     |          |  |
|------------------|--------------|---------------|-----|-------------------|-----|----------|--|
| Make/Rewind      | G & W        | High Voltage  |     | No. Radiators     |     | Ground   |  |
| Serial No.       |              | Low Voltage   |     | No. Fans          |     | Outside  |  |
| Inventory Number | SWITCH       | Phase/Cycle   |     | Bushings Top/Side |     | Inside   |  |
| Impedance        |              | Gas Headspace |     | Location          |     | Platform |  |
| KVA              |              | Water Cooled  |     | Environment       |     | Pole     |  |
| FILTER Valves    | TOP & BOTTOM | Hose          | 50' | Gal./Type         | 60A | Roof     |  |

### FIELD INSPECTION DATA

| Date | P.O. No.      | TEST            |          | TRANSFORMER |       | Oil Level | Bush. | Paint | Leaks         | Quality Factor | Recommended Service |
|------|---------------|-----------------|----------|-------------|-------|-----------|-------|-------|---------------|----------------|---------------------|
|      |               | Temp.           | Humidity | Press       | Temp. |           |       |       |               |                |                     |
| 6/73 | 00330-3-57717 | 78 <sup>o</sup> | 60%      |             |       | OK        |       | GOOD  | NONE          | GOOD           | INSP. 6/74          |
| 5/75 | 0030-5-02170  | 75 <sup>o</sup> | 65%      |             |       | OK        |       | GOOD  | SWITCH HANDLE | FAIR           | FIELD SERVICE       |
| 7/75 | 0030-5-06350  |                 |          |             |       |           |       |       | REPAIRED      | GOOD           | INSP. 5/76          |
| 4/76 | 0030-6-17555  | 90 <sup>o</sup> | 80%      |             |       | OK        |       | GOOD  | NONE          | GOOD           | INSP. 4/77          |
| 6/77 | 0030-7-31795  | 75 <sup>o</sup> | 60%      |             |       | OK        |       | GOOD  | SEE LETTER    | FAIR           | FIELD SERVICE       |
| 4/78 | 0030-8-45421  | 50 <sup>o</sup> | 85%      |             |       | OK        |       | FAIR  | NONE          | FAIR           | INSP 4/79           |
| 4/79 | 0030-9-61899  | 50 <sup>o</sup> | 50%      |             |       | OK        |       | FAIR  | NONE          | FAIR           | INSP. 4/80          |
| 4/88 | 21799         |                 |          |             |       |           |       |       | SEE REPORT    | P              | FIELD SERV.         |

### LIQUID TEST DATA

| Date | Color | Sludge | I.F.T. | S.R. | Neut# | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|--------|--------|------|-------|-------|------------------|------|----------------|---------------------|
| 6/73 | MW    | CLEAR  |        | 44.8 | .003  | 35.5  | 1.387            |      | GOOD           | TEST 6/74           |
| 5/75 | MW    | TRACE  |        | 44.0 | .003  | 43.1  | 1.388            |      | GOOD           | TEST 5/76           |
| 4/76 | MW    | TRACE  |        | 44.0 | .002  | 46.2  | 1.389            | 59.8 | GOOD           | TEST 4/77           |
| 6/77 | MW    | TRACE  |        | 13.7 | .003  | 45    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | VLS   | TRACE  |        |      | .005  | 41    | 1.389            |      | GOOD           | TEST 4/79           |
| 4/79 | MW    | CLEAR  |        |      | .005  | 50+   | 1.398            |      | GOOD           | TEST 4/80           |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10<sup>o</sup> ohm-cm askarel only  
Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100<sup>o</sup>f

CONCORD, NH  
(603) 224-4006

# TSI

## TRANSFORMER SERVICE, INC.

TSI NO. 8  
CUSTOMER NO.  
LOCATION

### Transformer Inspection Service

CUSTOMER FACEMATE CORPORATION CITY CHICOPEE STATE MA

#### NAME PLATE & LOCATION DATA

|               |         |                             |  |                       |            |                                      |   |
|---------------|---------|-----------------------------|--|-----------------------|------------|--------------------------------------|---|
| Make/Rewind   | G & W   | High Voltage                |  | No. Radiators         |            | Special Conditions                   |   |
| Serial No.    | SWITCH  | Low Voltage                 |  | Supplemental Cooling  | Type/No.   | Outside <input type="checkbox"/>     | Platform <input type="checkbox"/>         |
| Paint Color   |         | Phase/Cycle                 |  | Bushings T-Top S-Side | #HV #LV    | Inside <input type="checkbox"/>      | Pole <input type="checkbox"/>             |
| Impedance     |         | Type of Headspace           |  | No Load Tap Changer   | #Top #Side | Ground Roof <input type="checkbox"/> | Vault Cage <input type="checkbox"/>       |
| KVA           |         | Sample energ. Filter energ. | Yes <input type="checkbox"/> No <input type="checkbox"/> | Accessory Equipment   | TSI No(s). | Radiators                            | Welded Flanged <input type="checkbox"/>   |
| Filter Valves | TV & BV | Hose (one way)              | 50'  | Gal./Type             | 60/ASKAREL | Top Cover                            | Welded Bolted <input type="checkbox"/>    |
|               |         |                             |  |                       |            | Valves                               | Threaded Flanged <input type="checkbox"/> |

#### FIELD INSPECTION DATA

| Date | Purchase Order No. | AMBIENT |          | TRANSFORMER |       | High Temp. | Liquid Level | Bush. Cond. | Paint Cond. | Leaks      | Quality Factor | Recommended Service |
|------|--------------------|---------|----------|-------------|-------|------------|--------------|-------------|-------------|------------|----------------|---------------------|
|      |                    | Temp.   | Humidity | Press.      | Temp. |            |              |             |             |            |                |                     |
| 4/38 | 21799              |         |          |             |       |            |              |             |             | SEE REPORT | P              | FIELD SERVICE       |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |

#### LIQUID TEST DATA

| Date | Color | Visual | PCB Content | IFT | Neut. No. | Diel. | Moisture Content | Power Factor | TCG Content | Specific Gravity |  | Quality Factor | Recommended Service |
|------|-------|--------|-------------|-----|-----------|-------|------------------|--------------|-------------|------------------|--|----------------|---------------------|
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |

E-estimated PCB-Polychlorinated Biphenyl by electron capture in parts per million IFT-Interfacial Tension in dynes/cm  
 Neut. No.-mg KOH/g oil Diel.-dielectric in kilo volts Moisture content in parts per million Power Factor in percent corrected to 20 °C  
 TCG-Total Combustible Gas by gas chromatography in parts per million Quality Factor-G, Good F, Fair B, Borderline P, Poor C, Critical

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts

TEST NO.: 9

#11X

### NAME PLATE & LOCATION DATA

|                  |              |               |        |                   |             |                        |          |          |
|------------------|--------------|---------------|--------|-------------------|-------------|------------------------|----------|----------|
| Make/Rewind      | AC           | High Voltage  | 13800  | No. Radiators     | 16          | 10 TUBES EA.<br>6'x12" | Ground   | NO       |
| Serial No.       | 2980713      | Low Voltage   | 2300   | No. Fans          | NO          |                        | Outside  | YES      |
| Inventory Number | 11705        | Phase/Cycle   | 3/60   | Bushings Top/Side | ENCLOSED    |                        | Inside   | NO       |
| Impedance        | 5.3%         | Gas Headspace | SEALED | Location          | #11 BLDG 42 |                        | Platform | 10' HIGH |
| KVA              | 1500         | Water Cooled  | NO     | Environment       | GOOD        |                        | Pole     | NO       |
| FILTER Valves    | TOP & BOTTOM | Hose          | 50'    | Gal./Type         | 590A        |                        | Roof     | NO       |

### FIELD INSPECTION DATA

| Date | P.O. No.      | TEST  |          | TRANSFORMER |       | Oil Level | Bush. | Paint | Leaks      | Quality Factor | Recommended Service |
|------|---------------|-------|----------|-------------|-------|-----------|-------|-------|------------|----------------|---------------------|
|      |               | Temp. | Humidity | Press       | Temp. |           |       |       |            |                |                     |
| 6/73 | 00330-3-57717 | 78°   | 60%      | +1.0        | 44°   | OK        |       | GOOD  | NONE       | GOOD           | INSP. 6/74          |
| 5/75 | 0030-5-02170  | 75°   | 65%      | -0          | 40°   | OK        |       | GOOD  | MANHOLE    | FAIR           | FIELD SERVICE       |
| 7/75 | 0030-5-06350  |       |          |             |       | +5GAL     |       |       | REPAIRED   | GOOD           | INSP. 5/76          |
| 4/76 | 0030-6-17555  | 90°   | 80%      | +1.5        | 47°   | OK        |       | GOOD  | NONE       | GOOD           | INSP. 4/77          |
| 6/77 | 0030-7-31795  | 75°   | 65%      | -.5         | 30°   | OK        |       | GOOD  | NONE       | GOOD           | INSP. 6/78          |
| 4/78 | 0030-8-45421  | 50°   | 90%      | -1          | 32°   | OK        | ENCL  | FAIR  | NONE       | GOOD           | INSP 4/79           |
| 4/79 | 0030-9-61899  | 50°   | 50%      | -.5         | 25°   | OK        | ENCL  | FAIR  | NONE       | GOOD           | INSP. 4/80          |
| 4/88 | 21779         |       |          |             |       |           |       |       | SEE REPORT | P              | FIELD SERV.         |

### LIQUID TEST DATA

| Date | Color | Sludge   | I.F.T. | S.R. | Neut# | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|----------|--------|------|-------|-------|------------------|------|----------------|---------------------|
| 6/73 | NW    | TRACE    |        | 45.8 | .010  | 37.7  | 1.557            | 47.2 | GOOD           | TEST 6/74           |
| 5/75 | VLS   | TRACE    |        | 37.9 | .012  | 45.0  | 1.559            | 46.1 | GOOD           | TEST 5/76           |
| 4/76 | VLS   | TRACE    |        | 39.9 | .009  | 44.4  | 1.558            | 45.5 | GOOD           | TEST 4/77           |
| 6/77 | VLS   | CLOUDY   |        | 9.2  | .009  | 40    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | VLS   | CRYSTALS |        |      | .010  | 34    | 1.556            |      | GOOD           | TEST 4/79           |
| 4/79 | LS    | TRACE    |        |      | .010  | 50+   | 1.561            |      | GOOD           | TEST 4/80           |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only  
Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

CONCORD, NH  
(603) 224-4006

# TSI TRANSFORMER SERVICE, INC.

TSI NO. 9  
CUSTOMER NO.  
LOCATION #11  
BLDG. #42

## Transformer Inspection Service

CUSTOMER FACEMATE CORPORATION CITY CHICOPEE STATE MA

### NAME PLATE & LOCATION DATA

|               |                   |                             |  |                       |                          |       |                                      |   |
|---------------|-------------------|-----------------------------|--|-----------------------|--------------------------|-------|--------------------------------------|---|
| Make/Rewind   | ALLIS<br>CHALMERS | High Voltage                | 13800  | No. Radiators         | 10 TUBES EA.<br>6' X 12" |       | Special Conditions                   |   |
| Serial No.    | 2980713           | Low Voltage                 | 2300   | Supplemental Cooling  | Type/No.                 |       | Outside <input type="checkbox"/>     | Platform <input type="checkbox"/>         |
| Paint Color   |                   | Phase/Cycle                 | 3/60   | Bushings T-Top S-Side | #HV                      | #LV   | Inside <input type="checkbox"/>      | Pole <input type="checkbox"/>             |
| Impedance     | 5.3%              | Type of Headspace           | SEALED   | No Load Tap Changer   | #Top                     | #Side | Ground Roof <input type="checkbox"/> | Vault Cage <input type="checkbox"/>       |
| KVA           | 1500              | Sample energ. Filter energ. | Yes <input type="checkbox"/> No <input type="checkbox"/> | Accessory Equipment   | TSI No(s).               |       | Radiators                            | Welded Flanged <input type="checkbox"/>   |
| Filter Valves | TV & BV           | Hose (one way)              | 50'  | Gal./Type             | 590/ASKAREL              |       | Top Cover                            | Welded Bolted <input type="checkbox"/>    |
|               |                   |                             |  |                       |                          |       | Valves                               | Threaded Flanged <input type="checkbox"/> |

### FIELD INSPECTION DATA

| Date | Purchase Order No. | AMBIENT |          | TRANSFORMER |       | High Temp. | Liquid Level | Bush. Cond. | Paint Cond. | Leaks      | Quality Factor | Recommended Service |
|------|--------------------|---------|----------|-------------|-------|------------|--------------|-------------|-------------|------------|----------------|---------------------|
|      |                    | Temp.   | Humidity | Press.      | Temp. |            |              |             |             |            |                |                     |
| 4/88 | 21977              |         |          |             |       |            |              |             |             | SEE REPORT | P              | FIELD SERVICE       |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |

### LIQUID TEST DATA

| Date | Color | Visual | PCB Content | IFT | Neut. No. | Dielectric | Moisture Content | Power Factor | TCG Content | Specific Gravity |  | Quality Factor | Recommended Service |
|------|-------|--------|-------------|-----|-----------|------------|------------------|--------------|-------------|------------------|--|----------------|---------------------|
|      |       |        |             |     |           |            |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |            |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |            |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |            |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |            |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |            |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |            |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |            |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |            |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |            |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |            |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |            |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |            |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |            |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |            |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |            |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |            |                  |              |             |                  |  |                |                     |

E-estimated PCB-Polychlorinated Biphenyl by electron capture in parts per million IFT-Interfacial Tension in dynes/cm  
 Neut. No.-mg KOH/g oil Dielectric-dielectric in kilo volts Moisture content in parts per million Power Factor in percent corrected to 20°C  
 TCG-Total Combustible Gas by gas chromatography in parts per million Quality Factor-G, Good F, Fair B, Borderline P, Poor C, Critical

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts TEST NO.: 10

#115

### NAME PLATE & LOCATION DATA

|                  |       |               |     |                   |     |          |  |
|------------------|-------|---------------|-----|-------------------|-----|----------|--|
| Make/Rewind      | G & W | High Voltage  |     | No. Radiators     |     | Ground   |  |
| Serial No.       |       | Low Voltage   |     | No. Fans          |     | Outside  |  |
| Inventory Number |       | Phase/Cycle   |     | Bushings Top/Side |     | Inside   |  |
| Impedance        |       | Gas Headspace |     | Location          |     | Platform |  |
| KVA              |       | Water Cooled  |     | Environment       |     | Pole     |  |
| FILTER Valves    | YES   | Hose          | 50' | Gal./Type         | 60A | Roof     |  |

### FIELD INSPECTION DATA

| Date | P.O. No.      | TEST            |          | TRANSFORMER |       | Oil Level | Bush. | Paint | Leaks            | Quality Factor | Recommended Service |
|------|---------------|-----------------|----------|-------------|-------|-----------|-------|-------|------------------|----------------|---------------------|
|      |               | Temp.           | Humidity | Press       | Temp. |           |       |       |                  |                |                     |
| 6/73 | 00330-3-57717 | 78 <sup>o</sup> | 60%      |             |       | OK        |       | GOOD  | BOTTOM COV.      | POOR           | FIELD SERVICE       |
| 5/75 | 0030-5-02170  | 75 <sup>o</sup> | 65%      |             |       | OK        |       | GOOD  | SIDE COVERS      | POOR           | FIELD SERVICE       |
| 7/75 | 0030-5-06350  |                 |          |             |       |           |       |       | REGASKETED       | GOOD           | INSP. 5/76          |
| 4/76 | 0030-6-17555  | 90 <sup>o</sup> | 80%      |             |       | OK        |       | POOR  | NONE             | FAIR           | CLEAN&PAINT         |
| 6/77 | 0030-7-31795  | 75 <sup>o</sup> | 60%      |             |       | OK        |       | POOR  | SEE LETTER       | POOR           | FIELD SERVICE       |
| 4/78 | 0030-8-45421  | 50 <sup>o</sup> | 85%      |             |       | OK        |       | POOR  | SEE LETTER       | POOR           | FIELD SERVICE       |
| 8/78 | 0030-8-50697  |                 |          |             |       |           |       |       | REPAIRED EPOXIED | FAIR           | INSP. 4/79          |
| 4/79 | 0030-9-61899  | 50 <sup>o</sup> | 50%      |             |       | OK        |       | FAIR  | NONE             | FAIR           | INSP. 4/80          |
| 4/88 | 21779         |                 |          |             |       |           |       |       | SEE REPORT       | P              | FIELD SERV.         |

### LIQUIO TEST DATA

| Date | Color | Sludge   | I.F.T. | S.R. | Neut# | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|----------|--------|------|-------|-------|------------------|------|----------------|---------------------|
| 6/73 | WW    | CLEAR    |        | 44.8 | .006  | 35.9  | 1.554            | 46.9 | GOOD           | TEST 6/74           |
| 5/75 | LS    | CLEAR    |        | 33.8 | .006  | 31.3  | 1.557            | 48.0 | GOOD           | TEST 5/76           |
| 4/76 | LS    | CLEAR    |        | 34.0 | .006  | 33.7  | 1.557            | 48.0 | GOOD           | TEST 4/77           |
| 6/77 | LS    | CLEAR    |        | 8.2  | .005  | 33    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | LS    | S. TRACE |        |      | .006  | 31    | 1.555            |      | GOOD           | TEST 4/79           |
| 4/79 | LS    | TRACE    |        |      | .006  | 30    | 1.549            |      | GOOD           | TEST 4/80           |
|      |       |          |        |      |       |       |                  |      |                |                     |
|      |       |          |        |      |       |       |                  |      |                |                     |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10<sup>o</sup>ohm-cm askarel only  
Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100<sup>o</sup>f

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts TEST NO.: 13

### NAME PLATE & LOCATION DATA

#9X

|                  |              |               |        |                   |    |                        |       |          |     |
|------------------|--------------|---------------|--------|-------------------|----|------------------------|-------|----------|-----|
| Make/Rewind      | WEST         | High Voltage  | 13800  | No. Radiators     | 22 | TUBES 6 EA             | 6'x1½ | Ground   | NO  |
| Serial No.       | 3411578      | Low Voltage   | 575    | No. Fans          |    | NO                     |       | Outside  | NO  |
| Inventory Number | 5687         | Phase/Cycle   | 3/60   | Bushings Top/Side |    | ENCLOSED               |       | Inside   | YES |
| Impedance        | 5.3%         | Gas Headspace | SEALED | Location          |    | 550 VOLT RM #9 BLDG 42 |       | Platform | NO  |
| KVA              | 1500         | Water Cooled  | NO     | Environment       |    | WARM INSIDE            |       | Pole     | NO  |
| FILTER Valves    | TOP & BOTTOM | Hose          | 50'    | Gal./Type         |    | 647A                   |       | Roof     | NO  |

### FIELD INSPECTION DATA

| Date | P.O. No.      | TEST  |          | TRANSFORMER |       | Oil Level | Bush. | Paint | Leaks        | Quality Factor | Recommended Service |
|------|---------------|-------|----------|-------------|-------|-----------|-------|-------|--------------|----------------|---------------------|
|      |               | Temp. | Humidity | Press       | Temp. |           |       |       |              |                |                     |
| 6/73 | 00330-3-57717 | 78°   | 60%      |             | 50°   | OK        |       | GOOD  | NONE         | GOOD           | INSP. 6/74          |
| 5/75 | 0030-5-02170  | 75°   | 65%      |             | 52°   | OK        |       | GOOD  | L.V. BUSHING | POOR           | FIELD SERVICE       |
| 7/75 | 0030-5-06350  |       |          |             |       |           |       |       | REPAIRED     | GOOD           | INSP. 5/76          |
| 4/76 | 0030-6-17555  | 100°  | 80%      |             | 53°   | OK        | ENCL. | GOOD  | NONE         | GOOD           | INSP. 4/77          |
| 6/77 | 0030-7-31795  | 80    | 60%      |             | 52    | OK        | ENCL. | GOOD  | SEE LETTER   | POOR           | FIELD SERVICE       |
| 4/78 | 0030-8-45421  | 70°   | 80%      |             | 54°   | OK        | ENCL. | DIRTY | COMPARTMENT  | POOR           | FIELD SERVICE       |
| 8/78 | 0030-8-50697  |       |          |             |       |           |       |       | REPAIRED     | FAIR           | INSP. 4/79          |
| 4/79 |               | 60°   | 60%      |             | 50°   | OK        | ENCL. | DIRTY | THREE VALVES | FAIR           | REPAIR LEAKS        |
| 8/79 | 0030-9-64477  |       |          |             |       |           |       |       | REPAIRED     | GOOD           | INSP. 4/80          |
| 1/83 | 9073          | 65°   | 50%      |             | 10°   | OK        | ENCL. | DIRTY | LV BUSHING   | FAIR           | INSP. 1/84          |

### LIQUID TEST DATA

| Date | Color | Sludge | I.F.T. | S.R. | Neut# | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|--------|--------|------|-------|-------|------------------|------|----------------|---------------------|
| 6/73 | WW    | CLEAR  |        | 110. | .011  | 35.8  | 1.554            | 52.7 | GOOD           | TEST 6/74           |
| 5/75 | WW    | CLEAR  |        | 73.3 | .011  | 32.2  | 1.555            | 53.0 | GOOD           | TEST 5/76           |
| 4/76 | WW    | CLEAR  |        | 81.4 | .011  | 34.7  | 1.555            | 53.0 | GOOD           | TEST 4/77           |
| 6/77 | WW    | CLEAR  |        | 14.6 | .019  | 46    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | VLS   | CLEAR  |        |      | .022  | 37    | 1.554            |      | GOOD           | TEST 4/79           |
| 4/79 | VLS   | CLEAR  |        | 88.0 | .025  | 45    | 1.548            |      | GOOD           | TEST 4/80           |
| 1/83 | VLS   | CLEAR  |        |      | .025  | 41    |                  |      | GOOD           | TEST 1/84           |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10° ohm-cm askarel only  
Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

*Uniroyal*

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts TEST NO.: 13

### NAME PLATE & LOCATION DATA

#9X

|                  |              |               |        |                   |    |                        |      |          |     |
|------------------|--------------|---------------|--------|-------------------|----|------------------------|------|----------|-----|
| Make/Rewind      | WEST         | High Voltage  | 13800  | No. Radiators     | 22 | TUBES                  | 6 EA | Ground   | NO  |
| Serial No.       | 3411578      | Low Voltage   | 575    | No. Fans          |    |                        |      | Outside  | NO  |
| Inventory Number | 5687         | Phase/Cycle   | 3/60   | Bushings Top/Side |    | ENCLOSED               |      | Inside   | YES |
| Impedance        | 5.3%         | Gas Headspace | SEALED | Location          |    | 550 VOLT RM #9 BLDG 42 |      | Platform | NO  |
| KVA              | 1500         | Water Cooled  | NO     | Environment       |    | WARM INSIDE            |      | Pole     | NO  |
| FILTER Valves    | TOP & BOTTOM | Hose          | 50'    | Gal./Type         |    | 647A                   |      | Roof     | NO  |

### FIELD INSPECTION DATA

| Date | P.O. No.      | TEST  |          | TRANSFORMER |       | Oil Level | Bush. | Paint | Leaks          | Quality Factor | Recommended Service |
|------|---------------|-------|----------|-------------|-------|-----------|-------|-------|----------------|----------------|---------------------|
|      |               | Temp. | Humidity | Press       | Temp. |           |       |       |                |                |                     |
| 6/73 | 00330-3-57717 | 78°   | 60%      |             | 50°   | OK        |       | GOOD  | NONE           | GOOD           | INSP. 6/74          |
| 5/75 | 0030-5-02170  | 75°   | 65%      |             | 52°   | OK        |       | GOOD  | L.V. BUSHING   | POOR           | FIELD SERVI         |
| 7/75 | 0030-5-06350  |       |          |             |       |           |       |       | REPAIRED       | GOOD           | INSP. 5/76          |
|      | 0030-6-17555  | 100°  | 80%      |             | 53°   | OK        | ENCL. | GOOD  | NONE           | GOOD           | INSP. 4/77          |
| 6/77 | 0030-7-31795  | 80    | 60%      |             | 52    | OK        | ENCL. | GOOD  | SEE LETTER     | POOR           | FIELD SERVICE       |
| 4/78 | 0030-8-45421  | 70°   | 80%      |             | 54°   | OK        | ENCL  | DIRTY | COMPARTMENT    | POOR           | FIELD SERVIC        |
| 8/78 | 0030-8-50697  |       |          |             |       |           |       |       | REPAIRED       | FAIR           | INSP. 4/79          |
| 4/79 |               | 60°   | 60%      |             | 50°   | OK        | ENCL  | DIRTY | THREE VALVES   | FAIR           | REPAIR LEAK         |
| 8/79 | 0030-9-64477  |       |          |             |       |           |       |       | REPAIRED       | GOOD           | INSP. 4/80          |
| 1/83 | 9073          | 65°   | 50%      |             | 10°   | OK        | ENCL. | DIRTY | LV BUSHING     | FAIR           | INSP. 1/84          |
| 4/88 |               | 45    | 90       |             | 10-85 | OK        | encl  | Dirty | lv bushing (4) | P              | F/S                 |

### LIQUID TEST DATA

| Date | Color | Sludge | I.F.T. | S.R. | Neut# | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|--------|--------|------|-------|-------|------------------|------|----------------|---------------------|
| 6/73 | WW    | CLEAR  |        | 110. | .011  | 35.8  | 1.554            | 52.7 | GOOD           | TEST 6/74           |
| 5/75 | WW    | CLEAR  |        | 73.3 | .011  | 32.2  | 1.555            | 53.0 | GOOD           | TEST 5/76           |
| 4/76 | WW    | CLEAR  |        | 81.4 | .011  | 34.7  | 1.555            | 53.0 | GOOD           | TEST 4/77           |
| 6/77 | WW    | CLEAR  |        | 14.6 | .019  | 46    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | VLS   | CLEAR  |        |      | .022  | 37    | 1.554            |      | GOOD           | TEST 4/79           |
| 4/79 | VLS   | CLEAR  |        | 88.0 | .025  | 45    | 1.548            |      | GOOD           | TEST 4/80           |
| 1/83 | VLS   | CLEAR  |        |      | .025  | 41    |                  |      | GOOD           | TEST 1/84           |



**Transformer Inspection Service**

CUSTOMER FACEMATE COPR. CITY CHICOPEE STATE MA

**NAME PLATE & LOCATION DATA**

|               |           |                             |  |                       |                          |   |  |
|---------------|-----------|-----------------------------|--|-----------------------|--------------------------|---|--|
| Make/Rewind   | WEST.     | High Voltage                | 13800  | No. Radiators         | TUBES 6 EA<br>6' X 1 1/2 | Special Conditions  |  |
| Serial No.    | 3411578   | Low Voltage                 | 575  | Supplemental Cooling  | Type/No.                 | Outside Inside <input type="checkbox"/> <input checked="" type="checkbox"/> | Platform Pole <input type="checkbox"/> <input type="checkbox"/>    |
| Paint Color   |           | Phase/Cycle                 |  | Bushings T-Top S-Side | #HV #LV                  | Ground Roof <input type="checkbox"/> <input type="checkbox"/>               | Vault Cage <input type="checkbox"/> <input type="checkbox"/>       |
| Impedance     | 5.3       | Type of Headspace           | SEALED   | No Load Tap Changer   | #Top #Side               | Radiators   | Weided Flanged <input type="checkbox"/> <input type="checkbox"/>   |
| KVA           | 1500      | Sample energ. Filter energ. | Yes <input type="checkbox"/> No <input type="checkbox"/><br>Yes <input type="checkbox"/> No <input type="checkbox"/> | Accessory Equipment   | TSI No(s).               | Top Cover   | Weided Bolted <input type="checkbox"/> <input type="checkbox"/>    |
| Filter Valves | TOP & BTM | Hose (one way)              | 50'  | Gal./Type             | 67A 647A                 | Valves  | Threaded Flanged <input type="checkbox"/> <input type="checkbox"/> |

**FIELD INSPECTION DATA**

| Date | Purchase Order No. | AMBIENT |          | TRANSFORMER |       | High Temp. | Liquid Level | Bush. Cond. | Paint Cond. | Leaks      | Quality Factor | Recommended Service |
|------|--------------------|---------|----------|-------------|-------|------------|--------------|-------------|-------------|------------|----------------|---------------------|
|      |                    | Temp.   | Humidity | Press.      | Temp. |            |              |             |             |            |                |                     |
| 4/88 | 21799              | 45°     | 90%      |             | 10°   |            | OK           | ENCL        | DIRTY       | SEE REPORT | P              | FIELD SERV.         |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |

**LIQUID TEST DATA**

| Date | Color | Visual | PCB Content | IFT | Neut. No. | Diel. | Moisture Content | Power Factor | TCG Content | Specific Gravity | Quality Factor | Recommended Service |
|------|-------|--------|-------------|-----|-----------|-------|------------------|--------------|-------------|------------------|----------------|---------------------|
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |

E-estimated PCB-Polychlorinated Biphenyl by electron capture in parts per million IFT-Interfacial Tension in dynes/cm  
 Neut. No.-mg KOH/g oil Diel.-dielectric in kilo volts Moisture content in parts per million Power Factor in percent corrected to 20°C  
 TCG-Total Combustible Gas by gas chromatography in parts per million Quality Factor-G, Good F, Fair B, Borderline P, Poor C, Critical

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts TEST NO.: 14

### NAME PLATE & LOCATION DATA

#95

|                  |                |               |     |                   |             |          |     |
|------------------|----------------|---------------|-----|-------------------|-------------|----------|-----|
| Make/Rewind      | WEST           | High Voltage  |     | No. Radiators     |             | Ground   |     |
| Serial No.       |                | Low Voltage   |     | No. Fans          |             | Outside  |     |
| Inventory Number | SWITCH FOR #13 | Phase/Cycle   |     | Bushings Top/Side |             | Inside   | YES |
| Impedance        |                | Gas Headspace |     | Location          | #9 BLDG. 42 | Platform |     |
| KVA              |                | Water Cooled  |     | Environment       | CLUTTERED   | Pole     |     |
| FILTER Valves    | TOP & BOTTOM   | Hose          | 50' | Gal./Type         | 50EA        | Roof     |     |

### FIELD INSPECTION DATA

| Date | P.O. No.      | TEST  |          | TRANSFORMER |       | Oil Level    | Bush. | Paint | Leaks                    | Quality Factor | Recommended Service |
|------|---------------|-------|----------|-------------|-------|--------------|-------|-------|--------------------------|----------------|---------------------|
|      |               | Temp. | Humidity | Press       | Temp. |              |       |       |                          |                |                     |
| 6/73 | 00330-3-57717 | 78°   | 60%      |             |       | LOW          |       | GOOD  | COVER BOLTS              | POOR           | FIELD SERVICE       |
| 5/75 | 0030-5-02170  | 75°   | 65%      |             |       | LOW          |       |       | COVER BOLTS              | POOR           | FIELD SERVICE       |
| 7/75 | 0030-5-06350  |       |          |             |       | +15GAL.      |       |       | REPAIRED                 | GOOD           | INSP. 5/76          |
| 4/76 | 0030-6-17555  | 100°  | 80%      |             |       | LOW          |       | GOOD  | SWITCH HAND & BOT. COMP. | POOR           | FIELD SERVICE       |
| 6/77 | 0030-7-31795  | 80°   | 60%      |             |       | LOW          |       | GOOD  | SEE LETTER               | FAIR           | FIELD SERVICE       |
| 4/73 | 0030-8-45421  | 70°   | 80%      |             |       | LOW          |       | DIRTY | SWITCH                   | POOR           | FIELD SERVICE       |
| 8/78 | 0030-8-50697  |       |          |             |       | ADDED 5 GAL. |       |       | REPAIRED                 | FAIR           | INSP. 4/79          |
| 4/79 | 0030-9-61899  | 60°   | 60%      |             |       | OK           |       | DIRTY | SWITCH LEVER             | FAIR           | REPAIR LEAK         |
| 8/79 | 0030-9-64477  |       |          |             |       |              |       |       | REPAIRED                 | GOOD           | INSP. 4/80          |
| 1/83 | 9073          | 65°   | 50%      |             |       | OK           |       | DIRTY | NONE                     | GOOD           | INSP. 1/84          |

### LIQUID TEST DATA

| Date | Color | Sludge   | I.F.T. | S.R. | Neut# | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|----------|--------|------|-------|-------|------------------|------|----------------|---------------------|
| 6/73 | VLS   | TRACE    |        | 55.0 | .004  | 37.4  | 1.543            | 52.2 | GOOD           | TEST 6/74           |
| 5/75 | VLS   | TRACE    |        | 99.9 | .004  | 30.0  | 1.544            | 52.2 | GOOD           | TEST 5/76           |
| 4/75 | S     | HEAVY    |        | 5.36 | .004  | 30.0  | 1.541            | 51.4 | GOOD           | TEST 4/77           |
| 6/77 | S     | TRACE    |        | 11.0 | .008  | 31    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | S     | S. TRACE |        |      | .009  | 30    | 1.542            |      | GOOD           | TEST 4/79           |
| 4/79 | CLEAR | TRACE    |        |      | .009  | 50+   | 1.403            |      | GOOD           | TEST 4/80           |
| 1/83 | S     | TRACE    |        |      | .010  | 47    |                  |      | GOOD           | TEST 1/84           |
|      |       |          |        |      |       |       |                  |      |                |                     |
|      |       |          |        |      |       |       |                  |      |                |                     |

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts TEST NO.: 14

### NAME PLATE & LOCATION DATA

#9S

|                  |                |               |     |                   |             |          |     |
|------------------|----------------|---------------|-----|-------------------|-------------|----------|-----|
| Make/Rewind      | WEST           | High Voltage  |     | No. Radiators     |             | Ground   |     |
| Serial No.       |                | Low Voltage   |     | No. Fans          |             | Outside  |     |
| Inventory Number | SWITCH FOR #13 | Phase/Cycle   |     | Bushings Top/Side |             | Inside   | YES |
| Impedance        |                | Gas Headspace |     | Location          | #9 BLDG. 42 | Platform |     |
| KVA              |                | Water Cooled  |     | Environment       | CLUTTERED   | Pole     |     |
| FILTER Valves    | TOP & BOTTOM   | Hose          | 50' | Gal./Type         | 50EA        | Roof     |     |

### FIELD INSPECTION DATA

| Date | P.O. No.      | TEST  |          | TRANSFORMER |       | Oil Level    | Bush. | Paint | Leaks                    | Quality Factor | Recommended Service |
|------|---------------|-------|----------|-------------|-------|--------------|-------|-------|--------------------------|----------------|---------------------|
|      |               | Temp. | Humidity | Press       | Temp. |              |       |       |                          |                |                     |
| 6/73 | 00330-3-57717 | 78°   | 60%      |             |       | LOW          |       | GOOD  | COVER BOLTS              | POOR           | FIELD SERVICE       |
| 5/75 | 0030-5-02170  | 75°   | 65%      |             |       | LOW          |       |       | COVER BOLTS              | POOR           | FIELD SERVICE       |
| 7/75 | 0030-5-06350  |       |          |             |       | +15GAL.      |       |       | REPAIRED                 | GOOD           | INSP. 5/76          |
| 4    | 0030-6-17555  | 100°  | 80%      |             |       | LOW          |       | GOOD  | SWITCH HAND & BOT. COMP. | POOR           | FIELD SERVICE       |
| 6/77 | 0030-7-31795  | 80°   | 60%      |             |       | LOW          |       | GOOD  | SEE LETTER               | FAIR           | FIELD SERVICE       |
| 4/78 | 0030-8-45421  | 70°   | 80%      |             |       | LOW          |       | DIRTY | SWITCH                   | POOR           | FIELD SERVICE       |
| 8/78 | 0030-8-50697  |       |          |             |       | ADDED 5 GAL. |       |       | REPAIRED                 | FAIR           | INSP. 4/79          |
| 4/79 | 0030-9-61899  | 60°   | 60%      |             |       | OK           |       | DIRTY | SWITCH LEVER             | FAIR           | REPAIR LEAK         |
| 8/79 | 0030-9-64477  |       |          |             |       |              |       |       | REPAIRED                 | GOOD           | INSP. 4/80          |
| 1/83 | 9073          | 65°   | 50%      |             |       | OK           |       | DIRTY | NONE                     | GOOD           | INSP. 1/84          |

### LIQUID TEST DATA

| Date | Color | Sludge   | I.F.T. | S.R. | Neut # | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|----------|--------|------|--------|-------|------------------|------|----------------|---------------------|
| 6/73 | VLS   | TRACE    |        | 55.0 | .004   | 37.4  | 1.543            | 52.2 | GOOD           | TEST 6/74           |
| 5/75 | VLS   | TRACE    |        | 99.9 | .004   | 30.0  | 1.544            | 52.2 | GOOD           | TEST 5/76           |
| 4/76 | S     | HEAVY    |        | 5.36 | .004   | 30.0  | 1.541            | 51.4 | GOOD           | TEST 4/77           |
| 6/77 | S     | TRACE    |        | 11.0 | .008   | 31    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | S     | S. TRACE |        |      | .009   | 30    | 1.542            |      | GOOD           | TEST 4/79           |
| 4/79 | CLEAR | TRACE    |        |      | .009   | 50+   | 1.403            |      | GOOD           | TEST 4/80           |
| 1/83 | S     | TRACE    |        |      | .010   | 47    |                  |      | GOOD           | TEST 1/84           |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10° ohm-cm askarel only  
Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

**Transformer Inspection Service**

CUSTOMER FACEMATE CORP. CITY CHICOPEE STATE MA

**NAME PLATE & LOCATION DATA**

|               |           |                             |  |                       |            |                                      |   |
|---------------|-----------|-----------------------------|--|-----------------------|------------|--------------------------------------|---|
| Make/Rewind   | WEST      | High Voltage                |  | No. Radiators         |            | Special Conditions                   |   |
| Serial No.    |           | Low Voltage                 |  | Supplemental Cooling  | Type/No.   | Outside <input type="checkbox"/>     | Platform <input type="checkbox"/>         |
| Paint Color   |           | Phase/Cycle                 |  | Bushings T-Top S-Side | #HV #LV    | Inside <input type="checkbox"/>      | Pole <input type="checkbox"/>             |
| Impedance     |           | Type of Headspace           |  | No Load Tap Changer   | #Top #Side | Ground Roof <input type="checkbox"/> | Vault Cage <input type="checkbox"/>       |
| KVA           |           | Sample energ. Filter energ. | Yes <input type="checkbox"/> No <input type="checkbox"/> | Accessory Equipment   | TSI No(s). | Radiators                            | Welded Flanged <input type="checkbox"/>   |
| Filter Valves | TOP & BTM | Hose (one way)              | 50'  | Gal./Type             | 50EA       | Top Cover                            | Welded Bolted <input type="checkbox"/>    |
|               |           |                             |  |                       |            | Valves                               | Threaded Flanged <input type="checkbox"/> |

**FIELD INSPECTION DATA**

| Date | Purchase Order No. | AMBIENT |          | TRANSFORMER |       | High Temp. | Liquid Level | Bush. Cond. | Paint Cond. | Leaks      | Quality Factor | Recommended Service |
|------|--------------------|---------|----------|-------------|-------|------------|--------------|-------------|-------------|------------|----------------|---------------------|
|      |                    | Temp.   | Humidity | Press.      | Temp. |            |              |             |             |            |                |                     |
| 4/88 | 21779              | 45°     | 90%      |             |       |            | OK           |             | BAD         | SEE REPORT | P              | FIELD SERV.         |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |

**LIQUID TEST DATA**

| Date | Color | Visual | PCB Content | IFT | Neut. No. | Diel. | Molsture Content | Power Factor | TCG Content | Specific Gravity | Quality Factor | Recommended Service |
|------|-------|--------|-------------|-----|-----------|-------|------------------|--------------|-------------|------------------|----------------|---------------------|
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |

E-estimated PCB-Polychlorinated Biphenyl by electron capture in parts per million IFT-Interfacial Tension in dynes/cm  
 Neut. No.-mg KOH/g oil Diel.-dielectric in kilo volts Molsture content in parts per million Power Factor in percent corrected to 20 °C  
 TCG-Total Combustible Gas by gas chromatography in parts per million Quality Factor-G, Good F, Fair B, Borderline P, Poor C, Critical

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts TEST NO.: 15

### NAME PLATE & LOCATION DATA

#19X

|                  |             |               |        |                   |    |                           |          |     |
|------------------|-------------|---------------|--------|-------------------|----|---------------------------|----------|-----|
| Make/Rewind      | WEST        | High Voltage  | 13200  | No. Radiators     | 16 | 7 TUBES EA<br>5' x 1 1/2" | Ground   | YES |
| Serial No.       | 5060977     | Low Voltage   | 575    | No. Fans          | 3  |                           | Outside  | YES |
| Inventory Number | 19          | Phase/Cycle   | 3/60   | Bushings Top/Side |    | ENCLOSED                  | Inside   | NO  |
| Impedance        | 5.3%        | Gas Headspace | SEALED | Location          |    | #19 BLDG 28               | Platform | NO  |
| KVA              | 1500        | Water Cooled  |        | Environment       |    | FAIR                      | Pole     | NO  |
| FILTER Valves    | PLUG BOTTOM | Hose          | 50'    | Gal./Type         |    | 800A                      | Roof     | NO  |

### FIELD INSPECTION DATA

| Date | P.O. No.      | TEST                |          | TRANSFORMER |            | Oil Level | Bush. | Paint | Leaks      | Quality Factor | Recommended Service |
|------|---------------|---------------------|----------|-------------|------------|-----------|-------|-------|------------|----------------|---------------------|
|      |               | Temp.               | Humidity | Press       | Temp.      |           |       |       |            |                |                     |
| 6/73 | 00330-3-57717 | 78°                 | 60%      |             | 48°        | LOW       |       | GOOD  | NONE       | FAIR           | ADD ASKAREL         |
| 5/75 | 0030-5-02170  | 75°                 | 65%      | 0           | 48°        | LOW       |       | FADED | SEE LETTER | POOR           | FIELD SERVICE       |
| 7/75 | 0030-5-06350  |                     |          |             |            | +25GAL.   |       |       | REPAIRED   | GOOD           | INSP. 5/76          |
| 4/76 | 0030-6-17555  | 90°                 | 80%      | 0           | 54°        | OK        |       | POOR  | NONE       | POOR           | FIELD SERVICE       |
| 6/77 | 0030-7-31795  | 70°                 | 60%      | 0           | 40°        | OK        |       | POOR  | SEE LETTER | POOR           | FIELD SERVICE       |
| 4/78 | 0030-8-45421  | 60°                 | 30%      | 1.25        | CAN'T READ | OK        |       | POOR  | SEE LETTER | POOR           | FIELD SERVICE       |
| 8/78 | 0030-8-50697  | PAINTED BY UNIROYAL |          |             |            |           |       |       | REPAIRED   | FAIR           | INSP. 4/79          |
| 4/79 | 0030-9-61899  | 50°                 | 40%      | 1.2         | CAN'T READ | OK        |       | FAIR  | NONE       | FAIR           | INSP. 4/80          |
| 5/88 | 21779         |                     |          |             |            | OK        |       | POOR  | SEE REPORT | P              | FIELD SERV.         |

### LIQUID TEST DATA

| Date | Color | Sludge | I.F.T. | S.R.  | Neut # | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|--------|--------|-------|--------|-------|------------------|------|----------------|---------------------|
| 6/73 | BLACK | HEAVY  |        | 73.3  | .006   | 36.9  | 1.557            | 54.4 | GOOD           | TEST 6/74           |
| 5/75 | WW    | MOD    |        | 220.0 | .004   | 35.8  | 1.560            | 54.6 | GOOD           | TEST 5/76           |
| 4/76 | VLS   | TRACE  |        | 146.0 | .004   | 34.7  | 1.552            | 54.6 | GOOD           | TEST 4/77           |
| 6/77 | VLS   | TRACE  |        | 14.6  | .007   | 44    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | VLS   | TRACE  |        |       | .015   | 37    | 1.552            |      | GOOD           | TEST 4/79           |
| 4/79 | VLS   | TRACE  |        |       | .015   | 43    | 1.559            |      | GOOD           | TEST 4/80           |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10° ohm-cm askarel only  
Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

# TRANSFORMER SERVICE, INC.

Oil Testing Service

*Done*  
*incomplete from A/A*

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts TEST NO.: 15

## NAME PLATE & LOCATION DATA

#19X

|                  |             |               |        |                   |             |            |           |        |     |
|------------------|-------------|---------------|--------|-------------------|-------------|------------|-----------|--------|-----|
| Make/Rewind      | WEST        | High Voltage  | 13200  | No. Radiators     | 16          | 7 TUBES EA | 5'x1 1/2" | Ground | YES |
| Serial No.       | 5060977     | Low Voltage   | 575    | No. Fans          | 3           | Outside    |           |        | YES |
| Inventory Number | 19          | Phase/Cycle   | 3/60   | Bushings Top/Side |             | ENCLOSED   | Inside    |        | NO  |
| Impedance        | 5.3%        | Gas Headspace | SEALED | Location          | #19 BLDG 28 | Platform   |           |        | NO  |
| KVA              | 1500        | Water Cooled  |        | Environment       | FAIR        | Pole       |           |        | NO  |
| FILTER Valves    | PLUG BOTTOM | Hose          | 50'    | Gal./Type         | 800A        | Roof       |           |        | NO  |

## FIELD INSPECTION DATA

| Date | P.O. No.      | TEST                     |          | TRANSFORMER |            | Oil Level | Bush. | Paint | Leaks      | Quality Factor | Recommended Service |
|------|---------------|--------------------------|----------|-------------|------------|-----------|-------|-------|------------|----------------|---------------------|
|      |               | Temp.                    | Humidity | Press       | Temp.      |           |       |       |            |                |                     |
| 6/73 | 00330-3-57717 | 78°                      | 60%      |             | 48°        | LOW       |       | GOOD  | NONE       | FAIR           | ADD ASKAREL         |
| 5/75 | 0030-5-02170  | 75°                      | 65%      | 0           | 48°        | LOW       |       | FADED | SEE LETTER | POOR           | FIELD SERVICE       |
| 7/75 | 0030-5-06350  |                          |          |             |            | +25GAL.   |       |       | REPAIRED   | GOOD           | INSP. 5/76          |
| 6/77 | 0030-6-17555  | 90°                      | 80%      | 0           | 54°        | OK        |       | POOR  | NONE       | POOR           | FIELD SERVICE       |
| 6/77 | 0030-7-31795  | 70°                      | 60%      | 0           | 40°        | OK        |       | POOR  | SEE LETTER | POOR           | FIELD SERVICE       |
| 4/78 | 0030-8-45421  | 60°                      | 30%      | 1.25        | CAN'T READ | OK        |       | POOR  | SEE LETTER | POOR           | FIELD SERVICE       |
| 8/78 | 0030-8-50697  | PAINTED BY UNIROYAL      |          |             |            |           |       |       | REPAIRED   | FAIR           | INSP. 4/79          |
| 4/79 | 0030-9-61899  | 50°                      | 40%      | 1.2         | CAN'T READ | OK        |       | FAIR  | NONE       | FAIR           | INSP. 4/80          |
| 4/85 |               | <del>scribbled out</del> |          |             |            |           |       |       |            |                |                     |
| 5/88 |               | <del>scribbled out</del> |          |             |            |           |       |       |            |                |                     |

Level GA 5+  
TU picking NET 4  
BV - (J) P F/S

## LIQUID TEST DATA

| Date | Color | Sludge | I.F.T. | S.R.  | Neut # | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|--------|--------|-------|--------|-------|------------------|------|----------------|---------------------|
| 6/73 | BLACK | HEAVY  |        | 73.3  | .006   | 36.9  | 1.557            | 54.4 | GOOD           | TEST 6/74           |
| 5/75 | WW    | MOD    |        | 220.0 | .004   | 35.8  | 1.560            | 54.6 | GOOD           | TEST 5/76           |
| 4/76 | VLS   | TRACE  |        | 146.0 | .004   | 34.7  | 1.552            | 54.6 | GOOD           | TEST 4/77           |
| 6/77 | VLS   | TRACE  |        | 14.6  | .007   | 44    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | VLS   | TRACE  |        |       | .015   | 37    | 1.552            |      | GOOD           | TEST 4/79           |
| 4/79 | VLS   | TRACE  |        |       | .015   | 43    | 1.559            |      | GOOD           | TEST 4/80           |

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts

TEST NO.: 16

### NAME PLATE & LOCATION DATA

19S

|                  |             |               |  |                   |     |          |  |
|------------------|-------------|---------------|--|-------------------|-----|----------|--|
| Make/Rewind      | WEST        | High Voltage  |  | No. Radiators     |     | Ground   |  |
| Serial No.       |             | Low Voltage   |  | No. Fans          |     | Outside  |  |
| Inventory Number | SWITCH      | Phase/Cycle   |  | Bushings Top/Side |     | Inside   |  |
| Impedance        |             | Gas Headspace |  | Location          |     | Platform |  |
| KVA              |             | Water Cooled  |  | Environment       |     | Pole     |  |
| FILTER Valves    | PLUG BOTTOM | Hose          |  | Gal./Type         | 38A | Roof     |  |

### FIELD INSPECTION DATA

| Date | P.O. No.      | TEST                |          | TRANSFORMER |       | Oil Level | Bush. | Paint | Leaks       | Quality Factor | Recommended Service |
|------|---------------|---------------------|----------|-------------|-------|-----------|-------|-------|-------------|----------------|---------------------|
|      |               | Temp.               | Humidity | Press.      | Temp. |           |       |       |             |                |                     |
| 6/73 | 00330-3-57717 | 78°                 | 60%      |             |       | LOW       |       | GOOD  | COVER BOLTS | POOR           | FIELD SERVICE       |
| 5/75 | 0030-5-02170  | 75°                 | 65%      |             |       | LOW       |       | FADED | SEE LETTER  | POOR           | FIELD SERVICE       |
| 7/75 | 0030-5-0635   |                     |          |             |       | +10GAL.   |       |       | REPAIRED    | GOOD           | INSP. 5/76          |
| 4/76 | 0030-6-17555  | 90°                 | 80%      |             |       | OK        |       | POOR  | NONE        | FAIR           | CLEAN&PAINT         |
| 6/77 | 0030-7-31795  | 70°                 | 60%      |             |       | OK        |       | POOR  | NONE        | FAIR           | CLEAN&PAINT         |
| 4/78 | 0030-8-45421  | 60°                 | 30%      |             |       | OK        |       | POOR  | NONE        | POOR           | CLEAN&PAINT         |
| 8/78 |               | PAINTED BY UNIROYAL |          |             |       |           |       |       |             | FAIR           | INSP. 4/79          |
| 4/79 | 0030-9-61899  | 50°                 | 30%      |             |       | OK        |       | FAIR  | NONE        | FAIR           | INSP. 4/80          |
| 5/88 | 21779         | 40°                 | 90%      |             |       | OK        |       | POOR  | SEE REPORT  | P              | FIELD SERV.         |

### LIQUID TEST DATA

| Date | Color | Sludge | I.F.T. | S.R.  | Neut # | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|--------|--------|-------|--------|-------|------------------|------|----------------|---------------------|
| 6/73 | WW    | CLEAR  |        | 31.4  | .004   | 36.9  | 1.553            | 51.1 | GOOD           | TEST 6/74           |
| 5/75 | VLS   | TRACE  |        | 104.0 | .003   | 40.1  | 1.554            | 51.1 | GOOD           | TEST 5/76           |
| 4/76 | S     | TRACE  |        | 88.0  | .003   | 41.7  | 1.552            | 50.5 | GOOD           | TEST 4/77           |
| 6/77 | DS    | TRACE  |        | 9.2   | .005   | 39    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | DS    | TRACE  |        |       | .008   | 42    | 1.556            |      | GOOD           | TEST 4/79           |
| 4/79 | DS    | TRACE  |        |       | .005   | 50+   | 1.542            |      | GOOD           | TEST 4/80           |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10° ohm-cm askarel only  
Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts

TEST NO.: 17

5X

### NAME PLATE & LOCATION DATA

|                  |             |               |        |                   |            |                            |          |
|------------------|-------------|---------------|--------|-------------------|------------|----------------------------|----------|
| Make/Rewind      | WEST        | High Voltage  | 13200  | No. Radiators     | 16         | 9 TUBES EA.<br>5' x 1 1/2" | Ground   |
| Serial No.       | 6538987     | Low Voltage   | 575    | No. Fans          |            |                            | Outside  |
| Inventory Number | 13589       | Phase/Cycle   | 3/60   | Bushings Top/Side |            |                            | Inside   |
| Impedance        | 5.3%        | Gas Headspace | SEALED | Location          | #5 BLDG 28 |                            | Platform |
| KVA              | 1500        | Water Cooled  | NO     | Environment       |            |                            | Pole     |
| FILTER Valves    | PLUG BOTTOM | Hose          | 50'    | Gal./Type         | 800A       |                            | Roof     |

### FIELD INSPECTION DATA

| Date  | P.O. No.      | TEST                |          | TRANSFORMER |       | Oil Level   | Bush. | Paint | Leaks      | Quality Factor | Recommended Service |
|-------|---------------|---------------------|----------|-------------|-------|-------------|-------|-------|------------|----------------|---------------------|
|       |               | Temp.               | Humidity | Press       | Temp. |             |       |       |            |                |                     |
| 6/73  | 00330-3-57717 | 78°                 | 60%      | +2.0        | 48°   | LOW         |       | GOOD  | NONE       | FAIR           | ADD ASKAREL         |
| 5/75  | 0030-5-02170  | 75°                 | 65%      | +2 1/2      | 41°   | OK          |       | GOOD  | NO         | GOOD           | INSP 5/76           |
| 4/76  | 0030-6-17555  | 90°                 | 80%      | +4.5        | 48°   | OK          |       | GOOD  | NONE       | GOOD           | INSP. 4/77          |
| 6/77  | 0030-7-31795  | 70°                 | 60%      | +2          | 38°   | OK          |       | GOOD  | NONE       | GOOD           | INSP. 6/78          |
| 4/78  | 0030-8-45421  | 60°                 | 30%      | +2.75       | 32°   | OK          |       | DIRTY | NONE       | FAIR           | FIELD SERVICE       |
| 8/78  |               | PAINTED BY UNIROYAL |          |             |       |             |       |       |            | FAIR           | INSP. 4/79          |
| 5/79  | 0030-9-61899  | 50°                 | 40%      | +1.5        | 30°   | OK          |       | GOOD  | NONE       | GOOD           | INSP. 4/80          |
| 10/79 | 0030-9-66526  |                     |          |             |       | ADDED 7 GAL |       |       |            | GOOD           | INSP. 4/80          |
| 4/88  | 21779         | 45°                 | 90%      |             |       |             |       | POOR  | SEE REPORT | P              | FIELD SERV.         |

### LIQUID TEST DATA

| Date | Color | Sludge | I.F.T. | S.R. | Neut # | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|--------|--------|------|--------|-------|------------------|------|----------------|---------------------|
| 6/73 | BLACK | HEAVY  |        | 45.8 | .009   | 32.8  | 1.554            | 51.1 | GOOD           | TEST 6/74           |
| 5/75 | VLS   | CLEAR  |        | 88.0 | .011   | 40.4  | 1.556            | 51.7 | GOOD           | TEST 5/76           |
| 4/76 | BLACK | BLACK  |        | 95.6 | .011   | 30.0  | 1.556            | 50.8 | GOOD           | TEST 4/77           |
| 6/77 | WW    | TRACE  |        | 12.9 | .01    | 28    |                  |      | GOOD           | TEST 6/78           |
| 7/77 | WW    | CLEAR  |        | 23.7 | .005   | 38.0  | 1.556            | 51.0 | GOOD           | TEST 6/78           |
| 4/78 | VDS   | TRACE  |        |      | .006   | 41    | 1.557            |      | GOOD           | TEST 4/79           |
| 4/79 | VLS   | TRACE  |        |      | .015   | 50+   | 1.556            |      | GOOD           | TEST 4/80           |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only  
Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f



# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts TEST NO.: 18

### NAME PLATE & LOCATION DATA

55

|                  |        |               |     |                   |     |          |  |
|------------------|--------|---------------|-----|-------------------|-----|----------|--|
| Make/Rewind      | WEST   | High Voltage  |     | No. Radiators     |     | Ground   |  |
| Serial No.       |        | Low Voltage   |     | No. Fans          |     | Outside  |  |
| Inventory Number | SWITCH | Phase/Cycle   |     | Bushings Top/Side |     | Inside   |  |
| Impedance        |        | Gas Headspace |     | Location          |     | Platform |  |
| KVA              |        | Water Cooled  |     | Environment       |     | Pole     |  |
| FILTER Valves    | PLUGS  | Hose          | 50' | Gal./Type         | 38A | Roof     |  |

### FIELD INSPECTION DATA

| Date | P.O. No.      | TEST            |          | TRANSFORMER |       | Oil Level | Bush. | Paint | Leaks           | Quality Factor | Recommended Service |
|------|---------------|-----------------|----------|-------------|-------|-----------|-------|-------|-----------------|----------------|---------------------|
|      |               | Temp.           | Humidity | Press       | Temp. |           |       |       |                 |                |                     |
| 6/73 | 00330-3-57717 | 78 <sup>o</sup> | 60%      |             |       | LOW       |       | GOOD  | NONE            | FAIR           | ADD ASKAREL         |
| 5/75 | 0030-5-02170  | 75 <sup>o</sup> | 65%      |             |       | OK        |       | FAIR  | NONE            | FAIR           | INSP. 5/76          |
| 4/76 | 0030-6-17555  | 90 <sup>o</sup> | 80%      |             |       | OK        |       | FAIR  | NONE            | FAIR           | INSP. 4/77          |
| 6/77 | 0030-7-31795  | 70 <sup>o</sup> | 60%      |             |       | OK        |       | FAIR  | NONE            | FAIR           | INSP. 6/78          |
| 4/78 | 0030-8-45421  | 60 <sup>o</sup> | 30%      |             |       | OK        |       | POOR  | B.V. AT THREADS | POOR           | FIELD SERVICE       |
| 8/78 | 0030-8-50697  | PAINTED BY      |          | UNIROYAL    |       |           |       |       | REPAIRED        | FAIR           | INSP. 4/79          |
| 4/79 | 0030-9-61899  | 50 <sup>o</sup> | 40%      |             |       | OK        |       | GOOD  | NONE            | GOOD           | INSP. 4/80          |
| 4/88 | 21779         | 45 <sup>o</sup> | 90%      |             |       | OK        |       | POOR  | SEE REPORT      | P              | FIELD SERV.         |
|      |               |                 |          |             |       |           |       |       |                 |                |                     |
|      |               |                 |          |             |       |           |       |       |                 |                |                     |

### LIQUID TEST DATA

| Date | Color | Sludge | I.F.T. | S.R. | Neut # | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|--------|--------|------|--------|-------|------------------|------|----------------|---------------------|
| 6/73 | VLS   | HEAVY  |        | 44.0 | .009   | 29.2  | 1.554            | 51.7 | GOOD           | TEST 6/74           |
| 5/75 | VLS   | TRACE  |        | 88.0 | .008   | 42.0  | 1.555            | 52.5 | GOOD           | TEST 5/76           |
| 4/76 | BLACK | BLACK  |        | 99.9 | .008   | 34.5  | 1.555            | 51.7 | GOOD           | TEST 4/77           |
| 6/77 | VLS   | CLEAR  |        | 11   | .007   | 44    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | S     | CLEAR  |        |      | .007   | 41    | 1.555            |      | GOOD           | TEST 4/79           |
| 4/79 | VLS   | TRACE  |        |      | .005   | 42    | 1.556            |      | GOOD           | TEST 4/80           |
|      |       |        |        |      |        |       |                  |      |                |                     |
|      |       |        |        |      |        |       |                  |      |                |                     |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10<sup>o</sup> ohm-cm askarel only  
Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100<sup>o</sup>f

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts TEST NO.: 19

18X

### NAME PLATE & LOCATION DATA

|                  |             |               |        |                   |                            |          |     |
|------------------|-------------|---------------|--------|-------------------|----------------------------|----------|-----|
| Make/Rewind      | WEST        | High Voltage  | 13800  | No. Radiators     | 13<br>20 FINS EA.<br>4'x3" | Ground   | YES |
| Serial No.       | YBR92491    | Low Voltage   | 575    | No. Fans          | NO                         | Outside  | YES |
| Inventory Number | 18          | Phase/Cycle   | 3/60   | Bushings Top/Side | ENCLOSED                   | Inside   | NO  |
| Impedance        | 5.4%        | Gas Headspace | SEALED | Location          | BLDG 28                    | Platform | NO  |
| KVA              | 1500        | Water Cooled  | NO     | Environment       | FAIR                       | Pole     | NO  |
| FILTER Valves    | PLUG BOTTOM | Hose          | 50'    | Gal./Type         | 290A                       | Roof     | NO  |

### FIELD INSPECTION DATA

| Date  | P.O. No.      | TEST                                   |          | TRANSFORMER |       | Oil Level | Bush. | Paint | Leaks | Quality Factor | Recommended Service |
|-------|---------------|--|----------|-------------|-------|-----------|-------|-------|-------|----------------|---------------------|
|       |               | Temp.                                  | Humidity | Press       | Temp. |           |       |       |       |                |                     |
| 6/73  | 00330-3-57717 | 78°                                    | 60%      | +4.25       | 47°   | LOW       |       | GOOD  | NONE  | FAIR           | ADD ASKAREL         |
| 5/75  | 0030-5-02170  | 75°                                    | 65%      | 4           | 46°   | LOW       |       | GOOD  | NO    | FAIR           | ADD ASKAREL         |
| 7/75  | 0030-5-06350  |  |          |             |       | +15GAL.   |       |       |       | GOOD           | INSP. 5/76          |
| 4/75  | 0030-6-17555  | 90°                                    | 80%      | +4.25       | 53°   | OK        |       | GOOD  | NONE  | GOOD           | INSP. 4/77          |
| 6/77  | 0030-7-31795  | 70°                                    | 60%      | +3.2        | 45°   | OK        |       | GOOD  | NONE  | GOOD           | INSP. 6/78          |
| 4/78  | 0030-8-45421  | 60°                                    | 30%      | +4.25       | 40°   | OK        |       | FAIR  | NONE  | FAIR           | INSP 4/79           |
| 4/79  | 0030-9-61899  | 50°                                    | 40%      | BROKE       | 35°   | NOT SURE  |       | GOOD  | NONE  | FAIR           | FIELD SERVICE       |
| 4/79  | 0030-9-62180  | ADDED 40 GAL. ASKAREL                  |          |             |       |           |       |       |       | GOOD           | INSP. 4/80          |
| 10/79 | 0030-9-66526  | INSTALLED NEW QUALITROL GA & REGULATOR |          |             |       |           |       |       |       | GOOD           | INSP. 4/80          |
| 4/88  | 21779         | 45°                                    | 90%      |             |       |           |       | POOR  | NONE  | F              | PAINT               |

### LIQUID TEST DATA

| Date | Color   | Sludge           | I.F.T. | S.R. | Neut# | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|---------|------------------|--------|------|-------|-------|------------------|------|----------------|---------------------|
| 6/73 | PINK    | CLEAR            |        | 44.8 | .007  | 37.1  | 1.392            |      | GOOD           | TEST 6/74           |
| 5/75 | WW PINK | CLEAR            |        | 78.5 | .007  | 38.8  | 1.391            | 67.7 | GOOD           | TEST 5/76           |
| 4/76 | WWP     | TRACE            |        | 84.6 | .007  | 34.7  | 1.389            | 66.5 | GOOD           | TEST 4/77           |
| 6/77 | WWP     | TRACE            |        | 12.9 | .008  | 43    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | DS      | TRACE            |        |      | .010  | 45    | 1.390            |      | GOOD           | TEST 4/79           |
| 4/79 | WW PINK | TRACE            |        |      | .010  | 17    | 1.396            |      | CRITICAL       | FILTER              |
| 4/79 |         | FILTERED ASKAREL |        |      |       | 33    |                  |      | GOOD           | TEST 4/80           |
|      |         |                  |        |      |       |       |                  |      |                |                     |
|      |         |                  |        |      |       |       |                  |      |                |                     |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10° ohm-cm askarel only  
Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts TEST NO.: 20

### NAME PLATE & LOCATION DATA

18S

|                  |                |               |     |                   |     |          |     |
|------------------|----------------|---------------|-----|-------------------|-----|----------|-----|
| Make/Rewind      | WEST           | High Voltage  |     | No. Radiators     |     | Ground   | YES |
| Serial No.       |                | Low Voltage   |     | No. Fans          |     | Outside  | YES |
| Inventory Number | SWITCH FOR #19 | Phase/Cycle   |     | Bushings Top/Side |     | Inside   | NO  |
| Impedance        |                | Gas Headspace |     | Location          |     | Platform | NO  |
| KVA              |                | Water Cooled  |     | Environment       |     | Pole     | NO  |
| FILTER Valves    | PLUG BOTTOM    | Hose          | 50' | Gal./Type         | 46A | Roof     | NO  |

### FIELD INSPECTION DATA

| Date | P.O. No.      | TEST  |          | TRANSFORMER |       | Oil Level | Bush. | Paint | Leaks | Quality Factor | Recommended Service |
|------|---------------|-------|----------|-------------|-------|-----------|-------|-------|-------|----------------|---------------------|
|      |               | Temp. | Humidity | Press       | Temp. |           |       |       |       |                |                     |
| 6/73 | 00330-3-57717 | 78°   | 60%      |             |       | LOW       |       | GOOD  |       | GOOD           | INSP. 6/74          |
| 5/75 | 0030-5-02170  | 75°   | 65%      |             |       | OK        |       | FAIR  | NO    | GOOD           | INSP. 5/76          |
| 4/76 | 0030-6-17555  | 90°   | 80%      |             |       | OK        |       | FAIR  | NONE  | GOOD           | INSP. 4/77          |
| 6/77 | 0030-7-31795  | 70°   | 60%      |             |       | OK        |       | FAIR  | NONE  | GOOD           | INSP. 6/78          |
| 4/78 | 0030-8-45421  | 60°   | 30%      |             |       | OK        |       | FAIR  | NONE  | FAIR           | INSP 4/79           |
| 4/79 | 0030-9-61899  | 50°   | 40%      |             |       | OK        |       | GOOD  | NONE  | GOOD           | INSP. 4/80          |
| 4/88 | 21779         | 45°   | 90%      |             |       | OK        |       | POOR  | NONE  | F              | PAINT               |
|      |               |       |          |             |       |           |       |       |       |                |                     |
|      |               |       |          |             |       |           |       |       |       |                |                     |
|      |               |       |          |             |       |           |       |       |       |                |                     |

### LIQUID TEST DATA

| Date | Color   | Sludge | I.F.T. | S.R.  | Neut # | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|---------|--------|--------|-------|--------|-------|------------------|------|----------------|---------------------|
| 6/73 | PINK    | CLEAR  |        | 44.0  | .005   | 36.5  | 1.390            |      | GOOD           | TEST 6/74           |
| 5/75 | WW PINK | CLEAR  |        | 110.0 | .006   | 43.4  | 1.391            | 67.5 | GOOD           | TEST 5/76           |
| 4/76 | WW BRN  | CLEAR  |        | 110.0 | .006   | 41.0  | 1.391            | 66.5 | GOOD           | TEST 4/77           |
| 6/77 | WW PINK | TRACE  |        | 12.9  | .005   | 44    |                  |      | GOOD           | TEST 6/78           |
| 4/73 | WWB     | TRACE  |        |       | .007   | 43    | 1.393            |      | GOOD           | TEST 4/79           |
| 4/79 | WW PINK | TRACE  |        |       | .010   | 49    | 1.397            |      | GOOD           | TEST 4/80           |
|      |         |        |        |       |        |       |                  |      |                |                     |
|      |         |        |        |       |        |       |                  |      |                |                     |
|      |         |        |        |       |        |       |                  |      |                |                     |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10° ohm-cm askarel only  
Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100° f

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts TEST NO.: 21

### NAME PLATE & LOCATION DATA

8X

|                  |              |               |        |                   |    |                   |          |     |
|------------------|--------------|---------------|--------|-------------------|----|-------------------|----------|-----|
| Make/Rewind      | AC           | High Voltage  | 13800  | No. Radiators     | 5  | 16 FINS<br>8'x12" | Ground   | YES |
| Serial No.       | 3733807      | Low Voltage   | 2300   | No. Fans          | NO |                   | Outside  | YES |
| Inventory Number | 8            | Phase/Cycle   | 3/60   | Bushings Top/Side |    | ENCLOSED          | Inside   | NO  |
| Impedance        | 5.3%         | Gas Headspace | SEALED | Location          |    | BLDG 28           | Platform | NO  |
| KVA              | 3750         | Water Cooled  | NO     | Environment       |    | GOOD              | Pole     | NO  |
| FILTER Valves    | TOP & BOTTOM | Hose          | 50'    | Gal./Type         |    | 945A              | Roof     | NO  |

### FIELD INSPECTION DATA

| Date | P.O. No.      | TEST                         |          | TRANSFORMER |                 | Oil Level | Bush. | Paint | Leaks        | Quality Factor | Recommended Service |
|------|---------------|------------------------------|----------|-------------|-----------------|-----------|-------|-------|--------------|----------------|---------------------|
|      |               | Temp.                        | Humidity | Press       | Temp.           |           |       |       |              |                |                     |
| 6/73 | 00330-3-57717 | 78 <sup>o</sup>              | 60%      | -.50        | 50 <sup>o</sup> | OK        |       | GOOD  | NONE         | GOOD           | INSP. 6/74          |
| 5/75 | 0030-5-02170  | 75 <sup>o</sup>              | 65%      | -1/2        | 40 <sup>o</sup> | OK        |       | GOOD  | NO           | GOOD           | INSP. 5/76          |
| 4/76 | 0030-6-17555  | 90 <sup>o</sup>              | 80%      | -.5         | 48 <sup>o</sup> | OK        |       | GOOD  | NONE         | GOOD           | INSP. 4/77          |
| 6/77 | 0030-7-31795  | 70 <sup>o</sup>              | 60%      | -.5         | 35 <sup>o</sup> | OK        |       | GOOD  | SEE LETTER   | FAIR           | FIELD SERVICE       |
| 4/78 | 0030-8-45421  | 60 <sup>o</sup>              | 30%      | -.5         | 30              | OK        |       | FAIR  | SAMPLE VALVE | POOR           | FIELD SERVICE       |
| 8/78 | 0030-8-50697  | REPACKED TOP & BOTTOM VALVES |          |             |                 |           |       |       | REPAIRED     | GOOD           | INSP. 4/79          |
| 4/79 | 0030-9-61899  | 50 <sup>o</sup>              | 40%      | -.5         | 30 <sup>o</sup> | OK        |       | GOOD  | NONE         | GOOD           | INSP. 4/80          |
| 4/83 | 21779         |                              |          |             |                 |           |       |       |              | P              | FIELD SER.V         |

### LIQUID TEST DATA

| Date | Color | Sludge | I.F.T. | S.R.  | Neut# | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|--------|--------|-------|-------|-------|------------------|------|----------------|---------------------|
| 6/73 | WW    | TRACE  |        | 45.8  | .004  | 36.1  | 1.552            | 55.2 | GOOD           | TEST 6/74           |
| 5/75 | VLS   | CLEAR  |        | 220.0 | .004  | 48.5  | 1.555            | 53.9 | GOOD           | TEST 5/76           |
| 4/76 | VLS   | CLEAR  |        | 137.0 | .004  | 41.7  | 1.557            | 54.4 | GOOD           | TEST 4/77           |
| 6/77 | VLS   | CLEAR  |        | 12.2  | .005  | 46    | 1.557            |      | GOOD           | TEST 6/78           |
| 4/78 | VLS   | TRACE  |        |       | .005  | 41    | 1.555            |      | GOOD           | TEST 4/79           |
| 4/79 | VLS   | TRACE  |        |       | .005  | 39    | 1.555            |      | GOOD           | TEST 4/80           |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10<sup>o</sup> oh.n-cm askarel only  
Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100<sup>o</sup>f

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts TEST NO.: 22

85

### NAME PLATE & LOCATION DATA

|                  |              |               |  |                   |      |          |  |
|------------------|--------------|---------------|--|-------------------|------|----------|--|
| Make/Rewind      | AC           | High Voltage  |  | No. Radiators     |      | Ground   |  |
| Serial No.       |              | Low Voltage   |  | No. Fans          |      | Outside  |  |
| Inventory Number | SWITCH       | Phase/Cycle   |  | Bushings Top/Side |      | Inside   |  |
| Impedance        |              | Gas Headspace |  | Location          |      | Platform |  |
| KVA              |              | Water Cooled  |  | Environment       |      | Pole     |  |
| FILTER Valves    | TOP & BOTTOM | Hose          |  | Gal./Type         | 50EA | Roof     |  |

### FIELD INSPECTION DATA

| Date | P.O. No.      | TEST            |          | TRANSFORMER |       | Oil Level | Bush. | Paint | Leaks      | Quality Factor | Recommended Service |
|------|---------------|-----------------|----------|-------------|-------|-----------|-------|-------|------------|----------------|---------------------|
|      |               | Temp.           | Humidity | Press       | Temp. |           |       |       |            |                |                     |
| 6/73 | 00330-3-57717 | 78 <sup>o</sup> | 60%      |             |       | OK        |       | GOOD  | NONE       | GOOD           | INSP. 6/74          |
| 5/75 | 0030-5-02170  | 75 <sup>o</sup> | 65%      |             |       | OK        |       | GOOD  | NONE       | GOOD           | INSP. 5/76          |
| 4/76 | 0030-6-17555  | 90 <sup>o</sup> | 80%      |             |       | OK        |       | GOOD  | NONE       | GOOD           | INSP. 4/77          |
| 6/77 | 0030-7-31795  | 70 <sup>o</sup> | 60%      |             |       | OK        |       | FAIR  | NONE       | FAIR           | INSP. 6/78          |
| 4/78 | 0030-8-45421  | 60 <sup>o</sup> | 30%      |             |       | OK        |       | POOR  | NONE       | FAIR           | FIELD SERVICE       |
| 8/78 |               | PAINTED BY      |          | UNIROYAL    |       |           |       |       |            |                |                     |
| 4/79 | 0030-9-61899  | 50 <sup>o</sup> | 40%      |             |       | OK        |       | FAIR  | NONE       | FAIR           | INSP. 4/80          |
| 5/88 |               |                 |          |             |       |           |       |       | SEE REPORT | P              | FIELD SERV.         |

### LIQUID TEST DATA

| Date | Color | Sludge | I.F.T. | S.R. | Neut# | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|--------|--------|------|-------|-------|------------------|------|----------------|---------------------|
| 6/73 | WW    | CLEAR  |        | 44.0 | .005  | 35.8  | 1.555            | 52.5 | GOOD           | TEST 6/74           |
| 5/75 | VLS   | CLEAR  |        | 91.6 | .004  | 48.8  | 1.555            | 52.5 | GOOD           | TEST 5/76           |
| 4/76 | VLS   | TRACE  |        | 99.9 | .004  | 41.1  | 1.556            | 53.0 | GOOD           | TEST 4/77           |
| 6/77 | VLS   | TRACE  |        | 11.5 | .005  | 45    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | VLS   | CLEAR  |        |      | .006  | 39    | 1.555            |      | GOOD           | TEST 4/79           |
| 4/79 | VLS   | CLEAR  |        |      | .010  | 33    | 1.550            |      | GOOD           | TEST 4/80           |

A.-askarel E.-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10<sup>o</sup> ohm-cm askarel only  
 Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100<sup>o</sup>f

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts

TEST NO.: 23

13X

### NAME PLATE & LOCATION DATA

|                  |              |               |        |                   |             |                   |          |         |
|------------------|--------------|---------------|--------|-------------------|-------------|-------------------|----------|---------|
| Make/Rewind      | AC           | High Voltage  | 13800  | No. Radiators     | 5           | 2 EA. 11 FINS EA. | Ground   | NO      |
| Serial No.       | 1850625      | Low Voltage   | 2300   | No. Fans          | NO          |                   | Outside  | YES     |
| Inventory Number |              | Phase/Cycle   | 3/60   | Bushings Top/Side |             | ENCLOSED          | Inside   | NO      |
| Impedance        | 5.4%         | Gas Headspace | SEALED | Location          | #13 BLDG 88 |                   | Platform | 5' HIGH |
| KVA              | 1500         | Water Cooled  | NO     | Environment       | GOOD        |                   | Pole     | NO      |
| FILTER Valves    | TOP & BOTTOM | Hose          | 50'    | Gal./Type         | 576A        |                   | Roof     | NO      |

### FIELD INSPECTION DATA

| Date | P.O. No.      | TEST  |          | TRANSFORMER |       | Oil Level | Bush. | Paint | Leaks       | Quality Factor | Recommended Service |
|------|---------------|-------|----------|-------------|-------|-----------|-------|-------|-------------|----------------|---------------------|
|      |               | Temp. | Humidity | Press       | Temp. |           |       |       |             |                |                     |
| 6/73 | 00330-3-57717 | 78°   | 60%      |             | 50°   | LOW       |       | GOOD  | NONE        | FAIR           | ADD ASKAREL         |
| 5/75 | 0030-5-02170  | 75°   | 65%      |             | 45°   | LOW       |       | GOOD  | NONE        | FAIR           | ADD ASKAREL         |
| 7/75 | 0030-5-06350  |       |          |             |       | +35GAL.   |       |       |             | GOOD           | INSP. 5/76          |
| 4/76 | 0030-6-17555  | 70°   | 70%      |             | 42°   | OK        |       | GOOD  | NONE        | GOOD           | INSP. 4/77          |
| 6/77 | 0030-7-31795  | 60°   | 30%      |             | 48°   | OK        |       | GOOD  | SEE LETTER  | FAIR           | FIELD SERVICE       |
| 4/78 | 0030-8-45421  | 60°   | 30%      |             | 35°   | OK        |       | FAIR  | SAMPLE TAP  | POOR           | FIELD SERVICE       |
| 8/78 | 0030-8-50697  |       |          |             |       |           |       |       | REPAIRED    | FAIR           | INSP. 4/79          |
| 4/79 | 0030-9-61899  | 50°   | 40%      |             | 32°   | OK        |       | GOOD  | TEMP. GAUGE | FAIR           | REPAIR LEAK         |
| 8/79 | 0030-9-64477  |       |          |             |       |           |       |       | REPAIRED    | GOOD           | INSP. 4/80          |
| 4/88 | 21779         |       |          |             |       |           |       |       | SEE REPORT  | P              | FIELD SERV.         |

### LIQUID TEST DATA

| Date | Color | Sludge | I.F.T. | S.R.  | Neut# | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|--------|--------|-------|-------|-------|------------------|------|----------------|---------------------|
| 6/73 | WW GR | HEAVY  |        | 73.3  | .034  | 35.2  | 1.555            | 53.3 | GOOD           | TEST 6/74           |
| 5/75 | DS    | MOD    |        | 220.0 | .036  | 35.0  | 1.557            | 51.7 | GOOD           | TEST 5/76           |
| 4/76 | DS    | TRACE  |        | 115.0 | .036  | 34.8  | 1.554            | 50.2 | GOOD           | TEST 4/77           |
| 6/77 | LS    | TRACE  |        | 14.6  | .03   | 42    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | DS    | HEAVY  |        |       | .040  | 37    | 1.552            |      | BORDERLINE     | TEST 4/79           |
| 4/79 | S     | TRACE  |        |       | .030  | 41    | 1.553            |      | GOOD           | TEST 4/80           |
|      |       |        |        |       |       |       |                  |      |                |                     |
|      |       |        |        |       |       |       |                  |      |                |                     |
|      |       |        |        |       |       |       |                  |      |                |                     |

*Retyped.  
Removed from  
originals  
1/89*

CONCORD, NH  
(603) 224-4006

# TSI TRANSFORMER SERVICE, INC.

TSI NO. 23  
CUSTOMER NO. UR#13?  
LOCATION

## Transformer Inspection Service

CUSTOMER FACEMATE CORPORATION CITY CHICOPEE STATE MA

### NAME PLATE & LOCATION DATA

|               |                |                             |  |                       |                        |                                  |                                   |
|---------------|----------------|-----------------------------|--|-----------------------|------------------------|----------------------------------|-----------------------------------|
| Make/Rewind   | ALLIS CHALMERS | High Voltage                | 13800  | No. Radiators         | 2 EACH<br>11 FINS EACH | Special Conditions               |                                   |
| Serial No.    | 1850625        | Low Voltage                 | 2300   | Supplemental Cooling  | Type/No.               | Outside <input type="checkbox"/> | Platform <input type="checkbox"/> |
| Paint Color   |                | Phase/Cycle                 | 3/60   | Bushings T-Top S-Side | #HV #LV                | Inside <input type="checkbox"/>  | Pole <input type="checkbox"/>     |
| Impedance     | 5.4%           | Type of Headspace           | SEALED   | No Load Tap Changer   | #Top #Side             | Ground <input type="checkbox"/>  | Vault <input type="checkbox"/>    |
| KVA           | 1500           | Sample energ. Filter energ. | Yes <input type="checkbox"/> No <input type="checkbox"/> | Accessory Equipment   | TSI No(s).             | Roof <input type="checkbox"/>    | Cage <input type="checkbox"/>     |
| Filter Valves | TV & BV        | Hose (one way)              | 50'  | Gal./Type             | 576/ASKAREL            | Radiators                        | Welded <input type="checkbox"/>   |
|               |                |                             |  |                       |                        | Flanged <input type="checkbox"/> |                                   |
|               |                |                             |  |                       |                        | Top Cover                        | Welded <input type="checkbox"/>   |
|               |                |                             |  |                       |                        | Valves                           | Bolted <input type="checkbox"/>   |
|               |                |                             |  |                       |                        |                                  | Threaded <input type="checkbox"/> |
|               |                |                             |  |                       |                        |                                  | Flanged <input type="checkbox"/>  |

### FIELD INSPECTION DATA

| Date | Purchase Order No. | AMBIENT |          | TRANSFORMER |       | High Temp. | Liquid Level | Bush. Cond. | Paint Cond. | Leaks      | Quality Factor | Recommended Service |
|------|--------------------|---------|----------|-------------|-------|------------|--------------|-------------|-------------|------------|----------------|---------------------|
|      |                    | Temp.   | Humidity | Press.      | Temp. |            |              |             |             |            |                |                     |
| 4/88 | 21799              |         |          |             |       |            |              |             |             | SEE REPORT | P              | FIELD SERVICE       |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |

### LIQUID TEST DATA

| Date | Color | Visual | PCB Content | IFT | Neut. No. | Diel. | Moisture Content | Power Factor | TCG Content | Specific Gravity | Quality Factor | Recommended Service |
|------|-------|--------|-------------|-----|-----------|-------|------------------|--------------|-------------|------------------|----------------|---------------------|
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |

E-estimated PCB-Polychlorinated Biphenyl by electron capture in parts per million IFT-Interfacial Tension in dynes/cm  
 Neut. No.-mg KOH/g oil Diel.-dielectric in kilo volts Moisture content in parts per million Power Factor in percent corrected to 20°C  
 TCG-Total Combustible Gas by gas chromatography in parts per million Quality Factor-G, Good F, Fair B, Borderline P, Poor C, Critical

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts

TEST NO.: 24

### NAME PLATE & LOCATION DATA

135

|                  |                     |               |     |                   |     |          |  |
|------------------|---------------------|---------------|-----|-------------------|-----|----------|--|
| Make/Rewind      | G & W               | High Voltage  |     | No. Radiators     |     | Ground   |  |
| Serial No.       |                     | Low Voltage   |     | No. Fans          |     | Outside  |  |
| Inventory Number | SWITCH II<br>FOR 23 | Phase/Cycle   |     | Bushings Top/Side |     | Inside   |  |
| Impedance        |                     | Gas Headspace |     | Location          |     | Platform |  |
| KVA              |                     | Water Cooled  |     | Environment       |     | Pole     |  |
| FILTER Valves    | TOP & BOTTOM        | Hose          | 50' | Gal./Type         | 60A | Roof     |  |

### FIELD INSPECTION DATA

| Date | P.O. No.      | TEST                        |          | TRANSFORMER |       | Oil Level    | Bush. | Paint | Leaks          | Quality Factor | Recommended Service |
|------|---------------|-----------------------------|----------|-------------|-------|--------------|-------|-------|----------------|----------------|---------------------|
|      |               | Temp.                       | Humidity | Press       | Temp. |              |       |       |                |                |                     |
| 6/73 | 00330-3-57717 | 78°                         | 60%      |             |       | OK           |       | GOOD  | COVER BOLTS    | POOR           | FIELD SERVICE       |
| 5/75 | 0030-5-02170  | 75°                         | 65%      |             |       | OK           |       | GOOD  | COVER BOLTS    | POOR           | FIELD SERVICE       |
| 7/75 | 0030-5-06350  |                             |          |             |       |              |       |       | REPAIRED       | GOOD           | INSP. 5/76          |
| 4/76 | 0030-6-17555  | 70°                         | 70%      |             |       | OK           |       | GOOD  | FLANGE         | POOR           | FIELD SERVICE       |
| 6/77 | 0030-7-31795  | 60°                         | 60%      |             |       | OK           |       | POOR  | SEE LETTER     | POOR           | FIELD SERVICE       |
| 4/78 | 0030-8-45421  | 60°                         | 30%      |             |       | LOW          |       | POOR  | SEE LETTER     | POOR           | FIELD SERVICE       |
| 8/78 | 0030-8-50697  | REPAIRED SWITCH HANDLE LEAK |          |             |       | ADDED 10 GAL |       |       | ALSO TOP COVER | FAIR           | INSP. 4/79          |
| 4/79 | 0030-9-61899  | 50°                         | 40%      |             |       | OK           |       | GOOD  | NONE           | GOOD           | INSP. 4/80          |
| 4/88 | 21779         |                             |          |             |       |              |       |       | cabinet        | p              | field serv.         |

### LIQUIO TEST DATA

| Date | Color | Sludge   | I.F.T. | S.R.  | Neut # | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|----------|--------|-------|--------|-------|------------------|------|----------------|---------------------|
| 6/73 | WW GR | TRACE    |        | 48.8  | .008   | 35.9  | 1.553            | 51.4 | GOOD           | TEST 6/74           |
| 5/75 | VLS   | TRACE    |        | 220.0 | .009   | 35.8  | 1.554            | 51.4 | GOOD           | TEST 5/76           |
| 4/76 | LS    | CLEAR    |        | 95.6  | .009   | 31.1  | 1.555            | 52.0 | GOOD           | TEST 4/77           |
| 6/77 | LS    | CLEAR    |        | 13.7  | .01    | 30    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | S     | S. TRACE |        |       | .010   | 31    | 1.554            |      | GOOD           | TEST 4/79           |
| 4/79 | LS    | TRACE    |        |       | .015   | 50+   | 1.554            |      | GOOD           | TEST 4/80           |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10°ohm-cm askarel only  
Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f



# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts

TEST NO.: 27

### NAME PLATE & LOCATION DATA

22X

|                  |              |               |        |                   |                       |          |     |
|------------------|--------------|---------------|--------|-------------------|-----------------------|----------|-----|
| Make/Rewind      | AC           | High Voltage  | 13.8   | No. 22 Radiators  | 7 FINS EA.<br>6' x 3" | Ground   | YES |
| Serial No.       | 2831107      | Low Voltage   | 550    | No. Fans          | NO                    | Outside  | NO  |
| Inventory Number | 11040        | Phase/Cycle   | 3/60   | Bushings Top/Side | ENCLOSED              | Inside   | YES |
| Impedance        | 5.4%         | Gas Headspace | SEALED | Location          | #22 SUB #2            | Platform | NO  |
| KVA              | 1000         | Water Cooled  | NO     | Environment       | FAIR                  | Pole     | NO  |
| FILTER Valves    | TOP & BOTTOM | Hose          | 100'   | Gal./Type         | 394A                  | Roof     | NO  |

### FIELD INSPECTION DATA

| Date  | P.O. No.      | TEST  |          | TRANSFORMER |       | Oil Level   | Bush. | Paint | Leaks      | Quality Factor | Recommended Service |
|-------|---------------|-------|----------|-------------|-------|-------------|-------|-------|------------|----------------|---------------------|
|       |               | Temp. | Humidity | Press       | Temp. |             |       |       |            |                |                     |
| 6/73  | 00330-3-57717 | 78°   | 60%      |             | 45°   | LOW         |       | GOOD  | NONE       | FAIR           | ADD ASKAREL         |
| 5/75  | 0030-5-02170  | 75°   | 65%      | +½          | 40°   | LOW         |       | GOOD  | NO         | FAIR           | ADD ASKAREL         |
| 7/75  | 0030-5-06350  |       |          |             |       | +10GAL      |       |       |            | GOOD           | INSP. 5/76          |
| 4/76  | 0030-6-17555  | 70°   | 70%      | + .5        | 36°   | OK          |       | GOOD  | NONE       | GOOD           | INSP. 4/77          |
| 6/77  | 0030-7-31795  | 60°   | 60%      | + .5        | 38°   | OK          |       | GOOD  | SEE LETTER | FAIR           | FIELD SERVICE       |
| 4/79  | 0030-9-61899  | 50°   | 40%      | - .1        | 30°   | BELOW 25C   |       | GOOD  | NONE       | FAIR           | ADD ASKAREL         |
| 8/79  | 0030-9-64477  |       |          |             |       | ADDED 5GAL  |       |       |            | GOOD           | INSP. 4/80          |
| 10/79 | 0030-9-66526  |       |          |             |       | ADDED 20GAL |       |       |            | GOOD           | INSP. 4/80          |
| 1/83  | 9073          | 65°   | 50%      | -1          | 20°   | OK          |       | OK    | NONE       | GOOD           | INSP. 1/84          |
| 4/88  | 21779         |       |          |             |       |             |       |       | SEE REPORT | P              | FIELD SERV.         |

### LIQUID TEST DATA

| Date | Color | Sludge | I.F.T. | S.R.  | Neut # | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|--------|--------|-------|--------|-------|------------------|------|----------------|---------------------|
| 6/73 | WW GR | TRACE  |        | 61.1  | .011   | 36.0  | 1.556            | 46.9 | GOOD           | TEST 6/74           |
| 5/75 | WW GR | TRACE  |        | 146.0 | .013   | 39.9  | 1.559            | 45.8 | GOOD           | TEST 5/76           |
| 4/76 | WW GR | CLEAR  |        | 95.6  | .009   | 41.7  | 1.555            | 45.4 | GOOD           | TEST 4/77           |
| 6/77 | WW GR | CLEAR  |        | 12.9  | .01    | 44    |                  |      | GOOD           | TEST 6/78           |
| 4/79 | WW GR | CLEAR  |        |       | .010   | 48    | 1.551            |      | GOOD           | TEST 4/80           |
| 1/83 | WWGR  | CLEAR  |        |       | .010   | 49    |                  |      | GOOD           | TEST 1/84           |
|      |       |        |        |       |        |       |                  |      |                |                     |
|      |       |        |        |       |        |       |                  |      |                |                     |
|      |       |        |        |       |        |       |                  |      |                |                     |

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY Chicopee

STATE: Massachusetts TEST NO.: 28

### NAME PLATE & LOCATION DATA

22S

|                  |                |               |  |                   |            |          |     |
|------------------|----------------|---------------|--|-------------------|------------|----------|-----|
| Make/Rewind      | G & W          | High Voltage  |  | No. Radiators     |            | Ground   |     |
| Serial No.       |                | Low Voltage   |  | No. Fans          |            | Outside  |     |
| Inventory Number | SWITCH FOR #27 | Phase/Cycle   |  | Bushings Top/Side |            | Inside   | YES |
| Impedance        |                | Gas Headspace |  | Location          | #22 SUB #2 | Platform |     |
| KVA              |                | Water Cooled  |  | Environment       | CLEAN      | Pole     |     |
| FILTER Valves    | TOP & BOTTOM   | Hose          |  | Gal./Type         | 60A        | Roof     |     |

### FIELD INSPECTION DATA

| Date | P.O. No.      | TEST            |          | TRANSFORMER |       | Oil Level | Bush. | Paint | Leaks       | Quality Factor | Recommended Service |
|------|---------------|-----------------|----------|-------------|-------|-----------|-------|-------|-------------|----------------|---------------------|
|      |               | Temp.           | Humidity | Press       | Temp. |           |       |       |             |                |                     |
| 6/73 | 00330-3-57717 | 78 <sup>o</sup> | 60%      |             |       |           |       | GOOD  | COVER BOLTS | POOR           | FIELD SERVICE       |
| 5/75 | 0030-5-02170  | 75 <sup>o</sup> | 65%      |             |       | OK        |       | GOOD  | COVER BOLTS | POOR           | FIELD SERVICE       |
| 7/75 |               |                 |          |             |       | +5GAL     |       |       | REGASKETED  | GOOD           | INSP. 5/76          |
| 4/76 | 0030-6-17555  | 70 <sup>o</sup> | 70%      |             |       | OK        |       | GOOD  | NONE        | GOOD           | INSP. 4/77          |
| 6/77 | 0030-7-31795  | 60 <sup>o</sup> | 60%      |             |       | OK        |       | GOOD  | NONE        | GOOD           | INSP. 6/78          |
| 4/79 | 0030-9-61899  | 50 <sup>o</sup> | 40%      |             |       | OK        |       | GOOD  | NONE        | GOOD           | INSP. 4/80          |
| 1/83 | 9073          | 65 <sup>o</sup> | 50%      |             |       | OK        |       | GOOD  | NONE        | GOOD           | INSP. 1/84          |
| 4/88 | 21779         |                 |          |             |       |           |       |       | NONE        | F              |                     |

### LIQUID TEST DATA

| Date | Color | Sludge     | I.F.T. | S.R. | Neut # | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|------------|--------|------|--------|-------|------------------|------|----------------|---------------------|
| 6/73 | WW    | CLEAR      |        | 31.4 | .011   | 35.8  | 1.556            | 46.6 | GOOD           | TEST 6/74           |
| 5/75 | VLS   | TRACE      |        | 9.16 | .012   | 37.0  | 1.561            | 41.6 | GOOD           | TEST 5/76           |
| 4/76 | VLS   | TRACE      |        | 11.0 | .008   | 33.4  | 1.560            | 45.2 | GOOD           | TEST 4/77           |
| 6/77 | LS    | TRACE      |        | 9.9  | .012   | 43    |                  |      | GOOD           | TEST 6/78           |
| 4/79 | LS    | MOD. TRACE |        |      | .010   | 38    | 1.551            |      | GOOD           | TEST 4/80           |
| 1/83 | LS    | S.TRACE    |        |      | .010   | 36    |                  |      | GOOD           | TEST 1/84           |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10<sup>o</sup>ohm-cm askarel only  
Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100<sup>o</sup>f

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts

TEST NO.: 29

16X

### NAME PLATE & LOCATION DATA

|                  |              |               |        |                   |         |                           |          |     |
|------------------|--------------|---------------|--------|-------------------|---------|---------------------------|----------|-----|
| Make/Rewind      | AC           | High Voltage  | 13.8   | No. Radiators     | 5<br>11 | 2 SETS EA.<br>FINES 5'x4" | Ground   | YES |
| Serial No.       | 1978152      | Low Voltage   | 2300   | No. Fans          |         | NO                        | Outside  | YES |
| Inventory Number | #16          | Phase/Cycle   | 3/60   | Bushings Top/Side |         | ENCLOSED                  | Inside   | NO  |
| Impedance        | 5.3%         | Gas Headspace | SEALED | Location          |         | BUILDING #28              | Platform | NO  |
| KVA              | 1500         | Water Cooled  | NO     | Environment       |         | FAIR                      | Pole     | NO  |
| FILTER Valves    | TOP & BOTTOM | Hose          | 50'    | Gal./Type         |         | 574A                      | Roof     | NO  |

### FIELD INSPECTION DATA

| Date | P.O. No.      | TEST  |          | TRANSFORMER |       | Oil Level | Bush. | Paint | Leaks      | Quality Factor | Recommended Service |
|------|---------------|-------|----------|-------------|-------|-----------|-------|-------|------------|----------------|---------------------|
|      |               | Temp. | Humidity | Press       | Temp. |           |       |       |            |                |                     |
| 6/73 | 00330-3-57717 | 78°   | 60%      |             | 44°   | LOW       |       | GOOD  | NONE       | FAIR           | ADD ASKAREL         |
| 5/75 | 0030-5-02170  | 75°   | 65%      |             | 40°   | LOW       | OK    | GOOD  | MANHOLES   | FAIR           | FIELD SERVICE       |
| 7/75 | 0030-5-06350  |       |          |             |       | *24GAL.   |       |       | REGASKETED | GOOD           | INSP. 5/76          |
| 4/76 | 0030-6-17555  | 90°   | 80%      |             | 42°   | OK        | OK    | GOOD  | NONE       | GOOD           | INSP. 4/77          |
| 6/77 | 0030-7-31795  | 75°   |          |             | 30°   | OK        |       | GOOD  | NONE       | GOOD           | INSP. 6/78          |
| 4/73 | 0030-8-45421  | 60°   | 30%      |             | 25°   | OK        | ENCL  | FAIR  | TAP VALVE  | POOR           | FIELD SERVICE       |
| 8/78 | 0030-8-50697  |       |          |             |       |           |       |       | REPAIRED   | GOOD           | INSP. 4/79          |
| 4/79 | 0030-9-61899  | 50°   | 40%      |             | 52°   | OK        | ENCL  | GOOD  | NONE       | GOOD           | INSP. 4/80          |
| 5/88 | 21779         |       |          |             |       |           |       |       | SEE REPORT | P              | FIELD SERV.         |

### LIQUIO TEST DATA

| Date | Color | Sludge   | I.F.T. | S.R.   | Neut# | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|----------|--------|--------|-------|-------|------------------|------|----------------|---------------------|
| 6/73 | WW    | CLEAR    |        | 27.5   | .016  | 36.0  | 1.550            | 52.5 | GOOD           | TEST 6/74           |
| 5/75 | DS    | TRACE    |        | 110.0  | .023  | 37.8  | 1.558            | 52.5 | GOOD           | TEST 5/76           |
| 4/76 | WW GR | CLEAR    |        | 110.00 | .018  | 34.7  | 1.551            | 50.8 | GOOD           | TEST 4/77           |
| 6/77 | S     | CLEAR    |        | 13.7   | .013  | 47    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | S     | S. TRACE |        |        | .015  | 43    | 1.554            |      | GOOD           | TEST 4/79           |
| 4/79 | LS    | TRACE    |        |        | .015  | 44    | 1.559            |      | GOOD           | TEST 4/80           |

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts TEST NO.: 30

### NAME PLATE & LOCATION DATA

165

|                  |              |               |     |                   |     |          |  |
|------------------|--------------|---------------|-----|-------------------|-----|----------|--|
| Make/Rewind      | G & W        | High Voltage  |     | No. Radiators     |     | Ground   |  |
| Serial No.       |              | Low Voltage   |     | No. Fans          |     | Outside  |  |
| Inventory Number | SWITCH       | Phase/Cycle   |     | Bushings Top/Side |     | Inside   |  |
| Impedance        |              | Gas Headspace |     | Location          |     | Platform |  |
| KVA              |              | Water Cooled  |     | Environment       |     | Pole     |  |
| FILTER Valves    | TOP & BOTTOM | Hose          | 50' | Gal./Type         | 56A | Roof     |  |

### FIELD INSPECTION DATA

| Date | P.O. No.      | TEST                                     |          | TRANSFORMER |       | Oil Level | Bush. | Paint | Leaks               | Quality Factor | Recommended Service |
|------|---------------|--|----------|-------------|-------|-----------|-------|-------|---------------------|----------------|---------------------|
|      |               | Temp.                                    | Humidity | Press       | Temp. |           |       |       |                     |                |                     |
| 6/73 | 00330-3-57717 | 78°                                      | 60%      |             |       |           |       | GOOD  | COVER BOLTS         | POOR           | FIELD SERVICE       |
| 5/75 | 0030-5-02170  | 75°                                      | 65%      |             |       | OK        |       | GOOD  | COVER BOLTS         | POOR           | FIELD SERVICE       |
| 7/75 | 0030-5-06350  |  |          |             |       |           |       |       | REPAIRED            | GOOD           | INSP. 5/76          |
| 4/76 | 0030-6-17555  | 90°                                      | 80%      |             |       | OK        |       | GOOD  | SWITCH HANDLE SHAFT | FAIR           | FIELD SERVICE       |
| 6/77 | 0030-7-31795  | 75°                                      |          |             |       | OK        |       | POOR  | SEE LETTER          | POOR           | FIELD SERVICE       |
| 4/78 | 0030-8-45421  | 60°                                      | 30%      |             |       | OK        |       | POOR  | SEE LETTER          | POOR           | FIELD SERVICE       |
| 8/78 | 0030-8-50697  |  |          |             |       |           |       |       | REPAIRED            | GOOD           | INSP. 4/79          |
| 4/79 | 0030-9-61899  | 50°                                      | 40%      |             |       | OK        |       | GOOD  | SWITCH HANDLE       | FAIR           | REPAIR LEAK         |
| 8/79 | 0030-9-64477  | DRAINED, FLUSHED, REGASKETED & RE-FILLED |          |             |       |           |       |       | REPAIRED            | GOOD           | INSP. 4/80          |
| 5/88 | 21779         |  |          |             |       |           |       |       | SEE REPORT          | P              | FIELD SERV.         |

### LIQUID TEST DATA

| Date | Color           | Sludge | I.F.T. | S.R. | Neut# | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |  |
|------|-----------------|--------|--------|------|-------|-------|------------------|------|----------------|---------------------|--|
| 6/73 | WW GR           | HEAVY  |        | 52.3 | .021  | 39.0  | 1.555            | 56.0 | GOOD           | TEST 6/74           |  |
| 5/75 | BLACK           | CARBON |        | 53.6 | .029  | 40.0  | 1.538            | 49.4 | BORDERLINE     | FILTER              |  |
| 7/75 | CHANGED ASKAREL |        |        |      |       |       |                  |      |                |                     |  |
| 4/76 | S               | CLEAR  |        | 75.8 | .018  | 38.7  | 1.504            | 46.1 | GOOD           | TEST 4/77           |  |
| 6/77 | S               | CLEAR  |        | 12.9 | .013  | 34    |                  |      | GOOD           | TEST 6/78           |  |
| 4/78 | S               | CLEAR  |        |      | .021  | 29    | 1.515            |      | GOOD           | TEST 4/79           |  |
| 4/79 | BLACK           | CARBON |        |      | .020  | 40    | 1.508            |      | GOOD           | TEST 4/80           |  |
|      |                 |        |        |      |       |       |                  |      |                |                     |  |
|      |                 |        |        |      |       |       |                  |      |                |                     |  |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10° ohm-cm askarel only  
Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

CONCORD, NH  
(603) 224-4006



**TRANSFORMER SERVICE, INC.**

TSI NO. 30  
CUSTOMER NO.  
LOCATION

## Transformer Inspection Service

CUSTOMER FACEMATE CORPORATION CITY CHICOPEE STATE MA

### NAME PLATE & LOCATION DATA

|               |         |                             |  |                       |            |                                      |   |
|---------------|---------|-----------------------------|--|-----------------------|------------|--------------------------------------|---|
| Make/Rewind   | G & W   | High Voltage                |  | No. Radiators         |            | Special Conditions                   |   |
| Serial No.    | SWITCH  | Low Voltage                 |  | Supplemental Cooling  | Type/No.   | Outside <input type="checkbox"/>     | Platform <input type="checkbox"/>         |
| Paint Color   |         | Phase/Cycle                 |  | Bushings T-Top S-Side | #HV #LV    | Inside <input type="checkbox"/>      | Pole <input type="checkbox"/>             |
| Impedance     |         | Type of Headspace           |  | No Load Tap Changer   | #Top #Side | Ground Roof <input type="checkbox"/> | Vault Cage <input type="checkbox"/>       |
| KVA           |         | Sample energ. Filter energ. | Yes <input type="checkbox"/> No <input type="checkbox"/> | Accessory Equipment   | TSI No(s). | Radiators                            | Welded Flanged <input type="checkbox"/>   |
| Filter Valves | TV & BV | Hose (one way)              | 50'  | Gal./Type             | 56/ASKAREL | Top Cover                            | Welded Bolted <input type="checkbox"/>    |
|               |         |                             |  |                       |            | Valves                               | Threaded Flanged <input type="checkbox"/> |

### FIELD INSPECTION DATA

| Date | Purchase Order No. | AMBIENT |          | TRANSFORMER |       | High Temp. | Liquid Level | Bush. Cond. | Paint Cond. | Leaks      | Quality Factor | Recommended Service |
|------|--------------------|---------|----------|-------------|-------|------------|--------------|-------------|-------------|------------|----------------|---------------------|
|      |                    | Temp.   | Humidity | Press.      | Temp. |            |              |             |             |            |                |                     |
| 4/88 | 21799              |         |          |             |       |            |              |             |             | SEE REPORT | P              | FIELD SERVICE       |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |

### LIQUID TEST DATA

| Date | Color | Visual | PCB Content | IFT | Neut. No. | Diel. | Moisture Content | Power Factor | TCG Content | Specific Gravity |  | Quality Factor | Recommended Service |
|------|-------|--------|-------------|-----|-----------|-------|------------------|--------------|-------------|------------------|--|----------------|---------------------|
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |

E-estimated PCB-Polychlorinated Biphenyl by electron capture in parts per million IFT-Interfacial Tension in dynes/cm  
 Neut. No.-mg KOH/g oil Diel.-dielectric in kilo volts Moisture content in parts per million Power Factor in percent corrected to 20°C  
 TCG-Total Combustible Gas by gas chromatography in parts per million Quality Factor-G, Good F, Fair B, Borderline P, Poor C, Critical

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts

TEST NO.: 31

### NAME PLATE & LOCATION DATA

7X

|                  |              |               |           |                   |   |             |        |          |     |
|------------------|--------------|---------------|-----------|-------------------|---|-------------|--------|----------|-----|
| Make/Rewind      | AC           | High Voltage  | 13.8Y     | No. Radiators     | 5 | T6 FINS EA  | 7'x12" | Ground   | YES |
| Serial No.       | 3733808      | Low Voltage   | 7967-2300 | No. Fans          |   | NONE        |        | Outside  | YES |
| Inventory Number | 7            | Phase/Cycle   | 3/60      | Bushings Top/Side |   | ENCLOSED    |        | Inside   | NO  |
| Impedance        | 5.3%         | Gas Headspace | SEALED    | Location          |   | #7 BLDG. 28 |        | Platform | NO  |
| KVA              | 3750         | Water Cooled  | NO        | Environment       |   | GOOD        |        | Pole     | NO  |
| FILTER Valves    | TOP & BOTTOM | Hose          | 50'       | Gal./Type         |   | 945A        |        | Roof     | NO  |

### FIELD INSPECTION DATA

| Date | P.O. No.      | TEST  |          | TRANSFORMER |       | Oil Level | Bush. | Paint | Leaks      | Quality Factor | Recommended Service |
|------|---------------|-------|----------|-------------|-------|-----------|-------|-------|------------|----------------|---------------------|
|      |               | Temp. | Humidity | Press       | Temp. |           |       |       |            |                |                     |
| 6/73 | 00330-3-57717 | 78°   | 60%      | +3.0        | 42°   | LOW       |       | GOOD  | NONE       | FAIR           | ADD ASKAREL         |
| 5/75 | 0030-5-02170  | 75°   | 65%      | +3.0        | 38°   | LOW       |       | GOOD  | NONE       | GOOD           | INSP. 5/76          |
| 4/76 | 0030-6-17555  | 90°   | 80%      | +3.0        | 42°   | OK        |       | GOOD  | NONE       | GOOD           | INSP. 4/77          |
| 6/77 | 0030-7-31795  | 75°   |          | +3          | 35°   | OK        |       | GOOD  | NONE       | GOOD           | INSP. 6/78          |
| 4/73 | 0030-8-45421  | 60°   | 30%      | +3          | 30°   | OK        |       | FAIR  | NONE       | FAIR           | INSP 4/79           |
| 4/79 | 0030-9-61899  | 50°   | +3.0     | 26°         | 26°   | OK        |       | GOOD  | NONE       | GOOD           | INSP. 4/80          |
| 5/88 | 21779         |       |          |             |       |           |       |       | SEE REPORT | P              | FIELD SERV.         |
|      |               |       |          |             |       |           |       |       |            |                |                     |
|      |               |       |          |             |       |           |       |       |            |                |                     |
|      |               |       |          |             |       |           |       |       |            |                |                     |

### LIQUID TEST DATA

| Date | Color | Sludge | I.F.T. | S.R.  | Neut# | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|--------|--------|-------|-------|-------|------------------|------|----------------|---------------------|
| 6/73 | WW    | TRACE  |        | 44.8  | .005  | 36.0  | 1.553            | 54.2 | GOOD           | TEST 6/74           |
| 5/75 | VLS   | TRACE  |        | 110.0 | .008  | 44.0  | 1.557            | 51.4 | GOOD           | TEST 5/76           |
| 4/76 | VLS   | TRACE  |        | 84.6  | .003  | 41.0  | 1.556            | 52.2 | GOOD           | TEST 4/77           |
| 6/77 | WW    | CLEAR  |        | 9.6   | .003  | 44    |                  |      | GOOD           | TEST 6/78           |
| 4/79 | VLS   | CLEAR  |        |       | .005  | 42    | 1.555            |      | GOOD           | TEST 4/79           |
| 4/79 | VLS   | CLEAR  |        |       | .010  | 43    | 1.550            |      | GOOD           | TEST 4/80           |
|      |       |        |        |       |       |       |                  |      |                |                     |
|      |       |        |        |       |       |       |                  |      |                |                     |
|      |       |        |        |       |       |       |                  |      |                |                     |

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts

TEST NO.: 32

### NAME PLATE & LOCATION DATA

7S

|                  |              |               |  |                   |     |          |  |
|------------------|--------------|---------------|--|-------------------|-----|----------|--|
| Make/Rewind      | AC           | High Voltage  |  | No. Radiators     |     | Ground   |  |
| Serial No.       |              | Low Voltage   |  | No. Fans          |     | Outside  |  |
| Inventory Number | SWITCH       | Phase/Cycle   |  | Bushings Top/Side |     | Inside   |  |
| Impedance        |              | Gas Headspace |  | Location          |     | Platform |  |
| KVA              |              | Water Cooled  |  | Environment       |     | Pole     |  |
| FILTER Valves    | TOP & BOTTOM | Hose          |  | Gal./Type         | 38A | Roof     |  |

### FIELD INSPECTION DATA

| Date | P.O. No.      | TEST            |          | TRANSFORMER |       | Oil Level | Bush. | Paint | Leaks            | Quality Factor | Recommended Service |
|------|---------------|-----------------|----------|-------------|-------|-----------|-------|-------|------------------|----------------|---------------------|
|      |               | Temp.           | Humidity | Press       | Temp. |           |       |       |                  |                |                     |
| 6/73 | 00330-3-57717 | 78 <sup>o</sup> | 60%      |             |       |           |       | GOOD  |                  | GOOD           | INSP. 6/74          |
| 5/75 | 0030-5-02170  | 75 <sup>o</sup> | 65%      |             |       | LOW       |       | GOOD  | MINOR SIDE BOLTS | FAIR           | FIELD SERVICE       |
| 7/75 | 0030-5-06350  |                 |          |             |       | +5GAL     |       |       | REGASKETED       | GOOD           | INSP. 5/76          |
| 4/76 | 0030-6-17555  | 90              | 80%      |             |       | OK        |       | GOOD  | NONE             | GOOD           | INSP. 4/77          |
| 6/77 | 0030-7-31795  | 75 <sup>o</sup> |          |             |       | OK        |       | GOOD  | NONE             | GOOD           | INSP. 6/78          |
| 4/78 | 0030-8-45421  | 60 <sup>o</sup> | 30%      |             |       | OK        |       | FAIR  | BOTTOM VALVE     | POOR           | FIELD SERVICE       |
| 8/78 | 0030-8-50697  |                 |          |             |       |           |       |       | REPAIRED         | GOOD           | INSP. 4/79          |
| 4/79 | 0030-9-61899  | 50 <sup>o</sup> | 40%      |             |       | OK        |       | GOOD  | NONE             | GOOD           | INSP. 4/80          |
| 4/88 | 21779         |                 |          |             |       |           |       |       | SEE REPORT       | P              | FIELD SERV.         |

### LIQUID TEST DATA

| Date | Color | Sludge | I.F.T. | S.R. | Neut # | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|--------|--------|------|--------|-------|------------------|------|----------------|---------------------|
| 6/73 | WW    | TRACE  |        | 36.0 | .004   | 36.9  | 1.554            | 52.7 | GOOD           | TEST 6/74           |
| 5/75 | WW    | TRACE  |        | 78.5 | .004   | 35.2  | 1.557            | 50.8 | GOOD           | TEST 5/76           |
| 4/76 | VLS   | TRACE  |        | 91.6 | .002   | 34.1  | 1.551            | 49.2 | GOOD           | TEST 4/77           |
| 6/77 | WW    | CLEAR  |        | 13.7 | .004   | 39    |                  |      | GOOD           | TEST 6/78           |
| 4/73 | WW    | CLEAR  |        |      | .006   | 41    | 1.548            |      | GOOD           | TEST 4/79           |
| 4/79 | WW    | CLEAR  |        |      | .005   | 45    | 1.560            |      | GOOD           | TEST 4/80           |
|      |       |        |        |      |        |       |                  |      |                |                     |
|      |       |        |        |      |        |       |                  |      |                |                     |
|      |       |        |        |      |        |       |                  |      |                |                     |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10<sup>o</sup> ohm-cm askarel only  
 Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100<sup>o</sup>f

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts TEST NO.: 33

20X

### NAME PLATE & LOCATION DATA

|                  |              |               |        |                   |                  |          |     |
|------------------|--------------|---------------|--------|-------------------|------------------|----------|-----|
| Make/Rewind      | AC           | High Voltage  | 13860  | No. 5 Radiators   | 2 SETS EA. 5'x4" | Ground   | YES |
| Serial No.       | 2475184      | Low Voltage   | 2300   | No. Fans          | NO               | Outside  | YES |
| Inventory Number | 10511        | Phase/Cycle   | 3/60   | Bushings Top/Side | ENCLOSED         | Inside   | NO  |
| Impedance        | 5.5%         | Gas Headspace | SEALED | Location          | #20 BLDG. 29     | Platform | NO  |
| KVA              | 1600         | Water Cooled  | NO     | Environment       | GOOD             | Pole     | NO  |
| FILTER Valves    | TOP & BOTTOM | Hose          | 50'    | Gal./Type         | 576A             | Roof     | NO  |

### FIELD INSPECTION DATA

| Date  | P.O. No.      | TEST                |          | TRANSFORMER |       | Oil Level   | Bush. | Paint | Leaks        | Quality Factor | Recommended Service |
|-------|---------------|---------------------|----------|-------------|-------|-------------|-------|-------|--------------|----------------|---------------------|
|       |               | Temp.               | Humidity | Press       | Temp. |             |       |       |              |                |                     |
| 6/73  | 00330-3-57717 | 78°                 | 60%      | NO GA       | 40°   | LOW         |       | GOOD  | NONE         | FAIR           | ADD ASKAREL         |
| 5/75  | 0030-5-02170  | 75°                 | 65%      | NO GA       | 38°   | LOW         |       | POOR  | TWO MANHOLES | POOR           | FIELD SERVICE       |
| 7/75  | 0030-5-06350  |                     |          |             |       | +55GAL      |       |       | REPAIRED     | FAIR           | CLEAN&PAINT         |
| 4/76  | 0030-6-17555  | 90°                 | 80%      | NO GA       | 53°   | OK          |       | POOR  | NONE         | FAIR           | CLEAN&PAINT         |
| 6/77  | 0030-7-31795  | 75°                 |          |             | 45°   | OK          |       | POOR  | SEE LETTER   | POOR           | FIELD SERVICE       |
| 4/78  | 0030-8-45421  | 60°                 | 30%      | NO GA       | 35°   | OK          |       | POOR  | SEE LETTER   | POOR           | FIELD SERVICE       |
| 8/78  |               | PAINTED BY UNIROYAL |          |             |       |             |       |       |              | FAIR           | INSP. 4/79          |
| 4/79  | 0030-9-68199  | 50°                 | 50%      | NO GA       | 30°   | OK          |       | GOOD  | NONE         | GOOD           | INSP. 4/80          |
| 10/79 | 0030-9-66526  |                     |          |             |       | ADDED 15GAL |       |       |              | GOOD           | INSP. 4/80          |
| 5/88  | 21779         |                     |          |             |       |             |       |       | SEE REPORT   | P              | FIELD SERV.         |

### LIQUID TEST DATA

| Date | Color | Sludge | I.F.T. | S.R.  | Neut# | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|--------|--------|-------|-------|-------|------------------|------|----------------|---------------------|
| 6/73 | WW    | CLEAR  |        | 78.5  | .003  | 36.0  | 1.553            | 56.3 | GOOD           | TEST 6/74           |
| 5/75 | VLS   | TRACE  |        | 220.0 | .003  | 36.2  | 1.557            | 58.7 | GOOD           | TEST 5/76           |
| 4/76 | VLS   | CLOUDY |        | 84.6  | .002  | 33.4  | 1.551            | 57.3 | GOOD           | TEST 4/77           |
| 6/77 | VLS   | CLEAR  |        | 14.6  | .005  | 48    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | VLS   | CLEAR  |        |       | .004  | 41    | 1.556            |      | GOOD           | TEST 4/79           |
| 4/79 | VLS   | CLEAR  |        |       | .005  | 46    | 1.560            |      | GOOD           | TEST 4/80           |
|      |       |        |        |       |       |       |                  |      |                |                     |
|      |       |        |        |       |       |       |                  |      |                |                     |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10° ohm-cm askarel only  
Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f



CONCORD, NH  
(603) 224-4006

# TSI TRANSFORMER SERVICE, INC.

TSI NO. 33  
CUSTOMER NO.  
LOCATION

## Transformer Inspection Service

CUSTOMER FACEMATE CORPORATION CITY CHICOPEE STATE MA

### NAME PLATE & LOCATION DATA

|               |                   |                             |  |                       |                       |       |                                      |   |
|---------------|-------------------|-----------------------------|--|-----------------------|-----------------------|-------|--------------------------------------|---|
| Make/Rewind   | ALLIS<br>CHALMERS | High Voltage                | 13860  | No. Radiators         | 2 SETS EA.<br>5' X 4" |       | Special Conditions                   |   |
| Serial No.    | 2475184           | Low Voltage                 | 2300   | Supplemental Cooling  | Type/No.              |       | Outside <input type="checkbox"/>     | Platform <input type="checkbox"/>         |
| Paint Color   |                   | Phase/Cycle                 | 3/60   | Bushings T-Top S-Side | #HV                   | #LV   | Inside <input type="checkbox"/>      | Pole <input type="checkbox"/>             |
| Impedance     | 5.5%              | Type of Headspace           | SEALED   | No Load Tap Changer   | #Top                  | #Side | Ground Roof <input type="checkbox"/> | Vault <input type="checkbox"/>            |
| KVA           | 1600              | Sample energ. Filter energ. | Yes <input type="checkbox"/> No <input type="checkbox"/> | Accessory Equipment   | TSI No(s).            |       | Top Cover <input type="checkbox"/>   | Welded Bolted <input type="checkbox"/>    |
| Filter Valves | TV & BV           | Hose (one way)              | 50'  | Gal./Type             | 576/ASKAREL           |       | Valves <input type="checkbox"/>      | Threaded Flanged <input type="checkbox"/> |

### FIELD INSPECTION DATA

| Date | Purchase Order No. | AMBIENT |          | TRANSFORMER |       | High Temp. | Liquid Level | Bush. Cond. | Paint Cond. | Leaks      | Quality Factor | Recommended Service |
|------|--------------------|---------|----------|-------------|-------|------------|--------------|-------------|-------------|------------|----------------|---------------------|
|      |                    | Temp.   | Humidity | Press.      | Temp. |            |              |             |             |            |                |                     |
| 4/88 | 21799              |         |          |             |       |            |              |             |             | SEE REPORT | P              | FIELD SERVICE       |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |

### LIQUID TEST DATA

| Date | Color | Visual | PCB Content | IFT | Neut. No. | Diel. | Moisture Content | Power Factor | TCG Content | Specific Gravity |  | Quality Factor | Recommended Service |
|------|-------|--------|-------------|-----|-----------|-------|------------------|--------------|-------------|------------------|--|----------------|---------------------|
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |

E-estimated PCB-Polychlorinated Biphenyl by electron capture in parts per million IFT-Interfacial Tension in dynes/cm  
 Neut. No.-mg KOH/g oil Diel.-dielectric in kilo volts Moisture content in parts per million Power Factor in percent corrected to 20°C  
 TCG-Total Combustible Gas by gas chromatography in parts per million Quality Factor-G, Good F, Fair B, Borderline P, Poor C, Critical

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts

TEST NO.: 34  
20S

### NAME PLATE & LOCATION DATA

|                  |              |               |  |                   |     |          |  |
|------------------|--------------|---------------|--|-------------------|-----|----------|--|
| Make/Rewind      | AC           | High Voltage  |  | No. Radiators     |     | Ground   |  |
| Serial No.       |              | Low Voltage   |  | No. Fans          |     | Outside  |  |
| Inventory Number | SWITCH       | Phase/Cycle   |  | Bushings Top/Side |     | Inside   |  |
| Impedance        |              | Gas Headspace |  | Location          |     | Platform |  |
| KVA              |              | Water Cooled  |  | Environment       |     | Pole     |  |
| FILTER Valves    | TOP & BOTTOM | Hose          |  | Gal./Type         | 60A | Roof     |  |

### FIELD INSPECTION DATA

| Date | P.O. No.      | TEST  |          | TRANSFORMER |       | Oil Level | Bush. | Paint | Leaks                | Quality Factor | Recommended Service |
|------|---------------|---|----------|-------------|-------|-----------|-------|-------|----------------------|----------------|---------------------|
|      |               | Temp.   | Humidity | Press       | Temp. |           |       |       |                      |                |                     |
| 6/73 | 00330-3-57717 | 78 <sup>o</sup>                               | 60%      |             |       | OK        |       | GOOD  | OIL LEVEL GA & BOLTS | POOR           | FIELD SERVICE       |
| 5/75 | 0030-5-02170  | 75 <sup>o</sup>                               | 65%      |             |       | OK        |       | POOR  | OIL LEVEL GA & BOLTS | POOR           | FIELD SERVICE       |
| 7/75 | 0030-5-06350  |   |          |             |       |           |       |       | REPAIRED             | FAIR           | CLEAN & PAINT       |
| 4/76 | 0030-6-17555  | 90 <sup>o</sup>                               | 80%      |             |       | OK        |       | POOR  | NONE                 | FAIR           | CLEAN & PAINT       |
| 6/77 | 0030-7-31795  | 75 <sup>o</sup>                               | 60%      |             |       | OK        |       | POOR  | SEE LETTER           | POOR           | FIELD SERVICE       |
| 4/78 | D030-8-45421  | 60 <sup>o</sup>                               | 30%      |             |       | OK        |       | POOR  | SWITCH COMPARTMENT   | POOR           | FIELD SERVICE       |
| 8/78 | 0030-8-50697  | VALVES TIGHTENED & TEFLONED, SWITCH TIGHTENED |          |             |       |           |       |       |                      | FAIR           | INSP. 4/79          |
| 4/79 |               | 50 <sup>o</sup>                               | 50%      |             |       | OK        |       | GOOD  | NONE                 | GOOD           | INSP. 4/80          |
| 5/88 | 21779         |   |          |             |       |           |       |       | SEE REPORT           | P              | FIELD SERV.         |

### LIQUID TEST DATA

| Date | Color | Sludge   | I.F.T. | S.R.  | Neut# | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|----------|--------|-------|-------|-------|------------------|------|----------------|---------------------|
| 6/73 | VLS   | CLEAR    |        | 45.8  | .013  | 36.1  | 1.548            | 51.7 | GOOD           | TEST 6/74           |
| 5/75 | S     | TRACE    |        | 110.0 | .014  | 27.0  | 1.552            | 51.7 | GOOD           | TEST 5/76           |
| 4/76 | S     | CLEAR    |        | 91.6  | .014  | 29.7  | 1.550            | 50.8 | GOOD           | TEST 4/77           |
| 6/77 | S     | CLEAR    |        | 13.7  | .013  | 46    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | LS    | S. TRACE |        |       | .020  | 40    | 1.552            |      | GOOD           | TEST 4/79           |
| 4/79 | LS    | TRACE    |        |       | .020  | 40    | 1.553            |      | GOOD           | TEST 4/80           |
|      |       |          |        |       |       |       |                  |      |                |                     |
|      |       |          |        |       |       |       |                  |      |                |                     |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10<sup>o</sup> ohm-cm askarel only  
Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100<sup>o</sup>f

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts

TEST NO.: 35

### NAME PLATE & LOCATION DATA

21X

|                  |              |               |        |                   |    |                       |          |     |
|------------------|--------------|---------------|--------|-------------------|----|-----------------------|----------|-----|
| Make/Rewind      | AC           | High Voltage  | 13.2Y  | No. Radiators     | 16 | 10 TUBES EA.<br>6'X3" | Ground   | YES |
| Serial No.       | 2777813      | Low Voltage   | 2300   | No. Fans          |    | NONE                  | Outside  | YES |
| Inventory Number | 21           | Phase/Cycle   | 3/60   | Bushings Top/Side |    | ENCLOSED              | Inside   | NO  |
| Impedance        | 5.0%         | Gas Headspace | SEALED | Location          |    | #21 BLDG 29           | Platform | NO  |
| KVA              | 1500         | Water Cooled  | NO     | Environment       |    | GOOD                  | Pole     | NO  |
| FILTER Valves    | TOP & BOTTOM | Hose          | 50'    | Gal./Type         |    | 590A                  | Roof     | NO  |

### FIELD INSPECTION DATA

| Date  | P.O. No.      | TEST  |          | TRANSFORMER |       | Oil Level          | Bush. | Paint | Leaks      | Quality Factor | Recommended Service |
|-------|---------------|-------|----------|-------------|-------|--------------------|-------|-------|------------|----------------|---------------------|
|       |               | Temp. | Humidity | Press       | Temp. |                    |       |       |            |                |                     |
| 6/73  | 00330-3-57717 | 78°   | 60%      | NO GA       | 45°   | OK                 |       | GOOD  | NONE       | GOOD           | INSP. 6/74          |
| 5/75  | 0030-5-02170  | 75°   | 65%      | NO GA       | 40°   | OK                 | ENCL. | GOOD  | NONE       | GOOD           | INSP. 5/76          |
| 4/76  | 0030-6-17555  | 90°   | 80%      | NO GA       | 46°   | OK                 | ENCL. | GOOD  | NONE       | GOOD           | INSP. 4/77          |
| 6/77  | 0030-7-31795  | 75°   |          |             | 35°   | OK                 |       | GOOD  | NONE       | GOOD           | INSP. 6/78          |
| 4/78  | 0030-8-45421  | 60°   | 30%      | NO GA       | 30°   | OK                 | ENCL. | FAIR  | NONE       | FAIR           | INSP 4/79           |
| 4/79  | 0030-9-61899  | 50°   | 40%      | NO GA       | 28°   | OK                 | ENCL. | GOOD  | NONE       | GOOD           | INSP. 4/80          |
| 10/79 | 0030-9-66526  |       |          |             |       | ADDED<br>9 1/2 GAL |       |       |            | GOOD           | INSP. 4/80          |
| 5/88  | 21779         |       |          |             |       |                    |       |       | SEE REPORT | P              | FIELD SERV.         |

### LIQUID TEST DATA

| Date | Color | Sludge             | I.F.T. | S.R. | Neut# | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|--------------------|--------|------|-------|-------|------------------|------|----------------|---------------------|
| 6/73 | WW GR | TRACE              |        | 46.B | .008  | 37.3  | 1.556            | 47.2 | GOOD           | TEST 6/74           |
| 5/75 | DS    | TRACE              |        | 22.0 | .007  | 33.4  | 1.561            | 47.8 | GOOD           | TEST 5/76           |
| 4/76 | WW GR | TRACE              |        | 22.0 | .007  | 36.4  | 1.559            | 46.9 | GOOD           | TEST 4/77           |
| 6/77 | WW GR | CLEAR              |        | 13.7 | .007  | 46    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | WWG   | SLUDGE & HVY CRYST |        |      | .010  | 48    | 1.557            |      | GOOD           | TEST 4/79           |
| 4/79 | WWGR  | SLUDGE & CRYST     |        |      | .010  | 50    | 1.565            |      | GOOD           | TEST 4/80           |



# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts TEST NO.: 36

### NAME PLATE & LOCATION DATA

21S

|                  |              |               |     |                   |     |          |  |
|------------------|--------------|---------------|-----|-------------------|-----|----------|--|
| Make/Rewind      | AC           | High Voltage  |     | No. Radiators     |     | Ground   |  |
| Serial No.       |              | Low Voltage   |     | No. Fans          |     | Outside  |  |
| Inventory Number | SWITCH       | Phase/Cycle   |     | Bushings Top/Side |     | Inside   |  |
| Impedance        |              | Gas Headspace |     | Location          |     | Platform |  |
| KVA              |              | Water Cooled  |     | Environment       |     | Pole     |  |
| FILTER Valves    | TOP & BOTTOM | Hose          | 50' | Gal./Type         | 60A | Roof     |  |

### FIELD INSPECTION DATA

| Date  | P.O. No.      | TEST            |          | TRANSFORMER |       | Oil Level       | Bush. | Paint | Leaks       | Quality Factor | Recommended Service |
|-------|---------------|-----------------|----------|-------------|-------|-----------------|-------|-------|-------------|----------------|---------------------|
|       |               | Temp.           | Humidity | Press       | Temp. |                 |       |       |             |                |                     |
| 6/73  | 00330-3-57717 | 78 <sup>o</sup> | 60%      |             |       | OK              |       | GOOD  | COVER BOLTS | POOR           | FIELD SERVICE       |
| 5/75  | 0030-5-02170  | 75 <sup>o</sup> | 65%      |             |       | OK              |       | GOOD  | COVER BOLTS | POOR           | FIELD SERVICE       |
| 7/75  | 0030-5-06350  |                 |          |             |       |                 |       |       | REPAIRED    | GOOD           | INSP. 5/76          |
| 4/76  | 0030-6-17555  | 90 <sup>o</sup> | 80%      |             |       | OK              |       | GOOD  | NONE        | GOOD           | INSP. 4/77          |
| 6/77  | 0030-7-31795  | 75 <sup>o</sup> |          |             |       | OK              |       | GOOD  | SEE LETTER  | FAIR           | FIELD SERVICE       |
| 4/78  | 0030-8-45421  | 60 <sup>o</sup> | 30%      |             |       | OK              |       | FAIR  | SEE LETTER  | POOR           | FIELD SERVICE       |
| 8/78  | 0030-8-50697  |                 |          |             |       |                 |       |       | REPAIRED    | FAIR           | INSP. 4/79          |
| 4/79  | 0030-9-61899  | 50 <sup>o</sup> | 40%      |             |       | OK              |       | GOOD  | NONE        | GOOD           | INSP. 4/80          |
| 10/79 | 0030-9-66526  |                 |          |             |       | ADDED 2 1/2 GAL |       |       |             | GOOD           | INSP. 4/80          |
| 5/88  | 21779         |                 |          |             |       |                 |       |       | SEE REPORT  | P              | FIELD SERV.         |

### LIQUID TEST DATA

| Date | Color | Sludge      | I.F.T. | S.R. | Neut# | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|-------------|--------|------|-------|-------|------------------|------|----------------|---------------------|
| 6/73 | WW GR | CLEAR       |        | 31.4 | .007  | 32.2  | 1.540            | 47.2 | GOOD           | TEST 6/74           |
| 5/75 | VLS   | TRACE       |        | 39.2 | .008  | 38.8  | 1.554            | 48.0 | GOOD           | TEST 5/76           |
| 4/76 | VLS   | TRACE       |        | 31.8 | .008  | 40.2  | 1.554            | 48.6 | GOOD           | TEST 4/77           |
| 6/77 | LS    | TRACE       |        | 9.9  | .01   | 42    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | LS    | S. TRACE    |        |      | .015  | 34    | 1.555            |      | GOOD           | TEST 4/79           |
| 4/79 | LS    | HEAVY TRACE |        |      | .015  | 36    | 1.551            |      | GOOD           | TEST 4/80           |
|      |       |             |        |      |       |       |                  |      |                |                     |
|      |       |             |        |      |       |       |                  |      |                |                     |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10<sup>o</sup>ohm-cm askarel only  
Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100<sup>o</sup>f

CONCORD, NH  
(603) 224-4006

# TSI TRANSFORMER SERVICE, INC.

TSI NO. 36  
CUSTOMER NO.  
LOCATION

## Transformer Inspection Service

CUSTOMER FACEMATE CORPORATION CITY CHICOPEE STATE MA

### NAME PLATE & LOCATION DATA

|               |                   |                             |  |                       |            |                                  |                                   |
|---------------|-------------------|-----------------------------|--|-----------------------|------------|----------------------------------|-----------------------------------|
| Make/Rewind   | ALLIS<br>CHALMERS | High Voltage                |  | No. Radiators         |            | Special Conditions               |                                   |
| Serial No.    | SWITCH            | Low Voltage                 |  | Supplemental Cooling  | Type/No.   | Outside <input type="checkbox"/> | Platform <input type="checkbox"/> |
| Paint Color   |                   | Phase/Cycle                 |  | Bushings T-Top S-Side | #HV #LV    | Inside <input type="checkbox"/>  | Pole <input type="checkbox"/>     |
| Impedance     |                   | Type of Headspace           |  | No Load Tap Changer   | #Top #Side | Ground <input type="checkbox"/>  | Vault <input type="checkbox"/>    |
| KVA           |                   | Sample energ. Filter energ. | Yes <input type="checkbox"/> No <input type="checkbox"/> | Accessory Equipment   | TSI No(s). | Roof <input type="checkbox"/>    | Cage <input type="checkbox"/>     |
| Filter Valves | TV & BV           | Hose (one way)              | 50'  | Gal./Type             | 60/ASKAREL | Radiators                        | Welded <input type="checkbox"/>   |
|               |                   |                             |  |                       |            | Top Cover                        | Flanged <input type="checkbox"/>  |
|               |                   |                             |  |                       |            | Valves                           | Welded <input type="checkbox"/>   |
|               |                   |                             |  |                       |            |                                  | Bolted <input type="checkbox"/>   |
|               |                   |                             |  |                       |            |                                  | Threaded <input type="checkbox"/> |
|               |                   |                             |  |                       |            |                                  | Flanged <input type="checkbox"/>  |

### FIELD INSPECTION DATA

| Date | Purchase Order No. | AMBIENT |          | TRANSFORMER |       | High Temp. | Liquid Level | Bush. Cond. | Paint Cond. | Leaks      | Quality Factor | Recommended Service |
|------|--------------------|---------|----------|-------------|-------|------------|--------------|-------------|-------------|------------|----------------|---------------------|
|      |                    | Temp.   | Humidity | Press.      | Temp. |            |              |             |             |            |                |                     |
| 4/88 | 21799              |         |          |             |       |            |              |             |             | SEE REPORT | P              | FIELD SERVICE       |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |

### LIQUID TEST DATA

| Date | Color | Visual | PCB Content | IFT | Neut. No. | Diel. | Moisture Content | Power Factor | TCG Content | Specific Gravity | Quality Factor | Recommended Service |
|------|-------|--------|-------------|-----|-----------|-------|------------------|--------------|-------------|------------------|----------------|---------------------|
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |

E-estimated PCB-Polychlorinated Biphenyl by electron capture in parts per million IFT-Interfacial Tension in dynes/cm  
 Neut. No.-mg KOH/g oil Diel.-dielectric in kilo volts Moisture content in parts per million Power Factor in percent corrected to 20°C  
 TCG-Total Combustible Gas by gas chromatography in parts per million Quality Factor-G, Good F, Fair B, Borderline P, Poor C, Critical

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts TEST NO.: 37

17X

### NAME PLATE & LOCATION DATA

|                  |              |               |        |                   |   |                       |          |     |
|------------------|--------------|---------------|--------|-------------------|---|-----------------------|----------|-----|
| Make/Rewind      | AC           | High Voltage  | 13800  | No. Radiators     | 5 | 2 SETS OF 11 FINS EA. | Ground   | YES |
| Serial No.       | 1978150      | Low Voltage   | 2300   | No. Fans          |   | NO                    | Outside  | YES |
| Inventory Number | 7748         | Phase/Cycle   | 3/60   | Bushings Top/Side |   | ENCLOSED              | Inside   | NO  |
| Impedance        | 5.3%         | Gas Headspace | SEALED | Location          |   | #17 BLDG. 27          | Platform | NO  |
| KVA              | 1500         | Water Cooled  | NO     | Environment       |   | GOOD                  | Pole     | NO  |
| FILTER Valves    | TOP & BOTTOM | Hose          | 50'    | Gal./Type         |   | 574A                  | Roof     | NO  |

### FIELD INSPECTION DATA

| Date  | P.O. No.      | TEST  |          | TRANSFORMER |       | Oil Level   | Bush. | Paint | Leaks        | Quality Factor | Recommended Service |
|-------|---------------|-------|----------|-------------|-------|-------------|-------|-------|--------------|----------------|---------------------|
|       |               | Temp. | Humidity | Press       | Temp. |             |       |       |              |                |                     |
| 6/73  | 00330-3-57717 | 78°   | 60%      | NO GA       | 45°   | LOW         |       | GOOD  | NONE         | FAIR           | ADD ASKAREL         |
| 5/75  | 0030-5-02170  | 75°   | 65%      | NO GA       | 40°   | LOW         |       | FAIR  | MANHOLES (2) | FAIR           | FIELD SERVI         |
| 7/75  | 0030-5-06350  |       |          |             |       | +20GAL.     |       |       | REGASKETED   | GOOD           | INSP. 5/76          |
| 4/76  | 0030-6-17555  | 90°   | 80%      | NO GA       | 45°   | OK          |       | FAIR  | NONE         | GOOD           | INSP. 4/77          |
| 6/77  | 0030-7-31795  | 75°   | 60%      |             | 40°   | OK          |       | FAIR  | NONE         | GOOD           | INSP. 6/78          |
| 4/78  | 0030-8-45421  | 60°   | 30%      | NO GA       | 28°   | OK          |       | POOR  | NONE         | POOR           | PAINT               |
| 4/79  | 0030-9-61899  | 50°   | 40%      | NO GA       | 24°   | OK          |       | GOOD  | NONE         | GOOD           | INSP. 4/80          |
| 10/79 | 0030-9-66526  |       |          |             |       | ADDED 15GAL |       |       |              | GOOD           | INSP. 4/80          |
| 5/88  | 21779         |       |          |             |       |             |       |       | SEE REPORT   | P              | FIELD SERV.         |

### LIQUID TEST DATA

| Date | Color  | Sludge | I.F.T. | S.R. | Neut # | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|--------|--------|--------|------|--------|-------|------------------|------|----------------|---------------------|
| 6/73 | WW GR  | HEAVY  |        | 44.0 | .020   | 35.2  | 1.552            | 51.7 | GOOD           | TEST 6/74           |
| 5/75 | DS     | TRACE  |        | 88.0 | .022   | 36.2  | 1.556            | 50.8 | GOOD           | TEST 5/76           |
| 4/76 | WW GR. | TRACE  |        | 75.8 | .013   | 37.4  | 1.554            | 49.7 | GOOD           | TEST 4/77           |
| 6/77 | S      | TRACE  |        | 13.7 | .012   | 47    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | S      | TRACE  |        |      | .012   | 47    | 1.555            |      | GOOD           | TEST 4/79           |
| 4/79 | S      | TRACE  |        |      | .010   | 50+   | 1.562            |      | GOOD           | TEST 4/80           |

CONCORD, NH  
(603) 224-4006



**TRANSFORMER SERVICE, INC.**

TSI NO. 37  
CUSTOMER NO.  
LOCATION #17 BLDG. 27

**Transformer Inspection Service**

CUSTOMER FACEMATE CORPORATION CITY CHICOPEE STATE MA

**NAME PLATE & LOCATION DATA**

|               |                |                             |  |                       |   |                      |                                      |   |
|---------------|----------------|-----------------------------|--|-----------------------|---|----------------------|--------------------------------------|---|
| Make/Rewind   | ALLIS CHALMERS | High Voltage                | 13800  | No. Radiators         | 5 | 2 SETS OF 11 FINS EA | Special Conditions                   |   |
| Serial No.    | 1978150        | Low Voltage                 | 2300   | Supplemental Cooling  |   | Type/No.             | Outside <input type="checkbox"/>     | Platform <input type="checkbox"/>         |
| Paint Color   |                | Phase/Cycle                 | 3/60   | Bushings T-Top S-Side |   | #HV #LV              | Inside <input type="checkbox"/>      | Pole <input type="checkbox"/>             |
| Impedance     | 5.3%           | Type of Headspace           | SEALED   | No Load Tap Changer   |   | #Top #Side           | Ground Roof <input type="checkbox"/> | Vault <input type="checkbox"/>            |
| KVA           | 1500           | Sample energ. Filter energ. | Yes <input type="checkbox"/> No <input type="checkbox"/> | Accessory Equipment   |   | TSI No(s).           | <input type="checkbox"/>             | Cage <input type="checkbox"/>             |
| Filter Valves | TY, BV         | Hose (one way)              | 50'  | Gal./Type             |   | 574/ASKAREL          | Radiators <input type="checkbox"/>   | Welded Flanged <input type="checkbox"/>   |
|               |                |                             |  |                       |   |                      | Top Cover <input type="checkbox"/>   | Welded Bolted <input type="checkbox"/>    |
|               |                |                             |  |                       |   |                      | Valves <input type="checkbox"/>      | Threaded Flanged <input type="checkbox"/> |

**FIELD INSPECTION DATA**

| Date | Purchase Order No. | AMBIENT |          | TRANSFORMER |       | High Temp. | Liquid Level | Bush. Cond. | Paint Cond. | Leaks | Quality Factor | Recommended Service |
|------|--------------------|---------|----------|-------------|-------|------------|--------------|-------------|-------------|-------|----------------|---------------------|
|      |                    | Temp.   | Humidity | Press.      | Temp. |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |

**LIQUID TEST DATA**

| Date | Color | Visual | PCB Content | IFT | Neut. No. | Diel. | Moisture Content | Power Factor | TCG Content | Specific Gravity | Quality Factor | Recommended Service |
|------|-------|--------|-------------|-----|-----------|-------|------------------|--------------|-------------|------------------|----------------|---------------------|
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |

E-estimated PCB-Polychlorinated Biphenyl by electron capture in parts per million IFT-Interfacial Tension in dynes/cm  
 Neut. No.-mg KOH/g oil Diel.-dielectric in kilo volts Moisture content in parts per million Power Factor in percent corrected to 20°C  
 TCG-Total Combustible Gas by gas chromatography in parts per million Quality Factor-G, Good F, Fair B, Borderline P, Poor C, Critical



# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts TEST NO.: 38

### NAME PLATE & LOCATION DATA

17S

|                  |              |               |     |                   |     |          |  |
|------------------|--------------|---------------|-----|-------------------|-----|----------|--|
| Make/Rewind      | AC           | High Voltage  |     | No. Radiators     |     | Ground   |  |
| Serial No.       |              | Low Voltage   |     | No. Fans          |     | Outside  |  |
| Inventory Number | SWITCH       | Phase/Cycle   |     | Bushings Top/Side |     | Inside   |  |
| Impedance        |              | Gas Headspace |     | Location          |     | Platform |  |
| KVA              |              | Water Cooled  |     | Environment       |     | Pole     |  |
| FILTER Valves    | TOP & BOTTOM | Hose          | 50' | Gal./Type         | 56A | Roof     |  |

### FIELD INSPECTION DATA

| Date  | P.O. No.      | TEST                                 |          | TRANSFORMER |       | Oil Level  | Bush. | Paint | Leaks                            | Quality Factor | Recommended Service |
|-------|---------------|--------------------------------------|----------|-------------|-------|------------|-------|-------|----------------------------------|----------------|---------------------|
|       |               | Temp.                                | Humidity | Press       | Temp. |            |       |       |                                  |                |                     |
| 6/73  | 00330-3-57717 | 78°                                  | 60%      |             |       | OK         |       | GOOD  | COVER BOLTS                      | POOR           | FIELD SERVICE       |
| 5/75  | 0030-5-02170  | 75°                                  | 65%      |             |       | OK         |       | FAIR  | COVER BOLTS                      | POOR           | FIELD SERVICE       |
| 7/75  | 0030-5-06350  |                                      |          |             |       |            |       |       | REG. & EPOXIED                   | GOOD           | INSP. 5/76          |
| 4/76  | 0030-6-17555  | 90°                                  | 80%      |             |       | OK         |       | FAIR  | MINOR                            | FAIR           | INSP. 4/77          |
| 6/77  | 0030-7-31795  | 75°                                  |          |             |       | OK         |       | FAIR  | SEE LETTER SWITCH COMP TO TRANSF | FAIR           | FIELD SERVICE       |
| 4/78  | 0030-8-45421  | 60°                                  | 30%      |             |       | OK         |       | POOR  |                                  | POOR           | FIELD SERVICE       |
| 8/78  | 0030-8-50697  | REPAIRED VALVE LEAKS, EXPOXIED COMP. |          |             |       |            |       |       |                                  | FAIR           | INSP. 4/79          |
| 4/79  | 0030-9-61899  | 50°                                  | 40%      |             |       | OK         |       | GOOD  | TOP PLUG                         | FAIR           | REPAIR LEAK         |
| 8/79  | 0030-9-64477  |                                      |          |             |       |            |       |       | REPAIRED                         | GOOD           | INSP. 4/80          |
| 10/79 | 0030-9-66526  |                                      |          |             |       | ADDED 3GAL |       |       |                                  | GOOD           | INSP. 4/80          |

### LIQUID TEST DATA

| Date | Color | Sludge | I.F.T. | S.R.  | Neut # | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|--------|--------|-------|--------|-------|------------------|------|----------------|---------------------|
| 6/73 | WW    | HEAVY  |        | 44.8  | .009   | 31.0  | 1.550            | 50.5 | GOOD           | TEST 6/74           |
| 5/75 | LS    | TRACE  |        | 115.0 | .011   | 36.2  | 1.553            | 49.7 | GOOD           | TEST 5/76           |
| 4/76 | LS    | TRACE  |        | 88.0  | .011   | 38.7  | 1.555            | 50.2 | GOOD           | TEST 4/77           |
| 6/77 | LS    | CLEAR  |        | 13.7  | .01    | 46    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | S     | CLEAR  |        |       | .015   | 38    | 1.549            |      | GOOD           | TEST 4/79           |
| 4/79 | LS    | CLEAR  |        |       | .015   | 50    | 1.557            |      | GOOD           | TEST 4/80           |
|      |       |        |        |       |        |       |                  |      |                |                     |
|      |       |        |        |       |        |       |                  |      |                |                     |

**Transformer Inspection Service**

CUSTOMER FACEMATE CORP. CITY CHICOPEE STATE MA

**NAME PLATE & LOCATION DATA**

|               |           |  |     |                       |              |                                      |   |
|---------------|-----------|--|-----|-----------------------|--------------|--------------------------------------|---|
| Make/Rewind   | AC        | High Voltage   |     | No. Radiators         |              | Special Conditions                   |   |
| Serial No.    |           | Low Voltage  |     | Supplemental Cooling  | Type/No.     | Outside <input type="checkbox"/>     | Platform <input type="checkbox"/>       |
| Paint Color   |           | Phase/Cycle  |     | Bushings T-Top S-Side | #HV #LV      | Inside <input type="checkbox"/>      | Pole <input type="checkbox"/>           |
| Impedance     |           | Type of Headspace  |     | No Load Tap Changer   | #Top #Side   | Ground Roof <input type="checkbox"/> | Vault Cage <input type="checkbox"/>     |
| KVA           |           | Sample energ. Yes <input type="checkbox"/> No <input type="checkbox"/> |     | Accessory Equipment   | TSI No(s).   | Radiators                            | Welded Flanged <input type="checkbox"/> |
| Filter Valves | TOP & BTM | Filter energ. Yes <input type="checkbox"/> No <input type="checkbox"/> |     |                       |              | Top Cover                            | Welded Bolted <input type="checkbox"/>  |
|               |           | Moist (one way)  | 50' | Gal./Type             | 56 / ASKAREL | Valves                               | Threaded <input type="checkbox"/>       |
|               |           |  |     |                       |              |                                      | Flanged <input type="checkbox"/>        |

**FIELD INSPECTION DATA**

| Date | Purchase Order No. | AMBIENT |          | TRANSFORMER |       | High Temp. | Liquid Level | Bush. Cond. | Paint Cond. | Leaks      | Quality Factor | Recommended Service |
|------|--------------------|---------|----------|-------------|-------|------------|--------------|-------------|-------------|------------|----------------|---------------------|
|      |                    | Temp.   | Humidity | Press.      | Temp. |            |              |             |             |            |                |                     |
| 5/88 | 21779              |         |          |             |       |            |              |             |             | SEE REPORT | P              | FIELD SERV.         |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |
|      |                    |         |          |             |       |            |              |             |             |            |                |                     |

**LIQUID TEST DATA**

| Date | Color | Visual | PCB Content | IFT | Neut. No. | Diel. | Moisture Content | Power Factor | TCG Content | Specific Gravity |  | Quality Factor | Recommended Service |
|------|-------|--------|-------------|-----|-----------|-------|------------------|--------------|-------------|------------------|--|----------------|---------------------|
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |

E-estimated PCB-Polychlorinated Biphenyl by electron capture in parts per million IFT-Interfacial Tension in dynes/cm  
 Neut. No.-mg KOH/g oil Diel.-dielectric in kilo volts Moisture content in parts per million Power Factor in percent corrected to 20°C  
 TCG-Total Combustible Gas by gas chromatography in parts per million Quality Factor-G, Good F, Fair B, Borderline P, Poor C, Critical

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts TEST NO.: 39

### NAME PLATE & LOCATION DATA

3X

|                  |              |               |        |                   |    |                        |          |     |
|------------------|--------------|---------------|--------|-------------------|----|------------------------|----------|-----|
| Make/Rewind      | AC           | High Voltage  | 13.8   | No. Radiators     | 16 | 10 FINS EA.<br>6' X 3" | Ground   | NO  |
| Serial No.       | 2988887      | Low Voltage   | 2300   | No. Fans          |    | NONE                   | Outside  | NO  |
| Inventory Number | 11706        | Phase/Cycle   | 3/60   | Bushings Top/Side |    | ENCLOSED               | Inside   | YES |
| Impedance        | 5.3%         | Gas Headspace | SEALED | Location          |    | #3 BLDG. 29            | Platform | NO  |
| KVA              | 1500         | Water Cooled  | NO     | Environment       |    | WARM                   | Pole     | NO  |
| FILTER Valves    | TOP & BOTTOM | Hose          | 75'    | Gal./Type         |    | 590A                   | Roof     | NO  |

### FIELD INSPECTION DATA

| Date | P.O. No.      | TEST  |          | TRANSFORMER |       | Oil Level   | Bush. | Paint | Leaks       | Quality Factor | Recommended Service |
|------|---------------|-------|----------|-------------|-------|-------------|-------|-------|-------------|----------------|---------------------|
|      |               | Temp. | Humidity | Press.      | Temp. |             |       |       |             |                |                     |
| 6/73 | 00330-3-57717 | 78°   | 60%      | + .5        | 55°   | LOW         |       | GOOD  | PRES. GAUGE | FAIR           | FIELD SERVICE       |
| 5/75 | 0030-5-02170  | 75°   | 65%      | + .5        | 48°   | LOW         | ENCL. | GOOD  | PRES. GAUGE | FAIR           | FIELD SERVICE       |
| 7/75 | 0030-5-06350  |       |          |             |       | OK          |       |       | REPAIRED    |                |                     |
| 4/76 | 0030-6-17555  | 95°   | 60%      | + .5        | 48°   | OK          | ENCL. | GOOD  | NONE        | GOOD           | INSP. 4/77          |
| 6/77 | 0030-7-31795  | 80°   | 50%      | + .5        | 45°   | OK          |       | GOOD  | NONE        | GOOD           | INSP. 6/78          |
| 4/78 | 0030-8-45421  | 80°   | 85%      | + .75       | 45°   | OK          | ENCL. | GOOD  | NONE        | GOOD           | INSP. 4/79          |
| 4/79 | 0030-9-61899  | 70°   | 60%      | +1          | 42°   | LOW         | ENCL. | GOOD  | VALVES      | POOR           | REPAIR LEAKS        |
| 8/79 | 0030-9-64477  |       |          |             |       | ADDED 25GAL |       |       | REPAIRED    | GOOD           | INSP. 4/80          |
| 5/88 | 21779         |       |          |             |       |             |       |       | SEE REPORT  | P              | FIELD SERV.         |

### LIQUID TEST DATA

| Date | Color | Sludge | I.F.T. | S.R.  | Neut# | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|--------|--------|-------|-------|-------|------------------|------|----------------|---------------------|
| 6/73 | WW GR | HEAVY  |        | 44.8  | .011  | 34.8  | 1.558            | 46.6 | GOOD           | TEST 6/74           |
| 5/75 | VLS   | TRACE  |        | 220.0 | .015  | 34.6  | 1.563            | 45.5 | GOOD           | TEST 5/76           |
| 4/76 | VLS   | CLEAR  |        | 88.0  | .009  | 35.0  | 1.563            | 46.1 | GOOD           | TEST 4/77           |
| 6/77 | VLS   | CLEAR  |        | 14.6  | .018  | 46    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | LS    | CLEAR  |        |       | .015  | 41    | 1.561            |      | GOOD           | TEST 4/79           |
| 4/79 | LS    | CLEAR  |        | 84.6  | .015  | 36    | 1.563            |      | GOOD           | TEST 4/80           |
|      |       |        |        |       |       |       |                  |      |                |                     |
|      |       |        |        |       |       |       |                  |      |                |                     |
|      |       |        |        |       |       |       |                  |      |                |                     |

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts

TEST NO.: 40  
3S

### NAME PLATE & LOCATION DATA

|                  |              |               |     |                   |     |          |     |
|------------------|--------------|---------------|-----|-------------------|-----|----------|-----|
| Make/Rewind      | AC           | High Voltage  |     | No. Radiators     |     | Ground   | NO  |
| Serial No.       |              | Low Voltage   |     | No. Fans          |     | Outside  | NO  |
| Inventory Number | SWITCH       | Phase/Cycle   |     | Bushings Top/Side |     | Inside   | YES |
| Impedance        |              | Gas Headspace |     | Location          |     | Platform | NO  |
| KVA              |              | Water Cooled  |     | Environment       |     | Pole     | NO  |
| FILTER Valves    | TOP & BOTTOM | Hose          | 75' | Gal./Type         | 60A | Roof     | NO  |

### FIELD INSPECTION DATA

| Date | P.O. No.      | TEST            |          | TRANSFORMER |       | Oil Level    | Bush. | Paint | Leaks                 | Quality Factor | Recommended Service |
|------|---------------|-----------------|----------|-------------|-------|--------------|-------|-------|-----------------------|----------------|---------------------|
|      |               | Temp.           | Humidity | Press       | Temp. |              |       |       |                       |                |                     |
| 6/73 | 00330-3-57717 | 78 <sup>o</sup> | 60%      |             |       | LOW          |       | GOOD  | NONE                  | FAIR           | ADD ASKAREL         |
| 5/75 | 0030-5-02170  | 75 <sup>o</sup> | 65%      |             |       | OK           |       | GOOD  | SIDE COVER            | FAIR           | FIELD SERVICE       |
| 7/75 | 0030-5-06350  |                 |          |             |       |              |       |       | REPAIRED              | GOOD           | INSP. 5/76          |
| 4/76 | 0030-6-17555  | 90 <sup>o</sup> | 60%      |             |       | OK           |       | GOOD  | NONE                  | GOOD           | INSP. 4/77          |
| 6/77 | 0030-7-31795  | 80 <sup>o</sup> | 50%      |             |       | OK           |       | GOOD  | SEE LETTER            | FAIR           | FIELD SERVICE       |
| 4/78 | 0030-8-45421  | 80 <sup>o</sup> | 85%      |             |       | OK           |       | GOOD  | NONE                  | GOOD           | INSP 4/79           |
| 4/79 | 0030-9-61899  | 70 <sup>o</sup> | 60%      |             |       | BROKEN GAUGE |       | GOOD  | SEE QUOTE             | POOR           | REPAIR LEAKS        |
| 8/79 | 0030-9-64477  |                 |          |             |       |              |       |       | REPAIRED BOTTOM VALVE | GOOD           | INSP. 4/80          |
| 5/83 | 21779         |                 |          |             |       |              |       |       | SEE REPORT            | P              | FIELD SERV.         |

### LIQUID TEST DATA

| Date | Color | Sludge   | I.F.T. | S.R. | Neut# | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|----------|--------|------|-------|-------|------------------|------|----------------|---------------------|
| 6/73 | WW GR | HEAVY    |        | 12.2 | .010  | 35.5  | 1.556            | 47.2 | GOOD           | TEST 6/74           |
| 5/75 | S     | TRACE    |        | 16.9 | .011  | 34.3  | 1.561            | 45.5 | GOOD           | TEST 5/76           |
| 4/76 | S     | TRACE    |        | 23.4 | .011  | 34.0  | 1.563            | 46.1 | GOOD           | TEST 4/77           |
| 6/77 | S     | CLEAR    |        | 6.5  | .015  | 31    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | S     | S. TRACE |        |      | .015  | 37    | 1.563            |      | GOOD           | TEST 4/79           |
| 4/79 | S     | TRACE    |        | 27.8 | .015  | 37    | 1.551            |      | GOOD           | TEST 4/80           |
|      |       |          |        |      |       |       |                  |      |                |                     |
|      |       |          |        |      |       |       |                  |      |                |                     |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10<sup>o</sup> ohm-cm askarel only  
Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100<sup>o</sup>f

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts

TEST NO.: 41

2X

### NAME PLATE & LOCATION DATA

|                  |             |               |         |                   |    |                         |          |     |
|------------------|-------------|---------------|---------|-------------------|----|-------------------------|----------|-----|
| Make/Rewind      | GE          | High Voltage  | 13.8 KV | No. Radiators     | 20 | 7 TUBES EA.<br>6' X 1½" | Ground   | NO  |
| Serial No.       | C502077     | Low Voltage   | 600     | No. Fans          |    | NONE                    | Outside  | NO  |
| Inventory Number | 11467       | Phase/Cycle   | 3/60    | Bushings Top/Side |    | ENCLOSED.               | Inside   | YES |
| Impedance        | 5.55%       | Gas Headspace | SEALED  | Location          |    | #2 BLDG. 29             | Platform | NO  |
| KVA              | 1500        | Water Cooled  | NO      | Environment       |    |                         | Pole     | NO  |
| FILTER Valves    | BOTTOM PLUG | Hose          | 50'     | Gal./Type         |    | 500 A                   | Roof     | NO  |

### FIELD INSPECTION DATA

| Date  | P.O. No.      | TEST  |          | TRANSFORMER |       | Oil Level    | Bush.   | Paint  | Leaks     | Quality Factor | Recommended Service |
|-------|---------------|-------|----------|-------------|-------|--------------|---------|--------|-----------|----------------|---------------------|
|       |               | Temp. | Humidity | Press       | Temp. |              |         |        |           |                |                     |
| 6/73  | 00330-3-57717 | 78°   | 60%      | +1.5        | 54°   | LOW          |         | GOOD   | NONE      | FAIR           | ADD ASKAREL         |
| 5/75  | 0030-5-02170  | 75°   | 65%      | +1          | 49°   | OK           |         | GOOD   | NONE      | GOOD           | INSP. 5/76          |
| 4/76  | 0030-6-17555  | 90°   | 60%      | +1.5        | 48°   | OK           |         | GOOD   | NONE      | GOOD           | INSP. 4/77          |
| 6/77  | 0030-7-31795  | 80°   | 50%      | +1          | 50°   | OK           |         | GOOD   | NONE      | GOOD           | INSP. 6/78          |
| 4/78  | 0030-8-45421  | 80°   | 85%      | +1          | 62°   | OK           |         | GOOD   | NONE      | GOOD           | INSP 4/79           |
| 4/79  | 0030-9-61899  | 70°   | 60%      | +1          | 62°   | OK           |         | GOOD   | NONE      | GOOD           | INSP. 4/80          |
| 10/79 | 0030-9-66526  |       |          |             |       | ADDED 7½ GAL |         |        |           | GOOD           | INSP. 4/80          |
| 1/83  | 9073          | 65°   | 50%      | 0           | 10°   | OK           |         | GOOD   | NONE      | FAIR           | FIELD SERVICE       |
| 4/88  | 21779         | 45°   | 90%      |             |       | OK           |         | BAD    | BTM VALVE | F              | FIELD SERV.         |
| 3/90  |               | 48°F  | 66%      | 0           | 12°C  | OK           | HY ENCL | FLAKES |           |                | " "                 |

**FAULTY TOP SAMPLE TAP!**

### LIQUIO TEST DATA

↳ low voltage bushings OK

| Date | Color | Sludge | I.F.T. | S.R. | Neut# | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|--------|--------|------|-------|-------|------------------|------|----------------|---------------------|
| 6/73 | WW    | CLEAR  |        | 31.4 | .014  | 35.6  | 1.555            | 46.9 | GOOD           | TEST 6/74           |
| 5/75 | VLS   | CLEAR  |        | 52.3 | .019  | 41.2  | 1.560            | 45.4 | GOOD           | TEST 5/76           |
| 4/76 | VLS   | CLEAR  |        | 47.8 | .019  | 44.1  | 1.561            | 45.4 | GOOD           | TEST 4/77           |
| 6/77 | VLS   | CLEAR  |        | 11.5 | .015  | 46    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | LS    | CLEAR  |        |      | .015  | 42    | 1.561            |      | GOOD           | TEST 4/79           |
| 4/79 | LS    | CLEAR  |        | 46.3 | .020  | 40    | 1.561            |      | GOOD           | TEST 4/80           |
| 1/83 | S     | CLEAR  |        |      | .020  | 42    | BOTTOM SAMPLE    |      | GOOD           | TEST 1/84           |
|      |       |        |        |      |       |       |                  |      |                |                     |
|      |       |        |        |      |       |       |                  |      |                |                     |

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts

TEST NO.: 41

### NAME PLATE & LOCATION DATA

2X

|                  |             |               |        |                   |    |                         |          |     |
|------------------|-------------|---------------|--------|-------------------|----|-------------------------|----------|-----|
| Make/Rewind      | GE          | High Voltage  | 13.8   | No. Radiators     | 20 | 7 TUBES EA.<br>6' X 1½" | Ground   | NO  |
| Serial No.       | C502077     | Low Voltage   | 600    | No. Fans          |    | NONE                    | Outside  | NO  |
| Inventory Number | 11467       | Phase/Cycle   | 3/60   | Bushings Top/Side |    | ENCLOSED.               | Inside   | YES |
| Impedance        | 5.55%       | Gas Headspace | SEALED | Location          |    | #2 BLDG. 29             | Platform | NO  |
| KVA              | 1500        | Water Cooled  | NO     | Environment       |    |                         | Pole     | NO  |
| FILTER Valves    | BOTTOM PLUG | Hose          | 50'    | Gal./Type         |    | 500 A                   | Roof     | NO  |

### FIELD INSPECTION DATA

| Date  | P.O. No.      | TEST  |          | TRANSFORMER |       | Oil Level   | Bush. | Paint | Leaks     | Quality Factor | Recommended Service |
|-------|---------------|-------|----------|-------------|-------|-------------|-------|-------|-----------|----------------|---------------------|
|       |               | Temp. | Humidity | Press       | Temp. |             |       |       |           |                |                     |
| 6/73  | 00330-3-57/17 | 78°   | 60%      | +1.5        | 54°   | LOW         |       | GOOD  | NONE      | FAIR           | ADD ASKAREL         |
| 5/75  | 0030-5-02170  | 75°   | 65%      | +1          | 49°   | OK          |       | GOOD  | NONE      | GOOD           | INSP. 5/76          |
| 4/76  | 0030-6-17555  | 90°   | 60%      | +1.5        | 48°   | OK          |       | GOOD  | NONE      | GOOD           | INSP. 4/77          |
| 6/77  | 0030-7-31795  | 80°   | 50%      | +1          | 50°   | OK          |       | GOOD  | NONE      | GOOD           | INSP. 6/78          |
| 4/78  | 0030-8-45421  | 80°   | 85%      | +1          | 62°   | OK          |       | GOOD  | NONE      | GOOD           | INSP 4/79           |
| 4/79  | 0030-9-61899  | 70°   | 60%      | +1          | 62°   | OK          |       | GOOD  | NONE      | GOOD           | INSP. 4/80          |
| 10/79 | 0030-9-66526  |       |          |             |       | ADDED 7 GAL |       |       |           | GOOD           | INSP. 4/80          |
| 1/83  | 9073          | 65°   | 50%      | 0           | 10°   | OK          |       | GOOD  | NONE      | FAIR           | FIELD SERVICE       |
| 4/83  | 21779         | 45°   | 90%      |             |       | OK          |       | BAD   | BTM VALVE | F              | FIELD SERV.         |

### LIOUID TEST DATA

| Date | Color | Sludge | I.F.T. | S.R. | Neut# | Diel. | Specific Gravity | SSU  | Quality Factor | Recommended Service |
|------|-------|--------|--------|------|-------|-------|------------------|------|----------------|---------------------|
| 6/73 | WW    | CLEAR  |        | 31.4 | .014  | 35.6  | 1.555            | 46.9 | GOOD           | TEST 6/74           |
| 5/75 | VLS   | CLEAR  |        | 52.3 | .019  | 41.2  | 1.560            | 45.4 | GOOD           | TEST 5/76           |
| 4/76 | VLS   | CLEAR  |        | 47.8 | .019  | 44.1  | 1.561            | 45.4 | GOOD           | TEST 4/77           |
| 6/77 | VLS   | CLEAR  |        | 11.5 | .015  | 46    |                  |      | GOOD           | TEST 6/78           |
| 4/78 | LS    | CLEAR  |        |      | .015  | 42    | 1.561            |      | GOOD           | TEST 4/79           |
| 4/79 | LS    | CLEAR  |        | 46.3 | .020  | 40    | 1.561            |      | GOOD           | TEST 4/80           |
| 1/83 | S     | CLEAR  |        |      | .020  | 42    | BOTTOM SAMPLE    |      | GOOD           | TEST 1/84           |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10° ohm-cm askarel only  
Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee STATE: Massachusetts TEST NO.: 48

#1 INCOM 00

### NAME PLATE & LOCATION DATA

|                  |                       |               |       |               |          |          |     |
|------------------|-----------------------|---------------|-------|---------------|----------|----------|-----|
| Make/Rewind      | GE                    | High Voltage  | 15 KV | No. Radiators | NONE     | Ground   | YES |
| Serial No.       | K6344133-504          | Low Voltage   |       | No. Fans      | NONE     | Outside  | YES |
| Inventory Number | INC. LINE #1 O.C.B.   | Phase/Cycle   | 3/60  | Bushings Top  | 6        | Inside   | NO  |
| Impedance        |                       | Gas Headspace | NO    | Location      | MAIN SUB | Platform | NO  |
| KVA              | 1200 AMP.             | Water Cooled  | NO    | Environment   | CLEAN    | Pole     | NO  |
| FILTER Valves    | TOP PLUB BOTTOM VALVE | Hose          | 100'  | Gal./Type     | 42       | Roof     | NO  |

### FIELD INSPECTION DATA

| Date | P.O. No.     | TEST                                     |          | TRANSFORMER |       | Oil Level | Bush. | Paint | Leaks             | Quality Factor | Recommended Service |            |
|------|--------------|--|----------|-------------|-------|-----------|-------|-------|-------------------|----------------|---------------------|------------|
|      |              | Temp.                                    | Humidity | Press       | Temp. |           |       |       |                   |                |                     |            |
| 4/76 | 0030-6-17555 | 80°                                      | 60%      |             |       | OK        | GOOD  | GOOD  | NONE              | GOOD           | INSP. 4/77          |            |
| 7/77 | 0330-7-35115 | Dismantled, cleared, repaired and tested |          |             |       |           |       |       |                   |                | GOOD                | INSP. 6/78 |
| 4/78 | 0030-8-45421 | 60°                                      | 30%      |             |       | OK        |       | GOOD  | NONE              | GOOD           | INSP 4/79           |            |
| 4/79 | 0030-9-61899 | 50°                                      | 40%      |             |       | LOW       |       |       | MINOR @ LEVEL GA. | FAIR           | FIELD SERV.         |            |
| 8/79 | 0030-9-64477 |  |          |             |       | OK        |       |       | REPAIRED          | GOOD           | INSP. 4/80          |            |
| 1/83 | 9073         | 65°                                      | 50%      |             |       | LOW       | OK    | OTLY  | LEVEL GAUGE       | FAIR           | REPAIR LEAK         |            |
|      |              |  |          |             |       |           |       |       |                   |                |                     |            |
|      |              |  |          |             |       |           |       |       |                   |                |                     |            |
|      |              |  |          |             |       |           |       |       |                   |                |                     |            |
|      |              |  |          |             |       |           |       |       |                   |                |                     |            |

### LIQUID TEST DATA

| Date | Color | Sludge       | I.F.T. | S.R. | Neut # | Diel. | Specific Gravity | SSU | PCB CONTENT | Quality Factor | Recommended Service |
|------|-------|--------------|--------|------|--------|-------|------------------|-----|-------------|----------------|---------------------|
| 4/76 | 1.5   | CLEAR        | 25.1   |      | .05    | 37.9  |                  |     |             | GOOD           | TEST 4/77           |
| 7/77 | 1.0   | CLEAR        | 37.8   |      | .01    | 40    |                  |     |             | GOOD           | TEST 6/78           |
| 4/78 | 1.0   | CLEAR        | 33.6   |      | .01    | 44    |                  |     |             | GOOD           | TEST 4/79           |
| 4/79 | 1.0   | CARBON TRACE | 32.7   |      | .04    | 39    |                  |     |             | GOOD           | TEST 4/80           |
| 1/83 | 2.5   | H.CARBON     | 24.0   |      | .10    | 44    |                  |     | 9 PPM       | BORDERLINE     | RE-REFINE           |
| 4/88 |       |              |        |      |        |       |                  |     | 16 PPM      |                |                     |
|      |       |              |        |      |        |       |                  |     |             |                |                     |
|      |       |              |        |      |        |       |                  |     |             |                |                     |
|      |       |              |        |      |        |       |                  |     |             |                |                     |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10<sup>9</sup> ohm-cm askarel only  
Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts TEST NO.: 49

#2

### NAME PLATE & LOCATION DATA

|                  |                          |               |       |                     |          |          |     |
|------------------|--------------------------|---------------|-------|---------------------|----------|----------|-----|
| Make/Rewind      | GE                       | High Voltage  | 15 KV | No. Radiators       | NONE     | Ground   | YES |
| Serial No.       | K6344133-509             | Low Voltage   |       | No. Fans            | NONE     | Outside  | YES |
| Inventory Number | INC. LINE #2 O.C.B.      | Phase/Cycle   | 3/60  | Bushings Top/Bottom | 6        | Inside   | NO  |
| Impedance        |                          | Gas Headspace | YES   | Location            | MAIN SUB | Platform | NO  |
| KVA              | 1200 AMP                 | Water Cooled  | NO    | Environment         | CLEAN    | Pole     | NO  |
| FILTER Valves    | TOP PLUG<br>BOTTOM VALVE | Hose          | 100'  | Gal./Type           | 42       | Roof     | NO  |

### FIELD INSPECTION DATA

| Date | P.O. No.     | TEST                                     |          | TRANSFORMER |       | Oil Level | Bush. | Paint | Leaks       | Quality Factor | Recommended Service |            |
|------|--------------|--|----------|-------------|-------|-----------|-------|-------|-------------|----------------|---------------------|------------|
|      |              | Temp.                                    | Humidity | Press       | Temp. |           |       |       |             |                |                     |            |
| 4/76 | 0030-6-17555 | 80°                                      | 60%      |             |       | OK        | GOOD  | GOOD  | NONE        | GOOD           | INSP. 4/77          |            |
| 7/77 | 0330-7-35115 | Dismantled, cleaned, repaired and tested |          |             |       |           |       |       |             |                | GOOD                | INSP. 6/78 |
| 4/78 | 0030-8-45421 | 60°                                      | 30%      |             |       | OK        |       | GOOD  | NONE        | GOOD           | INSP 4/79           |            |
| 4/79 | 0030-9-61899 | 50°                                      | 40%      |             |       | LOW       |       | GOOD  | NONE        | FAIR           | ADD OIL             |            |
| 8/79 | 0030-9-64477 |  |          |             |       | OK        |       |       |             | GOOD           | INSP. 4/80          |            |
| 1/83 | 9073         | 65°                                      | 50%      |             |       | LOW       | OK    | OILY  | LEVEL GAUGE | FAIR           | FIELD SERVICE       |            |
|      |              |  |          |             |       |           |       |       |             |                |                     |            |
|      |              |  |          |             |       |           |       |       |             |                |                     |            |
|      |              |  |          |             |       |           |       |       |             |                |                     |            |

### LIQUID TEST DATA

| Date | Color | Sludge       | I.F.T. | S.R. | Neut # | Diel. | Specific Gravity | SSU | PCB CONTENT | Quality Factor | Recommended Service |
|------|-------|--------------|--------|------|--------|-------|------------------|-----|-------------|----------------|---------------------|
| 4/76 | 1.5   | CLEAR        | 24.9   |      | .05    | 41.2  |                  |     |             | GOOD           | TEST 4/77           |
| 7/77 | 1.5   | CLEAR        | 34.6   |      | .03    | 33    |                  |     |             | GOOD           | TEST 6/78           |
| 4/78 | 1.5   | CLEAR        | 34.1   |      | .03    | 41    |                  |     |             | GOOD           | TEST 4/79           |
| 4/79 | 1.5   | CARBON TRACE | 38.7   |      | .04    | 40    |                  |     |             | GOOD           | TEST 4/80           |
| 1/83 | 1.5   | H. CARBON    | 27.8   |      | .05    | 33    |                  |     | 460 PPM     | BORDERLINE     | RE-REFINE           |
| 4/88 |       |              |        |      |        |       |                  |     | 550 PPM     |                |                     |
| 5/88 |       |              |        |      |        |       |                  |     | 550 PPM     |                |                     |
|      |       |              |        |      |        |       |                  |     |             |                |                     |
|      |       |              |        |      |        |       |                  |     |             |                |                     |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10<sup>9</sup> ohm-cm askarel only  
Neut No -mg KOH/g oil Diel -kilo volts SSU-viscosity @ 100°f



# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts

TEST NO.: 50

### NAME PLATE & LOCATION DATA

#3

|                  |                          |               |       |               |          |          |     |
|------------------|--------------------------|---------------|-------|---------------|----------|----------|-----|
| Make/Rewind      | GE                       | High Voltage  | 15 KV | No. Radiators | NONE     | Ground   | YES |
| Serial No.       | K6344133-505             | Low Voltage   |       | No. Fans      |          | Outside  | YES |
| Inventory Number | INC. LINE #3 O.C.B.      | Phase/Cycle   | 3/60  | Bushings Top  | 6        | Inside   | NO  |
| Impedance        |                          | Gas Headspace | YES   | Location      | MAIN SUB | Platform | NO  |
| KVA              | 1200 AMP                 | Water Cooled  | NO    | Environment   | CLEAN    | Pole     | NO  |
| FILTER Valve:    | TOP PLUG<br>BOTTOM VALVE | Hose          | 100'  | Gal./Type     | 42       | Roof     | NO  |

### FIELD INSPECTION DATA

| Date | P.O. No.     | TEST                                      |          | TRANSFORMER |       | Oil Level | Bush. | Paint | Leaks | Quality Factor | Recommended Service |            |
|------|--------------|---|----------|-------------|-------|-----------|-------|-------|-------|----------------|---------------------|------------|
|      |              | Temp.                                     | Humidity | Press       | Temp. |           |       |       |       |                |                     |            |
| 4/75 | 0030-6-17555 | 80°                                       | 60%      |             |       | OK        | GOOD  | GOOD  | NONE  | GOOD           | INSP. 4/77          |            |
| 7/77 | 0330-7-35115 | Dismantled, cleaned, repaired, and tested |          |             |       |           |       |       |       |                | GOOD                | INSP. 6/78 |
| 4/78 | 0030-8-45421 | 60°                                       | 30%      |             |       | OK        |       | GOOD  | NONE  | GOOD           | INSP 4/79           |            |
| 4/79 | 0030-9-61899 | 50°                                       | 40%      |             |       | OK        |       | GOOD  | NONE  | GOOD           | INSP. 4/80          |            |
| 1/83 | 9073         | 65°                                       | 50%      |             |       | OK        | OK    | OK    | NONE  | GOOD           | INSP. 1/84          |            |
|      |              |   |          |             |       |           |       |       |       |                |                     |            |
|      |              |   |          |             |       |           |       |       |       |                |                     |            |
|      |              |   |          |             |       |           |       |       |       |                |                     |            |
|      |              |   |          |             |       |           |       |       |       |                |                     |            |
|      |              |   |          |             |       |           |       |       |       |                |                     |            |
|      |              |   |          |             |       |           |       |       |       |                |                     |            |

### LIQUID TEST DATA

| Date | Color | Sludge    | I.F.T. | S.R. | Neut # | Diel. | Specific Gravity | SSU | PCB CONTENT | Quality Factor | Recommended Service |
|------|-------|-----------|--------|------|--------|-------|------------------|-----|-------------|----------------|---------------------|
| 4/75 | 1.5   | CLEAR     | 27.1   |      | .05    | 47.1  |                  |     |             | GOOD           | TEST 4/77           |
| 7/77 | 1.5   | CLEAR     | 34.7   |      | .03    | 34    |                  |     |             | GOOD           | TEST 6/78           |
| 4/78 | 1.5   | CLEAR     | 34.5   |      | .03    | 39    |                  |     |             | GOOD           | TEST 4/79           |
| 4/79 | 1.0   | CLEAR     | 38.3   |      | .02    | 41    |                  |     |             | GOOD           | TEST 4/80           |
| 1/83 | 1.5   | H. CARBON | 26.1   |      | .07    | 30    |                  |     | 9 PPM       | BORDERLINE     | RE-REFINE           |
| 4/88 |       |           |        |      |        |       |                  |     | 11 PPM      |                |                     |
|      |       |           |        |      |        |       |                  |     |             |                |                     |
|      |       |           |        |      |        |       |                  |     |             |                |                     |
|      |       |           |        |      |        |       |                  |     |             |                |                     |
|      |       |           |        |      |        |       |                  |     |             |                |                     |
|      |       |           |        |      |        |       |                  |     |             |                |                     |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10<sup>9</sup> ohm-cm askarel only  
Neut No-mn KOH/o oil Diel -kilo volts SSU-viscosity @ 100°f

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts TEST NO.: 51

### NAME PLATE & LOCATION DATA

#4

|                  |                       |               |       |                   |           |          |     |
|------------------|-----------------------|---------------|-------|-------------------|-----------|----------|-----|
| Make/Rewind      | GE                    | High Voltage  | 15 KV | No. Radiators     | NONE      | Ground   | YES |
| Serial No.       | K6344133-506          | Low Voltage   |       | No. Fans          | NONE      | Outside  | YES |
| Inventory Number | INC. LINE #4 O.C.B.   | Phase/Cycle   | 3/60  | Bushings Top/Side | 6         | Inside   | NO  |
| Impedance        |                       | Gas Headspace | YES   | Location          | MAIN SUB. | Platform | NO  |
| KVA              | 1200 AMP              | Water Cooled  | NO    | Environment       | CLEAN     | Pole     | NO  |
| FILTER Valves    | TOP PLUG BOTTOM VALVE | Hose          | 100'  | Gal./Type         | 42        | Roof     | NO  |

### FIELD INSPECTION DATA

| Date | P.O. No.     | TEST                                     |          | TRANSFORMER |       | Oil Level   | Bush. | Paint | Leaks | Quality Factor | Recommended Service |            |
|------|--------------|--|----------|-------------|-------|-------------|-------|-------|-------|----------------|---------------------|------------|
|      |              | Temp.                                    | Humidity | Press       | Temp. |             |       |       |       |                |                     |            |
| 4/75 | 0030-6-17555 | 80°                                      | 60%      |             |       | OK          | GOOD  | GOOD  | NONE  | GOOD           | INSP. 4/77          |            |
| 7/77 | 0330-7-35115 | Dismantled, cleaned, repaired and tested |          |             |       |             |       |       |       |                | GOOD                | INSP. 6/78 |
| 4/78 | 0030-8-45421 | 60°                                      | 30%      |             |       | OK          |       | GOOD  | NONE  | GOOD           | INSP 4/79           |            |
| 4/79 | 0030-9-61899 | 50°                                      | 40%      |             |       | LOW         |       | GOOD  | NONE  | FAIR           | ADD OIL             |            |
| 8/79 | 0030-9-64477 |  |          |             |       | ADDED 1 GAL |       |       |       | GOOD           | INSP. 4/80          |            |
| 1/83 | 9073         | 65°                                      | 50%      |             |       | OK          | OK    | OK    | NONE  | GOOD           | INSP. 1/84          |            |
|      |              |  |          |             |       |             |       |       |       |                |                     |            |
|      |              |  |          |             |       |             |       |       |       |                |                     |            |
|      |              |  |          |             |       |             |       |       |       |                |                     |            |
|      |              |  |          |             |       |             |       |       |       |                |                     |            |

### LIQUID TEST DATA

| Date | Color  | Sludge    | I.F.T. | S.R. | Neut # | Diel. | Specific Gravity | SSU | PCB CONTENT | Quality Factor | Recommended Service |
|------|--------|-----------|--------|------|--------|-------|------------------|-----|-------------|----------------|---------------------|
| 4/76 | CARBON | CARBON    | 23.9   |      | .05    | 33.8  |                  |     |             | GOOD           | TEST 4/77           |
| 7/77 | 1.5    | CLEAR     | 34.8   |      | .03    | 35    |                  |     |             | GOOD           | TEST 6/78           |
| 4/78 | 1.5    | S. TRACE  | 33.5   |      | .03    | 37    |                  |     |             | GOOD           | TEST 4/79           |
| 4/79 | 1.5    | CLEAR     | 33.3   |      | .05    | 36    |                  |     |             | GOOD           | TEST 4/80           |
| 1/83 | 1.5    | L. CARBON | 29.1   |      | .04    | 41    |                  |     | 960 PPM     | GOOD           | TEST 1/84           |
| 4/88 |        |           |        |      |        |       |                  |     | 1100 PPM    |                |                     |
| 5/88 |        |           |        |      |        |       |                  |     | 960 PPM     |                |                     |
|      |        |           |        |      |        |       |                  |     |             |                |                     |
|      |        |           |        |      |        |       |                  |     |             |                |                     |
|      |        |           |        |      |        |       |                  |     |             |                |                     |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10<sup>9</sup> ohm-cm askarel only  
Neut. No. mg KOH/g oil Diel. kV-cm Dielectric SSU - Saybolt Universal @ 100°F

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts TEST NO.: 52

#1 feeder

### NAME PLATE & LOCATION DATA

|                  |                          |               |       |                               |          |          |     |
|------------------|--------------------------|---------------|-------|-------------------------------|----------|----------|-----|
| Make/Rewind      | GE                       | High Voltage  | 15 KV | No. Radiators                 | NONE     | Ground   | YES |
| Serial No.       | K6344133-50B             | Low Voltage   |       | No. Fans                      | NONE     | Outside  | YES |
| Inventory Number | FEEDER #1<br>O.C.B.      | Phase/Cycle   | 3/60  | Bushings Top/ <del>XXXX</del> | 6        | Inside   | NO  |
| Imperlance       |                          | Gas Headspace | YES   | Location                      | MAIN SUB | Platform | NO  |
| KVA              | 1200 AMP.                | Water Cooled  | NO    | Environment                   | CLEAN    | Pole     | NO  |
| FILTER Valve:    | TOP PLUG<br>BOTTOM VALVE | Hose          | 100'  | Gal./Type                     | 42       | Roof     | NO  |

### FIELD INSPECTION DATA

| Date | P.O. No.     | TEST  |          | TRANSFORMER |       | Oil Level | Bush. | Paint  | Leaks                   | Quality Factor | Recommended Service |
|------|--------------|-------|----------|-------------|-------|-----------|-------|--------|-------------------------|----------------|---------------------|
|      |              | Temp. | Humidity | Press       | Temp. |           |       |        |                         |                |                     |
| 4/75 | 0030-6-17555 | 80°   | 60%      |             |       | OK        | GOOD  | GOOD   | NONE                    | GOOD           | INSP. 4/77          |
| 4/78 | 0030-8-45421 | 60°   | 30       | NO GAUGES   |       | OK        |       | GOOD   | NONE                    | GOOD           | INSP 4/79           |
| 4/79 | 0030-9-61899 | 50°   | 30%      | NO GAUGES   |       | LOW       |       | GOOD   | MINOR AT<br>LEVEL GAUGE | FAIR           | FIELD<br>SERVICE    |
| 8/79 | 0030-9-64477 |       |          |             |       |           |       |        | REPAIRED                | GOOD           | INSP. 4/80          |
| 1/83 | (073         | 65°   | 50%      |             |       | 1"LOW     | OK    | S.OILY | LEVEL GAUGE             | FAIR           | REPAIR LEAK         |
|      |              |       |          |             |       |           |       |        |                         |                |                     |
|      |              |       |          |             |       |           |       |        |                         |                |                     |
|      |              |       |          |             |       |           |       |        |                         |                |                     |
|      |              |       |          |             |       |           |       |        |                         |                |                     |

### LIQUID TEST DATA

| Date | Color | Sludge | I.F.T. | S.R. | Neut # | Diel. | Specific Gravity | SSU | PCB CONTENT | Quality Factor | Recommended Service |
|------|-------|--------|--------|------|--------|-------|------------------|-----|-------------|----------------|---------------------|
| 4/76 | 1.5   | CLEAR  | 24.8   |      | .05    | 41.0  |                  |     |             | GOOD           | TEST 4/77           |
| 4/78 | 1.5   | CLEAR  | 32.7   |      | .03    | 41    |                  |     |             | GOOD           | TEST 4/79           |
| 4/79 | 1.5   | CLEAR  | 32.5   |      | .06    | 46    |                  |     |             | GOOD           | TEST 4/80           |
| 1/83 | 2.0   | CLEAR  | 27.8   |      | .06    | 38    |                  |     | 360 PPM     | BORDERLINE     | RE-REFINE           |
| 4/88 |       |        |        |      |        |       |                  |     | 380PPM      |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

**CUSTOMER:** Facemate Corp.

**CITY:** Chicopee

**STATE:** Massachusetts

**TEST NO.:** 53

### NAME PLATE & LOCATION DATA

#2

|                  |                          |               |       |                     |          |          |     |
|------------------|--------------------------|---------------|-------|---------------------|----------|----------|-----|
| Make/Rewind      | GE                       | High Voltage  | 15 KV | No. Radiators       | NONE     | Ground   | YES |
| Serial No.       | K6344133-502             | Low Voltage   |       | No. Fans            | NONE     | Outside  | YES |
| Inventory Number | FEEDER #2<br>O.C.B.      | Phase/Cycle   | 3/60  | Bushings Top/Bottom | 6        | Inside   | NO  |
| Impedance        |                          | Gas Headspace | YES   | Location            | MAIN SUB | Platform | NO  |
| KVA              | 1200 AMPS                | Water Cooled  | NO    | Environment         | CLEAN    | Pole     | NO  |
| FILTER Valves    | TOP PLUG<br>BOTTOM VALVE | Hose          | 100'  | Gal./Type           | 42       | Roof     | NO  |

### FIELD INSPECTION DATA

| Date | P.O. No.     | TEST  |          | TRANSFORMER |       | Oil Level | Bush. | Paint | Leaks | Quality Factor | Recommended Service |
|------|--------------|-------|----------|-------------|-------|-----------|-------|-------|-------|----------------|---------------------|
|      |              | Temp. | Humidity | Press       | Temp. |           |       |       |       |                |                     |
| 4/75 | 0030-6-17555 | 80°   | 60%      |             |       | OK        | GOOD  | GOOD  | NONE  | GOOD           | INSP. 4/77          |
| 4/78 | 0030-8-45421 | 60°   | 30%      |             |       | OK        |       | GOOD  | NONE  | GOOD           | INSP 4/79           |
| 4/79 | 0030-9-61899 | 50°   | 40%      |             |       | OK        |       | GOOD  | NONE  | GOOD           | INSP. 4/80          |
| 1/83 | 9073         | 65°   | 50%      |             |       | OK        | OK    | OK    | NONE  | GOOD           | INSP. 1/84          |
|      |              |       |          |             |       |           |       |       |       |                |                     |
|      |              |       |          |             |       |           |       |       |       |                |                     |
|      |              |       |          |             |       |           |       |       |       |                |                     |
|      |              |       |          |             |       |           |       |       |       |                |                     |
|      |              |       |          |             |       |           |       |       |       |                |                     |
|      |              |       |          |             |       |           |       |       |       |                |                     |
|      |              |       |          |             |       |           |       |       |       |                |                     |

### LIQUID TEST DATA

| Date | Color | Sludge | I.F.T. | S.R. | Neut # | Diel. | Specific Gravity | SSU | PCB CONTENT | Quality Factor | Recommended Service |
|------|-------|--------|--------|------|--------|-------|------------------|-----|-------------|----------------|---------------------|
| 4/75 | 1.5   | CLEAR  | 24.7   |      | .05    | 43.5  |                  |     |             | GOOD           | TEST 4/77           |
| 4/78 | 1.5   | CLEAR  | 28.1   |      | .03    | 42    |                  |     |             | GOOD           | TEST 4/79           |
| 4/79 | 1.5   | CLEAR  | 28.4   |      | .05    | 46    |                  |     |             | GOOD           | TEST 4/80           |
| 1/83 | 2.0   | CLEAR  | 26.7   |      | .06    | 41    |                  |     | 310 PPM     | BORDERLINE     | RE-REFINE           |
| 4/88 |       |        |        |      |        |       |                  |     | 366 PPM     |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10<sup>9</sup> ohm-cm askarel only  
Neut. No. -mo KOH/a oil Diel.-kilo volts SSU-viscosity @ 100°f

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.      CITY: Chicopee      STATE: Massachusetts      TEST NO.: 54

*Feeder #3*

### NAME PLATE & LOCATION DATA

|                  |                          |               |       |                   |           |          |     |
|------------------|--------------------------|---------------|-------|-------------------|-----------|----------|-----|
| Make/Rewind      | GE                       | High Voltage  | 15 KV | No. Radiators     | NONE      | Ground   | YES |
| Serial No.       | K6344T33-503             | Low Voltage   |       | No. Fans          | NONE      | Outside  | YES |
| Inventory Number | FEEDER #3<br>O.C.B.      | Phase/Cycle   | 3/60  | Bushings Top/Side | 6         | Inside   | NO  |
| Impedance        |                          | Gas Headspace | YES   | Location          | MAIN SUB. | Platform | NO  |
| KVA              | 1200 AMP                 | Water Cooled  | NO    | Environment       | CLEAN     | Pole     | NO  |
| FILTER Valves    | TOP PLUG<br>BOTTOM VALVE | Hose          | 100'  | Gal./Type         | 42        | Roof     | NO  |

### FIELD INSPECTION DATA

| Date | P.O. No.     | TEST  |          | TRANSFORMER |       | Oil Level | Bush. | Paint | Leaks | Quality Factor | Recommended Service |
|------|--------------|-------|----------|-------------|-------|-----------|-------|-------|-------|----------------|---------------------|
|      |              | Temp. | Humidity | Press       | Temp. |           |       |       |       |                |                     |
| 4/75 | 0030-6-17555 | 80°   | 60%      |             |       | OK        | GOOD  | GOOD  | NONE  | GOOD           | INSP. 4/77          |
| 4/78 | 0030-8-45421 | 60°   | 30%      |             |       | OK        |       | GOOD  | NONE  | FAIR           | INSP 4/79           |
| 4/79 | 0030-9-61899 | 50°   | 40%      |             |       | LOW       |       | GOOD  | NONE  | FAIR           | ADD OIL             |
| 8/79 | 0030-9-64477 |       |          |             |       | OK        |       |       |       | GOOD           | INSP. 4/80          |
| 1/83 | 9073         | 65°   | 50%      |             |       | 1/2" LOW  | OK    | OK    | NONE  | FAIR           | ADD OIL             |
|      |              |       |          |             |       |           |       |       |       |                |                     |
|      |              |       |          |             |       |           |       |       |       |                |                     |
|      |              |       |          |             |       |           |       |       |       |                |                     |
|      |              |       |          |             |       |           |       |       |       |                |                     |
|      |              |       |          |             |       |           |       |       |       |                |                     |
|      |              |       |          |             |       |           |       |       |       |                |                     |

### LIQUID TEST DATA

| Date | Color | Sludge | I.F.T. | S.R. | Neut # | Diel. | Specific Gravity | SSU | PCB CONTENT        | Quality Factor | Recommended Service |
|------|-------|--------|--------|------|--------|-------|------------------|-----|--------------------|----------------|---------------------|
| 4/76 | 1.5   | CLEAR  | 24.9   |      | .05    | 41.3  |                  |     |                    | GOOD           | TEST 4/77           |
| 4/78 | 1.5   | CLEAR  | 31.2   |      | .03    | 40    |                  |     |                    | GOOD           | TEST 4/79           |
| 4/79 | 1.5   | CLEAR  | 29.9   |      | .06    | 34    |                  |     |                    | GOOD           | TEST 4/80           |
| 1/83 | 2.0   | CLEAR  | 23.8   |      | .08    | 47    |                  |     | 230 PPM<br>360 PPM | BORDERLINE     | RE-REFINE           |
|      |       |        |        |      |        |       |                  |     |                    |                |                     |
|      |       |        |        |      |        |       |                  |     |                    |                |                     |
|      |       |        |        |      |        |       |                  |     |                    |                |                     |
|      |       |        |        |      |        |       |                  |     |                    |                |                     |
|      |       |        |        |      |        |       |                  |     |                    |                |                     |
|      |       |        |        |      |        |       |                  |     |                    |                |                     |
|      |       |        |        |      |        |       |                  |     |                    |                |                     |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10<sup>9</sup> ohm-cm askarel only  
Neut No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts

TEST NO.: 55

#4

### NAME PLATE & LOCATION DATA

|                  |                          |               |       |                   |           |          |     |
|------------------|--------------------------|---------------|-------|-------------------|-----------|----------|-----|
| Make/Rewind      | GE                       | High Voltage  | 15 KV | No. Radiators     | NONE      | Ground   | YES |
| Serial No.       | K6344133-507             | Low Voltage   |       | No. Fans          | NONE      | Outside  | YES |
| Inventory Number | FEEDER #4<br>O.C.B.      | Phase/Cycle   | 3/60  | Bushings Top/Side | 6         | Inside   | NO  |
| Impedance        |                          | Gas Headspace | YES   | Location          | MAIN SUB. | Platform | NO  |
| KVA              | 1200 AMP.                | Water Cooled  | NO    | Environment       | CLEAN     | Pole     | NO  |
| FILTER Valves    | TOP PLUG<br>BOTTOM VALVE | Hose          | 100'  | Gal./Type         | 42        | Roof     | NO  |

### FIELD INSPECTION DATA

| Date | P.O. No.     | TEST  |          | TRANSFORMER |       | Oil Level    | Bush. | Paint | Leaks | Quality Factor | Recommended Service |
|------|--------------|-------|----------|-------------|-------|--------------|-------|-------|-------|----------------|---------------------|
|      |              | Temp. | Humidity | Press       | Temp. |              |       |       |       |                |                     |
| 4/76 | 0030-6-17555 | 80°   | 60%      |             |       | OK           | GOOD  | GOOD  | NONE  | GOOD           | INSP. 4/77          |
| 4/78 | 0030-8-45421 | 60°   | 30%      |             |       | OK           |       | GOOD  | NONE  | GOOD           | INSP 4/79           |
| 4/79 | 0030-9-61899 | 50°   | 40%      |             |       | LOW          |       | GOOD  | NONE  | FAIR           | ADD OIL             |
| 8/79 | 0030-9-64477 |       |          |             |       | REPLACED OIL |       |       |       | GOOD           | INSP. 4/80          |
| 1/83 | 9073         | 65°   | 50%      |             |       | OK           | OK    | OK    | NONE  | GOOD           | INSP. 1/84          |
|      |              |       |          |             |       |              |       |       |       |                |                     |
|      |              |       |          |             |       |              |       |       |       |                |                     |
|      |              |       |          |             |       |              |       |       |       |                |                     |
|      |              |       |          |             |       |              |       |       |       |                |                     |
|      |              |       |          |             |       |              |       |       |       |                |                     |

### LIQUIO TEST DATA

| Date | Color | Sludge   | I.F.T. | S.R. | Neut # | Diel. | Specific Gravity | SSU | PCB CONTENT | Quality Factor | Recommended Service |
|------|-------|----------|--------|------|--------|-------|------------------|-----|-------------|----------------|---------------------|
| 4/76 | 1.5   | CLEAR    | 25.1   |      | .05    | 31.7  |                  |     |             | GOOD           | TEST 4/77           |
| 4/78 | 1.5   | CLEAR    | 33.4   |      | .02    | 38    |                  |     |             | GOOD           | TEST 4/79           |
| 4/79 | BLACK | CARBON   | 30.8   |      | .04    | 34    |                  |     |             | BORDERLINE     | SEE QUOTE           |
| 8/79 | 1.0   | CLEAR    | 39.2   |      | .02    | 40+   |                  |     |             | GOOD           | TEST 4/80           |
| 1/83 | 1.0   | L.CARBON | 31.4   |      | .03    | 36    |                  |     | 4 PPM       | GOOD           | TEST 1/84           |
| 4/88 |       |          |        |      |        |       |                  |     | 9 PPM       |                |                     |
|      |       |          |        |      |        |       |                  |     |             |                |                     |
|      |       |          |        |      |        |       |                  |     |             |                |                     |
|      |       |          |        |      |        |       |                  |     |             |                |                     |
|      |       |          |        |      |        |       |                  |     |             |                |                     |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10° ohm-cm askarel only  
 Diel. - Dielectric Constant at 100° f SSU-viscosity @ 100° f

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: Chicopee

STATE: Massachusetts

TEST NO.: 56

### NAME PLATE & LOCATION DATA

#5

|                  |                          |               |       |                            |          |          |     |
|------------------|--------------------------|---------------|-------|----------------------------|----------|----------|-----|
| Make/Rewind      | GE                       | High Voltage  | 15 KV | No. Radiators              | NONE     | Ground   | YES |
| Serial No.       | K6344133-501             | Low Voltage   |       | No. Fans                   | NONE     | Outside  | YES |
| Inventory Number | FEEDER #5<br>O.C.B.      | Phase/Cycle   | 3/60  | Bushings Top/ <del>4</del> | 6        | Inside   | NO  |
| Impedance        |                          | Gas Headspace | YES   | Location                   | MAIN SUB | Platform | NO  |
| KVA              | 1200 AMP.                | Water Cooled  | NO    | Environment                | CLEAN    | Pole     | NO  |
| FILTER Valves    | TOP PLUG<br>BOTTOM VALVE | Hose          | 100'  | Gal./Type                  | 42       | Roof     | NO  |

### FIELD INSPECTION DATA

| Date | P.O. No.     | TEST  |          | TRANSFORMER |       | Oil Level    | Bush. | Paint | Leaks | Quality Factor | Recommended Service |
|------|--------------|-------|----------|-------------|-------|--------------|-------|-------|-------|----------------|---------------------|
|      |              | Temp. | Humidity | Press       | Temp. |              |       |       |       |                |                     |
| 4/76 | 0030-6-17555 | 80°   | 60%      |             |       | OK           | GOOD  | GOOD  | NONE  | GOOD           | INSP. 4/77          |
| 4/78 | 0030-8-45421 | 60°   | 30%      |             |       | OK           |       | GOOD  | NONE  | GOOD           | INSP 4/79           |
| 4/79 | 0030-9-61899 | 50°   | 40%      |             |       | LOW          |       | GOOD  | NONE  | FAIR           | ADD OIL             |
| 8/79 | 0030-9-64477 |       |          |             |       | REPLACED OIL |       |       |       | GOOD           | INSP. 4/80          |
| 1/83 | 9073         | 65°   | 50%      |             |       | OK           | OK    | OK    | NONE  | GOOD           | INSP. 1/84          |
|      |              |       |          |             |       |              |       |       |       |                |                     |
|      |              |       |          |             |       |              |       |       |       |                |                     |
|      |              |       |          |             |       |              |       |       |       |                |                     |
|      |              |       |          |             |       |              |       |       |       |                |                     |
|      |              |       |          |             |       |              |       |       |       |                |                     |
|      |              |       |          |             |       |              |       |       |       |                |                     |

### LIQUID TEST DATA

| Date | Color | Sludge      | I.F.T. | S.R. | Neut # | Diel. | Specific Gravity | SSU | PCB CONTENT | Quality Factor | Recommended Service |
|------|-------|-------------|--------|------|--------|-------|------------------|-----|-------------|----------------|---------------------|
| 4/76 | 1.5   | CLEAR       | 26.0   |      | .05    | 41,1  |                  |     |             | GOOD           | TEST 4/77           |
| 4/78 | 1.5   | CLEAR       | 26.0   |      | .05    | 39    |                  |     |             | GOOD           | TEST 4/79           |
| 4/79 | BLACK | HIGH CARBON | 30.3   |      | .05    | 40    |                  |     |             | BORDERLINE     | SEE QUOTE           |
| 8/79 | 1.0   | CLEAR       | 39.2   |      | .02    | 40+   |                  |     |             | GOOD           | TEST 4/80           |
| 1/83 | 1.0   | S.TRACE     | 28.4   |      | .03    | 32    |                  |     | 13 PPM      | GOOD           | TEST 1/84           |
| 4/83 |       |             |        |      |        |       |                  |     | 13 PPM      |                |                     |
|      |       |             |        |      |        |       |                  |     |             |                |                     |
|      |       |             |        |      |        |       |                  |     |             |                |                     |
|      |       |             |        |      |        |       |                  |     |             |                |                     |
|      |       |             |        |      |        |       |                  |     |             |                |                     |
|      |       |             |        |      |        |       |                  |     |             |                |                     |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10<sup>9</sup> ohm-cm askarel only  
Neut No-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f

# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: CHICOPEE

STATE: MASSACHUSETTS

TEST NO.: 57

### NAME PLATE & LOCATION DATA

|                  |            |               |     |                   |                    |              |                  |
|------------------|------------|---------------|-----|-------------------|--------------------|--------------|------------------|
| Make/Rewind      | G&W        | High Voltage  |     | No. Radiators     |                    | Ground LEVEL | YES              |
| Serial No.       | 12-23      | Low Voltage   |     | No. Fans          |                    | Outside      | 12' DOWN MANHOLE |
| Inventory Number | LINK BOX 5 | Phase/Cycle   |     | Bushings Top/Side |                    | Inside       |                  |
| Impedance        |            | Gas Headspace | NO  | Location          | FRONT OF #12BLDG42 | Platform     |                  |
| KVA              | 15         | Water Cooled  | NO  | Environment       | VERY DIRTY         | Pole         |                  |
| FILTER Valves    | 1"BV-1"TP  | Hose          | 50' | Gal./Type         | 30                 | Roof         |                  |

### FIELD INSPECTION DATA

| Date | P.O. No.     | TEST             |          | TRANSFORMER              |       | Oil Level | Bush. | Paint | Leaks | Quality Factor | Recommended Service |
|------|--------------|------------------|----------|--------------------------|-------|-----------|-------|-------|-------|----------------|---------------------|
|      |              | Temp.            | Humidity | Press                    | Temp. |           |       |       |       |                |                     |
| 8/79 | 0030-9-65632 | DRAINED, CLEANED |          | REGASKETED AND RE-FILLED |       |           |       |       |       | GOOD           | INSP. 4/80          |
| 1/83 | 9073         | 65°              | 50%      |                          |       | OK        |       | POOR  | NONE  | POOR           | CLEAN&PAINT         |
|      |              |                  |          |                          |       |           |       |       |       |                |                     |
|      |              |                  |          |                          |       |           |       |       |       |                |                     |
|      |              |                  |          |                          |       |           |       |       |       |                |                     |
|      |              |                  |          |                          |       |           |       |       |       |                |                     |
|      |              |                  |          |                          |       |           |       |       |       |                |                     |
|      |              |                  |          |                          |       |           |       |       |       |                |                     |
|      |              |                  |          |                          |       |           |       |       |       |                |                     |
|      |              |                  |          |                          |       |           |       |       |       |                |                     |
|      |              |                  |          |                          |       |           |       |       |       |                |                     |
|      |              |                  |          |                          |       |           |       |       |       |                |                     |
|      |              |                  |          |                          |       |           |       |       |       |                |                     |
|      |              |                  |          |                          |       |           |       |       |       |                |                     |

*see 57-60  
TSE  
Link Boxes  
10'-12' down  
inside*

### LIQUID TEST DATA

| Date | Color | Sludge | I.F.T. | S.R. | Neut# | Diel. | Specific Gravity | SSU | PCB CONTENT | Quality Factor | Rec. Service |
|------|-------|--------|--------|------|-------|-------|------------------|-----|-------------|----------------|--------------|
| 1/83 | 1.0   | CLEAR  | 33.7   |      | .04   | 33    |                  |     | 23 PPM      | GOOD           | TEST 1/84    |
| 4/88 |       |        |        |      |       |       |                  |     | 35 PPM      |                |              |
|      |       |        |        |      |       |       |                  |     |             |                |              |
|      |       |        |        |      |       |       |                  |     |             |                |              |
|      |       |        |        |      |       |       |                  |     |             |                |              |
|      |       |        |        |      |       |       |                  |     |             |                |              |
|      |       |        |        |      |       |       |                  |     |             |                |              |
|      |       |        |        |      |       |       |                  |     |             |                |              |
|      |       |        |        |      |       |       |                  |     |             |                |              |
|      |       |        |        |      |       |       |                  |     |             |                |              |
|      |       |        |        |      |       |       |                  |     |             |                |              |
|      |       |        |        |      |       |       |                  |     |             |                |              |
|      |       |        |        |      |       |       |                  |     |             |                |              |
|      |       |        |        |      |       |       |                  |     |             |                |              |
|      |       |        |        |      |       |       |                  |     |             |                |              |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10<sup>9</sup> ohm-cm askarel only  
Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f



# TRANSFORMER SERVICE, INC.

## Oil Testing Service

CUSTOMER: Facemate Corp.

CITY: CHICOPEE STATE: MASSACHUSETTS TEST NO.: 58

### NAME PLATE & LOCATION DATA

|                  |                 |               |     |                   |                    |              |                    |
|------------------|-----------------|---------------|-----|-------------------|--------------------|--------------|--------------------|
| Make/Rewind      | G&W             | High Voltage  |     | No. Radiators     |                    | Ground LEVEL | YES                |
| CAT. NO.         | J4375           | Low Voltage   |     | No. Fans          |                    | Outside      | 12'DOWN<br>MANHOLE |
| Inventory Number | LINK BOX 4      | Phase/Cycle   |     | Bushings Top/Side |                    | Inside       |                    |
| Impedance        |                 | Gas Headspace | NO  | Location          | FRONT OF #12BLDG42 | Platform     |                    |
| KVA              | 15              | Water Cooled  | NO  | Environment       | VERY DIRTY         | Pole         |                    |
| FILTER Valves    | TP-1" BOTTOM-1" | Hose          | 50' | Gal./Type         | 30                 | Roof         |                    |

### FIELD INSPECTION DATA

| Date | P.O. No.     | TEST              |          | TRANSFORMER |       | Oil Level | Bush. | Paint | Leaks | Quality Factor | Recommended Service |
|------|--------------|-------------------|----------|-------------|-------|-----------|-------|-------|-------|----------------|---------------------|
|      |              | Temp.             | Humidity | Press       | Temp. |           |       |       |       |                |                     |
| 8/79 | 0030-9-65632 | DRAINED, CLEANED, |          | REGASKETED  |       |           |       |       |       | GOOD           | INSP. 4/80          |
| 1/83 | 9073         | 65°               | 50%      |             |       | OK        |       | POOR  | NONE  | POOR           | CLEAN&PAINT         |
|      |              |                   |          |             |       |           |       |       |       |                |                     |
|      |              |                   |          |             |       |           |       |       |       |                |                     |
|      |              |                   |          |             |       |           |       |       |       |                |                     |
|      |              |                   |          |             |       |           |       |       |       |                |                     |
|      |              |                   |          |             |       |           |       |       |       |                |                     |
|      |              |                   |          |             |       |           |       |       |       |                |                     |
|      |              |                   |          |             |       |           |       |       |       |                |                     |
|      |              |                   |          |             |       |           |       |       |       |                |                     |
|      |              |                   |          |             |       |           |       |       |       |                |                     |
|      |              |                   |          |             |       |           |       |       |       |                |                     |
|      |              |                   |          |             |       |           |       |       |       |                |                     |
|      |              |                   |          |             |       |           |       |       |       |                |                     |
|      |              |                   |          |             |       |           |       |       |       |                |                     |
|      |              |                   |          |             |       |           |       |       |       |                |                     |

### LIQUID TEST DATA

| Date | Color | Sludge | I.F.T. | S.R. | Neut # | Diel. | Specific Gravity | SSU | PCB CONTENT | Quality Factor | Recommended Service |
|------|-------|--------|--------|------|--------|-------|------------------|-----|-------------|----------------|---------------------|
| 1/83 | 8.0   | CARBON | 29.8   |      | .08    | 30    |                  |     | 360 PPM     | POOR           | RE-REFINE           |
| 4/88 |       |        |        |      |        |       |                  |     | 360 PPM     |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |
|      |       |        |        |      |        |       |                  |     |             |                |                     |

A-askarel E-estimated I.F.T.-dynes/cm S.R.-specific resistivity 10<sup>9</sup> ohm-cm askarel only  
Neut. No.-mg KOH/g oil Diel.-kilo volts SSU-viscosity @ 100°f



CONCORD, NH  
(503) 224-4006



**TRANSFORMER SERVICE, INC.**

TSI NO. 76  
CUSTOMER NO.  
LOCATION UNIROYAL #24

**Transformer Inspection Service**

CUSTOMER FACEMATE CITY CHICOPEE STATE MA

**NAME PLATE & LOCATION DATA**

|               |            |                             |  |                       |                   |       |   |   |
|---------------|------------|-----------------------------|--|-----------------------|-------------------|-------|---|---|
| Make/Rewind   | ITE        | High Voltage                | 13,200Y  | No. Radiators         | 8 14" SSETS       |       | Special Conditions  |   |
| Serial No.    | 13615      | Low Voltage                 | 575  | Supplemental Cooling  | Type/No.          |       | Outside Inside <input checked="" type="checkbox"/> <input type="checkbox"/> | Platform Pole <input checked="" type="checkbox"/> <input type="checkbox"/>    |
| Paint Color   | GREEN      | Phase/Cycle                 | 3/60   | Bushings T-Top S-Side | #HV               | #LV   | Ground Roof <input type="checkbox"/> <input type="checkbox"/>               | Vault Cage <input type="checkbox"/> <input type="checkbox"/>                  |
| Impedance     | 5.42       | Type of Headspace           | SEALED   | No Load Tap Changer   | #Top              | #Side | Radiators   | Welded Flanged <input type="checkbox"/> <input type="checkbox"/>              |
| KVA           | 1500       | Sample energ. Filter energ. | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/><br>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Accessory Equipment   | TSI No(s). SWITCH |       | Top Cover   | Welded Bolted <input checked="" type="checkbox"/> <input type="checkbox"/>    |
| Filter Valves | BV/BST/TFP | Hose (one way)              |  | Gal./Type             | 410 A             |       | Valves  | Threaded Flanged <input type="checkbox"/> <input checked="" type="checkbox"/> |

**FIELD INSPECTION DATA**

| Date | Purchase Order No. | AMBIENT |          | TRANSFORMER |       | High Temp. | Liquid Level | Bush. Cond. | Paint Cond. | Leaks | Quality Factor | Recommended Service |
|------|--------------------|---------|----------|-------------|-------|------------|--------------|-------------|-------------|-------|----------------|---------------------|
|      |                    | Temp.   | Humidity | Press.      | Temp. |            |              |             |             |       |                |                     |
| 7/88 | VERBAL             | 85°     | 70%      | 0           | 38°   | 50°        | S.LOW        |             | FAIR        |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |
|      |                    |         |          |             |       |            |              |             |             |       |                |                     |

**LIQUID TEST DATA**

| Date | Color | Visual | PCB Content | IFT | Neut. No. | Diel. | Moisture Content | Power Factor | TCG Content | Specific Gravity | Quality Factor | Recommended Service |
|------|-------|--------|-------------|-----|-----------|-------|------------------|--------------|-------------|------------------|----------------|---------------------|
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |                |                     |

E-estimated PCB-Polychlorinated Biphenyl by electron capture in parts per million IFT-Interfacial Tension in dynes/cm  
 Neut. No.-mg KOH/g oil Diel.-dielectric in kilo volts Moisture content in parts per million Power Factor in percent corrected to 20°C  
 TCG-Total Combustible Gas by gas chromatography in parts per million Quality Factor-G, Good F, Fair B, Borderline P, Poor C, Critical

CONCORD, NH  
(603) 224-4006

# TSI

**TRANSFORMER SERVICE, INC.**

TSI NO. 77  
CUSTOMER NO.  
LOCATION UNIROYAL #24

## Transformer Inspection Service

CUSTOMER FACEMATE CITY CHICOPEE STATE MA

### NAME PLATE & LOCATION DATA

|               |       |                             |  |                       |            |                                      |   |
|---------------|-------|-----------------------------|--|-----------------------|------------|--------------------------------------|---|
| Make/Rewind   | G & W | High Voltage                |  | No. Radiators         |            | Special Conditions                   |   |
| Serial No.    |       | Low Voltage                 |  | Supplemental Cooling  | Type/No.   | Outside <input type="checkbox"/>     | Platform <input type="checkbox"/>         |
| Paint Color   | GREEN | Phase/Cycle                 |  | Bushings T-Top S-Side | #HV #LV    | Inside <input type="checkbox"/>      | Pole <input type="checkbox"/>             |
| Impedance     |       | Type of Headspace           |  | No Load Tap Changer   | #Top #Side | Ground Roof <input type="checkbox"/> | Vault Cage <input type="checkbox"/>       |
| KVA           |       | Sample energ. Filter energ. | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/><br>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Accessory Equipment   | TSI No(s). | Radiators                            | Welded Flanged <input type="checkbox"/>   |
| Filter Valves | BV/TP | Hose (one way)              |  | Gal./Type             | 42A        | Top Cover                            | Welded Bolted <input type="checkbox"/>    |
|               |       |                             |  |                       |            | Valves                               | Threaded Flanged <input type="checkbox"/> |

TYPE: PRAD-IB

### FIELD INSPECTION DATA

| Date | Purchase Order No. | AMBIENT |          | TRANSFORMER |       | High Temp. | Liquid Level | Bush. Cond. | Paint Cond. | Leaks       | Quality Factor | Recommended Service |
|------|--------------------|---------|----------|-------------|-------|------------|--------------|-------------|-------------|-------------|----------------|---------------------|
|      |                    | Temp.   | Humidity | Press.      | Temp. |            |              |             |             |             |                |                     |
| 7/38 | VERBAL             |         |          |             |       |            | HIGH         |             |             | SIGHT GAUGE |                |                     |
|      |                    |         |          |             |       |            |              |             |             |             |                |                     |
|      |                    |         |          |             |       |            |              |             |             |             |                |                     |
|      |                    |         |          |             |       |            |              |             |             |             |                |                     |
|      |                    |         |          |             |       |            |              |             |             |             |                |                     |
|      |                    |         |          |             |       |            |              |             |             |             |                |                     |
|      |                    |         |          |             |       |            |              |             |             |             |                |                     |
|      |                    |         |          |             |       |            |              |             |             |             |                |                     |
|      |                    |         |          |             |       |            |              |             |             |             |                |                     |
|      |                    |         |          |             |       |            |              |             |             |             |                |                     |

### LIQUID TEST DATA

| Date | Color | Visual | PCB Content | IFT | Neut. No. | Diel. | Moisture Content | Power Factor | TCG Content | Specific Gravity |  | Quality Factor | Recommended Service |
|------|-------|--------|-------------|-----|-----------|-------|------------------|--------------|-------------|------------------|--|----------------|---------------------|
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |
|      |       |        |             |     |           |       |                  |              |             |                  |  |                |                     |

E-estimated PCB-Polychlorinated Biphenyl by electron capture in parts per million IFT-Interfacial Tension in dynes/cm  
 Neut. No.-mg KOH/g oil Diel.-dielectric in kilo volts Moisture content in parts per million Power Factor in percent corrected to 20°C  
 TCG-Total Combustible Gas by gas chromatography in parts per million Quality Factor-G, Good F, Fair B, Borderline P, Poor C, Critical

REGISTRATION ON

DELIVER TO  
ON SITE

ORDERED BY  
WALTER MROZINSKI



Facemate Corporation  
Five West Main Street  
Chicopee, Mass. 01020  
(413) 594-6661

Cable Address: FACEMATE COPE  
Telex: 955-460

**PURCHASE ORDER**

**NO. 23271**

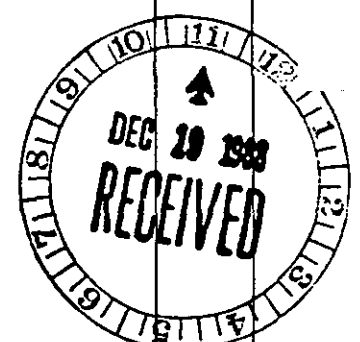
This number must appear on  
all invoices, packing slips,  
packages and correspondence.

VEND NO. 00397 TO: TRANSFORMER SERVICE, INC  
PO BOX 1077  
CONCORD, NH 03301

SHIP TO: CHICOPEE INDUSTRIAL PARK  
154 GROVE ST  
CHICOPEE, MA 01020

|                  |                 |                        |  |   |
|------------------|-----------------|------------------------|--|---|
| DATE<br>12/16/88 | TERMS<br>NET 30 | F.O.B.<br>CHICOPEE, MA | SHIP VIA<br>ST   | <input type="checkbox"/> TAXABLE<br><input checked="" type="checkbox"/> TAX EXEMPT 04-2564730 |
| ARRIVE 1/89      |                 |                        | <input type="checkbox"/> NON-CONFIRMED . . . PLEASE ACKNOWLEDGE<br><input checked="" type="checkbox"/> ** CONFIRMED WITH KEN PRICE |   |

| ITEM NO. | ACCOUNT NO. | DESCRIPTION   | QUANTITY | U/M |                 |
|----------|-------------|---|----------|-----|-----------------|
| 1        | 8839-000    | PHASE 2<br>WORK TO BE DONE PER QUOTE DATED 8-23-88:<br>PULL VACUUM ON UNITS, TIGHTEN ALL FLANGE BOLTS,<br>TIGHTEN ALL GAUGES, VALVES, SAMPLE TAPS AND PLUGS<br>CLEAN ALL LEAK AREAS OF LIQUID RESIDUE, DIRT AND<br>OLD EXPOXY, APPLY NEW EXPOXY TO LEAK AREAS, CLEAN<br>LIQUID RESIDUE FROM ACCESSIBLE AREAS ON TRANSFORMER<br>AND SWITCH. WORK TO BE DONE ON TSI TEST #'S:<br>5, 7, 9, 13, 15, 17, 19, 21, 29, 31, 33, 35, 37, 27,<br>39, 41 AND 76 INCLUDING ALL SWITCHES EXCEPT FOR TSI<br>TEST #41<br><br>COST BREAKDOWN: \$800.00/PER UNIT AND \$400.00<br>travel and mobilization charge. AMOUNT DOES<br>NOT INCLUDE ANY PCB CLEANUP COSTS - IF CLEANUPS<br>ARE REQUIRED, TSI TO ADVISE FACEMATE PURCHASING<br>DEPT. BEFORE PROCEEDING. PCB MATERIAL TO BE<br>INCINERATED AT SCA IN CHICAGO. TSI MUST PROVIDE<br>CERTIFICATES OF DISPOSAL AND TRACKING MANIFESTS<br>WITH DATE AND CHAMBERS. | 1        | JOB | \$14<br>(N<br>E |



*This job was  
cancelled  
9/28/90*

**SPECIAL INSTRUCTIONS**

1. This order is subject to the terms and conditions as stated on the face and reverse side hereof.
2. Detailed packing list must accompany all shipments.
3. Show itemized prices, unit and extension, on all invoices.
4. Except as provided by specific agreement or in accordance with accepted industry standards, ship exact quantities as shown. Do not overship or undership.

J. MROZINSKI

AUTHORIZED SIGNATURE

ORIGINAL PURCHASE ORDER

1-0436  
SCANNED

MEMORANDUM

TO: Peter Mokrzecky, HW *PPM*  
THRU: Alan Weinberg, BWSC *AW*  
FROM: Lisa Jones, BWSC *LJ*  
RE: Status of Uniroyal, Chicopee, MA  
MAD001122944  
Listed as Generator on 8/15/80

---

BWSC is currently reviewing a Phase I Site Investigation (dated March 1991 & submitted by ECS) and DEP files to prepare a Preliminary Assessment Report for submittal to the EPA under the MSCA grant.

A review of the RCRA list revealed that Uniroyal is still listed. The only papers on file are the original notice to the EPA as a generator, treatment, and storage facility.

I have extracted a portion of the Phase I Report which applies to the current activities at the former Uniroyal Complex. Uniroyal moved out in late 1980 and the property was purchased by Facemate Corporation for anticipated expansion. Since Facemate never really needed the space except for a small portion used for storage, they decided in 1986 to lease out space under the name Chicopee Industrial Park. The attached list contains the tenants names. I do not believe there are currently any tenants who generate enough waste to be considered for RCRA listing.

Copy to Site File 1-0436.

WSC042s/BWSCMEM.436

unnumbered well located within Building 11 was not in use in 1915. The deep wells are shown on Plate 2. Based on field observations, deep well location Nos. 4, 9 and 10 have been confirmed. No records of pumping rates, well yields, or geologic materials encountered during well installation were found.

#### 2.4 Present Site Use

Details regarding known uses of the facility since 1980 were compiled by Mr. John Anderson, facility manager, and are presented in Tables 1 and 1A.

At present, Facemate Corporation leases available space in Buildings 25, 26, 27, 42 and 43. Facemate Corporation drew its first lease with Benaj Tool in July, 1986, and has since drawn approximately 44 leases with other tenants. Many of the tenants at the facility utilize space for offices, however, several manufacturing companies are currently housed within buildings on the upper terrace of the complex. Benaj Tool, B.K. Tool and Fido Tool occupy the first floor of Buildings 27 and 42, and a printing shop (New England Dye Cut) occupies the first floor of Building 42. The Swift River fish hatchery is operated on the second floor of Building 27. Both floors of Building 25 were occupied by Automotive Design, Inc. (ADI), autobody refurbishment specialists. ADI moved out of the facility in September, 1990. Liquid Solid Separation Corporation, sole tenant of Building 43, manufactures and stores synthetic filtering media. The upper floors of

TABLE 1  
LISTING OF PRESENT AND HISTORICAL TENANTS  
CHICOPEE INDUSTRIAL PARK

| COMPANY NAME                           | BUILDING NO.                 | CONTACT           | TELEPHONE #                      |
|--|------------------------------|-------------------|----------------------------------|
| Automotive Designs                     | 25                           | Bernard Eckert    | 786-0100                         |
| Managers Office                        | 26 Room 101                  | John Anderson     | 592-7555                         |
| Ken Lemanski                           | 26 Room 101                  | Ken Lemanski      | 592-9406                         |
| Joseph Chessey                         | 26 Room 102                  | Mayor Chessey     | 594-4711                         |
| Jobs for Bay State Graduates           | 26 Room 103                  | Laura Finn-Heafey | 592-3233                         |
| Tax & Accounting Service               | 26 Room 104                  | Glen A. Ladd      | 592-9115                         |
| Ray's Barber Shop                      | 26 Room 105                  | Ray Lamarche      | 592-3931                         |
| T.E.M.C.O., Inc.                       | 26 Room 106                  | Mike/Yves Demers  | 592-5129                         |
| C'Conner Photo                         | 26 Room 107                  | Gina Nolan        | (617) 851-3737<br>(203) 684-5767 |
| Northeast Woods & Water                | 26 Room 108-110A             | Bill Borchers     | 594-6613                         |
| OSEG                                   | 26 Room 109                  | Bill Borchers     | 594-2085                         |
| Dispute Resolution Service of Chicopee | 26 Room 109                  | Leo Florian       | 787-6480                         |
| Summit Planning                        | 26 Room 110                  | Robert Baker      | Not Available                    |
| A.F. Tardy Labor Relations             | 26 Room 110                  | Al Tardy          | 594-9078                         |
| M.A.D.D.                               | 26 Room 111                  | Adel Simard       | 592-9953                         |
| Pioneer Development Center             | 26 Room 201 & 202            | Suzanne Welch     | 592-4616                         |
| Heritage Home Care                     | 26 Room 204                  | Jim Percoski      | 594-7155                         |
| Pat Welch                              | 26 Room 204                  | Pat Welch         | 533-5264                         |
| Dubois Jewelers                        | 26 Room 205 & 206            | Wade Dubois       | 592-6200                         |
| Laser Print                            | 26 Room 207                  | Jose Parent       | Not Available                    |
| Tanex Marketing                        | 26 Room 208                  | Phil Sowa         | 594-9075                         |
| Annicore                               | 26 Room 208, 211, 212, & 213 | Not Available     | Not Available                    |
| National Mortgage Network              | 26 Room 209                  | Brant Dubois      | Not Available                    |



TABLE 1 (cont'd)

| COMPANY NAME                             | BUILDING NO.      | CONTACT                                      | TELEPHONE #                |
|--|-------------------|--|----------------------------|
| Enviro Impact                            | 26 Room 210 & 211 | Norman Morrissette                           | 594-8577                   |
| Pioneer Valley Waste System              | 26 Room 214       | Greg Nagy                                    | 594-7188                   |
| Valley Opportunity Adult Day Health Care | 26 Basement Level | Jean Brown                                   | 594-6688                   |
| Alden Dental Lab                         | 26 Basement Level | Fred Aicklen                                 | 594-6850                   |
| Ceramics Etc.                            | 26 Basement Level | Rachel D.                                    | 532-3345                   |
| Trans-Comm                               | 26 Basement Level | Caroline Lutz                                | 592-9171                   |
| Benaj Tool                               | 27                | Edward Pazik                                 | 594-2490                   |
| E.K. Tool                                | 27                | Janusz Burda                                 | 594-8773                   |
| Fido Tool (A1 Screw Machine)             | 27                | Steve Fido                                   | 594-8939                   |
| Fire Detection                           | 27                | Joe Cevula                                   | 594-7710                   |
| Superior Sheet Metal                     | 27                | Peter Nyzio                                  | 592-5822                   |
| D & C Marble & Granite                   | 27                | Louis Serrazina                              | 589-0664                   |
| B & G Machine                            | 27                | James Webb                                   | Not Available              |
| Springfield Wire                         | 27                | Michael Riley                                | 781-6950                   |
| B & T Tire Co.                           | 27                | Not Available                                | Not Available              |
| Swift River Hatchery                     | 27, 2nd Floor     | Mark, or Blair<br><i>Whittam</i>             | 594-8994                   |
| Jay's Polishing                          | 42                | Jay Urban                                    | 536-3556                   |
| New Eng. Die Cut                         | 42                | Rich Holland                                 | 592-2344                   |
| Shawmut First Bank                       | 42                | Pat Walter                                   | 592-1146                   |
| Chicopee Parade Commission               | 42                | Thomas Collins,<br>President                 | 538-8552                   |
| Surplus Equipment                        | 42                | Sandra Dakis-Fiore                           | 737-1280                   |
| Liquid Solid Separations                 | 43                | George J. Peer,<br>President<br>Carl Russell | (201) 782-1570<br>594-7456 |

TABLE 1A  
LISTING OF PRESENT AND HISTORICAL TENANTS  
CHICOPEE INDUSTRIAL PARK

| COMPANY NAME                           | BUILDING NO.                 | DATES OF OCCUPANCY | TELEPHONE #   |
|--|------------------------------|--------------------|---------------|
| Automotive Designs                     | 25                           | 9/87 - 9/90        | 7531          |
| Managers Office                        | 26 Room 101                  | 1/89 - present     | 6512          |
| Ken Lemanski                           | 26 Room 101                  | 4/88 - 4/90        | 9999          |
| Joseph Chessey                         | 26 Room 102                  | 3/90 - present     | 9999          |
| Jobs for Bay State Graduates           | 26 Room 103                  | 12/90 - present    | 7361          |
| Tax & Accounting Service               | 26 Room 104                  | 1/87 - present     | 8931          |
| Ray's Barber Shop                      | 26 Room 105                  | 8/88 - present     | 7241          |
| T.E.M.C.O., Inc.                       | 26 Room 106                  | 3/87 - present     | 9999          |
| O'Conner Photo                         | 26 Room 107                  | 2/88 - present     | 3861          |
| Northeast Woods & Water                | 26 Room 108-110A             | 9/89 - present     | 7941          |
| OSEG                                   | 26 Room 109                  | 1/90 - present     | 8922          |
| Dispute Resolution Service of Chicopee | 26 Room 109                  | 10/88 - 10/89      | 7399          |
| Summit Planning                        | 26 Room 110                  | 10/88 - 10/90      | 7999          |
| A.F. Tardy Labor Relations             | 26 Room 110                  | 9/90 - present     | 7399          |
| M.A.D.D.                               | 26 Room 111                  | 8/89 - present     | 8091          |
| Pioneer Development Center             | 26 Room 201 & 202            | 10/89 - present    | 8999          |
| Heritage Home Care                     | 26 Room 204                  | 2/90 - present     | 8361          |
| Pat Welch                              | 26 Room 204                  | 9/88 - 9/89        | 9999          |
| Dubois Jewelers                        | 26 Room 205 & 206            | 3/89 - present     | 7631          |
| Laser Print                            | 26 Room 207                  | 4/89 - present     | 7339          |
| Tanex Marketing                        | 26 Room 208                  | 4/90 - present     | 7399          |
| Amicore                                | 26 Room 208, 211, 212, & 213 | 8/88 - 8/90        | Not Available |
| National Mortgage Network              | 26 Room 209                  | 5/90 - present     | 6162          |

TABLE 1A (cont'd)

| COMPANY NAME                             | BUILDING NO.      | DATES OF OCCUPANCY | TELEPHONE #   |
|--|-------------------|--------------------|---------------|
| Enviro Impact                            | 26 Room 210 & 211 | 6/90 - 11/90       | 8999          |
| Pioneer Valley Waste System              | 26 Room 214       | 9/90 - present     | 8922          |
| Valley Opportunity Adult Day Health Care | 26 Basement Level | 2/89 - present     | 8059          |
| Alden Dental Lab                         | 26 Basement Level | 5/90 - present     | 8072          |
| Ceramics Etc.                            | 26 Basement Level | 9/88 - 8/90        | 3269          |
| Trans-Comm                               | 26 Basement Level | 6/89 - present     | 4172          |
| Eenaj Tool                               | 27                | 7/86 - present     | 3451          |
| E.K. Tool                                | 27                | 9/89 - present     | 3451          |
| Fido Tool (Al Screw Machine)             | 27                | 2/89 - present     | 3451          |
| Fire Detection                           | 27                | 4/89 - present     | 7393          |
| Superior Sheet Metal                     | 27                | 1/90 - present     | 3444          |
| D & C Marble & Granite                   | 27                | 1/91 - present     | 3281          |
| E & G Machine                            | 27                | monthly - 12/89    | Not Available |
| Springfield Wire                         | 27                | 4/88 - 6/90        | 4225          |
| E & T Tire Co.                           | 27                | 6/88 - 6/89        | 4225          |
| Swift River Hatchery                     | 27, 2nd Floor     | 5/90 - present     | 0921          |
| Jay's Polishing                          | 42                | 11/87 - present    | 7699          |
| New Eng. Die Cut                         | 42                | 12/87 - present    | 2752          |
| Shawmut First Bank                       | 42                | 1/90 - present     | 6059          |
| Chicopee Parade Commission               | 42                | 8/89 - present     | 7999          |
| Surplus Equipment                        | 42                | 2/88 - present     | 5086          |
| Liquid Solid Separations                 | 43                | 7/89 - present     | 3299          |

Buildings 27, 28, 28 N Ext, 28 E Annex, and 42 are currently utilized for storage of spare parts and machinery for Facemate Corporation.

Buildings 28, 28 N Ext, and 28 E Annex are not available for lease to outside tenants. Access to the middle terrace (west of Building 28) and lower terrace (Buildings 1 through 15) of the facility is restricted, and is patrolled daily by security personnel. Locked chain linked fences prevent access to these areas.

#### 2.5 Present Oil or Hazardous Materials Use

Currently, one (1) askarel transformer (Uniroyal No. 2) is in use at the facility. One (1) askarel transformer (Uniroyal No. 22) was formerly used at the facility, but was taken off line and stored for reuse by Facemate Corporation in October, 1990. According to Facemate Corporation, all other askarel transformers at the site are currently stored for reuse.

At present, no above ground storage tanks for petroleum products at the site are utilized. One (1) 200,000 gallon above ground storage tank is located outside Building 15, and at least ten (10) smaller above ground tanks are located within basements and on floors of other on-site buildings. The facility is heated by gas furnaces within each occupied building. Natural gas connections were supplied to the facility in 1970.

Based on site inspections and interviews with tenants conducted on August 17, 1990, small amounts of certain oil and/or

hazardous materials are presently in use by tenants within the facility. Machine shops are located on the first floor of Building 27, including Benaj Tool, B.K. Tool and A 1 Screw Machine (a.k.a. Fido Tool). Each of the machine shops utilize cutting oils which are clarified and recycled within the machines during the manufacturing process. Metal shavings and chips are temporarily stored in 55 gallon drums and within each machine shop, and are transferred to a dumpster north of Building 27. One empty 55 gallon drum which formerly contained an orthophenol/phenol mixture was observed at A 1 Screw Machine. According to Mr. Steven Fido of A 1 Screw Machine, the chemical mixture has not been used as part of the manufacturing process.

The Swift River fish hatchery, located on the second floor of Building 27, provides a controlled aqueous environment for fish breeding and development. Water conditions are closely monitored and controlled. No hazardous materials are utilized for the hatchery operations.

New England Dye Cut, located on the third floor of Building 42, is a printing company. Up to six printing presses are stored near the work area, however, only two presses are currently functional. Historically, printing ink contained cadmium based dyes, which may be impregnated on old printing press equipment. Modern printing ink formulations are not considered hazardous materials.

Jay's Polishing is also located on the third floor of Building 42. According to Mr. Eugene Urban, antiques are refurbished at his

shop. In 1988, Mr. Urban utilized an epoxy and lacquer stripping compound (brand name Entone) to strip wood surfaces prior to refinishing. Mr. Urban discontinued the use of the stripping compound shortly after moving into Building 42. All spent stripping compound was collected for proper disposal. Mr. Urban also utilizes caustic soda and acid wash tanks for cleaning of metal. One 90 gallon container holds a 30 percent caustic wash and is used for an initial rinse. One 35 gallon container holds a 15 percent acid wash and is used for the second rinse. One 35 gallon container holds a 60 percent caustic wash and is used for the final rinse. Mr. Urban indicated that he does not know the actual chemical names for the rinse chemicals. Metal or brass antiques which require etching and/or plating are shipped to a location off-site for treatment.

A jewelry repair shop operated by Dubois Jewelers is located in Building 26, rooms 205 and 206. According to Mr. Wade Dubois, a biodegradable, environmentally safe, multi purpose ultrasonic solution is utilized to clean gold jewelry at this repair shop. No oil or hazardous materials are utilized at this location.

Automotive Designs Inc. (ADI) was located in Building 25 until September, 1990. Paint thinner (100% mineral spirits) was utilized by ADI. Waste paint thinner was decanted into drums for proper disposal.

Liquid Solid Separation Corporation, located in Building 43, manufactures filtering media. The filtering media is marketed as an alternative to asbestos filtering media, and consists of a

mixture of diatomaceous earth and synthetic fibers (NAFCO-C). No asbestos fibers are utilized in the manufacturing process.

Diatomaceous earth and synthetic fibers utilized in the process may be classified as a nuisance dust, and may require respiratory protection for workers in certain circumstances, however, no other hazards are known.

Based on the review of present use, storage, treatment and disposal practices for oil and hazardous materials utilized at the site, in August, 1990, no evidence of a release of OHM to the environment to the site from present practices was observed.

#### 2.6 Migration Pathways, Sensitive Receptors and Exposure Points

Sensitive receptors are natural resources and organisms which could be adversely impacted by a release of oil and/or hazardous materials. Such potential exposure points near the site include on-site and nearby businesses and residences, and the Chicopee River.

Migration pathways are diverse and can be formed by man made or natural materials. Man-made conduits are generally laid in coarse grained materials which may have a significantly greater ability to permit flow of water per unit width (transmissivity) than the surrounding native overburden materials. The coarse grained materials may provide preferred migration pathways for groundwater flow and vapors.

The site is serviced by municipal water and sanitary sewer utilities. Both services are provided to the building from service

FIELD MEMORANDUM

DIVISION OF HAZARDOUS WASTE

INSPECTION SITE:  
Uniroval, Inc.  
154 Grove Street  
Chicopee, MA 01020

DATE INSPECTED:  
June 27, 1991

INSPECTOR: Merle Buckhout

REASON FOR INSP.: 21E

PHONE NUMBER:  
413-594-6611

MAD 001 122 944

Lisa Jones, DEP WERO 21E, came into this office to ask for the MAD number of Uniroval in Chicopee. She said that Uniroval ceased operations in 1980. It was sold to Facemate Corp., 5 Main Street, Chicopee 01020 on November 24, 1981. It is presently under a 21E cleanup.

CHICROY1.wp





WMAD00112294421

**DESCRIPTION OF HAZARDOUS WASTES (continued from front)**

**HAZARDOUS WASTES FROM NON-SPECIFIC SOURCES.** Enter the four-digit number from 40 CFR Part 261.31 for each listed hazardous waste from non-specific sources your installation handles. Use additional sheets if necessary.

|         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|
| 1       | 2       | 3       | 4       | 5       | 6       |
| 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 |
| 7       | 8       | 9       | 10      | 11      | 12      |
| 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 |

**HAZARDOUS WASTES FROM SPECIFIC SOURCES.** Enter the four-digit number from 40 CFR Part 261.32 for each listed hazardous waste from specific industrial sources your installation handles. Use additional sheets if necessary.

|         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|
| 13      | 14      | 15      | 16      | 17      | 18      |
| 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 |
| 19      | 20      | 21      | 22      | 23      | 24      |
| 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 |
| 25      | 26      | 27      | 28      | 29      | 30      |
| 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 |

**COMMERCIAL CHEMICAL PRODUCT HAZARDOUS WASTES.** Enter the four-digit number from 40 CFR Part 261.33 for each chemical substance your installation handles which may be a hazardous waste. Use additional sheets if necessary.

|         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|
| 31      | 32      | 33      | 34      | 35      | 36      |
| 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 |
| 37      | 38      | 39      | 40      | 41      | 42      |
| 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 |
| 43      | 44      | 45      | 46      | 47      | 48      |
| 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 |

**LISTED INFECTIOUS WASTES.** Enter the four-digit number from 40 CFR Part 261.34 for each listed hazardous waste from hospitals, veterinary hospitals, medical and research laboratories your installation handles. Use additional sheets if necessary.

|         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|
| 49      | 50      | 51      | 52      | 53      | 54      |
| 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 | 23 - 26 |

**CHARACTERISTICS OF NON-LISTED HAZARDOUS WASTES.** Mark "X" in the boxes corresponding to the characteristics of non-listed hazardous wastes your installation handles. (See 40 CFR Parts 261.21 - 261.24)

1. IGNITABLE (D001)     
  2. CORROSIVE (D002)     
  3. REACTIVE (D003)     
  4. TOXIC (D000)

**CERTIFICATION**

certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

|                                       |   |                        |
|---------------------------------------|---|------------------------|
| SIGNATURE<br><i>Edward H. Quigley</i> | NAME & OFFICIAL TITLE (type or print)<br>E. H. Quigley, Factory Manager | DATE SIGNED<br>8-12-80 |
|---------------------------------------|---|------------------------|

A Form 8700-12 (6-80) REVERSE

RECEIVED  
AUG 14 1980  
PERMITS BRANCH



COMPREHENSIVE RESPONSE ACTION TRANSMITTAL  
FORM & PHASE I COMPLETION STATEMENT

Release Tracking Number

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

1 - 0436

A. SITE LOCATION:

Site Name (optional) Former Uniroyal Complex

Street: 154 Grove Street Location Aid: Corner of Grove & Oak St.

City/Town: Chicopee ZIP Code: 01020

Related Release Tracking Numbers that this Form Addresses: None

Tier Classification: (check one of the following)  Tier IA  Tier IB  Tier IC  ~~Tier IA~~  ~~Tier II~~  ~~Not Tier Classified~~

If a Tier I Permit has been issued, state the Permit Number: 0158

B. THIS FORM IS BEING USED TO: (check all that apply)

- Submit a Phase I Completion Statement, pursuant to 310 CMR 40.0484 (complete Sections A, B, C, G, H, I and J). REC'D. BY \_\_\_\_\_
- Submit a Phase II Scope of Work, pursuant to 310 CMR 40.0834 (complete Sections A, B, C, G, H, I and J).
- Submit a final Phase II Comprehensive Site Report and Completion Statement, pursuant to 310 CMR 40.0836 (complete Sections A, B, C, D, G, H, I and J).
- Submit a Phase III Remedial Action Plan and Completion Statement, pursuant to 310 CMR 40.0862 (complete Sections A, B, C, G, H, I and J).
- Submit a Phase IV Remedy Implementation Plan, pursuant to 310 CMR 40.0874 (complete Sections A, B, C, G, H, I and J).
- Submit an As-Built Construction Report, pursuant to 310 CMR 40.0875 (complete Sections A, B, C, G, H, I and J).
- Submit a Phase IV Final Inspection Report and Completion Statement, pursuant to 310 CMR 40.0878 and 40.0879 (complete Sections A, B, C, E, G, H, I and J).
- Submit a periodic Phase V Inspection & Monitoring Report, pursuant to 310 CMR 40.0892 (complete Sections A, B, C, G, H, I and J).
- Submit a final Phase V Inspection & Monitoring Report and Completion Statement, pursuant to 310 CMR 40.0893 (complete Sections A, B, C, F, G, H, I and J).

You must attach all supporting documentation required for each use of form indicated, including copies of any Legal Notices and Notices to Public Officials required by 310 CMR 40.1400.

C. RESPONSE ACTIONS:

Check here if any response action(s) that serves as the basis for the Phase submittal(s) involves the use of Innovative Technologies. (DEP is interested in using this information to create an Innovative Technologies Clearinghouse.)

Describe Technologies: \_\_\_\_\_

D. PHASE II COMPLETION STATEMENT:

Specify the outcome of the Phase II Comprehensive Site Assessment:

- Additional Comprehensive Response Actions are necessary at this Site, based on the results of the Phase II Comprehensive Site Assessment.
- The requirements of a Class A Response Action Outcome have been met and a completed Response Action Outcome Statement (BWSC-104) will be submitted to DEP.
- The requirements of a Class B Response Action Outcome have been met and a completed Response Action Outcome Statement (BWSC-104) will be submitted to DEP.
- Rescoring of this Site using the Numerical Ranking System is necessary, based on the results of the final Phase II Report.

E. PHASE IV COMPLETION STATEMENT:

Specify the outcome of Phase IV activities:

- Phase V operation, maintenance or monitoring of the Comprehensive Response Action is necessary to achieve a Response Action Outcome. (This site will be subject to a Phase V Operation, Maintenance and Monitoring Annual Compliance Fee.)
- The requirements of a Class A Response Action Outcome have been met. No additional operation, maintenance or monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement (BWSC-104) will be submitted to DEP.
- The requirements of a Class C Response Action Outcome have been met. No additional operation, maintenance or monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement (BWSC-104) will be submitted to DEP.

SECTION E IS CONTINUED ON THE NEXT PAGE



**COMPREHENSIVE RESPONSE ACTION TRANSMITTAL  
FORM & PHASE I COMPLETION STATEMENT**

Release Tracking Number

I - 0436

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

**H. PERSON UNDERTAKING RESPONSE ACTION(S):**

Name of Organization: Facemate Corporation  
Name of Contact: Mr. Walter Mrozinski Title: President and CEO  
Street: 5 West Main Street  
City/Town: Chicopee State: MA ZIP Code: 01020  
Telephone: (413) 594-6661 Ext.: \_\_\_\_\_ FAX (optional) (413) 594-8328

Check here if there has been a change in the person undertaking the Response Action.

**I. RELATIONSHIP TO SITE OF PERSON UNDERTAKING RESPONSE ACTION(S):** (check one)

- RP or PRP Specify:  Owner  Operator  Generator  Transporter Other RP or PRP: \_\_\_\_\_
- Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)
- Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))
- Any Other Person Undertaking Response Action Specify Relationship: \_\_\_\_\_

**J. CERTIFICATION OF PERSON UNDERTAKING RESPONSE ACTION(S):**

Walter Mrozinski attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

By: [Signature] Title: COF B  
(signature)  
For: Facemate Corporation Date: 6-29-95  
(print name of person or entity recorded in Section H)

Enter address of the person providing certification, if different from address recorded in Section H:  
Street: \_\_\_\_\_  
City/Town: \_\_\_\_\_ State: \_\_\_\_\_ ZIP Code: \_\_\_\_\_  
Telephone: \_\_\_\_\_ Ext.: \_\_\_\_\_ FAX (optional) \_\_\_\_\_

**YOU MUST COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.**



**COMPREHENSIVE RESPONSE ACTION TRANSMITTAL  
FORM & PHASE I COMPLETION STATEMENT**

Release Tracking Number

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

1 - 0436

**H. PERSON UNDERTAKING RESPONSE ACTION(S):**

Name of Organization: Uniroyal-Goodrich Tire Company  
Name of Contact: Thomas F. Harrison, Esquire Title: Counsel  
Day, Berry, & Howard  
Street: Citiplace  
City/Town: Hartford State: CT ZIP Code: 06103-3499  
Telephone: (203) 275-0480 Ext.: \_\_\_\_\_ FAX (optional): 203-275-0343

Check here if there has been a change in the person undertaking the Response Action.

**I. RELATIONSHIP TO SITE OF PERSON UNDERTAKING RESPONSE ACTION(S):** (check one)

- RP or PRP Specify:  Owner  Operator  Generator  Transporter  Other RP or PRP: Former Owner
- Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)
- Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(f))
- Any Other Person Undertaking Response Action Specify Relationship: \_\_\_\_\_

**J. CERTIFICATION OF PERSON UNDERTAKING RESPONSE ACTION(S):**

I, THOMAS F. HARRISON, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

By: Thomas F. Harrison Title: Counsel  
(signature)

For: Uniroyal-Goodrich Tire Company Date: June 26, 1995  
(print name of person or entity recorded in Section H)

Enter address of the person providing certification, if different from address recorded in Section H:  
Street: \_\_\_\_\_  
City/Town: \_\_\_\_\_ State: \_\_\_\_\_ ZIP Code: \_\_\_\_\_  
Telephone: \_\_\_\_\_ Ext.: \_\_\_\_\_ FAX (optional): \_\_\_\_\_

**YOU MUST COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.**

**ENVIRONMENTAL COMPLIANCE SERVICES, INC.**  
 588 Silver Street  
 AGAWAM, MASSACHUSETTS 01001

**LETTER OF TRANSMITTAL**

TO

(413) 789-3530  
 Massachusetts DEP  
 436 Dwight Street  
 Springfield, MA 01103

|                       |                                |         |          |
|-----------------------|--------------------------------|---------|----------|
| DATE                  | 7/5/95                         | JOB NO. | 11094.00 |
| ATTENTION             | Bureau of Waste Site Cleanup   |         |          |
| RE:                   | 154 Grove Street, Chicopee, MA |         |          |
|                       | RTN #1-0436                    |         |          |
| <b>HAND DELIVERED</b> |                                |         |          |
| DATE                  | _____                          |         |          |
| REC'D. BY             | _____                          |         |          |

WE ARE SENDING YOU  Attached  Under separate cover via certified mail the following items:

- Shop drawings     Prints     Plans     Samples     Specifications  
 Copy of letter     Change order     \_\_\_\_\_

| COPIES | DATE | NO. | DESCRIPTION  |
|--------|------|-----|--|
| 1      |      | 001 | Comprehensive Response Action Transmittal Form & Phase I Completion Statement for Former Uniroyal Complex, 154 Grove Street Chicopee, MA |
|        |      |     |  |
|        |      |     |  |
|        |      |     |  |
|        |      |     |  |
|        |      |     |  |
|        |      |     |  |
|        |      |     |  |

THESE ARE TRANSMITTED as checked below:

- For approval     Approved as submitted     Resubmit \_\_\_\_\_ copies for approval  
 For your use     Approved as noted     Submit \_\_\_\_\_ copies for distribution  
 As requested     Returned for corrections     Return \_\_\_\_\_ corrected prints  
 For review and comment     \_\_\_\_\_  
 FOR BIDS DUE \_\_\_\_\_ 19 \_\_\_\_\_     PRINTS RETURNED AFTER LOAN TO US

REMARKS Please find enclosed the above listed document. If you should have questions, feel free to call.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

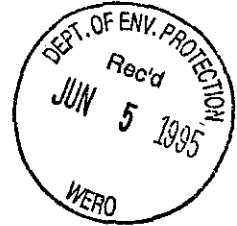
COPY TO \_\_\_\_\_

Mark C. Hellstein, LSP  
 SIGNED: \_\_\_\_\_

*If enclosures are not as noted, kindly notify us at once.*

1-0436

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE SITE CLEANUP  
POST OFFICE BOX 4062  
BOSTON, MASSACHUSETTS 02106



June 2, 1995

Mr. Kathleen Freeman  
Foley, Hoag & Elliot  
One Post Office Square  
Boston, MA 02109

Re: RTN #1-0436, Former Uniroyal Complex  
154 Grove Street, Chicopee  
M.G.L. C.21E, 310 CMR 40.0000  
Tier IA Annual Compliance Assurance Fee

Dear Ms. Freeman:

Per your request, enclosed please find documentation of the costs appearing on the Invoice for Annual Compliance Fee (Invoice) for the above-referenced release.

Enclosed is a Request for Information Report (Report), which is a detailed listing of Oversight Costs incurred, listed chronologically by Phase. Please be advised that the difference between the total of this listing and the Invoice total is due to rounding. The rate charged for each person is their actual pay rate plus a fringe rate of .45 times the pay rate. This fringe rate includes an allowance for paid leave as well as actual fringe benefits (refer to 310 CMR 40.020 "hourly rate of compensation"). Indirect costs of \$27.31/hour, as provided in 310 CMR 40.621, are also added for all personnel. Please note that the Department will not review the reasonableness or appropriateness of indirect or fringe rates. Both the indirect and fringe rates were developed with extensive input from management consulting and accounting firms prior to the promulgation of these regulations.

As explained in the cover letter accompanying the Invoice, the Tier IA Annual Compliance Assurance Fee is assessed as the actual Department staff oversight costs expended at the subject site during the billing period. This amount may not exceed \$10,000.00 per billing period of one year. Please note that the enclosed Report shows that you were billed a total of total of \$8,535.35 for the billing period from 10/1/93 through 10/1/94, and a total of \$1,782.33 from 10/2/94 through 12/31/94.

Supporting documentation for the Report may be viewed at our offices. Should you wish to review this documentation or should you have any questions, please contact Ms. Julie Harper of my staff at 617/292-5843.

Sincerely,

Robert P. Kalaghan, Acting Director  
Fiscal Management, Cost Recovery, Revenues and Administration  
Bureau of Waste Site Cleanup

cc: Elizabeth Jones, WRO

OVERSIGHT COST RECOVERY REQUEST FOR INFORMATION REPORT

Site: 1-0436 UNIROVAL COMPLEX - FMT  
154 GROVE ST  
CHICOPEE

Page No.: 1  
Report Date: 05/23/95  
ACF DATE - 05/12/95

| Phase   | Week Ending | Last Name        | First Name | Activity Code & Name   | Hours  | Dollars  |
|---|-------------|------------------|------------|--|--------|----------|
| <u>Beginning of Listing for Period 10/1/93 to 10/1/94</u> |             |                  |            |  |        |          |
| 2   | 10/16/93    | JONES            | ELIZABETH  | SCA42 a REVIEW OF REPORTS                                    | 0.50   | 28.51    |
| 2   | 01/29/94    | JONES            | ELIZABETH  | SCA42 a REVIEW OF REPORTS                                    | 1.00   | 57.01    |
| 2   | 02/12/94    | JONES            | ELIZABETH  | SCA42 a REVIEW OF REPORTS                                    | 1.50   | 85.52    |
| 2   | 02/12/94    | JONES            | ELIZABETH  | SCA43 a COMMUNICATIONS WITH PRPS OR THEIR AGENTS             | 0.50   | 28.51    |
| 2   | 02/19/94    | JONES            | ELIZABETH  | SCA46 a OTHER SITE MANAGEMENT ACTIVITIES                     | 0.50   | 28.51    |
| 2   | 02/19/94    | JONES            | ELIZABETH  | SCA42 a REVIEW OF REPORTS                                    | 1.50   | 85.52    |
| 2   | 03/19/94    | JONES            | ELIZABETH  | SCA42 a REVIEW OF REPORTS                                    | 4.50   | 256.55   |
| 2   | 03/26/94    | JONES            | ELIZABETH  | SCA43 a COMMUNICATIONS WITH PRPS OR THEIR AGENTS             | 0.50   | 28.51    |
| 2   | 04/02/94    | JONES            | ELIZABETH  | SCA65 EPA PREL ASSESSMENTS/SITE INVESTIGATIONS/WORK PRODUCTS | 2.00   | 114.02   |
| 2   | 04/23/94    | JONES            | ELIZABETH  | SCA46 a OTHER SITE MANAGEMENT ACTIVITIES                     | 1.00   | 57.01    |
| 2   | 04/23/94    | JONES            | ELIZABETH  | SCA65 EPA PREL ASSESSMENTS/SITE INVESTIGATIONS/WORK PRODUCTS | 4.50   | 256.55   |
| 2   | 05/07/94    | JONES            | ELIZABETH  | SCA43 a COMMUNICATIONS WITH PRPS OR THEIR AGENTS             | 0.50   | 28.51    |
| 2   | 05/14/94    | JONES            | ELIZABETH  | SCA42 a REVIEW OF REPORTS                                    | 6.00   | 342.07   |
| 2   | 05/14/94    | JONES            | ELIZABETH  | SCA65 EPA PREL ASSESSMENTS/SITE INVESTIGATIONS/WORK PRODUCTS | 0.50   | 28.51    |
| 2   | 05/14/94    | JONES            | ELIZABETH  | SCA41 a FIELD OVERSIGHT                                      | 3.00   | 171.03   |
| 2   | 06/04/94    | JONES            | ELIZABETH  | SCA42 a REVIEW OF REPORTS                                    | 2.00   | 116.26   |
| 2   | 06/04/94    | JONES            | ELIZABETH  | SCA65 EPA PREL ASSESSMENTS/SITE INVESTIGATIONS/WORK PRODUCTS | 10.00  | 581.32   |
| 2   | 06/04/94    | JONES            | ELIZABETH  | SCA41 a FIELD OVERSIGHT                                      | 1.00   | 58.13    |
| 2   | 06/04/94    | JONES            | ELIZABETH  | SCA46 a OTHER SITE MANAGEMENT ACTIVITIES                     | 2.00   | 116.26   |
| 2   | 06/11/94    | JONES            | ELIZABETH  | SCA43 a COMMUNICATIONS WITH PRPS OR THEIR AGENTS             | 0.50   | 29.07    |
| 2   | 06/11/94    | JONES            | ELIZABETH  | SCA46 a OTHER SITE MANAGEMENT ACTIVITIES                     | 3.50   | 203.46   |
| 2   | 06/11/94    | JONES            | ELIZABETH  | SCA43 a COMMUNICATIONS WITH PRPS OR THEIR AGENTS             | 2.00   | 116.26   |
| 2   | 06/11/94    | JONES            | ELIZABETH  | SCA41 a FIELD OVERSIGHT                                      | 1.00   | 58.13    |
| 2   | 06/11/94    | JONES            | ELIZABETH  | SCA65 EPA PREL ASSESSMENTS/SITE INVESTIGATIONS/WORK PRODUCTS | 4.50   | 261.59   |
| 2   | 06/18/94    | JONES            | ELIZABETH  | SCA65 EPA PREL ASSESSMENTS/SITE INVESTIGATIONS/WORK PRODUCTS | 17.50  | 1,017.30 |
| 2   | 06/25/94    | JONES            | ELIZABETH  | SCA65 EPA PREL ASSESSMENTS/SITE INVESTIGATIONS/WORK PRODUCTS | 23.50  | 1,366.09 |
| 2   | 07/09/94    | JONES            | ELIZABETH  | SCA46 a OTHER SITE MANAGEMENT ACTIVITIES                     | 1.00   | 58.13    |
| 2   | 08/06/94    | BENGOCHEA AGOLIA | ALICIA     | SCA65 EPA PREL ASSESSMENTS/SITE INVESTIGATIONS/WORK PRODUCTS | 8.50   | 461.69   |
| 2   | 08/06/94    | REED             | MICHAEL    | SCA65 EPA PREL ASSESSMENTS/SITE INVESTIGATIONS/WORK PRODUCTS | 3.75   | 213.79   |
| 2   | 08/13/94    | BENGOCHEA AGOLIA | ALICIA     | SCA65 EPA PREL ASSESSMENTS/SITE INVESTIGATIONS/WORK PRODUCTS | 7.00   | 380.21   |
| 2   | 08/13/94    | REED             | MICHAEL    | SCA65 EPA PREL ASSESSMENTS/SITE INVESTIGATIONS/WORK PRODUCTS | 10.25  | 584.37   |
| 2   | 08/20/94    | BENGOCHEA AGOLIA | ALICIA     | SCA65 EPA PREL ASSESSMENTS/SITE INVESTIGATIONS/WORK PRODUCTS | 3.50   | 190.11   |
| 2   | 08/20/94    | JONES            | ELIZABETH  | SCA46 a OTHER SITE MANAGEMENT ACTIVITIES                     | 2.00   | 116.26   |
| 2   | 08/20/94    | JONES            | ELIZABETH  | SCA41 a FIELD OVERSIGHT                                      | 5.50   | 319.72   |
| 2   | 09/03/94    | JONES            | ELIZABETH  | SCA41 a FIELD OVERSIGHT                                      | 1.50   | 87.20    |
| 2   | 09/17/94    | JONES            | ELIZABETH  | SCA46 a OTHER SITE MANAGEMENT ACTIVITIES                     | 0.50   | 29.07    |
| 2   | 10/01/94    | JONES            | ELIZABETH  | SCA43 a COMMUNICATIONS WITH PRPS OR THEIR AGENTS             | 2.00   | 116.26   |
| 2   | 10/01/94    | JONES            | ELIZABETH  | SCA41 a FIELD OVERSIGHT                                      | 1.50   | 87.20    |
| 2   | 10/01/94    | JONES            | ELIZABETH  | SCA46 a OTHER SITE MANAGEMENT ACTIVITIES                     | 0.50   | 29.07    |
| Total for Phase 2   |             |                  |            |  | 143.00 | 8,193.28 |
| 6   | 10/09/93    | JONES            | ELIZABETH  | SCA11 b EMERGENCY RESPONSE ACTIONS (IRAS)                    | 6.00   | 342.07   |
| Total for Phase 6   |             |                  |            |  | 6.00   | 342.07   |
| Total for Period 10/2/93 to 10/1/94                       |             |                  |            |  | 149.00 | 8,535.35 |



OVERSIGHT COST RECOVERY REQUEST FOR INFORMATION REPORT

Page No.: 2  
 Report Date: 05/23/95  
 ACF DATE - 05/12/95

Site: 1-0436 UNIROVAL COMPLEX - FMR  
 154 GROVE ST  
 CHICOPEE

| Phase   | Week Ending | Last Name | First Name                                       | Activity Code & Name   | Hours | Dollars  |
|---|-------------|-----------|--|--|-------|----------|
| <u>Beginning of Listing for Period 10/2/94 - 12/31/94</u> |             |           |  |  |       |          |
| 2   | 10/08/94    | REED      | MICHAEL  | SCA65 EPA PREL ASSESSMENTS/SITE INVESTIGATIONS/WORK PRODUCTS   | 0.75  | 42.76    |
| 2   | 10/15/94    | REED      | MICHAEL  | SCA65 EPA PREL ASSESSMENTS/SITE INVESTIGATIONS/WORK PRODUCTS   | 1.00  | 57.01    |
| 2   | 10/29/94    | JONES     | ELIZABETH  | SCA65 EPA PREL ASSESSMENTS/SITE INVESTIGATIONS/WORK PRODUCTS   | 1.00  | 58.13    |
| 2   | 11/05/94    | REED      | MICHAEL  | SCA65 EPA PREL ASSESSMENTS/SITE INVESTIGATIONS/WORK PRODUCTS   | 0.25  | 14.25    |
| 2   | 11/12/94    | JONES     | ELIZABETH  | SCA77 a OTHER PUBLIC PARTICIPATION ACTIVITIES & COMMUNICATIONS | 0.50  | 29.07    |
| 2   | 11/12/94    | REED      | MICHAEL  | SCA46 a OTHER SITE MANAGEMENT ACTIVITIES                       | 0.50  | 28.51    |
| 2   | 11/19/94    | REED      | MICHAEL  | SCA65 EPA PREL ASSESSMENTS/SITE INVESTIGATIONS/WORK PRODUCTS   | 8.25  | 470.34   |
| 2   | 12/03/94    | JONES     | ELIZABETH  | SCA43 a COMMUNICATIONS WITH PRPS OR THEIR AGENTS               | 0.50  | 29.07    |
| 2   | 12/03/94    | REED      | MICHAEL  | SCA65 EPA PREL ASSESSMENTS/SITE INVESTIGATIONS/WORK PRODUCTS   | 6.00  | 342.07   |
| 2   | 12/10/94    | GREEN     | SCA43 a COMMUNICATIONS WITH PRPS OR THEIR AGENTS | 0.25   | 16.91 |          |
| 2   | 12/10/94    | JONES     | ELIZABETH  | SCA46 a OTHER SITE MANAGEMENT ACTIVITIES                       | 1.50  | 87.20    |
| 2   | 12/10/94    | REED      | MICHAEL  | SCA65 EPA PREL ASSESSMENTS/SITE INVESTIGATIONS/WORK PRODUCTS   | 3.00  | 171.03   |
| 2   | 12/17/94    | JONES     | ELIZABETH  | SCA46 a OTHER SITE MANAGEMENT ACTIVITIES                       | 1.00  | 58.13    |
| 2   | 12/24/94    | JONES     | ELIZABETH  | SCA46 a OTHER SITE MANAGEMENT ACTIVITIES                       | 6.50  | 377.86   |
| Total for Phase 2   |             |           |  |  | 31.00 | 1,782.33 |

Total for Period 10/2/94 - 12/31/94

Total:

-- End of Report --

MEMORANDUM

TO: Site File, Uniroyal Complex, Chicopee 1-0436  
FROM: Lisa Jones, Site Manager *LJ*  
RE: Phase II SOW Submittal  
DATE: May 17, 1995

---

Page Fallon of ECS called to request a one week extension for the submittal of the revised Phase II SOW. The Department granted his request and agreed to the submittal date of May 31, 1995. \_\_\_\_\_

5 FILE COPY



Commonwealth of Massachusetts  
Executive Office of Environmental Affairs

**Department of  
Environmental Protection**  
Western Regional Office

**William F. Weld**  
Governor  
**Trudy Coxe**  
Secretary, EOE  
**David B. Struhs**  
Commissioner

May 11, 1995

**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

David C. Minc , Esquire  
Uniroyal Goodrich Tire Company  
600 South Main Street  
Akron, Ohio 44397-0001

**Re: Chicopee; Site # 1-0436;  
Former Uniroyal Complex;  
Permit # 78745.**

Mr. Ed Mrozinski  
Facemate Corporation  
5 West Main Street  
Chicopee, Mass 01020

Dear Messrs Minc and Mrozinski:

Attached please find the revised pages of the Transition Classification and Permit Statement ("Statement") and the cover letter dated March 23, 1995 for the above referenced site. These changes are made in order to accommodate the recent revisions to the Massachusetts Contingency Plan (MCP), 310 CMR 40.0600.

As part of the revised MCP, the recipients of a Transition Statement have the option of submitting a Response Action Outcome (RAO) prepared in accordance with 310 CMR 40.1000 to the Department. The RAO will not become effective until it is approved by the Department. Should option 3 of the revised Statement be selected, the Categorical Tier IA classification of this site and the applicable Annual Compliance Fee will remain in effect until the RAO is approved or as otherwise determined by the Department.


Please replace pages 6 and 7 of the Transition Statement already in your possession with the attached pages (revised pages 5, 6 and 7 of Statement and pages 2 and 3 of the cover letter).

Please note that with the exception of the attached pages, all other portions of the Statement, issued on March 23, 1995 including the cover letter, the applicable deadlines and any attachments thereto shall remain the same.

Messrs Minc and Mrozinski  
Former Uniroyal Complex  
Page 2

If you have any questions please contact Mr. Saadi Motamedi at  
413/784-1100 extension 224.

Sincerely,

  
Richard M. Green  
Section Chief  
Site Management/Permits  
Bureau of Waste Site Cleanup

Attachments

Certified Mail #: Z 276 663 506  
Z 276 663 507

RMG/SM1-0436.let /mr

CC (w/o Attachments):

Chicopee Chief Municipal Official  
Chicopee Board of Health  
Captain Czepiel, Chicopee Fire Department  
Stanley Kulig, Chicopee Superintendent of Public Works  
Chicopee Conservation Commission  
Jeanne Kidwell, Chicopee Community Development Office

CC (w/ Attachments):

Ellyn Weiss, Esq.; Foley, Hoag & Eliot  
One Post Office Square, Boston, Mass 02109

Thomas Harrison, Esq.; Day, Berry & Howard  
City Place, Hartford, Ct 06103-3499

Marianne Milette, USEPA Region One, TSCA Program-Enforcement  
Division, JFK Federal Building-AEO,  
Boston, Mass 02203-2211

Page Fallon, ECS  
Ronald Clark, Environmental Mitigation Group  
Site Files, BWSC, DEP, WERO  
Permit Files, BWSC, DEP, WERO  
Elizabeth Jones, BWSC, DEP, WERO

## TRANSITION PERMIT STATEMENT

The new MCP does not require submittal of a new permit application for priority disposal sites. Instead, DEP will issue a "Transition Classification and Permit Statement" (Transition Statement) to those with potential liability under MGL c.21E §5 which describes the site's classification and the terms of the transition permit. This Statement, if signed and dated by the PRP, or other person performing the response actions, becomes a valid Tier I permit for the site effective upon its receipt by the Department.

The Transition Statement for the above-referenced site is attached for your review and action. According to 310 CMR 40.0640(3), you must return the Transition Statement to DEP within 120 days of your receipt of this letter indicating whether you (1) accept the terms of the Transition Statement, (2) disagree with DEP's classification of the site, or (3) do not accept the terms of the Transition Statement. These options are as follows:

(1) Accept Transition Statement: To accept the terms of the Transition Statement, please sign and date both copies of the Statement at Paragraph "1" and return one copy to this office. (Please also send a copy of one of the signed Transition Statements to the Chief Municipal Official and Chairman of the Board of Health.) Annual Compliance Fees for Tier IA will be assessed starting October 1, 1993. The Tier IA Transition Permit is effective upon the Department's receipt of the signed and dated Transition Statement [310 CMR 40.0640(3)(b)1.a].

(2) Disagree with Transition Statement: If you do not agree with the Department's determination that this site should be classified as Tier IA because, in the Opinion of an LSP, the site should be reclassified as IB, IC, or Tier II, sign and date both copies of the Statement at Paragraph "2" and return one copy to this office within 120 days. (Please also send a copy of one of the signed Transition Statements to the Chief Municipal Official and Chairman of the Board of Health.) In order to change the site's permit category and in order to continue response actions at the subject site, you must obtain a Major Permit Modification from DEP. To do so, you must submit a "Major Permit Modification" application (310 CMR 40.0707), which includes an LSP Tier Classification Opinion, and fee of \$1200. This application will then be processed according to the provisions of 310 CMR 40.0700. The appropriate Annual Compliance Fee will be determined pending the outcome of the permit modification.

If you wish to conduct assessment activities (such as the sampling of existing monitoring wells, the sampling of surficial soils, and the monitoring of vapors inside buildings) within 120 days in an effort to document a lower Tier Classification for the purposes of filing a Major Permit Modification with DEP, you may do so. However, "intrusive" assessment activities (subsurface investigations involving test pits, new monitoring wells, and soil borings, etc.), will require prior DEP approval, unless they are being done as part of a response action which already has DEP approval.

(3) Do Not Accept Transition Statement: If you do not agree with the Department's determination that this site should be classified as a Tier IA since in the Opinion of a LSP a Response Action Outcome (RAO) pursuant to 310 CMR 40.1000 has been achieved at the disposal site, sign and date both copies of the Statement at Paragraph "3" and return one copy

# Transition Statements

**Note:** Each Permittee must complete this section as well as the certification on Page 7. For disposal sites with more than one Permittee, make copies of this section, have each Permittee complete this information, and submit all copies to the Department.

Check one of the following to indicate your response and then sign the appropriate paragraph (1 through 3) and the Certification of Submittal:

- I accept the Transition Permit (sign "1")
- I do not accept the Transition Permit and I am attaching a Major Permit Modification application (sign "2")
- I do not accept the Transition Permit and I am attaching a Response Action Outcome (sign "3")
- I do not accept the Transition Permit and I intend to conduct response actions which were approved by the Department prior to October 1, 1993. (sign "4-A")
- I do not accept the Transition Permit and I do not intend to conduct response actions which were approved by the Department prior to October 1, 1993 (sign "4-B").

## 1. Transition Permit Acceptance Statement

I accept and agree to conduct all response actions pursuant to the terms and conditions of any and all Department approvals that are in effect as of October 1, 1993 as shown in **Attachment B1**. I agree to conduct all future response actions at this disposal site which are not subject to an existing Department approval in accordance with this Permit and the provisions of 310 CMR 40.0000, including response actions with approvals pending on October 1, 1993 and subsequently approved and listed in **Attachment B2**. I believe that I have the technical, financial, and legal ability to proceed with response actions at this site in accordance with M.G.L. c. 21E, 310 CMR 40.0000 and other applicable requirements. I am aware of the requirements set forth in 310 CMR 40.0172 for notifying the Department in the event that I am unable to proceed with such response actions.

Name (Print): \_\_\_\_\_  
Position or title: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

## 2. Transition Statement (if not accepting Transition Permit and attaching Major Permit Modification application).

I do not accept the enclosed Transition Permit, since the disposal site, in the Opinion of an LSP may be reclassified as Tier \_\_\_\_\_ (Insert Tier IB, IC, or Tier II, whichever is applicable). I am attaching a Major Permit Modification application pursuant to 310 CMR 40.0707.

Name (Print): \_\_\_\_\_  
Position or title: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

**3. Transition Statement (if not accepting Transition Permit and submitting a Response Action Outcome).**

I do not accept the enclosed Transition Permit since in the opinion of a LSP a Class \_\_\_\_ (insert A or B only) Response Action Outcome (RAO) pursuant to 310 CMR 40.1000 has been achieved at this disposal site. I have included with this Transition Permit a RAO Statement and its supporting documents prepared pursuant to 310 CMR 40.1000. I understand that unless otherwise indicated by the Department, this RAO will not become effective until it is approved by the Department.

Name (Print): \_\_\_\_\_  
Position or title: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

**4. Transition Statement if not accepting Transition Permit and providing statement regarding future response actions at the disposal site.**

**4-A. RP/PRP/Other Person intends to conduct response actions approved by DEP prior to October 1, 1993.**

I do not accept the enclosed Transition Permit, however, I intend to conduct response actions which were approved by the Department prior to October 1, 1993. I have attached and incorporated within this Statement a schedule for when this work will be completed and a Status Report indicating whether one or more Temporary and/or Permanent Solutions have been achieved or will be achieved at the disposal site, including an LSP Opinion regarding the completion of response actions to date and the response actions remaining in order to achieve a Temporary or Permanent solution at the disposal site.

Name (Print): \_\_\_\_\_  
Position or title: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

**4-B. RP/PRP/Other Person does not intend to conduct response actions approved by DEP prior to October 1, 1993.**

I do not accept the enclosed Transition Permit and do not intend to conduct response actions including any response actions approved by the Department prior to October 1, 1993. I have attached an explanation of why I will not continue with response actions at the disposal site including, where appropriate, an explanation of any technical, financial, or legal inabilities that preclude me from undertaking response actions at the disposal site as outlined in 310 CMR 40.0172. I have attached and incorporated within this Statement, a Status Report indicating whether one or more Temporary and/or Permanent Solutions have been achieved or will be achieved at the disposal site, including an LSP Opinion regarding the completion of response actions to date and the response actions remaining in order to achieve a Temporary or Permanent Solution at the disposal site.

Name (Print): \_\_\_\_\_  
Position or title: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

**Certification of Submittal (The above signatory must also sign the following certification)**

I certify under the penalties of law that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this certification, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained herein is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for wilfully submitting false, inaccurate or incomplete information.

Name (Print):

\_\_\_\_\_

Position or title:

\_\_\_\_\_

Signature:

\_\_\_\_\_

Date:

\_\_\_\_\_





**ENVIRONMENTAL  
MITIGATION GROUP**

450 GRANT STREET SUITE 201  
AKRON, OHIO 44311  
216/375-5123 FAX: 216/375-9485

1-0436



March 29, 1995

Mr. Alan Weinberg  
Commonwealth of Massachusetts  
Department of Environmental Protection  
Western Regional Office  
436 Dwight Street  
Springfield, Massachusetts 01103

RE: Chicopee; 1-0436;  
Former Uniroyal Complex  
154 Grove Street  
Permit #78745

Dear Mr. Weinberg:

I appreciate being put on the distribution list for your March 23, 1995 letter relative to the above-referenced site.

Please note our new address:

Ronald R. Clark, Vice President  
EMG, Inc.  
450 Grant Street, Suite 201  
Akron, Ohio 44311

Thank you.

Sincerely,

EMG, Inc.

R. R. Clark  
Vice President



Commonwealth of Massachusetts  
Executive Office of Environmental Affairs  
**Department of  
Environmental Protection**  
Western Regional Office

FILE COPY

William F. Weld  
Governor

Trudy Coxe  
Secretary, EOE

Thomas B. Powers  
Acting Commissioner

March 23, 1995

**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

David C. Minc, Esquire  
Uniroyal Goodrich Tire Company  
600 South Main Street  
Akron, OH 44397-0001

Mr. Ed Mrozinski  
Facemate Corporation  
5 West Main Street  
Chicopee, MA 01020

**Re: Chicopee; 1-0436;  
Former Uniroyal Complex  
154 Grove Street  
Permit # 78745**

Dear Mr. Minc and Mr. Mrozinski:

The Massachusetts Department of Environmental Protection (DEP) has redesigned the Waste Site Cleanup Program. The revised Massachusetts Contingency Plan ("MCP") and related fee regulations (310 CMR 4.00) became effective on October 1, 1993. The new MCP (310 CMR 40.0000) includes specific requirements for sites which had been classified as "priority disposal sites" under the 1988 version of the MCP in order for them to make the transition into the redesigned program. (See enclosed Transition Fact Sheet #5 for more information.)

This letter is being sent to you regarding the above-referenced site which was previously classified as a "priority disposal site" and listed as such on DEP's August 1993 Transition List of Confirmed Disposal Sites and Locations to Be Investigated, or Addendum thereto. **Uniroyal Goodrich Tire Company and Facemate Corporation** have been previously identified as a "Potential Responsible Parties" (PRPs) for the above-referenced site with liability under MGL c.21E §5.

**EXISTING APPROVALS**

Response actions which received DEP approval prior to October 1, 1993, must continue in accordance with the terms of the approval [see 310 CMR 40.0640(1)(c)]. An LSP may be engaged or employed, but is not required, to oversee response actions previously-approved by DEP. If an LSP is engaged or employed, he or she should be identified to DEP. Once work under existing approvals is complete, all future response actions must be conducted according to the terms of the revised MCP and

Chicopee; 1-0436  
Former Uniroyal Complex

will require the use of an LSP.

The above-referenced site has the following approval(s) for response actions:

- \* Review of Phase I Report; June 11, 1993
- \* Site Classification; June 9, 1993
- \* Approval of Short Term Measure (STM) re: Oil Sheen & Odor Control; November 6, 1991
- \* Approval of STM re: Polychlorinated biphenyls (PCBs) in Oak Street Pump Station - Sampling and Dye Tests; October 10, 1991
- \* Approval of STMs, Part I - Free Phase Product Bailing and Plume Delineation, Part II - PCB Contaminated Soil: Cover, Fence, and Control Access (proposal dated June 17, 1991; revised proposal dated July 24, 1991); August 6, 1991
- \* Preliminary Review of Phase I Report, Short Term Measures (STM) Required & STM Proposed; June 25, 1991
- \* Notice of Responsibility to Uniroyal, Inc.; June 25, 1991
- \* Second Notice of Responsibility to Facemate Corporation; November 5, 1990
- \* Approval of STM - Product Bailing; September 14, 1990
- \* Approval for Disposal of PCB contaminated storm water; DEP DWPC Correspondence, December 7, 1989
- \* Notice of Responsibility to Facemate Corporation; March 11, 1988

These approvals are also included in Attachment B(1) of the Transition Statement. These response actions must continue until they are completed.

#### APPROVALS FOR REPORTS/PROPOSALS SUBMITTED PRIOR TO 10/1/93

The Transition provisions [310 CMR 40.0640(5)] of the new MCP also address situations where scopes of work, reports, or portions of reports may have been submitted to DEP prior to October 1, 1993, but which have not been reviewed/approved by DEP as of October 1, 1993.

DEP received a proposal for the removal and disposal of PCB contaminated sediments from the Oak Street Flood Control Station. The request was prepared by Tom Hamel, Chief Operator, Chicopee Water Pollution Control Division of the City of Chicopee Department of Public Works and was dated September 20, 1993. The Department verbally approved this proposal as an Interim Measure (IM) on September 20, 1993 and documented the approval in a letter dated October 19, 1993. As a follow-up activity to the completion of the IM, a letter documenting the cleanup was submitted by Environmental Products & Services, Inc., and is dated December 12, 1994.

DEP also received a proposal for a Phase II Comprehensive Site Assessment, which was prepared by Environmental Compliance Services, Inc. and is dated August 27, 1993. DEP has completed the review of this Phase II Scopo of Work (SOW) and is issuing a "Review of Proposal" to identify

Chicopee; 1-0436  
Former Umroyal Complex

specific approved tasks and the conditions of their approval, and to request that supplemental information and additional tasks be incorporated into a revised Phase II SOW. This review and approval is included in Attachment B(2) of the Transition Statement.

It should be noted that response actions other than those included in this approval must be done according to the revised MCP.

#### TRANSITION CLASSIFICATION

Under the new MCP, sites will be classified as either Tier I or Tier II. All Tier I sites require permits to proceed with assessment and remediation. Sites classified as Tier IA will be managed by a Licensed Site Professional (LSP) under the Department's direct oversight. Tier IB and IC sites will be managed by LSPs and will not receive direct oversight by DEP, but will be subject to DEP audit.

The Transition regulations of the new MCP (310 CMR 40.0640), categorically classify all sites which had been listed as "priority disposal sites" as Tier IA sites. Therefore, the above-referenced site is Tier IA.

#### SPECIAL CONDITIONS

Because the Department has discovered, on numerous occasions, leaks of askarel (40 to 60 % PCB content) oil from electrical transformers and switches, and because of a concern for the inadequate containment provided by these deteriorating units, the Department is imposing Special Conditions within this Permit. The Special Conditions will require you to control leaking sources by completing the following actions:

- 1) Within one hundred twenty (120) days from the effective date of this permit, remove and dispose of all askarel oil from all electrical equipment, which is classified under federal regulations, and listed by Facemate Corporation as "stored for re-use",
- 2) Within five (5) years from the effective date of this permit, remove and properly dispose of or recycle, all units which were drained of askarel oil.

A plan to perform the above actions must be submitted in writing to the Department within fifteen (15) days of the effective date of the Transition Permit. The submittal should meet the requirements of a Release Abatement Measure (RAM) Plan in accordance with 310 CMR 40.0441 in Subpart D of the new MCP. In addition to the procedures for the performance of the above actions, the RAM Plan shall contain specific schedules, dates, and timelines for the performance of the actions.

These Special Conditions and a copy of a memo regarding the PCB Compliance Inspection by the US EPA and the Department's followup with the US EPA - Toxic Substance Control Act Enforcement Division are included in Attachment A.

Chicopee; 1-0436  
Former Uniroyal Complex

### TRANSITION PERMIT STATEMENT

The new MCP does not require submittal of a new permit application for priority disposal sites. Instead, DEP will issue a "Transition Classification and Permit Statement" (Transition Statement) to those with potential liability under MGL c.21E §5 which describes the site's classification and the terms of the transition permit. This Statement, if signed and dated by the PRP, or other person performing the response actions, becomes a valid Tier I permit for the site effective upon its receipt by the Department.

The Transition Statement for the above-referenced site is attached for your review and action. According to 310 CMR 40.0640(3), you must return the Transition Statement to DEP within 120 days of your receipt of this letter indicating whether you (1) accept the terms of the Transition Statement, (2) disagree with DEP's classification of the site, or (3) do not accept the terms of the Transition Statement. These options are as follows:

(1) Accept Transition Statement: To accept the terms of the Transition Statement, please sign and date both copies of the Statement at Paragraph "1" and return one copy to this office. (Please also send a copy of one of the signed Transition Statements to the Chief Municipal Official and Chairman of the Board of Health.) Annual Compliance Fees for Tier IA will be assessed starting October 1, 1993. The Tier IA Transition Permit is effective upon the Department's receipt of the signed and dated Transition Statement [310 CMR 40.0640(3)(b)1.a].

(2) Disagree with Transition Statement: If you do not agree with the Department's determination that this site should be classified as Tier IA because, in the Opinion of an LSP, the site should be reclassified as IB, IC, or Tier II, sign and date both copies of the Statement at Paragraph "2" and return one copy to this office within 120 days. (Please also send a copy of one of the signed Transition Statements to the Chief Municipal Official and Chairman of the Board of Health.) In order to change the site's permit category and in order to continue response actions at the subject site, you must obtain a Major Permit Modification from DEP. To do so, you must submit a "Major Permit Modification" application (310 CMR 40.0707), which includes an LSP Tier Classification Opinion, and fee of \$1200. This application will then be processed according to the provisions of 310 CM 40.0700. The appropriate Annual Compliance Fee will be determined pending the outcome of the permit modification.

If you wish to conduct assessment activities (such as the sampling of existing monitoring wells, the sampling of surficial soils, and the monitoring of vapors inside buildings) within 120 days in an effort to document a lower Tier Classification for the purposes of filing a Major Permit Modification with DEP, you may do so. However, "intrusive" assessment activities (subsurface investigations involving test pits, new monitoring wells, and soil borings, etc.), will require prior DEP approval, unless they are being done as part of a response action which already has DEP approval.

Chicopee; 1-0436  
Former Umroyal Complex

(3) Do Not Accept Transition Statement: If you do not accept this Transition Statement, you must sign and date the Statement at Paragraph "3-A" or "3-B" and return one copy to this office. (Please also send a copy of one of the signed Transition Statements to the Chief Municipal Official and Chairman of the Board of Health.) You must also indicate whether or not you intend to conduct any response actions which were approved by DEP prior to October 1, 1993. If you do not intend to conduct such response actions, you must include an explanation pursuant to 310 CMR 40.0171 and 40.0172. If you do intend to conduct these response actions, you must include a schedule for completing them.

Whether or not you intend to complete work previously approved, you must submit a Status Report which includes an LSP Opinion as to whether a Temporary or Permanent Solution has been or will be achieved at the site, and if not, the response actions necessary to do so [310 CMR 40.0640(3)(b)3].

Please note that if this site is adjacent to another disposal site where response actions are being conducted, it may be necessary to coordinate your response actions with those being undertaken on the adjacent site. All persons authorized to conduct response actions under a Tier I permit must comply at all times with MGL c. 21E, 310 CMR 40.0000, permit terms and conditions and any other applicable federal, state, and local law. Failure to comply with all applicable requirements shall be cause for the Department to initiate enforcement action, including, without limitation, permit suspension and revocation.

If the enclosed Transition Statement is not returned to the Department within 120 days of its receipt, or if the Statement indicates that you do not accept the Transition Permit under paragraph (3) above, the Annual Compliance Fee for Tier IB sites (\$2,600) will be assessed, beginning on the day after such Transition Statement is due [310 CMR 40.0640(4)]. In addition, DEP may commence appropriate enforcement actions to ensure that the required response actions for the above-referenced site are initiated and completed in a timely manner.

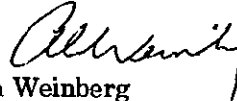
Please note that should there be more than one PRP performing response actions at the above-referenced site, all must sign the Transition Statement and are encouraged to designate a Primary Representative.

We recognize that there may be difficulties and confusion during the transition of existing sites from the old MCP to the new MCP. The new MCP, however, offers many incentives and opportunities for streamlined, timely, and efficient cleanups. It is our intent to provide you with as smooth a transition as possible.

Chicopee; 1-0436  
Former Uniroyal Complex

Should you have any questions about this letter or the Transition Statement, please contact Lisa Jones at (413) 784-1100 X 248 or at the above address.

Sincerely,



Alan Weinberg  
Regional Engineer  
Bureau of Waste Site Cleanup

**CERTIFIED MAIL NO: Z 082 547 806 to Uniroyal Goodrich Company**  
**CERTIFIED MAIL NO: Z 082 547 807 to Facemate Corporation**

Attachments: Summary of Redesigned Program  
Fact Sheet on LSPs  
Transition Fact Sheet #5  
310 CMR 40.0730

cc (w/o Attachments):

Mayor of Chicopee  
Chicopee Board of Health  
Captain Czepiel, Chicopee Fire Dept.  
Stanley Kulig, Superintendent of Public Works, Chicopee  
Chicopee Conservation Commission  
Jeanne Kidwell, Chicopee Community Development Office  
WERO, BWSC, Permit Files  
WERO, BWSC, Site Files

cc (w/Attachments):

Attorney for Facemate: Ellyn Weiss, Esq., Foley, Hoag & Eliot, One Post Office Square, Boston, MA 02109  
Attorney for Uniroyal: Thomas Harrison, Esq., Day, Berry, & Howard, City Place, Hartford, CT 06103-3499  
Marianne Milette, US EPA - Region I, TSCA Program - Enforcement Division, JFK Federal Building - AEO, Boston, MA 02203-2211  
Page Fallon, Environmental Compliance Services, Inc.  
Ronald Clark, Environmental Mitigation Group

/mr

Massachusetts Department of Environmental Protection  
Bureau of Waste Site Cleanup (BWSC)

**TIER I TRANSITION CLASSIFICATION AND PERMIT STATEMENT**

*This Permit is Issued to:*

- One Permittee  
 More than One Permittee\*

\*A list of all Permittees is attached.

*For DEP Use Only*

*Effective Date:*  
*Expiration Date:*

One Permittee:

Name of Organization: \_\_\_\_\_  
Permittee Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Street: \_\_\_\_\_  
City/Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip code: \_\_\_\_\_  
Telephone: \_\_\_\_\_

***DEP Finding Concerning Tier Classification***

Transition Tier IA (BWSC04)  Transition Tier IB (BWSC05) Permit No. **78745**

This permit authorizes comprehensive remedial response actions at:

Disposal Site Number: 1-0000436  
Disposal Site Name: Former Uniroyal Complex  
Street: 154 Grove Street  
City/Town: Chicopee State: MA Zip code: 01020

The Permittee has 120 days from receipt of this Transition Permit to sign and submit the Transition Statement. This permit shall be effective upon the Department's receipt of the signed and dated Transition Statement.

This permit shall expire 5 years from its effective date.



**List of Permittees:**

Facemate Corporation  
5 West Main Street  
Chicopee, MA 01020  
Contact: Mr. Ed Mrozinski  
(413) 594-6661

Uniroyal Goodrich Tire Company  
600 South Main Street  
Akron, OH 44397-0001  
Contact: David C. Minc, Esquire

## ***Permit Conditions***

- (1) All response actions conducted pursuant to this Tier I Permit shall comply at all times with M.G.L. c. 21E, 310 CMR 40.0000, the terms and conditions of the permit and any other applicable federal, state or local law.
- (2) In every proceeding, the burden shall be on the Permittee to demonstrate compliance with the terms and conditions of a permit at all times.
- (3) Each Permittee shall comply with:
  - (a) submittal of a Class A, B or C Response Action Outcome Statement within five years of the effective date of the permit, unless otherwise provided in the permit;
  - (b) submittal of a copy of the signed and completed Transition Classification and Permit Statement to the Chief Municipal Officer(s) and the local boards of health for the communities where the disposal site is located.
  - (c) notification in writing to the Department:
    1. as required in 310 CMR 40.0500;
    2. upon gaining knowledge of any technical, financial or legal inability to perform any necessary response action, in accordance with 310 CMR 40.0172;
    3. upon a decision by a permittee who is performing response actions as an Other Person to not proceed as required by the permit; and
    4. of any change in the LSP of Record for the disposal site no later than ten days after the effective date of such change through the filing of a Minor Permit Modification by the permittee in accordance with 310 CMR 40.0725;
  - (d) compliance with:
    1. all applicable submittal requirements, including but not limited to, scopes of work, Status Reports, Completion Statements, Phase Reports, and RAOs;
    2. all requirements for record keeping and document retention, including but not limited to 310 CMR 40.0014, 310 CMR 40.0022 and 310 CMR 40.0023;
    3. the Notification Regulations, 310 CMR 40.0300, in the event of discovery of a new releases located at the disposal site, threat of release or Imminent Hazard;
    4. the management procedures for excavated soils and wastes and requirements for remedial air emissions set forth in 310 CMR 40.0030 and 310 CMR 40.0040; and
    5. all public involvement activities required by 310 CMR 40.1400 through 40.1406;
  - (e) inclusion of the Disposal Site Number and the permit number on documents submitted to the Department with respect to the disposal site;
  - (f) certification of documents submitted to the Department as required by 310 CMR 40.0009;
  - (g) evaluation of the need to perform Immediate Response Actions in accordance with 310 CMR 40.0400 as new or additional information about the disposal site is obtained;
  - (h) modification or cessation of any response action as necessary to maintain compliance with any permit condition or to prevent an actual or potential threat to health, safety, public welfare, or the environment;
  - (i) notification, orally or in writing, to the Department within seventy-two hours of obtaining knowledge of the need to modify or cease any response actions for the reasons in 310 CMR 40.0740(3)(h); provided that any such oral notification shall be confirmed by the permittee in writing within sixty days of such oral notice and any written notice shall include a Status Report prepared by an LSP; and timely remediation of any adverse impacts to health, safety, public welfare or the environment that result from the performance of response actions;

(j) at disposal sites where groundwater investigation is necessary, delineation of the vertical and horizontal extent of contamination, identification and confirmation of groundwater flow directions, identification of groundwater migration pathways, including but not limited to, the identification of possible partitioning of dissolved volatile organic compounds at the water table interface which may lead to vapor transport into subsurface structures, homes or other occupied or unoccupied buildings, and monitoring of groundwater wells, discharges and/or other monitoring points in a manner which provides for the timely development or representative information about conditions and changes in conditions at the disposal site;

(k) acquisition of all required federal, state and local permits;

(l) proper operation and maintenance of all treatment, storage, abatement or control systems and of all equipment required to continue or complete response actions;

(m) authorization for personnel and authorized agents of the Department to enter, at reasonable times and upon the presentation of credentials, any premises owned or controlled by the permittee for the purpose of investigating, sampling, or inspecting any records, conditions, equipment, practice or property relating to response actions at the disposal site, or protecting health, safety, public welfare, or the environment; and

(n) notification upon a change of the Primary representative in accordance with 310 CMR 40.0703(7), if one is designated.

(4) A Tier I Permit does not grant any property rights or exclusive privileges, nor does it authorize any injury to private property or invasion of property rights.

Special Conditions:

Special conditions, as set forth in Attachment A, are included in this permit. Each Permittee shall comply with these special conditions.

Yes  No

***DEP Authorization***

Issued by the Department of Environmental Protection:

Name (Print): Alan Weinberg Date of Issuance: March 23, 1995

Signature 

***Notice of Appeal Rights***

Any person aggrieved by this permit decision may request an adjudicatory hearing within 21 days of the date of issuance (the postmark date of this Permit as described in 310 CMR 40.0008) of this permit, if the Department has imposed special conditions (as set forth in Attachment A) without the Permittees consent or agreement, in accordance with 310 CMR 40.0050.

## Primary Representative and LSP Information

*Primary Representative (only applicable if there is more than one Permittee) For more than one Permittee, a Primary Representative can be designated and authorized. If you are designating a Primary Representative provide the following information:*

Check if Primary Representative is also a Permittee.

Name of Organization: \_\_\_\_\_  
Primary Representative Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Street: \_\_\_\_\_  
City/Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip code: \_\_\_\_\_  
Telephone: \_\_\_\_\_

### *Primary Representative Certification:*

I certify under the penalties of law that I am fully authorized to act on behalf of all persons conducting response actions under this permit for the following purposes:

- a) to receive oral and written correspondence from DEP with respect to this permit;
- b) to receive oral and written correspondence from DEP with respect to the performance of response actions upon issuance of a Tier I permit; and
- c) to receive any statement of fee required by 310 CMR 4.03(3) under this Tier I permit.

I am aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for wilfully submitting false, inaccurate, or incomplete information.

Name (Print): \_\_\_\_\_  
Position or Title: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

*Note:* The Primary Representative for more than one Permittee will receive the annual compliance assurance fee statement for the disposal site.

### *LSP Information*

Provide the following information if an LSP has been engaged or employed to submit LSP Opinions concerning response actions that were approved prior to October 1, 1993.

Name (Print): \_\_\_\_\_  
License Number: \_\_\_\_\_

## Transition Statements

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**Note:** Each Permittee must complete this section. For disposal sites with more than one Permittee, make copies of this section, have each Permittee complete this information, and then attach all copies to this Transition Permit.

Check one of the following to indicate your response and then sign the appropriate paragraph (1 through 3) and the Certification of Submittal:

- I accept the Transition Permit (sign "1")
- I do not accept the Transition Permit and I am attaching a Major Permit Modification application (sign "2")
- I do not accept the Transition Permit and I intend to conduct response actions which were approved by the Department prior to October 1, 1993.  
(sign "3-A")
- I do not accept the Transition Permit and I do not intend to conduct response actions which were approved by the Department prior to October 1, 1993 (sign "3-B").

**1. *Transition Permit Acceptance Statement***

I agree to conduct all response actions pursuant to the terms and conditions of any and all Department approvals that are in effect as of October 1, 1993 as shown in Attachment B1. I agree to conduct all future response actions at this disposal site which are not subject to an existing Department approval in accordance with this Permit and the provisions of 310 CMR 40.0000, including response actions with approvals pending on October 1, 1993 and subsequently approved and listed in Attachment B2. I believe that I have the technical, financial, and legal ability to proceed with response actions at this site in accordance with M.G.L. c. 21E, 310 CMR 40.0000 and other applicable requirements. I am aware of the requirements set forth in 310 CMR 40.0172 for notifying the Department in the event that I am unable to proceed with such response actions.

Name (Print): \_\_\_\_\_  
Position or title: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

**2. *Transition Statement (if not accepting Transition Permit and attaching Major Permit Modification application).***

I do not accept the enclosed Transition Permit, since the disposal site, in the Opinion of an LSP may be reclassified as Tier \_\_\_\_\_ (Insert Tier IB, IC, or Tier II, whichever is applicable). I am attaching a Major Permit Modification application pursuant to 310 CMR 40.0707.

Name (Print): \_\_\_\_\_  
Position or title: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

**3. Transition Statement if not accepting Transition Permit and providing statement regarding future response actions at the disposal site.**

**3-A. RP/PRP/Other Person intends to conduct response actions approved by DEP prior to October 1, 1993.**

I do not accept the enclosed Transition Permit, however, I intend to conduct response actions which were approved by the Department prior to October 1, 1993. I have attached and incorporated within this Statement a schedule for when this work will be completed and a Status Report indicating whether one or more Temporary and/or Permanent Solutions have been achieved or will be achieved at the disposal site, including an LSP Opinion regarding the completion of response actions to date and the response actions remaining in order to achieve a Temporary or Permanent solution at the disposal site.

Name (Print): \_\_\_\_\_  
Position or title: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

**3-B. RP/PRP/Other Person does not intend to conduct response actions approved by DEP prior to October 1, 1993.**

I do not accept the enclosed Transition Permit and do not intend to conduct response actions including any response actions approved by the Department prior to October 1, 1993. I have attached an explanation of why I will not continue with response actions at the disposal site including, where appropriate, an explanation of any technical, financial, or legal inabilities that preclude me from undertaking response actions at the disposal site as outlined in 310 CMR 40.0172. I have attached and incorporated within this Statement, a Status Report indicating whether one or more Temporary and/or Permanent Solutions have been achieved or will be achieved at the disposal site, including an LSP Opinion regarding the completion of response actions to date and the response actions remaining in order to achieve a Temporary or Permanent Solution at the disposal site.

Name (Print): \_\_\_\_\_  
Position or title: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

***Certification of Submittal (All recipients must sign the following certification)***

I certify under the penalties of law that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this certification, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained herein is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for wilfully submitting false, inaccurate or incomplete information.

Name (Print): \_\_\_\_\_  
Position or title: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

**This Attachment will be completed by DEP**

**ATTACHMENT A TO PERMIT NO. 78745**

Each Permittee shall comply with the following special conditions:

Check here if not applicable to this permit.

Because the Department has discovered, on numerous occasions, leaks of askarel (40 to 60 % PCB content) oil from electrical transformers and switches, and because of a concern for the inadequate containment provided by these deteriorating units, the Department is imposing Special Conditions within this Permit. The Special Conditions will require you to control leaking sources by completing the following actions:

1. Within one hundred twenty (120) days from the effective date of this permit, the Permittees shall remove and dispose of all askarel oil from all electrical equipment, which is classified under federal regulations and listed by Facemate Corporation as "stored for re-use".
2. Within five (5) years from the effective date of this permit, the Permittees shall remove and properly dispose of or recycle, all units which were drained of askarel oil.
3. The Permittees shall submit a Release Abatement Measure (RAM) plan, prepared in accordance with 310 CMR 40.0441, within fifteen (15) days, of the effective date of this permit. The plan shall contain specific procedures, schedules, dates, and timelines for the performance of the Special Conditions set forth herein.
4. The Permittees shall comply with all applicable requirements of the Massachusetts Contingency Plan (MCP), 310 CMR 40.000, as well as all other federal, state, and local laws, regulations, ordinances, and requirements during the planning and implementation of the Special Conditions set forth herein.

These Special Conditions are imposed following a discussion between the Department and the US EPA - Toxic Substance Control Program Enforcement Division. This discussion is summarized in a Waste Site Cleanup Memorandum dated January 9, 1995, regarding "PCB Compliance Inspection and Follow-up with EPA". A copy of this memo is included with this Attachment.

**ATTACHMENT A TO PERMIT NO. 78745**

**WASTE SITE CLEANUP MEMORANDUM**

TO: Site File, Former Uniroyal, 1-0436, Chicopee  
THROUGH: Saadi Motamedi, Unit Supervisor <sup>(SM)</sup>  
FROM: Lisa Jones, Site Manager <sup>LJ</sup>  
DATE: January 9, 1995  
RE: PCB Compliance Inspection and Follow-up with EPA

---

On August 17, 1994, Lisa Jones, DEP Site Manager, met with the following people to accompany Dix Howard, the inspector from EPA, who was conducting a PCB Compliance Inspection under the Toxic Substance Control Act (TSCA):

Ed Mrozinski, V.P., Facemate Corp.  
Tom Eagan, Accounting/Staff Coordinator, Facemate Corp.  
Page Fallon, Sr. Hydrogeologist, Environmental Compliance Services  
John Fauth, On-site Manager, Chicopee Industrial Park  
Peter Yanovitch, Sales Representative, Transformer Services, Inc.

As the first matter of business, Mr. Howard requested all records from the past sixteen years to ensure proper inspections of PCB-containing equipment since TSCA regulations were promulgated in 1978. Mr. Eagan provided records of the locations, maintenance, and inspection of the PCB transformers, switches, and other electrical units since ownership by Facemate in 1981. Mr. Howard explained the TSCA requirement for quarterly inspections of all PCB equipment that is "stored for re-use" or "in service" at the site.

The parties next toured the facility to inspect the current status and condition of transformers. The following conditions were noted:

1. Two 55 gallon drums labeled "PCB Oil" were seen stored beside transformer, UR # 9 inside building # 42. Removal and disposal are required.
2. Transformer UR # 9 appeared to be leaking PCB oil from two bottom valves. Stains from oil were visible on the unit and the concrete floor. Repair of the unit is required.
3. UR # 22, located near a collapsed portion of Building # 6, was found operating, "in service"; although, the Phase I report and prior inspections indicated the unit was "stored" and not in use. The floor of the electrical control room and the platform appeared oily, degraded, and hollow. The remains of either a switch or a transformer provided evidence of a previous equipment removal from this area. The structural integrity of the buildings seem questionable and further evaluation should be made to determine if the storage or use of electrical equipment should be allowed at this location.
4. UR # 22 may need enhanced electrical protection according to



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the inspector, Mr. Howard. Mr. Mrozinski replied that there are breakers at the electrical substation, fuses in the electrical room of Building # 29, and the unit is in series with UR # 2, the other in-service transformer.

5. Mr. Howard made note of several additional TSCA violations, including: (a) failure to post PCB signs at the means of access to or on fences surrounding the transformers, and (b) storage of combustible materials near transformers.
6. The parties observed evidence of a prior fire in the electrical room of building # 29, and an additional leaking transformer, UR # 3 in this area.
7. Numerous small (approximately 30 gallon size) exterior wall-mounted transformers were seen attached to buildings # 8, # 2, # 7, # 42, and # 27. The contents, status, and condition of these units is unknown and several appeared to be leaking.

Upon completion of this inspection, Mr. Howard, US EPA, and Lisa Jones, MA DEP, engaged in a discussion of the future actions at the site. Ms. Jones explained the process of Waste Site Cleanup under the Massachusetts Contingency Plan (MCP) and the current status of this site, as a Tier IA site in Phase II.

Furthermore, she explained the need for the responsible parties to complete the assessment, evaluate risk, propose and implement remedial actions in accordance with the MCP. She emphasized that her greatest concern is the inappropriate storage of 11,694 gallons of transformer oil, with 40 to 60 % PCB content, in deteriorating, frequently leaking, and likely outdated transformers and switches. She further stated that the Department has direct oversight of the actions at the site and, as the Project Manager, she would encourage the responsible parties to propose a plan to eliminate further risk posed by leaking equipment.

On January 3, 1995, Ms. Marianne Milette, of the EPA's TSCA Enforcement Division contacted Project Manager, Lisa Jones, to discuss a strategy for action at the Uniroyal site. Ms. Jones explained that she would soon be issuing a transition permit for this site under the new MCP. She also explained that as a special condition of the permit, the Department would require the responsible parties to propose a plan to 1) immediately dispose of all PCB-containing transformer oil that is found in electrical equipment, which is classified as "stored for re-use", and 2) remove all drained units, including transformers and switches, within five years of the permit acceptance.

Ms. Milette concurred with the DEP's strategy. She also stated that it is acceptable under TSCA to store the drained units at the

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site indefinitely, as long as they continue to be classified as "stored for re-use".

Ms. Milette stated that the EPA - TSCA Program would not pursue further enforcement action, at this time, pending the acceptance of the permit and compliance by the responsible parties with the TSCA PCB Regulations.

WSC118s:UNIRO0109.95

**This Attachment will be completed by DEP**

**ATTACHMENT B TO PERMIT NO. 78745**

B1. The following Department approvals were in effect as of October 1, 1993:

Check here if not applicable to this permit.

1. Approval of Interim Measure at the Oak Street Pump Station; granted to City of Chicopee on October 19, 1993; Interim Measure completed upon receipt of documentation; January 8, 1995

2. Review of Phase I Report; June 11, 1993

3. Site Classification; June 9, 1993

4. Approval of Short Term Measure (STM) re: Oil Sheen & Odor Control; November 6, 1991

5. Approval of STM re: Polychlorinated biphenyls (PCBs) in Oak Street Pump Station - Sampling and Dye Tests; October 10, 1991

6. Approval of STMs, Part I - Free Phase Product Bailing and Plume Delineation, Part II - PCB Contaminated Soil: Cover, Fence, and Control Access (proposal dated June 17, 1991; revised proposal dated July 24, 1991); August 6, 1991

7. Preliminary Review of Phase I Report, Short Term Measures (STM) Required & STM Proposed; June 25, 1991

8. Approval of STM - Product Bailing; September 14, 1990

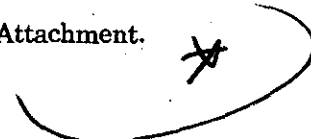
9. Approval for Disposal of PCB contaminated storm water; DEP DWPC Correspondence, December 7, 1989

B2. The following response actions, which were pending as of October 1, 1993, and are now approved by DEP and in effect under this permit.

Check here if not applicable to this permit.

1. Scope of Work for a Phase II Comprehensive Site Assessment; August 27, 1993

A conditional approval is included with this Attachment.



Attachment B2.

Chicopee  
Site # 1-0004366  
Former Uniroyal Complex  
54 Grove Street  
Scope of Work for a Phase II  
Comprehensive Site Assessment  
Permit No. 78745

REVIEW OF PROPOSAL

The Department has reviewed a Scope of Work (SOW) for a Phase II Comprehensive Site Assessment which was submitted on your behalf by Environmental Compliance Services, Inc. (ECS) of Agawam, MA. This proposal, dated August 27, 1993, describes numerous tasks including additional background research, field investigations, preparation of a report, and preparation of a proposal for a risk assessment. The proposal incorporates some, but not all, of the requirements contained in a June 11, 1993 letter from this Department.

DEPARTMENT APPROVAL

The Department grants approval of the proposed tasks, numbered I through XV in the SOW, with the following modifications and additional submittal requirements:

Task I - Additional Investigations of Utilities and Former Production Wells

1. To evaluate contaminant migration along the surface water drainage pathway, include sampling of sediments from the storm water drainage system, which discharges to the Chicopee River. Sample locations must include:
  - (a) the catch basin at the bottom of the stairs between Buildings 29 & 40, a location which may have been impacted by the PCB oil release(s) from transformer UR # 21,
  - (b) other catch basins, located in proximity to past/present PCB releases, PCB contaminated soil, and/or transformer pads, and,
  - (c) the pump chamber of the Oak Street pump station, if sediments are re-depositing behind the weir plate. (Note: The City of Chicopee completed an Interim Measure to remove all PCB-contaminated sediments from the pump chamber and re-activated the pump station on September 27, 1994.)

Submit the collected samples for laboratory analyses to detect polychlorinated biphenyls (PCBs) via EPA Method 8080.

2. Include the proper abandonment of former production well # 4, which was found to be freely flowing on June 30, 1994. This action is necessary to prevent further flooding of the buildings on the lowest tier of the site and to reduce the potential for contaminant migration. Closure of additional former deep wells may also be considered at this time.
3. Expand the evaluation of electrical equipment proposed in the last paragraph of this task. (For emphasis, the Department suggests this activity be proposed as a separate task.) Locate and sample (if PCB content is unknown) all containers of dielectric fluid including any PCB and non-PCB oil containing units, such as those previously reported in the Phase I Building Inspection Reports and those found during the August 17, 1994 site visit: exterior wall-mounted units attached to the upper floors of Buildings # 2, # 7, # 8, # 27, and # 42. Sample the soil beneath any unit which appears to be the source of a release. Analyze the oil and soil samples using PCB test kits and/or EPA Method 8080 for PCBs.

Task II - Subsurface Investigation Related to Underground Storage Tanks

4. Include analysis for total lead, for soil samples taken from the excavations and soil borings near the former rubber cement manufacturing buildings # 9 and # 43, i.e., locations of former Tanks F, T, U, and V. Lead, which was reportedly mixed with solvents to make tire balancing "mud" in the rubber cement buildings, may have been released to soil and groundwater in these locations.

Task III - Additional Soil Boring and Shallow Monitoring Well Locations

5. Add or revise shallow soil boring/monitoring well locations to define the nature and extent of releases and to evaluate migration and exposure pathways, as follows:
  - (a) south and west of ECS-6A: to delineate the extent of the release from former tanks B and C, to evaluate a potential vapor release to Building 43, and to evaluate fate and transport via groundwater flow and/or via the nearby storm drain system. (Note: previous groundwater sampling indicates samples exceed Upper Concentration Limits of the MCP for Toluene at ECS-6A and GW-2 standards for Benzene and Toluene at ECS-2, a monitoring well which was destroyed and was not proposed for replacement),
  - (b) immediately adjacent to and downgradient of former Tank D; the proposed locations (one, upgradient of Tank D, and the other, downgradient in the vicinity of PCB-contaminated soil Area A, will not provide information to evaluate conditions near the release or near the potential targets (tenants using Building 25 and the storm drain system),
  - (c) near the transformer platform of Building 8: to evaluate potential PCB contamination in groundwater.

Task IV - Installation of Deep Monitoring Wells

6. Locate a deep monitoring well near ECS-15, where low levels of halogenated volatile organic compounds were detected, instead of near ECS-20, where no contaminants were detected. The revised location will provide information on vertical flow regime and on the presence or absence of halogenated volatile organic compounds in groundwater.

Task VI

7. Re-number tasks in the revised Phase II SOW since no activity was proposed with this task number.

Task X - Groundwater Sampling and Analysis

8. Use EPA Method 8270 instead of EPA Method 8100 to ensure that previously detected polynuclear aromatic compounds are carried throughout the assessment. (Note: Analysis by EPA Method 8270 of surface soil samples, S-15 and S-16, indicates the presence of 24 semi-volatile organic compounds; seven of the detected compounds are not listed parameters for EPA Method 8100. Elimination of any detected hazardous material from the assessment requires justification.)
9. Include methyl-tertiary-butyl ether (MTBE) as an additional parameter in the volatile organic compounds analysis.

Map to Supplement Tasks III & IV and Revisions to Table 1

10. Submit a map of proposed sample locations; and identify the boring/monitoring well locations to be consistent with the proposed groundwater sampling locations given in Table 1 of the SOW and described in the narrative of Tasks III and IV.
11. Update Table 1, Groundwater Sampling Plan, to incorporate the changes described in items 5, 6, 8, & 9, above. Also, modify Table 1, as follows: sample ECS-15 for VOCs; sample ECS-8, ECS-9, and ECS-11 for soluble RCRA 8 metals plus Zinc.

Task XI - Investigation of Impacts on Chicopee River Sediments

12. As required in the June 11, 1993 letter, include a river sediment sampling and analysis plan to determine if there has been an impact to the river from either historic oil spills, hazardous materials releases, or from surface water runoff carrying contaminated soil from the site. The Department agrees that ECS may need to gather additional information regarding discharge points at and upstream of the site; however, the Department does not agree with the delay or possible elimination of this sampling event on the basis that several upstream sources exist. Historically, the storm drain system of the site was a pathway for contaminants to enter the river, and, currently, there is a potential pathway.

Evidence indicates numerous historic releases of oil and hazardous materials (OHM) from the site to the river as documented in the DEP Water Pollution Control Correspondence files 1968 - 1980 (now incorporated into the Waste Site Cleanup Files): several 1000-3000 gallon spills and on-going discharges of 125 to 500 gallons of oil per day prior to 1980. Since tire production ceased in 1980, the likelihood of a OHM release appears to have diminished; outfalls normally discharge storm water only, but may carry contaminated surface soil from the site. The finding of PCBs in the pump station chamber in 1987 and the finding of high levels of PCBs in surface soil during the Phase I investigation indicate a strong possibility that PCBs are carried with surface water run-off from the site to the river. Discharge pipes: one, through the Oak Street pump station and another, approximately 300 feet downstream (pressure drain) are the known pipes that presently discharge to the river.

Therefore, as a supplement to the proposed task, prepare a river sediment sampling plan and include, at a minimum, one sample upstream of the site, one downstream of each discharge pipe emanating from the site, and one from a depositional location further downstream of the site. Specific locations should be selected and approved, in the field, by the Department Site Manager. Analyze the samples for PCBs and semi-volatile organic compounds using EPA Methods 8080 and 8270, respectively. Petroleum Identification or Total Petroleum Analysis may also be included, if oil residuals are substantial.

Task XIII - Samples of Wood Block Floor Materials

13. Use EPA Method 8270 instead of EPA Method 8100 to ensure that previously detected compounds are carried throughout the assessment. (See item 7.)

Task XIV - Report on Field Findings

14. As a result of the redesign of the Waste Site Cleanup Program, your Phase II must now meet the requirements of 310 CMR 40.0830 of the revised MCP, which became effective on October 1, 1993. Your Phase II report must also address deficiencies and missing information cited in the Review of Phase I letter dated June 11, 1993.

Additional Tasks

15. Investigate all sources and potential sources of oil and hazardous materials, including the 200,000 gallon above ground oil storage tank, the process oil tanks, the numerous oil interceptors, the sulfuric acid tanks, and other containers. Volume and content of each source must be determined to prepare for its removal.
16. Prepare a status update report of the Short Term Measure of Product Bailing, which was approved on September 14, 1990. If appropriate, propose a Phase II task as a follow-up action.

DEPARTMENT DETERMINATION

Modifications and changes, cited in this attachment, should be incorporated into a revised Phase II SOW. The revised Phase II SOW, a map of proposed soil boring and monitoring well locations, a revised Table 1, and a schedule to implement the Phase II tasks must be submitted to the Department within sixty (60) days from the date of receipt of this Transition Classification and Permit Statement .

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION I  
JOHN F. KENNEDY FEDERAL BUILDING  
BOSTON, MASSACHUSETTS 02203-0001



March 18, 1995

Mr. Harish Panchal  
Bureau of Waste Site Cleanup  
Department of Environmental Protection  
One Winter Street, Fifth Floor  
Boston, MA 02108

Dear Mr. Panchal:

I have completed my review of the former Uniroyal Complex (Chicopee, MA) Site Inspection and have no further comments. I accept this SI package as a final MSCA deliverable and will enter an SI completion into CERCLIS with a recommendation for continued evaluation of the site as a High Priority.

If you have any questions, I may be reached at (617) 573-9697.

Sincerely,

A handwritten signature in cursive script that reads "Nancy Smith".

Nancy Smith  
Site Assessment Manager



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Printed with Soy/Canola Ink on paper that  
contains at least 75% recycled fiber



WASTE SITE CLEANUP MEMORANDUM

TO: Site File, Former Uniroyal, 1-0436, Chicopee  
THROUGH: Saadi Motamedi, Unit Supervisor  
FROM: Lisa Jones, Site Manager  
DATE: January 9, 1995  
RE: PCB Compliance Inspection and Follow-up with EPA

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Tom Eagan, Accounting/Staff Coordinator, Facemate Corp.  
Page Fallon, Sr. Hydrogeologist, Environmental Compliance Services  
John Fauth, On-site Manager, Chicopee Industrial Park  
Peter Yanovitch, Sales Representative, Transformer Services, Inc.

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4. UR # 22 may need enhanced electrical protection according to

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1/9/95

the inspector, Mr. Howard. Mr. Mrozinski replied that there are breakers at the electrical substation, fuses in the electrical room of Building # 29, and the unit is in series with UR # 2, the other in-service transformer.

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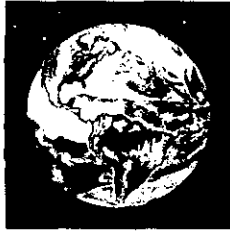
Ms. Milette concurred with the DEP's strategy. She also stated that it is acceptable under TSCA to store the drained units at the

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site indefinitely, as long as they continue to be classified as "stored for re-use".

Ms. Milette stated that the EPA - TSCA Program would not pursue further enforcement action, at this time, pending the acceptance of the permit and compliance by the responsible parties with the TSCA PCB Regulations.

WSC118s:UNIRO0109.95



# Environmental PRODUCTS & SERVICES, INC.

P.O. Box 51009

Springfield, MA 01151-1009

(413) 731-1000

FAX (413) 737-4958

(800) 5454-EPS

Chicopee 1-0436

JJ

December 12, 1994

Ms. Lisa Jones  
MA DEP  
Dwight Street  
Springfield, MA



RE: Documentation of Pump Station Clean-Out

Environmental Products and Services was contacted by the City of Chicopee to perform a PCB clean up located at the Oak Street Pump Station, Chicopee, MA.

Environmental Products and Services arrived on site on September 15, 1994 to begin the pump station clean out. Water was removed utilizing a Vac truck and then transported to the treatment plant located at 80 Meding Street, Chicopee, MA 01013.

Also on this day a change of scope was realized when the amount of sludge remaining in the pump station was significantly different than what was originally anticipated. The issue was addressed and resolved in a timely manner by the City of Chicopee and Environmental Products and Services.

On September 27, 1994, Environmental Products and Services mobilized to the 2 Oak Street Pump Station and started the clean-up. A confine space entry was made by two field technicians in Level "C". A turbo vacuum truck was utilized to remove the PCB contaminated sediments.

The sediments were then off loaded into DOT approved 17H drums. The waste was profiled and manifested ahead of time for security reasons. A total of 21 drums was generated. These drums were then transported to EPS Albany to complete actions for September 27, 1994.

On September 28, 1994, Environmental Products and Services mobilized to the 2 Oak Street Pump Station. A confine space entry was made by one field technician in Level "C" to remove the remainder of the sludge with the aide of one Turbo Vac. An industrial strength degreaser was then applied to the walls and floor of the pump station chambers and scrubbed with hard bristle brushes. Then the walls and floor were powerwashed. All generated rinse water was removed from the pump station with the turbo vac unit.

Corporate Office  
(315) 471-0503

Albany, NY  
(518) 465-4000

Boston, MA  
(617) 933-6666

Bridgeport, CT  
(203) 380-3838

Buffalo, NY  
(716) 685-6600

Harrisburg, PA  
(717) 564-4200

Linden, NJ  
(908) 486-8600

Newburgh, NY  
(914) 561-0707

Rochester, NY  
(716) 436-5660

Syracuse, NY  
(315) 451-6666

The sediments were then off loaded into DOT approved 17H drums. A truck clean out was performed to decon the turbo vac unit. Twenty-nine drums of waste were then transported to EPS Albany to complete actions on September 28, 1994.

The final task for Environmental Products and Services was the transportation and disposal of the drums.

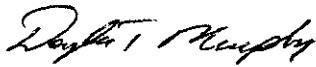
On September 29, 1994 Environmental Products and Services picked up 50 drums of waste in Albany, New York to transport to their final destination, Northeast Chemical Corporation located at 3301 Monroe Street, Cleveland, OH 44113.

The drums were delivered on September 30, 1994 to complete tasks for job #M0097 and document #3518.

If you have any questions regarding this matter, please feel free to contact me.

Very truly yours,

ENVIRONMENTAL PRODUCTS & SERVICES, INC.



Douglas T. Murphy, Project Coordinator  
*Springfield Branch*

DTM/slh

cc: Tom Hammell, City of Chicopee



**DANIEL S. GREENBAUM**  
Commissioner  
**JOHN J. HIGGINS**  
Regional Director

*The Commonwealth of Massachusetts*

*Executive Office of Environmental Affairs*

*Department of Environmental Protection*

*Western Region*

*436 Dwight Street, Springfield, Mass. 01103*

*(413) 784-1100*

1-0436  
Chicopee

TO: Nancy Smith, EPA Region I

FROM: Lisa Jones, MA DEP - WERO

DATE: February 3, 1992

RE: Former Uniroyal Complex (MAD01122944) - Corrections to PA

---

I recently discovered two mistakes in the PA and am submitting corrected page 2 and page 3 for this site.

The correction on Page 2, line 8 makes "Directly east..." now read "Directly west..."

The correction on Page 3, Paragraph 2, Line 9 replaces "80 feet" to read "150 feet".

cc: Janet Waldron, DEP-Boston

Chicopee safety complex, a pet grooming shop, several restaurants, attorneys' offices, and a convenience store with self-serve gasoline. A glass & mirror shop and a credit union, lots which were once part of the Uniroyal Complex, occupy the southern most portion of the site. Residential properties, an automobile dealership, and an appliance store are located to the south (across Front Street). Southwest of the site are an auto service center and residential properties. Directly west of the site is a US Army Corps of Engineers Flood Control Dike which is now maintained by the City of Chicopee and beyond the dike is the Chicopee River. (Environmental Compliance Services, March 1991).

The site has been owned by Facemate Corporation since November 24, 1981. Portions of the site have been offered for lease by the current owner, Facemate Corporation, under the name Chicopee Industrial Park, since 1986. Tenants lease space in five of the twenty three buildings for offices, storage of supplies, auto body repair, a fish hatchery, a machine shop, and light industrial manufacturing processes including metal fabrication, printing, and filter media fabrication. A commercial bus transportation company leases parking space in the northwest portion of the site, in the vicinity of a former salvage yard. Facemate Corporation also uses space in the occupied buildings for storage. The remaining eighteen buildings are not and have not been used by the present owner. (Environmental Compliance Services, March 1991)

Prior owner and operator of the site was Uniroyal, Inc., a/k/a United States Rubber Company from 1938 to November 24, 1981. Uniroyal notified as a RCRA Hazardous Waste Generator on August 15, 1980 and is still on the current list under #MAD01122944 (MA DEP, January 1991).

Under ownership by Uniroyal, the operations included the manufacturing of rubber tires and associated support services including power generation, electric distribution, and maintenance of buildings and equipment (Environmental Compliance Services, March 1991). Twenty-two former underground storage tanks and a number of other containers were used by Uniroyal to store gasoline, naphtha, lubricating oils, carbon black, and solvent blends including some blends which contained methylene chloride, 1,2-dichloroethane, and a high percent (30-40%) of toluene (S. Joyce, MA DEP, Review Letter to Facemate, June 1991). The company also burned coal and later #6 fuel oil in the boiler plant and stored the # 6 oil in a 200,000 gallon capacity above ground tank. (Environmental Compliance Services, March 1991)

Electric power was distributed throughout the complex using 25 large transformers (500 to 1500 KVA) and numerous smaller transformers (less than 500 KVA) (Factory Insurance Association Map, 1961). In the 1972 Facility Manual for the Uniroyal Plant, two of the large transformers are identified as a "Dry Type" (not containing dielectric fluid) and the other twenty-three large transformers contained PCB based dielectric fluid.

At the present, one large PCB oil containing transformer is in use, sixteen large PCB oil containing transformers are stored on site for future use, two "Dry Type" transformers are stored for future use, and six PCB oil containing transformers have been removed (three removed by Uniroyal circa 1972; three removed by Transformer Services, Inc at the request of Facemate in 1989) (Environmental Compliance Services, March 1991). The total number of smaller transformers and the contents of these transformers are not known at the present.

In 1987 MA DEP received a report of an oil substance entering the Chicopee River in the vicinity of the Oak Street Pumping Station. During an investigation of this release, MA DEP personnel found that oil had impacted the pumping station which transfers storm water and sewage to the municipal sewage treatment plant but is also emptied directly into the river during heavy rain storms. The PCB identified as Arochlor 1248 was detected at 71 ppm in a sample from the oil found at the Oak Street pumping station (D. Slowick, MA DEP Memo, April 1988). The pumping station is approximately 150 feet from the former location of transformers #13, #14, and #25 (see Figure 3). These three transformers were subsequently removed by Facemate Corporation in 1989. No conclusive evidence has been found as yet however to prove that the PCB contamination at the pumping station came from leaking transformers at the site (R. Nunes, Chicopee Fire Department, January 1988).

A release of oil and/or hazardous materials was first discovered at the site during the removal of underground storage tanks on February 22-24, 1988. Department personnel observed the removal of several underground tanks and found at least two tanks had been leaking (A. Symington, MA DEP, February 1988). Subsequently, the Department issued a Notice of Responsibility (NOR) on March 11, 1988 to the current owner, Facemate Corporation, to take necessary actions for the prevention and mitigation of the releases under M.G.L. c. 21E. In that notice the Department required Facemate to conduct an environmental site investigation including the installation of groundwater monitoring wells to determine the extent of soil and groundwater contamination resulting from the releases (S. Joyce, MA DEP, 1988). Facemate Corporation retained the services of Environmental Compliance Service, Inc. (ECS) to conduct the environmental site investigation (Environmental Compliance Services, March 1988).

On September 13, 1990, during groundwater monitoring activities at the site, personnel of ECS discovered more than two feet of a floating, clear, gasoline-like liquid in monitoring well ECS-9. ECS personnel reported as much as 4 feet of product on the following day and requested Department approval to begin hand bailing the product as a Short Term Measure (STM). The Department granted verbal approval of this STM on September 14, 1990. (D. Slowick, MA DEP, September 1990)





DANIEL S. GREENBAUM  
Commissioner  
JOHN J. HIGGINS  
Regional Director

1-0436  
Chicopee  
The Commonwealth of Massachusetts

Executive Office of Environmental Affairs  
Department of Environmental Protection  
Western Region

436 Dwight Street, Springfield, Mass. 01103  
(413) 784-1100

PRELIMINARY ASSESSMENT  
FORMER UNIROYAL COMPLEX  
CHICOPEE, MASSACHUSETTS

July 31, 1991

CERCLIS NO. MAD01122944

INTRODUCTION

The Massachusetts Department of Environmental Protection (the Department) has completed a Preliminary Assessment (PA) for the Former Uniroyal Complex, a/k/a Chicopee Industrial Park in Chicopee, MA, as part of the Multi-Site Cooperative Agreement Program (MSCA) between the EPA and the Commonwealth of Massachusetts for the purpose of identifying and screening potential hazardous waste sites pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

This Preliminary Assessment complies with the requirements set forth under CERCLA, as amended. It does not necessarily fulfill the requirements of other EPA or state regulations such as those under the Resource Conservation and Recovery Act (RCRA). The PA is not intended to be a definitive study of the site, and therefore is not suitable for use in planning a site remediation or undertaking enforcement actions against potentially responsible parties. The PA is the first step of the site screening process set forth by the National Contingency Plan (NCP).

PROPERTY DESCRIPTION AND HISTORY

The Former Uniroyal Complex, the "site", is located along the east bank of the Chicopee River at the intersection of Grove Street and Front Street on a 17.8 acre parcel of land in Chicopee Falls, MA (see Figure 1 taken from the USGS Topographic Map of the Springfield North, Massachusetts Quadrangle). The general topography of the site is terraced, decreasing in elevation toward the west to the foot of the Chicopee River Flood Control Dike.

The site is located in a mixed residential, commercial, and industrial area (see Figure 2). The site is bounded to the north by Facemate Corporation property, Oak Street, and a vacant lot, with residential and commercial properties further north. Properties to the east (across Grove Street) support the City of

Chicopee safety complex, a pet grooming shop, several restaurants, attorneys' offices, and a convenience store with self-serve gasoline. A glass & mirror shop and a credit union, lots which were once part of the Uniroyal Complex, occupy the southern most portion of the site. Residential properties, an automobile dealership, and an appliance store are located to the south (across Front Street). Southwest of the site are an auto service center and residential properties. Directly ~~east~~<sup>west</sup> of the site is a US Army Corps of Engineers Flood Control Dike which is now maintained by the City of Chicopee and beyond the dike is the Chicopee River. (Environmental Compliance Services, March 1991).

The site has been owned by Facemate Corporation since November 24, 1981. Portions of the site have been offered for lease by the current owner, Facemate Corporation, under the name Chicopee Industrial Park, since 1986. Tenants lease space in five of the twenty three buildings for offices, storage of supplies, auto body repair, a fish hatchery, a machine shop, and light industrial manufacturing processes including metal fabrication, printing, and filter media fabrication. A commercial bus transportation company leases parking space in the northwest portion of the site, in the vicinity of a former salvage yard. Facemate Corporation also uses space in the occupied buildings for storage. The remaining eighteen buildings are not and have not been used by the present owner. (Environmental Compliance Services, March 1991)

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Under ownership by Uniroyal, the operations included the manufacturing of rubber tires and associated support services including power generation, electric distribution, and maintenance of buildings and equipment (Environmental Compliance Services, March 1991). Twenty-two former underground storage tanks and a number of other containers were used by Uniroyal to store gasoline, naphtha, lubricating oils, carbon black, and solvent blends including some blends which contained methylene chloride, 1,2-dichloroethane, and a high percent (30-40%) of toluene (S. Joyce, MA DEP, Review Letter to Facemate, June 1991). The company also burned coal and later #6 fuel oil in the boiler plant and stored the # 6 oil in a 200,000 gallon capacity above ground tank. (Environmental Compliance Services, March 1991)

Electric power was distributed throughout the complex using 25 large transformers (500 to 1500 KVA) and numerous smaller transformers (less than 500 KVA) (Factory Insurance Association Map, 1961). In the 1972 Facility Manual for the Uniroyal Plant, two of the large transformers are identified as a "Dry Type" (not containing dielectric fluid) and the other twenty-three large transformers contained PCB based dielectric fluid.

At the present, one large PCB oil containing transformer is in use, sixteen large PCB oil containing transformers are stored on site for future use, two "Dry Type" transformers are stored for future use, and six PCB oil containing transformers have been removed (three removed by Uniroyal circa 1972; three removed by Transformer Services, Inc at the request of Facemate in 1989) (Environmental Compliance Services, March 1991). The total number of smaller transformers and the contents of these transformers are not known at the present.

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A release of oil and/or hazardous materials was first discovered at the site during the removal of underground storage tanks on February 22-24, 1988. Department personnel observed the removal of several underground tanks and found at least two tanks had been leaking (A. Symington, MA DEP, February 1988). Subsequently, the Department issued a Notice of Responsibility (NOR) on March 11, 1988 to the current owner, Facemate Corporation, to take necessary actions for the prevention and mitigation of the releases under M.G.L. c. 21E. In that notice the Department required Facemate to conduct an environmental site investigation including the installation of groundwater monitoring wells to determine the extent of soil and groundwater contamination resulting from the releases (S. Joyce, MA DEP, 1988). Facemate Corporation retained the services of Environmental Compliance Service, Inc. (ECS) to conduct the environmental site investigation (Environmental Compliance Services, March 1988).

On September 13, 1990, during groundwater monitoring activities at the site, personnel of ECS discovered more than two feet of a floating, clear, gasoline-like liquid in monitoring well ECS-9. ECS personnel reported as much as 4 feet of product on the following day and requested Department approval to begin hand bailing the product as a Short Term Measure (STM). The Department granted verbal approval of this STM on September 14, 1990. (D. Slowick, MA DEP, September 1990)

On October 16, 1990, the Department was notified that the STM of hand bailing was concluded on September 27, 1990. A total of 7.25 gallons of a product & water mix was bailed and the thickness of the floating layer had decreased to 0.12 feet. (Environmental Compliance Services, October 1990)

On November 5, 1990, the Department issued a second Notice of Responsibility to Facemate Corporation requiring that a Preliminary Assessment (PA), Phase I - Limited Site Investigation, and Interim Site Classification Form (ISCF) be completed for this site in accordance with the Massachusetts Contingency Plan, 310 CMR 40.000 (S. Joyce, MA DEP, November 1990).

On March 29, 1991, the Department received the requested Phase I Report and accompanying PA and ISCF. The report describes the consultant's findings and recommendations following the site investigation and tank removal activities which were conducted between April 1988 and March 1991. (S. Joyce, MA DEP, June 1991)

Department personnel have conducted site visits to visually assess conditions at the site, to evaluate the effectiveness of existing access restrictions, and to verify control of PCB sources. The findings from these site visits were presented to Facemate representatives during a meeting on May 7, 1991. As a result, Facemate was required by the Department to repair and extend property fencing to completely restrict site access, to submit all available maintenance and service records for the transformers since Facemate's purchase of the property, and to address the imminent hazard posed by the potential for direct contact to PCB contaminated surface soil. (S. Joyce, MA DEP, June 1991)

The Department received a Proposal for Short Term Measures prepared by ECS and dated June 17, 1991. The Department approved the proposed STMs on July 10, 1991. Work has begun to cover and fence specific areas containing elevated PCB levels in surface soil (see Figure 4) and to resume bailing of the solvent from monitoring well ECS-9. Additional investigative work including a soil gas survey and additional monitoring well installation is also underway to better define the extent and migration of the solvent plume affecting groundwater in the vicinity of ECS-9. (Environmental Compliance Services, June 1991)

Based on a review of all available information, the Department confirms that there have been releases of oil and hazardous materials at the site. Known releases include releases of PCB oil from the askarel transformers, releases of gasoline and solvent blends (including blends which contained the halogenated compounds methylene chloride and 1,2-dichloroethane) from several of the twenty-two former underground storage tanks, releases of base/neutral/acid semivolatiles which are likely to be associated with former tire manufacturing processes that used carbon black and with former boiler house operations which used coal and later # 6 fuel oil, releases of chlorinated solvents

including perchloroethylene, dichlorobenzene, chloroform, carbon tetrachloride, and 1,1,1 trichloroethane and another type of PCB, Arochlor 1254, which may have been used during the former tire manufacturing operations. (S. Joyce, MA DEP, June 1991)

Numerous soil and groundwater samples were analyzed during the site assessment process. Results indicate PCB levels in surface soil from not detected (less than 250 ug/kg) to 8,700,000 ug/kg and PCBs in groundwater not detected (less than 2.5 ug/L). (Environmental Compliance Services, March 1991)

Volatile organic compounds (VOCs), primarily aromatic compounds, were detected in many of the groundwater samples from the site. The VOCs were typically found in the vicinity of the former underground storage tanks and the former rubber cement/adhesive manufacturing buildings. Laboratory analysis of groundwater samples indicates levels of benzene up to 3,714 ug/L, toluene up to 140,000 ug/L, ethylbenzene up to 700 ug/L, and xylenes up to 2,000 ug/L. Other volatile organic compounds which were detected in groundwater samples include dichlorobenzenes at 210 ug/L, methylene chloride at 400 ug/L, perchloroethylene at 4.5 ug/L, chloroform at 4.0 ug/L, carbon tetrachloride at 4.5 ug/L, and 1,1,1-trichloroethane at 18 ug/L. (Environmental Compliance Services, March 1991).

Elevated levels (>100 mg/kg) of polyaromatic hydrocarbons (PAHs) were typically found in surface soil samples taken from the upper railroad spur and from the lower set of railroad tracks between Buildings 33 and 8. These areas appeared to be contaminated with carbon black on the surface soil according to site inspection reports. The highest detected level was 629,350 ug/kg total PAHs with 24 constituents identified in a surface soil sample, S-15. ECS reported no detected (greater than 2 times the EPA Method 8270 detection limits) PAHs in groundwater; however, the Department finds there is insufficient sampling data to determine if PAHs are impacting groundwater. No samples were collected for PAH analysis from the two monitoring wells which are located in the PAH contaminated areas. (Environmental Compliance Services, March 1991)

Limited RCRA Metals testing was performed during the Phase I Investigation. Metals analyses were not performed on soil samples. Analysis for 8 Soluble RCRA Metals was performed on groundwater samples from eight of the twenty-two monitoring wells. The analysis revealed the presence of barium up to 0.35 ug/L; no other metals were detected. Total metals analysis was performed on samples of the liquid removed from underground storage tanks prior to the tank removal activities; tests revealed 69.4 mg/L of lead in one sample and zinc in all samples with the highest level found at 11.5 mg/kg. (Environmental Compliance Services, March 1991)

WATER USE

The groundwater at the site was encountered at depths from 2 to 5 feet in monitoring wells located on the lower western most terrace, from 7.5 to 20 feet in monitoring wells on the middle terrace, from 8 to 16 feet in monitoring wells on the upper eastern-most terrace, and from 23 to 25 feet in borings located in the area designated "former Salvage Yard", north of Building 1. Based on survey data and groundwater level measurements, ECS concludes that the lateral groundwater flow is west toward the Chicopee River. (Environmental Compliance Services, March 1991)

The Chicopee River may represent the primary sensitive receptor near the site. It has not yet been determined if contamination from the site has migrated to the Chicopee River. Potential pathways to the river include conduits installed through the Chicopee River Flood Control Dike, the storm/sewer system including the Oak Street Pumping Station, and the hydrologic flow path of the groundwater westward beneath the dike. Deep wells located at the site which were formerly used for process and fire control may also contribute to the potential for contaminant migration. (Environmental Compliance Services, March 1991)

The Chicopee River meanders south and then west to its confluence with the Chicopee River approximately 1.9 miles from the site. There are no known surface water intakes for drinking water within 15 miles downstream of the site. (MA DEP - Division of Water Supply, 1991)

Both the Chicopee and Connecticut Rivers are designated Class B surface waters and are suitable for recreational and fishing use. (MA DEP-Water Pollution Control, 1990).

The site and surrounding community in Chicopee Falls is serviced by municipal water drawn from the Quabbin Reservoir more than 15 miles from the site. (MA DEP - Division of Water Supply, 1991)

There are no known public or private drinking water wells within one mile of the site and few wells at the edge of the four mile radius. Six or seven residences on Slater Avenue in Springfield, approximately four miles south/southeast of the site are supplied by private drinking water wells and Westover Air Force Base located 4 1/8 miles northeast of the site has a drinking water well which serves a population of 4,144. There are no other known drinking water wells within a four mile radius of the site. (MA DEP - Division of Water Supply, May 1991).

There are no critical habitat areas within one mile of the site. The nearest critical habitat area is over four miles from the site, in an area northeast of Westover Air Force Base. (MA Division of Fish & Wildlife, 1991)

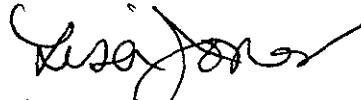
*Out of service  
Westover  
from  
City*

CONCLUSIONS

Following a review of all available information, the Department confirms the presence of hazardous waste on surface soil and in groundwater. There is also a likelihood that hazardous waste is impacting the nearby surface water via groundwater migration or surface water runoff. The contaminants identified at the site include but may not be limited to PCBs, volatile organic compounds and semi-volatile organic compounds.

Because there is potential for direct contact with hazardous materials at this site and because of the proximity of this site to the Chicopee River, the Department recommends that a screening site inspection of high priority be conducted.

Submitted by,



Lisa Jones,  
Environmental Engineer  
MA DEP, Bureau of Waste Site Cleanup

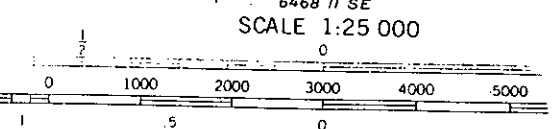
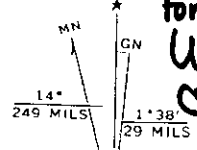
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WSC042s/uniroyal.pa

cc: Janet Waldron, BWSC, DEP - Boston



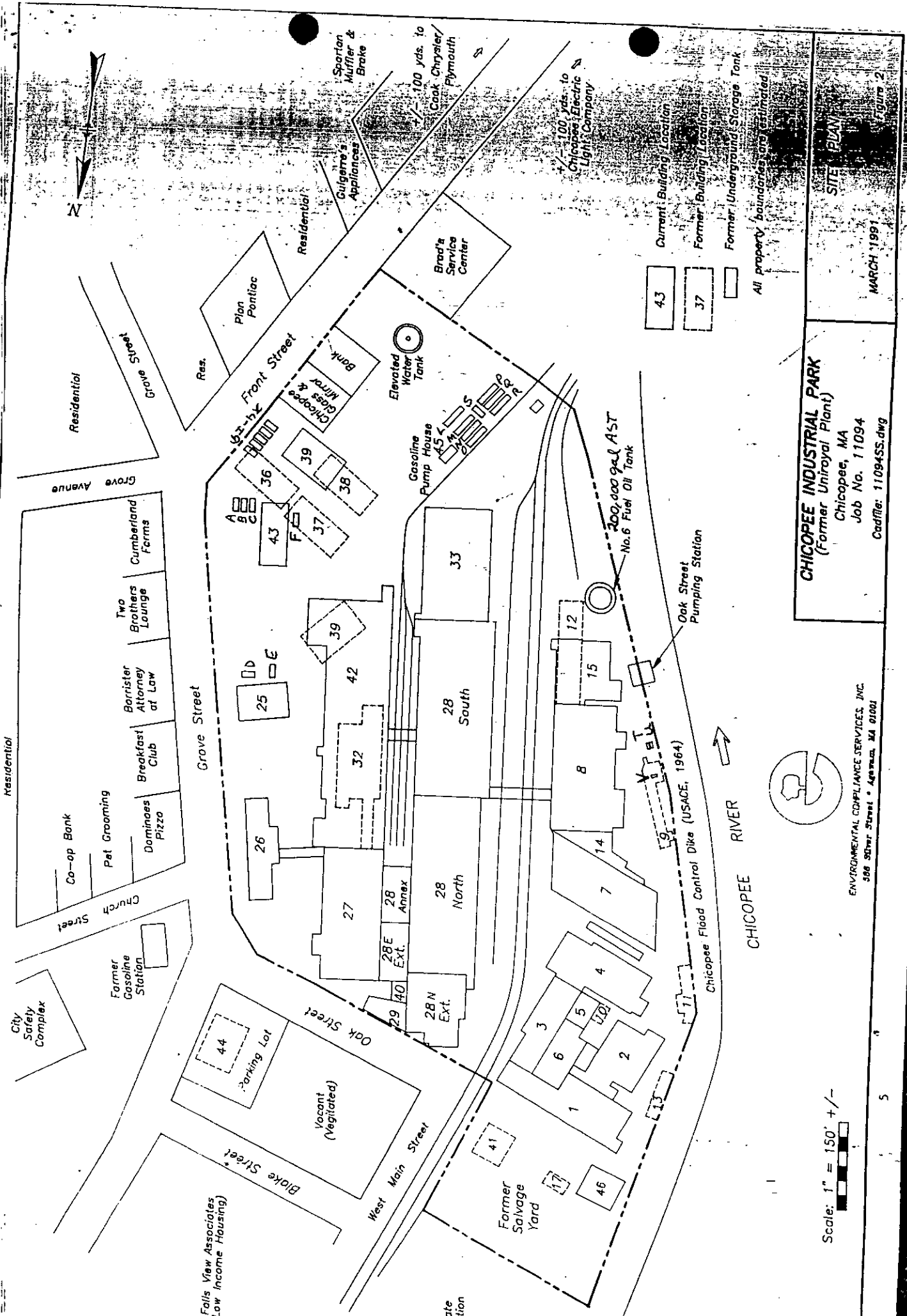
**FIGURE 1**  
 former  
 Uniroyal Complex  
 Chicopee, MA

Published by the Geological Survey  
 &GS, and Massachusetts Geodetic Survey  
 ible survey; 1933. Revised from  
 en 1971. Field checked 1972  
 1927 North American datum  
 on Massach coordinate system.



CONTOUR INTERVAL 10 FEET  
 NATIONAL GEODETIC VERTICAL DATUM OF 19





- 43 Current Building Location
  - 37 Former Building Location
  - Former Underground Storage Tank
- All property boundaries are estimated

**CHICOPEE INDUSTRIAL PARK**  
 (Former Uniroyal Plant)  
 Chicopee, MA  
 Job No. 11094  
 Cadfile: 11094SS.dwg

Scale: 1" = 150' +/-

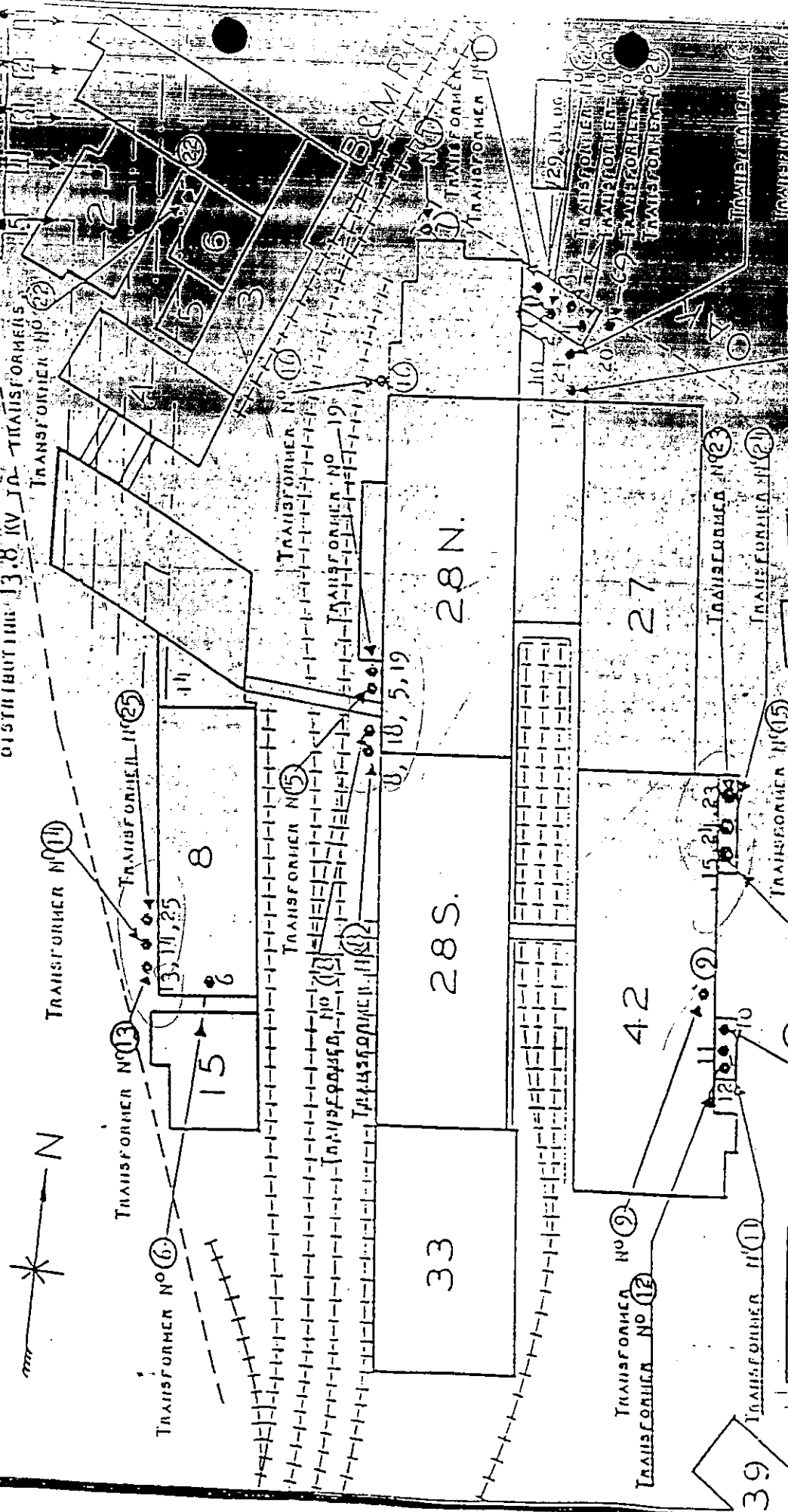
ENVIRONMENTAL COMPLIANCE SERVICES, INC.  
 506 Silver Street • Agawam, MA 01001

SITE PLAN

MARCH 1991

Four Incoming Feeders From Western Mass. Electric

FIVE OUTGOING FEEDERS WITH 300 FT. CHAINS DISTRIBUTING 13.8 KV TO TRANSFORMERS

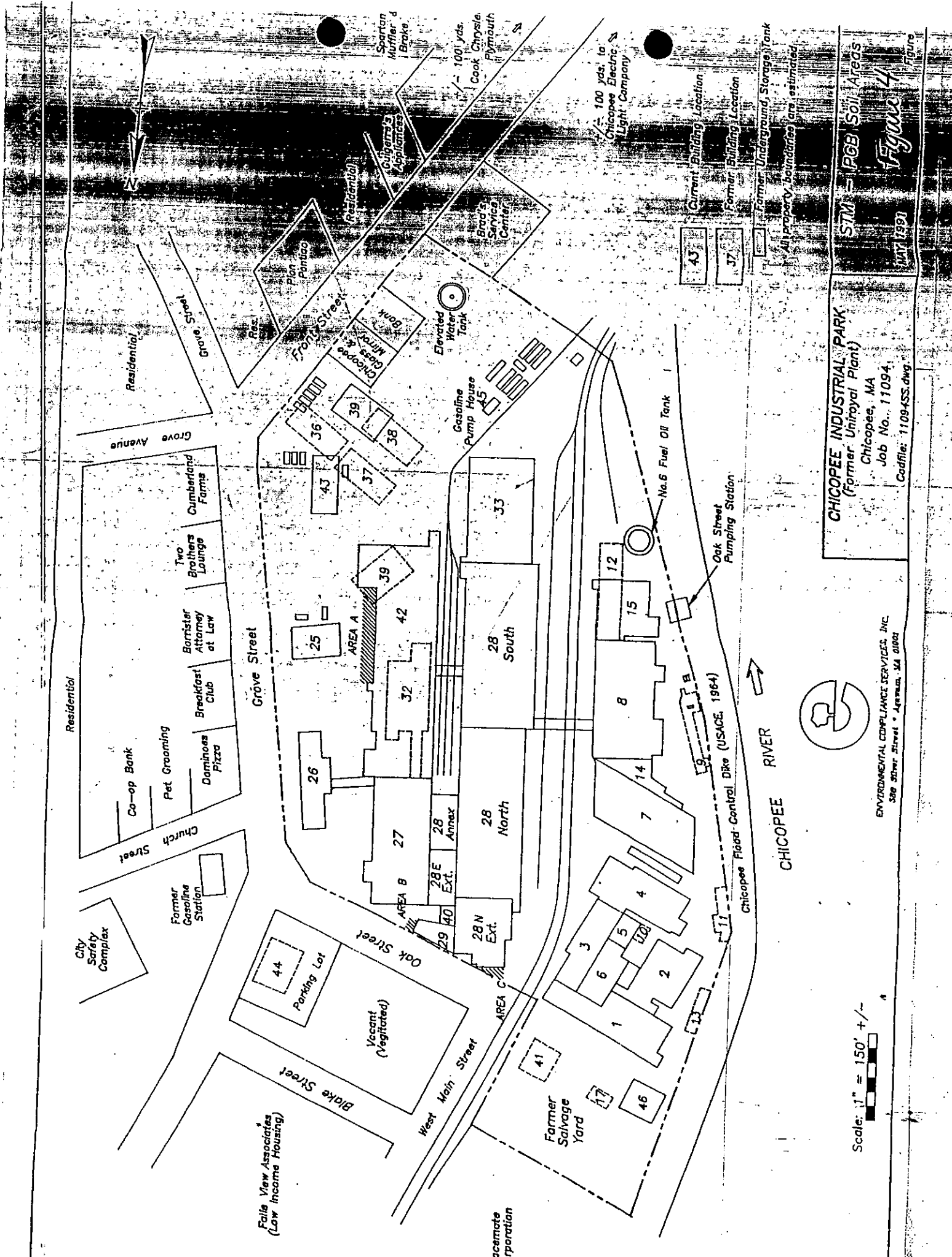


NOTE: ADAPTED FROM ISITE UNIROVAL FACILITY MANUAL

TRANSFORMER LOCATIONS (FORMER UNIROVAL (PL 4471))

SITE PLAN

HICKERS



STM - PCB Soil Areas  
 Figure 4  
 MAY 1991

CHICOPEE INDUSTRIAL PARK  
 (Former Uniroyal Plant)  
 Chicopee, MA  
 Job No. 11094  
 Cadfile: 11094SS.dwg

ENVIRONMENTAL COMPLIANCE SERVICES, INC.  
 306 Silver Street • Ayer, MA 01001

Scale: 1" = 150' +/-

Preliminary Assessment  
Former Uniroyal Complex

REFERENCES

G. Barrett (Facemate Corporation), Letter to Chicopee Fire Department Re: Underground Storage Tank Registration and Tank Removal Plans, January 28, 1988.

Environmental Compliance Services, Inc., Letter to MA DEP Re: Former Uniroyal Complex, March 23, 1988.

Environmental Compliance Services, Inc., Letter to MA DEP Re: Proposal for Short Term Measures, June 17, 1991.

Environmental Compliance Services, Inc., Letter to MA DEP Re: Summary of Product Bailing, October 16, 1990.

Environmental Compliance Services, Inc., Phase I Limited Site Investigation Report - Chicopee Industrial Park (Former Uniroyal Complex), March 1991.

L. Jones (MA DEP), Memo to Site Files Re: Site Visit Prior to Approval of STM Proposal, June 27, 1991.

S. Joyce (MA DEP), Notice of Responsibility to Facemate, March 11, 1988.

S. Joyce (MA DEP), Notice of Responsibility to Facemate, November 5, 1990.

S. Joyce (MA DEP), Notice of Responsibility to Uniroyal/Goodrich, June 25, 1991.

S. Joyce (MA DEP), Review of Report Letter to Facemate, June 25, 1991.

R. Nunes (Chicopee Fire Department), Letter to MA DEP Re; Oak Street Flood Control Pumping Station Incident, January 15, 1988.

D. Slowick (MA DEP), OHM Spill/Release Incident Report, September 13, 1990.

A. Symington (MA DEP), Field Notes - Tank Removals, February 22, 23, & 24, 1988.

MA DEP - Division of Hazardous Waste - Uniroyal File

MA DEP - Division of Hazardous Waste, 1991, RCRA Handlers in Western Massachusetts List, January 1991.

MA DEP - Division of Water Pollution Control, 1990, Regulations for Surface Water Quality Standards (314 CMR 4.0) and Groundwater Quality Standards (314 CMR 6.0)

Preliminary Assessment  
Former Uniroyal Complex

REFERENCES (continued)

MA DEP - Division of Water Supply, Public Water Supply Source Location Confirmation Form for Uniroyal, May 28, 1991.

MA DEP - Division of Water Supply, Water Supply Protection Atlas Overlays for USGS Quadrangles in Western Mass: Springfield North.

MA DEP - Division of Water Supply, 1990, Confirmed Community Water Sources List

MA Division of Fish & Wildlife, 1990, Atlas of State Listed Rare Wildlife Species in Wetlands Habitat, prepared by National Heritage and Endangered Species Program.

US Geological Survey Map - Springfield North Quadrangle, Revised 1973.



Commonwealth of Massachusetts  
Executive Office of Environmental Affairs

**Department of  
Environmental Protection**  
Western Regional Office

**William F. Weld**  
Governor

**Trudy Coxe**  
Secretary, EOE

**Thomas B. Powers**  
Acting Commissioner

To: Nancy Smith, EPA Region I

From: Michael Reed, MA DEP/WERO *mk*

Through: Catherine Wanat, MA DEP/WERO *W*

Date: December 2, 1994

Subject: Revised Site Assessment Report  
Former Uniroyal Complex  
Chicopee, Massachusetts  
MAD001122944, DEP Site No. 1-0000436

---

Enclosed is the revised Site Investigation (SI) Report, text and revised Figure 2, for the former Uniroyal Complex located in Chicopee, Massachusetts. Also enclosed are copies of References 22, 23, and 24, which contain information regarding groundwater supply sources within four miles of the site. This SI Report is being submitted for the MSCA grant quarter ending December 31, 1994. SI Worksheets, PAScore sheets, and supporting documentation for the SI Report were submitted to your office with the original SI package on August 11, 1994.

This revised SI Report contains the clarifications and additional discussion regarding recent site activities and specifics regarding private wells and surface water impacts that were requested in your comments letter received by the Department on September 13, 1994. The requested changes are not substantial and do not change the conclusions of the original SI Report.

Please forward any additional comments to both MA DEP/Boston and /WERO. Thank you.

cc: Ronald Gallagher, DEP/Boston



Commonwealth of Massachusetts  
Executive Office of Environmental Affairs

**Department of  
Environmental Protection**  
Western Regional Office

**William F. Weld**  
Governor

**Trudy Coxe**  
Secretary, EOE

**Thomas B. Powers**  
Acting Commissioner

**SITE INSPECTION REPORT**

**FINAL**

**Uniroyal Complex (Former)  
154 Grove Street  
Chicopee, MA**

**CERCLIS No. MAD001122944**

**DEP Site No. 1-0436**

Prepared by:

**Lisa Jones  
Bureau of Waste Site Cleanup  
Springfield, MA**

December 2, 1994

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**Site Inspection Report  
Uniroyal Complex (Former)  
Chicopee, Massachusetts**

**CERCLIS No. MAD001122944  
December 2, 1994**

## **INTRODUCTION**

The Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup team, was requested by the Region I U.S. Environmental Protection Agency (EPA) Waste Management Division to perform a Site Inspection of the Former Uniroyal Complex in Chicopee, MA. Tasks were conducted in accordance with the Site Inspection guidance provided by the EPA and performed under the Multi-Site Cooperative Agreement.

Background information used in the generation of this report was obtained through file searches conducted at the Department of Environmental Protection (the Department), telephone interviews with town officials, conversations with persons knowledgeable of the Former Uniroyal Complex and conversations with other federal, state, and local agencies. Additional information was collected during numerous on-site reconnaissances and environmental sampling events conducted by Department personnel, for both SI and state purposes, and by environmental consultants hired by the present and former owners. The most recent site visit conducted by Department personnel was on September 28, 1994.

This package follows the guidelines developed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended, commonly referred to as Superfund. However, these documents do not necessarily fulfill the requirements of other EPA regulations such as those under the Resource Conservation and Recovery Act (RCRA) or other federal, state, or local regulations. Site Inspections are intended to provide a preliminary screening of sites to facilitate EPA's assignment of site priorities. They are limited efforts and are not intended to supersede more detailed investigations.

## **SITE DESCRIPTION**

The Former Uniroyal Complex is located on a 17.8-acre parcel of land along the east bank of the Chicopee River at the intersection of Grove Street and Front Street in Chicopee Falls, MA (Figures 1 & 2). The general topography of the site is terraced, decreasing in elevation toward the west to the foot of the Chicopee River flood control dike. The geographic coordinates are 42°9'15"N latitude and 72°35'16"W longitude. (Ref. 1)

The site is located in a mixed residential, commercial, and industrial area. The site is bounded to the north by Facemate Corporation property and Oak Street. Beyond Oak Street are two lots, a vacant lot and a parking lot. Residential and commercial properties are located north, east, and south of the site. The nearest residential properties are an apartment complex named Falls Views Associates, located 330 feet to the north, and several single family homes on Front Street, located 75 to 300 feet south of the site. Local youths are known to trespass even though there are fences and a security guard. (Refs. 1 & 17)

Directly west of the site is a US Army Corps of Engineers flood control dike which is now maintained by the City of Chicopee. Beyond the dike is the Chicopee River, a Class B Surface Water considered suitable for fishing and recreation. (Ref. 1)

## **SITE HISTORY**

### **Operational History**

The site has been owned by Facemate Corporation since November 24, 1981. Buildings on the eastern, upper tier of the site have been offered for lease by Facemate Corporation, under the name Chicopee Industrial Park, since 1986. Tenants lease space in five of the twenty-three buildings for offices, storage of supplies, auto body repair, a machine shop, and light industrial manufacturing processes including metal fabrication, printing, and filter media fabrication. An auto salvage yard is proposing to lease space in the former salvage yard space. Facemate Corporation also uses space in the occupied buildings for storage. The remaining eighteen buildings, located on the middle and lower tiers, are not and have not been used by the present owner. Some of these unoccupied buildings were abandoned in the 1960s by Uniroyal, while others have not been used since Uniroyal ceased production and moved out of them in 1981. Consequently, many of the buildings, including those located on the western most portions of the site, the lowest tier, and several on the middle tier, are deteriorating, collapsing, or in an unstable condition. (Ref. 1)

Prior owners and operators of the site include Fisk Rubber Company, manufacturer of bicycle and automobile tires from 1898 to 1938, and Uniroyal, Inc. (a/k/a United States Rubber Company) from 1938 to November 24, 1981. Uniroyal filed notification as a RCRA Hazardous Waste Generator (#MAD01122944) on August 15, 1980 although production at the Chicopee plant had ceased on July 22, 1980. (Refs. 1 & 18)

Under ownership by Uniroyal, the operations included the manufacturing of rubber tires and associated support services including power generation, electric distribution, and maintenance of buildings and equipment. Suspected contaminants of concern from these operations include:

- (a) volatile organic compounds (VOCs) associated with the use of solvents and gasoline blends,
- (b) semi-volatile organic compounds (SVOCs) associated with process oil, carbon black, plasticizers, and rubber agents,
- (c) polychlorinated biphenyls (PCBs) resulting from leaks and spills of askarel oil, a dielectric fluid used in electrical transformers, switches, lines, and associated electrical equipment,
- (d) specific priority pollutant metals, such as zinc (in the form of zinc oxide) used as a reinforcing agent in rubber, and lead, associated with a "mud" used in tire balancing,
- (e) fuel oil associated with the boiler plant and a 200,000 gallon oil tank, and
- (f) asbestos used for pipe and boiler insulation. (Refs. 1, 6 & 10)

## Regulatory History

In 1987, the Department received a report of an oil substance entering the Chicopee River in the vicinity of the Oak Street Pumping Station (Figure 2). During an investigation of this release, Department personnel found that oil had impacted the pumping station which moves storm water from the site into the river during periods of high water elevation in the river. The PCB identified as Aroclor 1248 was detected at 71 parts per million (ppm) in a sample of the oil. The oil in the pump station was removed immediately after its discovery. Subsequent to the 1987 incident, the pumps in the station were not used until the remaining PCB-contaminated sediments were removed during October of this year. (Refs. 21 & 23)

The pumping station is approximately 150 feet from the former location of transformers #13, #14, and #25 (Figure 3). These transformers were found to be leaking in 1988 and were subsequently removed in 1989 by Transformer Services Inc., under contract with Facemate Corporation. No conclusive evidence has been found, as yet, however to prove that the PCB contamination at the pumping station came from these leaking transformers or any other PCB containing equipment at the site. Further investigation of the source of contamination in the pump station is necessary. (Ref. 3 & 19)

Releases of oil and/or hazardous materials were discovered at the site during the removal of underground storage tanks on February 22-24, 1988. Department personnel observed the removal of several underground tanks and found at least two tanks had been leaking. As a result of this finding, the Department issued a Notice of Responsibility (NOR) on March 11, 1988 to the current owner, Facemate Corporation, to take necessary actions for the prevention and mitigation of the releases under M.G.L. c. 21E. In that notice, the Department required Facemate to conduct an environmental site investigation to determine the extent of soil and groundwater contamination resulting from the releases from the underground tanks. Facemate Corporation retained the services of Environmental Compliance Service, Inc. (ECS) to conduct the environmental site investigation. (Ref. 19)

On September 13, 1990, during groundwater monitoring activities at the site, ECS personnel discovered more than two feet of a floating, clear, gasoline-like liquid in monitoring well, ECS-9 (Figures 4 & 5). ECS personnel reported as much as four feet of product on the following day and requested Department approval to begin hand bailing the product as a Short Term Measure (STM). The Department granted verbal approval of this STM on September 14, 1990. On October 16, 1990, the Department was notified that the STM was concluded on September 27, 1990. A total of 7.25 gallons of a product and water mix was bailed and the thickness of the floating layer had been decreased to 0.12 feet. (Ref. 19)

On November 5, 1990, the Department issued a second NOR to Facemate Corporation, requiring that a Preliminary Assessment (PA), Phase I - Limited Site Investigation, and Interim Site Classification Form (ISCF) be completed for this site in accordance with the Massachusetts Contingency Plan, 310 CMR 40.000.

On March 29, 1991, the Department received the Phase I Report and accompanying forms. The report describes the consultant's findings and recommendations following the site

investigation and tank removal activities which were conducted between April 1988 and March 1991. (Reference 19) Based on the results of the Phase I and other site investigations mentioned above, the EPA entered the site into CERCLIS on June 21, 1991. The Department submitted a CERCLA Preliminary Assessment Report to the EPA on August 6, 1991.

After a preliminary review of the Phase I Report, the Department issued a Notice of Responsibility to Uniroyal Inc. (now Uniroyal Goodrich Tire Company, Inc.), as a potentially responsible party (PRP), based on their former status of owner and operator of the site. The Department also issued a review letter to Facemate identifying the same requirements for further action. Both letters, dated June 25, 1991, identified "Imminent Hazards" associated with PCB oil on surface soil, the potential migration of PCBs to the river via the storm drains, and the potential for migration of uncontrolled solvents in groundwater. The letters required that a STM proposal be submitted to address these imminent hazards. (Ref. 9)

The Department received several proposals for Short Term Measures, prepared by ECS and dated June 17, 1991 (revised July 24, 1991), October 1, 1991, and November 18, 1991. The Department approved the proposed STMs which included product bailing, a soil vapor survey, the installation of soil borings completed as monitoring wells, the placement of impermeable barriers to cover PCB contaminated surface soils, an investigation of PCBs at the Oak Street Pump Station, and an investigation of an oil sheen observed at the outfall from the Oak Street Pump Station to the Chicopee River. (Ref. 2)

A follow-up report of these activities was prepared by ECS, dated March 5, 1992, and submitted to the Department. The report summarizes the completion of STM actions with the exception of the dye test, which was conducted on a later date. Additional monitoring wells and the results of the soil vapor survey suggest that the solvent plume is localized in the vicinity of the former underground storage tank field near Building 45. The report also indicates that the potential for direct contact with PCB contaminated soil is now reduced following the installation of additional fencing and impermeable covers. (Ref. 2) A Department memorandum to the site file indicates that the dye test was inconclusive; no connection between the two tested manholes and the pump station was found. Additional investigations of the storm drains and pump station as potential migration pathways was required by the Department. (Ref. 9)

Response actions were required to address the potential for on-going releases from equipment containing PCB oil because previous maintenance records indicated equipment was "leaking" and in "poor condition" in 1988. In a letter dated February 10, 1993, the Department required Facemate to address this issue. ECS submitted a response letter dated March 22, 1993. This letter indicates that Facemate now conducts quarterly visual inspections of the PCB transformers and switches, as required by federal regulations, and that no apparent leaks were found during inspections conducted on December 4, 1992, and March 19, 1993. While this information indicates that there were no visible leaks, it is possible that on-going releases may exist in hidden locations, such as manholes, which contain lines, link boxes, and other PCB containing components. Consequently, the Department will be meeting with the responsible parties to discuss a strategy to eliminate the threat of release posed by these PCB containing components, transformers, and switches. (Ref. 9)

On September 7, 1993, the Department received a proposal for a Phase II Comprehensive Site Assessment. This proposal describes numerous tasks to further characterize and delineate the extent of soil and groundwater contamination and to address data gaps found during the Phase I Investigation. The Department has approved several of the proposed tasks but also requires additional tasks and modifications to the plan. (Ref. 7)

## **WASTE CHARACTERISTICS**

### **Solvents**

During the operational history of Uniroyal, twenty-two underground storage tanks were used to store the gasoline-like, enriched aromatic solvent blends used in rubber manufacturing. The various names associated with these solvents include naphtha, gasoline, benzol, and "Chicopee Special". The locations of the tanks are shown in Figure 2. Table 1 lists the capacities, years of use, and present status of each tank. Laboratory analyses of the fluids found in the tanks prior to the 1988 tank removal activities, indicate the solvent blends contained as much as 6% benzene and 40% toluene: three times the benzene and toluene content typically found in gasoline. Analysis of Tank F contents indicated the presence of methylene chloride and 1,2-dichloroethane, in addition to non-halogenated aromatic compounds such as benzene, toluene, ethyl benzene, and xylenes. (Refs. 1 & 9)

Of the twenty-two underground storage tanks located at the site, eleven tanks (Tanks A, B, C, D, E, F, G, H, I, J, and K) were removed in 1988 under oversight by ECS, seven tanks (Tanks L, M, N, O, P, Q, R, and S) were reportedly cut and filled with sand during the 1960's or 1970's, and three tanks (Tanks T, U, and V) may have been removed in 1943 or 1944 during the relocation of the rubber cement manufacturing process. (Refs. 1 & 5) It is anticipated that test pit investigations will be conducted sometime during 1995 to attempt to locate Tanks L through V, pending the receipt and approval by the Department of a revised Phase II Scope of Work (Ref. 7). However, the initiation of test pit activities may be delayed further by the implementation of various risk reduction and containment measures that the Department has requested in the interim. Therefore, until additional information is obtained to confirm the removal or proper abandonment of tanks L through V, the contents of these tanks (equal to 74,000 gallons of solvent) must be considered as a waste source.

### **Solvent-Contaminated Soil**

Based on the information provided from laboratory analysis of soil and groundwater provided in references 1 & 2, and further discussed in the waste/source sampling section of this report, areas of solvent contaminated soil were estimated. These areas are shown on Figures 5C and 5D and the estimated size of these areas are:

Area 1 (Tanks A,B,C) = 2500 sq.ft.

Area 2 (Tank D) = 500 sq.ft.

Area 3 (Tank F) = 300 sq.ft.

Area 4 (Tanks LMNOPQRS) = 50,000 sq.ft.



**Table 1**  
**Underground Storage Tanks**  
**Former Uniroyal Complex, Chicopee, Massachusetts**

| Tank ID | Capacity (gallons) | Contents         | Years Used    | Status       |
|---------|--------------------|------------------|---------------|--------------|
| A       | 1,000              | Gasoline Blend   | 1943-1977     | Removed 1988 |
| B       | 1,000              | Gasoline Blend   | 1943-1977     | Removed 1988 |
| C       | 1,000              | Gasoline Blend   | 1943-1977     | Removed 1988 |
| D       | 1,000              | Gasoline Blend   | 1961-?        | Removed 1988 |
| E       | 1,000              | Gasoline         | 1961-?        | Removed 1988 |
| F       | 1,000              | Solvent Blend    | 1961-1968     | Removed 1988 |
| G       | 10,000             | Chicopee Special | 1979-1981     | Removed 1988 |
| H       | 10,000             | Solvent          | 1979-1981     | Removed 1988 |
| I       | 10,000             | Solvent          | 1979-1981     | Removed 1988 |
| J       | 10,000             | Regular Gasoline | 1979-1981     | Removed 1988 |
| K       | 8,000              | Spill Recovery   | 1979-1981     | Removed 1988 |
| L       | 10,000             | Naphtha          | 1943-?        | Unknown      |
| M       | 10,000             | Naphtha          | 1943-?        | Unknown      |
| N       | 10,000             | Naphtha          | 1943-?        | Unknown      |
| O       | 10,000             | Naphtha          | 1943-?        | Unknown      |
| P       | 10,000             | Naphtha          | 1943-?        | Unknown      |
| Q       | 10,000             | Naphtha          | 1943-?        | Unknown      |
| R       | 10,000             | Naphtha          | 1943-?        | Unknown      |
| S       | 1,000              | Spill Recovery   | 1943-?        | Unknown      |
| T       | 1,000              | Gasoline         | prior to 1943 | Unknown      |
| U       | 1,000              | Naphtha          | prior to 1943 | Unknown      |
| V       | 1,000              | Benzol           | prior to 1943 | Unknown      |

Notes: 1. Information in this table was obtained from References 1 & 5.  
2. Tank locations are shown on Figure 2.

The total estimated area equals 53,300 sq.ft.

### Process Oil

As listed in Table 2, several above-ground tanks were used to store process oils which were similar to #4 and/or #6 fuel oil. These process oils are likely the source of semi-volatile organic compounds (SVOCs) found in surface soil (Ref. 1). Various names given to the oils include Aromatic Oil, Aromatic Oil Type A, Paraflux (Ref. 10), Synthetic Pine Tar Oil Type 2, Pine Tar Oil Type 3, and Naphthenic Oil (Ref. 6). According to specification data sheets, these oils functioned as plasticizers for the rubber manufacturing process.

**Table 2**  
**Process Oil Above-ground Storage Tanks**  
**Former Uniroyal Complex, Chicopee, Massachusetts**

| Location                | Number of Tanks & Capacity (gallons) | Total Capacity (gallons) |
|-------------------------|--------------------------------------|--------------------------|
| Building 28 Basement    | four 11,500                          | 46,000                   |
| Building 40 Basement    | three 10,000                         | 30,000                   |
| Building 40 First Floor | two 3,000                            | 6,000                    |

Note: Information in the table was obtained from Reference 5.

These process oils were shipped to the property by rail car and were probably spilled on occasion during off-loading of the tank cars. Oil was also discharged into floor drains during rubber manufacturing operations and known to impact the river via the storm drain system. Extensive plant modifications, including the installation of eleven oil / water separators shown in Figure 6, were planned and implemented in the 1970s to control these releases (Refs. 5 & 10). A memorandum dated 1971 indicates that the control program reduced the daily discharge to the river from 500 to 125 gallons of oil (Ref. 10). When plant operations ceased in 1980, oil discharges were further eliminated.

Because of the uncertainties in actual volumes lost to the river and because process oil is no longer handled at the site, the only source related to process oil releases at the site that will be considered in this investigation is the contaminated soil located along the two major rail spurs, that was impacted by tank-car off-loading. The total area is approximately 51,000 sq. ft. as calculated from information obtained in Reference 1.

All oil containers, including process oil tanks, numerous oil interceptors, and a 200,000 gallon above-ground #6 fuel oil tank, must be inspected and evaluated as potential release sources. The volume, type, and physical state (liquid or sludge) of the oil in each container must be determined to prepare for proper disposal of any remaining contents.

## PCB Transformers

Electric power was distributed throughout the complex using 25 large transformers (500 to 1500 kVA [kilovolt-amperes, a measure of apparent power]) and numerous smaller transformers. The locations of these transformers are shown on Figure 3 and the capacity of each unit is listed in Table 3. In the 1972 Facility Manual for the Uniroyal Plant, two of the large transformers are identified as a "Dry Type", not containing dielectric fluid, and the other twenty-three large transformers are identified as askarel transformers, containing PCB-based dielectric fluid. According to a local utility company, askarel often contains 40 to 60% PCBs. At present, one askarel transformer is in use, sixteen askarel transformers are stored on site for future use, two "Dry Type" transformers are stored for future use, and six askarel transformers have been removed (three were removed by Uniroyal circa 1972; three were removed by Transformer Services, Inc., at the request of Facemate in 1989). The total number of smaller transformers and the contents of these transformers is presently unknown; ECS reported the location of several units during their building inspections but their reports do not indicate contents or condition. (Refs. 1, 3 & 9)

Based on information found in the transformer inspection records (Ref. 3), Table 3 was constructed to summarize the volume of PCB oil contents and the present status of the individual transformers and switches. The total volume of askarel oil in transformers and switches equals 11,694 gallons. This volume is approximately equal to 90,000 pounds of PCBs for oil that has 60% PCB content and a specific gravity of 1.62 (Ref. 4).

## PCB-Contaminated Soil

Six distinct areas of PCB-contaminated soil are shown on Figure 5. These locations, and the volumes of soil associated with each location, were based on the analytical results of samples collected from various soil boring locations and depths (Ref. 1). The dimensions and volume calculations follow:

- Area A:  $200' \times 20' \times 3' = 12,000$  cu.ft.
- Area B:  $10' \times 10' \times 2' = 200$  cu.ft.
- Area C:  $10' \times 20' \times 4' = 800$  cu. ft.
- Area D:  $500' \times 100' \times 1.5' = 75,000$  cu.ft.
- Area E:  $150' \times 50' \times 5' = 37,500$  cu.ft.
- Area F:  $150' \times 50' \times 2' = 15,000$  cu.ft.

The total soil volume = 140,500 cu.ft.

## Metals

According to information provided in Reference 6, zinc oxide and lead are the predominant metals likely to be found at the site. Lead was used in a tire balancing "mud" that was brush applied to a tire interior. The lead-containing compound was not associated with the gasoline solvent although it was probably mixed in the cement house, Building 43. To date, limited sampling data is available to evaluate the presence of metals in groundwater and no soil

**Table 3**  
**Characteristics of Electric Transformers**  
**Former Uniroyal Complex, Chicopee, Massachusetts**

| Unit No. | Unit Type | Unit Contents |      | Condition (as of 5/88) | Status (as of 6/94) |
|----------|-----------|---------------|------|------------------------|---------------------|
|          |           | Gallons       | Type |                        |                     |
| 1        | T         | unk           | A    | NA                     | Removed 1972        |
| 2        | T         | 500           | A    | Fair                   | In use, 1991        |
| 3        | T         | 590           | A    | Poor                   | Stored for reuse    |
| 3        | S         | 60            | A    | Poor                   | " " "               |
| 4        | T         | None          | Dry  | NA                     | " " "               |
| 5        | T         | 800           | A    | Poor                   | " " "               |
| 5        | S         | 38            | A    | Poor                   | " " "               |
| 6        | T         | NA            | Dry  | NA                     | " " "               |
| 7        | T         | 945           | A    | Poor                   | " " "               |
| 7        | S         | 38            | A    | Poor                   | " " "               |
| 8        | T         | 945           | A    | Poor                   | " " "               |
| 8        | S         | 50            | A    | Poor                   | " " "               |
| 9        | T         | 647           | A    | Fair                   | " " "               |
| 9        | S         | 50            | A    | Fair                   | " " "               |
| 10       | T         | 576           | A    | Poor                   | " " "               |
| 10       | S         | 60            | A    | Poor                   | " " "               |
| 11       | T         | 590           | A    | Poor                   | " " "               |
| 11       | S         | 60            | A    | Poor                   | " " "               |
| 12       | T         | unk           | A    | NA                     | Removed 1972        |
| 13       | T         | unk           | A    | Poor                   | Removed 4/89        |
| 14       | T         | unk           | A    | Unknown                | Removed 4/89        |
| 15       | T         | 574           | A    | Poor                   | Stored for reuse    |
| 15       | S         | 56            | A    | Poor                   | " " "               |
| 16       | T         | 574           | A    | Poor                   | " " "               |
| 16       | S         | 56            | A    | Poor                   | " " "               |

Table continued next page

**Table 3 (Continued)**

| Unit No. | Unit Type | Unit Contents |      | Condition (as of 5/88) | Status (as of 6/94) |
|----------|-----------|---------------|------|------------------------|---------------------|
|          |           | Gallons       | Type |                        |                     |
| 17       | T         | 574           | A    | Poor                   | Stored for reuse    |
| 17       | S         | 56            | A    | Poor                   | " " "               |
| 18       | T         | 290           | A    | Fair                   | " " "               |
| 18       | S         | 46            | A    | Fair                   | " " "               |
| 19       | T         | 800           | A    | Poor                   | " " "               |
| 19       | S         | 38            | A    | Poor                   | " " "               |
| 20       | T         | 576           | A    | Poor                   | " " "               |
| 20       | S         | 60            | A    | Poor                   | " " "               |
| 21       | T         | 590           | A    | Poor                   | " " "               |
| 21       | S         | 60            | A    | Poor                   | " " "               |
| 22       | T         | 394           | A    | Poor                   | " " "               |
| 22       | S         | 60            | A    | Poor                   | " " "               |
| 23       | T         | unk           | A    | Unknown                | Removed 1972        |
| 24       | T         | 410           | A    | Fair                   | Stored for reuse    |
| 24       | S         | 42            | A    | Fair                   | " " "               |
| 25       | T         | unk           | A    | Unknown                | Removed 4/89        |

Notes: Information in this table was obtained from Reference 3.

Unit Type: T = Transformer S = Switch

Unit Contents:

- unk = unknown volume
- A = Unit contained askarel fluid (40 to 60% PCBs)
- Dry = Unit did not contain dielectric fluid

Condition:

- "Poor" designation includes evidence of fluid or pressure leaks.
- "Fair" designation may means in operating condition.
- NA = not applicable

sampling data was available. The need for further sampling for priority pollutants is discussed later in this report. (Refs. 1, 2 & 9)

## **WASTE/SOURCE SAMPLING**

Investigation activities were conducted by ECS to characterize the nature and extent of oil and hazardous materials at the site, as part of the Phase I and imminent hazard evaluations. These activities included field surveys of source areas and migration pathways, building inspections, and an extensive sampling program. The sampling program included soil sampling for SVOCs in 11 test pit excavation locations (TP- #), surface soil sampling for SVOCs and/or PCBs at 25 locations (S- #), soil sampling for PCBs at various depths at 77 hand-boring locations (HB- #), the installation and sampling of 28 shallow 2" diameter groundwater monitoring wells (ECS- #), and a soil gas survey conducted in the vicinity of former Tanks L through S. Soil sample locations are shown on Figure 5 and groundwater sampling locations are shown on Figure 6. Laboratory results from soil and groundwater sampling and analyses are presented in Tables 7, 8, and 9, attached. Additional sampling activities which were conducted during the evaluation of the Oak Street pump station and during other investigations are discussed in applicable sections of this report.

### **PCB Analysis**

Numerous surface and subsurface soil samples were analyzed for PCBs during the site assessment process. In addition to the initial surface sampling to identify the presence of PCBs, an extensive hand and drill-rig soil boring program was conducted to estimate the vertical and lateral extent of PCB contamination. Results indicated that PCB levels in surface soil ranged from not detected (less than 0.250 ppm) to 8,700 ppm.

Five distinct areas exist where PCB concentrations in surface soil (0 to 6-inch depth) exceed 500 ppm. These areas are identified on Figure 5 as Areas A, B, C, D, and E. Area F also has PCB contamination but concentrations in samples collected from this area are less than 100 ppm. PCB contamination in these areas is associated with askarel transformers and switches. The PCB compounds detected include Aroclor 1248 and Aroclor 1260.

Three of these locations, Areas A, B, and C, were recently fenced and covered temporarily with an impermeable membrane because they were considered by the Department to present an imminent hazard. The imminent hazard was attributed to the potential for direct human contact with elevated concentrations of PCBs in surface soil. Maximum PCB concentrations in surface soil in these areas were: 2700 ppm in Area A, 573 ppm in Area B, and 4200 ppm in Area C. PCBs were also found in a soil sample collected from the surface of the sidewalk bordering Oak Street, adjacent to Area C, at a concentration of 250 ppm. To eliminate the imminent hazard, soil was swept from the sidewalk and relocated to within fenced Area C.

The other areas, Areas D and E, are located in unused portions of the site and are not in areas presently considered to pose an imminent hazard to on-site workers. Area D, which is located west of Building 28 N in the immediate vicinity of transformers #8, #18, #5, and #19,

exhibited PCB levels up to 890 ppm. A wide-spread area of moderate PCB levels (up to 91 ppm) was found adjacent to this location, north and south along the middle-tier railroad tracks. Area E, which is located west of Building 8 near where transformers #13, #14, and #25 once stood, exhibited PCB levels of 8700 ppm (from 0 to 6 inches) and 470 ppm (from 2 to 4 feet), with both Aroclor 1260 and 1248, present. The maximum depth of PCB contamination is not known.

An additional PCB-contaminated area, near a pile of wood block floor debris along the upper railroad spur west of Buildings 42 and 27, was found to contain low levels (not detected to 7.7 ppm) of Aroclor 1254 in surface soil samples. The source of the PCBs in this area has not been identified, nor is it likely to be associated with the dielectric fluid used in the askarel transformers.

PCBs were not detected (less than 2.5 ppb) in groundwater samples collected from monitoring wells; however, very few groundwater samples were analyzed for PCB content. Most monitoring wells are located near former underground storage tanks and are not located in the vicinity of PCB releases.

As part of the STM actions, samples of standing water and sediment were collected from a manhole located near Building 8, and found to contain Aroclor 1260 at levels of 27 ppb in the water and 140 ppm in the sediment. Although this manhole is located approximately 150 feet from the Oak Street Pump Station, no connection was found between the manhole and the pump station. The manhole appears to be an isolated utility access and the water may be present because of groundwater infiltration or surface runoff.

PCBs (Aroclor 1260) were detected at 35 ppm in sediments collected from the Oak Street pump station, but were not detected in the standing water in the pump station during a sampling event on November 6, 1991. Previously, in 1987, Aroclor 1248 was detected at 71 ppm in an oil sample from this pump station. Additional investigations of the Oak Street pump station and the storm drain system are necessary to identify potential source(s) of contaminants in the pump house chamber and to evaluate the potential migration pathway of drainage containing PCB-contaminated soil or sediment being discharged to the river.

The collection of river sediment samples for PCBs analysis was not conducted during the Phase I investigation, but will be required during Phase II.

### **Volatile Organic Compounds Analysis**

Volatile organic compounds (VOCs), primarily the non-halogenated aromatic compounds commonly associated with gasoline including benzene, toluene, ethylbenzene, and xylenes (BTEX), were detected in many of the groundwater samples collected at the site. These VOCs were typically found in samples collected from monitoring wells located in the vicinity of former underground storage tanks (USTs), which had contained gasoline blends and feedstock solvents for rubber manufacturing and for vehicle use. The most significant petrochemical release to groundwater was found in the lower tank field (Tanks L through S), where separate-phase product was observed in monitoring wells ECS-9 and ECS-23. A soil gas

survey and additional monitoring well installation and sampling, which were completed as STM activities, indicated that the release in this former tank field is localized. (Ref. 2)

The highest concentrations of VOCs were detected in subsurface soil and groundwater samples taken from former locations of the tank fields for Tanks ABC and Tanks L through S. A separate floating layer of solvents was observed in two monitoring wells near former Tanks L through S. The maximum VOC concentrations detected in groundwater samples were 3714 ug/L benzene, 140,000 ug/l toluene, 700 ug/l ethyl benzene, and 689 ug/l total xylenes.

Methyl tertiary butyl ether (MTBE), at levels up to 45 ppb, was another VOC detected in groundwater samples analyzed during the STM activities associated with the lower tank field. Additional analysis for this compound must be considered in Phase II activities to determine if its presence is related to the lower tank field or if there is another source for this compound. (Ref. 9)

Low levels of halogenated compounds were found in a limited number of groundwater samples taken from areas where spillage may have occurred from the industrial use of cleaning or degreasing solvents. The halogenated compounds detected include perchloroethylene (PCE), methylene chloride, dichlorobenzene, chloroform, carbon tetrachloride, 1,1,1-trichloroethane (TCA), and breakdown products of TCA and PCE. (Ref. 1)

Sampling of the contents removed from Tank F also indicates that at least this one UST contained chlorinated solvents. Tank closure documents indicate that there were several holes in the tank and very strong odors in the tank pit. Laboratory analysis of the contents from Tank F is presented in Table 12 of the Phase I report. The results showed the presence of methylene chloride (up to 45 ppm) and 1,2 dichloroethane (up to 37 ppm), in addition to high concentrations of BTEX.

Tank F is located near to Building 43 and was likely used to store either a special feedstock, recycled, or waste material used in or generated from the rubber cement manufacturing processes, which took place in Building 43. Further investigation of the release from Tank F will be needed in Phase II. In addition, the Department requires the submittal of supporting documentation for the removal and disposal of hazardous waste and contaminated soil, which was generated during the removal of this tank. Appendix D (pages 6 & 7) of the Phase I report indicates that there was a stockpile of soil, as well as 12 drums of product. No information was found in the Phase I report to verify the disposal of this hazardous waste. (Refs. 1 & 9)

Documentation of the removal and disposal of Tank K and its reported contents of 8,000 gallons of oily water were also missing from the Phase I report, and must be submitted to the Department to verify proper disposal. (Ref. 9)



## **Semi-volatile Organic Compounds Analysis**

Soil sampling and analysis for SVOCs during the Phase I field work indicated the presence of these contaminants in surface soil at the site, although the vertical and lateral extent of this contamination has not yet been defined. No subsurface samples were taken for SVOC analysis, nor were there any samples collected for SVOC analysis from the lowermost level, west of buildings 1 through 15. (Ref. 9)

Moderate (10 to < 100 ppm) to high (>100 ppm) concentrations of total polyaromatic hydrocarbons (PAHs) were typically found in surface soil samples collected in the vicinity of the upper railroad spur, between Buildings 42 and 28, and along the middle section of railroad tracks, between Buildings 28 and 8. The surface soil contamination detected at these two locations is most likely attributable to historic spills during the transport and delivery of carbon black, process oil, plasticizers, rubber agents, and/or #6 fuel oil. (Refs. 1 & 9)

The highest concentration of PAHs detected (629 ppm total PAHs, with 24 constituents identified) was from surface soil sample # S-15. Several of the PAHs detected are used almost exclusively in rubber manufacturing: aniline is a vulcanizing agent, and benzoic acid and bis(2-ethylhexyl) adipate are plasticizers. The other PAHs detected, although typically associated with oil and tars derived from the petroleum and coal-gasification industries, were more probably constituents of the process oil. (Ref. 1)

ECS reported no detected PAHs (greater than 2 times the EPA Method 8270 detection limits) in groundwater, but only four of the monitoring wells were sampled for PAH analysis. Presently, there is insufficient analytical data to evaluate the impact of PAHs on groundwater. No samples were collected for PAH analysis from the two monitoring wells which are located in areas where surface soil was found with elevated PAHs (ECS-11 and ECS-20). (References 1 & 9) These two monitoring wells and twelve additional monitoring wells will be sampled, and the groundwater samples submitted for PAH analysis, during the forthcoming Phase II work. (Ref. 7) River sediment sampling and analysis for PAHs will also be completed, pursuant to Department requirements for the Phase II work. (Ref. 9)

## **Metals Analysis**

Limited RCRA Metals testing was performed during the Phase I Investigation. Metals analyses were not performed on soil samples. Analyses for RCRA-8 metals were performed on groundwater samples collected from eight of the twenty-eight monitoring wells on-site. The analyses revealed the presence of barium up to 0.35 ug/L; no other metals were detected. (Ref. 1)

Total metals analyses were performed on samples of the liquid removed from underground storage tanks before tank removal actions. Test results revealed 69.4 mg/kg of lead in a composite sample from Drums 8 & 16 and zinc in all samples, with the highest level reported as 11.5 mg/kg. Since both zinc and lead are likely to be found associated with rubber manufacturing, additional metals analyses are necessary during Phase II. (Ref. 9)

## **GROUNDWATER PATHWAY**

### **Geology and Hydrogeology**

Regionally, land in the western portion of the Chicopee River drainage basin exhibits a terraced topography which is likely to have formed during post-glacial erosion and deposition. The three terraces at the site slope gradually towards the river. Site geology consists of glacio-fluvial deposits (sands and silts), glacio-lacustrine deposits (varved clays and silts), glacial outwash deposits (sands and gravels), and fill (poorly sorted mixture of varying grain size).

The predominant deposits are medium to fine sand and silt. The lakebed deposits are underlain by glacial outwash deposits of sand and gravel. Numerous borings indicate the presence of fill materials such as wood debris, coal, and cinders at depths up to five feet in the lowermost terrace, and at depths up to ten feet along railways. (Ref. 1)

Groundwater at the site was encountered at the following depths: from 2 to 5 feet in monitoring wells located on the lower, western-most terrace; from 7.5 to 20 feet in monitoring wells located on the middle terrace; from 8 to 16 feet in monitoring wells located on the upper, eastern-most terrace; and from 23 to 25 feet in borings located in the area designated "Former Salvage Yard". Based on survey and groundwater elevation data, the lateral groundwater flow was determined to be westerly towards the Chicopee River. Seasonal groundwater to surface water discharge is likely. (Ref. 1)

### **Target Evaluation**

Based on a review of the Department's Priority Resource Maps and Division of Water Supply files, and on detailed discussions with local water supply officials (Chicopee Board of Health and Water Department), the following was ascertained: (a) There are no public groundwater supply sources located within 4 miles of the site; (b) nearly all residences in the City of Chicopee are serviced by municipal water drawn from the Quabbin Reservoir; and (c) there are no private wells used for drinking water or other personal consumption uses located within one mile of the site. (Refs. 8, 22 & 23) The population served by groundwater wells within four miles of the site is shown in Table 4. Since groundwater contamination is localized to the site and is unlikely to impact drinking water supply, there are no primary targets for the groundwater pathway.

On-site, deep water supply wells, reportedly to depths of 200 feet, were formerly used for process water and fire control. These wells were not used as drinking water supplies. There is no information regarding the influence of these wells on groundwater and/or contaminant migration. Since the present property owners do not intend to use these wells, ECS has recommended that these wells must be properly decommissioned. (Ref. 1)

Groundwater sampling results are presented in Table 9. The most significant release to groundwater is in the vicinity of Tanks L through S, where a light non-aqueous phase liquid (LNAPL) is present and has been measured at a thickness of up to 4 feet. The groundwater

in this areas and in several other areas in the vicinity of former tanks contain dissolved constituents of the LNAPL, as indicated by the presence of benzene, toluene, ethylbenzene, and xylenes in groundwater samples. Low levels of chlorinated solvents were also found in groundwater samples. Analysis for additional suspected groundwater contaminants, such as PCBs, PAHs, and metals, will be completed during the Phase II activities, anticipated to occur sometime during 1995. (Refs. 1 & 7)

**Table 4**

**Estimated Drinking Water Populations Served by Groundwater Sources Within Four Miles of the Former Uniroyal Complex, Chicopee, Massachusetts**

| Radial Distance From Site (miles) | Estimated Population Served by Private Wells | Estimated Population Served by Public Wells | Total Estimated Population Served by Groundwater Sources Within the Ring |
|-----------------------------------|--|---|--|
| 0.00 < 0.25                       | 0  | 0   | 0  |
| 0.25 < 0.50                       | 0  | 0   | 0  |
| 0.50 < 1.00                       | 0  | 0   | 0  |
| 1.00 < 2.00                       | 72   | 0   | 72   |
| 2.00 < 3.00                       | 385  | 0   | 385  |
| 3.00 < 4.00                       | 771  | 0   | 771  |
| <b>TOTAL</b>                      | <b>1233</b>                                  | <b>0</b>                                    | <b>1233</b>  |

Note: Information listed in this table was obtained from References 8, 22, and 23.

**SURFACE WATER PATHWAY**

**Hydrology**

Flow in the Chicopee River is influenced by three hydroelectric stations: two upstream and one downstream of the site. The annual average flow rate is 950 cubic feet per second (cfs), as measured at the Indian Orchard USGS Gaging Station, located several miles upstream. (Ref. 13) The Chicopee River meanders south then west to its confluence with the Connecticut River, approximately 2.1 miles from the Oak Street pump station. The Connecticut River is a large river with an average annual flow rate of 12,600 cfs. The Connecticut River extends south into Connecticut and eventually discharges into Long Island Sound. (Refs. 12 & 13)

Both the Chicopee and Connecticut Rivers are designated Class B surface waters and, therefore, are suitable for fishing and recreation. There are no drinking water intakes on these rivers. (Ref. 8) The nearest environmental receptors downstream of the site are wetland areas that border the Chicopee River at distances of 0.9, 1.3, and 1.7 miles, and at the confluence with the Connecticut River. The total length of wetland frontage is given in Table 5 as measured from the map in Reference 11, attached. The Connecticut River is a designated habitat of the federally-endangered shortnose sturgeon, however the most critical habitat, the spawning grounds, are reportedly upstream of the site in Holyoke, Massachusetts. (Ref. 12)

**Table 5**

**Water Bodies Within the Surface Water Segment of Former Uniroyal Complex, Chicopee, Massachusetts**

| Surface Water Body | Descriptor   | Length of Reach (miles) | Flow Rate (cfs) | Length of Wetlands (miles) |
|--------------------|--------------|-------------------------|-----------------|----------------------------|
| Chicopee River     | large stream | 2.1                     | 950             | 1.1                        |
| Connecticut River  | large river  | 12.9                    | 12,600          | 1.3                        |

- Notes:**
1. cfs = cubic feet per second
  2. The flow rates are an annual average of daily flows.
  3. Information for this table was obtained from references 11, 13, & 14.

**Target Evaluation**

Although some building floor drains and exterior storm drains located in the uppermost tier of the property may have been tied into the sanitary sewer lines located on Front Street, most or all drainage from the Former Uniroyal Complex enters the Chicopee River via a storm drain system which passes water from the site through a US Army Corps of Engineers flood-control dike. The Oak Street pump station, located between the site and the dike, is used to pump stormwater into the river when the river water level rises above the discharge pipe. A gravity-fed discharge line, adjacent to the pump station, is used when the river level is below the outfall pipe. This pump station and its discharge pipe(s) are the probable point of entry for contamination to impact the river. (Refs. 1 & 10)

Historic releases of process oil were known to occur on-site during the operational years at the Former Uniroyal Complex. As was mentioned above (Site History section), the Department had the City of Chicopee close the Oak Street pump station during 1987, in response to ongoing pump discharge releases of process oil and possibly PCBs to the Chicopee River. Analytical results of pump chamber sediment samples, collected during November of 1991, indicated the presence of 35 ppm PCBs. (Ref. 2) A previous sample obtained during the removal of oil from the station in 1987 showed 71 ppb in a sample of the floating oil within the pump chamber.

The pump has been inactive and the contaminated sediments contained within the pump chambers until October of this year, when the contaminated sediments were removed and disposed of off-site (Refs. 20 & 23) Note that, although the pump station was inoperative between 1987 and October 1994, discharge from the stormwater drainage system via the gravity-fed line during low-flow periods in the Chicopee River has continued unabated.

In the absence of river sediment or fish sample analytical data, the Department considers the pre-cleanup analytical results from the chamber sediments (35 ppm PCB) to represent the worst-case condition in the river. Hence, the Chicopee River is considered a primary fishery, with PCB contamination assumed to be present at 35 ppm in sediments. Sampling of the river sediments for PCB and SVOC analysis will be completed as part of the Phase II activities during 1995. The nearest downstream wetland may also need to be sampled and analyzed for PCBs and/or SVOCs, pending the results of river sediment sampling. (Refs. 7, 9 & 11)

At present, surface water impacts via groundwater discharge are not believed to be significant because of the general trend of declining contaminant concentrations detected in monitoring wells located closer to the river. (Table 9) However, it may represent an additional potential pathway for future contaminant migration.

## **SOIL EXPOSURE PATHWAY**

Currently, there are approximately 85 workers using the property. Trespassing youths have also been seen on the premises in restricted areas on all three terraces and inside of in-use and abandoned buildings. There are no schools or day care facilities within 200 feet of the site. The nearest residential property is less than 200 feet from the site boundaries but greater than 200 feet from areas of contaminated surface soil. Surrounding residential population from 1990 US Census data is presented in Table 6. (Refs. 1, 2, 16)

On several occasions, the Department has accompanied the site owners and their agents to inspect the accessibility of residents and workers to surface soil contamination, and to inspect the transformers for leaks. Since these inspections, impermeable membranes and fencing were installed to reduce direct contact hazards with PCB-contaminated soil. Repairs have been made to several leaking PCB units as required by Department personnel. In addition, the Department is requiring that plans be made to remove all PCB-containing equipment that is "stored for re-use" and other PCB containing equipment which is not inspected quarterly. (Refs. 1, 2 & 16)

## **AIR PATHWAY**

The air exposure pathway poses a minimal threat to the tenant/worker and surrounding residential populations. Most areas of soil contamination are covered with an impermeable membrane, located in limited access locations, and/or beneath several feet of soil. There are thirty-four tenant businesses using buildings on the uppermost tier. Eighteen businesses rent office space and sixteen businesses rent storage and/or production space. The total

number of people using the space is estimated to be eighty-five. The surrounding residential population is presented in Table 6.

**Table 6**  
**Estimated Population Within Four Miles of  
Former Uniroyal Complex, Chicopee, Massachusetts**

| Radial Distance From Site (miles) | Estimated Population |
|-----------------------------------|----------------------|
| 0.00 < 0.25                       | 463                  |
| 0.25 < 0.50                       | 1,389                |
| 0.50 < 1.00                       | 5,569                |
| 1.00 < 2.00                       | 28,030               |
| 2.00 < 3.00                       | 47,843               |
| 3.00 < 4.00                       | 62,087               |
| <b>TOTAL</b>                      | <b>145,381</b>       |

Note: Information for this table was obtained from Reference 8, which reports data from the 1990 US Census Report.

## SUMMARY AND CONCLUSIONS

This Site Investigation (SI) was conducted by the Department at the Former Uniroyal Complex in Chicopee, Massachusetts to gather data necessary to evaluate the site as a candidate for the Superfund National Priority List. Soil, sediment, and groundwater analytical results from prior investigations were reviewed to characterize the types of hazardous waste substances found at the site and to evaluate the potential migration pathways. In addition, information was collected to identify and quantify target populations potentially impacted by the site.

The site has been used for industrial purposes since 1898. The predominant use of the property from 1898 to 1980 was to manufacture rubber tires for bicycles and automobiles. Support services, which were necessary for the operation of this large tire manufacturing plant, included power generation, electrical distribution, and maintenance of buildings and equipment. In the 1960s, tire production diminished and several buildings were abandoned. In 1980, tire production at Uniroyal's Chicopee plant ceased. From 1980 to 1986, the property had very limited use, as storage space for the new owner. Since 1986, portions of the property have been leased under the name Chicopee Industrial Park for offices, storage space, and light industrial manufacturing.

As a result of many years of tire production and subsequent abandonment of related tire production equipment, storage containers, and electrical equipment, various oils and

hazardous materials (OHM) have been released to soil, groundwater, and surface water. Specific sources of OHM include underground solvent storage tanks, above-ground oil storage tanks, electrical transformers and switches containing PCB oil, and contaminated soil. In addition, spills of OHM were likely to have occurred during deliveries and during production. These historic OHM spills were probably the source of contamination in surface soil along the railroads and may also have resulted in an impact to river sediment via storm and floor drain discharges.

Numerous site investigations were conducted at the site prior to the SI: a MCP Phase I - Limited Site Investigation dated March 1991, a CERCLA Preliminary Assessment dated July 1991, and a Short Term Measure Evaluation dated March 1992. Based on the results of these reports, oil and hazardous materials were identified in surface soil, subsurface soil, groundwater, and pump station sediments.

The contaminants of concern found at this site include non-halogenated volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), lead, and zinc. VOCs are associated with the use of solvents and gasoline-like blends. SVOCs are components in process oil, carbon black, plasticizers, and rubber agents. PCBs were used in the dielectric fluid found in transformers, switches, and other electrical components. Lead was mixed with solvents and used as a "mud" for tire balancing. Zinc in the form of zinc oxide was used as a reinforcing agent in the manufactured rubber.

The highest concentrations of VOCs were detected in subsurface soil and groundwater samples taken from former locations of the tank fields for Tanks ABC and Tanks L through S. A separate floating layer of solvents was observed in two monitoring wells near former Tanks L through S. The maximum VOC concentrations detected in groundwater samples were 3714 ug/L benzene, 140,000 ug/l toluene, 700 ug/l ethyl benzene, and 689 ug/l total xylenes.

The highest concentrations (629,350 ug/kg) of total SVOCs were found in a surface soil sample from along the railroad located west of building 28. Twenty-three contaminants were identified in this sample.

PCBs were detected in surface soil, subsurface soil, and groundwater. Five areas of surface soil were found to contain greater than 500 ppm of PCBs. The maximum concentration found in surface soil samples was 8,700 ppm. PCBs at a concentration of 75 ppb were also found in an oil sample from the Oak Street pump station during a 1978 oil spill incident. The PCBs in the oil were likely a result of co-mingling of a process oil spill with PCB-contaminated sediments. Further investigation of the pump chamber revealed 35 ppm in the pump chamber sediments. The analytical results of 35 ppm PCBs, found in the pump station sediment sample, is being evaluated in the SI as representative of the river sediments in the absence of river sediment sampling and analysis. Additional testing in the river will provide supplemental information for this SI.

Heavy metals analysis of drummed liquid waste taken from the former underground storage tanks from the site revealed the potential for a release of only two metals: zinc and lead. The maximum observed concentrations were 11.5 mg/kg zinc and 69.4 mg/kg lead. Metals were

not detected in groundwater samples. Analysis for metals in soil has not yet been completed.

Four pathways of exposure were evaluated in the SI: groundwater, surface water, soil exposure, and air exposure pathways. The groundwater pathway for this site is insignificant due to the lack of groundwater use in the area; groundwater in the vicinity of the site is not used for drinking water. The surface water pathway and the soil exposure pathways are the primary pathways of concern. The Chicopee River is a primary target as a fishery and as an area with bordering wetlands. On-site workers, trespassing youths, and nearby residential population are the primary targets of for the soil exposure pathway. The air pathway was found to be significant only because of the population within the target area; however, there is no evidence of an air release.

Because of the potential for PCB contamination to impact the nearby fishery and wetlands of the Chicopee River, and because of the potential hazards for direct human contact with PCB-contaminated soil, the Department recommends additional evaluations of this site. Furthermore, the Department is requiring the responsible parties for this site to perform specific risk reduction actions including fencing, capping, and/or removals.

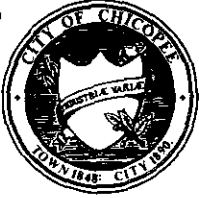


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22. M. Reed, MA DEP BWSC, September 30, 1994. Public water supply information obtained from search of MA DEP - Division of Water Supply files.
23. M. Reed, MA DEP BWSC, September 30, 1994. Personal communication with B. Brouillard, Director, Chicopee Board of Health, and W. Rezalla, Cross-Connection Officer, Chicopee Water Department, regarding the location and uses of private groundwater wells in the vicinity of the site.
24. T. Hamel, Chief Operator, Chicopee DPW, October 21, 1994. Letter notifying the Department of the completion of Oak Street Pump Station cleanup activities.

Chicopee 1-0436 50



# CITY OF CHICOPEE



## DEPARTMENT OF PUBLIC WORKS

RECEIVED

Stanley W. Kulig, P.E.  
Superintendent

10:25 10/21

Thomas Hamel  
Chief Operator

October 21, 1994  
DEP  
Western Region

Lisa Jones  
MA. D.E.P.- Western Region  
436 Dwight Street  
Springfield, MA 01103

RE: Oak Street Flood Control P.S.  
PCB Clean-Up

Dear Lisa Jones:

I am pleased to inform you that the final clean up of this site has been completed. I extend to you my personnel appreciation for your assistance and that of your department.

If you wish to inspect the site or have any questions do not hesitate to contact me.

Sincerely,

*Thomas Hamel*  
Thomas Hamel  
Chief Operator

p.c. Mayor Chessey  
Stanley Kulig  
Board of Aldermen

enclosure: Manifests

OSFCPC

### Water Pollution Control



COMMONWEALTH OF MASSACHUSETTS  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 DIVISION OF HAZARDOUS WASTE  
 One Winter Street  
 Boston, Massachusetts 02108

30087

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

|  |  |  |                         |  |   |                                    |
|--|--|--|-------------------------|--|---|------------------------------------|
| <b>UNIFORM HAZARDOUS WASTE MANIFEST</b>  |  | 1. Generator US EPA ID No.<br>MP 413594358588904 | Manifest Document No. 4 | 2. Page 1 of 1                                   | Information in the shaded areas is not required by Federal law. |                                    |
| 3. Generator's Name and Mailing Address<br>CITY OF CHICOPEE<br>80 MEDINA STREET<br>CHICOPEE, MA 01013  |  |  |                         | A. State Manifest Document Number<br>MA 0088EH 4 |   |                                    |
| 4. Generator's Phone (413) 594-3585  |  |  |                         | B. State Gen. ID 2 OAK STREET<br>CHICOPEE, MA    |   |                                    |
| 5. Transporter 1 Company Name<br>ENVIRONMENTAL PRODUCTS & SERVICES   |  | 6. US EPA ID Number<br>NYD980761191              |                         | C. State Trans. ID<br>94094D NY                  |   |                                    |
| 7. Transporter 2 Company Name  |  | 8. US EPA ID Number                              |                         | D. Transporter's Phone (315) 471-0503            |   |                                    |
| 9. Designated Facility Name and Site Address<br>NORTHEAST CHEMICAL CORPORATION<br>3301 MONROE STREET<br>CLEVELAND, OH 44113  |  | 10. US EPA ID Number<br>OH 068115711             |                         | E. State Trans. ID                               |   |                                    |
|  |  |  |                         | F. Transporter's Phone ( )                       |   |                                    |
|  |  |  |                         | G. State Facility's ID Not Required              |   |                                    |
|  |  |  |                         | H. Facility's Phone (216) 961-8618               |   |                                    |
| 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)   |  | 12. Containers No.                               | 13. Total Quantity      | 14. Unit Wt/Vol                                  | 15. Waste No.   |                                    |
| a. WASTE NON RCRA SOLID NOS (POLYCHLORINATED BIPHENYLS CONTAMINATED SEDIMENT), NON HAZARDOUS, NONE   |  | 029  | DM 117400               | P  | MA99  |                                    |
| b.   |  |  |                         |  |   |                                    |
| c.   |  |  |                         |  |   |                                    |
| d.   |  |  |                         |  |   |                                    |
| J. Additional Descriptions for Materials Listed Above (include physical state and hazard code.)  |  |  |                         | K. Handling Codes for Wastes Listed Above        |   |                                    |
| a. POLYCHLORINATED BIPHENYLS 11.3 ppm<br>Unknown Source  |  |  |                         | a. S 1 0 1 1                                     |   |                                    |
| b.   |  |  |                         | b.   |   |                                    |
| 15. Special Handling instructions and Additional Information<br>Job #: M0097 PO #: 81728<br>Emergency #: (315)471-0503 APPROVAL # 88265  |  |  |                         |  |   |                                    |
| 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.<br><br>If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford. |  |  |                         |  |   |                                    |
| Printed/Typed Name<br>George Graham  |  |  |                         | Signature<br><i>George Graham</i>                |   | Date<br>Month Day Year<br>10/18/94 |
| 17. Transporter 1 Acknowledgement of Receipt of Materials  |  |  |                         | Signature<br><i>John J. Backus Jr</i>            |   | Date<br>Month Day Year<br>10/18/94 |
| Printed/Typed Name<br>JOHN J. BACKUS, JR   |  |  |                         | Signature  |   | Date                               |
| 18. Transporter 2 Acknowledgement of Receipt of Materials  |  |  |                         | Signature  |   | Date                               |
| Printed/Typed Name   |  |  |                         | Signature  |   | Date                               |
| 19. Discrepancy Indication Space   |  |  |                         |  |   |                                    |
| 20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.   |  |  |                         |  |   |                                    |
| Printed/Typed Name<br>PAUL SHIMKO  |  |  |                         | Signature<br><i>Paul Shimko</i>                  |   | Date<br>Month Day Year<br>10/18/94 |

In case of emergency or spill, immediately call the National Response Center (800) 424-8802.

GENERATOR

TRANSPORTER

FACILITY

MA H3A8304 COPY>3: FACILITY MAILS TO GENERATOR

Form Approved OMB No. 2050-0039, E-pubs 03091

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.



COMMONWEALTH OF MASSACHUSETTS  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 DIVISION OF HAZARDOUS WASTE  
 One Winter Street  
 Boston, Massachusetts 02108

30086

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

|  |  |  |  |   |  |  |  |   |  |
|--|--|--|--|---|--|--|--|---|--|
| <b>UNIFORM HAZARDOUS WASTE MANIFEST</b>  |  | 1. Generator US EPA ID No.<br>MA P 4 1 3 5 9 4 3 5 8 5 8 8 3 0 3   |  | Manifest Quantity 0.3   |  | 2. Page 1 of 1                                   |  | Information in the shaded areas is not required by Federal law. |  |
| 3. Generator's Name and Mailing Address<br>CITY OF CHICOPEE<br>80 MEDINA STREET<br>CHICOPEE, MA 01013  |  |  |  | A. State Manifest Document Number<br>MA H388303   |  | B. State Gen. ID<br>2 OAK STREET<br>CHICOPEE, MA |  |   |  |
| 4. Generator's Phone<br>413 594-3585   |  | 5. Transporter 1 Company Name<br>ENVIRONMENTAL PRODUCTS & SERVICES |  | 6. US EPA ID Number<br>NY D 9 8 0 7 6 1 1 9 1   |  | C. State Trans. ID<br>14395 MA                   |  |   |  |
| 7. Transporter 2 Company Name<br>ENVIRONMENTAL PRODUCTS & SERVICES   |  | 8. US EPA ID Number<br>NY D 9 8 0 7 6 1 1 9 1                      |  | 9. Designated Facility Name and Site Address<br>NORTHEAST CHEMICAL CORPORATION<br>3301 MONROE STREET<br>CLEVELAND, OH 44113 |  | 10. US EPA ID Number<br>OH D 9 8 0 6 8 1 1 5 7 1 |  | D. Transporter's Phone<br>315 471-0503                          |  |
| 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)   |  |  |  | 12. Containers  |  | 13. Total Quantity                               |  | 14. Unit Wt/Vol   |  |
| a. WASTE NON RCRA SOLID NOS (POLYCHLORINATED BIPHENYLS CONTAMINATED SEDIMENT), NON HAZARDOUS, NONE   |  |  |  | 021 DIM / 13000   |  | P  |  | MA991   |  |
| b.   |  |  |  |   |  |  |  |   |  |
| c.   |  |  |  |   |  |  |  |   |  |
| d.   |  |  |  |   |  |  |  |   |  |
| J. Additional Descriptions for Materials Listed Above (include physical state and hazard code.)  |  |  |  | K: Handling Codes for Wastes Listed Above   |  |  |  |   |  |
| a. POLYCHLORINATED BIPHENYLS 113<br>Unknown Source   |  |  |  | S   |  | O  |  | I   |  |
| b.   |  |  |  |   |  |  |  |   |  |
| 15. Special Handling Instructions and Additional Information<br>Job #: M0097 PO #: 81728<br>Emergency #: (315)471-0503 APPROVAL # 22255  |  |  |  |   |  |  |  |   |  |
| 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.<br><br>If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford. |  |  |  |   |  |  |  |   |  |
| 17. Transporter 1 Acknowledgement of Receipt of Materials  |  |  |  | Signature<br>Craig C. Biele   |  | Date<br>09/27/94                                 |  |   |  |
| 18. Transporter 2 Acknowledgement of Receipt of Materials  |  |  |  | Signature<br>John J. Backus Jr  |  | Date<br>09/27/94                                 |  |   |  |
| 19. Discrepancy Indication Space   |  |  |  | Signature<br>John J. Backus Jr  |  | Date<br>09/27/94                                 |  |   |  |
| 20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.   |  |  |  |   |  |  |  |   |  |
| Printed/Typed Name<br>PAUL SHIMKO  |  |  |  | Signature<br>Paul Shimko  |  | Date<br>10/23/94                                 |  |   |  |

In case of emergency or spill, immediately call the National Response Center (800) 424-8802.

GENERATOR

TRANSPORTER

FACILITY

MA H388303 COPY>3: FACILITY MAILS TO GENERATOR



Commonwealth of Massachusetts  
Executive Office of Environmental Affairs

**Department of  
Environmental Protection**  
Western Regional Office

**FILE COPY**

William F. Weld  
Governor

Trudy Coxe  
Secretary, EOE

Thomas B. Powers  
Acting Commissioner

September 27, 1994

Stanley Kulig, Superintendent  
Department of Public Works  
City of Chicopee  
449 Front Street  
Chicopee, MA

FAX Date: September 26, 1994

Re: Chicopee 1-0436  
Former Uniroyal Complex  
Status of Interim Measure/  
Oak Street Pump Station Cleanup  
310 CMR 40.000

Dear Mr. Kulig:

As you are already aware, the Oak Street pump station has been closed since 1987, when the Department ordered emergency response actions to contain polychlorinated bi-phenyl (PCB) - contaminated sediments from entering the Chicopee River via the storm drain system following an oil release incident. In a letter (attached), from this Department, dated October 19, 1993, the Department granted the City of Chicopee the approval to cleanup and dispose of the sediments as an Interim Measure pursuant to the original Massachusetts Contingency Plan, 310 CMR 40.000. Since that approval, the City has delayed the start of the cleanup on numerous occasions and most recently, the Department was informed of the interruption of the completion of the approved Interim Measure.

As you were recently informed by Lisa Jones of this office, any further delay of completing this Interim Measure may place the Chicopee River at risk of becoming impacted by the contaminated sediments; and, subsequently, may place the City in jeopardy of becoming a responsible party for an environmental release. Furthermore, the current condition of the pump chamber, closed to act as a containment, may cause excessive flooding of nearby properties.

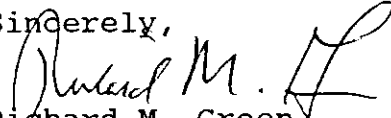
An additional incentive for your prompt response actions (completion of the Interim Measure) is to allow for the continuation of specific Phase II assessment activities at the Former Uniroyal Complex site. Dye testing has been required to be completed by the responsible parties for the site, Facemate Corporation and Uniroyal Goodrich Tire Company. Until such time as the pump station is again operational, the necessary dye tests

Page 2  
oakst.im2

cannot be performed and cannot, therefore, provide the opportunity to determine the source of the PCBs.

The Department encourages your prompt response in this matter. Should you need further assistance or have questions, please call Lisa Jones at (413) 784-1100 ext. 248.

Sincerely,

  
Richard M. Green  
Section Chief  
Site Management / Permits  
Bureau of Waste Site Cleanup

RMG/LJ/lj  
WSC118s:oakst.im2

cc: Doug Murphy, Environmental Products & Services, Inc. (FAXED)  
Ed Mrozinski, Facemate Corporation  
Attorney David Minc, Uniroyal Goodrich Tire Company  
Attorney Thomas Harrison, Day, Berry, and Howard  
Attorney Ellyn Weiss, Foley, Hoag, & Elliot  
Mayor of Chicopee  
Chicopee Board of Health  
Chicopee Conservation Commission  
Jeanne Kidwell, Chicopee Community Development Office  
Tom Hamel, Superintendent, Chicopee Water Pollution Control  
Facility (FAXED)

File

MEMORANDUM

TO: Site File 1-0436, Former Uniroyal Complex, Chicopee  
FROM: Lisa Jones, Site Manager  
RE: Status of Oak Street Pump Station  
DATE: June 27, 1994

I spoke with Tom Hamel, Supt. of Chicopee Water Treatment Plant to discuss the status of the Oak Street Pump Station. Due to inclement weather and scheduling problems, the start date for the cleaning of the pump chamber is now scheduled for July 5, 1994.

Mr. Hamel estimates more than one day of pumping will be necessary to remove enough water from the drain system to close the toe drain gate and to accomplish the sediment removal.



File

MEMORANDUM

To: Site File 1-0436 Former Uniroyal Complex, Chicopee  
From: Lisa Jones, Site Manager  
Re: Tenants at Chicopee Industrial Park  
Date: June 14, 1994

---

I contacted Tom Egan, Accounting Staff Coordinator at Chicopee Industrial Park. He provided the following information regarding current use of the site. There are 34 tenants: 18 use office space and 16 use other space such as storage or manufacturing space. The total number of people using the property is estimated at 85.

The fish hatchery is no longer a tenant. He believes they did use a deep well for water. They moved from CIP approximately one year ago.

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File

SM

MEMORANDUM

To: Site File 1-0436 Former Uniroyal Complex, Chicopee  
From: Lisa Jones, Site Manager  
Re: Gaging Stations & Hydroelectric Dams on the Chicopee River  
Date: June 14, 1994

---

I contacted Ken Smith (596-2128) Plant Engineer at Chicopee Hydroelectric Station to obtain information regarding the hydroelectric facilities, river flow rates and water levels. According to Mr. Smith, historic low water levels are usually during August. The average flow rate is 950 cfs.

There are three hydroelectric plants on the Chicopee River: Indian Orchard Station owned by Holyoke Water Power Company (HWP), Chicopee Hydroelectric at Deady Bridge (Route 33) owned by Chicopee Electric, and Dwight Station in Chicopee Center owned by HWP. The two stations owned by HWP may completely shut off river flow at their dams but Chicopee's license requires a minimal flow rate be maintained. There's a USGS gaging station at Indian Orchard. The USGS data may be obtained by contacting (508) 485-6360 or (508) 490-5058 Mr. Tom Sheppard.

## MEMORANDUM

TO: Site File 1-0436 Former Uniroyal Complex  
FROM: Lisa Jones, Site Manager  
RE: Follow-up to Leaking Transformers  
DATE: June 8, 1994

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On June 3, 1994, I contacted Facemate Corp. and spoke to Joanne Mrozinski and informed her of the leaking transformer UR #21 and the unrestricted access to transformers UR #21 and UR #17. I explained the urgency to evaluate the leak and have it repaired.

On June 6, 1994, Walter Mrozinski of Facemate called to discuss the necessary actions for repair of the transformer and cleanup of the spilled PCB oil. At this time, he informed me that no one from Environmental Compliance Services (ECS) had told him of the release and I was the first to inform him of the situation. He also stated that the next quarterly inspection is coming up soon and that an annual inspection by Transformer Services Inc. has already been scheduled for June 28, 1994. He will contact his consultant, ECS, and have them discuss the release and required actions with me. He will also provide me notice of the next quarterly inspection so that I may accompany Ed Mrozinski during the inspection.

I met with Mark Hellstein of ECS on June 7, 1994, and showed him the location of the leaking transformer. John Fauth, Building & Grounds Manager of the property, joined us to replace the missing lock and to verify the location and specifications for fence installation around the transformers. Mr. Fauth confirmed my suspicions regarding trespassers and stated that youths are known to trespass on fenced and unfenced areas of the property.

Mr. Hellstein took a sample of the PCB oil from the concrete pad and will have it analyzed for PCB content. I showed Mr. Hellstein the various nearby storm drains and explained the need to evaluate these drains as potential pathways for PCB contaminated soil to wash into the river. This evaluation may be conducted as part of the Phase II work.

During this same visit, I informed Mr. Hellstein of the potential fire hazard associated with the solvent soaked rag observed in a former delivery line located in Building 43. He agreed to ensure proper response actions are taken and will be in contact with Facemate regarding response actions.

Later in the afternoon of June 7, 1994, Walter Mrozinski informed me that Transformer Services Inc. (TSI) is sending a service man to repair the leak in the transformer today. On June 8, 1994, Mark Hellstein of ECS called to confirm the repair and cleanup were completed and fences would be installed as soon as possible.

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## MEMORANDUM

To: Site File 1-0436, Former Uniroyal Complex  
From: Lisa Jones, Site Manager  
Re: Site Visit May 13, 1994, 2:00 PM - 5:00 PM

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I met with Page Fallon of Environmental Compliance Services (ECS) to walk the site, discuss locations of the proposed Phase II monitoring wells, and verify the accessibility to proposed field work locations. During the site visit, I noticed two releases which need to be addressed and advised Mr. Fallon that these releases may be reportable pursuant to the new MCP. The observed conditions are described below:

1) Direct Contact Hazard with PCB Oil in areas east of Building 40:

Transformer UR #21 (TSI Test No. 35) containing 590 gallons of askarel, a dielectric fluid with 400,000 ppm to 600,000 ppm (40 to 60 %) PCB content, was observed to be leaking out a fitting near the bottom valve of the unit. The oil was dripping and a puddle had collected on the concrete pad. There is no chain link fence around this transformer or transformer UR #17 (TSI Test No. 37) to prevent contact by workers or trespassers who might enter the area. A safety barrier surrounds these transformers to prevent vehicles from damaging the equipment but the Department does not consider this three foot tall barrier sufficient to prevent direct contact by humans.

In addition, the padlock was found missing from the fence surrounding transformer UR #20, referred to as Area B in previous correspondence regarding fencing as a Short Term Measure. This lock should be replaced.

2) Potential vapor release/exposure and fire hazard in Building 43:

An incoming solvent line presumably leading from the former underground solvent storage tanks (Tanks A,B,C) was observed inside Building 43 on the east wall approximately 7 feet above floor level. This line was plugged with a rag that was damp and smelt of strong solvents. The line represents a fire hazard and should be removed. In addition, the line may emit vapors that are hazardous to the workers using this building.

Reportable Releases

Upon returning to the office, I reviewed the regulations and found that these two conditions may be reportable under various notification requirements.

In the first situation (1), it is very difficult to determine whether the observed release exceeds a two hour reportable quantity as a sudden release: one gallon for oil with >500 ppm PCB or one pound of PCBs (one pound is approximately 1 pint if the content is

60% PCB). The release may also pose an Imminent Hazard and require a two hour notification because the concentration of the PCBs is greater than 10 ppm, access to the area is not restricted by a physical barrier, the release is to the ground surface and within 500 feet of a residential dwelling, condition described in 310 CMR 40.0321 (2)(b).

In the situation described above as (2), the vapor release may be reportable under 310 CMR 40.0321 (1)(a) if the vapor concentrations are equal to or greater than 10 % of the Lower Explosive Limit.

#### Discussion of Proposed Monitoring Well Locations

During the site visit, I explained to Mr. Fallon that the Phase II narrative description of proposed drilling locations should be supplemented by a map of proposed locations. Furthermore, the revision of several locations or additional locations will be required to evaluate the releases from former underground solvent storage tanks and to evaluate the potential of the source areas to impact worker occupied buildings or the storm drain system. The proposed drilling locations place too much emphasis on upgradient and downgradient conditions without also including an evaluation of the conditions at the former tank graves, especially those of tanks D and F.

#### Continuation of Site Visit

Due to shortage of time, the site visit was not finished and must be completed on another day.

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1-0436



**ENVIRONMENTAL  
MITIGATION GROUP**

1530-B COMMERCE DRIVE STOW (AKRON), OHIO 44224-1711  
216/686-2557 FAX: 216/686-0484

March 30, 1994

Ms. Lisa Jones  
Massachusetts Department of Environmental Protection  
436 Dwight Street  
Springfield, Mass 01104

Re: Comprehensive Site Assessment  
Former Uniroyal Complex  
Chicopee

**RECEIVED**

APR 4 1994

D E P  
West-

Dear Ms. Jones:

This letter is in response to your request for information on carbon black. The enclosed article addresses the common misconception relative to the exposure to PNA's in carbon black. As the article states, exposure to common soot is a source of PNAs. Industrial grade carbon black contains extremely low concentrations of PNAs which tend to remain absorbed and not eluted upon contact with tissue fluids.

Also enclosed is a copy of a MSDS for carbon black. I believe you will find the Health Hazard Data section informative.

Sincerely,

EMG, Inc.

R. R. Clark  
Vice President

cc: S. Page Fallon, ECS  
T.F. Harrion, Day, Berry & Howard  
A. Graham, Michelin  
E.R. Weiss, Foley, Hoag & Elliot

RRC/esp

Enclosure

misc\_l&m\chicoL2.rrc

Carbon black

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# Distinguishing Features of Soots and Carbon Blacks

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RECEIVED

MAR 28 1994

ENVIRONMENTAL MITIGATION  
GROUP

*By E.F. Gunn, P.H. Johnson, C.A. Nau and  
R.H. Toeniskoetter  
of the Environmental Health Association of the  
Carbon Black Industry*

---

**C**arbon black is often identified as a form of soot, and the literature is replete with instances where materials which are actually carbon blacks are referred to as soots, and vice versa. This is unfortunate. Carbon blacks differ from the general class of soots in identifiable chemical and physical respects, and inferences based on studies with soots, especially in the field of health effects are inappropriate for extension to carbon blacks. In addition, carbon blacks have important uses because of their unique properties, whereas soots in general do not. Thus carbon black should not be equated with environmental soots.

Carbon blacks are high purity colloidal carbons produced commercially by controlled combustion or pyrolysis of raw materials composed almost entirely of carbon and hydrogen. Carbon blacks, which include commercial colloidal carbons such as furnace blacks, thermal blacks, lamp blacks, and acetylene blacks, usually contain less than several tenths percent of extractable organic matter (SOF, soluble organic fraction) and less than one percent ash (non-volatile inorganic matter). In fact the relatively small content of these impurities is one of the features which distinguish carbon blacks from soots.

Carbon blacks are produced under conditions carefully selected and maintained to maximize yield of colloidal

particulate carbon and provide a valuable product having high purity and uniform quality in terms of physical and chemical characteristics. About 96% of the carbon black produced and used in the United States today is furnace black made by the oil furnace process. Furnace blacks are made in a number of grades which differ from each other in properties such as particle size, surface area and structure. Thermal blacks and acetylene blacks are still produced and used domestically but in quantities that are relatively small in comparison to furnace blacks. Channel blacks, gas blacks, and lamp blacks are no longer produced domestically and are imported only in small quantities, as are some products from oil gasification processes.

Soots, on the other hand, can be more properly identified as relatively impure blackish particulates which are unwanted and frequently objectionable by-products that result from the uncontrolled burning of almost any kind of carbon-containing materials such as fuel oil, waste oil, coal, wood, paper, rubber, plastic, garbage, or occur in engine exhausts. Soots are mixtures of various forms of particulate carbon, organic tars, resins, and refractory inorganic materials. The composition of the mixture is a result of the type of material burned and the combustion conditions that existed when the soot was formed. It is not unusual for the tarry component to account for more than 25 weight percent of a soot.

Beyond the dissimilar features already mentioned, a recent comparative study<sup>1,2</sup> revealed that carbon blacks can be distinguished from soots on the basis of differences in

*Distinguishing Features/continued*

physical and chemical properties. It was shown, for example, that furnace blacks consist almost entirely of aciniform carbon, with negligible content of other forms of particulate carbon and very minor contents of other impurities. Aciniform carbon is colloidal carbon of a grape cluster morphology formed by nucleation and deposition from the vapor phase. The aciniform entities are aggregates of spheroidal particles fused together in random configurations, and have long been known to be responsible for the carbon black property known as structure. Many studies by other investigators have shown that the average size of the spheroidal particles which make up the aciniform aggregates vary with grade of carbon black in the range from less than 10 to about 500 nm.

In contrast to carbon black which is almost pure colloidal aciniform carbon, soots collected from deposits on surfaces such as chimney, firebox or exhaust pipe walls contain less than 50 percent particulate carbon and less than one percent aciniform carbon. The solid content of diesel soot is almost entirely aciniform carbon, but it is contaminated with a large amount of extractable organic tar. The relatively large quantities of non-aciniform particulate carbon found in the soots may be described as consisting of:

**Carbonaceous Microgel**—Organic materials deposited on aciniform carbon which resinify and carbonize on further heating and cause aggregates of aciniform carbon to become cemented together and embedded in an amorphous carbonaceous matrix. Microgel particles greater in size than 1  $\mu$ m were prevalent in the domestic chimney soots of the study.

**Carbonaceous Cenospheres**—Hard, shiny, porous or hollow carbon spheres, typically 10 to 100  $\mu$ m diameter, formed when liquid droplets undergo carbonization without substantial changes in shape. Carbon cenospheres have been recognized as a component of many soots, particularly those produced by combustion of droplets formed when spraying heavy fuel oils.

**Coke and Char Fragments**—Small fragments of carbonized wood or coal, of dimensions ranging from micrometers to millimeters that appear to constitute a major form of particulate carbon in deposited chimney soots from wood or coal burning fireplaces.

Whereas, as previously noted, carbon blacks are almost pure colloidal carbon, the soots contain very significant quantities of other compounds, including:

**Soluble Organic Fraction (SOF)**—Including several classes of compounds, especially polynuclear aromatics (PNAs). SOF is also referred to as extractable organic matter. In this study SOF was the total extract obtained

**Distinguishing Features of Soots and Carbon Blacks**

**TABLE**

| Carbon Black or Soot                             | Ash, % |                    | Extract, % |       | TGA*<br>Weight Loss, % | Atomic<br>Ratio<br>H/C | Carbon, %                |                   | Specific<br>Surface Area <sup>f</sup><br>m <sup>2</sup> /g |
|--|--------|--------------------|------------|-------|------------------------|------------------------|--------------------------|-------------------|--|
|  |        |                    | SOF        | Water |                        |                        | Particulate <sup>b</sup> | Aciniform         |  |
| Furnace process carbon black (N351)              | 0.27   | (.09) <sup>d</sup> | 0.13       | 0.9   | 1.5                    | 0.040                  | 99                       | (99) <sup>e</sup> | 73   |
| Furnace process carbon black (RCF4)              | 0.54   | (.27)              | 0.09       | 0.87  | 1.2                    | 0.023                  | 99                       | (99)              | 91   |
| Chimney soot from wood-burning fireplace         | 21.8   | (20.3)             | 15.8       | 14.2  | 48.0                   | 1.08                   | 50                       | 0.024             | 3  |
| Blended chimney soot from domestic coal fires    | 24.6   | (22.6)             | 35.6       | 19.0  | 52.4                   | 1.21                   | 23                       | 0.36              | 17   |
| Chimney soot from English coal-burning fireplace | 45.6   | (n.d.)             | 15.8       | 14.7  | 36.4                   | 1.00                   | —                        | 0.89              | 1  |
| Soot from "soot box" of domestic oil furnace     | 53.8   | (40.7)             | 0.64       | 50.7  | 43.7                   | n.d.                   | 8                        | 0.83              | 32   |
| Soot from small diesel engine                    | 2.2    | (0.68)             | 51.1       | 3.6   | 49.2                   | n.d.                   | 45                       | 50                | 72   |
| Standard urban dust (NBS SRH-1648)               | 64.6   | (57.7)             | 2.9        | 27    | 36.2                   | 1.67                   | 13                       | 0.47              | 29   |

\* Loss in weight upon heating to 910°C in nitrogen.

<sup>b</sup> Material remaining after subtraction of SOF, water extract and insoluble inorganic matter as estimated by ash after extraction.

<sup>c</sup> N<sub>2</sub> BET surface area of sample after extraction with methylene chloride, toluene and water, and de-ashing with HCl then HCl.

<sup>d</sup> After consecutive Soxhlet extraction with methylene chloride, toluene and water. Referred to weight of sample before extraction.

<sup>e</sup> Carbon black is wholly aciniform carbon. Allowance made for measured extractable and inorganic impurities.



via successive Soxhlet extractions with methylene chloride (4 hours) and toluene (48 hours). Most of the occluded and weakly bound material should be present in the methylene chloride extract; toluene recovered small amounts of more tightly bound material.

**Insoluble Organic Matter**—Including resins present as a coating, binder, or separate entity. Incompletely burned fuel fragments may also be present.

**Inorganic Matter**—Including inorganic oxides and salts, adventitious bits of metal, etc. (which are detectable as ash) also adsorbed liquids and gases, especially water, sulfuric acid, and nitrogen oxides.

The analyses of two commercial carbon blacks and some representative soots from various sources are summarized in the Table. These data illustrate the wide range in composition of environmental soots and the typically high content of inorganic materials and/or SOF. It is believed that the carcinogenicity which has been ascribed to soots is connected with their high content of materials other than particulate carbon, especially certain PNAs which are found in the SOF fraction. Notably, the commercial carbon blacks examined contained about 99% particulate carbon and less than 0.5% SOF, whereas the soots contained less than 50% particulate carbon and about up to 51% SOF.

Not only is the level of carcinogenic PNAs and SOF low in furnace blacks but also the adsorptive potential for organic compounds is great as a result of the high surface area exhibited by these blacks. As a result, only trace quantities of PNAs and other SOF constituents are eluted from furnace blacks upon contact with tissue fluids. Conversely, all of the soots have a large excess of SOF over that which can be tightly adsorbed on their available particulate carbon surface, resulting in enhanced desorption under mild conditions and a possible increase in the biological availability of PNAs and other organic adsorbates. There is a limit to the amount of SOF that any carbon can strongly adsorb. In carbon blacks this limit is not exceeded; whereas, in soots it is more often exceeded than not.

Considering these observed differences in composition, physical and chemical properties, and potential health effects of soots and furnace blacks, it follows that common nomenclature confusing carbon black with soot is inappropriate. Furthermore, "soot" should only be used as a general term to describe a class of mixtures which include particulate carbon as one component, and individual soots should not be considered equivalent to carbon black unless shown to be so by analytical characterization.

It is believed that enough information is presently available to describe carbon blacks and soots in a definitive fashion which comprehensively includes the distinguishing features of each material:

**Carbon Black** is a generic term applicable to a family of high purity colloidal carbons commercially produced by carefully controlled pyrolysis/combustion of normally

gaseous or liquid hydrocarbons. Examples of carbon black include furnace black, thermal black, lamp black, and acetylene black. In the carbon black process, colloidal carbon particulates are formed under conditions which are carefully established and maintained to maximize yield of particulates and to provide products having uniform quality in terms of such properties as particle size, structure, and surface area. The carbon content of carbon blacks is essentially all colloidal particulate (acini-form) carbon, or, if thermal blacks, a mixture of acini-form carbon and isolated spheroidal particles of colloidal dimension. Carbon blacks have average particle size not exceeding 1  $\mu\text{m}$  and specific surface area at least 5  $\text{m}^2/\text{g}$ . The soluble organic fraction (SOF) of carbon blacks is usually less than 0.3% by weight. (If oil has been deliberately added to the carbon black, as in the production of oil pellets, the added oil is not regarded to be part of the carbon black). The SOF of a carbon black can contain PNAs which are tightly bound to the carbon particles and require many hours to quantitatively remove even when strong organic solvents such as benzene or toluene are employed. The content of refractory inorganic materials (ash) in carbon blacks is low, usually less than 1 percent by weight, but can occasionally range slightly higher.

**Soot** is an incidental by-product in the form of blackish particulate matter which results from the burning of almost any kind of carbon-containing material. Soots are a mixture of various forms of particulate carbon, organic tars, resins and refractory inorganic materials. The exact composition of the mixture is dependent upon the type of material burned and the combustion conditions that existed when the soot was formed. It is not unusual for the soluble organic fraction (SOF) component to account for more than 25 weight percent of a soot, most of which is loosely bound and can be easily extracted by organic solvents. In comparison to carbon blacks, the particulate carbon content of soot deposits is low (typically less than 50 weight percent) and, in most cases, consists of less than 1% of the acini-form type. Suspended soots (e.g., smoke) contain larger amounts of acini-form carbon. The content of refractory inorganic materials (ash) in most soots is high, typically 20-40 weight percent. Because of the large amount of organic material, both soluble and resinified, soots have an H/C atomic ratio of greater than 0.1, whereas carbon blacks have a ratio below 0.05.

#### REFERENCES

1. A.I. Medalia and D. Rivin, paper to 15th Biennial Conference on Carbon, June 24, 1981 (Extended Abstracts, American Chemical Society, p. 480). Submitted to Carbon.
2. A.I. Medalia, D. Rivin, and D.R. Sanders, paper to the American Chemical Society, Rubber Division, Cleveland, Ohio, October 13-16, 1981. Submitted to Environmental Science and Technology.
3. J. Boddington, M.J. Bales, H. Wells and J. Halsemeyer, Am. Ind. Hyg. Assoc. J. 42, 503(1981).
4. G.J. Taylor, J.F. Redington, M.J. Bales, J. Boddington and C.A. Nau, Am. Ind. Hyg. Assoc. J. 41 519(1980) ◆

HMIS Index:  
 0 - Minimal  
 1 - Slight  
 2 - Moderate  
 3 - Serious  
 4 - Severe

**Cabot Corporation**  
 Billerica Technical Center  
 157 Concord Road, Billerica, MA 01821

HMIS Rating:  
 0 - Health  
 1 - Flammability  
 0 - Reactivity

MATERIAL SAFETY DATA SHEET

|               |                              |                                  |                        |                                    |
|---------------|------------------------------|----------------------------------|------------------------|------------------------------------|
| Code<br>91-01 | C.A.S. No.<br>See Section II | Date Revised<br>November 1, 1991 | Issued by<br>D.C. Gray | Telephone Number<br>(617) 342-6023 |
|---------------|------------------------------|----------------------------------|------------------------|------------------------------------|

**Section I - Material Identification and Use**

|                               |                           |                       |                        |
|-------------------------------|---------------------------|-----------------------|------------------------|
| Chemical Name<br>Carbon Black | Chemical Family<br>Carbon | Chemical Formula<br>C | Molecular Weight<br>12 |
|-------------------------------|---------------------------|-----------------------|------------------------|

Trade Name and Synonyms:

BLACK PEARLS®, ELFTEx®, MOGUL®, CSX, MONARCH®, REGAL®, STERLING®, VULCAN®, and CRX carbon blacks. The foregoing are registered trade names of Cabot Corporation.

|  |   |
|--|---|
| Manufacturer Name<br>Cabot Corporation | Street Address<br>75 State Street   |
| City<br>Boston                         | State<br>Massachusetts  |
| Postal Zip Code<br>02109-1806          | Emergency Telephone Number<br>(617)342-6023 (Days)/<br>(304)665-2442 (Nights/Weekend) |

**Section II - Ingredients**

|                            |                         |                |                                   |                                    |
|----------------------------|-------------------------|----------------|-----------------------------------|------------------------------------|
| Ingredient<br>Carbon Black | C.A.S. No.<br>1333-86-4 | Percent<br>100 | OSHA PEL<br>3.5 mg/m <sup>3</sup> | ACGIH TLV<br>3.5 mg/m <sup>3</sup> |
|----------------------------|-------------------------|----------------|-----------------------------------|------------------------------------|

**Section III - Physical Data**

|                                      |   |  |  |
|--------------------------------------|---|--|--|
| Boiling Point (°F)<br>Not Applicable | Specific Gravity<br>(H <sub>2</sub> O = 1)<br>1.7 - 1.9 | Vapor Pressure<br>(mm Hg)<br>Not Applicable            | Vapor Density<br>(Air = 1)<br>Not Applicable |
| Solubility in Water<br>Insoluble     | % Volatile by Volume<br>Not Applicable                  | Appearance & Odor<br>Amorphous black solid,<br>no odor | Evaporation Rate<br>Not Applicable           |

**Section IV—Fire and Explosion Hazard Data**

|  |   |  |  |  |  |
|--|---|--|--|--|--|
| <b>Flammability</b><br>Ignition in air above 600°F or 315°C.   | <b>Flash Point</b><br>Closed Cup >500°C<br>Method: Pensky-Martens | <b>Flammable Explosive Limits:</b><br><table border="1" style="width: 100%;"> <tr> <td data-bbox="816 319 1109 405"> <b>Lower Expl. Limit</b><br/>           Not Applicable         </td> <td data-bbox="1109 319 1485 405"> <b>Upper Expl. Limit</b><br/>           Not applicable         </td> </tr> </table> |  | <b>Lower Expl. Limit</b><br>Not Applicable | <b>Upper Expl. Limit</b><br>Not applicable |
| <b>Lower Expl. Limit</b><br>Not Applicable   | <b>Upper Expl. Limit</b><br>Not applicable                        |  |  |  |  |
| <b>Special Fire Fighting Procedures</b><br>Normal fog or nozzle jet application and/or exclusion of air  |   | <b>Extinguishing Media</b><br>Copious Water  |  |  |  |
| <b>Unusual Fire and Explosion Hazards</b><br>Carbon monoxide and carbon dioxide are products of combustion. Use appropriate respirator for protection against possible exposure to CO or CO <sub>2</sub> . It may not be obvious that the carbon black is burning unless the material is stirred and sparks are apparent.  |   |  |  |  |  |
| <b>Explosion Data</b><br>The National Electrical Code (NEC) is derived from NFPA Standard 70, and is referenced in the OSHA regulations. Under the NEC, Chapter 5, Article 500-3, carbon black dusts are included under FPN No. 14, Group F dusts if they contain "more than 8% total volatile matter". Carbon black dusts containing less than 8% total volatile matter are not considered to present explosion hazards. CABOT carbon blacks are well below 8% total volatile matter. |   |  |  |  |  |

**Section V—Health Hazard Data****Effects of Exposure: Inhalation****Acute**

None expected. Temporary discomfort to the upper respiratory tract may occur due to inhalation of dust concentrations above the Threshold Limit Value (TLV).

**Chronic**

Carbon black contains less than 0.1% of adsorbed polynuclear aromatic compounds (PNA). In non-adsorbed form, some PNA's have been found to be carcinogens in certain studies. No carcinogenic effect, however, has been found in humans due to exposure to carbon black. Carbon black is not considered a carcinogen by the International Agency for Research on Cancer (IARC), the Occupational Safety and Health Administration (OSHA), or the National Toxicology Program (NTP). Epidemiologic studies of workers in the carbon black producing industry in the U.S. and W. Europe show no significant adverse health effects due to occupational exposure to carbon black.

Some studies in the USSR and E. Europe report respiratory diseases, including: bronchitis, pneumoconiosis, emphysema and rhinitis among some workers. Such studies are of questionable validity due to inadequate study design and methodology, lack of appropriate controls for cigarette smoking and other confounding factors, such as carbon monoxide, coal oil and petroleum vapors. Moreover, review of these studies indicates that the concentration of carbon black was substantially greater than OSHA recommended levels.

**Section V (Continued)**

Chronic inflammation, lung fibrosis, and lung tumors have been found in preliminary studies in rats experimentally exposed, for long periods of time, to excessive concentrations of carbon black and other insoluble dust particles which overwhelm the lung clearance mechanisms. The researchers who conducted these tests believe that these conditions most likely result from the massive accumulation of small dust particles in the lung, the "dust overload phenomenon", rather than from a specific chemical effect of the dust particles. Such effects occur only when the lungs are overloaded with an excess of small particles. They are unlikely to result from workplace exposures to carbon black at or below the TLV. Human studies have not found that workplace exposures to carbon black at or below the TLV cause these effects.

**Effects of Exposure: Skin****Acute**

None significant. See Section VIII-Hygienic Practices.

**Chronic**

None significant

**Primary Route of Entry**

Inhalation

**First Aid Procedures**

For inhalation discomfort, move victim to fresh air.

**Medical Conditions Prone to Aggravation by Exposure**

None expected. Carbon black, like any nuisance dust, may aggravate certain pre-existing upper respiratory disorders, such as bronchitis or asthma.

**Section VI - Reactivity Data****Stability**

Stable

**Hazardous Polymerization**

Not Applicable

**Hazardous Decomposition Products**

Carbon monoxide, carbon dioxide and small amounts of sulfur containing gases when burning.

**Conditions to Avoid**

Excessive heat or flame. May react upon contact with strong oxidizers such as chlorates, bromates and nitrates.

**Section VII - Spill or Leak Procedures****Steps to be Taken in Case Material is Released or Spilled**

Carbon black is not a hazardous waste under U.S. Federal RCRA Regulation. Wear NIOSH approved Dust Protection Respirator, if needed. Spills should be removed by vacuuming, or spraying with water and sweeping mixture into a suitable container.

**Waste Disposal Method**

Burn or bury in accordance with Federal, State and local laws and regulations.

**Section VIII - Safe Handling and Use Information****Respiratory Protection**

None in normal handling. Wear NIOSH approved respirator for nuisance dust when dust levels exceed TLV.

**Ventilation**

Sufficient ventilation, in volume and pattern, to maintain exposure below TLV.

**Protective Gloves**

None required.

**Eye Protection**

None required.

**Hygienic Practices**

Wash exposed skin for hygienic purposes. Most skin irritation attributed to carbon black has been found to be due to the soap used for washup. A mild unscented soap should be used.

**Section IX - Special Precautions****Precautions to be Taken in Handling and Storing**

Before entering closed vessels and confined spaces, test for possible elevated levels of CO. Wear appropriate respirator to guard against possible exposure to CO, CO<sub>2</sub>, or lack of adequate oxygen supply.

**Section X - Regulatory Information**

The trade name substances BLACK PEARLS®, ELFTEx®, MOGUL®, CSX, MONARCH®, REGAL®, STERLING®, VULCAN®, and CRX are names for CABOT carbon blacks, and are registered trade names of Cabot Corporation.

Carbon black, CAS No. 1333-86-4 appears on the TSCA inventory (U.S.), EINECS (Europe), AICS (Australia), CEPA (Canada), and MITI (Japan) as a chemical of commerce in these jurisdictions.

Carbon black does not contain substances identified under SARA, Title III, Section 302, as extremely hazardous, or under Section 313 as a toxic chemical. Carbon black must be reported as a hazardous chemical on Tier I and Tier II reports, under SARA Sections 311/312, if the threshold quantity of 10,000 lbs is exceeded annually.

**SPECIAL SHIPPING INFORMATION**

The Intergovernmental Maritime Consultative Organization (IMCO) does classify carbon black as a "hazardous cargo" for the purposes of shipping, unless the shipment is accompanied by a statement that the carbon blacks contained in it are not subject to the IMCO code provisions for hazard class 4.2 because they pass the test for non-activated carbons described on page 4082-1. All CABOT carbon blacks pass this IMCO test and may be shipped with this disclaimer.

The Bureau of Explosives of the Association of American Railroads has ruled it is unnecessary to classify carbon black as hazardous under DOT regulations. Carbon black is moved as a non-hazardous material by rail.

The information set forth above is based on information which Cabot Corporation believes to be accurate. No warranty, express or implied, is intended. The information is provided solely for your information and consideration and CABOT assumes no legal responsibility for use or reliance thereon.

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report on file

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Western Region

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93487

**PROCESS/CHEMICAL USAGE INFORMATION**

**Former Uniroyal Complex  
Chicopee, MA**

Project No. 135701

for

**Ms. Lisa Jones**

**Bureau of Waste Site Cleanup**

**Massachusetts Department of Environmental Protection**

**436 Dwight Street**

**Springfield, Massachusetts 01104**

oil interceptors



**ENVIRONMENTAL  
MITIGATION GROUP**

1530-B COMMERCE DRIVE STOW (AKRON), OHIO 44224-1711  
216/686-2557 FAX: 216/686-0484

September 10, 1993

Ms. Lisa Jones  
Bureau of Waste Site Cleanup  
Massachusetts Department of Environmental Protection  
436 Dwight Street  
Springfield, Massachusetts 01104

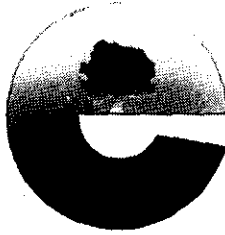
Re: Former-Uniroyal Complex  
Chicopee, MA  
Process/Chemical Usage Information  
EMG Project No. 135701

Dear Ms. Jones:

The Massachusetts Department of Environmental Protection's (DEP) June 11, 1993 correspondence to Mr. David C. Minc, Uniroyal Goodrich Tire Company, and Mr. Ed Mrozinski, Facemate Corporation, requested the submittal of additional operational history on the former Uniroyal Chicopee plant. The letter stated the purpose for this request was to ensure all contaminants of concern are identified and analyzed for during the Phase II activities. The responsibility for responding to this request has been given to me. Although I can provide only limited additional information on the plant's manufacturing processes, I am able to assure you that the analytical methods proposed by ECS in its Phase II Scope of Work are adequate to identify chemicals possibly released to the environment during Uniroyal's plant ownership.

Ronald R. Clark's Background

I was given the responsibility of responding to the DEP's information request due to my knowledge of the rubber tire industry. I am a former manager of environmental engineering for The BFGoodrich Company and the initial Environmental Control Manager for the Uniroyal Goodrich Tire Company. I am presently an environmental consultant with EMG, Inc. in Stow, Ohio. Through EMG I have been involved with Remedial Investigations of six (6) tire manufacturing plants. Although I never visited the Uniroyal Chicopee plant while it was operating, I am very familiar with the type of manufacturing activities which occurred there and the raw materials used in tire manufacturing.



**ENVIRONMENTAL COMPLIANCE SERVICES, INC.**

August 27, 1993  
File No. 11094.10  
Document No. 6861

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DEP  
Western Region

Bureau of Waste Site Cleanup  
Massachusetts Department of Environmental Protection  
436 Dwight Street  
Springfield, Massachusetts 01104

Attn: Ms. Lisa Jones

RE: Proposal for a Phase II  
Comprehensive Site Assessment  
Former Uniroyal Complex  
Chicopee Falls, MA

Dear Ms. Jones:

The Scope of Work for a Phase II -- Comprehensive Site Assessment attached has been prepared to address the findings of previous environmental investigations at the site, the requirements of the Massachusetts Contingency Plan (310 CMR 40.545), and additional requirements specified by the Massachusetts Department of Environmental Protection (DEP) in correspondence dated June 11, 1993. As required by the Massachusetts Contingency Plan, the objectives of this investigation will be to characterize the geology and hydrogeology of the site, to characterize and delineate the horizontal and vertical extent of soil and groundwater contamination at the site, and to assess potential risks to human health, safety, and the environment resulting from conditions at the site.

During the conduct of the Phase II field investigations described below, ECS will continually evaluate the need for Short Term Measures to address conditions which may constitute imminent hazards, and will evaluate the possibility of performing Interim Remedial Measures to address areas of concern in the most efficient and cost-effective way.





**ENVIRONMENTAL COMPLIANCE SERVICES, INC.**

Ms. Lisa Jones  
Massachusetts DEP  
August 27, 1993

Page 2

Facemate requests a meeting with yourself and Mr. Richard Green to discuss this Scope of Work and any further recommendations or suggestions you may have and would like, if possible, to schedule this meeting within three weeks from the date of this letter.

Please do not hesitate to call if you have any questions.

Sincerely,  
ENVIRONMENTAL COMPLIANCE SERVICES, INC.

S. Page Fallon, Ph.D.  
Hydrogeologist / Senior Project Manager

Attachments

cc: Mr. Walter Mrozinski, Facemate Corporation  
Attorney Ellyn R. Weiss, Foley, Hoag, & Eliot  
Attorney David C. Minc, Uniroyal Goodrich Tire Company  
Attorney Thomas Harrison, Day, Berry, and Howard  
Mr. Ron Clark, EMG Inc.

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Phase II -- Comprehensive Site Assessment  
Scope of Work  
Chicopee Industrial Park / Former Uniroyal Complex  
August 27, 1993

Page 1

## SCOPE OF WORK

Phase II -- Comprehensive Site Assessment  
Chicopee Industrial Park / Former Uniroyal Complex  
Chicopee, Massachusetts

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Based on the findings of the Phase I -- Limited Site Investigation and other work performed on the site, ECS has developed the following scope of work for the field investigations of the Phase II -- Comprehensive Site Assessment of the Chicopee Industrial Park / Former Uniroyal Complex located in Chicopee, Massachusetts.

### **Task I - Additional Investigation of Utilities and Former Production Wells**

ECS will perform additional background research and limited field investigations to obtain and/or clarify available information concerning the subsurface utility network and former groundwater production wells on-site. The focus of these additional investigations will be to further evaluate the potential for the existing or former utility network, and/or the production wells, to serve as migration pathways for contaminants observed on-site. Where possible, field checking will be performed to confirm the accuracy of available plans. Dye tests may be performed in selected parts of the system of underground utilities on the site to confirm underground connections and flow paths.

As required in correspondence from the DEP dated June 11, 1993, possible routes of contaminant migration to the Oak Street Pumping Station will be assessed. At present, ECS does not assume that contamination observed in the Oak Street Pump Station originated on the site. The investigation conducted by ECS in this regard will assess the potential impacts to the Oak Street Pumping Station from on-site sources currently known or discovered in the course of the Phase II assessment.

In addition, as required by the June 11 correspondence, the current status and function of the Oak Street Pumping Station will be evaluated with regard to the possible presence of a migration pathway via the pump house to the Chicopee River.

The location, status, and depth of groundwater production wells present on the site will be ascertained as part of this task. The likelihood of these wells constituting a potential contaminant migration pathway and the feasibility of abandonment of these wells will be evaluated as part of this task and may be proposed as an Interim Remedial Measure.

As required in the June 11, 1993, the location, status, and, in-so-far as possible, the nature of electrical equipment, transformers, switches, etc., present on the site will be confirmed and indicated on a plan of the site.

### **Task II - Subsurface Investigations Related to Underground Storage Tanks**

The Phase I investigation indicated the historical presence of three underground storage tanks located in the vicinity of former Building #9 (Tanks T, U, and V) and seven underground storage tanks located in the vicinity of existing monitoring well ECS-9 (Tanks L through S). While such information suggests that these tanks may have been removed or properly abandoned, the current status of these tanks is not known.

ECS proposes to conduct a limited program of subsurface investigations by means of test pits in the reported locations to confirm or refute the possible existence of these tanks and to evaluate soil conditions in those areas. If possible, the former product transfer lines associated with Building #45 (the former pump house) will be electronically traced to help locate tanks present in this area. If underground storage tanks are encountered, the location and orientation of the tanks will be documented and the need for remedial measures will be assessed.

Up to ten (10) soil samples for laboratory analysis may be collected during these subsurface investigations contingent on observations made during the excavations. Soil samples will be analyzed for volatile organic compounds according to USEPA Method 8240 with methyl-tertiary-butyl ether (MTBE) as an additional parameter (as required in DEP correspondence of June 11, 1993) and for total petroleum hydrocarbons by gas chromatograph.

As required in DEP correspondence dated June 11, 1993, subsurface investigations will be conducted in the vicinity of former underground Tank F, located west of Building #43. Tank F was reported to have contained chlorinated solvent. These subsurface investigations will consist of the performance of two to three soil borings in the vicinity of former underground Tank F. Up to six (6) soil samples from these borings may be collected for analysis for volatile organic compounds according to USEPA Method 8240.

### **Task III - Additional Soil Boring and Shallow Monitoring Well Installation**

The installation of eleven additional shallow groundwater monitoring wells on the site is proposed to delineate the horizontal extent of groundwater contamination at the site.

Up to four monitoring wells will be installed in the vicinity of the former tank field associated with Building #45. The purpose of these monitoring wells is to provide sampling

points to permit delineation of the horizontal extent of contamination downgradient from the former tank field. It is proposed to install three of these monitoring wells downgradient from the existing monitoring well network in the vicinity of the former tank field. One monitoring well will be installed upgradient from the existing monitoring well network for the purpose of evaluating groundwater quality coming onto the site from the south. This upgradient monitoring well will also serve as a sampling point for the delineation of the lateral extent of the contaminant plume emanating from the former tank field located south of Building #43.

Two monitoring wells will be installed downgradient from Building #43. The purpose of these monitoring wells is the delineation of the downgradient extent of the contaminant plume associated with underground tanks formerly in the vicinity of Building #43 and to permit evaluation of potential impacts to groundwater and soils in this area from possible leaks from the underground product transfer lines located northwest of former Building #39. The downgradient extent of this contaminant plume is presently constrained by the location of well ECS-14, near the southwestern corner of Building #42. The northern extent of the contaminant plume in this area is constrained by the location of well ECS-28, to the north. Potential migration of contamination to the southwest, or along the underground product lines which formerly connected tanks in this area to tanks in the vicinity of Building #45, is currently undefined. One of these proposed monitoring wells will be located in the vicinity of these product transfer lines to permit evaluation of the potential for migration of contamination along the lines. A second monitoring well will be located adjacent to the southern wall of Building #42. The purpose of this monitoring well is to permit evaluation of the lateral and/or downgradient extent of contaminant migration.

One monitoring well will be installed as a replacement for former monitoring well ECS-4, located in the vicinity of former underground storage tanks D and E (in the vicinity of Building #25). This well will be located upgradient of the former location of well ECS-4 and upgradient from Tank D, located south of Building #25. This monitoring well will provide an upgradient sampling point in this location.

It is not proposed to replace former monitoring well ECS-2, located south of and upgradient from Building #43. Monitoring wells ECS-5, ECS-6A, and ECS-6B, located in this area, provide adequate coverage in this area.

One monitoring well will be installed downgradient (to the west) of the former locations of underground Tanks D and E, south of Building #25. This monitoring well will be located in the vicinity of "Area A" -- an area of PCB-contaminated soil currently covered with geotextile as a Short Term Measure. The purpose of this monitoring well is to provide a sampling point downgradient of the former locations of Tanks D and E and in the vicinity of "Area A" to permit evaluation of the potential for migration of contamination from the former underground tanks, and from contaminated surface soils in the vicinity of "Area A."

One monitoring well will be installed on the site near the corner of Oak Street and West Main Street, west of the North Extension of Building #28, and downgradient from "Area B" and "Area C," and the lubrication room associated with Building #28 East Extension. The purpose of this monitoring well is to provide a sampling point to permit evaluation of possible impacts to groundwater from PCB-contaminated surface soils present to the east and potential impacts due to possible releases from the lubrication room.

One monitoring well will be installed in the open area between Buildings #42 and #28, at a point south of existing monitoring well ECS-11. The purpose of this monitoring well is provide information on water table elevation in this area, and to provide a sampling point to permit evaluation of possible releases within the basement of Building #42, located upgradient (to the east), and other potential sources located farther to the east (i.e., transformer Area A and the former underground storage tanks associated with Buildings #25 and #43).

One monitoring well will be installed in the open area between Building #28 and Building #8, at a point south of existing monitoring well ECS-20. The purpose of this monitoring well is to provide additional information on groundwater elevation in this area, and to permit evaluation of potential impacts to groundwater from surface soils in the vicinity of the well and from possible releases in the basement of Building #28, located upgradient to the east.

#### **Task IV - Installation of Deep Monitoring Wells**

ECS proposes to install three deeper groundwater monitoring wells on the site to provide information concerning the vertical extent of groundwater contamination. It is proposed to install one of these monitoring wells east of Building #43. This well will be located adjacent to existing monitoring well ECS-8. The purpose of this well is to provide information on groundwater flow in the deeper part of the shallow aquifer in unconsolidated materials or in shallow bedrock and the hydraulic relationship between the deeper and shallower parts of the saturated zone, and to provide information on the vertical extent of the contaminant plume located in the vicinity of Building #43.

A second, deeper monitoring well will be located in the vicinity of and downgradient from the former underground tank field near Building #45. The purpose of this well is to provide information on the vertical extent of contamination and on the hydraulic relationship between shallow and deeper groundwater in this part of the site. This well will be installed in proximity to an existing monitoring well to provide information on the vertical direction of groundwater flow. The well will be installed with a short screened interval located below the water table and the boring annulus above the sand pack will be grouted to the surface to prevent vertical migration of groundwater or contamination.

A third deeper monitoring well will be installed on the site in the vicinity of existing well ECS-20, located between Building #28 and Building #7. The purpose of this monitoring well is to provide information on the vertical groundwater flow regime in this area and the vertical extent of contamination in the area (Note: Analysis of groundwater samples from well ECS-20 collected on September 13, 1990 indicated the presence of no detectable concentrations of volatile organic compounds, total petroleum hydrocarbons, or PCBs and pesticides).

These monitoring wells will be installed with short screened intervals located below the water table. The locations of the screened intervals in these wells will be determined on the basis of on-site screening of soil samples retrieved from the soil boring. Soil samples will be screened for the presence of volatile aromatic hydrocarbons and volatile halocarbons using a portable gas chromatograph. The purpose of this screening is to identify in the boring the vertical extent of the contaminant plume in the saturated zone. The screened interval of the well will be positioned, if possible, below the contaminant plume. Should bedrock be intersected in these borings prior to the lower limb of the contaminant plume, temporary casing will be installed at the bedrock surface and a core bar will be advanced a maximum of 15 feet into bedrock. The well will be installed in the cored hole in bedrock and a grout seal will be emplaced at the bedrock surface. To ensure the validity of the hydrologic data derived from these wells, the screened intervals will be emplaced, if possible, in approximately the same vertical position relative to the stratigraphy.

#### **Task V - Installation of Piezometers and Seepage Meters in the Chicopee River**

Piezometers and seepage meters will be used in combination with other hydrogeologic information on the site to evaluate the hydraulic connection between groundwater on the site and surface water in the Chicopee River and to establish whether the River represents a sensitive environmental receptor. Mini-piezometers and seepage meters will be installed on the bank of the Chicopee River at locations adjacent to existing monitoring wells and potential sources of contamination.

It is proposed to install by hand seven mini-piezometers along the eastern bank of the Chicopee River, due west of the site. Four seepage meters will be installed adjacent to selected mini-piezometers to permit direct evaluation of local surface-groundwater interactions. One mini-piezometer will be installed on the bank of the Chicopee River north of the western extension of Oak Street. Two mini-piezometers will be installed west of Buildings #1 through #6, near the northwestern boundary of the site. One mini-piezometer will be installed west of Building #7. One mini-piezometer will be installed west of former Building #9 and the underground storage tanks formerly located in that area. One mini-piezometer will be installed west of Building #15 and the above-ground fuel oil tank. One mini-piezometer will be installed south of Building #15 and west of the former underground tank field in the vicinity of Building #45. It is tentatively proposed to install seepage meters near the northwestern corner of the site, opposite former Building #9, opposite Building #15

and the above-ground fuel oil tank, and on the bank of the river west of the former underground tank farm in the vicinity of Building #45.

Four of the mini-piezometers installed as part of this task will be sampled for quantitative analysis.

#### **Task VII - Monitoring Well Development**

All monitoring wells on the site (existing and proposed here) will be developed using surging and bailing, overpumping, or other non-contaminating techniques to improve the hydraulic connection between the well bore and the surrounding saturated materials.

#### **Task VIII - Hydraulic Conductivity Testing**

In-situ tests yielding hydraulic conductivity estimates will be conducted using selected monitoring wells on the site. Data from these tests will provide estimates of groundwater flow and contaminant transport velocities. Selection of locations for testing will be based on evaluation of groundwater flow on the site and contaminant sources. At least two of the deeper monitoring wells installed as part of Task IV above will be subjected to testing.

Each of the tests will be conducted by either removing or adding (in the case of monitoring wells screened below the water table only) a volume of water from the well and recording the water level response. Data will be recorded during each test until the water level within the well recovers to approximately 90% of the static water level. Data will be reduced following the method developed by Bouwer and Rice (1976) and Bouwer (1989).

#### **Task IX - Data Point Survey Update**

Each of the proposed monitoring wells and mini-piezometers installed during the Phase II field investigation will be surveyed for elevation and location relative to the datum established during the Phase I investigation. Relative elevation measurements will be rounded to the nearest 0.01 foot. Horizontal locations will be measured to the nearest foot. Survey data, combined with water level measurements, will be used to construct a revised water-table contour and groundwater flow direction map of the site.

#### **Task X - Groundwater Sampling and Analysis**

Groundwater samples from selected monitoring wells will be collected for analysis for volatile organic compounds according to USEPA Method 8240, for total petroleum

hydrocarbons according to modified USEPA Method 8100, for polynuclear aromatic hydrocarbons according to USEPA Method 8100, for polychlorinated biphenyls according to USEPA Method 8080, and for soluble concentrations of lead and/or zinc. The proposed sampling program for existing and proposed monitoring wells and well points is summarized in Table 1. Quantitative analyses of groundwater will be performed by a Massachusetts DEP-certified analytical laboratory.

#### **Task XI - Investigation of Impacts on Chicopee River Sediments**

The DEP has requested that samples of sediment and surface water from the Chicopee River, abutting the site to the west, be collected for quantitative analysis. Due to the large number of potential sources of contamination of river sediments upstream from the site, and the potential for discharge of contamination from off-site sources via municipal drainage systems on the site, ECS believes that such samples of Chicopee River sediment would not provide useful information concerning the potential impact of the site on the river.

ECS therefore proposes to gather additional information concerning the nature and locations of discharge points at and upstream from the site. After such information is gathered, and should this information indicate the likelihood of a release of significant contamination to the river from the site, ECS may propose sampling of river sediment at specific locations upstream from, adjacent to, and downstream from the site. Should sediment sampling be necessary, a proposal for such sampling, accompanied by the rationale for the sampling locations and the parameters for analysis, will be submitted to the DEP for prior approval.

ECS does not propose to perform sampling of surface water from the Chicopee River. Sediment sampling, if necessary, will provide a more meaningful indication of the impact of the site on the river environment. Analysis of surface water samples would not yield significant information concerning impacts to the river attributable to the site because of the uncertainty in the derivation of such samples, and the possible effects seasonal variations may have on water quality.

#### **Task XII - Additional Soil Sampling to Further Delineate the Extent of Soil Contamination**

Soils contamination due to the presence of PCBs and/or polynuclear aromatic hydrocarbons has been detected in certain areas on the site. Areas impacted by PCB-contaminated materials and/or polynuclear aromatic include: Area A, located east of Building #42; Area B, located north of Building #27; Area C, located north of Building #28 Extension; an area west of Building #28 North in the vicinity of transformers #5, #8, #18, and #19 (designated "Area D" in correspondence from the DEP), and an area in the vicinity of boring B-2 west of Building #15 (designated "Area E" in correspondence from the DEP). Areas A,



B, and C were the subject of a Short Term Measure previously completed. The vertical extent of soils contamination in Areas D and E is not well defined. ECS therefore proposes to perform two soil borings in each of these areas and to collect and analyze two to four soil samples for PCBs according to USEPA Method 8080 and for polynuclear aromatic hydrocarbons according to USEPA Method 8100 at each location a total of four to eight analyses. One soil sample from each location will be collected for analysis for total concentrations of lead and zinc.

#### **Task XIII - Samples of Wood Block Floor Materials**

As required in correspondence from the DEP dated June 11, 1993, a sample of material from the wood block floor material currently stockpiled west of Building #27 will be collected and submitted for analysis for volatile aromatic compounds, polynuclear aromatic hydrocarbons, and PCBs according to USEPA Methods 8240, 8100, and 8080, respectively. Obtaining a representative sample of this material is viewed as problematic. ECS proposes to collect splinters of surface material from these wooden blocks for analysis as being representative of the worst-case potential exposure point.

#### **Task XIV - Report on Field Investigations**

A report on the Phase II field investigations consistent with the requirements of 310 CMR 40.545 will be prepared. This report will summarize in text, tables, and figures pertinent data gathered during the Phase II field investigation. The report will consist at a minimum of an executive summary; an introductory section consisting of discussions of the previous investigatory work on site, a description of the site, and a discussion of the objectives and scope of the Phase II investigation; a section describing the purpose and methodology the field investigation; a section describing the results of field and laboratory testing, including discussions of the likely source(s) of the contaminants detected, the extent of contamination, possible exposure points, and background contaminant concentrations; and a discussion of the conclusions of the Phase II investigations and recommendations for additional work, if necessary. Boring and sampling logs, field data, laboratory certificates of analysis, the site Health and Safety Plan, and the site Quality Assurance / Quality Control Plan will be included as appendices to the Phase II report.

#### **Task XV - Proposal to Perform a Risk Assessment**

Upon completion of the Phase II field investigation report, ECS will prepare a proposal to perform a site risk assessment and will schedule a meeting with the DEP project manager to discuss and evaluate the risk assessment proposal.

**TABLE 1**  
**CHICOPEE INDUSTRIAL PARK / FORMER UNIROYAL COMPLEX**  
**PROPOSED GROUNDWATER SAMPLING PLAN**

| SAMPLING LOCATION | VOLATILE ORGANIC COMPOUNDS (USEPA METHOD 8240) | TOTAL PETROLEUM HYDROCARBONS BY GAS CHROMATOGRAPH (MODIFIED USEPA METHOD 8100) | POLYNUCLEAR AROMATIC HYDROCARBONS (USEPA METHOD 8100) | POLYCHLORINATED BIPHENYLS (PCBs) (USEPA METHOD 8080) | SOLUBLE METALS (ZINC AND LEAD) |
|-------------------|--|--|---|--|--------------------------------|
| ECS-1             | X  | X  | NS  | NS   | Pb                             |
| ECS-2             | DESTROYED                                      |  |   |  |                                |
| ECS-3             | X  | X  | NS  | NS   | RCRA 8 + Zn                    |
| ECS-4             | DESTROYED                                      |  |   |  |                                |
| ECS-5             | X  | X  | NS  | NS   | RCRA 8 + Zn                    |
| ECS-6A            | X  | NS   | NS  | NS   | Pb                             |
| ECS-6B            |  |  |   |  |                                |
| ECS-7             | X  | X  | NS  | NS   | NS                             |
| ECS-8             | X  | NS   | X   | NS   | NS                             |
| ECS-9             | PRODUCT  |  |   |  |                                |
| ECS-10            | X  | NS   | X   | X  | Pb, Zn                         |
| ECS-11            | X  | NS   | X   | X  | Pb, Zn                         |
| ECS-12            | NS   | NS   | X   | X  | NS                             |
| ECS-13            | NS   | NS   | X   | X  | Zn                             |
| ECS-14            | X  | X  | NS  | NS   | Pb                             |
| ECS-15            | NS   | NS   | NS  | NS   | NS                             |
| ECS-16            | NS   | X  | NS  | NS   | Pb, Zn                         |
| ECS-17            | X  | NS   | X   | X  | Pb, Zn                         |
| ECS-18            | X  | NS   | X   | X  | NS                             |
| ECS-19            | X  | NS   | X   | X  | NS                             |
| ECS-20            | NS   | NS   | X   | X  | Pb, Zn                         |
| ECS-21            | NS   | NS   | X   | X  | NS                             |
| ECS-22            | NS   | NS   | NS  | NS   | NS                             |
| ECS-23            | NS   | NS   | NS  | NS   | NS                             |
| ECS-24            | X  | X  | X   | X  | Pb                             |
| ECS-25            | X  | X  | NS  | NS   | Pb                             |
| ECS-26            | X  | X  | NS  | NS   | Pb                             |
| ECS-27            | X  | X  | NS  | NS   | Pb                             |
| ECS-28            | X  | X  | NS  | NS   | Zn, Pb                         |

Notes: X = To be sampled for analysis. Zn = Analyzed for soluble zinc. RCRA 8 + Zn = Analyzed for soluble RCRA 8 Metals (As, Ba, Cd, Cr, Pb, Hg, Se, Ag) plus zinc.  
 NS = Not sampled for this analysis. Pb = Analyzed for soluble lead.

**TABLE 1 (CONTINUED)**  
**CHICOPEE INDUSTRIAL PARK / FORMER UNIROYAL COMPLEX**  
**PROPOSED GROUNDWATER SAMPLING PLAN**

| SAMPLING LOCATION  | VOLATILE ORGANIC COMPOUNDS (USEPA METHOD 8240) | TOTAL PETROLEUM HYDROCARBONS BY GAS CHROMATOGRAPH (MODIFIED USEPA METHOD 8100) | POLYNUCLEAR AROMATIC HYDROCARBONS (USEPA METHOD 8100) | POLYCHLORINATED BIPHENYLS (PCBs) (USEPA METHOD 8080) | SOLUBLE METALS (ZINC AND LEAD) |
|--------------------|--|--|---|--|--------------------------------|
| P-ECS-29           | X  | X  | NS  | NS   | NS                             |
| P-ECS-30           | X  | X  | NS  | NS   | NS                             |
| P-ECS-31           | X  | X  | NS  | NS   | Pb                             |
| P-ECS-32           | X  | X  | NS  | NS   | NS                             |
| P-ECS-33           | X  | X  | NS  | NS   | Pb                             |
| P-ECS-34           | X  | X  | NS  | NS   | Pb                             |
| P-ECS-35           | X  | X  | NS  | NS   | NS                             |
| P-ECS-36           | X  | X  | NS  | X  | Pb, Zn                         |
| P-ECS-37           | X  | NS   | X   | X  | Pb, Zn                         |
| P-ECS-38           | X  | NS   | X   | X  | Pb, Zn                         |
| P-ECS-39           | X  | NS   | X   | X  | Pb, Zn                         |
| P-ECS-40 (deep #1) | X  | X  | NS  | NS   | Pb                             |
| P-ECS-41 (deep #2) | X  | X  | NS  | NS   | Pb                             |
| P-ECS-42 (deep #3) | X  | X  | X   | X  | RCRA 8 + Zn                    |
| P-MP-1             | X  | X  | NS  | NS   | NS                             |
| P-MP-2             | X  | X  | NS  | NS   | NS                             |
| P-MP-3             | X  | X  | NS  | NS   | NS                             |
| P-MP-4             | X  | X  | NS  | NS   | NS                             |

Notes: X = To be sampled for analysis. Zn = Analyzed for soluble zinc. RCRA 8 + Zn = Analyzed for soluble RCRA 8 Metals (As, Ba, Cd, Cr, Pb, Hg, Se, Ag) plus zinc.  
 NS = Not sampled for this analysis. Pb = Analyzed for soluble lead.

MEMORANDUM

TO: Site file 1-0436 Chicopee / Fmr. Uniroyal Complex  
FROM: Lisa Jones  
DATE: October 26, 1993  
SUBJECT: Start of Clean up Continuation at Oak St. Pump Sta.

Tom Hamel, chief operator of Chicopee WPC plant notified DEP of the start date (Nov. 1, 1993) of the continuation of the Oak Street pump station cleanup. ("Interim measure" under old MCP regulations)

The approval to continue the cleanup of PCB contaminated sediments was confirmed in a letter from DEP dated October 19, 1993.



DANIEL S. GREENBAUM  
Commissioner  
JOHN J. HIGGINS  
Regional Director

**FILE COPY**  
*The Commonwealth of Massachusetts*  
*Executive Office of Environmental Affairs*  
*Department of Environmental Protection*  
*Western Region*

*436 Dwight Street, Springfield, Mass. 01103*

*(413) 784-1100*

October 19, 1993

Thomas Hamel, Chief Operator  
Water Pollution Control  
City of Chicopee  
Department of Public Works  
80 Medina Street  
Chicopee, MA 01013

Re: Chicopee 1-0436P  
Former Uniroyal Complex  
Interim Measure at the  
Oak Street Pump Station  
310 CMR 40.0000

APPROVAL TO CONTINUE INTERIM MEASURE  
PURSUANT TO THE NEW MASSACHUSETTS CONTINGENCY PLAN (MCP)

Dear Mr. Hamel:

The Department of Environmental Protection (DEP) has reviewed your written request to continue with the cleanup of PCB (Polychlorinated Biphenyls) contaminated sediments presently contained in the chambers of the Oak Street Flood Control Pump Station. Your written proposal dated September 20, 1993 was submitted at the request of Lisa Jones, DEP Site Manager, who inspected the pump station with you on September 15, 1993. Per request by Ms. Jones, your proposal was modified so that the weir plates would remain to catch any additional PCB sediments which enter the pump station after completion of the proposed cleanup.

During her site visit, Lisa Jones explained the Department's role in the oversight of remedial actions, at the Former Uniroyal Complex, which is considered to be a Tier IA disposal site according to the new MCP. Since the Former Uniroyal Complex site is considered by the Department as a likely source of the PCB contamination in the pump station, the Department previously required the Responsible Parties (RPs) of the site to assess the condition of the pump station. According to a report dated March 5, 1992, which was submitted by Environmental Compliance Services, Inc., on behalf of the RPs, the pump station chambers contain an approximate 1.5 foot thickness of gravelly sediment and three feet of standing water. A water sample and sediment sample were collected from the pump station on November 6, 1991 and analyzed for PCBs via EPA Method 8080. Results indicate no detectable PCBs in the water greater than 2.5 ug/L and 35,100 ug/kg PCB Arochlor 1260 in the sediment sample.

As was discussed by you and Lisa Jones on September 15, 1993, and as presented in your proposal, the City of Chicopee is contracting with Environmental Products and Services, Inc. of Springfield, MA to conduct the cleanup of the station. The water, which is in contact with contaminated sediments, from within the chambers, and water, which may enter the chambers during cleanup, will be pumped out and brought to the Chicopee POTW. The storm water in the toe drain will be pumped out to the Chicopee River. Removal and disposal of contaminated sediments will be completed in accordance with applicable Departmental regulations and your consultant shall forward copies of Hazardous Waste Manifests from this cleanup to Lisa Jones. The weir plate adjacent to the station will be left in place to catch sediments which may be carried via storm drains from the Uniroyal site. The weir plate will act as a containment to prevent any additional PCB contaminated sediments from flowing directly to the Chicopee River. The RPs for the site will be instructed by the Department to periodically sample sediments, which settle in the future in the pump station chamber.

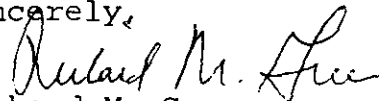
This letter confirms Department approval of the Interim Measure (IM), which was verbally approved on September 15, 1993 and modified in your written proposal dated September 20, 1993. Pursuant to 310 CMR 40.0641(1) of the new MCP regulations, you, as an "Other Person", performing the ongoing IM, have the option to engage or employ an LSP (Licensed Site Professional) to submit LSP Opinions. Upon completion of the approved IM, all future response actions shall be conducted pursuant to the provisions of the new MCP, 310 CMR 40.0000.

Please provide Lisa Jones with a three day notice prior to the date you wish to resume the cleanup.

Enclosed for your information are copies of letters and memoranda pertaining to the response actions at the Oak Street Pump Station and the Former Uniroyal Complex.

If you have any questions regarding this letter, or if you obtain any new information which may help establish a connection between the PCBs at the pump station and the site, please contact Lisa Jones of this office at (413) 784-1100 ext 248.

Sincerely,



Richard M. Green  
Section Chief  
Site Management / Permits  
Bureau of Waste Site Cleanup

LEJ/lej/mr  
WSC118s:oakst.im

Enclosures to addressee only

cc: Environmental Products & Services, Inc.  
Ed Mrozinski, Facemate Corporation  
Attorney David Minc, Uniroyal Goodrich Tire Company  
Attorney Thomas Harrison, Day, Berry, and Howard  
Attorney Ellyn Weiss, Foley, Hoag, & Elliot  
Mayor of Chicopee  
Chicopee Board of Health  
Chicopee Conservation Commission  
Jeanne Kidwell, Chicopee Community Development Office



**CITY OF CHICOPEE**  
**DEPARTMENT OF PUBLIC WORKS**

1-0436  
Chicopee



Stanley W. Kulig, P.E.  
Superintendent

Thomas Hamel  
Chief Operator

September 20, 1993

RECEIVED  
SEP 21 1993  
D.E.P.  
Western Region

Lisa Jones  
MA D.E.P.  
436 Dwight Street  
Springfield, MA

Re: Oak Street Flood Control

Dear Ms. Jones:

Based on the site inspection with you on <sup>September</sup> ~~October~~ 15, 1993, I request the PCB clean-up of the Oak Street Flood Control Station be modified as follows:

- .the storm water outside the station in the toe drain to be pumped out to the Chicopee River.
- .the weir plate adjacent to the station to be left in place to catch sediments.
- .any receiving water inside the station will be pumped out and brought to the POTW.
- .Environmental Products and Services, Inc. of Springfield will proceed to clean the walls and remove the PCB contaminated sediments inside the station (per contract #3518 conditions).

-1-

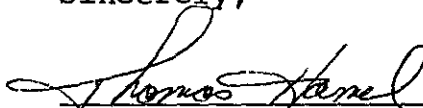
**Water Pollution Control**



The clean up project will be halted until we receive  
D.E.P. authorization to continue.

Your assistance is appreciated.

Sincerely,



Thomas Hamel  
Chief Operator

TH/kb

cc: Environmental Products  
Stanley Kulig, D.P.W.  
Ernest Laflamme, III, Flood Control

OSFC

BWSC MEMORANDUM

To: Site File 1-0436 Fmr. Uniroyal, Chicopee

From: Lisa Jones

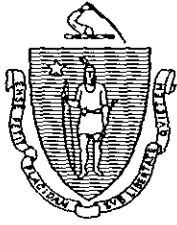
Date: August 12, 1993

Re: Extension on Phase II Scope of Work

The date for the submittal of the Phase II SOW has been extended at the request of Page Fallon of Environmental Compliance Services and with Department approval. The proposal will be submitted on or before August 27, 1993.

SCANNED

1-0436



DANIEL S. GREENBAUM  
Commissioner  
JOHN J. HIGGINS  
Regional Director

*The Commonwealth of Massachusetts*

*Executive Office of Environmental Affairs*

*Department of Environmental Protection*

*Western Region*

*436 Dwight Street, Springfield, Mass. 01103*

*(413) 784-1100*

June 16, 1993

David C. Minc, Esquire  
Uniroyal Goodrich Tire Company  
600 South Main Street  
Akron, OH 44397-00017

Re: CHICOPEE - #1-0436  
Chicopee Industrial Park  
from Uniroyal Complex  
Publication & Classification  
as a Priority Disposal Site

Dear Sir:

This letter concerns the referenced disposal site which appeared on the "List of Confirmed Disposal Sites and Locations to be Investigated". This list is published annually by the Department, pursuant to the requirements of M.G.L. c. 21E, Section 3A(c).

M.G.L. c. 21E Section 3A(d)(2) requires that the Department classify disposal sites as "priority" or "non-priority". The Department has reviewed the information available to it about the referenced disposal site, and has determined that it is a priority disposal site, pursuant to the Interim Site Classification requirements in the Massachusetts Contingency Plan, 310 CMR 40.544.

In addition, M.G.L. c. 21E Section 14(a) requires that, once a site has been classified, the Department publish a legal notice and press release informing the public of the location's status as a disposal site, and, if so, of its classification. The Department will issue a legal notice and press release containing this information on June 25, 1993. The legal notice will appear on Friday, in the Springfield Union News.

Effective October 3, 1988, the extent of assessment and remediation required by M.G.L. c. 21E at locations and disposal sites will be determined by reference to the Massachusetts Contingency Plan (310 CMR 40.00 et seq., promulgated pursuant to M.G.L. c. 21E, Sections 3, 3A(m), and 6). Remedial response actions required at locations and disposal sites are described in detail in Subpart D of the Massachusetts Contingency Plan (310 CMR 40.500 et seq.). No further remedial response actions other than those approved by the Department prior to October 3, 1988 may be conducted at this non-priority disposal site without first obtaining the Department's approval, as described in 310 CMR 40.536. These regulations require that Department approval be obtained at specific points in the remedial action process:

- \* Scope of Work for the Comprehensive Site Assessment (Phase II),
- \* Final Report of the Comprehensive Site Assessment (Phase II),
- \* Final Remedial Response Plan (Phase III),
- \* Remedial Response Implementation Plan (Phase IV), and
- \* Final Inspection Report (Phase IV).

For more information on the classification of the referenced disposal site, please contact Catherine Wanat at the address above.

Copies of the Massachusetts Contingency Plan are available from the State Bookstore, 21 Elm Street, Springfield, MA 01103, 413/733-7876.

Very truly yours,



Alan Weinberg,  
Regional Engineer  
Bureau of Waste Site Cleanup

SFJ:ERS  
cc: Mayor's Office  
Health Dept.  
wsc-015:priority.cor



DANIEL S. GREENBAUM  
Commissioner  
JOHN J. HIGGINS  
Regional Director

*The Commonwealth of Massachusetts*

*Executive Office of Environmental Affairs*

*Department of Environmental Protection*

*Western Region*

*436 Dwight Street, Springfield, Mass. 01103*

*(413) 784-1100*

June 16, 1993

Mr. Ed Mrozinski  
Facemate Corporation  
5 West Main Street  
Chicopee, MA 01020

Re: CHICOPEE - #1-0436  
Chicopee Industrial Park  
fmr Uniroyal Complex  
Publication & Classification  
as a Priority Disposal Site

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Very truly yours,



Alan Weinberg,  
Regional Engineer  
Bureau of Waste Site Cleanup

SFJ:ERS  
cc: Mayor's Office  
Health Dept.  
wsc-015:priority.cor

PUBLIC NOTICE  
COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Pursuant to M.G.L. c. 21E, Section 14(a) and the Massachusetts Contingency Plan (310 CMR 40.00), the Department of Environmental Protection announces that a Preliminary Assessment and Limited Site Investigation have been performed at the following location:

| <b>MUNICIPALITY</b> | <b>SITE NAME/ADDRESS</b>   | <b>SITE #</b> |
|---------------------|--|---------------|
| <b>Chicopee</b>     | <b>Chicopee Industrial Park<br/>frmr Uniroyal Complex<br/>154 Grove Street</b> | <b>1-0436</b> |

An investigation has confirmed that a release of oil and/or hazardous materials has occurred at this location. Therefore, the Department has identified it as a CONFIRMED DISPOSAL SITE. The Department has also determined that it is a PRIORITY disposal site (as defined by M.G.L. c. 21E, Section 2). M.G.L. c. 21E, Section 3A(f) requires that, if feasible, a permanent solution be implemented at each disposal site. If a permanent solution is not feasible, then a temporary solution must be implemented, and a plan for achieving a permanent solution must be developed.

M.G.L. c. 21E and the Massachusetts Contingency Plan provide several opportunities for public notice of and involvement in decisions regarding response actions at disposal sites:

\* The Chief Municipal Official and Board of Health of the community in which the site is located will be provided with notices of the results of investigations, plans for remedial responses, and field work involving the use of heavy construction equipment and/or protective clothing (310 CMR 40.202).

\* Upon receipt of a petition from ten or more residents of the municipality in which the disposal site is located, or of a municipality potentially affected by a disposal site, or upon the Department's initiative, a plan for involving the public in decisions regarding response actions at the site will be prepared and presented at a public meeting. This plan will be revised based on comments received, and will be implemented over the course of the response action (310 CMR 40.203).

\* The Chief Municipal Official of a city or town in which a disposal site is located may appoint from members of the potentially affected public an individual, or individuals, to inspect the site on behalf of the community (M.G.L. c. 21E, Section 14(d)).

For more information on the confirmed disposal site referenced above, and opportunities for public involvement in its remediation, please contact Alan Weinberg in the Western Region DEP Office, 436 Dwight Street, Springfield, MA 01103, 413/784-1100.

**INTERIM SITE CLASSIFICATION FORM**

Chicopee Industrial Park  
 DISPOSAL SITE NAME (Former Uniroyal Complex)  
 SITE ID NUMBER 1-0436  
 STREET 154 Grove Street  
 CITY/TOWN Chicopee Falls STATE MA ZIP CODE 01020

Completed by: Richard L. Amirault Company: ECS  
 Name: Richard L. Amirault  
 Street: 588 Silver Street City/Town: Agawam  
 State: Massachusetts Zip Code: 01001

**CLASSIFICATION SUMMARY**

Complete following pages of form and summarize classification below:

| Criterion | Met                                 | Not Met                             | Insufficient Information |
|-----------|-------------------------------------|-------------------------------------|--------------------------|
| 1         | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| 2         | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| 3         | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 4         | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 5         | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6         | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 7         | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 8         | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 9         | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Recommended Site Classification:

Priority  Non-Priority  Insufficient Information to Classify

Signature: Richard L. Amirault Date: February 28, 1991

**FOR DEQE USE**

| DEQE Concurrence | Yes                                 | No                                  | Comment  |
|------------------|-------------------------------------|-------------------------------------|--|
| 1                | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | > 500 ppm PCBs in surface soil / fencepost covered if groundwater  |
| 2                | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | no STM (only temporary) up to 629 ppm total PCBs   |
| 3                | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Product appears local to ECS 9 + is not migrating following info from add'l wells on 4/19/91.  |
| 4                | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Insufficient information since no SW or sediment data is available. Historic releases to river are documented in DW/PC files (1968-1980) and in ER files. River impact to unknown. |
| 5                | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Chicopee River + Ct River may be affected by oil, PCBs, and other hazardous wastes from site. These rivers are fished for human consumption. No data available.                    |
| 6                | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |  |
| 7                | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |  |
| 8                | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |  |
| 9                | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |  |

Department's Determination on Site Classification:  Priority  Non-Priority  Insufficient Information to Classify

Approved by: Lia Jones  
 Title: EE III  
 Date: 6/9/93

AMY  
6/10/93



INTERIM SITE CLASSIFICATION

Note:

Check appropriate box for each criterion indicating whether a criterion is met or not met or if information is inadequate to determine whether a criterion is met. Only one of these three boxes should be checked for each criterion. A disposal site cannot be classified as a non-priority disposal site if information is inadequate for any criterion.

Met  Not Met

1. Criterion 1 is met if conditions at the disposal site provide the opportunity for direct contact with oil or hazardous materials via open lagoons, drum storage areas and sludges, QI

if conditions at the disposal site provide the opportunity for direct contact with surface oil or hazardous materials and there is evidence of, or data that indicate, surface contamination at concentrations that could adversely affect human or environmental receptors.

**Supporting Information and Source:**

Analyses of surficial soils from areas beside and between buildings and in the vicinity of askarel transformers showed concentrations of ABNs and PCBs. Access to the site is partially restricted, and much of the contaminated surface is surrounded by fence and patrolled by security personnel. PCB and A/B/N contaminated areas near transformers on the upper terrace of the site and near existing machine shops in Building 42 are not fenced.

Additional information is required to determine if Criterion 1 is met.

Describe:

Met  Not Met

2. Criterion 2 is met if there is evidence of or data that indicate the presence of uncontained migrating oil or hazardous materials which exist as a separate phase in groundwater or surface water.

**Supporting Information and Source:**

On September 13, 1990, a 4.45 foot thick layer of free phase gasoline was observed on groundwater at monitoring well ECS-9, located in the vicinity of the former gasoline pump house on-site. A Short Term Measure (STM) consisting of product bailing was performed, and reduced the product thickness significantly. The most recent post-STM gauging for product (12/10/90) showed 0.30 feet of free phase.

→ product is contained 11/19/91

Additional information is required to determine if Criterion 2 is met.

Describe:

Met  Not Met

3. Criterion 3 is met if there are data that indicate groundwater contamination with oil or hazardous materials at levels exceeding state or federal drinking water standards/guidelines (or detectable levels of contaminants for which there are not state/federal standards or guidelines) and

the data is based on samples taken from a location that:

- i. Is within 2640 feet of a municipal water supply well(s), or
- ii. is within a mapped cone of influence of a municipal water supply well(s), or
- iii. is a private water supply well(s) or potentially affects a private water supply well,

unless there are data which indicate:

- i. that a hydrogeologic connection does not exist between the groundwater containing oil or hazardous materials and the municipal water supply well, or
- ii. that the identified concentrations of oil or hazardous materials, for which there are no drinking water standards or guidelines, are not and are not likely to be harmful to those drinking the water, or
- iii. that the oil or hazardous materials have not migrated to and are not likely to migrate to public or private water supply well(s).

**Supporting Information and Source:**

Based on interviews with the City of Chicopee Board of Health and review of DEP Water Supply Atlas Overlays, no public or private water supply wells are currently in use within a 1 mile radius of the site. Up to 10 deep wells were historically used at the site for sources of industrial process water. According to the City of Chicopee Water Department, no connections exist between municipal water mains and the wells.

Additional information is required to determine if Criterion 3 is met.  
Describe:

Met

Not Met

4. Criterion 4 is met if there is evidence of, or data that indicate that, a release of oil or hazardous materials at or from the disposal site into surface water has occurred and that the release is upstream of a potable surface water supply intake structure or of the recharge area of a municipal well(s),

unless there are data that indicate:

- i. that a hydrogeologic connection between the release of oil or hazardous materials into surface water and the recharge area does not exist, or
- ii. that concentrations of oil or hazardous materials at the surface water supply intake or the municipal well have not and are not likely to exceed State or Federal drinking water standard/guidelines, or
- iii. that concentrations of oil or hazardous materials at the surface water supply intake or the municipal well(s), for which there are no drinking water standards or guidelines, are not and are not likely to be harmful to those drinking the water.

**Supporting information and Source:** No surface water bodies exist on the site. No surface water was tested as part of the Phase I study. Although isolated areas of sheen have been reported/observed on the Chicopee River west of and in the general vicinity of the site, no direct correlation with historic or current conditions on the site are apparent. No potable surface watersupply intake structures are known to exist downstream (west) of the site on the Chicopee River (1.9 miles to Connecticut River). No municipal wells are known to exist along the banks of the Chicopee River, according to DEP Water Supply Atlas overlays. Additional information is required to determine if Criterion 4 is met.

Describe:

Met  Not Met  5. Criterion 5 is met if there is evidence of, or data that indicate that, a release of oil or hazardous materials at or from the disposal site to surface water has resulted or could result in a concentration which exceeds Ambient Water Quality Criteria for the protection of aquatic life or human health.

**Supporting Information and Source:**

No surface water has been tested as part of the Phase I study. Although isolated areas of sheen have been reported/observed on the Chicopee River west of and in the general vicinity of the site, no direct correlation with historic or current conditions on the site are apparent. No potable surface water intake structures are known to exist downstream (west) of the site on the Chicopee River, according to DEP Water Supply Overlays.



Additional Information is required to determine if Criterion 5 is met.

Describe: *Surface water was not tested and may have been affected via storm drain discharges. The storm drain system has not been thoroughly evaluated and is likely to transport contaminated soil with rain.*

Met  Not Met  6. Criterion 6 is met if there is evidence of, or data that indicate that, the disposal site poses a threat of fire or explosion.

**Supporting Information and Source:**

Based on the results of air quality monitoring during building inspections, no hazardous or explosive atmospheres were observed using a MSA 361 air monitoring system. Based on olfactory observations and H-Nu readings, no concentrated organic vapors were observed in on-site buildings. All historical releases of flammable liquids are contained in subsurface soils. No evidence of flammable solids was observed at the site.

Additional Information is required to determine if Criterion 6 is met.  
Describe:

Met

Not Met

7. Criterion 7 is met if there is evidence, or data that indicate that there are or there could be air emissions at or from the disposal site which could adversely impact human or environmental receptors.

**Supporting Information and Source:**

While an oil fired boiler is located on the site, the boiler has not been in use since 1981. No other potential air emissions at or from the site are known to occur. Inspection of on-site buildings using H-Nu Model PI-101 (10.2 eV lamp) and MSA 361 hazardous vapor detectors showed no detectable concentrations of VOCs, Hydrogen Sulfide, or Toxics.

Additional Information is required to determine if Criterion 7 is met.  
Describe:

Met

Not Met

8. Criterion 8 is met if there is evidence of, or data that indicate that, releases of oil or hazardous materials at or from the disposal site have affected or could affect the human food chain.

**Supporting Information and Source:**

No agricultural practices are known to occur at or in the vicinity of the site. The Sw<sup>S</sup> River fish hatchery, located on the 2nd floor in Building 27, is a fully contained and controlled hatching environment. No evidence of release(s) of oil or hazardous materials was observed in the vicinity of the hatchery. No groundwater or surface water from the vicinity of the site is utilized for drinking, agricultural or hatchery purposes.

Additional Information is required to determine if Criterion 8 is met.

Describe: The Chicopee River is a Class B surface water and is fished for consumption. The Connecticut River is also Class B and fished for consumption. The impact to sediment quality and to fish diet is unknown.

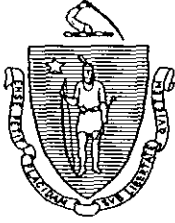
Met

Not Met  NA

9. Criterion 9 is met if there are data or any other information that indicate that the disposal site may pose a significant or otherwise unacceptable risk of harm to health, safety, public welfare, or to the environment if left in its present state for several years. Note: This criterion is to be used only if none of the previous eight criteria were met, and no additional information is required.

**Supporting Information and Source:**

See criterion no. 1 and no. 2, IDSCF.



DANIEL S. GREENBAUM  
Commissioner  
JOHN J. HIGGINS  
Regional Director

*The Commonwealth of Massachusetts*

*Executive Office of Environmental Affairs*

*Department of Environmental Protection*

*Western Region*

*436 Dwight Street, Springfield, Mass. 01103*

*(413) 784-1100*

June 11, 1993

FILE COPY

David C. Minc, Esquire  
Uniroyal Goodrich Tire company  
600 South Main Street  
Akron, OH 44397-0001

Mr. Ed Mrozinski  
Facemate Corporation  
5 West Main Street  
Chicopee, MA 01020

Re: Chicopee 1-0436P-91272&92187  
Former Uniroyal Complex  
154 Grove Street  
310 CMR 40.000

REVIEW OF PHASE I REPORT: PRIORITY CLASSIFICATION

Dear Mr. Minc & Mr. Mrozinski:

A Phase I - Limited Site Investigation Report and Interim Site Classification Form (ISCF) were prepared by Environmental Compliance Services, Inc. (ECS) of Agawam, MA and submitted to the Department on March 29, 1991 on behalf of Facemate Corporation. Following a preliminary review of this report, the Department required additional evaluations of the site and the implementation of Short Term Measures (STMs) to control the migration of gasoline-like feedstock solvent in groundwater and to eliminate the potential for direct human contact with elevated levels of polychlorinated biphenyls (PCBs) in surface soil. The results of the additional activities were summarized in the "Results of Short Term Measures" Report by ECS dated March 5, 1992.

In addition to reviewing the reports prepared by ECS, Department personnel have reviewed letters, memoranda, and reports found in the Department's Emergency Response (ER), Site Assessment, and Water Pollution Control files, which may not have been available or researched by ECS during the writing of the Phase I report. Specific items, which were probably not reviewed by ECS during the writing of the Phase I report, include "Division of Water Pollution Control Correspondence 1968-1980" file, a "revised Spill Prevention Control and Countermeasure Plan" dated January 1977, and Transformer Services' maintenance records for the site from 1979-1991." (Boldface type will be used in this letter to direct attention to information, which was not researched or developed by ECS but was discovered or generated by research efforts of Department personnel; boldface may also be used to highlight the existence of data gaps in the Phase I which may be addressed by Phase II activities.)

Upon completion of the Department's review of the submitted reports and additional documents, the Department finds there is sufficient information to meet the requirements of Phase I as outlined in 310 CMR 40.543 and to classify the site.

SITE DESCRIPTION & HISTORY

The Former Uniroyal Complex, the "site", is located along the east bank of the Chicopee River at the intersection of Grove Street and Front Street on a 17.8



acre parcel of land in Chicopee Falls, MA. The general topography of the site is terraced, decreasing in elevation toward the west to the foot of the Chicopee River Flood Control Dike.

The site is located in a mixed residential, commercial, and industrial area. The site is bounded to the north by Facemate Corporation property and Oak Street. Beyond Oak Street are two lots, a vacant lot and a parking lot. These lots must be considered as part of the site if historic records indicate prior ownership by Uniroyal or if contamination from the site is present on these lots. Residential and commercial properties are located further north. Properties to the east, across Grove Street, support the City of Chicopee safety complex, and commercial businesses, including several restaurants, attorneys' offices, and a convenience store with self-serve gasoline. A glass & mirror shop and a credit union, lots which were once part of the Uniroyal complex, occupy the southern most portion of the site. Residential properties, an automobile dealership, and an appliance store are located to the south, across Front Street. Southwest of the site are an auto service center and residential properties. Directly west of the site is a US Army Corps of Engineers Flood Control Dike which is now maintained by the City of Chicopee and beyond the dike is the Chicopee River, a Class B Surface Water considered suitable for fishing and recreation.

The site has been owned by Facemate Corporation since November 24, 1981. Portions of the site have been offered for lease by the current owner, Facemate Corporation, under the name Chicopee Industrial Park, since 1986. Tenants lease space in five of the twenty three buildings for offices, storage of supplies, auto body repair, a fish hatchery, a machine shop, and light industrial manufacturing processes including metal fabrication, printing, and filter media fabrication. A commercial bus transportation company leases parking space in the northwest portion of the site, in the vicinity of a former salvage yard. Facemate Corporation also uses space in the occupied buildings for storage. The remaining eighteen buildings are not and have not been used by the present owner. Some of the unoccupied buildings were abandoned in the 1960s while others have not been used since Uniroyal left in 1981. Consequently, many of the buildings, including those located on the western most portions of the site, the lowest tier, and several on the middle tier, are deteriorating, collapsing, or in an unstable condition.

Prior owners and operators of the site include Fisk Rubber Company, manufacturer of bicycle and automobile tires from 1898 to 1938 and Uniroyal, Inc., a/k/a United States Rubber Company from 1938 to November 24, 1981. Uniroyal filed notification as a RCRA Hazardous Waste Generator on August 15, 1980 under #MAD01122944 although production at the Chicopee plant had ceased on July 22, 1980.

Under ownership by Uniroyal, the operations included the manufacturing of rubber tires and associated support services including power generation, electric distribution, and maintenance of buildings and equipment. Suspected contaminants of concern from these operations include halogenated and non-halogenated volatile organic compounds (VOCs) associated with the use of solvents and gasoline blends, semi-volatile organic compounds (SVOCs), especially polynuclear aromatics hydrocarbons (PAHs), associated with process oil and carbon black, PCBs resulting from leaks and spills of dielectric fluids from electrical transformers, switches, lines, and associated electrical equipment, priority pollutant metals, including zinc, in the form of zinc oxide, used as a reinforcing agent in rubber, and lead, which is found in gasoline and similar feedstock solvents used by rubber manufacturers, fuel oils associated with the boiler plant, and asbestos insulation.

The specific processes, methods of materials handling, and equipment used by the former owners and operators to manufacture tires was not adequately described in the Phase I report. A description of these processes including the identification of raw materials used, wastes and by-products generated, recycled,

discharged or disposed is a requirement of Phase I. The Department will require that additional operational history be provided simultaneously with the Phase II Scope of Work to ensure all contaminants of concern are identified and are analyzed for during the Phase II activities.

Twenty-two former underground storage tanks and numerous above-ground tanks and containers were used by Uniroyal to store leaded and unleaded gasoline, enriched aromatic blends (i.e., naphtha, benzol, "Chicopee Special") with as much as 6 % Benzene (B) and 40% Toluene (T) which represents three times the B T content found in typical gasoline, solvent blends which contained Methylene Chloride and 1,2-Dichloroethane as found in Tank F, process oil ("Aromatic Oil Type A" a/k/a "Paraflex" which was reportedly similar to #6 fuel oil), lubricating oil, waste oil, and carbon black. The company also burned coal and later #6 fuel oil in the boiler plant and stored # 6 oil in a 200,000 gallon capacity above ground tank, which still exists at the site.

Of the twenty-two underground storage tanks located at the site, eleven tanks, designated as Tanks A, B, C, D, E, F, G, H, I, J, and K, were removed in 1988 under oversight by ECS, seven tanks, Tanks L, M, N, O, P, Q, R, and S were reportedly cut and filled with sand during the 1960's or 1970's, and three tanks, Tanks T, U, and V, which are listed with status: unknown, may have been removed in 1943 or 1944 during the relocation of the rubber cement manufacturing process.

Electric power was distributed throughout the complex using 25 large transformers (500 to 1500 KVA) and numerous smaller transformers. In the 1972 Facility Manual for the Uniroyal Plant, two of the large transformers are identified as a "Dry Type", not containing dielectric fluid, and the other twenty-three large transformers are identified as askarel transformers, containing PCB based dielectric fluid. According to a local utility company, askarel often contains 40 % to 60 % PCBs. At the present, one askarel transformer is in use, sixteen askarel transformers are stored on site for future use, two "Dry Type" transformers are stored for future use, and six askarel transformers have been removed (three were removed by Uniroyal circa 1972; three were removed by Transformer Services, Inc. at the request of Facemate in 1989). The total number of smaller transformers and the contents of these transformers is presently unknown; ECS reports locating several units during their building inspections but does not report their contents or condition.

#### REGULATORY HISTORY UNDER M.G.L. c. 21E

In 1987, the Department received a report of an oil substance entering the Chicopee River in the vicinity of the Oak Street Pumping Station. During an investigation of this release, Department personnel found that oil had impacted the pumping station which moves storm water from the site into the river during periods of high water elevation in the river. The PCB identified as Arochlor 1248 was detected at 71 ppm in a sample from the oil found at the Oak Street pumping station. Since this finding, the pumps in the station have not been used. The pumping station is approximately 150 feet from the former location of transformers #13, #14, and #25. These transformers were found to be leaking and were subsequently removed by Transformer Services for Facemate Corporation in 1989. No conclusive evidence has been found, as yet, however to prove that the PCB contamination at the pumping station came from these leaking transformers or any other PCB containing equipment at the site. Further investigation of the source of contamination in the pump station is necessary.

Releases of oil and/or hazardous materials were discovered at the site during the removal of underground storage tanks on February 22-24, 1988. Department personnel observed the removal of several underground tanks and found at least two tanks had been leaking. As a result of this finding, the Department issued a Notice of Responsibility (NOR) on March 11, 1988 to the current owner, Facemate Corporation, to take necessary actions for the prevention and mitigation of the

releases under M.G.L. c. 21E. In that notice, the Department required Facemate to conduct an environmental site investigation to determine the extent of soil and groundwater contamination resulting from the releases from the underground tanks. Facemate Corporation retained the services of Environmental Compliance Service, Inc. (ECS) to conduct the environmental site investigation.

On September 13, 1990, during groundwater monitoring activities at the site, personnel of ECS discovered more than two feet of a floating, clear, gasoline-like liquid in monitoring well, ECS-9. ECS personnel reported as much as 4 feet of product on the following day and requested Department approval to begin hand bailing the product as a Short Term Measure (STM). The Department granted verbal approval of this STM on September 14, 1990.

On October 16, 1990, the Department was notified that the STM of hand bailing was concluded on September 27, 1990. A total of 7.25 gallons of a product & water mix was bailed and the thickness of the floating layer had decreased to 0.12 feet.

On November 5, 1990, the Department issued a second Notice of Responsibility to Facemate Corporation requiring that a Preliminary Assessment (PA), Phase I - Limited Site Investigation, and Interim Site Classification Form (ISCF) be completed for this site in accordance with the Massachusetts Contingency Plan, 310 CMR 40.000.

On March 29, 1991, the Department received the Phase I Report and accompanying Preliminary Assessment Form and ISCF. The report describes the consultant's findings and recommendations following the site investigation and tank removal activities which were conducted between April 1988 and March 1991.

After a preliminary review of the Phase I Report, the Department issued a Notice of Responsibility to Uniroyal, as a potentially responsible party (PRP), based on their former status of owner and operator of the site, and issued a review letter to Facemate identifying the same requirements for further action. Both letters, dated June 25, 1991, identified "Imminent Hazards" associated with PCB oil on surface soil, the potential migration of PCBs to the river via the storm drains, and the potential for migration of uncontrolled solvents in groundwater. The letters required a STM Proposal be submitted to address these imminent hazards.

The Department received several proposals for Short Term Measures, prepared by ECS and dated June 17, 1991 (revised July 24, 1991), October 1, 1991, and November 18, 1991. The Department approved the proposed STMs which included product bailing, a soil vapor survey, the installation of soil borings completed as monitoring wells, the placement of an impermeable barrier to cover PCB contaminated surface soils, an investigation of PCBs in Oak Street Pump Station, and an investigation of an oil sheen observed at the outfall from the Oak Street Pump Station to the Chicopee River.

A follow-up report of these activities was prepared by ECS, is dated March 5, 1992, and was submitted to the Department. The report summarizes the completion of STM actions with the exception of the dye test, which was conducted on a later date. Additional monitoring wells and the results of the soil vapor survey suggest that the solvent plume is localized to the vicinity of the former underground storage tank field near Building 45. The report also indicates that the potential for direct contact with PCB contaminated soil is now reduced following the installation of additional fencing and impermeable covers. A Department memorandum to the file indicates that the dye test was inconclusive; no connection between the two tested manholes and the pump station was found. Additional investigations of the storm drains and the pump station as potential migration pathways will be required during the Phase II activities.

Additional information was required to address the potential for on-going

releases from equipment containing PCB oil because previous maintenance records indicated equipment was "leaking" and in "poor condition". In a letter dated February 10, 1993, the Department required Facemate to address this issue. ECS submitted a response letter dated March 22, 1993. This letter indicates that Facemate now conducts quarterly visual inspections of the PCB transformers and switches, as required by federal regulations and that no apparent leaks were found during inspections conducted on December 4, 1992 and March 19, 1993. While this information indicates that there are no visible leaks, it is possible that on-going releases may exist in hidden locations, such as manholes, which contain lines, link boxes, and other PCB containing components.

Since the Department considers any future or on-going release of PCB oil from any equipment at this site as a situation which constitutes an imminent hazard as identified in 310 CMR 40.542(2), you and your agents must continue to inspect ALL PCB oil containing components, including transformers, switches, lines, and link boxes to comply with 310 CMR 40.542 (1)(d) which requires a continual evaluation of the need to perform Short Term Measures. The Department considers your quarterly visual inspections insufficient to meet the requirements of a Short Term Measure evaluation because it does not account for the condition of all PCB oil containing equipment at the site.

#### SITE INVESTIGATION

Investigation activities were conducted by ECS to characterize the nature and extent of oil and hazardous materials at the site as part of the Phase I and imminent hazard evaluations. The activities included field surveys of source areas and migration pathways, building inspections, an extensive surface and subsurface soil sampling program, which included excavation of 11 test pits, and sampling at 25 surface soil locations, and 77 hand boring locations, the installation and sampling of 28 shallow 2" diameter groundwater monitoring wells, and a soil gas survey in the vicinity of a gasoline-like solvent release near the former Tanks L through S.

Based on a review of the available information, the Department confirms that there have been releases of oil and hazardous materials at the site. Known releases include releases of PCB oil from the askarel transformers and switches, releases of gasoline and solvent blends (including blends which contained the halogenated compounds methylene chloride and 1,2-dichloroethane) from several of the twenty-two former underground storage tanks, releases of base/neutral/acid semi-volatile organics which may be associated with carbon black and process oil, releases of oil and polycyclic aromatic hydrocarbons associated with former boiler house operations which used coal and later # 6 fuel oil, and releases of chlorinated solvents (including perchloroethylene, dichlorobenzene, chloroform, carbon tetrachloride, and 1,1,1 trichloroethane), all of which are regularly associated with industrial use in maintenance operations of buildings and equipment.

#### PCBs Released

Numerous surface and subsurface soil samples were analyzed for PCBs during the site assessment process. In addition to the initial surface sampling to identify the presence of PCBs, an extensive hand and drill rig soil boring program was conducted to estimate the vertical and lateral extent of PCB contamination. Results indicate PCB levels in surface soil (0 to 6 inches) range from not detected (less than 250 ppb) to 8,700 ppm.

Five distinct areas exist where PCB concentrations in surface soil (0-6 inches) exceed 500 ppm. These areas are all associated with askarel transformers and switches and the compounds detected include Arochlor 1248 and Arochlor 1260.

Three of these locations, Areas A, B, and C, which are shown on the most current site map (ECS, January 1992), were recently fenced and covered temporarily because they were considered, by the Department, to present an imminent hazard

due to the potential for direct human contact with elevated PCBs; PCB concentrations were found up to 2700 ppm in Area A, up to 573 ppm in Area B, and up to 4200 ppm in Area C. PCBs were also found outside of the fenced Area C on the sidewalk along Oak Street at a concentration of 250 ppm. To eliminate the imminent hazard, the soil on the sidewalk was swept and relocated to within fenced Area C.

Two additional areas, which the Department now designates as Areas D & E, are located in unused portions of the site and are not in areas presently considered to pose an imminent hazard. Area D, which is located west of Building 28 N in the immediate vicinity of transformers #8, #18, #5, and #19, exhibited PCB levels up to 890 ppm with a wide spread area of moderate PCB levels (up to 91 ppm) found adjacent to this location, north and south along the middle tier railroad tracks. Area E, which is located west of Building 8 near where transformers #13, #14, and #25 once stood, exhibited PCB levels of 8700 ppm (from 0 to 6 inches) and 470 ppm (from 2 to 4 feet) with both Arochlor 1260 and 1248, present. The maximum depth of PCB contamination is not known.

An additional PCB contaminated area, near a pile of wood block floor debris along the upper railroad spur west of Buildings 42 and 27, was found to contain low levels (ND to 7.7 ppm) of Arochlor 1254 in surface soil samples. The source of the PCBs in this area has not been identified nor is it likely to be associated with the dielectric fluid used in the askarel transformers.

PCBs were not detected (less than 2.5 ppb) in groundwater samples but very few groundwater samples were analyzed for PCB content; most monitoring wells are located near former underground storage tanks and are not located in the vicinity of PCB releases.

A manhole near Building 8 was sampled as part of the STM actions and was found to contain Arochlor 1260 at levels of 27 ppb in the water and 140 ppm in the sediment. Although this manhole is approximately 150 feet from the Oak Street Pump Station, no connection was found between the manhole and the pump station.

PCBs (Arochlor 1260) were detected at 35 ppm in sediments from the Oak Street Pump station but were not detected in the standing water in the pump station during a sampling event on November 6, 1991. Previously, in 1987, Arochlor 1248 was detected at 71 ppm in an oil sample from this pump station. The disappearance of this oil phase and the finding of different Arochlors suggest that there may be movement through this pump house chamber even though the pumps have not been used since 1987. Further investigation of the Oak Street pump station and the storm drain system are necessary to identify potential source(s) of contaminants in the pump house chamber and to evaluate the potential migration pathway of PCB contaminated soil or sediment to the river.

Sampling for PCBs in the river sediment was not conducted during Phase I but will be required during Phase II.

#### Volatile Organic Compounds Released

Volatile organic compounds (VOCs), primarily the non-halogenated aromatic compounds commonly associated with gasoline including Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX), were detected in many of the groundwater samples from the site. These VOCs were typically found in the vicinity of former underground storage tanks (USTs) used to store gasoline blends and feedstock solvents for rubber manufacturing and for vehicle use. Concentrations of BTEX in samples from the monitoring wells indicate that releases occurred in or near former UST locations with the most significant release found in the lower tank field for Tanks L through S, where separate phase product was observed in monitoring wells ECS-9 and ECS-23. A soil gas survey and additional monitoring well installation and sampling, which were completed as STM activities, indicate that the release in this former tank field is localized.

Methyl Tertiary Butyl Ether (MTBE), at levels up to 45 ppb, is another VOC found in groundwater samples analyzed during the STM activities associated with the lower tank field. Additional analysis for this compound must be considered in Phase II activities to determine if its presence is related to the tanks in the lower field or if there is another source.

Low levels of halogenated compounds were found in a limited number of groundwater samples taken from areas where spillage may have occurred from the industrial use of cleaning or degreasing solvents, including Perchloroethylene (PCE), Methylene Chloride, Dichlorobenzene, Chloroform, Carbon Tetrachloride, 1,1,1-Trichloroethane (TCA), and breakdown products of TCA and PCE.

Sampling of the contents removed from Tank F also indicates that at least this one UST contained chlorinated solvents and not gasoline as indicated on the site plan. Reports of the removal of this tank indicate that there were several holes in the tank and very strong odors in the tank pit. Laboratory analysis of the contents from Tank F, is presented in Table 12 of the Phase I report. The results showed the presence of Methylene Chloride (up to 45 ppm) and 1,2 Dichloroethane (up to 37 ppm) in addition to high concentrations of BTEX. Tank F is located near to Building 43 and was likely used to store either a special feedstock, recycle, or waste material used in or generated from the rubber cement manufacturing processes, which took place in Building 43. Further investigation of the release from Tank F will be needed in Phase II. In addition, the Department requires the submittal of supporting documentation for the removal and disposal of hazardous waste and contaminated soil, which was generated during the removal of this tank. Appendix D pages 6 & 7 of the Phase I report indicates that there was a stockpile of soil and 12 drums of product; no information was found in the Phase I report to verify the disposal of this hazardous waste.

Documentation for the removal and disposal of Tank K and its reported content of 8,000 gallons of oily water were also missing from the Phase I and must be submitted to the Department to verify proper disposal.

#### Semi-volatile Organic Compounds (SVOCs) Released

Sampling and analysis for SVOCs during the Phase I field work indicates the presence of these contaminants in surface soil at the site; vertical and lateral extent of contamination has not been defined nor was there any sampling for SVOCs from the lower most level.

Moderate (10 to 100 mg/kg) to high (>100 mg/kg) concentrations of total polyaromatic hydrocarbons (PAHs) were typically found in surface soil samples taken from the upper railroad spur between Buildings 42 and 28 and along the middle section of railroad tracks between Buildings 28 and 8. ECS attributes the surface soil contamination to historic use of carbon black, diesel oil, and or #6 oil but according to Department research, it may also be associated with spills of "Aromatic Oil Type A".

The highest concentration of PAHs detected was 629 mg/kg total PAHs with 24 constituents identified in surface soil sample, S-15. Several of the PAHs found in this sample are used almost exclusively in rubber manufacturing whereas the PAHs found at other locations are typically associated with coal tar, coal residue, and heavy petroleum oil in addition to their use in rubber production.

ECS reported no detected (greater than 2 times the EPA Method 8270 detection limits) PAHs in groundwater but only four monitoring wells were sampled for PAHs. The Department notes that there is insufficient sampling data to determine if PAHs are impacting groundwater. No samples were collected for PAH analysis from the two monitoring wells, ECS-11 and ECS-20, which are located in elevated PAH contaminated areas.

### Oil Releases

TPH analysis and visual inspections indicate historic spillage of oils in and near the railroad tracks and near pipes associated with the #6 fuel oil tank but little information was provided in the Phase I report regarding the spills to the river. The Department has additional information regarding historic spills of oil to the river in the Water Pollution Control files for this site. Additional research and sampling are necessary to determine whether there has been an impact to the river from these historic spills.

All oil containers, including the 200,00 gallon above ground tank, the process oil tanks, and the numerous oil interceptors must be inspected and evaluated as potential release sources. Volume, type, and physical state (liquid or sludge) of the oil in each container must be determined to prepare for proper disposal of remaining contents.

### Metals Analysis

Limited RCRA Metals testing was performed during the Phase I Investigation. Metals analyses were not performed on soil samples. Analyses for 8 Soluble RCRA Metals were performed on groundwater samples from eight of the twenty-eight monitoring wells. The analyses revealed the presence of barium up to 0.35 ug/L; no other metals were detected. Total metals analyses were performed on samples of the liquid removed from underground storage tanks before tank removal actions; tests results, found in the Phase I Report, revealed 69.4 mg/L of lead in a sample from Drums 8 & 16 (in Table 11, ECS incorrectly reported the lab results found in Appendix L) and zinc in all samples with the highest level reported as 11.5 mg/kg.

Since both zinc (in the form of zinc oxide) and lead (probably in the form of tetraethyl lead typically found in leaded gasoline) are likely to be found associated with rubber manufacturing, additional metals analyses are necessary during Phase II.

### GROUNDWATER AND SURFACE WATER USE

The groundwater at the site was encountered at depths from 2 to 5 feet in monitoring wells located on the lower western most terrace, from 7.5 to 20 feet in monitoring wells on the middle terrace, from 8 to 16 feet in monitoring wells on the upper eastern-most terrace, and from 23 to 25 feet in borings located in the area designated "former Salvage Yard", north of Building 1 during the Phase I investigation. Based on survey data and groundwater level measurements, ECS concludes that the lateral groundwater flow is west toward the Chicopee River.

Deep water supply wells, which were formerly used for process and fire control are known to exist at the site and one such well may be presently used by the fish hatchery. There is no information regarding the influence of these wells on groundwater and / or contaminant migration. The Department agrees with the recommendation by ECS to properly decommission the deep wells.

Groundwater in the vicinity of the site is not used as a drinking water supply. The surrounding community in Chicopee Falls is serviced by municipal water drawn from the Quabbin Reservoir. There are no known public or private drinking water wells within one mile of the site.

The Chicopee River may represent the primary receptors of contamination from the site. The Chicopee River meanders south and then west to its confluence with the Connecticut River 1.9 miles southwest of the site. Both the Chicopee and Connecticut Rivers are designated Class B surface waters and are suitable for recreational and fishing use. Currently, no sampling information exists to indicate if there has been an impact to the water or sediments in these rivers from either historic oil spills, hazardous materials releases, or from surface water runoff carrying contaminated soil from this site. Historic information

exists in DEP files regarding past releases from this site but little or no information exists to indicate whether residuals are present in river sediments.

There is also a lack of information regarding the migration pathways from the site to the Chicopee River. Potential pathways may include conduits installed through the Chicopee River Flood Control Dike, the storm/sewer system including the Oak Street Pumping Station, and the hydrologic flow path of the groundwater westward beneath the dike.

#### DIRECT CONTACT HAZARDS

Elevated concentrations of PCBs and PAHs were found to exist in surface soils at the site in areas where access is restricted by fencing and patrolling security personnel. PCBs and PAHs also exist in areas on the upper terrace where tenants and employees of Chicopee Industrial Park may come into contact with these contaminants in surface soil.

Although an effort has been made to eliminate the potential for direct contact by installation of additional fencing and placement of ground covers, the Department still considers the contamination at this site to pose significant risk to tenants, on-site workers and trespassers. It is the continued responsibility of Facemate to restrict access to contaminated areas and to advise all entering persons, including security personnel and certain tenants, of the restrictions and hazards at this site.

Incidental contact to oil and/or hazardous materials at the site has occurred during construction activities at the site. On August 17, 1992, Chicopee Water Department personnel encountered gasoline vapors and a sheen on groundwater while excavating soil to install a replacement water line to Building 43. During the Department's response to this incident, Lisa Jones of the Department met with John Fauth, property manager for Chicopee Industrial Park (CIP), and discovered that Mr. Fauth, who coordinates these activities, had not been informed that he was managing a property which is a listed 21E disposal site. In addition, ECS had not been consulted in planning this construction work. Consequently, the Department notified Facemate of their responsibility to properly inform CIP management of the conditions at the site and to seek advice from their environmental consultant prior to any future construction work. Furthermore, the Department requires that future construction work in contaminated areas be proposed in accordance with the Department's Interim Measures Policy #WSC-131-90.

In addition to the aforementioned incident, it is likely that additional exposures may occur as a result of the failure to inform people of the hazards at the site. \*

#### DEPARTMENT DETERMINATIONS

Based on a review of all available information, the Department has sufficient information to classify the site in accordance with the Massachusetts Contingency Plan. The Department agrees with the initial recommendation by ECS, dated February 28, 1991, to classify the site as a "Priority" disposal site even though additional investigations indicate that Criterion 2, presence of uncontained migrating product, is not met. The Department has determined that the site meets Criterion 1 and may also meet Criteria 5 and 8 of the Interim Site Classification Form, as explained below.

Criterion 1: Conditions at the site provide for direct contact with surface oil or hazardous materials...at concentrations that could adversely affect human or environmental receptors. Specifically, PCBs over 500 ppm and total PAHs up to 629 ppm were found at the site and access by humans is only partially restricted.

Criterion 5: There is evidence of a release of oil or hazardous material to surface water that could result in concentrations which exceed Ambient Water



Quality Criteria. Additional information is needed, specifically, surface water and sediment sampling, to determine if the site conditions meet this criterion. Based on historic oil and hazardous materials spill information and based on a potential for PCB and/or zinc contaminated soil to travel with surface water runoff, there is a likelihood that this criterion may be met.

Criterion 8: Hazardous material from the site could adversely affect the human food chain. Additional information is necessary to evaluate the potential for PCB contamination from this site to affect fish in the Chicopee River and to determine if human consumption of these fish is likely to pose a health risk.

This site is now considered a Phase II Priority Site and has been assigned to Lisa Jones, Site Manager, for oversight of further response actions (Phases II through IV, as required by the MCP).

Within 60 days from the date of this letter, you must submit a Scope of Work (SOW) for the Phase II Comprehensive Site Assessment, pursuant to the MCP, 310 CMR 40.545. With this submittal, you must include a comprehensive description of the rubber manufacturing processes (see page 2 and 3 of this letter).

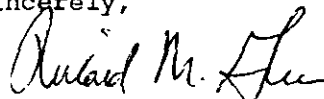
In addition to the items indicated at 310 CMR 40.545, the proposed Phase II activities must include investigations to address specific items presented in this letter and the following:

- 1) A sampling plan which will include sampling of surface water, river sediments, the wood block/floor debris waste pile, and locations with little or no sampling information, such as the lowest terrace (west of Building 1 through 8), the vacant lot across from Oak Street, the "Retail store" lot, and the Credit Union lot.
- 2) Replacement of monitoring wells ECS-2 and ECS-4, and any other monitoring wells which may be broken or destroyed.
- 3) Installation of monitoring wells to identify or evaluate the extent of groundwater contamination by contaminants which include PAHs, PCBs, metals, and/or VOCs.
- 4) Analysis for 13 priority pollutant metals, using total metals analysis for soil and sediments, and dissolved metals in groundwater.
- 5) Analysis for PAHs and PCBs in groundwater and river sediments.

Your consultant should schedule a meeting with the site manager to discuss future actions at the site, which will include Phase II activities and may also include Interim Measures and additional investigations or submittals to fill data gaps identified in this letter. Prior to this meeting, your consultant should prepare and submit a draft proposal or outline of topics for the meeting and for the Phase II SOW.

If you have any questions regarding this letter, please contact Lisa Jones of this office at (413) 784-1100 ext. 248.

Sincerely,



Richard M. Green,  
Section Chief, Site Management  
Bureau of Waste Site Cleanup

cc: Environmental Compliance Services, Inc.  
Captain Czepiel, Chicopee Fire Dept.  
Mayor of Chicopee  
Frank Rueli, City Engineer, Chicopee  
Chicopee Board of Health  
Chicopee Conservation Commission  
Jeanne Kidwell, Chicopee Community Development Office  
Attorney for Facemate: Ellyn Weiss, Foley, Hoag & Eliot  
Attorney for Uniroyal: Thomas Harrison, Day, Berry, & Howard

Chicopee  
1-0436

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE SITE CLEANUP  
BOSTON, MASSACHUSETTS 02108

May 18, 1993

To: UNIROYAL/GOODRICH COMPANY  
DAVID MINC, ATTORNEY  
600 SOUTH MAIN ST.  
AKRON, OH 44394

Re: Site Number 1-0436 / UNIROYAL COMPLEX - FMR

Dear Sir or Madam:

Enclosed is a Request for Payment for costs that the Commonwealth of Massachusetts has incurred in performing response actions at the above noted site. You have previously received a Notice of Responsibility from the Department on behalf of the Commonwealth informing you of the Department's basis for concluding that you are liable for these costs. This request is made pursuant to Chapter 21E, Section 5, of the Massachusetts General Laws and 310 CMR 40.000. A copy of the relevant regulations is included. If you would like a copy of Chapter 21E or the full text of 310 CMR 40.000, you may purchase them from the State Bookstore located at the State House in Boston (telephone: 617/727-2834) or at 21 Elm Street in Springfield (telephone: 413/784-1376).

The full amount shown on the attached Request for Payment is due within forty-five (45) days of the payment request date appearing on this document, unless you have filed a request for an administrative review of costs pursuant to 310 CMR 40.620 (4) or you are a debtor in bankruptcy. Failure to pay may result in the assessment of interest on the full amount owed the Department at a rate of one percent per month, or twelve percent (12%) per year, compounded annually. Failure to pay this debt may also result in legal action against you, including the placement of liens on your real and personal property in the Commonwealth. Instructions for submitting payment to the Department on behalf of the Commonwealth may be found in the Request for Payment.

If the Commonwealth continues to incur costs at the site referenced above, you will receive additional Requests for Payment for the new costs. You will also receive a Request for Payment if there is any outstanding balance, including any new interest assessment. Usually, requests will be sent once every four months.

Additional information regarding this document may be found in Appendix A. If you have any questions, you may contact the

Department of Environmental Protection, Bureau of Waste Site  
Cleanup, Cost Recovery Program, at 617/556-1013, Monday through  
Friday, between the hours of 9:00 AM and 5:00 PM.

Sincerely,

A handwritten signature in cursive script that reads "James C. Colman". The signature is written in black ink and is positioned above the typed name.

James C. Colman  
Assistant Commissioner  
Bureau of Waste Site Cleanup

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE SITE CLEANUP

Request for Payment of Response Action Costs

▶▶ Payment Is Due 45 Days From Payment Request Date ◀◀

Payment Request No...: 93-WSC-101443-A2  
Payment Request Date.: May 18, 1993  
Payment Due Date.: July 2, 1993  
Account No...: 1-0436/XXXXX-00

REQUESTED FROM: UNIRO-01

UNIROYAL/GOODRICH COMPANY  
DAVID MINC, ATTORNEY  
600 SOUTH MAIN ST.  
AKRON, OH 44394

SITE NO.: 1-0436

UNIROYAL COMPLEX - FMR  
154 GROVE ST.  
CHICOPEE, MA 01013

|                  |           |
|------------------|-----------|
| Amount Paid      | .         |
| Total Amount Due |           |
|                  | \$ 729.91 |

Pursuant to Chapter 21E, Section 5, of the Massachusetts General Laws and 310 CMR 40.000, the above-named Department hereby requests payment of the response action costs which the Commonwealth has incurred in performing the response actions at the above noted site.

A copy of this Request for Payment is being sent to each of the parties listed in Appendix B. It is the responsibility of the parties to apportion costs among themselves. Each party remains jointly and severally liable to the Commonwealth for the Department's total costs, unless you have filed a request for an administrative review of costs pursuant to 310 cmr 40.620 (4) or you are a debtor in bankruptcy.

Please return a copy of this page with your payment. Make sure that the Payment Request No. '93-WSC-101443-A2', the Site ID No. '1-0436', and the PRP ID No. 'UNIRO-01' are on the check as well in order to give a clear indication as to who is making the payment. Additional information regarding your responsibility can be found in Appendix A.

Make checks payable to the Commonwealth of Massachusetts and MAIL ONLY to  
Department of Environmental Protection  
Post Office Box 4062  
Boston, MA 02211

|   |
|---|
| COMMONWEALTH OF MASSACHUSETTS<br>DEPARTMENT OF ENVIRONMENTAL PROTECTION<br>BUREAU OF WASTE SITE CLEANUP |
|---|

Request for Payment of Response Action Costs

▶▶ Payment Is Due 45 Days From Payment Request Date ◀◀

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S U M M A R Y   O F   A M O U N T   D U E

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Request for Payment No. 93-WSC-101443-A2

For Costs Recorded Between April 6, 1991 and May 18, 1993

|  |        |
|--|--------|
| ▶ PRIOR COSTS AND CREDITS                    |        |
| Prior Balance Due .....                      | 0.00   |
| Outstanding Balance Before New Costs.....    | 0.00   |
| ▶ Net Balance Before New Costs.....          | 0.00   |
| ▶ NEW COSTS                                  |        |
| Posted between July 1, 1989 and May 18, 1993 |        |
| Planning, managing, directing,               |        |
| or performing all other response             |        |
| actions.*.....(5.50 hrs).....                | 282.45 |
| Planning, managing, directing, or            |        |
| performing short term measures to            |        |
| abate an imminent risk.....(10.00 hrs).....  | 447.46 |
| Total New Costs.....                         | 729.91 |
| ▶ NEW BALANCE DUE.....                       | 729.91 |
| <hr/>  |        |
| ▶ SUMMARY COST TO DATE INFORMATION           |        |
| Total Costs Prcessed to Date.....            | 729.91 |

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\* This may include, but is not limited to, activities such as: meetings and other communication with PRPs and/or their agents; review of reports submitted by PRPs or state contractors; site inspections; oversight of field activities such as well drilling and sampling; analysis or review of environmental data; enforcement activities; management of state contractors performing remedial response actions at the site.

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE SITE CLEANUP

Request for Payment of Response Action Costs

▶▶ Payment Is Due 45 Days From Payment Request Date ◀◀

Re: Site Number 1-0436 / UNIROYAL COMPLEX - FMR

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R E S P O N S I B L E P A R T Y L I S T

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A copy of this Request for Payment is being sent to the parties listed below. It is the responsibility of these parties to apportion costs among themselves. Each party remains jointly and severally liable to the Commonwealth for the Department's costs.

---

DHJ F-01 DHJ FACEMATE CORP. 5 WEST MAIN ST. CHICOPEE, MA 01013

UNIRO-01 UNIROYAL/GOODRICH COMPANY 600 SOUTH MAIN ST. AKRON, OH 44394

Appendix A

**ABOUT THIS REQUEST FOR PAYMENT**

**Making Payments:**

Please make checks payable to the Commonwealth of Massachusetts. The site number found on the first page of this request must appear on the face of the check. Checks must be accompanied by the remittance form found on page one. Payments should be sent to the following address:

Department of Environmental Protection  
Post Office Box 4062  
Boston, MA. 02211

**Questions About This Document:**

If you have any questions about this request, you can contact the Department of Environmental Protection, Bureau of Waste Site Cleanup, Cost Recovery Program at (617) 556-1013 between the hours of 9:00 AM and 5:00 PM, Monday through Friday.

**Requests for Additional Information:**

If you wish to obtain documentation that supports the costs that appear on this document, you must submit a written inquiry to the Department at the following address:

Department of Environmental Protection  
Post Office Box 4062  
Boston, MA. 02211  
Attn: Cost Recovery Documentation Request Coordinator

The written inquiry must include the following information: the site number; the payment request number found on the first page of this document; a brief explanation of the concern or questions; preference for how this information should be provided (i.e., mail or pickup by you or your agent); and the name, address, and telephone number of the party making this request.

**Note:** The Department requires at least two weeks to process this request. Please plan accordingly if you anticipate requesting an administrative review of costs.

**Administrative Review of Costs:**

If you disagree with the reasonableness or appropriateness of a cost item or items listed in the supporting documentation, you may ask the Department to review the costs in question pursuant to 310 CMR 40.620.

(continued on back)



COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE SITE CLEANUP  
BOSTON, MASSACHUSETTS 02108

*Rusu*  
*Chicopee*  
*1-0436*

May 18, 1993

To: DHJ FACEMATE CORP.  
WALTER MROZINSKI  
5 WEST MAIN ST.  
CHICOPEE, MA 01013

Re: Site Number 1-0436 / UNIROYAL COMPLEX - FMR

Dear Sir or Madam:

Enclosed is a Request for Payment for costs that the Commonwealth of Massachusetts has incurred in performing response actions at the above noted site. You have previously received a Notice of Responsibility from the Department on behalf of the Commonwealth informing you of the Department's basis for concluding that you are liable for these costs. This request is made pursuant to Chapter 21E, Section 5, of the Massachusetts General Laws and 310 CMR 40.000. A copy of the relevant regulations is included. If you would like a copy of Chapter 21E or the full text of 310 CMR 40.000, you may purchase them from the State Bookstore located at the State House in Boston (telephone: 617/727-2834) or at 21 Elm Street in Springfield (telephone: 413/784-1376).

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Additional information regarding this document may be found in Appendix A. If you have any questions, you may contact the

Department of Environmental Protection, Bureau of Waste Site  
Cleanup, Cost Recovery Program, at 617/556-1013, Monday through  
Friday, between the hours of 9:00 AM and 5:00 PM.

Sincerely,

A handwritten signature in cursive script that reads "James C. Colman". The signature is written in black ink and is positioned above the typed name.

James C. Colman  
Assistant Commissioner  
Bureau of Waste Site Cleanup

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE SITE CLEANUP

Request for Payment of Response Action Costs

►► Payment Is Due 45 Days From Payment Request Date ◄◄

Payment Request No...: 93-WSC-101443-A1  
Payment Request Date.: May 18, 1993  
Payment Due Date.: July 2, 1993  
Account No...: 1-0436/XXXXX-00

REQUESTED FROM: DHJ F-01

DHJ FACEMATE CORP.  
WALTER MROZINSKI  
5 WEST MAIN ST.  
CHICOPEE, MA 01013

SITE NO.: 1-0436

UNIROYAL COMPLEX - FMR  
154 GROVE ST.  
CHICOPEE, MA 01013

|                  |           |
|------------------|-----------|
| Amount Paid      |           |
| Total Amount Due | \$ 729.91 |

Pursuant to Chapter 21E, Section 5, of the Massachusetts General Laws and 310 CMR 40.000, the above-named Department hereby requests payment of the response action costs which the Commonwealth has incurred in performing the response actions at the above noted site.

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Make checks payable to the Commonwealth of Massachusetts and MAIL ONLY to  
Department of Environmental Protection  
Pcst Office Box 4062  
Boston, MA 02211

COMMONWEALTH OF MASSACHUSETTS  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 BUREAU OF WASTE SITE CLEANUP

Request for Payment of Response Action Costs

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S U M M A R Y O F A M O U N T D U E

Request for Payment No. 93-WSC-101443-A1  
 For Costs Recorded Between April 6, 1991 and May 18, 1993

|  |        |
|--|--------|
| ▶ PRIOR COSTS AND CREDITS                    |        |
| Prior Balance Due .....                      | 0.00   |
| Outstanding Balance Before New Costs.....    | 0.00   |
| ▶ Net Balance Before New Costs.....          | 0.00   |
| ▶ NEW COSTS                                  |        |
| Posted between July 1, 1989 and May 18, 1993 |        |
| Planning, managing, directing,               |        |
| or performing all other response             |        |
| actions.*.....(5.50 hrs).....                | 282.45 |
| Planning, managing, directing, or            |        |
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| abate an imminent risk.....(10.00 hrs).....  | 447.46 |
| Total New Costs.....                         | 729.91 |
| ▶ NEW BALANCE DUE.....                       | 729.91 |

|                                    |        |
|------------------------------------|--------|
| ▶ SUMMARY COST TO DATE INFORMATION |        |
| Total Costs Processed to Date..... | 729.91 |

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COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE SITE CLEANUP

Request for Payment of Response Action Costs

▶▶ Payment Is Due 45 Days From Payment Request Date ◀◀

Re: Site Number 1-0436 / UNIROYAL COMPLEX - FMR

---

R E S P O N S I B L E P A R T Y L I S T

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DHJ F-01 DHJ FACEMATE CORP. 5 WEST MAIN ST. CHICOPEE, MA 01013

UNIRO-01 UNIROYAL/GOODRICH COMPANY 600 SOUTH MAIN ST. AKRON, OH 44394

Appendix A

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Boston, MA. 02211  
Attn: Cost Recovery Documentation Request Coordinator

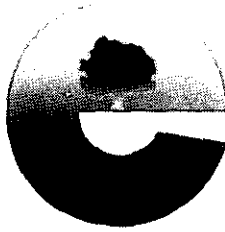
The written inquiry must include the following information: the site number; the payment request number found on the first page of this document; a brief explanation of the concern or questions; preference for how this information should be provided (i.e., mail or pickup by you or your agent); and the name, address, and telephone number of the party making this request.

**Note:** The Department requires at least two weeks to process this request. Please plan accordingly if you anticipate requesting an administrative review of costs.

**Administrative Review of Costs:**

If you disagree with the reasonableness or appropriateness of a cost item or items listed in the supporting documentation, you may ask the Department to review the costs in question pursuant to 310 CMR 40.620.

(continued on back)



**ENVIRONMENTAL COMPLIANCE SERVICES, INC.**

1-0436

RECEIVED

MAR 23 1993

Western Region  
Department of Environmental  
Protection

March 22, 1993  
File No. 11094.10  
Document No. 6151

Mr. Richard M. Greene  
Section Chief, Site Management  
Bureau of Waste Site Cleanup  
Commonwealth of Massachusetts  
Department of Environmental Protection  
Western Regional Office  
436 Dwight Street  
Springfield, MA 01103

RE: Chicopee 1-0436NC-91595  
Former Uniroyal Complex  
Chicopee, MA

Dear Mr. Greene:

This will respond to your letter of February 10, 1993, directing the Facemate Corporation ("Facemate") either to submit a proposal to perform a Short Term Measure to "eliminate any on-going releases of PCBs" or to show by letter of explanation that there are no active PCB leaks.

Facemate conducts inspections of PCB electrical equipment at the site each quarter, including PCB transformers and switches, as required by federal regulation. The last inspection, dated March 19, 1992, detected no leaks, as did the previous inspection in December, 1992 (copies of these transformer inspection reports are enclosed). As the federal regulations indicate, visual inspections at quarterly intervals are sufficient to guard against leaks from electrical equipment containing PCBs. On the basis of these inspections, it is ECS' opinion that there are no active PCB leaks and there is not, therefore, an imminent hazard which would make a Short Term Measure necessary under 310 CMR §40.542.

If leaking is detected, Facemate will retain a qualified contractor, Transformer Service, Inc. ("TSI"), to take the necessary actions, as well as to properly handle, transport and dispose of all hazardous waste. Documentation of completion of any such work will be prepared. This is consistent with Facemate's and TSI's practice.\*

\* Facemate purchased the site from Uniroyal in late 1981, not 1979, as the February 10 letter states.



**ENVIRONMENTAL COMPLIANCE SERVICES, INC.**

Mr. Richard M. Greene  
Massachusetts DEP  
Bureau of Waste Site Cleanup  
March 22, 1993

Page 2

Frankly, Facemate is perplexed that the letter of February 10<sup>th</sup>, in raising concerns based on a five-year old transformer inspection report, takes no note at all of the actions that have been taken by Facemate since that time to characterize this site and to ensure that there is no on-going risk of exposure to PCBs, an effort which goes beyond the normal Phase I scope. You state, for example, that the Phase I report did not include an effort to investigate service and maintenance records for the transformers or to report their present condition. In fact, present conditions were reported; identification of PCB transformers, from a review of the 1972 Uniroyal Facility Manual, along with a site map showing their locations appears at pages 32-34. Pages 49-58 and Appendix F of the Phase I Report contain the results of site, buildings and grounds inspections by ECS, including transformers and switches.

With respect to an investigation of maintenance records, the purpose of a Phase I Limited Site Investigation is to provide information needed for site classification and for development of a Phase II scope of work (310 CMR §50.543(1)). Historical records are reviewed for the purpose of obtaining information which can aid in characterizing the conditions of the site. While transformer maintenance records might indicate whether and where to look for potential PCB contamination, ECS went beyond that and in fact undertook an extensive sampling program in the vicinity of transformers and elsewhere to determine the presence and concentration of PCB contamination.

After the effective date of the Massachusetts Contingency Plan, the scope of ECS' site investigation efforts was intensified to include, among other things, an effort to characterize soil conditions with particular respect to PCBs. Extensive surface and subsurface sampling and analysis was done to determine the spread and depth of potential PCB contamination, including 24 surficial soil samples (Phase I Report, p. 61), groundwater samples from various wells (Id., p. 76-77), 83 hand-augured boring samples involving in some cases the removal of paving (Id., p. 79) and 10 soil samples from test pits (Id., p. 81-82). A full and detailed description of the program and its results is presented at pages 94-115 and Appendices M, N and O. Analyses of the results appears on pages 130-134.

Based largely upon these results, several Short Term Measures were taken under the Department's oversight, including covering of contaminated soil at three (3) locations with a secured polyethylene geomembrane, fencing, accessing a manhole and sampling its contents and investigation of the source of PCBs in the Oak Street Pumping Station.





**ENVIRONMENTAL COMPLIANCE SERVICES, INC.**

Mr. Richard M. Greene  
Massachusetts DEP  
Bureau of Waste Site Cleanup  
March 22, 1993

Page 3

See "Results of Short Term Measures," March, 1992. In summary, Facemate went well beyond what might have been inferred from transformer maintenance records; ECS proceeded to sample all potentially affected areas and has produced a substantial characterization of the surficial and sub-surface extent of PCB contamination. As far as the potential for current releases is concerned, Facemate's quarterly inspections are directed toward detecting PCB leakage and preventing releases. As the Department has noted, these requirements are established by EPA.

Your letter further suggests that the 1988 transformer inspection "showed evidence of historic releases" and implies that Facemate should have separately reported this. With respect, the Department was aware of the PCB issues from late 1987 (reference DEP correspondence to Facemate dated May 28, 1987 and November 5, 1990). Facemate was by 1988 already undertaking the site investigation which culminated in the Phase I report. As described above, this investigation included visual inspection of transformers and sampling of possible contaminated media. No release requiring notification pursuant to 310 CMR §40.374 occurred. Under these circumstances, notification of possible historic releases was not, in our view, required.

Finally, as you note, hazardous waste manifests in connection with the disposal of certain PCB transformers and switches in 1989 show that a small amount of contaminated soil was removed from the site by TSI and legally disposed of. DEP did receive a copy of the manifests, but no notification separate from the manifest was provided to DEP. I am informed by Facemate that it was unaware at the time that soil had been removed. In any case, there is no dispute that all contaminated material was properly handled and disposed of. TSI has been contracted and is still under contract to perform routine transformer maintenance in accordance with all applicable state, local and federal regulations. ECS maintains that the removal and disposal of transformers and switches is an operational function not requiring DEP notification. ECS/Facemate seeks clarification if the Department has a different view.

In summary, it is the opinion of ECS and Facemate that there are currently no on-going PCB-related releases at the site. Additionally, all potential threats of PCB-related releases have been identified and are being monitored.

\*

DEP  
Lead  
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of  
DEP  
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leak



**ENVIRONMENTAL COMPLIANCE SERVICES, INC.**

Mr. Richard M. Greene  
Massachusetts DEP  
Bureau of Waste Site Cleanup  
March 22, 1993

Page 4

Facemate has historically demonstrated, and will continue to demonstrate complete cooperation with the DEP regarding all outstanding regulations applicable to this site.

Sincerely,  
ENVIRONMENTAL COMPLIANCE SERVICES, INC.

*Mark C. Hellstein / SPF*

Mark C. Hellstein  
President

MCH/lm  
Attachments

cc: Mr. Walter Mrozinski, Facemate Corporation  
Ellyn R. Weiss, Esq., Foley, Hoag & Eliot  
David C. Minc, Esq., Uniroyal Corporation

FACEMATE CORP.

TEL: 413-594-8328

Mar 15 '93

14:54 No.009 P.02

Chicopee Industrial Park

Inspection Report

Date: 12/4/82

PCB Electrical Equipment  
TRANSFORMERS OUT OF SERVICE  
UNLESS STATED

Initials: [Signature]

| <u>Location</u>   | <u>Description</u>            | <u>OK</u> | <u>Leaks Noted</u> | <u>Comments</u> |
|-------------------|-------------------------------|-----------|--------------------|-----------------|
| FRONT OF BLDG. 27 | TBI#5 UR#15<br>SER #1978151   | ✓         |                    |                 |
| FRONT OF BLDG. 27 | TBI#6 SWITCH FOR<br>ABOVE     | ✓         |                    |                 |
| FRONT OF BLDG. 42 | TBI#7 UR#10<br>SER. #1830519  | ✓         |                    |                 |
| FRONT OF BLDG. 42 | TBI#8 SWITCH FOR<br>ABOVE     | ✓         |                    |                 |
| FRONT OF BLDG. 42 | TBI#9 UR#11<br>SER #2980713   | ✓         |                    |                 |
| FRONT OF BLDG. 42 | TBI#10 SWITCH FOR<br>ABOVE    | ✓         |                    |                 |
| INSIDE BLDG. 42   | TBI#13 UR#9<br>SER #3411578   | ✓         |                    |                 |
| INSIDE BLDG. 42   | TBI#14 SWITCH FOR<br>ABOVE    | ✓         |                    |                 |
| BACK OF BLDG. 28  | TBI#15 UR#19<br>SER #5060911  | ✓         |                    |                 |
| BACK OF BLDG. 28  | TBI#16 SWITCH FOR<br>ABOVE    | ✓         |                    |                 |
| BACK OF BLDG. 28  | TBI#17 UR#5<br>SER #6538987   | ✓         |                    |                 |
| BACK OF BLDG. 28  | TBI#18 SWITCH FOR<br>ABOVE    | ✓         |                    |                 |
| BACK OF BLDG. 28  | TBI#19 UR#18<br>SER #YBR92491 | ✓         |                    |                 |
| BACK OF BLDG. 28  | TBI #20 SWITCH FOR<br>ABOVE   | ✓         |                    |                 |

FACEMATE CORP.

TEL 413-594-8328

Mar 15 '93

14:54 No.009 P.03

Chicopee Industrial Park

Inspection Report

Date:

12/4/92

FCB Electrical Equipment

Initials:

EN

| <u>Location</u>                    | <u>Description</u>           | <u>OK</u> | <u>Leaks Noted</u> | <u>Comments</u> |
|------------------------------------|------------------------------|-----------|--------------------|-----------------|
| BACK OF BLDG. 28<br>FARTHEST SOUTH | TBI#21 UR#8<br>SER #3733807  | ✓         |                    |                 |
| BACK OF BLDG. 28<br>FARTHEST SOUTH | TBI#22 SWITCH FOR<br>ABOVE   | ✓         |                    |                 |
| FRONT OF BLDG. 3<br>UNDER ROOF     | TBI#27 UR#22<br>SER #2831107 | ✓         |                    |                 |
| FRONT OF BLDG. 3<br>UNDER ROOF     | TBI#28 SWITCH FOR<br>ABOVE   | ✓         |                    |                 |
| BACK OF BLDG. 28                   | TBI#29 UR#16<br>SER #1978152 | ✓         |                    |                 |
| BACK OF BLDG. 28                   | TBI#30 SWITCH FOR<br>ABOVE   | ✓         |                    |                 |
| SIDE OF BLDG. 28<br>FACING OAK ST. | TBI#31 UR#7<br>SER #3733808  | ✓         |                    |                 |
| SIDE OF BLDG. 28<br>FACING OAK ST. | TBI#32 SWITCH FOR<br>ABOVE   | ✓         |                    |                 |
| OUTSIDE ELECT. BLDG.               | TBI#33 UR#20<br>SER #2475194 | ✓         |                    |                 |
| OUTSIDE ELECT. BLDG.               | TBI#34 SWITCH FOR<br>ABOVE   | ✓         |                    |                 |
| SIDE OF ELECT. BLDG.               | TBI#35 UR#21<br>SER #2778113 | ✓         |                    |                 |
| SIDE OF ELECT. BLDG.               | TBI#36 SWITCH FOR<br>ABOVE   | ✓         |                    |                 |
| SIDE OF BLDG. 27<br>FACING OAK ST. | TBI#37 UR#17<br>SER #1978150 | ✓         |                    |                 |
| SIDE OF BLDG. 27<br>FACING OAK ST. | TBI#38 SWITCH FOR<br>ABOVE   | ✓         |                    |                 |



FACEMATE CORP.

TEL: 413-594-8328

Mar 9 '93

14:51 No.012 P.02

Chicago Industrial ParkInspection ReportDate: 3/19/93PCB Electrical EquipmentEd  
Initials: MROZINSH

| <u>Location</u>   | <u>Description</u>            | <u>OK</u> | <u>Leak Noted</u> | <u>Comments</u> |
|-------------------|-------------------------------|-----------|-------------------|-----------------|
| FRONT OF BLDG. 27 | TSI#5 UR#15<br>SER #1978151   | ✓         | NO LEAKS          |                 |
| FRONT OF BLDG. 27 | TSI#6 SWITCH FOR<br>ABOVE     | ✓         | "                 |                 |
| FRONT OF BLDG. 42 | TSI#7 UR#10<br>SER #1850519   | ✓         | NO LEAKS          |                 |
| FRONT OF BLDG. 42 | TSI#8 SWITCH FOR<br>ABOVE     | ✓         | "                 |                 |
| FRONT OF BLDG. 42 | TSI#9 UR#11<br>SER #2980713   | ✓         | NO LEAKS          |                 |
| FRONT OF BLDG. 42 | TSI#10 SWITCH FOR<br>ABOVE    | ✓         | "                 |                 |
| INSIDE BLDG. 42   | TSI#13 UR#9<br>SER #3411578   | ✓         | NO LEAKS          |                 |
| INSIDE BLDG. 42   | TSI#14 SWITCH FOR<br>ABOVE    | ✓         | "                 |                 |
| BACK OF BLDG. 28  | TSI#15 UR#19<br>SER #3050911  | ✓         | NO LEAKS          |                 |
| BACK OF BLDG. 28  | TSI#16 SWITCH FOR<br>ABOVE    | ✓         | "                 |                 |
| BACK OF BLDG. 28  | TSI#17 UR#5<br>SER #6538987   | ✓         | NO LEAKS          |                 |
| BACK OF BLDG. 28  | TSI#18 SWITCH FOR<br>ABOVE    | ✓         | "                 |                 |
| BACK OF BLDG. 28  | TSI#19 UR#18<br>SER #YBR92491 | ✓         | NO LEAKS          |                 |
| BACK OF BLDG. 28  | TSI #20 SWITCH FOR<br>ABOVE   | ✓         | "                 |                 |

FACEMATE CORP.

TEL: 413-594-8328

Mar 19 93

14:51 No.012 P.03

Chicopee Industrial ParkInspection Report

Date:

3/19/93

PCB Electrical Equipment

Ed

Initials: MROZINSKI

| <u>Location</u>                    | <u>Description</u>           | <u>OK</u> | <u>Leaks Noted</u> | <u>Comments</u> |
|------------------------------------|------------------------------|-----------|--------------------|-----------------|
| BACK OF BLDG. 28<br>FARTHEST SOUTH | T8I#21 UR#8<br>SER #3733807  | ✓         | NO LEAKS           |                 |
| BACK OF BLDG. 28<br>FARTHEST SOUTH | T8I#22 SWITCH FOR<br>ABOVE   | ✓         | "                  |                 |
| FRONT OF BLDG. 3<br>UNDER ROOF     | T8I#27 UR#22<br>SER #2831107 | ✓         | NO LEAKS           |                 |
| FRONT OF BLDG. 3<br>UNDER ROOF     | T8I#28 SWITCH FOR<br>ABOVE   | ✓         | "                  |                 |
| BACK OF BLDG. 28                   | T8I#29 UR#16<br>SER #1978152 | ✓         | NO LEAKS           |                 |
| BACK OF BLDG. 28                   | T8I#30 SWITCH FOR<br>ABOVE   | ✓         | "                  |                 |
| SIDE OF BLDG. 28<br>FACING OAK ST. | T8I#31 DR#7<br>SER #3733808  | ✓         | NO LEAKS           |                 |
| SIDE OF BLDG. 28<br>FACING OAK ST. | T8I#32 SWITCH FOR<br>ABOVE   | ✓         | "                  |                 |
| OUTSIDE ELECT. BLDG                | T8I#33 UR#20<br>SER #2475194 | ✓         | NO LEAKS           |                 |
| OUTSIDE ELECT. BLDG                | T8I#34 SWITCH FOR<br>ABOVE   | ✓         | "                  |                 |
| SIDE OF ELECT. BLDG                | T8I#35 UR#21<br>SER #2777813 | ✓         | NO LEAKS           |                 |
| SIDE OF ELECT. BLDG                | T8I#36 SWITCH FOR<br>ABOVE   | ✓         | "                  |                 |
| SIDE OF BLDG. 27<br>FACING OAK ST. | T8I#37 UR#17<br>SER #1978150 | ✓         | NO LEAKS           |                 |
| SIDE OF BLDG. 27<br>FACING OAK ST. | T8I#38 SWITCH FOR<br>ABOVE   | ✓         | "                  |                 |

FACEMATE CORP.

TEL: 413-594-8328

Mar 19 93

14:52 No.012 P.04

Chicopee Industrial Park

Inspection Report

Date: 3/19/93

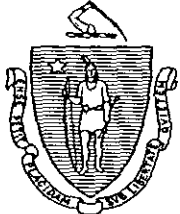
PCB Electrical Equipment

Ed.  
Initials: MRGZLWGM

| <u>Location</u>                  | <u>Description</u>                 | <u>OK</u> | <u>Leakage Noted</u>                             | <u>Comments</u> |
|----------------------------------|------------------------------------|-----------|--|-----------------|
| INSIDE ELECT. BLDG.              | TSI#39 UR#3<br>SER #298887         | ✓         | NO LEAKS   |                 |
| INSIDE ELECT. BLDG.              | TSI#40 SWITCH FOR<br>ABOVE         | ✓         | NO LEAKS   |                 |
| INSIDE ELECT. BLDG.              | TSI#41 UR#2<br>SER. #0302077       | ✓         | "  | IN SERVICE      |
| INCOMING #2 -<br>MAIN SUBSTATION | TSI#49 SWITCH<br>SER #K6344133-509 | ✓         | NO LEAKS   |                 |
| INCOMING #4 -<br>MAIN SUBSTATION | TSI#51 SWITCH<br>SER #K6344133-506 | ✓         | NO LEAKS   | IN SERVICE      |
| FRONT OF BLDG. 27                | TSI#76 UR#24<br>SER #13615         | ✓         | NO LEAKS   |                 |
| FRONT OF BLDG. 27                | TSI#77<br>SWITCH FOR ABOVE         | ✓         | "  |                 |
|                                  |                                    |           | TOTAL NUMBER<br>OF TRANSFORMERS:<br>OR SW. THRS. | 35              |
|                                  |                                    |           | TOTAL AMOUNT<br>OF PCB WEIGHT:                   | 11,189 GAL.     |
|                                  |                                    |           |  |                 |
|                                  |                                    |           |  |                 |
|                                  |                                    |           |  |                 |
|                                  |                                    |           |  |                 |
|                                  |                                    |           |  |                 |
|                                  |                                    |           |  |                 |
|                                  |                                    |           |  |                 |
|                                  |                                    |           |  |                 |
|                                  |                                    |           |  |                 |
|                                  |                                    |           |  |                 |



File



*The Commonwealth of Massachusetts*

*Executive Office of Environmental Affairs*

*Department of Environmental Protection*

*Western Region*

*436 Dwight Street, Springfield, Mass. 01103*

*(413) 784-1100*

February 10, 1993

DANIEL S. GREENBAUM  
Commissioner  
JOHN J. HIGGINS  
Regional Director

Mr. Edward Mrozinski  
Facemate Corp.  
5 West Main Street  
Chicopee, MA 01020

Re: Chicopee 1-0436NC-91595  
Former Uniroyal Complex  
154 Grove Street  
310 CMR 40.000

REVIEW OF TRANSFORMER SERVICE RECORDS  
NOTICE OF A POTENTIAL IMMINENT HAZARD:  
SHORT TERM MEASURE REQUIRED

Dear Mr. Mrozinski:

As was requested by the Department, Facemate submitted information and records pertaining to the inspection and maintenance of transformers and associated electrical equipment which contain or contained PCB-based dielectric fluid at the Former Uniroyal Complex site. These records and information, which were forwarded by Elyn Weiss, Esq., on behalf of Facemate to the Department on July 30, 1991 and September 6, 1991, were provided by Transformer Services Inc. (TSI) of Concord, N.H. and include only the files from Facemate's account with TSI. Earlier records, which may exist from Uniroyal's account with TSI, prior to 1980, were not requested by the Department.

A review of the service reports from Facemate has revealed that inspections of transformers and other electrical equipment were conducted on an annual basis by TSI from 1975 to 1979, during Uniroyal's ownership of the property. After 1979, during ownership by Facemate, the inspections by TSI were no longer made on an annual basis. Only a few units were inspected in 1983, and all units were inspected and tested in 1988. Records indicate that no inspections were recorded by TSI during the years of 1980, 1981, 1982, 1984, 1985, 1986, and 1987.

Following the 1988 field inspection, a letter was sent from TSI to Facemate dated June 3, 1988. This letter identifies numerous leaking components contributing to PCB oil contamination at the site. More specifically, the letter states, "There are thirty-seven pieces of askarel (pure PCB) filled electrical equipment (transformers and switches). Of these, thirty-one are reported as

having moderate to critical leaks. Regasketing, replacement of valves, sample taps and gauges, and epoxying of weld leaks are one option; disposal of these units is another. Either way, an extensive cleanup of the spilled fluid is definitely required (a soil sample from an empty transformer pad revealed a PCB content of 640,000 parts per million)."

This letter indicates that PCB releases were occurring in 1988 and that soil samples showed evidence of historic releases of PCBs prior to 1988. Facemate was made aware of these releases in 1988 but failed to report this information to the Department until March 29, 1991, when the Phase I Report was submitted. The Phase I report indicated PCB contamination in soil in the vicinity of the transformers but did not include an effort to investigate the service and maintenance records, or to report the present condition of these transformers and switches.

Since the 1988 inspection, records indicate Facemate retained TSI to remove and dispose of five of the leaking askarel units (three transformers Uniroyal Nos. 13, 14, and 25 and two associated switches) in 1989. Hazardous waste manifests for the disposal of these units, their contents, and a limited volume of contaminated soil are contained in the documents from TSI. Facemate did not notify the Department of this removal action until it was mentioned in the Phase I Report.

Additional information indicates that repairs were made to leaks in four askarel units, TSI test Nos. 35 & 36 (Uniroyal transformer #21X and switch #21S) and TSI Test Nos. 37 & 38 (Uniroyal transformer #17X and switch #17S), as authorized on a purchase order dated July 15, 1991. These units were found to be leaking during a June 26, 1991 site visit by Lisa Jones of the Department, at which time a verbal notice was given to Facemate to correct the problem.

Of the thirty-one askarel units found to be leaking in 1988, five units were removed and four units were repaired. Since no additional records of inspection, repairs, or removals, have been submitted to verify repairs to these leaking units, the Department must conclude that there still exist "moderate or critical leaks" in at least twenty-two askarel units at the site. The Department has no information to ascertain the type of leaks which exist or existed during the 1988 inspection. If these leaks are active and contributing to a release of PCBs to the environment, this condition constitutes an imminent hazard which must be addressed, in accordance with 310 CMR 40.542, via a Short Term Measure (STM).

#### DEPARTMENT REQUIREMENTS

The Department requires the submittal of a proposal to perform a Short Term Measure (STM) to eliminate any on-going releases of PCBs from the leaking transformers, switches, and other PCB containers,

or a letter of explanation if Facemate can show that there are no active PCB leaks. The STM proposal or letter of explanation must be submitted to the Department within 30 days of the date of this letter.

If a STM proposal is to be submitted, this proposal must include plans and a schedule to repair, remove, or drain each of the leaking units. Your response must also include a plan for the continued inspection of all PCB transformers, PCB switches, PCB containers, and PCB equipment at the site, including items which are in use or stored for re-use.

The Department recommends that you retain a qualified contractor or contractors to perform any necessary response actions, to properly handle, transport, and dispose of any hazardous waste generated during these response actions, and to verify completion of work by documentation which may include repair orders, inspection reports, hazardous waste manifests, and invoices.

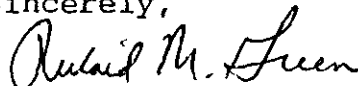
You are responsible for complying with all applicable federal, state, and local regulations.

Be advised, you may not initiate remediation, cleanup, or any other Short Term Measures at the site without further Department approval.

You and your agents must continue to evaluate the need for Short Term Measures, and you must notify the Department immediately if additional imminent hazards exist at the site. This evaluation must continue throughout the assessment and remediation process for this site.

If you have any questions regarding this letter or wish to schedule a meeting to discuss the required actions, please contact Lisa Jones of this office at (413) 784-1100 ext.248.

Sincerely,



Richard M. Green  
Section Chief, Site Management  
Bureau of Waste Site Cleanup

LEJ/lej/pjd

WSC118s:UNIROYAL.TSI

cc: David Minc, Esquire, Uniroyal Goodrich Tire Company  
Ellyn Weiss, Esquire, Foley, Hoag, & Eliot  
Capt. Czepiel, Chicopee Fire Department  
Chicopee Board of Health  
Mayor Chessey, Chicopee City Hall  
Frank A. Rueli, City Engineer, Chicopee City Hall  
Jeanne Kidwell, Chicopee Community Development Office  
Environmental Compliance Services, Inc.

MEMORANDUM

TO: Site File Chicopee 1- 0436  
Former Uniroyal Complex

FROM: Lisa Jones, Site Manager

DATE: September 18, 1992

RE: Dye Test

---

On this date, I met with personnel of ECS to investigate the potential pathway by which PCB contamination may have entered Chicopee's Oak Street Pump Station. Dye was placed into two manholes off Buildings 8 & 15 in the vicinity of former PCB transformers. Water was added to the manholes to induce flow. No dye was seen in the pump station as a result of this experiment.

The test was conducted at a time when the river was below the discharge so to allow an incoming flow from storm drains on the site. Flow was only seen entering from pipes to the south.

The event proved that the manholes which were examined do not appear to contribute as pathways. Additional investigative work is necessary in Phase II to evaluate additional potential migration pathways.

See  
LIST

MEMORANDUM

TO: Site File 1-0436 Former Uniroyal Complex, Chicopee  
FROM: Lisa Jones  
DATE: September 8, 1992  
RE: Control of Water Level in Chicopee River & Dye Test STM

---

The following hydroelectric stations' personnel were contacted to arrange low water levels in the Chicopee River for a dye test at the Former Uniroyal Site:

Chicopee Hydroelectric Station 596-2128 best to call at 9:00 AM  
Ken Smith, Plant Engineer  
Stephen Barry, Operator - on vacation till 9/14

Holyoke Water Power Co. 536-5520 best to call at 8:45 AM  
John Murray, Operator

Both Ken Smith & John Murray confirmed that they can assist in coordinating low water in the river by holding back flow at the hydroelectric stations. According to Mr. Smith, the natural flow in the river is low at this time of year and with a coordinated effort by both stations, the water can easily be dropped for a couple of hours to allow ECS personnel to perform the proposed dye test. The dye test is part of the STM proposal to determine if there is a surface water run off pathway from the vicinity of the concrete pad located off the southwest corner of Building 8, where leaking PCB oil transformers #13, #14, & #25 were once located, to the drainage system which runs through Oak Street pump station to the Chicopee River.

Mr. Murray suggested the test be conducted in the early afternoon on a no or low precipitation day to ensure maximum holding of water and Ken Smith requested the test date be after September 14 when Stephen Barry will be back from vacation.

As suggested during my phone call with John Paquin, project manager at ECS, a possible date for the test is September 18. Alexandra Newkirk or Sarah Walen of ECS should be available to run the test on this date. Prior to the test, ECS must make the necessary calls to the hydroelectric station operators to confirm the requested flow control. Stephen Barry and John Murray should be contacted on September 16 & again on September 17 to confirm a September 18 test date, weather permitting. Possible alternate dates include September 21, 22, and 25.

cc: John Paquin, ECS

**MASSACHUSETTS DEP OIL & HAZARDOUS MATERIAL INCIDENT REPORT**

(circle or fill in all that apply)

Response Date: 8/1/92 Closed:  Yes  No SA #: 1-0426 ER #: 10122-430

Initial Office Follow-up Office  Initial Field Follow-up Field 21E Notification Amended

City/Town: Chicopee Spill Name: Vir. Universal & Ind. Industrial

Address: 131 Rome St. Reported: 8/17/92 Time: 11:00 AM/PM

Half Town: \_\_\_\_\_ Zip Code: 01020 Occurred: 8/17/92 Time: 10:30 AM/PM

NOTIFIER: Cpt. Burkhardt Chic. Fire ( ) -  
 (Name) Check if Anonymous [ ] (Affiliation) (Phone)

**PRIMARY SPILL INFORMATION**

Petroleum / Hazardous / Both / Neither / Unknown

Material: 6-isobutyl/1-trichloro solvent Amount Reported: unk. Gallons Drums Cu Yds Lbs

Virgin / Waste Non-PCB / PCB \_\_\_\_\_ ppm / Unknown Amount Actual: unk. Vapors:  Sheen  None  Unknown

Environmental Impact:  SOIL  AIR  GROUNDWATER  SURFACE WATER  ZONE 2  WATER SUPPLY  STORM DRAIN  SCHOOL

RESIDENCE OTHER: \_\_\_\_\_

Spill Source:  U.S.T.  A.S.T.  TRANSFORMER  VEHICLE FUEL TANK  PIPE/HOSE/LINE

BOAT  DRUMS  VEHICLE  TANKER TRUCK  UNKNOWN  OTHER: \_\_\_\_\_

Release Type:  SPILL  FIRE  OVERFILL  TANK REMOVAL  TEST FAILURE  VEHICLE ACCIDENT

RUPTURE  LEAK  DUMPING  THREAT ONLY  UNKNOWN  OTHER: \_\_\_\_\_

Description: Water Dept. was digging to 4'-5' depth to install main water line to Bldg 43 (see map). They encountered old outside pipe + area of W. probably from former Tanks A/B/C. Under associated pipes one line was seen in hole. It was old DEP, John Pawan of FMS, Jennifer (copying) MI

Referral Within DEP: SA HW WS SW AQC WPC WJ IWJ ENF/SF Staff: \_\_\_\_\_

State Contractor: Used: \_\_\_\_\_ / Not Used Federal L.U.S.T. Eligible: No Yes Category: \_\_\_\_\_

Further DEP Response: Yes No Pending Response Needed:

**PRP INFORMATION**

Company: Tarmac Name: Ed Walter Mrozinski

Address: 5 Wainwright St. Town: Chicopee State: MA Zip: 01020

Business Phone: (413) 514-1101 Home Phone: ( ) -

NOR Issued:  Verbal  Field Office Date: 8/17/92 Responsibility Accepted: Yes No

PRP Contractor: N/A Contact: \_\_\_\_\_ Phone: (413)

Non-compliance Issues:

**OTHER AGENCIES INVOLVED IN OR NOTIFIED OF INCIDENT**

Agency: \_\_\_\_\_ Date: \_\_\_/\_\_\_/\_\_\_ Time: \_\_\_:\_\_\_ AM/PM

First Contact By: DEP OTHER AGENCY Phone: ( ) - Contact: \_\_\_\_\_

Agency: \_\_\_\_\_ Date: \_\_\_/\_\_\_/\_\_\_ Time: \_\_\_:\_\_\_ AM/PM

First Contact By: DEP OTHER AGENCY Phone: ( ) - Contact: \_\_\_\_\_

DEP Staff Notified: \_\_\_\_\_ ER Lead: \_\_\_\_\_

Report Prepared By: \_\_\_\_\_ Signature: \_\_\_\_\_

**MASSACHUSETTS DEP OIL & HAZARDOUS MATERIAL INCIDENT REPORT ATTACHMENT**

(circle or fill in all that apply)

This form is to be used: 1. As an attachment to an initial report when more space is needed.  
 2. As an Incident Report for follow-up responses with no new primary spill information.  
 3. As an attachment when there is more than one PRP.

Response Date: 6/17/97 Closed:  Yes  No SA #: 1-1136 ER #: W17-487

Initial Office \_\_\_\_\_ Follow-up Office \_\_\_\_\_ Initial Field Follow-up Field \_\_\_\_\_ 21E Notification \_\_\_\_\_ Amended \_\_\_\_\_ Attachment Page \_\_\_\_\_

City/Town: Lowell Spill Name: Fire. Industrial/Chic. Industrial Park

Address: 174 Lane St. Reported: 6/17/97 Time: 11:00 AM/PM

Half Town: \_\_\_\_\_ Zip Code: \_\_\_\_\_ Occurred: 6/17/97 Time: 10:30 AM/PM

NOTIFIER: \_\_\_\_\_ (Name)  Check if Anonymous [ ] (Affiliation) \_\_\_\_\_ (Phone)

Description: Met with F.D. at the location of the excavation and noted presence of storm pipes in the soil in the pit. F.D. instructed FCS & CIP (from ECLSA/CIP/Industrial Park) to have the Chic water Dept return to site back to the hole and for plans to be made to select a location for the line which is less likely to be through contaminated soil. If contaminated installation be made further north in areas where contamination is not likely present, pending other information. F.D. instructed FCS & CIP's management to consult on all and all future construction projects to avoid situations which may cause exposure to contaminated areas. This case is referred to state assessment since it is a listed site.

Det Buckenart of F.D. also provided information on the connection to Bid 43 likely to have been from Transfield. He examined his records & found an incident report dated Dec. 1981. Fire Dept responded in 1981 to report of pipes being cut by winter trenches & solvents flowing up from lines. Eastern Electric & Tel. was the contractor. (Contact: Ron Bate-Lowell) Referred to sites.

**ADDITIONAL PRP INFORMATION**

Company: Lowell (M) Name: \_\_\_\_\_

Address: \_\_\_\_\_ Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Business Phone: (\_\_\_\_) \_\_\_\_\_ Home Phone: (\_\_\_\_) \_\_\_\_\_

NOR Issued:  Verbal  Field  Office Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ Responsibility Accepted:  Yes  No

PRP Contractor: \_\_\_\_\_ Contact: \_\_\_\_\_ Phone: (\_\_\_\_) \_\_\_\_\_

Noncompliance Issues: \_\_\_\_\_

DEP Staff Notified: LISA JONES ER Lead: \_\_\_\_\_

Report Prepared By: LISA JONES Signature: \_\_\_\_\_

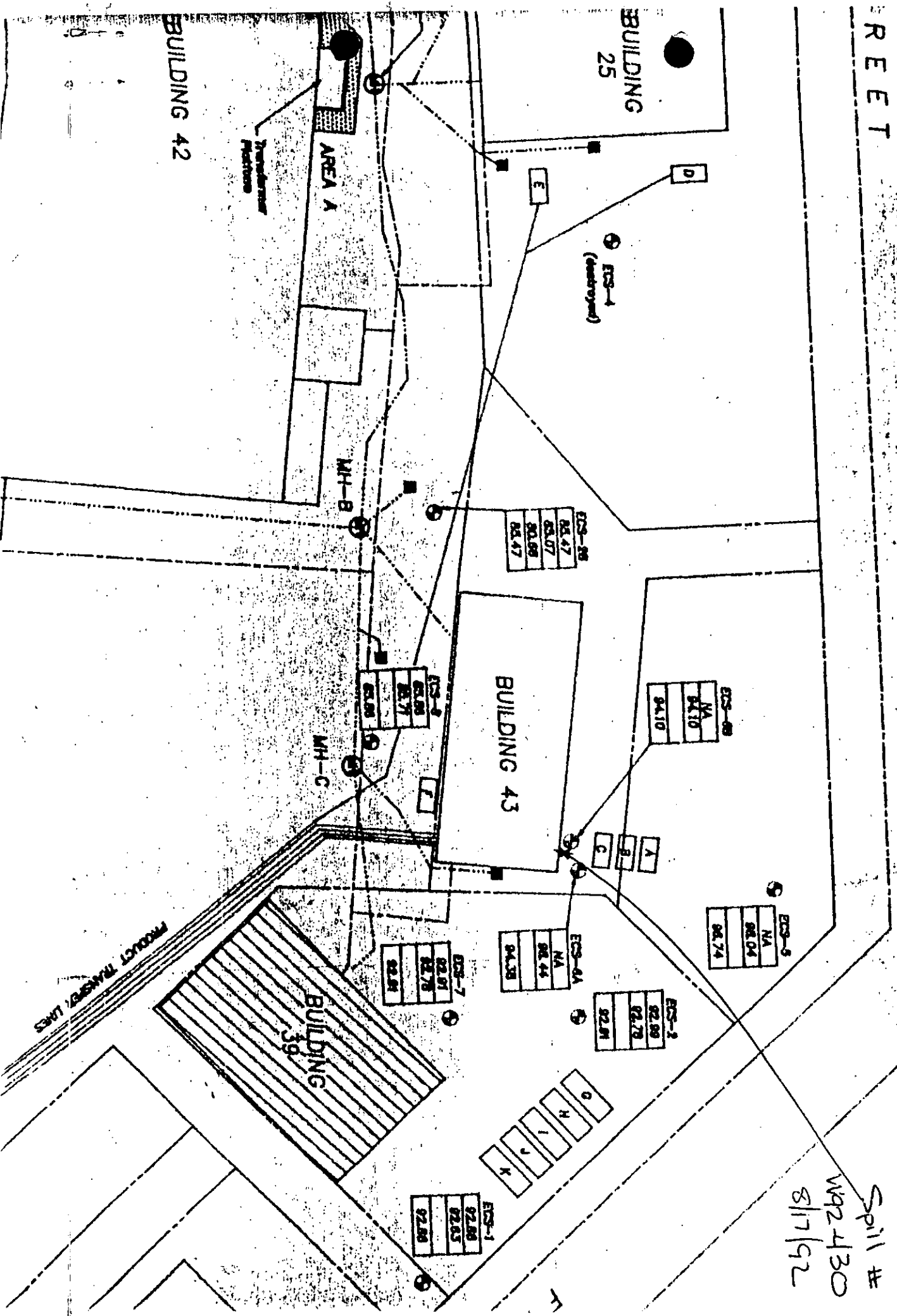
R E E T

Intersection of Grove St. & Grove Ave.

Service Station with Canister

North

Spill #  
W92430  
8/17/92



BUILDING 25

BUILDING 42

AREA A

BUILDING 43

BUILDING 39

MH-A

MH-B

MH-C

ECS-1 (Analog)

ECS-6

ECS-8

ECS-5

ECS-4

ECS-2

ECS-7

ECS-1

PRODUCT TRANSFER LINES

Transformer Padstone

|       |
|-------|
| ECS-6 |
| 98.47 |
| 98.07 |
| 90.99 |
| 98.47 |

|       |
|-------|
| ECS-8 |
| NA    |
| 94.10 |
| 94.10 |

|       |
|-------|
| ECS-5 |
| NA    |
| 98.04 |
| 98.74 |

|       |
|-------|
| ECS-4 |
| NA    |
| 98.44 |
| 94.35 |

|       |
|-------|
| ECS-2 |
| 92.89 |
| 92.78 |
| 92.81 |

|       |
|-------|
| ECS-7 |
| 92.81 |
| 92.78 |
| 92.81 |

|       |
|-------|
| ECS-1 |
| 92.88 |
| 92.65 |
| 92.89 |

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K



SCANNED

MEMORANDUM

TO: Site File 1-0436, Former Uniroyal Complex, Chicopee

FROM: Lisa Jones

DATE: March 12, 1992

RE: Telecon pertaining to change in monitoring

---

On this date, John Paquin of ECS contacted the Department to request approval to go to bi-monthly gw monitoring and bi-monthly checks on the boom in the sump of Building 42, as was requested in the STM letter report dated March 5, 1992. In response, the Department granted approval for the boom monitoring to be bi-monthly but requested the groundwater monitoring program continue to be scheduled bi-weekly until the Department receives notification of any significant change in the observations of measurable product in ECS-9.

**ENVIRONMENTAL COMPLIANCE SERVICES, INC.**  
 588 Silver Street  
 AGAWAM, MASSACHUSETTS 01001

1-043  
**LETTER OF TRANSMITTAL**  
 92187

(413) 789-3530

Bureau of Waste Site Cleanup

436 Dwight Street

Springfield, MA 01103

|                                   |                    |
|-----------------------------------|--------------------|
| DATE<br>3/6/92                    | JOB NO.<br>11094.1 |
| ATTENTION<br>Ms. Lisa Jores - DEP |                    |
| RE:<br>Former Uniroyal Complex    |                    |
| Chicopee, MA                      |                    |
| RECEIVED                          |                    |
| MAR 09 1992                       |                    |

WE ARE SENDING YOU  Attached  Under separate cover via \_\_\_\_\_ the following items:

- Shop drawings     Prints     Plans     Samples     Specifications  
 Copy of letter     Change order     \_\_\_\_\_

Western Region

*Two reports rec'd*

| COPIES | DATE   | NO. | DESCRIPTION   |
|--------|--------|-----|---|
| 1      | 3/5/92 |     | Results of Short Term Measures Performed at the Former Uniroyal Complex, Chicopee, MA DEP Site No. 1-0436 |
| 1      | 10/91  |     | Site Health and Safety Plan, Chicopee Industrial Park Chicopee, MA  |
|        |        |     |   |
|        |        |     |   |
|        |        |     |   |

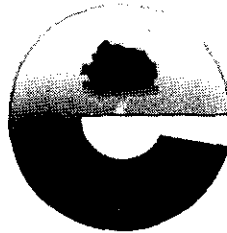
THESE ARE TRANSMITTED as checked below:

- For approval     Approved as submitted     Resubmit \_\_\_\_\_ copies for approval  
 For your use     Approved as noted     Submit \_\_\_\_\_ copies for distribution  
 As requested     Returned for corrections     Return \_\_\_\_\_ corrected prints  
 For review and comment     \_\_\_\_\_  
 FOR BIDS DUE \_\_\_\_\_ 19 \_\_\_\_\_  PRINTS RETURNED AFTER LOAN TO US

REMARKS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

COPY TO Mr. Edward Mrozinski, Facemate;  
Ms. Ellyn Weiss, Foley, Hoag & Elliot

SIGNED: John R. Paquin *SRP*



1-0436  
91861

**RECEIVED**  
NOV 20 1991  
**ENVIRONMENTAL COMPLIANCE SERVICES, INC.**  
**DEP**  
Western Region

November 18, 1991  
File No. 11094.3  
Document No. 3942

Ms. Lisa Jones  
Massachusetts DEP  
436 Dwight Street  
Springfield, MA 01103

RE: Request for STM  
Former Uniroyal Complex  
Chicopee, MA  
DEP Site No. 1-0436

Dear Ms. Jones:

This letter follows our telephone conversation on Tuesday, November 12, 1991. Representatives of the Facemate Corporation and Environmental Compliance Services, Inc. (ECS) have continued to investigate the cause of an oil sheen observed in the piping system associated with the Oak Street Pumping Station on Wednesday, November 6, 1991. As you will recall, the sheen (and associated fuel oil-like odor) was traced upstream to a concrete sump located in the basement of building number 42. Although no sheen or free phase product was observed in this sump, it did exhibit strong oil-like odors. A constant flow was observed to be entering the sump from an inlet pipe entering from the east. The site plans available to us in the field that day did not show the connection of this sump to the overall drainage system at the site. On Friday, November 8, 1991, ECS reviewed a series of drainage plans for the site which have recently been discovered. These plans, prepared by Lockwood Green Engineers, Inc. and dated December 23, 1968, show the drainage network associated with the sump in question. A photo-copy of this plan is enclosed with this correspondence. As shown, drainage from buildings 25, 43, and 39 flows (or formerly flowed) to a central manhole located off the southeast corner of building 42 (designated MH-B on the enclosed photo-copy) and then flows into the sump in building 42.



**ENVIRONMENTAL COMPLIANCE SERVICES, INC.**

Ms. Lisa Jones  
Massachusetts DEP  
November 18, 1991

Page 3

Since the depth to the water table in the vicinity of MH-B is approximately 14 feet below the ground-surface, it is possible that the black colored seepage into MH-B (approximately 17 feet deep) is from groundwater and may be the source of the sheen observed at the Oak Street Pump Station. Consequently, ECS proposes the following Short Term Measures (STM) to address this issue.

***SCOPE OF WORK***

**MAINTENANCE OF OIL ABSORBENT BOOMS**

As you recommended, an oil absorbent boom was installed in the sump on November 7, 1991, to function as a safeguard against a sheen (or product) migrating beyond the sump should a sheen or product ever enter it. ECS recommends that this boom be maintained and monitored on a weekly basis. As an additional safeguard, ECS recommends that a second boom be installed in a manhole located at the base of the dike, up-stream of the pumpstation, to function as backup protection, should the boom in the sump fail.

**MONITORING WELL INSTALLATION**

ECS recommends that one (1) to two (2) monitoring wells in the immediate vicinity of MH-B, to evaluate the elevation of the water table with respect to the seep, the existence of any free-phase, "floating" petroleum product, and to evaluate groundwater quality. Borings for each of the monitoring wells will be advanced by the hollow stem auger rotary drilling method to a depth of at least 5 feet below the local water table. Each monitoring well will be constructed of 10 feet of 2 inch ID, 0.010 slot PVC well screen attached with flush threaded joints to 2 inch ID PVC riser pipe. The screened portion of the wells will be back-filled with clean filter sand to prevent "silting in" of the well by fine grained material. At least a 1 foot bentonite clay seal will be installed above the sand pack to prevent surface water infiltration into the screened portion of the well. The remaining annulus of the borings will be back-filled with native material. A 2 foot long cast iron curb boxes will be set in cement at the surface to protect the well from the elements and vandalism. All drilling activities will be supervised and logged by an ECS environmental scientist.



**ENVIRONMENTAL COMPLIANCE SERVICES, INC.**

Ms. Lisa Jones  
Massachusetts DEP  
November 18, 1991

Page 2

On Friday afternoon, ECS and Facemate investigated this manhole as well as each other manhole and catch basin shown east of building 42. A manhole located west of building 25 (designated MH-A on the attached photo-copy) was opened and found to contain no oil-like odors, sheen, product, or other evidence of potential oil contamination. A manhole located west of building 43 (designated MH-C on the enclosed photocopy) was opened and found to contain no oil-like odors, sheen, product, or other evidence of potential oil contamination. The central manhole (MH-B) was opened and found to emit strong oil-like odors. At a depth of approximately 17 feet below the ground surface, a constantly flowing seep was observed to be entering from cracks between the red brick walls of the manhole. This seep appeared to have a black coloration. The manhole is 24 feet deep and has a solid base. Each inlet and outlet pipe shown on the plan was confirmed in the field. Oil-like odors were detected in a catch basin located approximately 15 feet northeast of MH-B.

ECS performed a dye test to confirm the connection of these structures to the drainage system of the Oak Street Pump Station. A fluorescent dye was added to the catch basin, northeast of MH-B, and flushed through the system with clean, potable water. The connection between the catch basin and MH-B, and between MH-B and the sump was confirmed. The connection between the sump and the Oak Street Pump Station was not confirmed within a reasonable amount of time on Friday evening. The following morning, however, I returned to the site, and observed residual dye flowing from the pumphouse discharge into the Chicopee River.

Following our conversation on Tuesday, I returned to the site to gauge each of the existing monitoring wells on the southeastern portion of the site for the presence of floating product and to collect a sample of potential free-phase petroleum product entering MH-B for petroleum identification. Monitoring wells ECS-1, ECS-2, ECS-5, ECS-6A, ECS-6B, ECS-7, ECS-8, and ECS-14 were gauged. None were found to contain any floating product. Manhole MH-B was reopened, however the seep was observed to be flowing and clear. A sample of the seep water was collected and found to exhibit oil-like odors. Since no free-phase product was observed, a sample for petroleum identification was not collected.



**ENVIRONMENTAL COMPLIANCE SERVICES, INC.**

Ms. Lisa Jones  
Massachusetts DEP  
November 18, 1991

Page 4

**GROUNDWATER AND PRODUCT SAMPLING AND ANALYSIS**

If free phase petroleum product is observed in either of the proposed monitoring wells, ECS will collect a representative sample of the product for petroleum identification analysis with the Coast Guard method. Representative groundwater samples will be collected from either, or both, of the proposed monitoring wells not containing product. Groundwater samples will be analyzed for total petroleum hydrocarbons via EPA Method 418.1 and volatile organic compounds via EPA Method 624.

**REPORT PREPARATION**

ECS will submit a report of the findings of these short term measures to the DEP within 30 days following the installation of the additional monitoring wells.

Thank you for granting verbal permission to proceed. Please feel free to call if you have any questions.

11/6/91  
Verbal  
O.K.

Sincerely,  
ENVIRONMENTAL COMPLIANCE SERVICES, INC.

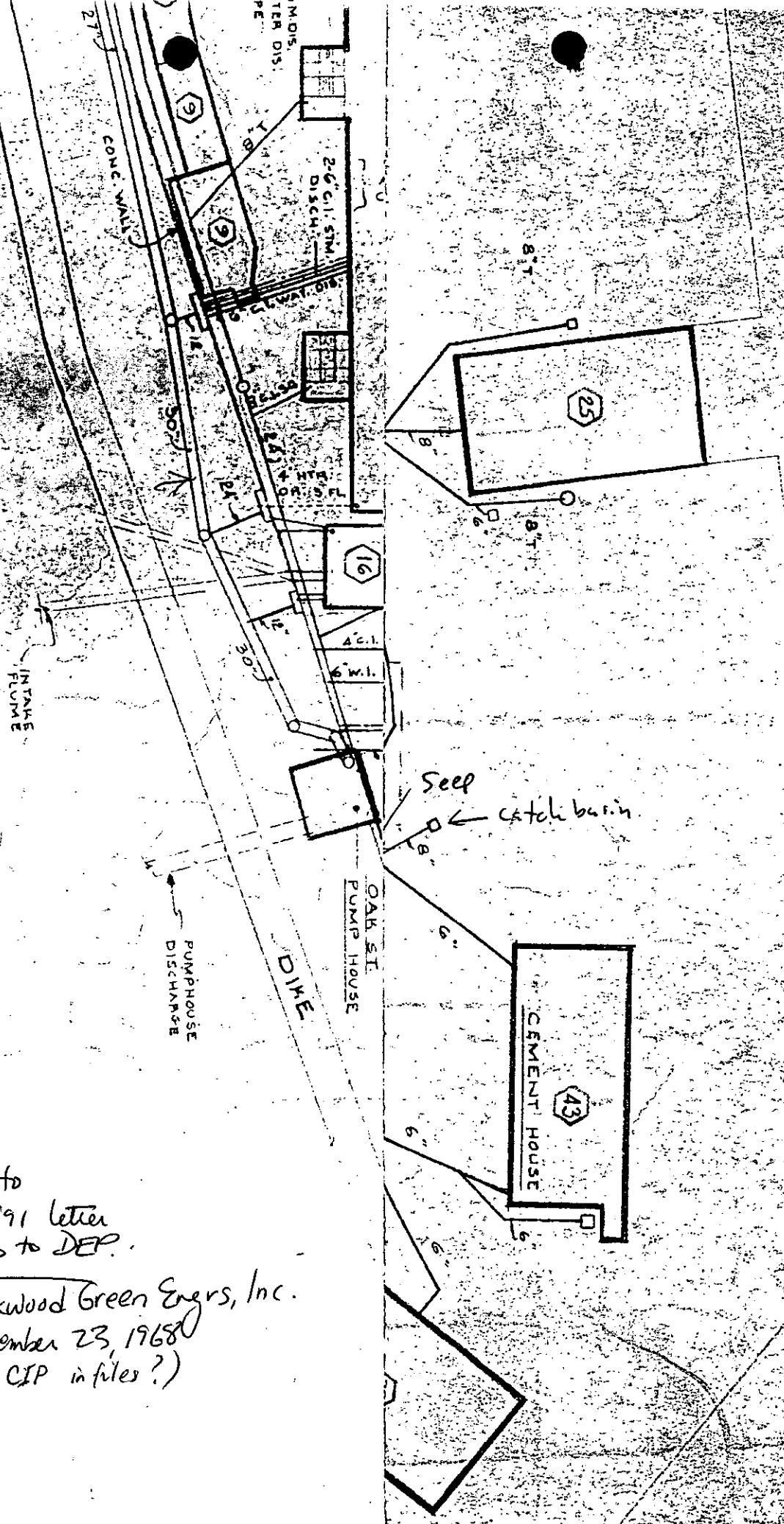
John R. Paquin  
Senior Project Manager  
Hydrogeologist

JRP/jm

cc: Mr. Edward Mrosiniski, Facemate

RIVER

GROVE ST.



Attached to  
 Nov 18, 1991 letter  
 from ECS to DEP.

From: Lockwood Green Engrs, Inc.  
 December 23, 1968  
 (at CIP in files?)





# DEP OHM SPILL/RELEASE INCIDENT REPORT

COPY State File

Date: 11/4/91 Region: WESTERN Case:  Closed  Pending ER #: W91-626

1. RESPONSE:  Initial Office  Follow-up Office  Amended Site # 1-0436  
 Initial Field  Follow-up Field  21E Notification

2. MUNICIPALITY: CHICOPEE 4. INCIDENT 1ST REPORTED:  
Date: 11/14/91 Time: 9:00 AM/PM

3. ADDRESS: REAL OF UNI-ROYAL  
IN CHICOPEE RIVER 5. INCIDENT OCCURRED: (FRI-SAT-SUN)  
Date: 11/1/91 Time: 3:30 AM/PM

6. PERSON WHO 1ST NOTIFIED DEP:  
Name/Address: VIRGINIA KIRNYCKI Tel. # 592 2220

7. OHM: a. Name: OIL CAS #: \_\_\_\_\_

b. AMOUNT: Reported: SHEEN Actual: \_\_\_\_\_ c. Category #: \_\_\_\_\_

d.  Oil/Not Oil Virgin/Waste? Non-PCB/PCB? ppm Soil Contamination Yes/ No

e. SOURCE: vehicle fuel tank drum tanker truck boat railroad tank/engine  
above-ground tank below-ground tank transformer pipe hose other UNK

f. RELEASE TYPE: Leak Overfill Rupture Tank Removal Spill Dumping Other UNK

8. DESCRIPTION OF INCIDENT: HOME OWNER OBSERVED OIL SHEEN IN CHICOPEE RIVER ON 11/1/91 - 11/3/91. SHE CALLED POLICE TWO TIMES BUT THEY WERE NOT ABLE TO OFFER ANY HELP. THE CALLER SAID THAT THE SHEEN IS NOT CONTINUOUS BUT IT OCCURS MOST OFTEN AT ABOUT 3:00 TO 3:30 PM. THIS IS THE SAME LADY THAT REPORTED THE SHEEN FROM THE OIL ST. PUMPING STATION.  
(OIL SHEEN HAS A KEROSENE ODOR)

9. POTENTIALLY RESPONSIBLE PERSON IDENTIFIED BY DEP:

a. PRP notified the Department Date: 1/1 Time: \_\_\_\_\_ AM/PM

b. Name/Address: UNK Tel. # \_\_\_\_\_  
Name/Address: \_\_\_\_\_ Tel. # \_\_\_\_\_

c. PRP received Notice of Responsibility: Verbal/Field/Office Date: 1/1 Time: NA AM/PM

10. RESPONSE ACTIONS:

a. Responsibility accepted and proper action taken by responsible person: Yes No NA

b. Name of cleanup contractor hired by responsible person \_\_\_\_\_

c. State-cleanup contractor: \_\_\_\_\_ d. Service Category: SC SSC SSI HM ASB

e. Contractor arrived on-scene: Date: 1/1 Time: \_\_\_\_\_ AM/PM

f. Further field response actions needed:  Yes  No (specify) FIELD INST.

g. Noncompliance Issues: \_\_\_\_\_

h. LUST: Federal Eligible Yes ~~No~~

11. INTRA-AGENCY NOTIFICATION/REFERRAL:

a. DEP Staff Notified: BOB TARENZI ER Lead: \_\_\_\_\_

b. Referral within DEP to: (Name/Program/Prog. #) ELIZABETH JONES WSC

12. OTHER AGENCIES NOTIFIED BY DEP OF SPILL/RELEASE INCIDENT:

Name: \_\_\_\_\_ Date: 1/1 Name: \_\_\_\_\_ Date: 1/1

Contact/Phone: \_\_\_\_\_ Contact/Phone: \_\_\_\_\_

Report prepared by: BOB TARENZI Signature: Bob Tarenzi

MEMORANDUM

TO: Site file 1-0436, former Uniroyal, Chiropce

FROM: Lisa Jones

DATE: 10/10/91

SUBJECT: approval of STM /Telecon to ECS

---

I spoke with Sarah Waler of ECS and DEP granted approval to perform STMs as outlined in their 10/1/91 proposal.

Clarification of their plan was made over the phone to ensure sampling of each distinct phase encountered in the holding tanks is tested individually for PCBs (ie PCB in oil layer, water layer, + sediment - 3 samples).

In addition, a separate proposal for source area control + pump station reactivation will be submitted before remediation of the pump station is undertaken. (if applicable).

cc: ECS -

Sarah Waler

MEMORANDUM

TO: Site File 1-0436, former Uniroyal, Chicopee

FROM: Lisa Jones

DATE: 10/8/91

SUBJECT: Telecom with alpha analytical Lab (508) 898-9220

---

Contacted Scott MacLean re: SSE's sample of oil in chamber collected 1/22/88. He verified that the sample was oil phase with PCB 71 mg/kg and the actual MDL for VOC'S were 200X higher than test method D.L.

In our discussion, I asked if 71 ppm PCB oil could have resulted by co-mingling askarel oily soil with non-PCB diesel or #4 oil. He stated that in his opinion 71 ppm PCB in oil is more than likely to be from askarel oil and agreed with my co-mingling theory.

In addition, he agreed that if my hypothesis were true then the sediment in the chamber should contain  $\gg 71$  ppm PCB content.

MEMORANDUM

TO: Site File 1-0436, Former Unifrogal, Chicopee

FROM: Lisa Jones

DATE: 10/8/91

SUBJECT: Review of files on Oak St. Pump Station Incident

Spill notification 10/20/87 - oil seen during periods of low level in river since 10/12/87. ER Report W87-597. City of Chicopee hired Southampton Sanitary Eng. (SSE) Discharge pipe at river was boomed and vac truck pumped product + water from boom area, decanted oil into 3 drums, and discharged water above pump station to storm drain. The pump station chambers were blocked off prior to cleanup and oil/water from cleanup was not pumped back to chamber. (Telecon w/ SSE: Karl Kuehner). Oil from this spill was sampled by:

- 1) DEP/Clean Harbors - found C<sub>10</sub>→C<sub>20</sub> similar to #4 oil 10/87 (Petro ID only)
- 2) City of Chicopee/Tighe+Bond - weathered #2 @ TPH 15,000mg/L 1/15/88 letter from city.
- 3) SSE/for disposal - according to Karl Kuehner PCB tested < 50ppm.

At a later date, SSE tested remaining oil layer in pump house chamber and found PCB - Arochlor 1248 at 71mg/kg. No action was taken to clean + reactivate station.

On 10/17/89, City of Chicopee WPC sent letter to DWPC/DEP to request disposal of water from pump station to city sewer. Chicopee WPC submitted Tighe+Bond analysis of top layer (PCB Arochlor 3.8 ug/L in water sample) and 2-3 ft under surface (0.2 ug/L). DEP-WPC granted approval to dispose water to sewer by (Dec. 7, 1989) but the city never followed through with the cleanup + disposal.





Executive Office of Environmental Affairs  
Department of Environmental Quality Engineering

Western Region

436 Dwight Street, Springfield, Mass. 01108

413-784-1100

DEC 07 1989



W87-597 R.T.

DANIEL S. GREENBAUM  
Commissioner

JOHN J. HIGGINS  
Regional Director

Stanley Kulig, Superintendent  
Department of Public Works  
Administration Building  
80 Medina Street  
Chicopee, MA 01020

Re: Chicopee-DWPC-OPS  
Oak Street Flood Control  
Station - Project #89-422

Gentlemen:

The Department of Environmental Protection has received your letter dated October 17, 1989 regarding PCB oil contamination within the Oak Street Flood Control Station. Your letter details that you have determined that between 0.00002 lbs - 0.00039 lbs of PCB material is present within 12,641 gallons of water and that the majority is floating product. Your proposal to pump the water below the floating product to the Chicopee wastewater treatment plant is acceptable.

Your plan to have the final 2"- 4" of water and floating product disposed of by Southampton Sanitary Disposal is also acceptable.

Should you have any questions regarding this matter, feel free to contact Timothy McElroy of my staff.

Very truly yours,

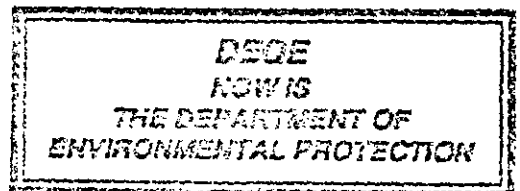
*Roland J. Dupuis*

Roland J. Dupuis, P.E.  
Regional Engineer  
Bureau of Resource Protection

oil contains  
2.38 µg/l  
PCB

TMCE/trc  
chicopcb/wpc29

cc: ✓ Richard Green, DHW/Springfield  
William Gaughan, DWPC/Boston  
Tom Hamel, Chicopee WWTP





City of Chicopee Water Pollution Control

89-422

TMcE

ADMINISTRATION BUILDING • WASTEWATER TREATMENT PLANT  
MEDINA STREET, CHICOPEE, MASS. 01013 TEL. (413) 594-4711 EXT. 387/(413) 592-6808

RECEIVED

October 17, 1989

NOV - 6 1989

LY

Western Region  
Department of Environmental  
PROTECTION

Mr. Tim McElroy  
Department of Environmental Protection  
436 Dwight Street  
4th Floor  
Springfield, MA 01101

Re: Oak Street Flood Control  
Station

Dear Tim:

As you may recall on October 20, 1987, an oil plume was reported flowing out of the Oak Street Flood Control station. Since that time the station has been closed. I am now writing to establish final procedures to facilitate the clean-up of this Flood Control Station.

The station has two chambers:

- A. 19' x 14' x 5' deep 9948 gallons
- B. 12' x 6' x 5' deep 2693 gallons

Laboratory analysis found PCB-1260 in the water. Two samples were taken, one at the surface. 3.8 ug/l. Second 2 - 3 ft. under surface. 0.2 ug/l. (see attached)

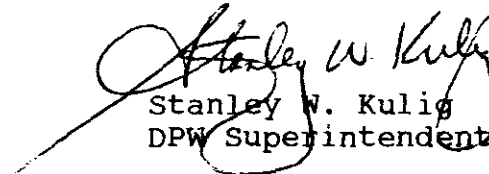
Since the analysis showed only 3.8 and 0.2 parts per billion or between 0.00039 lbs. to 0.00002 lbs. in these chambers, we propose the following:

1. Pump out the water to a level of 2-4 inches. The wastewater will be pumped to the POTW.
2. Hire Southampton Sanitary Disposal to then enter the chambers to mop up floating layer and to clean the walls.

Please let us know if this proposed procedure meets with your satisfaction. After we receive your written authorization we will initiate the clean up.

Your assistance is appreciated.

Thank you,

  
Stanley W. Kulig  
DPW Superintendent

TH/kr

Oak1089



**TIGHE & BOND CONSULTING ENGINEERS ENVIRONMENTAL SPECIALISTS**

John W. Powers  
David G. Healey  
Ronald A. Michalski  
Michael R. Parsons  
Philip W. Sheridan

Dennis H. Bianchi  
Thomas C. Couture  
James S. O'Reilly  
Emeriti  
Edward J. Bayon  
George H. McDonnell

RECEIVED  
NOV - 6 1989

**TIGHE & BOND LABORATORY**

Massachusetts Certificate C 8212  
Connecticut Certificate PH-0494  
New York Department of Health  
Western Region  
Department of Environmental Protection

Report to


CHICOPEE WWTP  
80 MEDINA STREET  
CHICOPEE, MA 01013

Attn : \_\_\_\_\_

Work ID: OAK ST. FLOOD CONTROL STATION

Work Order: 89-06-340

Approved by:

  
Kathleen E. Simmons PhD  
Laboratory Director

CITY OF CHICOPEE  
WATER POLLUTION CONTROL

1989 JUL - 9 A 10 36

RECEIVED

Serving Government & Industry Since 1911

Westfield Executive Park  
53 Southampton Road  
Westfield, MA 01085  
TEL. 413-562-1600  
FAX. 413-562-5317

06/29/89 15:48:06

REPORT CHICOPEE WWTP  
TO 80 MEDINA STREET  
CHICOPEE, MA 01013

PREPARED Tighe & Bond, Inc.  
BY 53 Southampton Road  
Westfield, MA 01085

*CS 6/29*

ATTN \_\_\_\_\_

ATTEN Dr. Kathleen Simmons

CERTIFIED BY \_\_\_\_\_

PHONE (413) 562-1600

CONTACT TOMHAMEL

CLIENT CHICOPEE LL      SAMPLES 2  
COMPANY CITY OF CHICOPEE  
FACILITY WWTP

WORK ID OAK ST. FLOOD CONTROL STATION  
TAKEN 6/22/89  
TRANS CLIENT  
TYPE WASTEWATER  
P.O. # AGREEMENT #6128, VENDOR #04361  
INVOICE under separate cover

SAMPLE IDENTIFICATION

TEST CODES and NAMES used on this report

01 OAK 6/22A TOP LAYER  
02 OAK 6/22B 2-3FT UNDER

PCB      PCB IN WATER

SAMPLE ID OAK 6/22A TOP LAYER FRACTION 01A TEST CODE PCB NAME PCB IN WATER  
Date & Time Collected 06/22/89 Category WASTEWATER

ANALYST MAG DATE EXTRACTED 06/26/89 FILE # \_\_\_\_\_ VERIFIED BY KES  
INSTRUMENT GC#3 DATE INJECTED 06/28/89 FACTOR 2

EPA METHOD 608  
Analysis of PCB's in Wastewater by Gas Chromatography

| <u>CAS #</u> | <u>COMPOUND</u> | <u>RESULT</u> | <u>DETECTION LIMIT</u> |
|--------------|-----------------|---------------|------------------------|
| 12674-11-2   | PCB-1016        | <u>ND</u>     | <u>0.2</u>             |
| 11104-28-2   | PCB-1221        | <u>ND</u>     | <u>0.2</u>             |
| 11141-16-5   | PCB-1232        | <u>ND</u>     | <u>0.2</u>             |
| 53469-21-9   | PCB-1242        | <u>ND</u>     | <u>0.2</u>             |
| 12672-29-6   | PCB-1248        | <u>ND</u>     | <u>0.2</u>             |
| 11097-69-1   | PCB-1254        | <u>ND</u>     | <u>0.2</u>             |
| 11096-82-5   | PCB-1260        | <u>3.8</u>    | <u>0.2</u>             |

All results reported in micrograms per liter (ug/L).

NOTES AND DEFINITIONS FOR THIS REPORT

All compounds analyzed using EPA Method 608 from Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, U.S. E.P.A., Environmental Monitoring and Support Laboratory, Cincinnati, Ohio, July 1982.

ND = Not detected

HA = Not analyzed

BLQ = Compound detected below minimum quantitation limit

Surrogate recovery was 110%.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TEST CODE PCB NAME PCB IN WATER

METHOD 608, METHODS FOR ORGANIC CHEMICAL ANALYSIS OF MUNICIPAL AND INDUSTRIAL WASTEWATER, EPA-600/4-82-057, 1982 REVISION.

City of Chicopee Industrial Self-Monitoring Chain of Custody Report

*Sample From Control Station*

| Samplers Signature | Sample Site Location | Date          | Time          | Sample Type |      | Sample Preparation Initial | Type of Preservation  | Container Number   | Analysis to be performed. Corresponding EPA Method Number |
|--------------------|----------------------|---------------|---------------|-------------|------|----------------------------|-----------------------|--------------------|---|
|                    |                      |               |               | Comp.       | Grab |                            |                       |                    |   |
| <i>[Signature]</i> | <i>[Location]</i>    | <i>[Date]</i> | <i>[Time]</i> |             | X    | <i>[Initial]</i>           | <i>[Preservation]</i> | <i>[Container]</i> | <i>[Analysis]</i>   |
| <i>[Signature]</i> | <i>[Location]</i>    | <i>[Date]</i> | <i>[Time]</i> |             | X    | <i>[Initial]</i>           | <i>[Preservation]</i> | <i>[Container]</i> | <i>[Analysis]</i>   |
|                    |                      |               |               |             |      |                            |                       |                    |   |
|                    |                      |               |               |             |      |                            |                       |                    |   |
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|   |   |  |
|---|---|--|
| Relinquished by: (Signature) <i>[Signature]</i> | Received by: (Signature) <i>[Signature]</i> | Date/Time <i>[Date/Time]</i>                   |
| Relinquished by: (Signature) <i>[Signature]</i> | Received by: (Signature) <i>[Signature]</i> | Date/Time <i>[Date/Time]</i>                   |
| Relinquished by: (Signature) <i>[Signature]</i> | Received by: (Signature) <i>[Signature]</i> | Date/Time <i>[Date/Time]</i>                   |
| Relinquished by: (Signature) <i>[Signature]</i> | Received by: (Signature) <i>[Signature]</i> | Date/Time <i>[Date/Time]</i>                   |
| Dispatched by: (Signature) <i>[Signature]</i>   | Date/Time <i>[Date/Time]</i>                | Received for Laboratory by: <i>[Signature]</i> |
| Method of Shipment:                             |   | Date/Time <i>[Date/Time]</i>                   |

List All Special Processes Performed On Sample. Example: (Extractions; Digestions)

| Performed by       | Parameter          | Date Performed | Description of Special Process |
|--------------------|--------------------|----------------|--------------------------------|
| <i>[Signature]</i> | <i>[Parameter]</i> | <i>[Date]</i>  | <i>[Description]</i>           |
|                    |                    |                |                                |
|                    |                    |                |                                |

# Insurance firms may lose environmental battles

By Julie Tullys  
Rubber & Plastics News Staff

With the growing number of multi-million dollar environmental cleanups, manufacturers have been looking to the courts for help in sharing the financial burden.

Increasingly, firms are seeking coverage from their insurance companies for environmental damage caused from current and former manufacturing operations. But insurers are challenging such claims, leaving industry with a new class of cases headed for the courts.

A California Supreme Court decision last year, however, may be the start of a trend favoring industry. The court ruled that cleanup costs can be recovered from insurers under standard comprehensive general liability policies. The ruling is similar to supreme court decisions in states such as Massachusetts, Minnesota, Washington and North Carolina, according to an opinion piece by Nancy Sher Cohen, head of the

One of the reasons for the legal struggles rests with the "pollution exclusion provision" found in many standard CGL policies issued during the 1970s and 1980s, Sher Cohen wrote.

The exclusion bars coverage except for those discharges or releases that are "sudden and accidental," Sher Cohen wrote. The insurers now argue that "sudden and accidental" means "abrupt, unexpected and unintended," according to her article.

Under this interpretation, manufacturers would have coverage for accidents such as a pipe rupture or tank spill but not for problems that occurred over extended periods of time. Sher Cohen challenges the meaning insurance

companies give the word "sudden."

"Our argument is that it's ambiguous. Dictionaries have definitions that say 'unexpected.' If it's ambiguous, as a legal matter you must construe the ambiguity against the drafter of the agreement, which in this case is the insurance company," she said.

Moreover, when the insurance companies adopted the pollution exclusion, she wrote, it was presented to regulatory agencies as a restatement of what is known as the "occurrence clause," which means that the releases were merely "unexpected."

Sher Cohen also sees a fundamental unfairness in holding manufacturers, which had followed environmental reg-

ulations over the years, retroactively responsible. "They (manufacturers) are open to cleanup, but the contamination was a result of state-of-the-art disposal practices," she said. Yet the new environmental laws say "by the way, we're going to make you responsible for what you did before, even though you followed all the rules," she said.

And she views the insurance companies' unwillingness to cover cleanup costs as equally unjust. "If you're in a car accident and you get sued, you paid your premium to get coverage. You'd be pretty cranky if your insurance said, 'I'm sorry but we think you're a bad driver and if in our litigation we can show that, we won't pay.'"

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## WHITE ELEPHANTS



## STRUGGLING TO MAKE CLOSED PLANTS VIABLE

insurance coverage litigation practice at the Los Angeles office of law firm Heller, Ehrman, White & McAuliffe.

And Sher Cohen believes manufacturers will win out in the long run. "It's just like the asbestos liability cases. The insurance companies lost. I think you'll find the same thing in the environmental cases."

## Struggles

*Continued from page 24*

he stresses that the site is doing well, considering the economic climate.

Akron's Canal Place also is home to a variety of businesses including a day care center, a furniture refinisher, an engineering firm and a plant shop serving commercial firms. But of the 1.8 million square feet of occupiable space, 800,000 square feet remain vacant.

## Keeping the faith

Even so, what's helped the Covington Canal Place staff in their redevelopment task, Oleksuk said, is imagination, creativity and commitment. "You don't fill these old, multistory, sprawling complexes easily. You don't do it with conventional leasing and marketing methods," he said.

Instead, Canal Place employs such techniques as growth leases or renovation incentives. "A lot of companies that come to us are new or are growing. What we try to do is make sure their business won't be constrained.

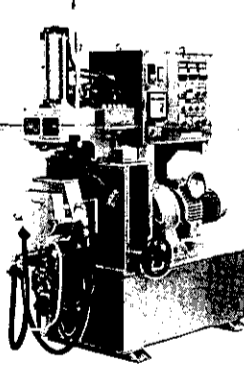
"This isn't a 9-to-5 job," he said.

And most of the on-site Covington employees don't see their job as such. Eight of the 12 in charge of maintenance, operations and renovation at Canal Place are former B.F. Goodrich employees.

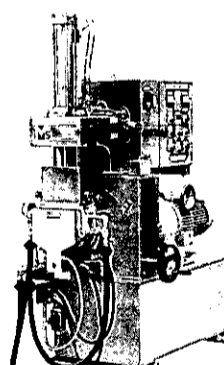
"They watched it go down. So to help breathe life back into it again is beneficial."

# Ideal dispersion mixers for R&D applications

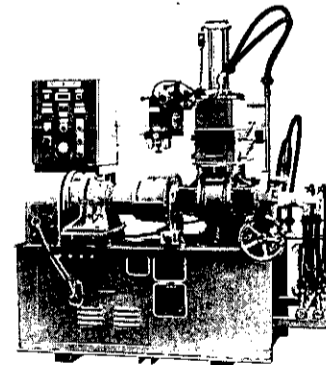
Moriyama's comprehensive line-up permits test mixing of the range of materials.



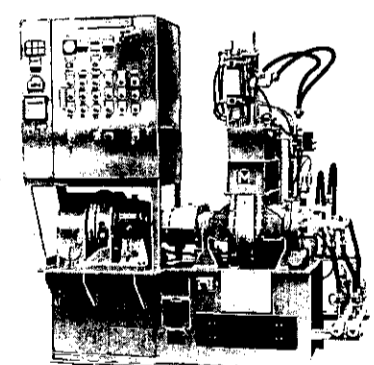
**D0.5-3**  
Mixing capacity 0.5 L  
Motor 3 HP (2.2 kW)



**D1-5**  
Mixing capacity 1 L  
Motor 5 HP (3.7 kW)  
Motor 3 HP (2.2 kW)



**D3-10**  
Mixing capacity 3 L  
Motor 10 HP (7.5 kW)



**D3-20**  
Mixing capacity 3 L  
Motor 20 HP (15 kW)

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- Wood compounds
- Plastic magnets
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- Polymer blends
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# Lifetime gets tough with wiper infringement

By Steve Walters  
Rubber & Plastics News Staff

DALLAS—Lifetime Automotive Products Inc. is actively seeking out companies guilty of patent infringement and false advertising against its own automotive products, and against others in the industry as well.

The focus is on one of the company's own products—Tripledge Lifetime Wipers. Tripledge is an extruded, multi-edged wiper that resists cold, heat, ozone, road chemicals and distortion better than butyl or natural rubber blades, the company claims.

According to Lifetime Automotive, a maker and marketer of proprietary automotive aftermarket and original

**C**ompanies that participate in patent infringement and false advertising are conducting illegal business practices. We will actively prosecute companies conducting illegal business practices in our product areas.

—Jennifer Runyeon  
Lifetime Automotive Products Inc.

equipment products, it filed suit in April against three major catalogers in England, and won all three.

In August, it stopped a U.S. company from using the Tripledge trade name in print advertising, the firm said. A company spokeswoman declined to release the guilty companies' names because of

legal agreements.

"Competition is welcomed in any industry," said Jennifer P. Runyeon, CEO of Lifetime Automotive. "But companies that participate in patent infringement and false advertising are conducting illegal business practices. While Lifetime cannot police the entire indus-

try, we will actively prosecute companies conducting illegal business practices in our product areas."

The usual procedure followed in pursuing such infractions is to first send out a certified letter requesting the guilty company stop.

If there is no response, Lifetime prosecutes, and in most cases, wins permanent injunctions and financial compensation, the company said.

Runyeon said other companies should be prepared to defend their name: "First, spread the word that your company welcomes notifications of trade infringements. I estimate that Lifetime has approximately 300 people—employees, board members, stockholders, vendors and lawyers—policing the marketplace.

"Secondly, be prepared to invest heavily in aggressive lawyers that can protect your name. In the long run, the investment pays off."

Lifetime Automotive was founded in October 1988 when Runyeon and a

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group of investors acquired the assets of Tripledge Wiper Corp., which had gone bankrupt trying to sell the wipers through "traditional automotive aftermarket channels," Lifetime said.

Lifetime took the wipers out of retail sales and started marketing them through direct-response ads. Once this strategy brought enough publicity to the Tripledge name, the company reentered the retail market through chains such as K mart, Wal-Mart, Target and other stores.

The firm said Tripledge is the No. 1 U.S. aftermarket wiper blade, and it continues to gain growth in the \$78.6 billion automotive aftermarket products industry.

In addition to Tripledge, the company also markets Spectrablade colored silicone wiper refills.

The Tripledge wipers are assembled at the company's subsidiary, Hugo Fulfillment Center in Hugo, Okla. The blades are made from Du Pont Nordel and are manufactured by two extruding companies, which Lifetime Automotive declined to name.

The patented, barrel-shaped design has three wiping edges in each direction; the multi-clawed frame distributes pressure evenly so the blades flex to the shape of the windshield.

Jamak Fabrication Inc. of Weatherford, Texas, produces the Spectrablade refills for Lifetime Automotive. The blades were co-developed by Dow Corning and Jamak, and feature a laser-cut silicone wiping edge.

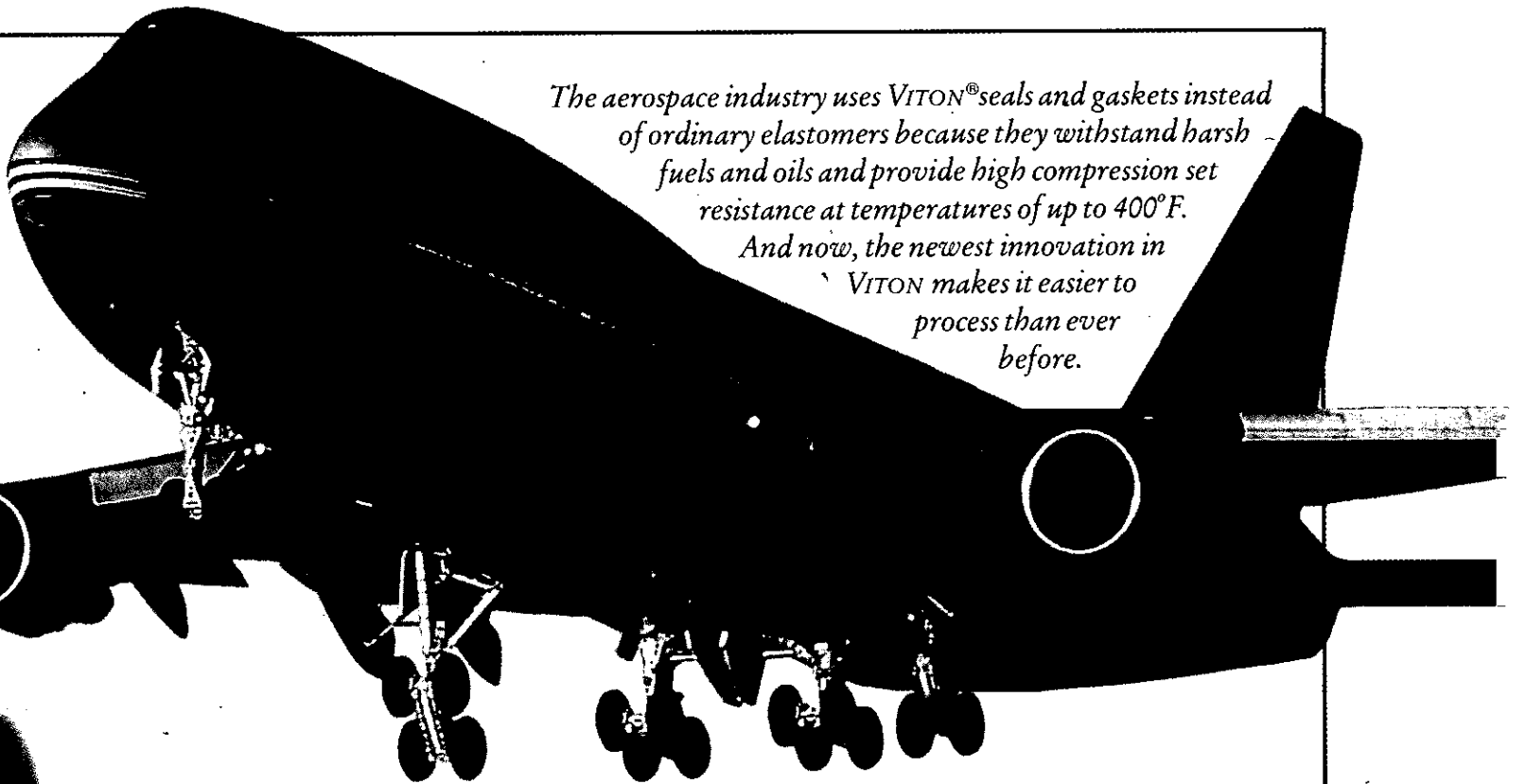
The blades have passed original equipment manufacturers' tests, the firm said, and are projected to be on some cars in 1997.

Today, Tripledge blades are marketed through both direct response advertisements and retail stores.

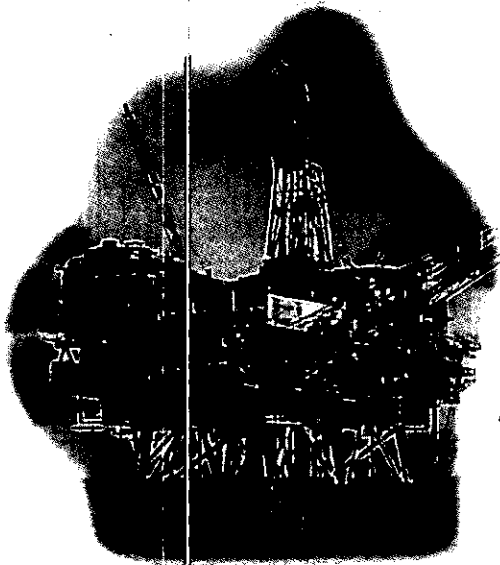
Other Lifetime products include windshield washer fluid and the Extend-Oil Cap, which extends into a funnel for ease in adding oil.

Lifetime Automotive is a subsidiary of Lifetime Products Inc. The automotive unit had sales of about \$20 million in 1990, up from \$3 million in 1989 and \$1 million from 1988.

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In construction, DuPont Neoprene is used for curtain wall glazing in high-rise buildings. Glazing gaskets of Neoprene and ALCRYN® thermoplastic elastomer provide a long-term seal and easier glass replacement. Membrane roofs based on HYPALON® and ELVALOY® HP are easy to install and are highly resistant to weathering.



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In chemical processing plants, VITON® seals, gaskets and o-rings are practically impervious to harsh chemicals and solvents. VITON also helps to prevent hazardous leaks and reduce fugitive emissions.



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# New laws drive buyer-seller, financial trends

Continued from page 19

facturing and some quantity is lost through emissions. Industry, he maintains, should be able to account for all this. "Then if a buyer says they have a problem, they (the former owner/operator) can document what happened to all that they used."

The key environmental accounting records that industry should rigorously maintain, he said, are the following:

- material safety data sheets, which are prepared under Toxic Substances Control Act or Occupational Safety and Health Administration regulations;
- all records having to do with hazardous waste; copies of these, he said, should be maintained "probably for-

ever"; and

• reports pertaining to inventory of what's at the site and how much air and water emissions occurred when the items were used; these records are required under government right-to-know laws.

"Those are the basics," Carrick said. "They may be voluminous, but they're not conceptually hard."

Barry Breen, editor in chief of the "Environmental Law Reporter," said manufacturers also need to contract their own environmental audits. Many companies already do this, he said, not only when the facility changes hands, but also as a procedure of self-evaluation.

"A company that's not evaluating its own environmental problems is writing out an invitation for disaster," he said.

Breen recommends process changes as well—for example, handling fewer hazardous materials.

"In some cases it's surprising how many hazardous materials can be replaced with those that are not hazardous," he said.

And for company employees, "better and more frequent training of all personnel, including the CEO." Educating top-level employees is beneficial for both its substantive value and its message-sending potential, Breen said.

"Nothing makes me pay more attention than what my boss pays attention

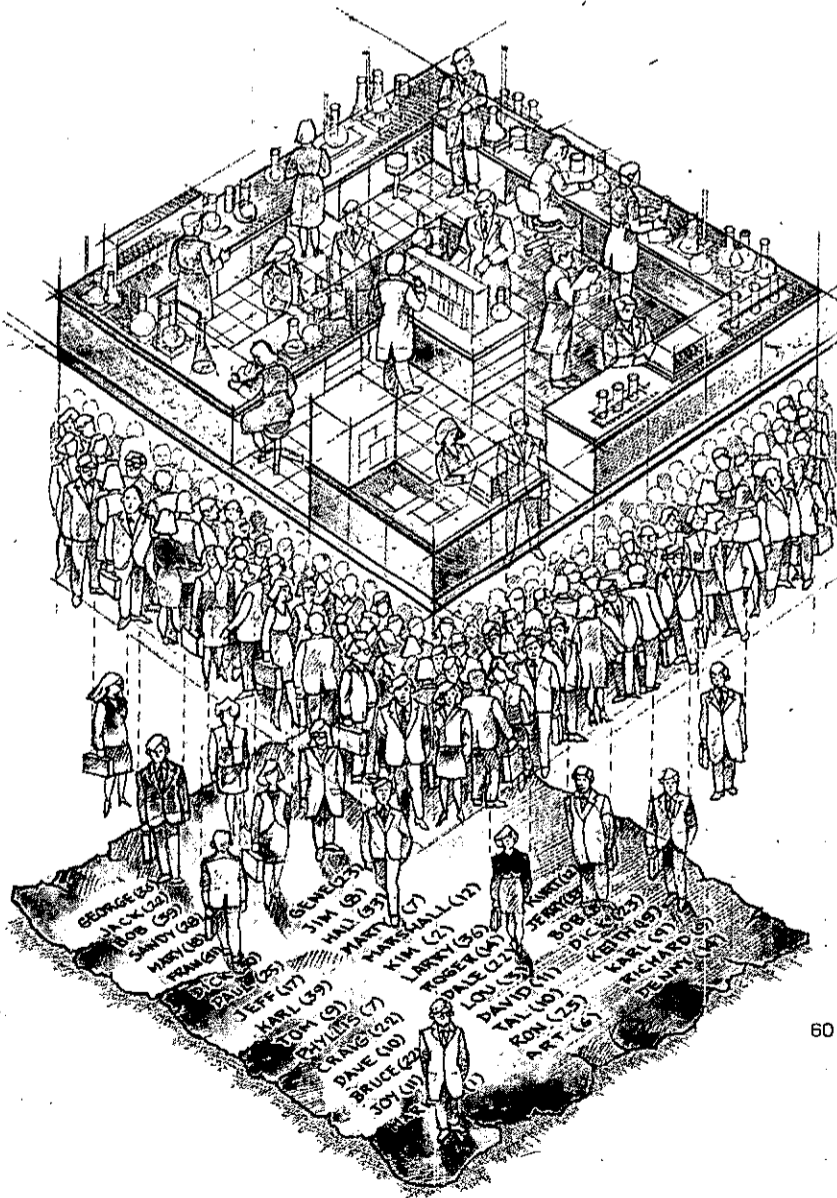
to," he said.

As for the future of environmental liability, Carrick sees the number of potentially liable parties growing. "The net of responsibility will be cast very wide," he said. "There will be an increasing expansion of those who can be held responsible. ... You will see a huge fight to hold chemical manufacturers responsible for what they sell." That, Carrick said, "would be the hars[est] thing that could be done."

Handlers, repackagers and reproducers also will be more responsible, and wholesalers and retailers for selling the products.

"The burden," Carrick said, "will fall on everyone."

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## Struggles

Continued from page 20

footage still is standing, he said, with the exception of some minor structures, which were cleared out for parking.

Fon sold the oldest of the former Firestone buildings to Indian Wells Enterprises. From the remaining structures, "We were able to acquire a plant site that works for us," Axel said.

As for the older buildings that were sold off, he said, "I don't know how IWI views it, but from our standpoint those older buildings that Firestone built were concrete structures that would cost unbelievable amounts to demolish. And what you could put back up would not be big enough when you added the cost of purchasing, the cost of demolition and the cost of rebuilding."

The two abandoned former BFG buildings in Akron are the most visible to the public eye and so stand out most as needing either complete refurbishing or demolition. But it remains to be seen how Akron—or some future owner—will deal with the financial difficulties and environmental concerns at the site.

And two buildings at the nearby Canal Place property are demolition candidates as well, Oleksuk said, but that plan is contingent upon the sale of another building to Akron. The city is trying to get grants for the purchase.

Another Canal Place building, which appears similar in condition to the demolition-slanted structures, is earmarked for housing. Oleksuk said the Canal Place staff will meet with developers on a monthly basis for that project.

## Measuring hopes

Occupancy success varies with former manufacturing properties, and most sources stress employment levels will never reach what they were when the companies were in operation—even with new business tenants.

Facemate, which had a fire in its main plant, originally had planned to move its manufacturing operations to the former Uniroyal complex, the Chicopee official said. But John Anderson, Facemate's manager of the Chicopee site, said that "when everything settled Facemate found that they could still use its old facility."

Instead, Facemate is leasing space to various businesses, which range from a fish farm to accounting firms to machine shops.

But only five of the 23 buildings are occupied, according to a Massachusetts Department of Environmental Protection document. The remaining 18 buildings are not and have not been used by Facemate, the document said. Anderson admits that things could be better, but

Continued on page 27

# Environmental problems common at closed plants

By Julie Tulys

Rubber & Plastics News Staff

When a community loses jobs but gains environmental problems from a plant shutdown "you try not to get into heavy finger pointing," at least according to one city official who is dealing with such a situation.

The comment comes from a Chicopee, Mass., city official, who asked that his name be withheld, in reference to a former Uniroyal plant with, he said, a "whole host of environmental problems."

Part of the reason for these kinds of situations simply comes with the manufacturing territory.

"Tire-producing facilities have a spinoff of a lot of caustic chemicals, especially older facilities," said Keith Kennon, marketing director for Trammel Crow, a development agency that redeveloped another Uniroyal complex in the City of Commerce, Calif. And sometimes the damage is done after the manufacturer has sold the facility.

## WHITE ELEPHANTS



## STRUGGLING TO MAKE CLOSED PLANTS VIABLE

Such was the case at a former Firestone Dayton Tire & Rubber Co. plant, which the firm closed in 1980. Environmental problems at the Dayton, Ohio, site have been so distressing to the community that the city is now pursuing demolition of the plant.

A \$5.4 million U.S. Environmental Protection Agency cleanup in 1987 was prompted by a PCB spill, resulting from salvaging of copper from transformers. During that effort, the EPA also did asbestos abatement work.

The former Firestone property now has two liens attached to it: one at \$5.4 million from the U.S. EPA and one at \$5 million from BancOhio.

But the property, if uncontaminated, is estimated to be worth only \$627,000, said Dusty Hall, environmental protection manager for the city of Dayton. "The property has a negative net worth," he said.

Dayton declared the former Firestone site a nuisance and issued nuisance abatement orders to parties potentially responsible for demolition and cleanup of the site. JV Properties of Akron, BancOhio and Bertram Green—who held a 10-percent interest in the site—were among those served.

The city has allocated \$980,000 for complete asbestos abatement work at the site and plans to have the buildings demolished by the end of 1992.

The Chicopee city official believes a massive demolition plan is the logical solution for the former Uniroyal complex as well. So far Facemate, a textile manufacturer that owns the property, has assumed environmental cleanup expenses at the site, which included costs to conduct a site assessment, contain hazardous substances and remove underground storage tanks, said Lisa Jones, environmental engineer with the Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup.

Surface soil and ground water at the former Uniroyal site are contaminated

with PCBs, solvents and other volatile and semivolatile compounds, according to a Massachusetts DEP document. Ellyn Weiss, the attorney for Facemate, said the firm has paid out well in excess of \$100,000 in cleanup costs, though she declined to reveal the actual amount.

The DEP issued a notice of responsibility to Uniroyal in 1980, according to the document.

Weiss said Facemate and Uniroyal are having "useful discussions," and that she believes an amicable solution can be worked out.

But for two former Goodrich buildings, once part of the firm's Akron plant, the outlook is less hopeful. The property, which is owned by Akron at-

torney Patrick Neman, is in Chapter 7 bankruptcy.

A U.S. EPA lien is one of five liens attached to the property. Currently the EPA lien is \$95,000, but it could grow to as much as \$161,000, said Kurt Lindland, assistant regional council for the U.S. EPA.

The EPA costs stem from the cleanup of a PCB spill—which allegedly resulted from salvaging of transformers—the removal of 5 transformers, and the removal of a tank and 13 drums that contained PCB fluids, Lindland said. And eventually asbestos work will need to be done at the site, and that may cost at least \$1 million to clean up, Lindland said.

The EPA is pursuing potentially re-

sponsible parties, which could include past owners and operators, he said.

A spokeswoman for B.F. Goodrich said that the firm is not aware of any reason why it should be responsible for cleanup at the site.

"When we sold those (buildings) in 1983 to Neman, to the best of our knowledge, they conformed to all environmental regulations," the spokeswoman said.

"Any environmental hazard that may exist has been the result of work done since we've sold it," she said.

Neman said he has no knowledge of the EPA cleanup, but said that in 1986 and 1987 he contracted a separate cleanup for a PCB spill on an 8-sq.-ft. area.

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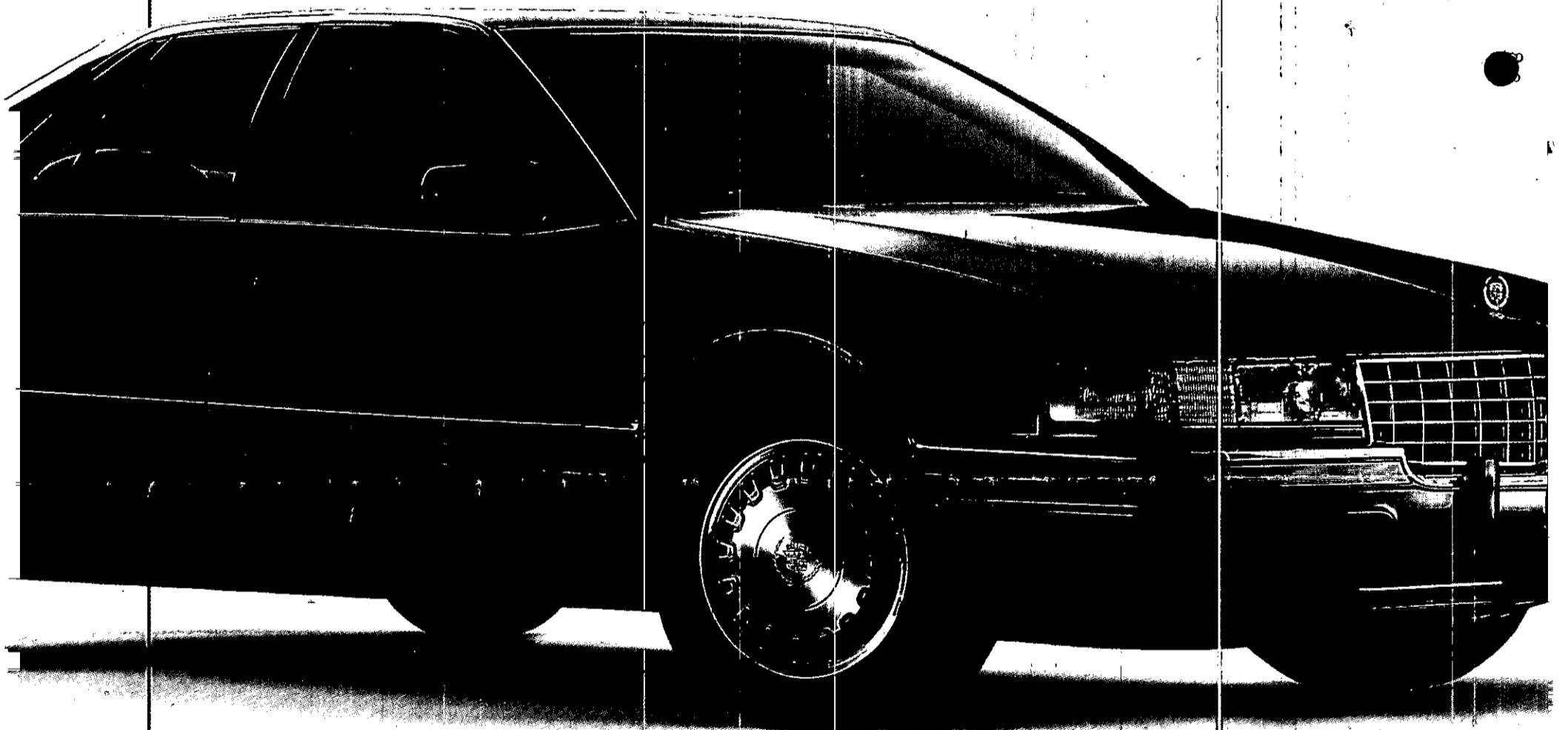
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# Abandoned dreams

## Cities find closed plants a costly redevelopment challenge

By Julie Tullys

Rubber & Plastics News Staff

To the casual observer, the former B.F. Goodrich Akron plant appears an eerie combination of structures deserted and renewed.

Towering over one street corner are two abandoned buildings, previously home to hose and aerospace operations. The structures, punctuated by broken, boarded up windows and stripped, crumbling outer walls, offer a backdrop to a rusting diner car.

They epitomize a common industrial story: companies move out, plants run



down, and communities scramble to find a workable redevelopment scheme. For many communities, the economic damage from job losses is merely the first of many dilemmas caused when companies shut the factory doors.

Even when ideas for reuse are implemented, new property owners frequently face environmental cleanup costs, demolition or rebuilding expenses, and other financial obstacles. And plants often remain totally or partially dormant, leaving communities with nothing but an eyesore.

One Chicopee, Mass., city official, commenting on a former Uniroyal tire plant, summed up his city's stance toward the complex: "It sits in the middle of the community and has been open to the elements for the last 10 years. The city is sad that it sits there as a blight." He characterizes the former Uniroyal site as "substandard mill space in the middle of a community," with broken windows, leaking roofs and no heat.



RPN photos by Julie Tullys

### New directions

Most of the former B.F. Goodrich plant in Akron is now owned by Covington Capital of Larchmont, N.Y. The redevelopment firm purchased the operation in 1988 and has transformed the facility into a multiuse complex called Canal Place, now home to 74 businesses throughout 18 buildings. Above: the interior of one structure that has remained dormant, but is slated for housing. Canal Place officials are meeting with redevelopers specializing in housing for the project. Above right: Architectural Greenery, a horticultural firm for commercial establishments, spent about \$15,000 to renovate office and business space. Right: Davis Refinishing, which needed only to add ventilation to its leased space.

The official, who asked that his name be withheld, said that Uniroyal sold the facility before the city could raise the capital to purchase it. Facemate, a textile manufacturer, bought the complex in 1981, the same year Uniroyal closed the operation.

The rest of B.F. Goodrich's former Akron operation, now owned by Larchmont, N.Y.-based Covington Capital, faces a similar dilemma. It now is semitransformed as a multiuse complex called Canal Place, which serves as home for 74

Continued on page 20



## Environmental laws spur property, financial trends

By Julie Tullys

Rubber & Plastics News Staff

Since the passage of the Superfund Act, former owners and operators of manufacturing facilities have been caught in an unexpected game of boomerang: properties are tossed toward new owners, and environmental problems send the sites sailing back to former corporate hands.

And this situation is setting some new buyer-seller trends, according to Roger Carrick, head of the environmental practice in the Los Angeles office of law firm Heller, Ehrman, White & McAuliffe. Buyers of former manufacturing operations no longer will accept the age-old "caveat emptor."

Today's plant buyers often ask for what is known as an indemnification clause, an agreement in which the seller agrees to pay for any environmental problems that might be found on the site after it's sold.

Not all companies are willing to agree to this. However, "people who have very clean properties are usually more willing to indemnify," Carrick said.

Or buyers may request that a portion of the sales

proceeds be kept in escrow as an environmental insurance policy of sorts. Then, if the buyer finds any environmental problems on the site within a set amount of time, a pool of money is available, Carrick said.

**A company that's not evaluating its own environmental problems is writing out an invitation for disaster.**

—Barry Breen  
editor in chief

"Environmental Law Reporter"

But probably the biggest and most important trend in environmental enforcement, he said, is that financial institutions have started conducting their own environmental audits. "Banks will not loan on contaminated property," which means it is becoming harder to finance acquisitions, he said.

Carrick said if a given property is priced at \$100 million, and an audit reveals \$10 million in cleanup costs, the bank may loan only 50 percent of the purchase price, knowing that more problems are likely to exist at the site.

The financial dilemmas don't stop with buyers, sellers and bankers, however. In an increasing number of bankruptcy cases, all assets are being applied to environmental cleanups, leaving creditors and pensioners in bad shape, Carrick said.

And he believes that the current credit crunch is caused—at least in part—by these new, environmental financial burdens. So the buzz words for the '90s, he said, are "pollution prevention" and "waste minimization." Industry also needs to engage in "environmental accounting," he said.

"All businesses have to be diligent in how they use chemicals." Firms should view chemicals as they do money, he said. "You account for how you use it. You account for how it leaves."

When a firm uses chemicals in its manufacturing processes, a certain amount will be found in the final product, he said, a portion is lost during manu-

Continued on page 24

# Communities search for redevelopment recipes

Continued from page 19  
businesses throughout 16 buildings.

But the two abandoned buildings, owned by Akron attorney Patrick Neman, create a perception problem, said Dennis Oleksuk, former B.F. Goodrich employee and current property manager for Canal Place. Because the structures sit adjacent to the Covington-owned property, they appear to be part of Canal Place. "We'd like to see something done to complement what we're doing," Oleksuk said.

## Costs and complications

What's necessary to successfully reuse properties such as these, said Jus-

tin McCarthy, deputy executive director for the City of Commerce, Calif., Redevelopment Agency, is a "good, solid developer to come in and take the ball."

McCarthy has been involved with a former Uniroyal complex in the City of Commerce, which stayed dormant for almost a decade. The city agency now owns the site, and Trammel Crow Co., the firm that took on the task of redeveloping the property, leases the multiuse complex.

The Citadel—the property's new name—contains a hotel, office space, a retail center, restaurants and an athletic club. In total, Trammel Crow paid

\$85 million for the redevelopment project, and the Commerce Redevelopment Agency contributed \$25 million in public funds, McCarthy said.

But for the small-firm or individual owner, this level of financing is not typically available—particularly when resources are needed to clean up environmental hazards. Trammel Crow boasts that it is "the largest full-service real estate development and property management company in the U.S. with more than \$15 billion in assets," according to a company statement.

Even so, Trammel Crow also finds environmental cleanup costs prohibitive. Keith Kennon, marketing director for Trammel Crow, said the process of making tires is especially bad. Tire factories, especially older operations, have a spinoff of a lot of caustic chemicals, he said. "We'll see a site that looks attractive and get an environmental re-

port and find that ... the cost of the cleanup far outweighs the deal you might be getting on the property."

McCarthy said one problem at the former Uniroyal site was hydrocarbon contamination from oil products. Trammel Crow spent around \$5 million to clean up the property, Kennon said. And he believes the million-dollar cleanup price tags prevent "about 80 percent of old industrial properties general from being restored."

The two abandoned former B.F. Goodrich buildings in Akron have not only generated environmental worries, but also have created a financial impasse. The property, which has a total of five liens against it, is in Chapter 7 bankruptcy. And this will make redevelopment of the site difficult.

## Demolition dilemmas

For some communities, the only al-



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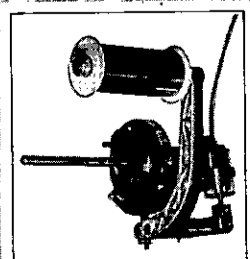
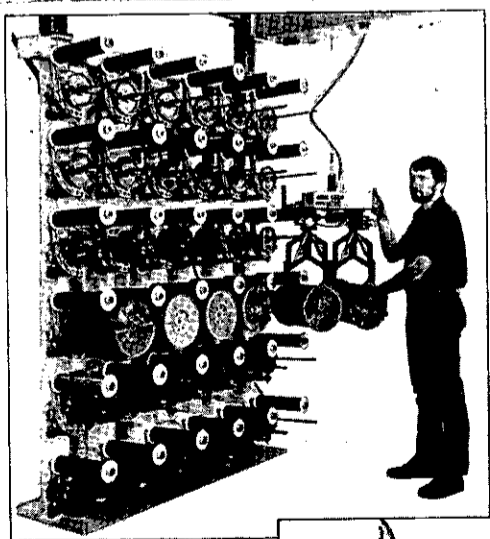
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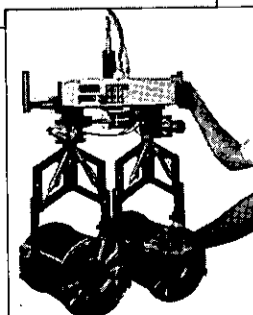
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California 91744



The Assyrian-style administration building shown in this photo from the 1930s is all that remains of the former Uniroyal complex in the City of Commerce, Calif. Trammel Crow, a redevelopment firm that spent \$85 million to demolish and refurbish the property, retained the office structure and a 1,700-ft. wall because they were well-known landmarks in the community. The firm leases the multiuse site from the city.



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ternative that will resolve the plight is one that the Chicopee city official suggests as the single solution for the former Uniroyal complex: "a massive demolition plan." That can sometimes offer more flexibility, said Jim Kiji Waters, rehabilitation specialist for the city of South Gate, Calif. "When you tear down, you can construct buildings that are more utilitarian, for a lot more intensified usage per square foot."

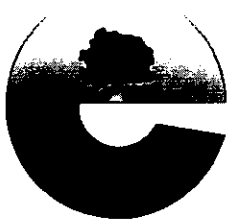
Trammel Crow decided on near-complete demolition for the former Uniroyal City of Commerce plant. The Assyrian-style administration building and 1,700-ft. wall—both of which were retained because of community perceptions—are all that's left of the complex. Trammel Crow's Kennon said that from a survey the firm found that the wall was the second most recognizable landmark in Southern California. "From a redevelopment standpoint, we already had an identity," he said.

The new owners of a former Firestone plant in South Gate, Calif., however, left the majority of the buildings intact. That decision has made the site both successful and unsuccessful, Kiji Waters said. "By retaining the structure the way Firestone left it, it limited the way you could use the site."

Hon Industries bought the plant in 1981 for \$12.8 million, said John Axel, senior vice president of finance and development for Hon. Most of the square

Continued on page 2

1-0436 91747



RECEIVED  
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**ENVIRONMENTAL COMPLIANCE SERVICES, INC.**

October 1, 1991  
File No. 11094.3  
Document No. 3779

Ms. Lisa Jones  
Massachusetts DEP  
Bureau of Waste Site Cleanup  
436 Dwight Street  
Springfield, MA 01103

RE: Proposal for Short Term  
Measures  
Oak Street Pumping Station  
Former Uniroyal Complex (CIP)  
Chicopee, MA  
DEP SA No. 1-0436

Dear Ms. Jones:

On behalf of Facemate Corporation (Facemate), Environmental Compliance Services, Inc. (ECS) submits the following proposal for Short Term Measures (STM) at the former Uniroyal Complex (Chicopee Industrial Park) in Chicopee, Massachusetts. The additional work is proposed at the request of the Department of Environmental Protection (DEP) to further evaluate the potential source of polychlorinated biphenyls (PCB) detected in oil released to the Oak Street pumping station located west of the site along the Chicopee River.

Of particular concern to the DEP is the potential for PCB contaminated soils and/or oil in the vicinity of former transformers numbered 13, 14 and 25 at the southwestern corner of building No. 8, to be the source of PCBs observed in the Oak Street pumping station. It is the opinion of the DEP that PCB contaminated soils or oil may have washed (or may wash) into a storm sewer manhole located near the former transformers, and from the manhole through discharge lines into the Oak Street pumping station. The potential for on-going release of PCB to the pumping station, and from the pumping station to the Chicopee River represents an imminent hazard.



**ENVIRONMENTAL COMPLIANCE SERVICES, INC.**

Ms. Lisa Jones  
Massachusetts DEP  
October 1, 1991

Page 2

The following STMs are designed to clarify whether PCBs from the former transformer area are the source of PCBs detected in the pumping station. The manhole will be accessed and its contents sampled for analysis of PCBs. Pending the results of laboratory analyses, the contents of the manhole will be characterized for disposal and the contents removed and disposed. If feasible, a dye test will be performed to confirm any connection with the Oak Street pumping station, and the manhole sealed to prevent any further potential for contamination.

Based upon the results of the STM, an additional proposal for source area control and pump station reactivation may be submitted for review. Source area control is likely to consist of localized covering. Pumping station reactivation may require the waste characterization of holding tank contents, removal, treatment and/or disposal of the contents, and steam cleaning of the holding tank and affected machinery.

**BACKGROUND**

The background of this site is described in detail in the Phase I - Limited Site Investigation submitted to the DEP in March of 1991 (ECS) and is summarized in the proposal for STM dated June 17, 1991. STMs outlined in the June proposal to address the presence of free-phase product in groundwater monitoring well ECS-9 and the potential for exposure to PCB contaminated soil in selected accessible areas are currently under way.

**POTENTIAL ON- AND OFF-SITE IMPACTS**

Potential impacts to health, safety and the public welfare or the environment during the STMs proposed are expected to be minimal provided the workers follow the safeguards outlined in the Health and Safety Plan designed for the work on-site. The process of determining whether the manhole located near the former transformers in the vicinity of Building No. 8 has provided a conduit between the PCB contaminated soil and the Oak Street pumping station may cause short term exposure to PCB contaminated soil, sludge and/or oil. Waste characterization and removal of the manhole contents (if required), dye testing and sealing of the manhole cover may also involve short term exposure to PCBs. Such short term exposure will be minimized through application of the Health and Safety Plan.



**ENVIRONMENTAL COMPLIANCE SERVICES, INC.**

Ms. Lisa Jones  
Massachusetts DEP  
October 1, 1991

Page 3

If it is determined that the manhole is a drainage way and that drainage from the PCB contaminated area is to the manhole and then to the pumping station, removing the contents of the manhole and sealing the manhole will minimize the potential for further environmental impact.

**PROPOSED MONITORING DURING AND AFTER IMPLEMENTATION**

No monitoring of PCBs during the STM is proposed. Should access to the manhole or the holding tank beneath the Oak Street pump station be required, the quality of air in the enclosed spaces will be monitored using an H-Nu Photoionization meter for volatile organic compounds, for the lower explosive limit using and LEL, and for percent oxygen using an O2 meter.

The effectiveness of manhole sealing and/or cleaning will be evaluated by observing the condition of the manhole three (3) months following sealing and other remedial work is performed. Post remedial sampling of manhole contents for the analysis of PCB will be performed as required.

**PROPOSED STM**

**TASK 1 - Background Research**

Additional background research about the drainage and underground utility network in the vicinity of the former transformer area and the Oak Street pumping station will be performed. All efforts will be made to determine whether a utility connection between the former transformer area and the Oak Street pumping station exists.

**TASK 2 - Manhole Access, Water, Sludge and/or Product Sampling and Analysis**

The manhole in the vicinity of the former transformer area and Building No. 8 will be accessed to observe its construction, condition and contents. Depending upon the apparent accessibility of the manhole, the need for contacting additional authorities for access to observe conditions and/or sample contents will be evaluated. Should there be sludge, fluid and/or





**ENVIRONMENTAL COMPLIANCE SERVICES, INC.**

Ms. Lisa Jones  
Massachusetts DEP  
October 1, 1991

Page 4

staining, grab or wipe samples will be collected for analysis of PCBs using EPA 8080, and selectively for petroleum identification using the Coast Guard Method.

ECS will arrange with the city engineer to access the holding tank of the Oak Street pumping station. The condition and contents of the holding tank will be observed and its contents sampled for analysis of PCB (EPA 8080) and selectively for petroleum identification (Coast Guard Method). The contents sampled may consist of sludge, separate phase product and water. *(must test liquid & sludge separately for PCBs)*

**TASK 3 - Waste Characterization, Removal and Disposal of Manhole Contents (Pending Results)**

Pending the results of the laboratory analysis for PCBs and petroleum characterization, the contents of the manhole may be sampled for analysis of waste characteristics. Final waste characterization analyses will depend upon the requirements of the disposal alternatives considered, but will consist of a minimum of volatile organic compounds (EPA 8240), Extraction Procedure Toxicity or total TCLP RCRA 8 metals, ignitability, corrosivity and reactivity.

Based upon the results of the waste characterization analyses, the final disposal alternative will be selected. The contents of the manhole will be removed and barreled for transport and disposal under a bill of lading or manifest, as required.

**TASK 4 - Dye Test**

Based upon the results of the additional background research and field observations made during the manhole and Oak Street pumping station access, the need for performing a dye test to confirm the connection between the manhole in the vicinity of the former transformers and the pumping station will be determined. Should a dye test be required, appropriate agencies or personnel will be contacted to coordinate necessary drainage system access. If, based upon available information, the dye test is feasible, colored or fluorescent dye will be dissolved and discharged into the manhole. The dye solution will be flushed through the drainage system and the potential discharge points observed for a period of time sufficient to confirm or refute the drainage connection.



**ENVIRONMENTAL COMPLIANCE SERVICES, INC.**

Ms. Lisa Jones  
Massachusetts DEP  
October 1, 1991

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**TASK 5 - Secure Manhole**

After determining the use of the manhole in the vicinity of the former transformers and evaluating whether preventing drainage from entering the manhole is viable, ECS will coordinate with representatives of Facemate to seal the manhole. If drainage to the manhole is critical, the proposed sealing will be reevaluated and the need for alternate source control considered.

**TASK 6 - STM Data Reduction and Summary Report**

Observations and data collected while performing the STMs will be presented and interpreted in a letter report. Data may be summarized in tables and on figures, and original data and field logs will be appended to the letter report. Based upon the information generated, appropriate recommendations will be made.

The work proposed will commence promptly upon DEP approval. Based upon the availability of information, coordination with necessary authorities and unforeseen difficulties encountered in the field, work will take place within two (2) months of DEP approval. The letter report will be submitted within the third month following approval. Please feel free to contact our office should there be questions or comments about the proposed work.

Sincerely,

Sarah K. Walen  
Senior Hydrogeologist/Associate

SKW/jm

cc: Mr. Edward Mrosiniski, Facemate  
Mr. Gilbert Barrett, Facemate  
Ellyn R. Weiss, Esq., Foley, Hoag & Eliot

## MEMORANDUM

TO: Site File 1-0436, Fmr. unroyal, Chicopee

FROM: Lisa Jones

DATE: 9/27/91

SUBJECT: Ongoing STMs + Additional STM Proposal

Telecon with Sarah Walen:

- ① STM Request ~~for~~ <sup>concerning</sup> PCB oil/soil from area west of Bldg 8+15 - to be submitted ~ 10/5. Proposal will include investigation of potential migration of contamination as required in telecon of 9/13/91.
- ② Facemate has requested DEP approval to take ~~off~~ over product bailing STM. DEP will approve this request on the condition that Facemate personnel working at the site comply with the Site Health + Safety Plan, ~~it~~ and as required by the Plan, each site worker must have ~~approved~~ attended the 40HR Haz. Waste Site Workers - Basic Health + Safety Course. per OSHA requirements.
- ③ ECS will send a copy of the site's Health + Safety Plan - not yet on file at DEP.
- ④ Product Recovery STM + associated investigation - DEP informed ECS about the need for additional monitoring well(s) installation downgradient of new well with product to better evaluate STM.

ECS ~~will~~ plans to propose this additional investigative work to Facemate + will inform DEP of further actions.

MEMORANDUM

TO: Fmr Uniroyal File 1-0436, Chicago

FROM: Lisa Jones

DATE: 9/13/91

SUBJECT: STM Work -

---

Sarah Waten of ECS called to notify DEP that one of the additional wells drilled southwest of ECS for STM evaluation was found to contain  $\frac{2}{10}$  foot of product after development + gauging. This well will be added to bailing program. She believes that initially ~~after~~ during installation + sampling no product was found so it may have been sampled in recent sampling event.

Additional STM required:

I informed S. Waten of the Dept's requirement to have the storm drain system and manhole in the vicinity of Bldg 8 transformer pad (former location of transformers 13, 14, - 25) tested for PCB's and sealed to prevent potential runoff of PCB contaminated soil to the river via the drainage system. Sampling of sediments in the Oak St. Station is also required to evaluate PCB contamination.

# Hybrid striped bass grow where tires once took shape

By HENRY FILAR

CHICOPEE — Fanciers of fresh fish in Oriental restaurants and sushi bars in Boston and New York are enjoying the taste of hybrid striped bass grown amid surroundings that once thundered with tire-making machinery.

The first bass to reach maturity in the freshwater tanks at the former Uniroyal Inc. plant have been shipped live to dining establishments by Swift River Inc. The company is a new venture in the budding aquaculture industry in Western Massachusetts.

Not one of the bigger operations with its 30 fiberglass tanks of 2,000 gallons each, compared to other aquaculture businesses, the company has started producing marketable fish in the 1½ to 2 pound size from its initial batch of 35,000 fingerlings.

But, unlike some other aquaculturists, which sell their product iced, Swift River guarantees its fish are fresh by shipping them alive in a tank mounted on a truck.

"We are selling our product live which commands a premium price because it is a premium product," said Mark Wisotzky of Haydenville, a partner in the firm. Wisotzky was interviewed last week in the company's production center in Building 27 of what is known now as the Chicopee Industrial Park. The company was incorporated in June one year ago.

He said he and his partner, Blair Whitham of Amherst, identified the sale of live fish as their corner of the market after finding success in selling to the Oriental market through distributors in Boston and New York. They also have sold live fish to one of the Panda Garden restaurants in the Connecticut Valley region.

Fish are being sold live, Wisotzky said, because they command an optimum price in this form. He said they sell their fish in the \$4-per-pound range, while those who sell fish that are not alive command slightly less than \$4.

"We're not a large producer so we can afford to make this extra marketing effort," he said. "It is appreciated by our customers who want live fish."

Swift River deliveries are made with a special tank mounted on a leased truck capable of handling up to 1,000 pounds of fish.

Wisotzky emphasized that although the operation is progressing well, it is still in the early stages of production, and production levels are not quite at the level of demand.

But even with this limitation, the partners are actively seeking to develop a larger market in the immediate area.

"We are producing our first crop of fish of marketable size," he said. Market size are fish that are 1½ to 2 pounds in weight and 13 to 14 inches in size.

At present, the company's goal

is to raise 100,000 pounds a year with the existing facilities. Wisotzky said research and development is taking place to modify the system to increase production to well over 100,000 pounds a year within the next two years.

An increase in production appears to be in line with the industry's expectations. Jim Carberg, vice president of Aquatic Systems Inc., the nation's largest striped bass producer, said in the June issue of Catfish and Aquaculture News, that total production in 1990 was 1.3 million pounds, and that production may reach 3 million pounds this year.

Tom Hopkins, president of Biometrics Inc., a product development company specializing in aquaculture-related environmental control systems, said in the same publication that the supply isn't high yet. He said this year will tell the story.

Aquaculturists across the country raise a variety of species for the market, including catfish and trout, but Wisotzky and Whitham decided to raise hybrid striped bass because they felt there was a market and they were capable of raising them.

After signing a five-year lease for 10,000 square feet of space in the former Uniroyal plant in the early spring of 1990, they installed 30 production tanks and four holding tanks of 2,000 gallons each. Each has an independent filtration, heating, oxygen-aeration and clarification system.

They chose the multiple tank system to have better control over growth and the isolation of problems, should any develop. The choice was made after extensive research of various technologies, inspection of operating systems and visits to trade shows, starting in the summer of 1989 and culminating with the lease of space in January of 1990.

Wisotzky said they have invested about \$500,000 in the venture for equipment, improvements in the facility, research and development and working capital. With plans for expansion in the future, investors are being sought for needed additional capital, he said.

Swift River has an option to lease an additional 20,000 square feet adjacent to the present facilities when expansion takes place.

The initial shipment of 35,000 fingerlings was delivered in the fall of 1990 in a compartmented truck by the Keo Fish Farms in Keo, Ark., the largest hybrid striped bass fingerling producer in the country.

The one-inch fish are born from eggs produced by the salt water striped bass and the fertilizing "milk" from the fresh water white bass, a perch-like fish common in southern United States waters. The hybrid is asexual and cannot reproduce.

The hybrids are warm water fish and are raised in fresh water

with a touch of salinity. They are fed three times a day with fish meal specially formulated for hybrid striped bass. Swift River bass consume 300 pounds of meal a day.

For about 15 seconds, after a scoop of fish meal is tossed into a tank, the surface churns and splashes as the ravenous bass grab the pellets. Then, there is quiet. In the depths, fish swim continually in the moving currents.

Wisotzky said the fingerlings were kept in the three holding tanks while the growing tanks and water systems were installed and tuned up.

When production tanks were ready in the late fall of 1990, about 4,000 fingerlings were placed in each. As they grew, they were transferred and the number reduced. Finally, when they reached market size, there were about 400 in a tank.

The mortality rate was low, according to Whitham. He said they lost only a few fish during the early stages when there were breakdowns in the mechanical equipment.

Wisotzky said they are not totally committed to raising hybrid bass. He said they are exploring raising largemouth bass, walleyes, tilapia (a freshwater species from Africa), redbass and sturgeon. "With our system, we can respond to the market and raise other species on demand," he said.

Besides raising fish for eating, the company also is looking into growing species, such as game fish for stocking, bait fish, and fish for aquariums.

Neither Wisotzky, 34, or Whitham, 40, were involved in biological studies when they attended college. Wisotzky studied landscape architecture at the University of Massachusetts, and Whitham concentrated on English at Columbia University. In this region, they became friends while they were engaged separately in real estate development and construction, Wisotzky in Northampton and Whitham in Pelham.

Wisotzky recalled they started to study aquaculture after Whitham found an article in a magazine and showed it to him because of his interest in fishing. He said that though both were successful in the real estate field, they were considering a career change. The article, he said, triggered the new venture.

As for the future, Wisotzky said he and Whitham are optimistic about demand for their product because, he said, commercial, ocean-going fisheries are in decline and the aquaculture industry can offer fish raised under quality control conditions that result in freshness and purity.

"The per-capita consumption of fish is rising," he said, "and the demand for seafood will have to be met by aquaculture operations like ours, and not from the sea."

File  
From Uniroyal  
1-0436

MEMORANDUM

TO: Site File - Former Uniroyal 1-0436

FROM: Lisa Jones

DATE: 8-14-91

SUBJECT: Additional Wells following Soil Gas Survey

---

I met with Sarah Walen of ECS on site, and reviewed hand delivered - Soil Gas Survey Results + map of proposed wells.

DEP granted verbal approval to go forward with installation of 3 additional 2" monitoring wells in the vicinity of ELS-9 as proposed on the Site Map dated Aug. 1991.

Following installation, sampling, and analysis (EPA Method 8240) ECS will evaluate effectiveness of bailing program - DEP may require a more aggressive STM upon their review of data.

cc: ECS



DEQE/WESTERN REGIONAL OFFICE

CONFERENCE/MEETING

on site

REGISTER

Subject Oak Street Pumping Station and  
Former Uniroyal Complex  
 Program holding meeting BWSC  
 Person conducting meeting Lisa Jones

Date 8/14/91  
 Time 10:00 AM

| Attendee       | Representing                   | Title                 |
|----------------|--------------------------------|-----------------------|
| Lisa Jones     | BWSC - DEP                     | Env. Egr.             |
| Frank Rueli    | Chicopee                       | City Engr.            |
| Tom Costello   | "                              | City Solicitor        |
| Ernie LaPlamme | "                              | Flood Control Foreman |
| Bob Lamay      | "                              | "                     |
| Ed Mrozinski   | Facemate/CIP (former Uniroyal) |                       |
| Sarah Waler    | ECS } consultants for          |                       |
| Mark Hellstein | ECS } Facemate                 |                       |
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**ENVIRONMENTAL COMPLIANCE SERVICES INC.**

588 Silver Street  
AGAWAM, MASSACHUSETTS 01001

(413) 789-3530

SCANNED

1-0436

**LETTER OF TRANSMITTAL**

TO

Massachusetts DEP  
436 Dwight Street  
Springfield, MA 01103

|                                |                    |
|--------------------------------|--------------------|
| DATE<br>August 13, 1991        | JOB NO.<br>11094.2 |
| ATTENTION<br>Ms. Lisa Jones    |                    |
| RE:<br>Soil Gas Survey Results |                    |
| Former Uniroyal Complex (CIP)  |                    |
| Chicopee - STM                 |                    |
| DEP SA# 1-0436                 |                    |
|                                |                    |
|                                |                    |

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|--------|--------|--------|---|
| 1      | 8/91   | 3581   | Table 1 - Summary of sampling point results   |
| 1      | 8/91   | Fig. 1 | Site Plan w/sampling point locations, chromatography results, and proposed monitoring well locations. |
| 1      | 7&8/91 |        | Chromatograms of sampling points, standards, and product from monitoring well ECS-9.                  |
|        |        |        |   |
|        |        |        |   |
|        |        |        |   |

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 As requested       Returned for corrections       Return \_\_\_\_\_ corrected prints  
 For review and comment       \_\_\_\_\_  
 FOR BIDS DUE \_\_\_\_\_ 19 \_\_\_\_\_       PRINTS RETURNED AFTER LOAN TO US

REMARKS Dear Ms. Jones;

Enclosed please find the above referenced draft material submitted for your review. Please review and comment on the proposed monitoring well locations. ECS will proceed with monitoring well installation subsequent to your review and comment. We look forward to hearing from you.

**HAND DELIVERED**  
DATE 8-14-91  
REC'D. BY [Signature]

COPY TO Mr. Edward Mrosinski, Facemate  
Ms. Ellyn R. Wiess, Foley, Hoag & Eliot

SIGNED: [Signature]





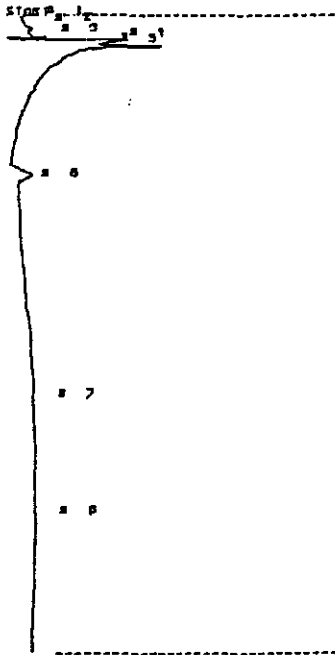
TABLE 1  
SOIL GAS SURVEY RESULTS - VICINITY OF ECS-9  
JULY 31 - AUGUST 1, 1991  
FORMER UNIROYAL COMPLEX (CIP)  
CHICOPEE, MASSACHUSETTS

Document No. 3581

| <u>SAMPLE #</u> | <u>DEPTH (in feet) <sup>1</sup></u> | <u>RESULT <sup>2</sup></u>    |
|-----------------|-------------------------------------|-------------------------------|
| S-1             | 5.0                                 | Trace                         |
| S-2             | 3.5                                 | Trace                         |
| S-3             | 5.0                                 | Trace                         |
| S-3             | 8.0                                 | Excessive odor <sup>3</sup>   |
| S-4             | 5.0                                 | Excessive w/odor <sup>3</sup> |
| S-5             | 5.0                                 | Trace                         |
| S-6             | 5.0                                 | Trace                         |
| S-7             | 5.0                                 | Trace                         |
| S-8             | 4.0                                 | Trace                         |
| S-9             | 5.0                                 | Trace                         |
| S-9             | 8.5                                 | Present                       |
| S-10            | 4.0                                 | Excessive w/odor              |
| S-11            | 5.0                                 | Excessive w/odor              |
| S-12            | 8.0                                 | Excessive odor <sup>3</sup>   |
| S-13            | 4.5                                 | Trace                         |
| S-13            | 7.0                                 | Trace                         |
| S-14            | 7.0                                 | Trace                         |
| S-15            | 7.0                                 | Present                       |
| S-16            | 3.5                                 | Trace (two runs)              |
| S-16            | 7.5                                 | Present                       |
| S-17            | 7.0                                 | Trace                         |
| S-18            | 4.5                                 | Trace                         |
| S-19            | 5.0                                 | Trace                         |
| S-20            | 3.5                                 | Trace (two runs)              |
| S-21            | 3.5                                 | Trace                         |
| S-22            | 3.5                                 | Trace                         |
| S-23            | 1.5                                 | Trace                         |
| S-24            | 3.0                                 | Trace                         |
| S-25            | 3.5                                 | Trace                         |

1. Depths generally represent maximum depth attainable at a particular location.
2. Results were determined on a rough quantitative basis where "Trace" represents concentrations less than 100 parts per billion (ppb) total volatile organic compounds (VOCs), "Present" represents concentrations greater than 100 ppb but less than 1 part per million (ppm) total VOCs, and "Excessive" represents concentrations greater than 1 ppm total VOCs.
3. Samples from locations S-4, -10, & -11 were injected into the chromatograph in spite of exhibiting an odor of petroleum. Due to long recovery times resulting from contamination of the syringes, air tubes, and gas chromatograph, S-12, which also exhibited a distinct odor, was not injected and classified as "Excessive".

PHOTOVAC

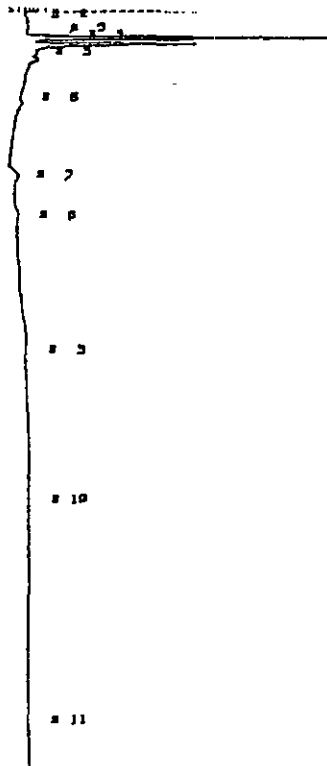


STOP # 505.1  
 SAMPLE LIBRARY 1 JUL 91 1221 11:25  
 ANALYSIS # 3 S-1 5 FT DEPTH  
 INTERNAL TEMP 23 STR #1  
 GAIN 50 CIP 00 UL

| COMPOUND NAME | PEAK | R.T.  | AREA/FTD |
|---------------|------|-------|----------|
| UNKNOWN       | 1    | 1.3   | 20.1 μS  |
| UNKNOWN       | 2    | 18.3  | 88.6 μS  |
| UNKNOWN       | 3    | 18.3  | 10.3 μS  |
| UNKNOWN       | 4    | 21.3  | 1.0 μS   |
| UNKNOWN       | 5    | 26.1  | 3.2 μS   |
| UNKNOWN       | 6    | 125.3 | 671.7 μS |
| UNKNOWN       | 7    | 203.7 | 7.3 μS   |
| UNKNOWN       | 8    | 221.6 | 2.3 μS   |

S-1  
 5 ft.

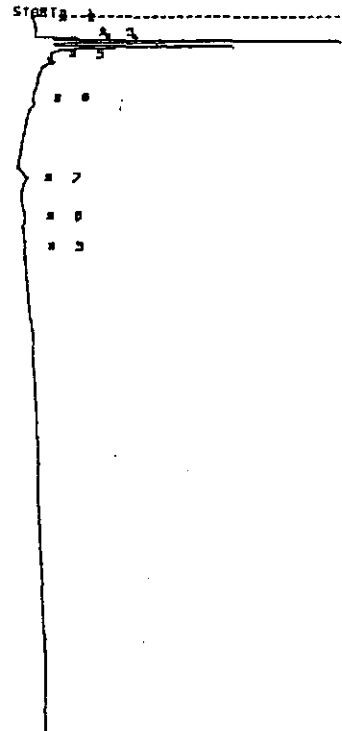
PHOTOVAC



STOP # 400.0  
 SAMPLE LIBRARY 1 JUL 91 1221 12:10  
 ANALYSIS # 10 S-2 3.5 FT  
 INTERNAL TEMP 22 STR #1  
 GAIN 50 CIP 00 UL

| COMPOUND NAME | PEAK | R.T.  | AREA/FTD |
|---------------|------|-------|----------|
| UNKNOWN       | 1    | 7.7   | 18.5 μS  |
| UNKNOWN       | 2    | 21.8  | 1.3 μS   |
| UNKNOWN       | 3    | 26.3  | 1.1 μS   |
| UNKNOWN       | 5    | 33.8  | 322.1 μS |
| UNKNOWN       | 7    | 125.3 | 320.8 μS |
| UNKNOWN       | 8    | 187.2 | 422.1 μS |
| UNKNOWN       | 9    | 221.8 | 0.3 μS   |
| UNKNOWN       | 10   | 238.8 | 6.5 μS   |

S-2  
 3.5 ft

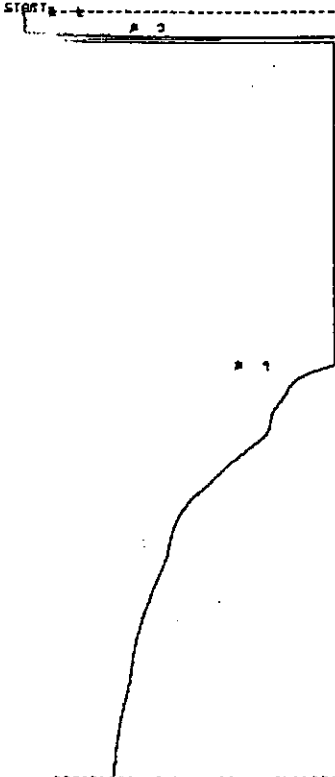


STOP # 507.5  
 SAMPLE LIBRARY 1 JUL 91 1221 12:12  
 ANALYSIS # 11 S-3 5 FT  
 INTERNAL TEMP 23 STR #1  
 GAIN 50 CIP 00 UL

| COMPOUND NAME | PEAK | R.T.  | AREA/FTD |
|---------------|------|-------|----------|
| UNKNOWN       | 1    | 7.7   | 15.3 μS  |
| UNKNOWN       | 3    | 21.1  | 2.0 μS   |
| UNKNOWN       | 4    | 28.3  | 1.3 μS   |
| UNKNOWN       | 7    | 125.3 | 313.7 μS |
| UNKNOWN       | 8    | 187.2 | 348.8 μS |
| UNKNOWN       | 9    | 138.3 | 303.7 μS |

S-3  
 5 ft

PHOTOVAC

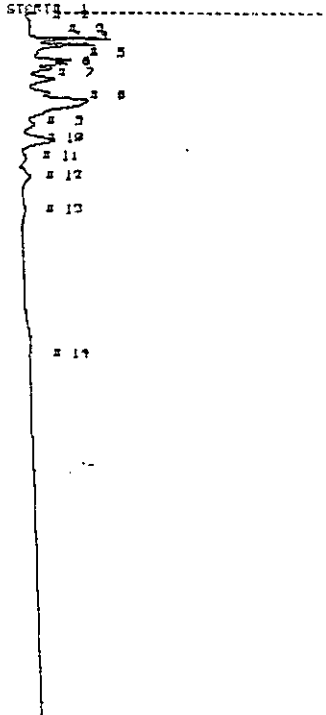


STOP # 600.0  
SAMPLE LIBRARY 1 JUL 31 1991 12:22  
ANALYSIS # 12 S-4 5 FT  
INTERNAL TEMP 23 STR 41  
RAIN SP CIP 70 UL

| COMPOUND NAME | PEAK | R.T. | AREA/PTH |
|---------------|------|------|----------|
| UNKNOWN       | 1    | 8.2  | 23.8 μG  |
| UNKNOWN       | 2    | 10.3 | 8.0 μG   |
| UNKNOWN       | 3    | 21.1 | 2.3 μG   |

S-4  
5 ft

PHOTOVAC

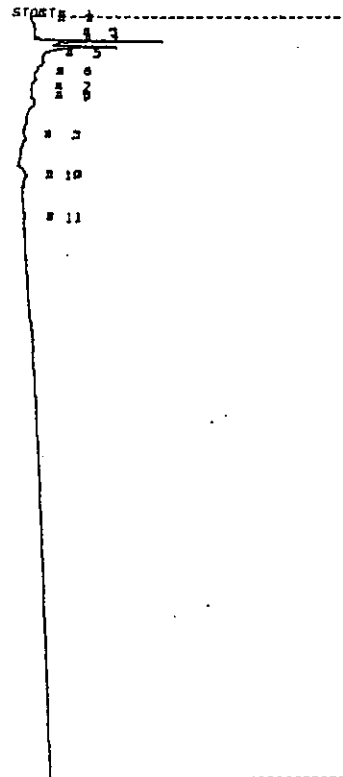


STOP # 545.0  
SAMPLE LIBRARY 1 JUL 31 1991 14: 0  
ANALYSIS # 8 S-5 5 FEET DEET  
INTERNAL TEMP 25 STRINGE 10  
RAIN SP CIP 70 UL

| COMPOUND NAME | PEAK | R.T.  | AREA/PTH |
|---------------|------|-------|----------|
| UNKNOWN       | 1    | 6.0   | 3.2 μG   |
| UNKNOWN       | 2    | 21.3  | 112.8 μG |
| UNKNOWN       | 4    | 26.7  | 510.2 μG |
| UNKNOWN       | 5    | 23.2  | 204.3 μG |
| UNKNOWN       | 6    | 46.7  | 8.5 μG   |
| UNKNOWN       | 7    | 84.7  | 228.7 μG |
| UNKNOWN       | 8    | 70.1  | 1.7 μG   |
| UNKNOWN       | 10   | 105.1 | 152.7 μG |
| UNKNOWN       | 11   | 113.3 | 8.0 μG   |
| UNKNOWN       | 12   | 155.3 | 171.0 μG |
| UNKNOWN       | 13   | 167.5 | 84.0 μG  |
| UNKNOWN       | 14   | 221.8 | 1.1 μG   |

S-5  
5 ft

PHOTOVAC

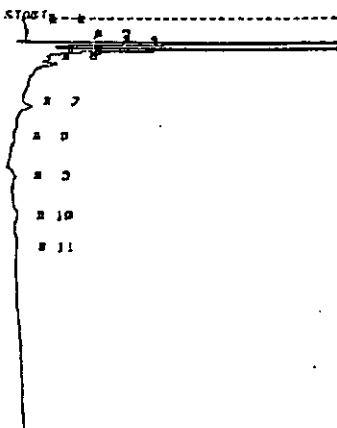


STOP # 600.0  
SAMPLE LIBRARY 1 JUL 31 1991 14:10  
ANALYSIS # 3 S-6 5 FT  
INTERNAL TEMP 25 STRINGE 10  
RAIN SP CIP 70 UL

| COMPOUND NAME | PEAK | R.T.  | AREA/PTH |
|---------------|------|-------|----------|
| UNKNOWN       | 1    | 7.1   | 17.8 μG  |
| UNKNOWN       | 2    | 10.1  | 8.2 μG   |
| UNKNOWN       | 3    | 21.7  | 812.1 μG |
| UNKNOWN       | 4    | 26.5  | 255.7 μG |
| UNKNOWN       | 5    | 39.3  | 160.1 μG |
| UNKNOWN       | 6    | 55.3  | 7.0 μG   |
| UNKNOWN       | 8    | 70.1  | 25.7 μG  |
| UNKNOWN       | 10   | 135.3 | 201.2 μG |
| UNKNOWN       | 11   | 169.1 | 217.2 μG |

S-6  
5 ft

PHOTOVAC

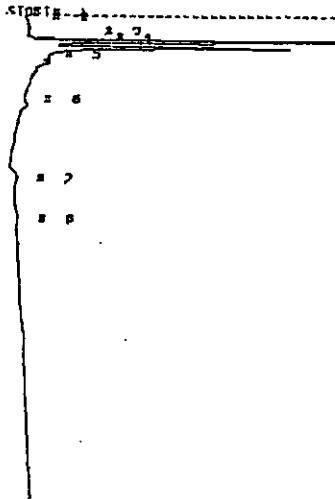


STOP # 620.4  
SAMPLE LIBRARY 1 JUL 31 1991 14:13  
ANALYSIS # 10 S-7 5 FT  
INTERNAL TEMP 23 STRINGE 10  
RAIN SP CIP 80 UL

| COMPOUND NAME | PEAK | R.T. | AREA/PTH |
|---------------|------|------|----------|
| UNKNOWN       | 1    | 8.0  | 87.1 μG  |

S-7 5 ft

PHOTOVAC

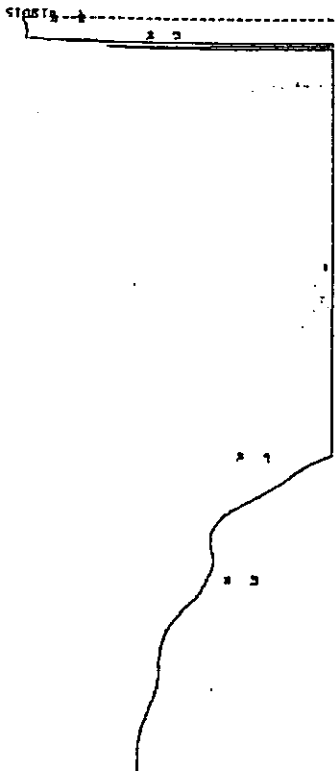


STOP # 881.0  
SAMPLE LIBRARY 1 JUL 31 1991 14:49  
ANALYSIS # 12 S-8 4 FT MAXDEPTH  
INTERNAL TEMP 23 STRINGS 20  
GAIN 50 CIP 20 UL

| COMPOUND NAME | PEAK | R.T.  | AREA/CFD |
|---------------|------|-------|----------|
| UNKNOWN       | 1    | 7.5   | 13.7 uS  |
| UNKNOWN       | 2    | 10.6  | 5.1 uS   |
| UNKNOWN       | 3    | 21.1  | 1.3 uS   |
| UNKNOWN       | 4    | 26.7  | 2.0 uS   |
| UNKNOWN       | 5    | 30.5  | 691.2 uS |
| UNKNOWN       | 7    | 128.3 | 201.3 uS |
| UNKNOWN       | 8    | 188.9 | 561.7 uS |

S-8 4 ft

PHOTOVAC

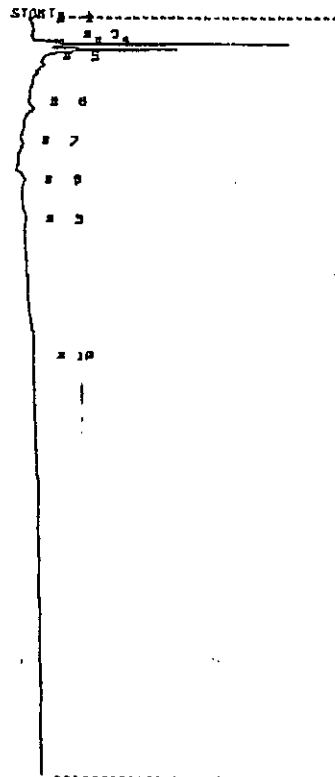


STOP # 889.0  
SAMPLE LIBRARY 1 JUL 31 1991 14:51  
ANALYSIS # 13 S-9 5 FT  
INTERNAL TEMP 25 STRINGS 20  
GAIN 50 CIP 20 UL

| COMPOUND NAME | PEAK | R.T.  | AREA/CFD |
|---------------|------|-------|----------|
| UNKNOWN       | 1    | 8.3   | 27.7 uS  |
| UNKNOWN       | 2    | 22.3  | 1.8 uS   |
| UNKNOWN       | 3    | 27.1  | 1.1 uS   |
| UNKNOWN       | 5    | 33.0  | 127.3 uS |
| UNKNOWN       | 6    | 25.3  | 87.7 uS  |
| UNKNOWN       | 8    | 128.3 | 278.1 uS |
| UNKNOWN       | 3    | 188.9 | 622.1 uS |
| UNKNOWN       | 10   | 228.4 | 1.2 uS   |

S-9 5 ft

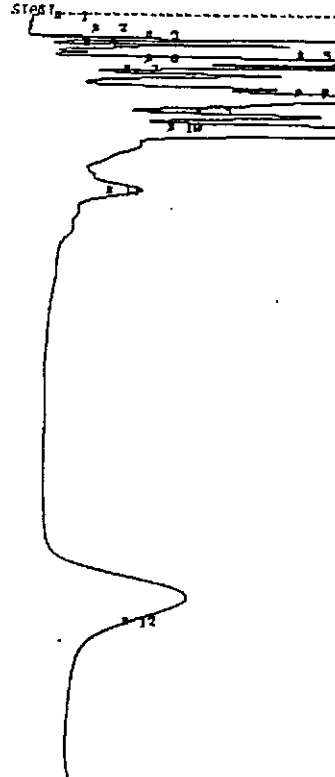
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STOP # 889.0  
SAMPLE LIBRARY 1 JUL 31 1991 14:51  
ANALYSIS # 13 S-9 5 FT  
INTERNAL TEMP 25 STRINGS 20  
GAIN 50 CIP 20 UL

| COMPOUND NAME | PEAK | R.T.  | AREA/CFD |
|---------------|------|-------|----------|
| UNKNOWN       | 1    | 8.3   | 27.7 uS  |
| UNKNOWN       | 2    | 22.3  | 1.8 uS   |
| UNKNOWN       | 3    | 27.1  | 1.1 uS   |
| UNKNOWN       | 5    | 33.0  | 127.3 uS |
| UNKNOWN       | 6    | 25.3  | 87.7 uS  |
| UNKNOWN       | 8    | 128.3 | 278.1 uS |
| UNKNOWN       | 3    | 188.9 | 622.1 uS |
| UNKNOWN       | 10   | 228.4 | 1.2 uS   |

PHOTOVAC



STOP # 889.0  
SAMPLE LIBRARY 1 AUG 1 1991 11:41  
ANALYSIS # 7 S-9 9 FT DEEP  
INTERNAL TEMP 21 STR 20  
GAIN 50 CIP 20 CIP

| COMPOUND NAME | PEAK | R.T.  | AREA/CFD |
|---------------|------|-------|----------|
| UNKNOWN       | 1    | 10.6  | 6.1 uS   |
| UNKNOWN       | 2    | 20.5  | 1.7 uS   |
| UNKNOWN       | 3    | 23.3  | 1.7 uS   |
| UNKNOWN       | 4    | 31.7  | 122.5 uS |
| UNKNOWN       | 5    | 27.8  | 3.7 uS   |
| UNKNOWN       | 8    | 12.1  | 3.6 uS   |
| UNKNOWN       | 7    | 31.1  | 3.6 uS   |
| UNKNOWN       | 8    | 87.2  | 15.1 uS  |
| UNKNOWN       | 3    | 85.5  | 5.8 uS   |
| UNKNOWN       | 10   | 31.3  | 22.2 uS  |
| UNKNOWN       | 11   | 117.3 | 17.8 uS  |
| UNKNOWN       | 12   | 185.3 | 22.7 uS  |

S-9 9 ft

S-10 4 ft

PHOTOVAC



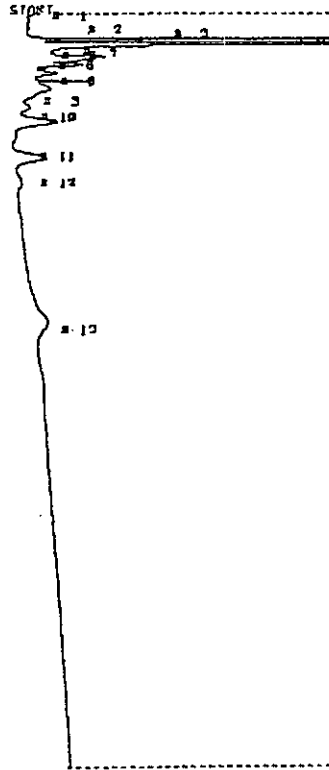
STOP # 601.0  
 SAMPLE LIBRARY I JUL 31 1991 10:0  
 ANALYSIS # 10 S-11 5 FT  
 INTERNAL TEMP 24 20 UL 0 00 ULAIN  
 GAIN 50 CIP

COMPOUND NAME PEAK R.T. AREA/CFD

| COMPOUND NAME | PEAK | R.T. | AREA/CFD |
|---------------|------|------|----------|
| UNKNOWN       | 1    | 5.1  | 25.5 US  |
| UNKNOWN       | 2    | 5.8  | 21.2 US  |
| UNKNOWN       | 3    | 5.7  | 6.1 US   |
| UNKNOWN       | 4    | 5.7  | 2.1 US   |

S-11  
 5 ft

PHOTOVAC



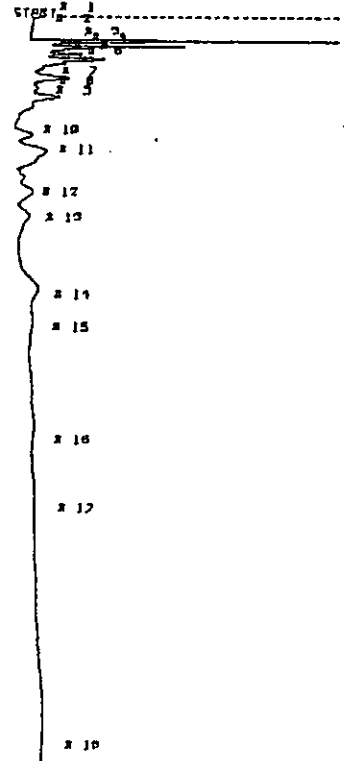
STOP # 600.0  
 SAMPLE LIBRARY I AUG 1 1991 12:00  
 ANALYSIS # 11 S-13 7 FT DEEP  
 INTERNAL TEMP 24 STR #0  
 GAIN 50 00 UL CIP

COMPOUND NAME PEAK R.T. AREA/CFD

| COMPOUND NAME | PEAK | R.T.  | AREA/CFD |
|---------------|------|-------|----------|
| UNKNOWN       | 2    | 20.0  | 2.0 US   |
| UNKNOWN       | 3    | 25.1  | 2.0 US   |
| UNKNOWN       | 4    | 23.5  | 1.2 US   |
| UNKNOWN       | 5    | 10.7  | 135.3 US |
| UNKNOWN       | 6    | 51.1  | 106.0 US |
| UNKNOWN       | 7    | 50.7  | 830.3 US |
| UNKNOWN       | 8    | 20.1  | 556.6 US |
| UNKNOWN       | 9    | 85.5  | 14.1 US  |
| UNKNOWN       | 10   | 32.5  | 591.0 US |
| UNKNOWN       | 11   | 170.0 | 103.1 US |

S-13  
 7 ft

PHOTOVAC



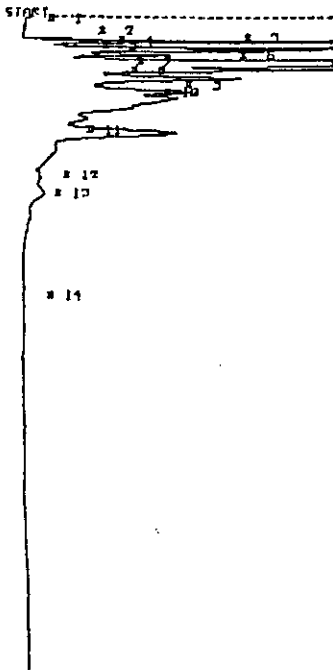
STOP # 600.0  
 SAMPLE LIBRARY I AUG 1 1991 10:0  
 ANALYSIS # 13 S-14 7 FT DEEP  
 INTERNAL TEMP 23 STR #0  
 GAIN 50 00 UL CIP

COMPOUND NAME PEAK R.T. AREA/CFD

| COMPOUND NAME | PEAK | R.T.  | AREA/CFD |
|---------------|------|-------|----------|
| UNKNOWN       | 2    | 10.4  | 2.2 US   |
| UNKNOWN       | 3    | 20.7  | 1.2 US   |
| UNKNOWN       | 4    | 25.3  | 322.6 US |
| UNKNOWN       | 5    | 31.7  | 122.0 US |
| UNKNOWN       | 6    | 26.2  | 300.0 US |
| UNKNOWN       | 7    | 31.5  | 556.0 US |
| UNKNOWN       | 8    | 60.1  | 31.5 US  |
| UNKNOWN       | 9    | 67.6  | 332.5 US |
| UNKNOWN       | 10   | 50.3  | 322.6 US |
| UNKNOWN       | 11   | 113.4 | 1.3 US   |
| UNKNOWN       | 12   | 142.0 | 802.3 US |
| UNKNOWN       | 13   | 102.2 | 203.6 US |
| UNKNOWN       | 14   | 222.1 | 1.3 US   |
| UNKNOWN       | 15   | 231.0 | 1.0 US   |
| UNKNOWN       | 16   | 210.0 | 4.1 US   |
| UNKNOWN       | 17   | 222.5 | 2.0 US   |

S-14  
 7 ft

PHOTOVAC

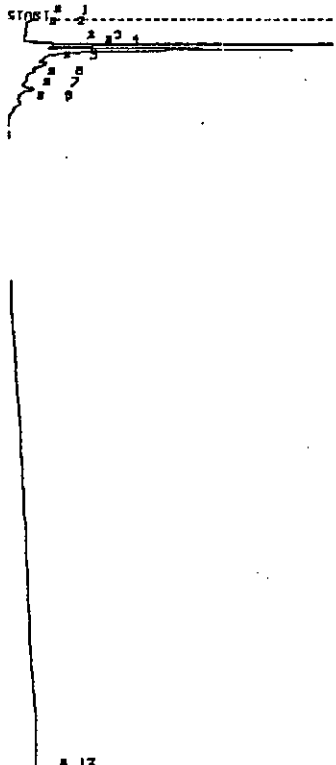


STOP # 515.2  
 SAMPLE LIBRARY J AUG 1 1991 14113  
 ANALYSIS # 12 S-15 7 FT DEEP  
 INTERNAL TEMP 23 STR 23  
 GAIN 58 20 UL CIF

| COMPOUND NAME | PEAK | R.T.  | AREA/FTD  |
|---------------|------|-------|-----------|
| UNKNOWN       | 2    | 29.7  | 1.6 US    |
| UNKNOWN       | 3    | 21.3  | 1.7 US    |
| UNKNOWN       | 4    | 22.1  | 1.1 US    |
| UNKNOWN       | 5    | 31.4  | 1.2 US    |
| UNKNOWN       | 6    | 36.6  | 0.7 US    |
| UNKNOWN       | 7    | 42.8  | 2.7 US    |
| UNKNOWN       | 8    | 59.7  | 3.6 US    |
| UNKNOWN       | 9    | 61.6  | 3.1 US    |
| UNKNOWN       | 10   | 62.6  | 5.5 US    |
| UNKNOWN       | 11   | 36.8  | 1.3 US    |
| UNKNOWN       | 12   | 127.3 | 121.1 μUS |
| UNKNOWN       | 14   | 228.7 | 23.3 μUS  |

S-15  
7 ft

PHOTOVAC

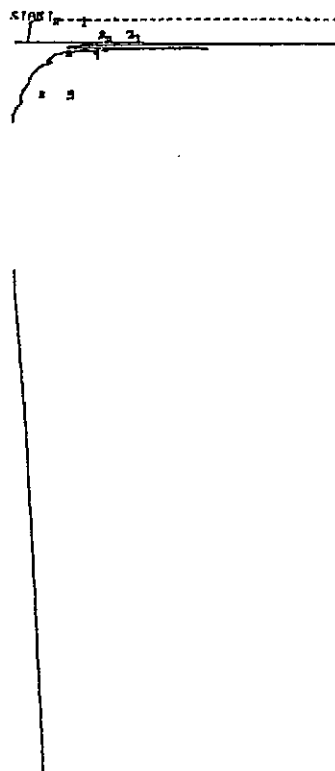


STOP # 699.9  
 SAMPLE LIBRARY J AUG 1 1991 15122  
 ANALYSIS # 20 S-16 3.5 FT DEEP  
 INTERNAL TEMP 24 STR 23  
 GAIN 58 25 UL CIF

| COMPOUND NAME | PEAK | R.T. | AREA/FTD  |
|---------------|------|------|-----------|
| UNKNOWN       | 2    | 29.7 | 1.3 US    |
| UNKNOWN       | 1    | 25.7 | 1.3 US    |
| UNKNOWN       | 5    | 37.4 | 235.5 μUS |
| UNKNOWN       | 7    | 59.7 | 33.2 μUS  |

S-16  
3.5 ft

PHOTOVAC

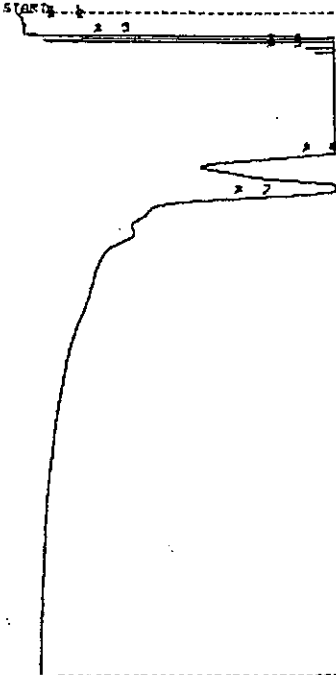


STOP # 699.9  
 SAMPLE LIBRARY J AUG 1 1991 15124  
 ANALYSIS # 20 S-16 3.5 FT  
 INTERNAL TEMP 24 STR #1  
 GAIN 58 25 UL CIF

| COMPOUND NAME | PEAK | R.T.  | AREA/FTD  |
|---------------|------|-------|-----------|
| UNKNOWN       | 2    | 29.7  | 1.6 US    |
| UNKNOWN       | 3    | 25.7  | 1.5 US    |
| UNKNOWN       | 1    | 37.1  | 207.6 μUS |
| UNKNOWN       | 6    | 124.3 | 171.5 μUS |
| UNKNOWN       | 7    | 124.0 | 30.5 μUS  |

S-16  
3.5 ft

PHOTOVAC



STOP # 321.3  
SAMPLE LIBRARY 1 AUG 2 1991 11:22  
ANALYSIS # 2 S-16 7.5 FT DEEP  
INTERNAL TEMP 28 80 UL  
GAIN 50 STR #2 CIF

| COMPOUND NAME | PEAK | R.T.  | AREA/FTD |
|---------------|------|-------|----------|
| UNKNOWN       | 1    | 2.1   | 23.8 UG  |
| UNKNOWN       | 2    | 18.6  | 11.5 UG  |
| UNKNOWN       | 3    | 28.3  | 2.9 UG   |
| UNKNOWN       | 4    | 29.8  | 6.1 UG   |
| UNKNOWN       | 5    | 36.8  | 1.7 UG   |
| UNKNOWN       | 6    | 25.7  | 198.3 UG |
| UNKNOWN       | 7    | 145.6 | 31.2 UG  |

S-16  
7.5 ft

PHOTOVAC

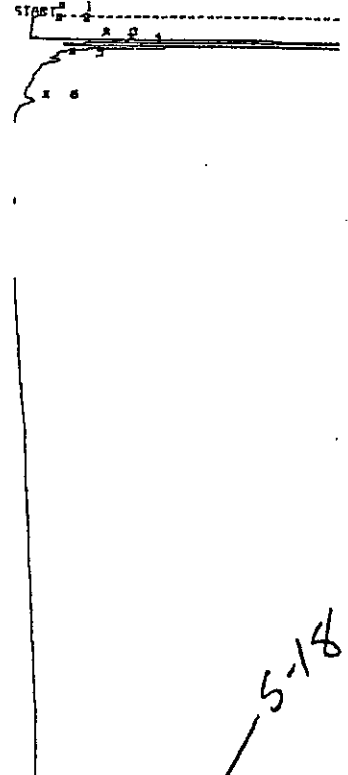


STOP # 600.0  
SAMPLE LIBRARY 1 AUG 1 1991 16:43  
ANALYSIS # 3 S-17 7 FT DEEP  
INTERNAL TEMP 25 STR #1 25 UL  
GAIN 50

| COMPOUND NAME | PEAK | R.T.  | AREA/FTD |
|---------------|------|-------|----------|
| UNKNOWN       | 1    | 28.1  | 1.7 UG   |
| UNKNOWN       | 2    | 25.7  | 1.1 UG   |
| UNKNOWN       | 3    | 121.3 | 121.8 UG |
| UNKNOWN       | 4    | 154.8 | 63.6 UG  |
| UNKNOWN       | 5    | 174.1 | 78.8 UG  |

S-17  
7 ft

PHOTOVAC

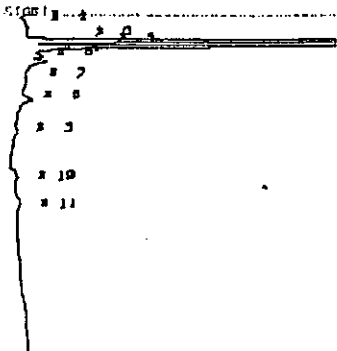


STOP # 600.0  
SAMPLE LIBRARY 1 AUG 1 1991 12:17  
ANALYSIS # 1 S-18 4.5 FT DEEP  
INTERNAL TEMP 24 STR #1 25 UL  
GAIN 50 CIF

| COMPOUND NAME | PEAK | R.T.  | AREA/FTD |
|---------------|------|-------|----------|
| UNKNOWN       | 1    | 28.3  | 2.1 UG   |
| UNKNOWN       | 2    | 25.2  | 2.1 UG   |
| UNKNOWN       | 3    | 121.1 | 632.1 UG |
| UNKNOWN       | 4    | 133.1 | 113.3 UG |
| UNKNOWN       | 5    | 153.7 | 298.8 UG |
| UNKNOWN       | 6    | 173.2 | 13.5 UG  |

S-18  
4.5 ft

PHOTOVAC



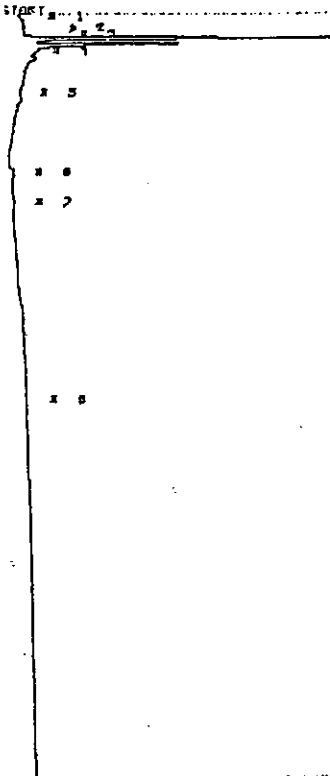
STOP # 287.1  
SAMPLE LIBRARY 1 AUG 2 1991 11:58  
ANALYSIS # 8 S-19 5 FT DEEP  
INTERNAL TEMP 22 SUCTSYS IN ANLTS  
GAIN 50 #1 80UL STR #2

| COMPOUND NAME | PEAK | R.T.  | AREA/FTD |
|---------------|------|-------|----------|
| UNKNOWN       | 1    | 8.5   | 18.8 UG  |
| UNKNOWN       | 2    | 10.3  | 8.5 UG   |
| UNKNOWN       | 3    | 28.1  | 2.9 UG   |
| UNKNOWN       | 4    | 28.3  | 1.7 UG   |
| UNKNOWN       | 5    | 29.8  | 145.3 UG |
| UNKNOWN       | 6    | 32.4  | 11.1 UG  |
| UNKNOWN       | 7    | 31.2  | 14.1 UG  |
| UNKNOWN       | 8    | 25.7  | 111.1 UG |
| UNKNOWN       | 9    | 121.3 | 121.8 UG |
| UNKNOWN       | 10   | 154.8 | 63.6 UG  |
| UNKNOWN       | 11   | 174.1 | 78.8 UG  |

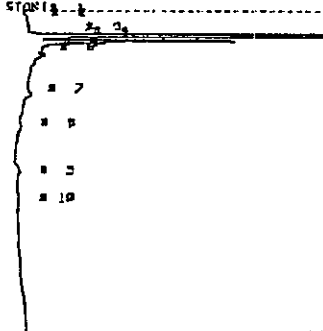
S-19  
5 ft



PHOTOVAC



PHOTOVAC

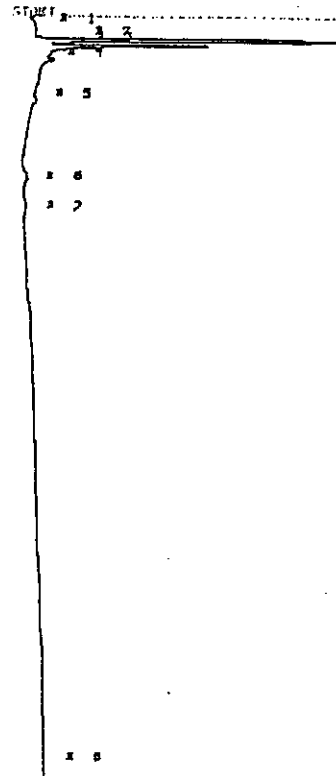


START # 755.7  
SAMPLE LIBRARY 1 AUG 2 1991 13101  
ANALYSIS # 11 S-20 3.5 FT  
INTERNAL TEMP 25 99 UL  
RAIN 50 STR #3 2nd RUN

| COMPOUND NAME | PEAK | R.T.  | AREA/HT   |
|---------------|------|-------|-----------|
| UNKNOWN       | 1    | 7.9   | 17.7 AUS  |
| UNKNOWN       | 2    | 20.9  | 2.1 US    |
| UNKNOWN       | 3    | 25.7  | 1.2 US    |
| UNKNOWN       | 5    | 31.2  | 151.2 AUS |
| UNKNOWN       | 6    | 37.1  | 228.2 AUS |
| UNKNOWN       | 7    | 70.1  | 62.4 AUS  |
| UNKNOWN       | 8    | 131.3 | 165.3 AUS |
| UNKNOWN       | 10   | 135.3 | 130.9 AUS |

S-20  
3.5 ft

PHOTOVAC



START # 600.0  
SAMPLE LIBRARY 1 AUG 2 1991 191 7  
ANALYSIS # 15 S-22 3.5 FT DEEP  
INTERNAL TEMP 25 STR #2 99 UL  
RAIN 50 CIP

| COMPOUND NAME | PEAK | R.T.  | AREA/HT   |
|---------------|------|-------|-----------|
| UNKNOWN       | 1    | 10.0  | 50.1 AUS  |
| UNKNOWN       | 2    | 20.9  | 1.2 US    |
| UNKNOWN       | 3    | 25.7  | 1.1 US    |
| UNKNOWN       | 4    | 31.2  | 151.2 AUS |
| UNKNOWN       | 5    | 37.1  | 228.2 AUS |
| UNKNOWN       | 6    | 70.1  | 62.4 AUS  |
| UNKNOWN       | 7    | 131.3 | 165.3 AUS |
| UNKNOWN       | 8    | 135.3 | 130.9 AUS |

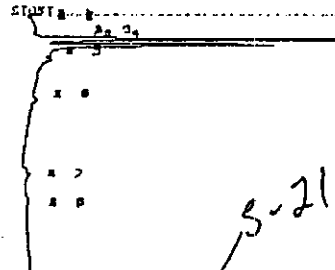
S-22  
3.5 ft

START # 600.0  
SAMPLE LIBRARY 1 AUG 2 1991 12124  
ANALYSIS # 3 S-20 3.5 FT DEEP  
INTERNAL TEMP 25 99 UL U, 20 FT  
RAIN 50 TUBE STR #2 CIP

| COMPOUND NAME | PEAK | R.T.  | AREA/HT   |
|---------------|------|-------|-----------|
| UNKNOWN       | 1    | 10.0  | 50.1 AUS  |
| UNKNOWN       | 2    | 20.9  | 1.2 US    |
| UNKNOWN       | 3    | 25.7  | 1.1 US    |
| UNKNOWN       | 4    | 31.2  | 151.2 AUS |
| UNKNOWN       | 5    | 37.1  | 228.2 AUS |
| UNKNOWN       | 6    | 70.1  | 62.4 AUS  |
| UNKNOWN       | 7    | 131.3 | 165.3 AUS |
| UNKNOWN       | 8    | 135.3 | 130.9 AUS |

S-20  
3.5 ft

PHOTOVAC

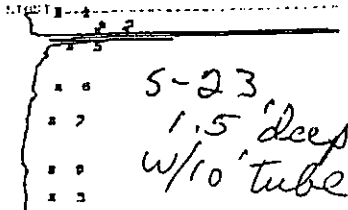


START # 600.0  
SAMPLE LIBRARY 1 AUG 2 1991 10104  
ANALYSIS # 12 S-20 3.5 FT  
INTERNAL TEMP 25 99 UL  
RAIN 50 STR #3 2nd RUN

| COMPOUND NAME | PEAK | R.T.  | AREA/HT   |
|---------------|------|-------|-----------|
| UNKNOWN       | 1    | 10.0  | 50.1 AUS  |
| UNKNOWN       | 2    | 20.9  | 1.2 US    |
| UNKNOWN       | 3    | 25.7  | 1.1 US    |
| UNKNOWN       | 4    | 31.2  | 151.2 AUS |
| UNKNOWN       | 5    | 37.1  | 228.2 AUS |
| UNKNOWN       | 6    | 70.1  | 62.4 AUS  |
| UNKNOWN       | 7    | 131.3 | 165.3 AUS |
| UNKNOWN       | 8    | 135.3 | 130.9 AUS |

S-21  
3.5 ft

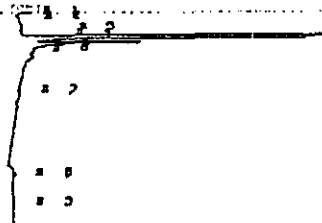
# PHOTOVAC



STEP # 125.0  
 SAMPLE LIBRARY 1 AUG 2 1991 1415  
 ANALYSIS # 16 S-23 0.5 FT DEEP  
 INTERNAL TEMP 21 STR 42 00 UL  
 GAIN SP CIP

| COMPOUND NAME | PEAK | R.T.  | AREA/PPM |
|---------------|------|-------|----------|
| UNKNOWN       | 1    | 11.1  | 10.0     |
| UNKNOWN       | 2    | 12.2  | 6.3      |
| UNKNOWN       | 3    | 23.1  | 225.6    |
| UNKNOWN       | 4    | 26.7  | 286.6    |
| UNKNOWN       | 5    | 38.3  | 178.0    |
| UNKNOWN       | 6    | 63.1  | 1.1      |
| UNKNOWN       | 7    | 124.2 | 35.6     |
| UNKNOWN       | 8    | 258.6 | 265.2    |

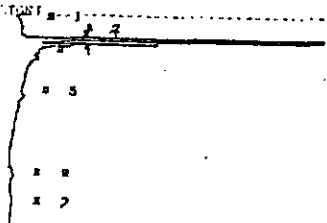
# PHOTOVAC



STEP # 267.0  
 SAMPLE LIBRARY 1 AUG 2 1991 1415  
 ANALYSIS # 13 S-24 0 FT DEEP  
 INTERNAL TEMP 21 STR 42 00 UL  
 GAIN SP 20 FT TUBE

| COMPOUND NAME | PEAK | R.T.  | AREA/PPM |
|---------------|------|-------|----------|
| UNKNOWN       | 1    | 11.1  | 10.0     |
| UNKNOWN       | 2    | 12.2  | 6.3      |
| UNKNOWN       | 3    | 23.1  | 225.6    |
| UNKNOWN       | 4    | 26.7  | 286.6    |
| UNKNOWN       | 5    | 38.3  | 178.0    |
| UNKNOWN       | 6    | 63.1  | 1.1      |
| UNKNOWN       | 7    | 124.2 | 35.6     |
| UNKNOWN       | 8    | 258.6 | 265.2    |

# PHOTOVAC



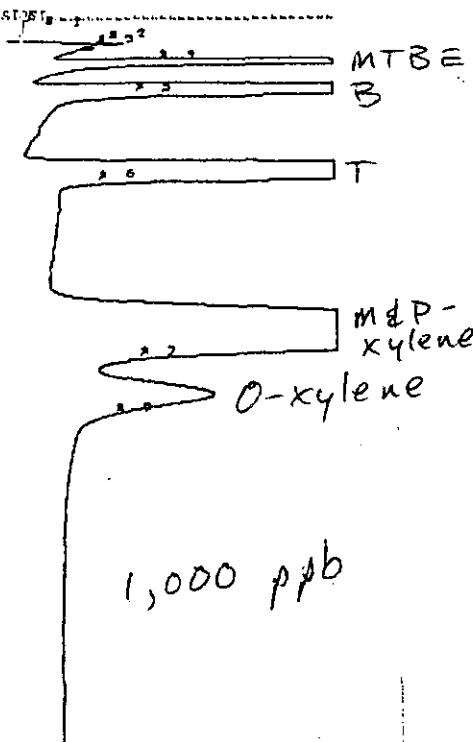
STEP # 101.0  
 SAMPLE LIBRARY 1 AUG 2 1991 1310  
 ANALYSIS # 22 S-25 0.5 FT DEEP  
 INTERNAL TEMP 22 STR 42 00 UL  
 GAIN SP 20 FT TUBE

| COMPOUND NAME | PEAK | R.T.  | AREA/PPM |
|---------------|------|-------|----------|
| UNKNOWN       | 1    | 11.1  | 10.0     |
| UNKNOWN       | 2    | 12.2  | 6.3      |
| UNKNOWN       | 3    | 23.1  | 225.6    |
| UNKNOWN       | 4    | 26.7  | 286.6    |
| UNKNOWN       | 5    | 38.3  | 178.0    |
| UNKNOWN       | 6    | 63.1  | 1.1      |
| UNKNOWN       | 7    | 124.2 | 35.6     |
| UNKNOWN       | 8    | 258.6 | 265.2    |

STEP # 101.0  
 SAMPLE LIBRARY 1 AUG 2 1991 1310  
 ANALYSIS # 22 S-25 0.5 FT DEEP  
 INTERNAL TEMP 22 STR 42 00 UL  
 GAIN SP 20 FT TUBE

| COMPOUND NAME | PEAK | R.T.  | AREA/PPM |
|---------------|------|-------|----------|
| UNKNOWN       | 1    | 11.1  | 10.0     |
| UNKNOWN       | 2    | 12.2  | 6.3      |
| UNKNOWN       | 3    | 23.1  | 225.6    |
| UNKNOWN       | 4    | 26.7  | 286.6    |
| UNKNOWN       | 5    | 38.3  | 178.0    |
| UNKNOWN       | 6    | 63.1  | 1.1      |
| UNKNOWN       | 7    | 124.2 | 35.6     |
| UNKNOWN       | 8    | 258.6 | 265.2    |

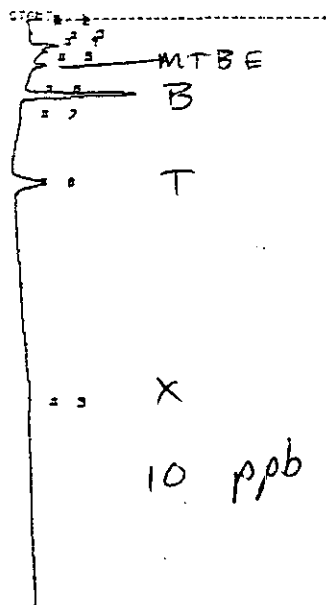
# PHOTOVAC



STEP # 320.5  
 SAMPLE LIBRARY 1 AUG 1 1991 1210  
 ANALYSIS # 11 S-20.5 1.000  
 INTERNAL TEMP 21 STR 42 00  
 GAIN SP CIP

| COMPOUND NAME | PEAK | R.T.  | AREA/PPM |
|---------------|------|-------|----------|
| UNKNOWN       | 2    | 21.7  | 359.5    |
| UNKNOWN       | 3    | 24.3  | 1.2      |
| UNKNOWN       | 4    | 38.1  | 0.5      |
| UNKNOWN       | 5    | 58.1  | 15.6     |
| UNKNOWN       | 6    | 124.2 | 35.6     |
| UNKNOWN       | 7    | 258.6 | 265.2    |

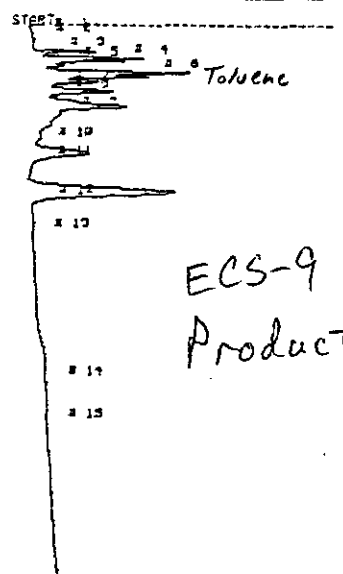
# PHOTOVAC



STEP # 105.5  
 SAMPLE LIBRARY 1 JUL 31 1991 1110  
 ANALYSIS # 6 S-19.5 1.000  
 INTERNAL TEMP 21 STR 42 00 UL  
 GAIN SP

| COMPOUND NAME | PEAK | R.T.  | AREA/PPM |
|---------------|------|-------|----------|
| UNKNOWN       | 1    | 8.1   | 23.0     |
| UNKNOWN       | 2    | 10.8  | 5.0      |
| UNKNOWN       | 3    | 21.2  | 225.6    |
| UNKNOWN       | 4    | 26.7  | 286.6    |
| UNKNOWN       | 5    | 38.3  | 178.0    |
| UNKNOWN       | 6    | 63.1  | 1.1      |
| UNKNOWN       | 7    | 124.2 | 35.6     |
| UNKNOWN       | 8    | 258.6 | 265.2    |

# PHOTOVAC



STEP # 120.0  
 SAMPLE LIBRARY 1 JUL 31 1991 1110  
 ANALYSIS # 2 S-9 2.0 UL AIR 00  
 INTERNAL TEMP 21 STR 42  
 GAIN SP

| COMPOUND NAME | PEAK | R.T.  | AREA/PPM |
|---------------|------|-------|----------|
| UNKNOWN       | 1    | 7.3   | 24.6     |
| UNKNOWN       | 2    | 12.2  | 6.3      |
| UNKNOWN       | 3    | 23.1  | 225.6    |
| UNKNOWN       | 4    | 27.3  | 686.2    |
| UNKNOWN       | 5    | 38.3  | 643.3    |
| UNKNOWN       | 6    | 40.1  | 1.1      |
| UNKNOWN       | 7    | 47.3  | 5.9      |
| UNKNOWN       | 8    | 55.5  | 121.3    |
| UNKNOWN       | 9    | 60.1  | 1.5      |
| UNKNOWN       | 11   | 108.2 | 310.2    |
| UNKNOWN       | 12   | 127.3 | 3.9      |
| UNKNOWN       | 13   | 167.6 | 223.1    |
| UNKNOWN       | 14   | 227.5 | 2.8      |
| UNKNOWN       | 15   | 393.7 | 2.1      |

LISA

FOLEY, HOAG & ELIOT

1615 L STREET, N.W.  
WASHINGTON, D.C. 20036  
TELEPHONE (202) 775-0600  
TELECOPIER (202) 857-0140

IN BOSTON  
ONE POST OFFICE SQUARE  
BOSTON, MASSACHUSETTS 02109  
TELEPHONE: (617) 482-1390  
CABLE ADDRESS "FOLEYHOAG"  
TELECOPIER (617) 482-7347  
TELEX 940693

August 8, 1991

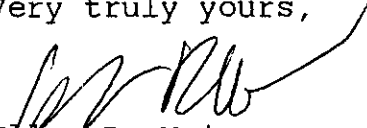
Ms. Lisa Jones  
Bureau of Waste Site Cleanup  
Department of Environmental Protection  
Western Region  
436 Dwight Street  
Springfield, MA 01103

RECEIVED  
AUG 14 1991  
D.E.P.  
Western Region

Re: Chicopee #1-0436  
Former Uniroyal Complex

Dear Lisa:

I apologize for the delay in responding to your inquiry about the TSI documentation at this site. I have passed your questions on to TSI. I am going on vacation to return on August 26 and will resolve your question as soon as I return. I hope this does not inconvenience you greatly.

Very truly yours,  
  
Elynn R. Weiss

ERW/ad

1-0436



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203-2211

August 6, 1991

RECEIVED

AUG 07 1991

Mr. Harish Panchal  
Bureau of Waste Site Cleanup  
Department of Environmental Protection  
One Winter Street, Fifth Floor  
Boston, MA 02108

DEP  
Western Region

Dear Harish:

I have reviewed the draft Preliminary Assessment report for the former Uniroyal Complex in Chicopee, MA (MAD001122944), and have no comments. This is an excellent MSCA product and I commend the report author for her thoroughness and clarity of presentation. I concur with the state's recommendation for continued investigation of this site under CERCLA (high priority Site Inspection recommended). I will enter this PA into CERCLIS as complete with the state's recommendation for further CERCLA assessment.

If you have any questions or comments, I may be reached at (617) 573-9697.

Sincerely,

*Nancy Smith*

Nancy Smith  
MA Site Assessment Manager

cc: Lisa Jones, DEP WRO





DANIEL S. GREENBAUM  
Commissioner  
JOHN J. HIGGINS  
Regional Director

*The Commonwealth of Massachusetts*

*Executive Office of Environmental Affairs*

*Department of Environmental Protection*

*Western Region*

*436 Dwight Street, Springfield, Mass. 01103*

*(413) 784-1100*

August 6, 1991

Mr. Ed Mrozinski  
Facemate Corporation  
5 West Main Street  
Chicopee, MA 01020

Re: Chicopee 1-0436  
Former Uniroyal Complex  
154 Grove Street

**APPROVAL OF SHORT TERM MEASURES**

Dear Mr. Mrozinski:

The Department of Environmental Protection has received and reviewed a letter regarding "Addendum to Proposal for Short Term Measures". This letter was submitted on your behalf by Environmental Compliance Services, Inc. (ECS) and is dated July 24, 1991.

The Department approves the Short Term Measures proposed in the June 17, 1991 letter from ECS with the revisions as stated in the July 24, 1991 addendum.

Thank you for your cooperation.

Very truly yours,

Stephen F. Joyce,  
Regional Engineer  
Bureau of Waste Site Cleanup

LJ/lj  
WSC042s\uniroyal.st2

cc: Sarah Walen, Environmental Compliance Services, Inc.  
Cpt. Czepiel, Chicopee Fire Dept.  
Mayor of Chicopee  
Frank Rueli, City Engineer, Chicopee  
Chicopee Board of Health  
Jeanne Kidwell, Chicopee Community Development Office  
Attorney for Facemate: Ellyn Weiss, Foley, Hoag & Eliot  
Attorney for Uniroyal: Thomas Harrison, Day, Berry, & Howard



DANIEL S. GREENBAUM  
Commissioner  
JOHN J. HIGGINS  
Regional Director

*The Commonwealth of Massachusetts*

*Executive Office of Environmental Affairs*

*Department of Environmental Protection*

*Western Region*

*436 Dwight Street, Springfield, Mass. 01103*

*(413) 784-1100*

August 6, 1991

Mr. Ed Mrozinski  
Facemate Corporation  
5 West Main Street  
Chicopee, MA 01020

Re: Chicopee # 1-0436  
Former Uniroyal Complex  
154 Grove Street

Acknowledgement of Receipt of Reports

Dear Mr. Mrozinski:

The Department of Environmental Protection has received a package of inspection reports, invoices, and manifests from your attorney, Ellyn Weiss. The package contains the requested information pertaining to the inspection and servicing of transformers by your contractor Transformer Services, Inc.

The Department is currently reviewing the submitted information in conjunction with the Phase I review now in progress.

Thank you for your cooperation.

Very truly yours,

Stephen F. Joyce,  
Regional Engineer  
Bureau of Waste Site Cleanup

LJ/lj  
WSC042s/uniroyal.tsi

cc: Attorney for Facemate: Ellyn Weiss, Foley, Hoag & Eliot  
Sarah Walen, Environmental Compliance Services, Inc.  
Cpt. Czepiel, Chicopee Fire Dept.  
Mayor of Chicopee  
Frank Rueli, City Engineer, Chicopee  
Chicopee Board of Health  
Jeanne Kidwell, Chicopee Community Development Office  
Attorney for Uniroyal: Thomas Harrison, Day, Berry, & Howard,  
City Place, Hartford, CT 06103-3499

OUT

| OUT TO         | FILE NUMBER OR NAME OUT   | DATE            | OUT TO | FILE NUMBER OR NAME OUT | DATE | OUT TO | FILE NUMBER OR NAME OUT | DATE |
|----------------|---------------------------|-----------------|--------|-------------------------|------|--------|-------------------------|------|
| <del>AK</del>  | <del>1-11978</del>        | <del>2/12</del> |        |                         |      |        |                         |      |
| <del>SPR</del> | <del>1-10995</del>        | <del>2/26</del> |        |                         |      |        |                         |      |
| <del>IT</del>  | <del>1-122</del>          | <del>2/17</del> |        |                         |      |        |                         |      |
| <del>BAK</del> | <del>1-0177</del>         | <del>2/17</del> |        |                         |      |        |                         |      |
| LMH            | 1-152 BAO                 | 3/27            |        |                         |      |        |                         |      |
| KP             | 8582                      | 4/22            |        |                         |      |        |                         |      |
| KF             | 1-0906                    | 5/6             |        |                         |      |        |                         |      |
| KIC            | 1064                      | 5/24            |        |                         |      |        |                         |      |
| KK             | 1-0482                    | 11/20/71        |        |                         |      |        |                         |      |
| <del>AK</del>  | <del>588</del>            | <del>2/4</del>  |        |                         |      |        |                         |      |
| <del>AK</del>  | <del>1-0527</del>         | <del>4/20</del> |        |                         |      |        |                         |      |
| <del>AK</del>  | <del>10734</del>          | <del>6/19</del> |        |                         |      |        |                         |      |
| <del>AK</del>  | <del>1-11120</del>        | <del>6/14</del> |        |                         |      |        |                         |      |
| KF             | 1-12549                   | 6/16            |        |                         |      |        |                         |      |
| MRS            | Norton 1-901 + report     | 6/17            |        |                         |      |        |                         |      |
| <del>AK</del>  | <del>1-1503</del>         | <del>6/10</del> |        |                         |      |        |                         |      |
| Abby           | 1-15502                   | 8/5             |        |                         |      |        |                         |      |
| <del>AK</del>  | <del>1-14117</del>        | <del>5/10</del> |        |                         |      |        |                         |      |
| <del>AK</del>  | <del>1-00173</del>        | <del>9/14</del> |        |                         |      |        |                         |      |
| <del>AK</del>  | <del>1-00160 Report</del> | <del>9/28</del> |        |                         |      |        |                         |      |
| <del>AK</del>  | <del>1063</del>           | <del>1-11</del> |        |                         |      |        |                         |      |



# OUT












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|--------------------------|--|--------------------|--------|---|--------|--------|-------------------------|------|
| <del>587</del>           | <del>1-10357-Orange</del>                  | <del>4/29</del>    | PL     | H2835   | 7/18   |        |                         |      |
| ANK                      | 1-0202, South Field Rd                     | 8/19               | Ball   | 1-179   | 12/20  |        |                         |      |
| <del>588</del>           | <del>1-11228</del>                         | <del>9/14</del>    | LSH    | 1-0749 P.I. I   | 5/6    |        |                         |      |
| Edith                    | 1-11328                                    | 11/12              | KR     | 1-0436 KCSA, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009 | 8/6/09 |        |                         |      |
| 258                      | 1-11325                                    | 4/12               |        |   |        |        |                         |      |
| <del>1-0215 CURROR</del> | <del>1-0215 CURROR</del>                   | <del>1/29</del>    |        |   |        |        |                         |      |
| <del>1-0201</del>        | <del>1-0201</del>                          | <del>1/29</del>    |        |   |        |        |                         |      |
| <del>1-0210</del>        | <del>1-0210</del>                          | <del>2/1/04</del>  |        |   |        |        |                         |      |
| EMH                      | 1-719 R.C.                                 | 12/21              |        |   |        |        |                         |      |
| KE                       | 1-0931 Car                                 | 7/3/01             |        |   |        |        |                         |      |
| KE                       | 1-0617 Spud                                | 3/7/02             |        |   |        |        |                         |      |
| KE                       | 1-1064                                     | 5/20               |        |   |        |        |                         |      |
| KE                       | 1-0549                                     | 12/04              |        |   |        |        |                         |      |
| BS                       | 1-0816 - Phil                              | 9/28/04            |        |   |        |        |                         |      |
| KE                       | 1-0405 <sup>STH</sup> <sub>ASSASSINE</sub> | 10/7               |        |   |        |        |                         |      |
| <del>PN</del>            | <del>1-0214</del>                          | <del>10/7</del>    |        |   |        |        |                         |      |
| <del>1-0214</del>        | <del>1-0214</del>                          | <del>1/31</del>    |        |   |        |        |                         |      |
| ABA                      | 493  |                    |        |   |        |        |                         |      |
| AT                       | 1-11914                                    |                    |        |   |        |        |                         |      |
| PE                       | 1-12483                                    | 4/28               |        |   |        |        |                         |      |
| <del>1-11162</del>       | <del>1-11162</del>                         | <del>4/15/05</del> |        |   |        |        |                         |      |
| <del>1-12934</del>       | <del>1-12934</del>                         | <del>3/21</del>    |        |   |        |        |                         |      |
| KE                       | 1-12644                                    | 8/2/05             |        |   |        |        |                         |      |
| MR                       | 1-0160 (Ph. III)                           | 12/15              |        |   |        |        |                         |      |











Volume I

|               |           |                |                     |
|---------------|-----------|----------------|---------------------|
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| 218311 ✓      | 3,727 KB  | Adobe Acrob... | 9/10/2004 3:23 PM   |
| 218382 Rev. 2 | 611 KB    | Adobe Acrob... | 1/21/2005 3:54 PM   |
| 218382 Rev    | 646 KB    | Adobe Acrob... | 10/19/2004 10:50 AM |
| 218382 ✓      | 3,174 KB  | Adobe Acrob... | 9/10/2004 3:30 PM   |
| 218419 Rev    | 1,003 KB  | Adobe Acrob... | 10/19/2004 10:49 AM |
| 218419 ✓      | 2,631 KB  | Adobe Acrob... | 9/10/2004 10:19 AM  |
| 218452 Rev    | 762 KB    | Adobe Acrob... | 10/19/2004 2:57 PM  |
| 218452 ✓      | 4,843 KB  | Adobe Acrob... | 9/17/2004 3:08 PM   |
| 218494 Rev    | 985 KB    | Adobe Acrob... | 10/29/2004 1:50 PM  |
| 218494 ✓      | 5,744 KB  | Adobe Acrob... | 9/16/2004 4:39 PM   |
| 218556 Rev.   | 3,196 KB  | Adobe Acrob... | 10/19/2004 1:30 PM  |
| 218556 Rev2   | 403 KB    | Adobe Acrob... | 10/22/2004 12:54 PM |
| 218556 ✓      | 9,048 KB  | Adobe Acrob... | 10/5/2004 9:43 AM   |
| 218600 Rev 2  | 7,019 KB  | Adobe Acrob... | 11/15/2004 9:13 AM  |
| 218600 Rev    | 3,656 KB  | Adobe Acrob... | 10/29/2004 1:54 PM  |
| 218600 ✓      | 13,453 KB | Adobe Acrob... | 10/6/2004 9:43 AM   |
| 218613 Rev    | 1,345 KB  | Adobe Acrob... | 10/29/2004 1:51 PM  |
| 218613 Rev2   | 4,773 KB  | Adobe Acrob... | 11/15/2004 9:23 AM  |
| 218613 ✓      | 8,714 KB  | Adobe Acrob... | 10/4/2004 2:43 PM   |
| 218795 Rev 2  | 2,696 KB  | Adobe Acrob... | 1/21/2005 3:49 PM   |
| 218795 Rev    | 2,496 KB  | Adobe Acrob... | 10/29/2004 1:49 PM  |
| 218795 ✓      | 8,491 KB  | Adobe Acrob... | 10/4/2004 2:35 PM   |
| 219121 ✓      | 1,828 KB  | Adobe Acrob... | 10/6/2004 4:31 PM   |
| 219612 ✓      | 665 KB    | Adobe Acrob... | 10/21/2004 9:49 AM  |
| 219758 ✓      | 1,214 KB  | Adobe Acrob... | 10/22/2004 3:57 PM  |
| 221602 ✓      | 31,420 KB | Adobe Acrob... | 1/5/2005 4:55 PM    |
| 221688 ✓      | 33,932 KB | Adobe Acrob... | 1/11/2005 2:24 PM   |
| 221733 ✓      | 20,392 KB | Adobe Acrob... | 1/10/2005 1:52 PM   |
| 221804 ✓      | 41,317 KB | Adobe Acrob... | 1/14/2005 5:17 PM   |
| 221819A ✓     | 41,722 KB | Adobe Acrob... | 1/20/2005 12:27 PM  |
| 221819B       | 30,714 KB | Adobe Acrob... | 1/20/2005 1:48 PM   |
| 221852 ✓      | 85,539 KB | Adobe Acrob... | 1/21/2005 11:27 AM  |
| 222565 ✓      | 3,097 KB  | Adobe Acrob... | 1/27/2005 5:42 PM   |
| 222622 ✓      | 2,093 KB  | Adobe Acrob... | 2/1/2005 2:04 PM    |
| 222622b       | 2,438 KB  | Adobe Acrob... | 2/1/2005 2:07 PM    |
| 222622c       | 3,688 KB  | Adobe Acrob... | 2/1/2005 2:10 PM    |
| 222622d       | 2,777 KB  | Adobe Acrob... | 2/1/2005 2:16 PM    |
| 222622e       | 820 KB    | Adobe Acrob... | 2/1/2005 2:18 PM    |

Volume II

|   |           |                |                     |
|---|-----------|----------------|---------------------|
|  A04-6801        | 11,269 KB | Adobe Acrob... | 8/2/2004 11:21 AM   |
|  A04-6931        | 44,559 KB | Adobe Acrob... | 8/31/2004 6:25 PM   |
|  A04-6939        | 43,692 KB | Adobe Acrob... | 8/25/2004 4:22 PM   |
|  A04-7256        | 32,209 KB | Adobe Acrob... | 11/11/2004 11:52 AM |
|  A04-7282        | 87,054 KB | Adobe Acrob... | 8/17/2004 4:12 PM   |
|  A04-7346 part B | 40,211 KB | Adobe Acrob... | 8/24/2004 5:48 PM   |
|  A04-7346        | 67,363 KB | Adobe Acrob... | 8/24/2004 5:50 PM   |
|  A04-7436        | 58,515 KB | Adobe Acrob... | 8/31/2004 5:25 PM   |
|  A04-7483        | 74,476 KB | Adobe Acrob... | 8/24/2004 11:51 AM  |
|  A04-7520        | 79,005 KB | Adobe Acrob... | 8/31/2004 9:17 AM   |
|  A04-7581        | 5,665 KB  | Adobe Acrob... | 9/1/2004 3:50 PM    |

Volume III

|  |           |                |                   |
|--|-----------|----------------|-------------------|
|  A04-7623   | 35,943 KB | Adobe Acrob... | 8/31/2004 6:29 PM |
|  A04-7646   | 63,128 KB | Adobe Acrob... | 9/20/2004 3:21 PM |
|  A04-7741   | 53,740 KB | Adobe Acrob... | 8/31/2004 4:47 PM |
|  A04-7848   | 58,270 KB | Adobe Acrob... | 8/31/2004 5:48 PM |
|  A04-7856   | 3,364 KB  | Adobe Acrob... | 8/31/2004 5:45 PM |
|  A04-7996   | 50,973 KB | Adobe Acrob... | 9/10/2004 4:25 PM |
|  A04-8046  | 52,815 KB | Adobe Acrob... | 8/31/2004 7:19 PM |
|  A04-8066 | 33,918 KB | Adobe Acrob... | 9/8/2004 1:23 PM  |

SCANNED

Vol. I

1-0430

File name

SAMPLE INFORMATION

Date: 09/08/2004

Job Number.: 218311  
Customer....: Gannett Fleming, INC.  
Attn.....: Jim Barish

Project Number.....: 20002458  
Customer Project ID....: LABORATORY ANALYSIS  
Project Description....: Laboratory Analysis

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|----------------------|--------------------|---------------|--------------|--------------|---------------|---------------|
| 218311-1             | WCB42-1-L          | Water         | 08/24/2004   | 09:30        | 08/24/2004    | 12:40         |
| 218311-2             | E42-1-L            | Water         | 08/24/2004   | 09:00        | 08/24/2004    | 12:40         |
| 218311-4             | FB-D-1             | Lab Water     | 08/24/2004   | 12:00        | 08/24/2004    | 12:40         |
| 218311-5             | AST40-4C-L         | Oil           | 08/24/2004   | 13:00        | 08/24/2004    | 12:40         |



STL

MADEP MA014  
RIDOH87  
CTDPH 0494  
VT DECWSD  
NH DES 283903-A

NELAP FL E87912 TOX  
NELAP NJ MA008 TOX  
NELAP NY 10843  
NY DOH 10843

Page 1



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**SAMPLE INFORMATION**  
Date: 09/09/2004

Job Number.: 218382  
Customer...: Gannett Fleming, INC.  
Attn.....: Jim Barish

Project Number.....: 20002458  
Customer Project ID....: LABORATORY ANALYSIS  
Project Description....: Laboratory Analysis

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|----------------------|--------------------|---------------|--------------|--------------|---------------|---------------|
| 218382-1             | RS-5F              | Soil          | 08/25/2004   | 11:30        | 08/25/2004    | 17:55         |
| 218382-2             | RS-15F             | Soil          | 08/25/2004   | 13:30        | 08/25/2004    | 17:55         |
| 218382-3             | RS-25F             | Soil          | 08/25/2004   | 14:00        | 08/25/2004    | 17:55         |
| 218382-4             | OWS-42-1C-L        | Oil           | 08/25/2004   | 15:15        | 08/25/2004    | 17:55         |
| 218382-5             | V42-1-L            | Water         | 08/25/2004   | 12:30        | 08/25/2004    | 17:55         |



MADEP MA014  
RIDOH57  
CTDPH 0494  
VT DECWSD  
NH DES 253903-A

NELAP FL E87912 TOX  
NELAP NJ MA008 TOX  
NELAP NY 10843  
NY DOH 10843



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**SAMPLE INFORMATION**

Date: 09/09/2004

Job Number.: 218419 ✓  
 Customer....: Gannett Fleming, INC.  
 Attn.....: Jim Barish

Project Number.....: 20002458  
 Customer Project ID....: LABORATORY ANALYSIS  
 Project Description....: Laboratory Analysis

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|----------------------|--------------------|---------------|--------------|--------------|---------------|---------------|
| 218419-1             | RS-6D-5            | Soil          | 08/26/2004   | 09:00        | 08/26/2004    | 18:20         |
| 218419-2             | RS-6D-15           | Soil          | 08/26/2004   | 09:30        | 08/26/2004    | 18:20         |
| 218419-3             | RS-6D-25           | Soil          | 08/26/2004   | 10:00        | 08/26/2004    | 18:20         |
| 218419-4             | RS-15D-5           | Soil          | 08/26/2004   | 10:30        | 08/26/2004    | 18:20         |
| 218419-5             | RS-15D-15          | Soil          | 08/26/2004   | 11:00        | 08/26/2004    | 18:20         |
| 218419-6             | RS-25D-5           | Soil          | 08/26/2004   | 14:50        | 08/26/2004    | 18:20         |
| 218419-7             | RS-25D-15          | Soil          | 08/26/2004   | 16:00        | 08/26/2004    | 18:20         |
| 218419-8             | RS-35D-5           | Soil          | 08/26/2004   | 16:40        | 08/26/2004    | 18:20         |
| 218419-9             | RS-30U-5           | Soil          | 08/26/2004   | 17:00        | 08/26/2004    | 18:20         |
| 218419-10            | RS-60U-5           | Soil          | 08/26/2004   | 17:30        | 08/26/2004    | 18:20         |



MADEP MA014  
 RIDPH57  
 CTDPH 0494  
 VT DECWSD  
 NH DES 253903-A

NELAP FL E87912 TOX  
 NELAP NJ MA008 TOX  
 NELAP NY 10843  
 NY DOH 10843



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**SAMPLE INFORMATION**  
Date: 09/15/2004

Job Number.: 218452 ✓  
Customer...: Gannett Fleming, INC.  
Attn.....: Jim Barish

Project Number.....: 20002458  
Customer Project ID....: LABORATORY ANALYSIS  
Project Description....: Laboratory Analysis

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|----------------------|--------------------|---------------|--------------|--------------|---------------|---------------|
| 218452-1             | P27-1              | Water         | 08/27/2004   | 10:00        | 08/27/2004    | 14:45         |
| 218452-2             | P27-1-L            | Water         | 08/27/2004   | 10:15        | 08/27/2004    | 14:45         |
| 218452-3             | P27-3-1            | Water         | 08/27/2004   | 10:20        | 08/27/2004    | 14:45         |
| 218452-4             | GF-SS1             | Soil          | 08/27/2004   | 11:15        | 08/27/2004    | 14:45         |
| 218452-5             | GF-SS2             | Soil          | 08/27/2004   | 11:20        | 08/27/2004    | 14:45         |



MADEP MA014  
RIDOHS7  
CTDPH 0494  
VT DECWSD  
NH DES 253903-A

NELAP FL E87912 TOX  
NELAP NJ MA008 TOX  
NELAP NY 10843  
NY DOH 10843



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**SAMPLE INFORMATION**

Date: 09/15/2004

Job Number.: 218494 ✓  
 Customer....: Gannett Fleming, INC.  
 Attn.....: Jim Barish

Project Number.....: 20002458  
 Customer Project ID....: LABORATORY ANALYSIS  
 Project Description....: Laboratory Analysis

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|----------------------|--------------------|---------------|--------------|--------------|---------------|---------------|
| 218494-1             | MW-4               | Water         | 08/30/2004   | 17:20        | 08/30/2004    | 18:40         |
| 218494-2             | MW-5               | Water         | 08/30/2004   | 15:20        | 08/30/2004    | 18:40         |
| 218494-3             | MW-4F              | Water         | 08/30/2004   | 17:20        | 08/30/2004    | 18:40         |
| 218494-4             | MW-5F              | Water         | 08/30/2004   | 15:20        | 08/30/2004    | 18:40         |
| 218494-5             | FB-830             | Lab Water     | 08/30/2004   | 17:30        | 08/30/2004    | 18:40         |



MADEP MA014  
 RIDOH57  
 CTDPH 0494  
 VT DECWSD  
 NH DES 253903-A

NELAP FL E87912 TOX  
 NELAP NJ MA008 TOX  
 NELAP NY 10843  
 NY DOH 10843



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2 pages

SAMPLE INFORMATION  
Date: 09/30/2004

Job Number.: 218556  
Customer.... Gannett Fleming, INC.  
Attn.....: Jim Barish

Project Number.....: 20002458  
Customer Project ID.....: LABORATORY ANALYSIS  
Project Description.....: Laboratory Analysis

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|----------------------|--------------------|---------------|--------------|--------------|---------------|---------------|
| 218556-1             | LS-A1A             | Soil          | 09/01/2004   | 08:45        | 09/01/2004    | 19:20         |
| 218556-2             | LS-A1B             | Soil          | 09/01/2004   | 08:45        | 09/01/2004    | 19:20         |
| 218556-3             | LS-A2A             | Soil          | 09/01/2004   | 09:15        | 09/01/2004    | 19:20         |
| 218556-4             | LS-A2B             | Soil          | 09/01/2004   | 09:15        | 09/01/2004    | 19:20         |
| 218556-5             | LS-A3A             | Soil          | 09/01/2004   | 09:45        | 09/01/2004    | 19:20         |
| 218556-6             | LS-A3B             | Soil          | 09/01/2004   | 09:45        | 09/01/2004    | 19:20         |
| 218556-7             | LS-A4A             | Soil          | 09/01/2004   | 09:55        | 09/01/2004    | 19:20         |
| 218556-8             | LS-A4B             | Soil          | 09/01/2004   | 09:55        | 09/01/2004    | 19:20         |
| 218556-9             | LS-B1A             | Soil          | 09/01/2004   | 10:15        | 09/01/2004    | 19:20         |
| 218556-10            | LS-B1B             | Soil          | 09/01/2004   | 10:15        | 09/01/2004    | 19:20         |
| 218556-11            | LS-B2A             | Soil          | 09/01/2004   | 10:30        | 09/01/2004    | 19:20         |
| 218556-12            | LS-B2B             | Soil          | 09/01/2004   | 10:30        | 09/01/2004    | 19:20         |
| 218556-13            | LS-B3B             | Soil          | 09/01/2004   | 10:45        | 09/01/2004    | 19:20         |
| 218556-14            | LS-D1A             | Soil          | 09/01/2004   | 13:15        | 09/01/2004    | 19:20         |
| 218556-15            | LS-D1B             | Soil          | 09/01/2004   | 13:20        | 09/01/2004    | 19:20         |
| 218556-16            | LS-D2A             | Soil          | 09/01/2004   | 14:00        | 09/01/2004    | 19:20         |
| 218556-17            | LS-D2B             | Soil          | 09/01/2004   | 14:05        | 09/01/2004    | 19:20         |
| 218556-18            | FB-901             | Lab Water     | 09/01/2004   | 16:55        | 09/01/2004    | 19:20         |
| 218556-19            | TB-901             | Lab Water     | 09/01/2004   | 16:55        | 09/01/2004    | 19:20         |
| 218556-20            | GF-85A             | Soil          | 09/01/2004   | 15:30        | 09/01/2004    | 19:20         |
| 218556-21            | GF-85B             | Soil          | 09/01/2004   | 15:40        | 09/01/2004    | 19:20         |
| 218556-22            | TP-19A             | Solid         | 09/01/2004   | 12:15        | 09/01/2004    | 19:20         |
| 218556-23            | TP-19B             | Solid         | 09/01/2004   | 12:15        | 09/01/2004    | 19:20         |
| 218556-24            | TP-5A              | Solid         | 09/01/2004   | 13:30        | 09/01/2004    | 19:20         |
| 218556-25            | TP-5B              | Solid         | 09/01/2004   | 13:30        | 09/01/2004    | 19:20         |
| 218556-26            | TP-18A             | Solid         | 09/01/2004   | 13:45        | 09/01/2004    | 19:20         |



STL

MADEP MA014  
RIDOH57  
CTDPH 0494  
VT DECWSD  
NH DES 253903-A

NELAP FL E87912 TOX  
NELAP NJ MA008 TOX  
NELAP NY 10843  
NY DOH 10843



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**SAMPLE INFORMATION**

Date:

Job Number.: 218556 ✓  
 Customer...: Gannett Fleming, INC.  
 Attn.....: Jim Berish

Project Number.....: 20002458  
 Customer Project ID....: LABORATORY ANALYSIS  
 Project Description....: Laboratory Analysis

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|----------------------|--------------------|---------------|--------------|--------------|---------------|---------------|
| 218556-27            | TP-18B             | Solid         | 09/01/2004   | 13:45        | 09/01/2004    | 19:20         |
| 218556-28            | TP-8A              | Solid         | 09/01/2004   | 14:00        | 09/01/2004    | 19:20         |
| 218556-29            | TP-8B              | Solid         | 09/01/2004   | 14:00        | 09/01/2004    | 19:20         |
| 218556-30            | TP-16A             | Solid         | 09/01/2004   | 14:20        | 09/01/2004    | 19:20         |
| 218556-31            | TP-16B             | Solid         | 09/01/2004   | 14:20        | 09/01/2004    | 19:20         |
| 218556-34            | TP-10A             | Solid         | 09/01/2004   | 16:50        | 09/01/2004    | 19:20         |
| 218556-35            | TP-10B             | Solid         | 09/01/2004   | 16:50        | 09/01/2004    | 19:20         |
| 218556-36            | TP-11A             | Solid         | 09/01/2004   | 17:00        | 09/01/2004    | 19:20         |
| 218556-37            | TP-11B             | Solid         | 09/01/2004   | 17:00        | 09/01/2004    | 19:20         |
| 218556-38            | TP-25-14-13        | Oil           | 09/01/2004   | 15:55        | 09/01/2004    | 19:20         |
| 218556-39            | B43-A1             | Air           | 09/01/2004   | 16:00        | 09/01/2004    | 19:20         |
| 218556-40            | B43-A2             | Air           | 09/01/2004   | 16:00        | 09/01/2004    | 19:20         |
| 218556-41            | B43-A3             | Air           | 09/01/2004   | 16:00        | 09/01/2004    | 19:20         |
| 218556-42            | B43-TB             | Air           | 09/01/2004   | 16:00        | 09/01/2004    | 19:20         |



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 NH DES 253903-A

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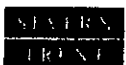
1/2

**SAMPLE INFORMATION**  
Date: 09/30/2004

Job Number.: 218600 ✓  
Customer...: Gannett Fleming, INC.  
Attn.....: Jim Barish

Project Number.....: 2000245B  
Customer Project ID....: LABORATORY ANALYSIS  
Project Description....: Laboratory Analysis

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|----------------------|--------------------|---------------|--------------|--------------|---------------|---------------|
| 218600-1             | TP-23A             | Solid         | 09/02/2004   | 08:30        | 09/02/2004    | 18:25         |
| 218600-2             | TP-23B             | Solid         | 09/02/2004   | 08:30        | 09/02/2004    | 18:25         |
| 218600-3             | TP-24A             | Solid         | 09/02/2004   | 08:45        | 09/02/2004    | 18:25         |
| 218600-4             | TP-24B             | Solid         | 09/02/2004   | 08:45        | 09/02/2004    | 18:25         |
| 218600-5             | TP-15A             | Solid         | 09/02/2004   | 09:00        | 09/02/2004    | 18:25         |
| 218600-6             | TP-15B             | Solid         | 09/02/2004   | 09:00        | 09/02/2004    | 18:25         |
| 218600-7             | TP-17A             | Solid         | 09/02/2004   | 09:45        | 09/02/2004    | 18:25         |
| 218600-8             | TP-17B             | Solid         | 09/02/2004   | 09:45        | 09/02/2004    | 18:25         |
| 218600-11            | TP-20A             | Solid         | 09/02/2004   | 10:15        | 09/02/2004    | 18:25         |
| 218600-12            | TP-20B             | Solid         | 09/02/2004   | 10:15        | 09/02/2004    | 18:25         |
| 218600-13            | TP-1A              | Solid         | 09/02/2004   | 10:30        | 09/02/2004    | 18:25         |
| 218600-14            | TP-1B              | Solid         | 09/02/2004   | 10:30        | 09/02/2004    | 18:25         |
| 218600-15            | TP-25A             | Solid         | 09/02/2004   | 10:45        | 09/02/2004    | 18:25         |
| 218600-16            | TP-25B             | Solid         | 09/02/2004   | 10:45        | 09/02/2004    | 18:25         |
| 218600-17            | TP-13A             | Solid         | 09/02/2004   | 11:00        | 09/02/2004    | 18:25         |
| 218600-18            | TP-13B             | Solid         | 09/02/2004   | 11:00        | 09/02/2004    | 18:25         |
| 218600-19            | TP-14A             | Solid         | 09/02/2004   | 11:15        | 09/02/2004    | 18:25         |
| 218600-20            | TP-14B             | Solid         | 09/02/2004   | 11:15        | 09/02/2004    | 18:25         |
| 218600-21            | GF-86B             | Soil          | 09/02/2004   | 09:45        | 09/02/2004    | 18:25         |
| 218600-22            | FB-902             | Lab Water     | 09/02/2004   | 11:30        | 09/02/2004    | 18:25         |
| 218600-23            | TB-902 Soil        | Other         | 09/02/2004   | 11:30        | 09/02/2004    | 18:25         |
| 218600-24            | TB-902 Water       | Lab Water     | 09/02/2004   | 11:30        | 09/02/2004    | 18:25         |
| 218600-25            | AST42-1C-S         | Other         | 09/02/2004   | 12:00        | 09/02/2004    | 18:25         |
| 218600-26            | AST42-2C-S         | Other         | 09/02/2004   | 13:00        | 09/02/2004    | 18:25         |
| 218600-27            | AST42-3C-S         | Other         | 09/02/2004   | 14:00        | 09/02/2004    | 18:25         |
| 218600-28            | AST42-4UA-S        | Other         | 09/02/2004   | 14:30        | 09/02/2004    | 18:25         |



**STL**

MADEP MA014  
RIDPH57  
CTDPH 0494  
VT DECWSD  
NH DES 253903-A

NELAP FL E87912 TOX  
NELAP NJ MA008 TOX  
NELAP NY 10843  
NY DOH 10843



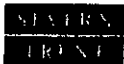
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2/2

| SAMPLE INFORMATION                 |   |
|------------------------------------|---|
| Date:                              |   |
| Job Number.: 218600 ✓              | Project Number.....: 20002458                 |
| Customer...: Gannett Fleming, INC. | Customer Project ID.....: LABORATORY ANALYSIS |
| Attn.....: Jim Barish              | Project Description.....: Laboratory Analysis |

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|----------------------|--------------------|---------------|--------------|--------------|---------------|---------------|
| 218600-29            | AST42-4UB-S        | Other         | 09/02/2004   | 14:35        | 09/02/2004    | 18:25         |
| 218600-30            | AST42-2U-S         | Other         | 09/02/2004   | 14:40        | 09/02/2004    | 18:25         |
| 218600-31            | AST42-1U-S         | Other         | 09/02/2004   | 14:45        | 09/02/2004    | 18:25         |
| 218600-32            | AST-42U-FD         | Other         | 09/02/2004   | 15:00        | 09/02/2004    | 18:25         |
| 218600-33            | S42-1              | Other         | 09/02/2004   | 17:15        | 09/02/2004    | 18:25         |
| 218600-34            | P42-1              | Other         | 09/02/2004   | 17:30        | 09/02/2004    | 18:25         |



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MADEP MA014  
RIDPH57  
CTDPH 0494  
VT DECWSD  
NH DES 253903-A

NELAP FL 287612 TOX  
NELAP NJ MAD08 TOX  
NELAP NY 10843  
NY DOH 10843



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**SAMPLE INFORMATION**

Date: 09/30/2004

Job Number.: 218613 ✓  
 Customer...: Gannett Fleming, INC.  
 Attn.....: Jim Barish

Project Number.....: 20002458  
 Customer Project ID....: LABORATORY ANALYSIS  
 Project Description....: Laboratory Analysis

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|----------------------|--------------------|---------------|--------------|--------------|---------------|---------------|
| 218613-1             | MW-4S-A            | Soil          | 09/03/2004   | 10:00        | 09/03/2004    | 12:45         |
| 218613-2             | MW-4S-B            | Soil          | 09/03/2004   | 10:05        | 09/03/2004    | 12:45         |
| 218613-3             | MW-4S-C            | Soil          | 09/03/2004   | 10:10        | 09/03/2004    | 12:45         |
| 218613-4             | FB-903             | Lab Water     | 09/03/2004   | 10:30        | 09/03/2004    | 12:45         |
| 218613-5             | TB-903             | Lab Water     | 09/03/2004   | 10:40        | 09/03/2004    | 12:45         |
| 218613-6             | E27-1              | Water         | 09/03/2004   | 09:30        | 09/03/2004    | 12:45         |
| 218613-7             | P27-4              | Water         | 09/03/2004   | 10:30        | 09/03/2004    | 12:45         |
| 218613-8             | FB-903 SOIL        | Methanol      | 09/03/2004   | 10:30        | 09/03/2004    | 12:45         |



MADEP MA014  
 RIDOH57  
 CTDPH 0494  
 VT DECWSD  
 NH DES 253903-A

NELAP FL E87912 TOX  
 NELAP NJ MA008 TOX  
 NELAP NY 10843  
 NY DOH 10843



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**SAMPLE INFORMATION**

Date: 09/30/2004

Job Number.: 218795 ✓  
 Customer....: Gannett Fleming, INC.  
 Attn.....: Jim Barish

Project Number.....: 20002458  
 Customer Project ID....: LABORATORY ANALYSIS  
 Project Description....: Laboratory Analysis

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|----------------------|--------------------|---------------|--------------|--------------|---------------|---------------|
| 218795-1             | CR28-1-0           | Oil           | 09/09/2004   | 09:30        | 09/09/2004    | 18:30         |
| 218795-2             | TB28NX-5-S         | Soil          | 09/09/2004   | 10:00        | 09/09/2004    | 18:30         |
| 218795-3             | CR28-1-S           | Soil          | 09/09/2004   | 10:30        | 09/09/2004    | 18:30         |
| 218795-4             | O128-3             | Water         | 09/09/2004   | 11:00        | 09/09/2004    | 18:30         |
| 218795-5             | BC-1-S             | Soil          | 09/09/2004   | 13:25        | 09/09/2004    | 18:30         |
| 218795-6             | BC-2-S             | Soil          | 09/09/2004   | 13:30        | 09/09/2004    | 18:30         |
| 218795-7             | BC-3-S             | Soil          | 09/09/2004   | 14:00        | 09/09/2004    | 18:30         |
| 218795-8             | BC-5-S             | Soil          | 09/09/2004   | 14:50        | 09/09/2004    | 18:30         |
| 218795-9             | BC-7-S             | Soil          | 09/09/2004   | 15:15        | 09/09/2004    | 18:30         |
| 218795-10            | MH-13-S            | Soil          | 09/09/2004   | 15:30        | 09/09/2004    | 18:30         |
| 218795-11            | MH-A6-S            | Soil          | 09/09/2004   | 17:45        | 09/09/2004    | 18:30         |
| 218795-12            | FB-909             | Lab Water     | 09/09/2004   | 12:30        | 09/09/2004    | 18:30         |
| 218795-13            | NHB-1A-S           | Soil          | 09/09/2004   | 17:30        | 09/09/2004    | 18:30         |
| 218795-14            | ML28NX-4A-S2       | Solid         | 09/09/2004   | 12:00        | 09/09/2004    | 18:30         |



MADEP MA014  
 RIDONS7  
 CTDPH 0494  
 VT DECWSD  
 NH DES 253903-A

NELAP FL E87912 TOX  
 NELAP NJ MA008 TOX  
 NELAP NY 10843  
 NY DOH 10843



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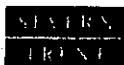
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**SAMPLE INFORMATION**  
Date: 10/09/2004

Job Number.: 219121 ✓  
Customer...: Gannett Fleming, INC.  
Attn.....: Jim Barish

Project Number.....: 20002458  
Customer Project ID....: LABORATORY ANALYSIS  
Project Description....: Laboratory Analysis

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|----------------------|--------------------|---------------|--------------|--------------|---------------|---------------|
| 219121-1             | CB-1               | Solid         | 09/21/2004   | 12:00        | 09/21/2004    | 18:10         |
| 219121-2             | CB-2               | Solid         | 09/21/2004   | 12:00        | 09/21/2004    | 18:10         |
| 219121-3             | CB-4               | Solid         | 09/21/2004   | 12:00        | 09/21/2004    | 18:10         |
| 219121-4             | CB-5               | Solid         | 09/21/2004   | 12:00        | 09/21/2004    | 18:10         |



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MADEP MA014  
RID0H57  
CTDPN 0494  
VT OECWSD  
NH DES 253903-A

NELAP FL E87012 TOX  
NELAP NJ MA008 TOX  
NELAP NY 10843  
NY DOH 10843



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**SAMPLE INFORMATION**  
Date: 10/20/2004

Job Number.: 219612  
Customer...: Gannett Fleming, Inc.  
Attn.....: Jim Barish

Project Number.....: 20002458  
Customer Project ID....: LABORATORY ANALYSIS  
Project Description....: Laboratory Analysis

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|----------------------|--------------------|---------------|--------------|--------------|---------------|---------------|
| 219612-1             | MW-4S-C            | Soil          | 09/03/2004   | 10:10        | 09/03/2004    | 12:45         |



MADEP MA014  
RIDOH67  
CTDPH 0494  
VT DECWSD  
NH DES 253903-A

NELAP FL E87912 TOX  
NELAP NJ MA008 TOX  
NELAP NY 10843  
NY DOH 10843



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**SAMPLE INFORMATION**  
Date: 10/22/2004

Job Number.: 219758  
Customer...: Gannett Fleming, Inc.  
Attn.....: Jim Barish

Project Number.....: 20002458  
Customer Project ID....: LABORATORY ANALYSIS  
Project Description....: Laboratory Analysis

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|----------------------|--------------------|---------------|--------------|--------------|---------------|---------------|
| 219758-1             | Hopper #1          | Soil          | 10/08/2004   | 12:30        | 10/08/2004    | 19:35         |
| 219758-2             | Hopper #2          | Soil          | 10/08/2004   | 12:31        | 10/08/2004    | 19:35         |
| 219758-3             | Hopper #3          | Soil          | 10/08/2004   | 12:32        | 10/08/2004    | 19:35         |



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MADEP MA014  
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VT DECWSD  
NH DES 253903-A

NELAP FL E87912 TOX  
NELAP NJ MA008 TOX  
NELAP NY 10843  
NY DOH 10843



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**SAMPLE INFORMATION**

Date: 12/30/2004

Job Number.: 221602  
 Customer...: Gannett Fleming, Inc.  
 Attn.....: Jim Barish

Project Number.....: 20002458  
 Customer Project ID....: LABORATORY ANALYSIS  
 Project Description....: Laboratory Analysis

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|----------------------|--------------------|---------------|--------------|--------------|---------------|---------------|
| 221602-1             | GF-9A              | Soil          | 12/13/2004   | 09:30        | 12/14/2004    | 12:10         |
| 221602-2             | GF-10A             | Soil          | 12/13/2004   | 09:40        | 12/14/2004    | 12:10         |
| 221602-3             | GF-11A             | Soil          | 12/13/2004   | 09:45        | 12/14/2004    | 12:10         |
| 221602-4             | GF-12A             | Soil          | 12/13/2004   | 09:50        | 12/14/2004    | 12:10         |
| 221602-5             | GF-13A             | Soil          | 12/13/2004   | 09:55        | 12/14/2004    | 12:10         |
| 221602-6             | GF-14A             | Soil          | 12/13/2004   | 10:00        | 12/14/2004    | 12:10         |
| 221602-7             | GF-15A             | Soil          | 12/13/2004   | 10:05        | 12/14/2004    | 12:10         |
| 221602-8             | GF-16A             | Soil          | 12/13/2004   | 10:10        | 12/14/2004    | 12:10         |
| 221602-9             | FB-1               | Lab Water     | 12/13/2004   | 17:00        | 12/14/2004    | 12:10         |
| 221602-10            | B8-E1              | Water         | 12/14/2004   | 09:15        | 12/14/2004    | 12:10         |
| 221602-11            | B8-E1S             | Soil          | 12/14/2004   | 09:20        | 12/14/2004    | 12:10         |
| 221602-12            | B8-E2              | Water         | 12/14/2004   | 10:30        | 12/14/2004    | 12:10         |
| 221602-13            | B7-E3              | Water         | 12/14/2004   | 11:00        | 12/14/2004    | 12:10         |
| 221602-14            | FB-2               | Lab Water     | 12/14/2004   | 11:15        | 12/14/2004    | 12:10         |
| 221602-15            | TB-1               | Lab Water     | 12/10/2004   | 12:00        | 12/14/2004    | 12:10         |

**SAMPLE INFORMATION**  
Date: 01/06/2005

Job Number.: 221688 ✓  
Customer...: Gannett Fleming, Inc.  
Attn.....: Jim Barish

Project Number.....: 20002458  
Customer Project ID.....: LABORATORY ANALYSIS  
Project Description.....: Laboratory Analysis

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|----------------------|--------------------|---------------|--------------|--------------|---------------|---------------|
| 221688-1             | B7-B1              | Water         | 12/14/2004   | 13:45        | 12/15/2004    | 17:30         |
| 221688-2             | B8-E4              | Water         | 12/14/2004   | 14:20        | 12/15/2004    | 17:30         |
| 221688-3             | B8-B1              | Water         | 12/14/2004   | 14:50        | 12/15/2004    | 17:30         |
| 221688-4             | AST8-1             | Oil           | 12/14/2004   | 16:00        | 12/15/2004    | 17:30         |
| 221688-5             | B15-B1             | Water         | 12/14/2004   | 16:30        | 12/15/2004    | 17:30         |
| 221688-6             | FB-3               | Lab Water     | 12/14/2004   | 12:00        | 12/15/2004    | 17:30         |
| 221688-7             | TB-3               | Lab Water     | 12/10/2004   | 12:00        | 12/15/2004    | 17:30         |
| 221688-8             | BAG HOUSE1         | Oil           | 12/15/2004   | 16:00        | 12/15/2004    | 17:30         |

SAMPLE INFORMATION  
Date: 01/07/2005

Job Number.: 221733 ✓  
Customer...: Gannett Fleming, Inc.  
Attn.....: Jim Barish

Project Number.....: 20002458  
Customer Project ID....: LABORATORY ANALYSIS  
Project Description....: Laboratory Analysis

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|----------------------|--------------------|---------------|--------------|--------------|---------------|---------------|
| 221733-1             | RS-100D-5          | Soil          | 12/16/2004   | 08:30        | 12/16/2004    | 17:45         |
| 221733-2             | RS-100D-15         | Soil          | 12/16/2004   | 09:45        | 12/16/2004    | 17:45         |
| 221733-3             | RS-100D-25         | Soil          | 12/16/2004   | 11:00        | 12/16/2004    | 17:45         |
| 221733-4             | RS-75D-5           | Soil          | 12/16/2004   | 12:30        | 12/16/2004    | 17:45         |
| 221733-5             | RS-75D-15          | Soil          | 12/16/2004   | 12:00        | 12/16/2004    | 17:45         |
| 221733-6             | RS-75D-25          | Soil          | 12/16/2004   | 12:45        | 12/16/2004    | 17:45         |
| 221733-7             | RS-50D-5           | Soil          | 12/16/2004   | 13:00        | 12/16/2004    | 17:45         |
| 221733-8             | RS-50D-15          | Soil          | 12/16/2004   | 13:30        | 12/16/2004    | 17:45         |
| 221733-9             | RS-50D-25          | Soil          | 12/16/2004   | 14:00        | 12/16/2004    | 17:45         |
| 221733-10            | RS-35D-25          | Soil          | 12/16/2004   | 14:45        | 12/16/2004    | 17:45         |
| 221733-11            | FB-4               | Lab Water     | 12/16/2004   | 12:00        | 12/16/2004    | 17:45         |
| 221733-12            | TB-4               | Lab Water     | 12/10/2004   | 14:10        | 12/16/2004    | 17:45         |
| 221733-13            | B7-B1              | Water         | 12/16/2004   | 15:00        | 12/16/2004    | 17:45         |

**SAMPLE INFORMATION**  
Date: 01/07/2005

Job Number.: 221804 ✓  
Customer...: Gannett Fleming, Inc.  
Attn.....: Jim Barish

Project Number.....: 20002458  
Customer Project ID....: LABORATORY ANALYSIS  
Project Description....: Laboratory Analysis

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|----------------------|--------------------|---------------|--------------|--------------|---------------|---------------|
| 221804-1             | B7-1FS             | Soil          | 12/17/2004   | 09:00        | 12/17/2004    | 17:45         |
| 221804-2             | 0133-1             | Oil           | 12/17/2004   | 15:20        | 12/17/2004    | 17:45         |
| 221804-3             | MH28-1             | Oil           | 12/17/2004   | 15:30        | 12/17/2004    | 17:45         |
| 221804-4             | CR8-1-0            | Oil           | 12/17/2004   | 10:00        | 12/17/2004    | 17:45         |
| 221804-5             | CR8-20             | Oil           | 12/17/2004   | 10:30        | 12/17/2004    | 17:45         |
| 221804-6             | FB-5               | Lab Water     | 12/17/2004   | 16:00        | 12/17/2004    | 17:45         |
| 221804-7             | TB-5               | Lab Water     | 12/10/2004   | 12:00        | 12/17/2004    | 17:45         |



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RIDOH57  
CTDPH 0494  
VT OECWSD  
NH DES 253903-A

NELAP FL E67912 TOX  
NELAP NJ MA008 TOX  
NELAP NY 10843  
NY DOH 10843



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**SAMPLE INFORMATION**  
Date: 01/12/2005

Job Number.: 221819 **A**  
Customer...: Gannett Fleming, Inc.  
Attn.....: Jim Barish

Project Number.....: 2000245B  
Customer Project ID.....: LABORATORY ANALYSIS  
Project Description.....: Laboratory Analysis

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|----------------------|--------------------|---------------|--------------|--------------|---------------|---------------|
| 221819-1             | LS-G1C             | Soil          | 12/18/2004   | 12:20        | 12/20/2004    | 17:53         |
| 221819-2             | LS-G2C             | Soil          | 12/18/2004   | 13:15        | 12/20/2004    | 17:53         |
| 221819-3             | LS-G3C             | Soil          | 12/18/2004   | 12:50        | 12/20/2004    | 17:53         |
| 221819-4             | LS-C1C             | Soil          | 12/19/2004   | 10:45        | 12/20/2004    | 17:53         |
| 221819-5             | LS-C2C             | Soil          | 12/19/2004   | 13:00        | 12/20/2004    | 17:53         |
| 221819-6             | LS-C3C             | Soil          | 12/19/2004   | 16:30        | 12/20/2004    | 17:53         |
| 221819-7             | LS-F1C             | Soil          | 12/20/2004   | 11:00        | 12/20/2004    | 17:53         |
| 221819-8             | E42-1-s            | Soil          | 12/20/2004   | 11:30        | 12/20/2004    | 17:53         |
| 221819-9             | E27-1-s            | Soil          | 12/20/2004   | 11:45        | 12/20/2004    | 17:53         |
| 221819-10            | WCB42-1            | Soil          | 12/20/2004   | 12:00        | 12/20/2004    | 17:53         |
| 221819-11            | WCB42-2            | Soil          | 12/20/2004   | 12:15        | 12/20/2004    | 17:53         |
| 221819-12            | GF-72C             | Soil          | 12/20/2004   | 14:00        | 12/20/2004    | 17:53         |
| 221819-13            | FB-5               | Lab Water     | 12/20/2004   | 16:30        | 12/20/2004    | 17:53         |
| 221819-14            | TB-5 Water         | Lab Water     | 12/20/2004   | 16:30        | 12/20/2004    | 17:53         |
| 221819-15            | TB-5 Soil          | Methanol      | 12/20/2004   | 16:30        | 12/20/2004    | 17:53         |
| 221819-16            | WCB42-1RE          | Soil          | 12/20/2004   | 12:00        | 12/20/2004    | 17:53         |
| 221819-17            | WCB42-2RE          | Soil          | 12/20/2004   | 12:15        | 12/20/2004    | 17:53         |

**SAMPLE INFORMATION**  
Date: 01/18/2005

Job Number.: 221852 ✓  
Customer....: Gannett Fleming, Inc.  
Attn.....: Jim Barish

Project Number.....: 20002458  
Customer Project ID....: LABORATORY ANALYSIS  
Project Description....: Laboratory Analysis

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|----------------------|--------------------|---------------|--------------|--------------|---------------|---------------|
| 221852-1             | UT-MH1-S           | Other         | 12/21/2004   | 12:00        | 12/21/2004    | 17:20         |
| 221852-2             | UT-MH2-S           | Other         | 12/21/2004   | 12:30        | 12/21/2004    | 17:20         |
| 221852-3             | LS-C4              | Soil          | 12/21/2004   | 12:50        | 12/21/2004    | 17:20         |
| 221852-4             | Interceptor J      | Other         | 12/21/2004   | 13:30        | 12/21/2004    | 17:20         |
| 221852-5             | Interceptor C      | Other         | 12/21/2004   | 15:00        | 12/21/2004    | 17:20         |
| 221852-6             | LT-MH1-S           | Other         | 12/21/2004   | 15:10        | 12/21/2004    | 17:20         |
| 221852-7             | B15-MH1            | Water         | 12/21/2004   | 15:30        | 12/21/2004    | 17:20         |
| 221852-8             | B15-MH2            | Soil          | 12/21/2004   | 15:45        | 12/21/2004    | 17:20         |
| 221852-9             | FB-6               | Lab Water     | 12/21/2004   | 16:30        | 12/21/2004    | 17:20         |
| 221852-10            | TB-6 Water         | Lab Water     | 12/21/2004   | 16:30        | 12/21/2004    | 17:20         |
| 221852-11            | TB-6 Soil          | Methanol      | 12/21/2004   | 16:30        | 12/21/2004    | 17:20         |

**SAMPLE INFORMATION**  
Date: 01/27/2005

Job Number.: 222565 ✓  
Customer...: Gannett Fleming, Inc.  
Attn.....: Jim Barish

Project Number.....: 20002458  
Customer Project ID....: LABORATORY ANALYSIS  
Project Description....: Laboratory Analysis

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|----------------------|--------------------|---------------|--------------|--------------|---------------|---------------|
| 222565-1             | Bag House 1        | Solid         | 12/15/2004   | 16:00        | 12/16/2004    | 17:30         |



**STL**

MADEP MA014  
RIDOH57  
CTDPH 0494  
VT DECWSD  
NH DES 253903-A

NELAP FL E87912 TOX  
NELAP NJ MA008 TOX  
NELAP NY 10843  
NY DOH 10843



STL Westfield  
53 Southampton Rd.  
Westfield, MA 01085  
Tel: (413) 572-4000  
Fax: (413) 572-3707

STL Billerica-Service Center  
148 Rangeway Rd.  
N. Billerica, MA 01862  
Tel: (978) 667-1400  
Fax: (978) 667-7871

**SAMPLE INFORMATION**

Date: 01/31/2005

Job Number.: 222622 ✓

Customer...: Gannett Fleming, Inc.

Attn.....: Jim Barish

Project Number.....: 20002458

Customer Project ID....: LABORATORY ANALYSIS

Project Description....: Laboratory Analysis

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
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| 222622-1             | LS-D1              | Soil          | 01/27/2005   | 10:30        | 01/27/2005    | 15:00         |
| 222622-2             | LS-D2              | Soil          | 01/27/2005   | 12:00        | 01/27/2005    | 15:00         |



**STL**

MADEP MA014  
RIDOH57  
CTDPH 0494  
VT DECWSD  
NH DES 253903-A

NELAP FL E87912 TOX  
NELAP NJ MA008 TOX  
NELAP NY 10843  
NY DOH 10843



STL Westfield  
53 Southampton Rd.  
Westfield, MA 01085  
Tel: (413) 872-4000  
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STL Billerica-Service Center  
146 Rangeway Rd.  
N. Billerica, MA 01862  
Tel: (978) 667-1400  
Fax: (978) 667-7871



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Vol 2

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1-0484

SAMPLE SUMMARY

| LAB SAMPLE ID | CLIENT SAMPLE ID | SAMPLED    |       | RECEIVED   |       |
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| A4678908      | ECS-10           | 07/15/2004 | 14:21 | 07/16/2004 | 17:35 |
| A4680107      | ECS-10           | 07/15/2004 | 11:21 | 07/20/2004 | 09:30 |
| A4678909      | ECS-10F          | 07/15/2004 | 14:21 | 07/16/2004 | 17:35 |
| A4680108      | ECS-10F          | 07/15/2004 | 11:21 | 07/20/2004 | 09:30 |
| A4678914      | ECS-12           | 07/16/2004 | 10:01 | 07/16/2004 | 17:35 |
| A4680113      | ECS-12           | 07/16/2004 | 10:01 | 07/20/2004 | 09:30 |
| A4678915      | ECS-12F          | 07/16/2004 | 10:01 | 07/16/2004 | 17:35 |
| A4680114      | ECS-12F          | 07/16/2004 | 10:01 | 07/20/2004 | 09:30 |
| A4678910      | ECS-17           | 07/15/2004 | 10:21 | 07/16/2004 | 17:35 |
| A4680109      | ECS-17           | 07/15/2004 | 10:21 | 07/20/2004 | 09:30 |
| A4678911      | ECS-17F          | 07/15/2004 | 10:21 | 07/16/2004 | 17:35 |
| A4680110      | ECS-17F          | 07/15/2004 | 10:21 | 07/20/2004 | 09:30 |
| A4678901      | ECS-18           | 07/15/2004 | 15:36 | 07/16/2004 | 17:35 |
| A4680101      | ECS-18           | 07/15/2004 | 15:36 | 07/20/2004 | 09:30 |
| A4678902      | ECS-18F          | 07/15/2004 | 15:36 | 07/16/2004 | 17:35 |
| A4678903      | ECS-18F          | 07/15/2004 | 15:36 | 07/16/2004 | 17:35 |
| A4680102      | ECS-18F          | 07/15/2004 | 15:36 | 07/20/2004 | 09:30 |
| A4678904      | ECS-28           | 07/15/2004 | 17:20 | 07/16/2004 | 17:35 |
| A4680103      | ECS-28           | 07/15/2004 | 17:20 | 07/20/2004 | 09:30 |
| A4678905      | ECS-28F          | 07/15/2004 | 17:20 | 07/16/2004 | 17:35 |
| A4680104      | ECS-28F          | 07/15/2004 | 17:20 | 07/20/2004 | 09:30 |
| A4678912      | ECS-3            | 07/16/2004 | 09:50 | 07/16/2004 | 17:35 |
| A4680111      | ECS-3            | 07/16/2004 | 09:50 | 07/20/2004 | 09:30 |
| A4678906      | ECS-33           | 07/15/2004 | 14:05 | 07/16/2004 | 17:35 |
| A4680105      | ECS-33           | 07/15/2004 | 14:05 | 07/20/2004 | 09:30 |
| A4678907      | ECS-33F          | 07/15/2004 | 14:05 | 07/16/2004 | 17:35 |
| A4680106      | ECS-33F          | 07/15/2004 | 14:05 | 07/20/2004 | 09:30 |
| A4678913      | ECS-3F           | 07/16/2004 | 09:50 | 07/16/2004 | 17:35 |
| A4680112      | ECS-3F           | 07/16/2004 | 09:50 | 07/20/2004 | 09:30 |
| A4678917      | ECS-6A           | 07/16/2004 | 12:10 | 07/16/2004 | 17:35 |
| A4680116      | ECS-6A           | 07/16/2004 | 12:10 | 07/20/2004 | 09:30 |
| A4678918      | ECS-6AF          | 07/16/2004 | 12:10 | 07/16/2004 | 17:35 |
| A4680117      | ECS-6AF          | 07/16/2004 | 12:10 | 07/20/2004 | 09:30 |
| A4678919      | ECS-6B           | 07/16/2004 | 11:41 | 07/16/2004 | 17:35 |
| A4680118      | ECS-6B           | 07/16/2004 | 11:41 | 07/20/2004 | 09:30 |
| A4678920      | ECS-6BF          | 07/16/2004 | 11:41 | 07/16/2004 | 17:35 |
| A4680119      | ECS-6BF          | 07/16/2004 | 11:41 | 07/20/2004 | 09:30 |
| A4678921      | FB-1             | 07/16/2004 | 16:00 | 07/16/2004 | 17:35 |
| A4680120      | FB-1             | 07/16/2004 | 16:00 | 07/20/2004 | 09:30 |
| A4678916      | FB-2             | 07/16/2004 | 13:00 | 07/16/2004 | 17:35 |
| A4680115      | FB-2             | 07/16/2004 | 13:00 | 07/20/2004 | 09:30 |
| A4678922      | TB-1             | 07/15/2004 |       | 07/16/2004 | 17:35 |

## SAMPLE SUMMARY

| LAB SAMPLE ID | CLIENT SAMPLE ID | SAMPLED    |       | RECEIVED   |       |
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| A4716913      | ECS-11           | 07/21/2004 | 11:45 | 07/21/2004 | 17:45 |
| A4693117      | ECS-13           | 07/20/2004 | 12:46 | 07/22/2004 | 09:45 |
| A4693317      | ECS-13           | 07/20/2004 | 12:46 | 07/20/2004 | 18:00 |
| A4716901      | ECS-13           | 07/20/2004 | 12:46 | 07/21/2004 | 18:00 |
| A4693318      | ECS-13 F         | 07/20/2004 | 12:46 | 07/20/2004 | 18:00 |
| A4693118      | ECS-13F          | 07/20/2004 | 12:46 | 07/22/2004 | 09:45 |
| A4693121      | ECS-14           | 07/20/2004 | 15:01 | 07/22/2004 | 09:45 |
| A4693321      | ECS-14           | 07/20/2004 | 15:01 | 07/20/2004 | 18:00 |
| A4716905      | ECS-14           | 07/20/2004 | 15:01 | 07/21/2004 | 18:00 |
| A4693322      | ECS-14 F         | 07/20/2004 | 15:01 | 07/20/2004 | 18:00 |
| A4693122      | ECS-14F          | 07/20/2004 | 15:01 | 07/22/2004 | 09:45 |
| A4693119      | ECS-16           | 07/20/2004 | 12:35 | 07/22/2004 | 09:45 |
| A4693319      | ECS-16           | 07/20/2004 | 12:35 | 07/20/2004 | 18:00 |
| A4716903      | ECS-16           | 07/20/2004 | 12:35 | 07/21/2004 | 18:00 |
| A4693320      | ECS-16 F         | 07/20/2004 | 12:35 | 07/20/2004 | 18:00 |
| A4693120      | ECS-16F          | 07/20/2004 | 12:35 | 07/22/2004 | 09:45 |
| A4693101      | ECS-20           | 07/19/2004 | 10:16 | 07/22/2004 | 09:45 |
| A4693301      | ECS-20           | 07/19/2004 | 10:16 | 07/20/2004 | 18:00 |
| A4693302      | ECS-20 F         | 07/19/2004 | 10:16 | 07/20/2004 | 18:00 |
| A4693102      | ECS-20F          | 07/19/2004 | 10:16 | 07/22/2004 | 09:45 |
| A4693101MS    | ECS-20MS         | 07/19/2004 | 10:16 | 07/22/2004 | 09:45 |
| A4693101SD    | ECS-20SD         | 07/19/2004 | 10:16 | 07/22/2004 | 09:45 |
| A4693103      | ECS-23           | 07/19/2004 | 13:06 | 07/22/2004 | 09:45 |
| A4693303      | ECS-23           | 07/19/2004 | 13:06 | 07/20/2004 | 18:00 |
| A4693304      | ECS-23 F         | 07/19/2004 | 13:06 | 07/20/2004 | 18:00 |
| A4693104      | ECS-23F          | 07/19/2004 | 13:06 | 07/22/2004 | 09:45 |
| A4693113      | ECS-24           | 07/19/2004 | 04:55 | 07/22/2004 | 09:45 |
| A4693313      | ECS-24           | 07/19/2004 | 16:55 | 07/20/2004 | 18:00 |
| A4693314      | ECS-24 F         | 07/19/2004 | 16:55 | 07/20/2004 | 18:00 |
| A4693114      | ECS-24F          | 07/19/2004 | 04:55 | 07/22/2004 | 09:45 |
| A4693109      | ECS-25           | 07/19/2004 | 07:30 | 07/22/2004 | 09:45 |
| A4693309      | ECS-25           | 07/19/2004 | 07:30 | 07/20/2004 | 18:00 |
| A4693310      | ECS-25 F         | 07/19/2004 | 07:30 | 07/20/2004 | 18:00 |
| A4693110      | ECS-25F          | 07/19/2004 | 07:30 | 07/22/2004 | 09:45 |
| A4693105      | ECS-26           | 07/19/2004 | 14:46 | 07/22/2004 | 09:45 |
| A4693305      | ECS-26           | 07/19/2004 | 14:46 | 07/20/2004 | 18:00 |
| A4693306      | ECS-26 F         | 07/19/2004 | 14:46 | 07/20/2004 | 18:00 |
| A4693106      | ECS-26F          | 07/19/2004 | 14:46 | 07/22/2004 | 09:45 |
| A4693111      | ECS-27           | 07/19/2004 | 02:30 | 07/22/2004 | 09:45 |
| A4693311      | ECS-27           | 07/19/2004 | 14:30 | 07/20/2004 | 18:00 |
| A4693312      | ECS-27 F         | 07/19/2004 | 14:30 | 07/20/2004 | 18:00 |
| A4693112      | ECS-27F          | 07/19/2004 | 02:30 | 07/22/2004 | 09:45 |
| A4693123      | ECS-29           | 07/20/2004 | 04:05 | 07/22/2004 | 09:45 |
| A4693323      | ECS-29           | 07/20/2004 | 16:05 | 07/20/2004 | 18:00 |
| A4716907      | ECS-29           | 07/20/2004 | 04:05 | 07/21/2004 | 18:00 |
| A4693115      | ECS-30           | 07/20/2004 | 10:30 | 07/22/2004 | 09:45 |
| A4693315      | ECS-30           | 07/20/2004 | 10:30 | 07/20/2004 | 18:00 |
| A4693316      | ECS-30 F         | 07/20/2004 | 10:30 | 07/20/2004 | 18:00 |
| A4693116      | ECS-30F          | 07/20/2004 | 10:30 | 07/22/2004 | 09:45 |
| A4693107      | ECS-32           | 07/19/2004 | 16:36 | 07/22/2004 | 09:45 |

| <u>LAB SAMPLE ID</u> | <u>CLIENT SAMPLE ID</u> | <u>SAMPLED</u> |             | <u>RECEIVED</u> |             |
|----------------------|-------------------------|----------------|-------------|-----------------|-------------|
|                      |                         | <u>DATE</u>    | <u>TIME</u> | <u>DATE</u>     | <u>TIME</u> |
| A4693307             | ECS-32                  | 07/19/2004     | 16:36       | 07/20/2004      | 18:00       |
| A4693308             | ECS-32 F                | 07/19/2004     | 16:36       | 07/20/2004      | 18:00       |
| A4693108             | ECS-32F                 | 07/19/2004     | 16:36       | 07/22/2004      | 09:45       |
| A4693124             | ECS-5                   | 07/20/2004     | 16:26       | 07/22/2004      | 09:45       |
| A4693324             | ECS-5                   | 07/20/2004     | 16:26       | 07/20/2004      | 18:00       |
| A4716908             | ECS-5                   | 07/20/2004     | 16:26       | 07/21/2004      | 18:00       |
| A4693325             | ECS-5 F                 | 07/20/2004     | 16:26       | 07/20/2004      | 18:00       |
| A4693125             | ECS-5F                  | 07/20/2004     | 16:26       | 07/22/2004      | 09:45       |
| A4693126             | FB-3                    | 07/19/2004     | 08:30       | 07/22/2004      | 09:45       |
| A4693326             | FB-3                    | 07/19/2004     | 08:30       | 07/20/2004      | 18:00       |
| A4693127             | FB-4                    | 07/20/2004     | 08:00       | 07/22/2004      | 09:45       |
| A4693327             | FB-4                    | 07/20/2004     | 08:00       | 07/20/2004      | 18:00       |
| A4716910             | FB-4                    | 07/20/2004     | 08:06       | 07/21/2004      | 18:00       |
| A4716911             | MW-1                    | 07/01/2004     |             | 07/20/2004      | 18:00       |
| A4693128             | TB                      | 07/19/2004     |             | 07/22/2004      | 09:45       |

## SAMPLE SUMMARY

| LAB SAMPLE ID | CLIENT SAMPLE ID | SAMPLED    |       | RECEIVED   |       |
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|               |                  | DATE       | TIME  | DATE       | TIME  |
| A4693907      | DUP              | 07/21/2004 | 11:51 | 07/23/2004 | 09:15 |
| A4723307      | DUP              | 07/21/2004 | 11:51 | 07/21/2004 | 17:45 |
| A4693908      | DUP F            | 07/21/2004 | 11:51 | 07/23/2004 | 09:15 |
| A4723308      | DUP F            | 07/21/2004 | 11:51 | 07/21/2004 | 17:45 |
| A4693911      | ECS-11           | 07/21/2004 | 11:45 | 07/23/2004 | 09:15 |
| A4717002      | ECS-11           | 07/21/2004 | 11:45 | 07/21/2004 | 17:45 |
| A4723310      | ECS-11           | 07/21/2004 | 11:45 | 07/21/2004 | 17:45 |
| A4693912      | ECS-11 F         | 07/21/2004 | 11:45 | 07/23/2004 | 09:15 |
| A4723311      | ECS-11 F         | 07/21/2004 | 11:45 | 07/21/2004 | 17:45 |
| A4693914      | ECS-29           | 07/21/2004 | 14:20 | 07/23/2004 | 09:15 |
| A4723312      | ECS-29           | 07/21/2004 | 14:20 | 07/21/2004 | 17:45 |
| A4693913      | ECS-29 F         | 07/21/2004 | 14:20 | 07/23/2004 | 09:15 |
| A4723313      | ECS-29 F         | 07/21/2004 | 14:20 | 07/21/2004 | 17:45 |
| A4693909      | FB-5             | 07/21/2004 | 15:15 | 07/23/2004 | 09:15 |
| A4723309      | FB-5             | 07/21/2004 | 15:15 | 07/21/2004 | 17:45 |
| A4693903      | MW-1             | 07/21/2004 | 09:46 | 07/23/2004 | 09:15 |
| A4717001      | MW-1             | 07/21/2004 | 09:46 | 07/21/2004 | 17:45 |
| A4723303      | MW-1             | 07/21/2004 | 09:46 | 07/21/2004 | 17:45 |
| A4693904      | MW-1 F           | 07/21/2004 | 09:46 | 07/23/2004 | 09:15 |
| A4723304      | MW-1 F           | 07/21/2004 | 09:46 | 07/21/2004 | 17:45 |
| A4693901      | MW-2             | 07/21/2004 | 09:25 | 07/23/2004 | 09:15 |
| A4723301      | MW-2             | 07/21/2004 | 09:25 | 07/21/2004 | 17:45 |
| A4693902      | MW-2 F           | 07/21/2004 | 09:25 | 07/23/2004 | 09:15 |
| A4723302      | MW-2 F           | 07/21/2004 | 09:25 | 07/21/2004 | 17:45 |
| A4693902MS    | MW-2 F MS        | 07/21/2004 | 09:25 | 07/23/2004 | 09:15 |
| A4723302MS    | MW-2 F MS        | 07/21/2004 | 09:25 | 07/21/2004 | 17:45 |
| A4693902SD    | MW-2 F SD        | 07/21/2004 | 09:25 | 07/23/2004 | 09:15 |
| A4723302SD    | MW-2 F SD        | 07/21/2004 | 09:25 | 07/21/2004 | 17:45 |
| A4693901MS    | MW-2 MS          | 07/21/2004 | 09:25 | 07/23/2004 | 09:15 |
| A4723301MS    | MW-2 MS          | 07/21/2004 | 09:25 | 07/21/2004 | 17:45 |
| A4693901SD    | MW-2 SD          | 07/21/2004 | 09:25 | 07/23/2004 | 09:15 |
| A4723301SD    | MW-2 SD          | 07/21/2004 | 09:25 | 07/21/2004 | 17:45 |
| A4693905      | MW-3             | 07/21/2004 | 11:51 | 07/23/2004 | 09:15 |
| A4723305      | MW-3             | 07/21/2004 | 11:51 | 07/21/2004 | 17:45 |
| A4693906      | MW-3 F           | 07/21/2004 | 11:51 | 07/23/2004 | 09:15 |
| A4723306      | MW-3 F           | 07/21/2004 | 11:51 | 07/21/2004 | 17:45 |
| A4693910      | TRIP BLANK       | 07/21/2004 |       | 07/23/2004 | 09:15 |

## SAMPLE SUMMARY

| <u>LAB SAMPLE ID</u> | <u>CLIENT SAMPLE ID</u> | <u>SAMPLED</u> |             | <u>RECEIVED</u> |             |
|----------------------|-------------------------|----------------|-------------|-----------------|-------------|
|                      |                         | <u>DATE</u>    | <u>TIME</u> | <u>DATE</u>     | <u>TIME</u> |
| A4725607             | FB                      | 07/28/2004     | 12:00       | 07/30/2004      | 10:30       |
| A4725601             | GF-1A                   | 07/28/2004     | 08:30       | 07/30/2004      | 10:30       |
| A4725602             | GF-1B                   | 07/28/2004     | 08:30       | 07/30/2004      | 10:30       |
| A4725603             | GF-2A                   | 07/28/2004     | 09:00       | 07/30/2004      | 10:30       |
| A4725604             | GF-2B                   | 07/28/2004     | 09:00       | 07/30/2004      | 10:30       |
| A4725605             | GF-3A                   | 07/28/2004     | 09:55       | 07/30/2004      | 10:30       |
| A4725606             | GF-3B                   | 07/28/2004     | 09:55       | 07/30/2004      | 10:30       |

## SAMPLE SUMMARY

| LAB SAMPLE ID | CLIENT SAMPLE ID | SAMPLED    |       | RECEIVED   |       |
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| A4728210      | FB-2             | 07/30/2004 | 09:00 | 07/30/2004 | 12:45 |
| A4730202      | FB-2             | 07/30/2004 | 09:00 | 07/31/2004 | 09:25 |
| A4729901      | GF-17A           | 07/28/2004 | 12:50 | 07/31/2004 | 09:25 |
| A4729902      | GF-17B           | 07/28/2004 | 12:50 | 07/31/2004 | 09:25 |
| A4729903      | GF-17C           | 07/28/2004 | 12:50 | 07/31/2004 | 09:25 |
| A4729910      | GF-18A           | 07/28/2004 | 15:40 | 07/31/2004 | 09:25 |
| A4729911      | GF-18B           | 07/28/2004 | 15:40 | 07/31/2004 | 09:25 |
| A4729912      | GF-18C           | 07/28/2004 | 15:40 | 07/31/2004 | 09:25 |
| A4729904      | GF-19A           | 07/28/2004 | 14:00 | 07/31/2004 | 09:25 |
| A4729905      | GF-19B           | 07/28/2004 | 14:00 | 07/31/2004 | 09:25 |
| A4729906      | GF-19C           | 07/28/2004 | 14:00 | 07/31/2004 | 09:25 |
| A4728201      | GF-1A            | 07/29/2004 | 15:05 | 07/30/2004 | 12:45 |
| A4728202      | GF-1B            | 07/29/2004 | 15:05 | 07/30/2004 | 12:45 |
| A4729907      | GF-20A           | 07/28/2004 | 14:45 | 07/31/2004 | 09:25 |
| A4729908      | GF-20B           | 07/28/2004 | 14:45 | 07/31/2004 | 09:25 |
| A4729909      | GF-20C           | 07/28/2004 | 14:45 | 07/31/2004 | 09:25 |
| A4729913      | GF-21A           | 07/28/2004 | 16:15 | 07/31/2004 | 09:25 |
| A4729914      | GF-21B           | 07/28/2004 | 16:15 | 07/31/2004 | 09:25 |
| A4729915      | GF-21C           | 07/28/2004 | 16:15 | 07/31/2004 | 09:25 |
| A4728203      | GF-2A            | 07/29/2004 | 16:15 | 07/30/2004 | 12:45 |
| A4728204      | GF-2B            | 07/29/2004 | 16:15 | 07/30/2004 | 12:45 |
| A4729922      | GF-33A           | 07/29/2004 | 17:00 | 07/31/2004 | 09:25 |
| A4728207      | GF-33B           | 07/29/2004 | 17:00 | 07/30/2004 | 12:45 |
| A4729923      | GF-33B           | 07/29/2004 | 17:00 | 07/31/2004 | 09:25 |
| A4728208      | GF-33C           | 07/29/2004 | 17:00 | 07/30/2004 | 12:45 |
| A4729924      | GF-33C           | 07/29/2004 | 17:00 | 07/31/2004 | 09:25 |
| A4729925      | GF-35A           | 07/30/2004 | 07:45 | 07/31/2004 | 09:25 |
| A4728209      | GF-35B           | 07/30/2004 | 07:45 | 07/30/2004 | 12:45 |
| A4729926      | GF-35B           | 07/30/2004 | 07:45 | 07/31/2004 | 09:25 |
| A4728205      | GF-3A            | 07/29/2004 | 15:35 | 07/30/2004 | 12:45 |
| A4728206      | GF-3B            | 07/29/2004 | 15:35 | 07/30/2004 | 12:45 |
| A4728212      | GF-5A            | 07/30/2004 | 09:45 | 07/30/2004 | 12:45 |
| A4729927      | GF-5A            | 07/30/2004 | 09:45 | 07/31/2004 | 09:25 |
| A4728213      | GF-5B            | 07/30/2004 | 09:45 | 07/30/2004 | 12:45 |
| A4729928      | GF-5B            | 07/30/2004 | 09:45 | 07/31/2004 | 09:25 |
| A4729916      | GF-6A            | 07/28/2004 | 17:00 | 07/31/2004 | 09:25 |
| A4729917      | GF-6B            | 07/28/2004 | 17:00 | 07/31/2004 | 09:25 |
| A4729918      | GF-7A            | 07/29/2004 | 07:45 | 07/31/2004 | 09:25 |
| A4729919      | GF-7B            | 07/29/2004 | 07:45 | 07/31/2004 | 09:25 |
| A4729920      | GF-8A            | 07/29/2004 | 08:50 | 07/31/2004 | 09:25 |
| A4729921      | GF-8B            | 07/29/2004 | 08:50 | 07/31/2004 | 09:25 |
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| A4738807      | FB-6             | 08/03/2004 | 07:00 | 08/04/2004 | 09:45 |
| A4739307      | FB-6             | 08/03/2004 | 07:00 | 08/03/2004 | 15:45 |
| A4738816      | GF-23A           | 08/03/2004 | 11:15 | 08/04/2004 | 09:45 |
| A4738817      | GF-23B           | 08/03/2004 | 11:15 | 08/04/2004 | 09:45 |
| A4739315      | GF-23B           | 08/03/2004 | 11:15 | 08/03/2004 | 15:45 |
| A4738818      | GF-23C           | 08/03/2004 | 11:15 | 08/04/2004 | 09:45 |
| A4739316      | GF-23C           | 08/03/2004 | 11:15 | 08/03/2004 | 15:45 |
| A4738813      | GF-34A           | 08/03/2004 | 09:30 | 08/04/2004 | 09:45 |
| A4738814      | GF-34B           | 08/03/2004 | 09:30 | 08/04/2004 | 09:45 |
| A4739313      | GF-34B           | 08/03/2004 | 09:30 | 08/03/2004 | 15:45 |
| A4738815      | GF-34C           | 08/03/2004 | 09:30 | 08/04/2004 | 09:45 |
| A4739314      | GF-34C           | 08/03/2004 | 09:30 | 08/03/2004 | 15:45 |
| A4734601      | GF-35C           | 08/02/2004 | 08:40 | 08/02/2004 | 17:05 |
| A4738819      | GF-35C           | 08/02/2004 | 08:40 | 08/04/2004 | 09:45 |
| A4738820      | GF-36A           | 08/02/2004 | 09:30 | 08/04/2004 | 09:45 |
| A4734602      | GF-36B           | 08/02/2004 | 09:30 | 08/02/2004 | 17:05 |
| A4738821      | GF-36B           | 08/02/2004 | 09:30 | 08/04/2004 | 09:45 |
| A4734603      | GF-36C           | 08/02/2004 | 09:30 | 08/02/2004 | 17:05 |
| A4738822      | GF-36C           | 08/02/2004 | 09:30 | 08/04/2004 | 09:45 |
| A4738823      | GF-37A           | 08/02/2004 | 10:30 | 08/04/2004 | 09:45 |
| A4734604      | GF-37B           | 08/02/2004 | 10:30 | 08/02/2004 | 17:05 |
| A4738824      | GF-37B           | 08/02/2004 | 10:30 | 08/04/2004 | 09:45 |
| A4734605      | GF-37C           | 08/02/2004 | 10:30 | 08/02/2004 | 17:05 |
| A4738825      | GF-37C           | 08/02/2004 | 10:30 | 08/04/2004 | 09:45 |
| A4738811      | GF-38A           | 08/03/2004 | 08:55 | 08/04/2004 | 09:45 |
| A4739311      | GF-38A           | 08/03/2004 | 08:55 | 08/03/2004 | 15:45 |
| A4738812      | GF-38B           | 08/03/2004 | 08:55 | 08/04/2004 | 09:45 |
| A4739312      | GF-38B           | 08/03/2004 | 08:55 | 08/03/2004 | 15:45 |
| A4738808      | GF-39A           | 08/03/2004 | 08:00 | 08/04/2004 | 09:45 |
| A4739308      | GF-39A           | 08/03/2004 | 08:00 | 08/03/2004 | 15:45 |
| A4738809      | GF-39B           | 08/03/2004 | 08:00 | 08/04/2004 | 09:45 |
| A4739309      | GF-39B           | 08/03/2004 | 08:00 | 08/03/2004 | 15:45 |
| A4738805      | GF-40A           | 08/02/2004 | 14:30 | 08/04/2004 | 09:45 |
| A4739305      | GF-40A           | 08/02/2004 | 14:30 | 08/03/2004 | 15:45 |
| A4738806      | GF-40B           | 08/02/2004 | 14:30 | 08/04/2004 | 09:45 |
| A4739306      | GF-40B           | 08/02/2004 | 14:30 | 08/03/2004 | 15:45 |
| A4738803      | GF-41A           | 08/02/2004 | 13:30 | 08/04/2004 | 09:45 |
| A4739303      | GF-41A           | 08/02/2004 | 13:30 | 08/03/2004 | 15:45 |
| A4738804      | GF-41B           | 08/02/2004 | 13:30 | 08/04/2004 | 09:45 |
| A4739304      | GF-41B           | 08/02/2004 | 13:30 | 08/03/2004 | 15:45 |
| A4738801      | GF-42A           | 08/02/2004 | 11:15 | 08/04/2004 | 09:45 |
| A4739301      | GF-42A           | 08/02/2004 | 11:15 | 08/03/2004 | 15:45 |
| A4738802      | GF-42B           | 08/02/2004 | 11:15 | 08/04/2004 | 09:45 |
| A4739302      | GF-42B           | 08/02/2004 | 11:15 | 08/03/2004 | 15:45 |
| A4734606      | TB-4             | 08/02/2004 |       | 08/02/2004 | 17:05 |
| A4739310      | TB-6             | 08/03/2004 |       | 08/03/2004 | 15:45 |

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| A4744218      | GF-10A           | 08/04/2004 | 09:20 | 08/05/2004 | 10:15 |
| A4744219      | GF-10B           | 08/04/2004 | 09:20 | 08/05/2004 | 10:15 |
| A4744220      | GF-11A           | 08/04/2004 | 09:50 | 08/05/2004 | 10:15 |
| A4744221      | GF-11B           | 08/04/2004 | 09:50 | 08/05/2004 | 10:15 |
| A4744211      | GF-22A           | 08/03/2004 | 15:30 | 08/05/2004 | 10:15 |
| A4743608      | GF-22B           | 08/03/2004 | 15:30 | 08/04/2004 | 12:35 |
| A4744212      | GF-22B           | 08/03/2004 | 15:30 | 08/05/2004 | 10:15 |
| A4743601      | GF-22C           | 08/03/2004 | 15:30 | 08/04/2004 | 12:35 |
| A4744201      | GF-22C           | 08/03/2004 | 15:30 | 08/05/2004 | 10:15 |
| A4744202      | GF-24A           | 08/03/2004 | 16:30 | 08/05/2004 | 10:15 |
| A4743602      | GF-24B           | 08/03/2004 | 16:30 | 08/04/2004 | 12:35 |
| A4744203      | GF-24B           | 08/03/2004 | 16:30 | 08/05/2004 | 10:15 |
| A4743603      | GF-24C           | 08/03/2004 | 16:30 | 08/04/2004 | 12:35 |
| A4744204      | GF-24C           | 08/03/2004 | 16:30 | 08/05/2004 | 10:15 |
| A4744208      | GF-25A           | 08/03/2004 | 14:50 | 08/05/2004 | 10:15 |
| A4743606      | GF-25B           | 08/03/2004 | 14:50 | 08/04/2004 | 12:35 |
| A4744209      | GF-25B           | 08/03/2004 | 14:50 | 08/05/2004 | 10:15 |
| A4743607      | GF-25C           | 08/03/2004 | 14:50 | 08/04/2004 | 12:35 |
| A4744210      | GF-25C           | 08/03/2004 | 14:50 | 08/05/2004 | 10:15 |
| A4744205      | GF-26A           | 08/03/2004 | 17:00 | 08/05/2004 | 10:15 |
| A4743604      | GF-26B           | 08/03/2004 | 17:00 | 08/04/2004 | 12:35 |
| A4744206      | GF-26B           | 08/03/2004 | 17:00 | 08/05/2004 | 10:15 |
| A4743605      | GF-26C           | 08/03/2004 | 17:00 | 08/04/2004 | 12:35 |
| A4744207      | GF-26C           | 08/03/2004 | 17:00 | 08/05/2004 | 10:15 |
| A4744213      | GF-32A           | 08/04/2004 | 08:00 | 08/05/2004 | 10:15 |
| A4743611      | GF-32B           | 08/04/2004 | 08:00 | 08/04/2004 | 12:35 |
| A4744214      | GF-32B           | 08/04/2004 | 08:00 | 08/05/2004 | 10:15 |
| A4743612      | GF-32C           | 08/04/2004 | 08:00 | 08/04/2004 | 12:35 |
| A4744215      | GF-32C           | 08/04/2004 | 08:00 | 08/05/2004 | 10:15 |
| A4744216      | GF-9A            | 08/04/2004 | 08:45 | 08/05/2004 | 10:15 |
| A4744217      | GF-9B            | 08/04/2004 | 08:45 | 08/05/2004 | 10:15 |
| A4743610      | TB-7             | 08/04/2004 |       | 08/04/2004 | 12:35 |



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| A4749101      | GF-12A           | 08/04/2004 | 10:30 | 08/06/2004 | 09:45 |
| A4749102      | GF-12B           | 08/04/2004 | 10:30 | 08/06/2004 | 09:45 |
| A4749103      | GF-13A           | 08/04/2004 | 15:15 | 08/06/2004 | 09:45 |
| A4749104      | GF-13B           | 08/04/2004 | 15:15 | 08/06/2004 | 09:45 |
| A4749105      | GF-14A           | 08/04/2004 | 15:45 | 08/06/2004 | 09:45 |
| A4749106      | GF-14B           | 08/04/2004 | 15:45 | 08/06/2004 | 09:45 |
| A4749107      | GF-15A           | 08/04/2004 | 16:10 | 08/06/2004 | 09:45 |
| A4749108      | GF-15B           | 08/04/2004 | 16:10 | 08/06/2004 | 09:45 |
| A4749109      | GF-16A           | 08/04/2004 | 17:00 | 08/06/2004 | 09:45 |
| A4749110      | GF-16B           | 08/04/2004 | 17:00 | 08/06/2004 | 09:45 |
| A4748301      | GF-4A            | 08/05/2004 | 10:00 | 08/05/2004 | 16:20 |
| A4749111      | GF-4A            | 08/05/2004 | 10:00 | 08/06/2004 | 09:45 |
| A4748301MS    | GF-4A MS         | 08/05/2004 | 10:00 | 08/05/2004 | 16:20 |
| A4748301SD    | GF-4A SD         | 08/05/2004 | 10:00 | 08/05/2004 | 16:20 |
| A4749111MS    | GF-4AMS          | 08/05/2004 | 10:00 | 08/06/2004 | 09:45 |
| A4749111SD    | GF-4ASD          | 08/05/2004 | 10:00 | 08/06/2004 | 09:45 |
| A4748302      | GF-4B            | 08/05/2004 | 10:00 | 08/05/2004 | 16:20 |
| A4749112      | GF-4B            | 08/05/2004 | 10:00 | 08/06/2004 | 09:45 |
| A4748302MS    | GF-4B MS         | 08/05/2004 | 10:00 | 08/05/2004 | 16:20 |
| A4748302SD    | GF-4B SD         | 08/05/2004 | 10:00 | 08/05/2004 | 16:20 |
| A4749112MS    | GF-4BMS          | 08/05/2004 | 10:00 | 08/06/2004 | 09:45 |
| A4749112SD    | GF-4BSD          | 08/05/2004 | 10:00 | 08/06/2004 | 09:45 |
| A4749114      | GF-SS1           | 08/05/2004 | 11:30 | 08/06/2004 | 09:45 |
| A4749115      | GF-SS2           | 08/05/2004 | 11:30 | 08/06/2004 | 09:45 |

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| A4758401      | FB-9             | 08/06/2004 | 08:00 | 08/07/2004 | 10:45 |
| A4752024      | GF-43A           | 08/06/2004 | 10:30 | 08/07/2004 | 10:45 |
| A4758402      | GF-43A           | 08/06/2004 | 10:30 | 08/07/2004 | 10:45 |
| A4752025      | GF-43B           | 08/06/2004 | 10:30 | 08/07/2004 | 10:45 |
| A4758403      | GF-43B           | 08/06/2004 | 10:30 | 08/07/2004 | 10:45 |
| A4752026      | GF-44A           | 08/06/2004 | 13:20 | 08/07/2004 | 10:45 |
| A4758404      | GF-44A           | 08/06/2004 | 13:20 | 08/07/2004 | 10:45 |
| A4752026MS    | GF-44A MS        | 08/06/2004 | 13:20 | 08/07/2004 | 10:45 |
| A4752026SD    | GF-44A SD        | 08/06/2004 | 13:20 | 08/07/2004 | 10:45 |
| A4752027      | GF-44B           | 08/06/2004 | 13:20 | 08/07/2004 | 10:45 |
| A4758407      | GF-44B           | 08/06/2004 | 13:20 | 08/07/2004 | 10:45 |
| A4758405      | GF-44MS          | 08/06/2004 | 13:20 | 08/07/2004 | 10:45 |
| A4758406      | GF-44SD          | 08/06/2004 | 13:20 | 08/07/2004 | 10:45 |
| A4752028      | GF-45A           | 08/06/2004 | 14:30 | 08/07/2004 | 10:45 |
| A4758408      | GF-45A           | 08/06/2004 | 14:30 | 08/07/2004 | 10:45 |
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| A4758409      | GF-45B           | 08/06/2004 | 14:30 | 08/07/2004 | 10:45 |
| A4752017      | GF-52A           | 08/06/2004 | 07:50 | 08/07/2004 | 10:45 |
| A4752018      | GF-52B           | 08/06/2004 | 07:50 | 08/07/2004 | 10:45 |
| A4758306      | GF-52B           | 08/06/2004 | 07:50 | 08/06/2004 | 13:10 |
| A4752019      | GF-52C           | 08/06/2004 | 07:50 | 08/07/2004 | 10:45 |
| A4758307      | GF-52C           | 08/06/2004 | 07:50 | 08/06/2004 | 13:10 |
| A4752021      | GF-53A           | 08/06/2004 | 09:30 | 08/07/2004 | 10:45 |
| A4752022      | GF-53B           | 08/06/2004 | 09:30 | 08/07/2004 | 10:45 |
| A4758310      | GF-53B           | 08/06/2004 | 09:30 | 08/06/2004 | 13:10 |
| A4752023      | GF-53C           | 08/06/2004 | 09:30 | 08/07/2004 | 10:45 |
| A4758311      | GF-53C           | 08/06/2004 | 09:30 | 08/06/2004 | 13:10 |
| A4752011      | GF-54A           | 08/06/2004 | 11:10 | 08/07/2004 | 10:45 |
| A4752012      | GF-54B           | 08/06/2004 | 11:10 | 08/07/2004 | 10:45 |
| A4758312      | GF-54B           | 08/06/2004 | 11:10 | 08/06/2004 | 13:10 |
| A4752013      | GF-54C           | 08/06/2004 | 11:10 | 08/07/2004 | 10:45 |
| A4758313      | GF-54C           | 08/06/2004 | 11:10 | 08/06/2004 | 13:10 |
| A4752014      | GF-55A           | 08/06/2004 | 12:00 | 08/07/2004 | 10:45 |
| A4752015      | GF-55B           | 08/06/2004 | 12:00 | 08/07/2004 | 10:45 |
| A4758314      | GF-55B           | 08/06/2004 | 12:00 | 08/06/2004 | 13:10 |
| A4752016      | GF-55C           | 08/06/2004 | 12:00 | 08/07/2004 | 10:45 |
| A4758315      | GF-55C           | 08/06/2004 | 12:00 | 08/06/2004 | 13:10 |
| A4752003      | GF-65A           | 08/05/2004 | 14:40 | 08/07/2004 | 10:45 |
| A4752004      | GF-65B           | 08/05/2004 | 14:40 | 08/07/2004 | 10:45 |
| A4758302      | GF-65B           | 08/05/2004 | 14:40 | 08/06/2004 | 13:10 |
| A4752001      | GF-66A           | 08/05/2004 | 14:00 | 08/07/2004 | 10:45 |
| A4752002      | GF-66B           | 08/05/2004 | 14:00 | 08/07/2004 | 10:45 |
| A4758301      | GF-66B           | 08/05/2004 | 14:00 | 08/06/2004 | 13:10 |
| A4752007      | GF-67A           | 08/05/2004 | 15:40 | 08/07/2004 | 10:45 |
| A4752008      | GF-67B           | 08/05/2004 | 15:40 | 08/07/2004 | 10:45 |
| A4758304      | GF-67B           | 08/05/2004 | 15:40 | 08/06/2004 | 13:10 |
| A4752005      | GF-68A           | 08/05/2004 | 15:15 | 08/07/2004 | 10:45 |
| A4752006      | GF-68B           | 08/05/2004 | 15:15 | 08/07/2004 | 10:45 |

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| A4752009             | GF-70A                  | 08/05/2004     | 16:15       | 08/07/2004      | 10:45       |
| A4752010             | GF-70B                  | 08/05/2004     | 16:15       | 08/07/2004      | 10:45       |
| A4758305             | GF-70B                  | 08/05/2004     | 16:15       | 08/06/2004      | 13:10       |
| A4758309             | TB-9                    | 08/06/2004     |             | 08/06/2004      | 13:10       |

## SAMPLE SUMMARY

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| A4758101             | AST40-1C-L              | 08/03/2004     | 11:00       | 08/06/2004      | 13:10       |
| A4758102             | AST40-2C-S              | 08/03/2004     | 11:05       | 08/06/2004      | 13:10       |
| A4758103             | AST40-3C-L              | 08/03/2004     | 11:10       | 08/06/2004      | 13:10       |
| A4758104             | AST42-1C-L              | 08/03/2004     | 14:00       | 08/06/2004      | 13:10       |
| A4758202             | AST42-1C-L              | 08/03/2004     | 14:00       | 08/06/2004      | 13:10       |
| A4758105             | AST42-1C-S              | 08/03/2004     | 14:00       | 08/06/2004      | 13:10       |
| A4758203             | AST42-1C-S              | 08/03/2004     | 14:00       | 08/06/2004      | 13:10       |
| A4758106             | AST42-2C-S              | 08/03/2004     | 14:05       | 08/06/2004      | 13:10       |
| A4758204             | AST42-2C-S              | 08/03/2004     | 14:05       | 08/06/2004      | 13:10       |
| A4758108             | AST42-3C-L              | 08/04/2004     | 14:10       | 08/06/2004      | 13:10       |
| A4758206             | AST42-3C-L              | 08/04/2004     | 14:10       | 08/06/2004      | 13:10       |
| A4758107             | AST42-3C-S              | 08/04/2004     | 14:10       | 08/06/2004      | 13:10       |
| A4758205             | AST42-3C-S              | 08/04/2004     | 14:10       | 08/06/2004      | 13:10       |
| A4758109             | AST42-4C-L              | 08/04/2004     | 14:15       | 08/06/2004      | 13:10       |
| A4758207             | AST42-4C-L              | 08/04/2004     | 14:15       | 08/06/2004      | 13:10       |

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| A4762305      | GF-46A           | 08/09/2004 | 12:40 | 08/11/2004 | 09:45 |
| A4765205      | GF-46A           | 08/09/2004 | 12:40 | 08/11/2004 | 09:45 |
| A4762306      | GF-46B           | 08/09/2004 | 12:45 | 08/11/2004 | 09:45 |
| A4765206      | GF-46B           | 08/09/2004 | 12:45 | 08/11/2004 | 09:45 |
| A4762303      | GF-47A           | 08/09/2004 | 11:20 | 08/11/2004 | 09:45 |
| A4765203      | GF-47A           | 08/09/2004 | 11:20 | 08/11/2004 | 09:45 |
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| A4765204      | GF-47B           | 08/09/2004 | 11:20 | 08/11/2004 | 09:45 |
| A4762307      | GF-48A           | 08/09/2004 | 14:00 | 08/11/2004 | 09:45 |
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| A4770116      | FB-12            | 08/11/2004 | 10:30 | 08/12/2004 | 09:45 |
| A4764701      | GF-51A           | 08/10/2004 | 10:00 | 08/10/2004 | 17:50 |
| A4770117      | GF-51A           | 08/10/2004 | 10:00 | 08/12/2004 | 09:45 |
| A4764702      | GF-51B           | 08/10/2004 | 10:05 | 08/10/2004 | 17:50 |
| A4770118      | GF-51B           | 08/10/2004 | 10:05 | 08/12/2004 | 09:45 |
| A4770113      | GF-56A           | 08/11/2004 | 08:50 | 08/12/2004 | 09:45 |
| A4764809      | GF-56B           | 08/11/2004 | 08:55 | 08/11/2004 | 12:10 |
| A4770114      | GF-56B           | 08/11/2004 | 08:55 | 08/12/2004 | 09:45 |
| A4764810      | GF-56C           | 08/11/2004 | 09:00 | 08/11/2004 | 12:10 |
| A4770115      | GF-56C           | 08/11/2004 | 09:00 | 08/12/2004 | 09:45 |
| A4770119      | GF-57A           | 08/10/2004 | 10:50 | 08/12/2004 | 09:45 |
| A4764601      | GF-57B           | 08/10/2004 | 10:55 | 08/10/2004 | 17:50 |
| A4770120      | GF-57B           | 08/10/2004 | 10:55 | 08/12/2004 | 09:45 |
| A4764602      | GF-57C           | 08/10/2004 | 11:00 | 08/10/2004 | 17:50 |
| A4770121      | GF-57C           | 08/10/2004 | 11:00 | 08/12/2004 | 09:45 |
| A4770101      | GF-59A           | 08/10/2004 | 14:15 | 08/12/2004 | 09:45 |
| A4764801      | GF-59B           | 08/10/2004 | 14:20 | 08/11/2004 | 12:10 |
| A4770102      | GF-59B           | 08/10/2004 | 14:20 | 08/12/2004 | 09:45 |
| A4764802      | GF-59C           | 08/10/2004 | 14:25 | 08/11/2004 | 12:10 |
| A4770103      | GF-59C           | 08/10/2004 | 14:25 | 08/12/2004 | 09:45 |
| A4770104      | GF-60A           | 08/10/2004 | 15:00 | 08/12/2004 | 09:45 |
| A4764803      | GF-60B           | 08/10/2004 | 15:05 | 08/11/2004 | 12:10 |
| A4770105      | GF-60B           | 08/10/2004 | 15:05 | 08/12/2004 | 09:45 |
| A4764804      | GF-60C           | 08/10/2004 | 15:10 | 08/11/2004 | 12:10 |
| A4770106      | GF-60C           | 08/10/2004 | 15:10 | 08/12/2004 | 09:45 |
| A4770107      | GF-61A           | 08/10/2004 | 16:10 | 08/12/2004 | 09:45 |
| A4770107MS    | GF-61AMS         | 08/10/2004 | 16:10 | 08/12/2004 | 09:45 |
| A4770107SD    | GF-61ASD         | 08/10/2004 | 16:10 | 08/12/2004 | 09:45 |
| A4764805      | GF-61B           | 08/10/2004 | 16:15 | 08/11/2004 | 12:10 |
| A4770108      | GF-61B           | 08/10/2004 | 16:15 | 08/12/2004 | 09:45 |
| A4764805MS    | GF-61B MS        | 08/10/2004 | 16:15 | 08/11/2004 | 12:10 |
| A4764805SD    | GF-61B SD        | 08/10/2004 | 16:15 | 08/11/2004 | 12:10 |
| A4770108MS    | GF-61BMS         | 08/10/2004 | 16:15 | 08/12/2004 | 09:45 |
| A4770108SD    | GF-61BSD         | 08/10/2004 | 16:15 | 08/12/2004 | 09:45 |
| A4764806      | GF-61C           | 08/10/2004 | 16:20 | 08/11/2004 | 12:10 |
| A4770109      | GF-61C           | 08/10/2004 | 16:20 | 08/12/2004 | 09:45 |
| A4764806MS    | GF-61C MS        | 08/10/2004 | 16:20 | 08/11/2004 | 12:10 |
| A4764806SD    | GF-61C SD        | 08/10/2004 | 16:20 | 08/11/2004 | 12:10 |
| A4770109MS    | GF-61CMS         | 08/10/2004 | 16:20 | 08/12/2004 | 09:45 |
| A4770109SD    | GF-61CSD         | 08/10/2004 | 16:20 | 08/12/2004 | 09:45 |
| A4770110      | GF-63A           | 08/10/2004 | 17:25 | 08/12/2004 | 09:45 |
| A4764807      | GF-63B           | 08/10/2004 | 17:30 | 08/11/2004 | 12:10 |
| A4770111      | GF-63B           | 08/10/2004 | 17:30 | 08/12/2004 | 09:45 |
| A4764808      | GF-63C           | 08/10/2004 | 17:35 | 08/11/2004 | 12:10 |
| A4770112      | GF-63C           | 08/10/2004 | 17:35 | 08/12/2004 | 09:45 |
| A4764604      | TB-11            | 08/10/2004 |       | 08/10/2004 | 17:50 |
| A4764812      | TB-12            | 08/11/2004 |       | 08/11/2004 | 12:10 |

## SAMPLE SUMMARY

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| A4774108             | FB-13                   | 08/12/2004     | 12:00       | 08/12/2004      | 13:00       |
| A4777613             | FB-13                   | 08/12/2004     | 12:00       | 08/13/2004      | 09:45       |
| A4777601             | GF-58A                  | 08/11/2004     | 14:30       | 08/13/2004      | 09:45       |
| A4774101             | GF-58B                  | 08/11/2004     | 14:30       | 08/12/2004      | 13:00       |
| A4777602             | GF-58B                  | 08/11/2004     | 14:35       | 08/13/2004      | 09:45       |
| A4774102             | GF-58C                  | 08/11/2004     | 14:40       | 08/12/2004      | 13:00       |
| A4777603             | GF-58C                  | 08/11/2004     | 14:40       | 08/13/2004      | 09:45       |
| A4777604             | GF-62A                  | 08/11/2004     | 15:20       | 08/13/2004      | 09:45       |
| A4774103             | GF-62B                  | 08/11/2004     | 15:25       | 08/12/2004      | 13:00       |
| A4777605             | GF-62B                  | 08/11/2004     | 15:25       | 08/13/2004      | 09:45       |
| A4774104             | GF-62C                  | 08/11/2004     | 15:30       | 08/12/2004      | 13:00       |
| A4777606             | GF-62C                  | 08/11/2004     | 15:30       | 08/13/2004      | 09:45       |
| A4777607             | GF-76A                  | 08/12/2004     | 09:00       | 08/13/2004      | 09:45       |
| A4774105             | GF-76B                  | 08/12/2004     | 09:05       | 08/12/2004      | 13:00       |
| A4777608             | GF-76B                  | 08/12/2004     | 09:05       | 08/13/2004      | 09:45       |
| A4777609             | GF-77A                  | 08/12/2004     | 10:25       | 08/13/2004      | 09:45       |
| A4774106             | GF-77B                  | 08/12/2004     | 10:30       | 08/12/2004      | 13:00       |
| A4777610             | GF-77B                  | 08/12/2004     | 10:30       | 08/13/2004      | 09:45       |
| A4777611             | GF-78A                  | 08/12/2004     | 10:50       | 08/13/2004      | 09:45       |
| A4774107             | GF-78B                  | 08/12/2004     | 10:55       | 08/12/2004      | 13:00       |
| A4777612             | GF-78B                  | 08/12/2004     | 10:55       | 08/13/2004      | 09:45       |
| A4774109             | TB-13                   | 08/12/2004     |             | 08/12/2004      | 13:00       |

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| A4784815             | FB-14                   | 08/13/2004     | 12:00       | 08/14/2004      | 09:00       |
| A4785709             | FB-14                   | 08/13/2004     | 12:00       | 08/13/2004      | 12:52       |
| A4784801             | GF-79A                  | 08/12/2004     | 13:25       | 08/14/2004      | 09:00       |
| A4784802             | GF-79B                  | 08/12/2004     | 13:30       | 08/14/2004      | 09:00       |
| A4785701             | GF-79B                  | 08/12/2004     | 13:30       | 08/13/2004      | 12:52       |
| A4784803             | GF-80A                  | 08/12/2004     | 14:25       | 08/14/2004      | 09:00       |
| A4784804             | GF-80B                  | 08/12/2004     | 14:30       | 08/14/2004      | 09:00       |
| A4785702             | GF-80B                  | 08/12/2004     | 14:30       | 08/13/2004      | 12:52       |
| A4784805             | GF-81A                  | 08/12/2004     | 15:20       | 08/14/2004      | 09:00       |
| A4784806             | GF-81B                  | 08/12/2004     | 15:25       | 08/14/2004      | 09:00       |
| A4785703             | GF-81B                  | 08/12/2004     | 15:25       | 08/13/2004      | 12:52       |
| A4784814             | GF-81C                  | 08/13/2004     | 11:45       | 08/14/2004      | 09:00       |
| A4785708             | GF-81C                  | 08/13/2004     | 11:45       | 08/13/2004      | 12:52       |
| A4784807             | GF-82A                  | 08/12/2004     | 16:00       | 08/14/2004      | 09:00       |
| A4784808             | GF-82B                  | 08/12/2004     | 16:05       | 08/14/2004      | 09:00       |
| A4785704             | GF-82B                  | 08/12/2004     | 16:05       | 08/13/2004      | 12:52       |
| A4784809             | GF-83A                  | 08/13/2004     | 09:20       | 08/14/2004      | 09:00       |
| A4784810             | GF-83B                  | 08/13/2004     | 09:25       | 08/14/2004      | 09:00       |
| A4785705             | GF-83B                  | 08/13/2004     | 09:25       | 08/13/2004      | 12:52       |
| A4784811             | GF-83C                  | 08/13/2004     | 09:30       | 08/14/2004      | 09:00       |
| A4785706             | GF-83C                  | 08/13/2004     | 09:30       | 08/13/2004      | 12:52       |
| A4784812             | GF-84A                  | 08/13/2004     | 10:25       | 08/14/2004      | 09:00       |
| A4784813             | GF-84C                  | 08/13/2004     | 10:30       | 08/14/2004      | 09:00       |
| A4785707             | GF-84C                  | 08/13/2004     | 10:30       | 08/13/2004      | 12:52       |
| A4785710             | TB-14                   | 08/13/2004     |             | 08/13/2004      | 12:52       |



## SAMPLE SUMMARY

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| A4785601             | AST28-1C-L              | 08/11/2004     | 15:05       | 08/13/2004      | 12:52       |
| A4785602             | AST28-2C-S              | 08/11/2004     | 15:20       | 08/13/2004      | 12:52       |
| A4785603             | AST28-3C-L              | 08/11/2004     | 13:50       | 08/13/2004      | 12:52       |
| A4785604             | AST28-4C-L              | 08/11/2004     | 11:30       | 08/13/2004      | 12:52       |
| A4785605             | AST28-5C-L              | 08/11/2004     | 11:35       | 08/13/2004      | 12:52       |
| A4785609             | AST40-1C-L              | 08/12/2004     | 08:00       | 08/13/2004      | 12:52       |
| A4785608             | OI28-1C-S               | 08/11/2004     | 16:00       | 08/13/2004      | 12:52       |
| A4785606             | OWS28-1C-L              | 08/11/2004     | 15:45       | 08/13/2004      | 12:52       |
| A4785607             | OWS28-2C-L              | 08/11/2004     | 15:46       | 08/13/2004      | 12:52       |

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| A4807305      | AST15-1C-L       | 08/12/2004 | 12:20 | 08/18/2004 | 12:35 |
| A4799601      | AST28-1U-S       | 08/17/2004 | 10:30 | 08/19/2004 | 10:00 |
| A4807301      | AST28-1U-S       | 08/17/2004 | 10:30 | 08/18/2004 | 12:35 |
| A4799602      | AST28-2U-S       | 08/17/2004 | 10:25 | 08/19/2004 | 10:00 |
| A4807302      | AST28-2U-S       | 08/17/2004 | 10:25 | 08/18/2004 | 12:35 |
| A4799603      | AST28-3U-S       | 08/17/2004 | 10:20 | 08/19/2004 | 10:00 |
| A4807303      | AST28-3U-S       | 08/17/2004 | 10:20 | 08/18/2004 | 12:35 |
| A4799606      | AST28-4C-L       | 08/17/2004 | 10:45 | 08/19/2004 | 10:00 |
| A4807202      | AST28-4C-L       | 08/17/2004 | 10:45 | 08/18/2004 | 12:35 |
| A4799604      | AST28-4U-S       | 08/17/2004 | 10:15 | 08/19/2004 | 10:00 |
| A4807304      | AST28-4U-S       | 08/17/2004 | 10:15 | 08/18/2004 | 12:35 |
| A4799611      | AST28-U-L        | 08/17/2004 | 15:00 | 08/19/2004 | 10:00 |
| A4807207      | AST28-U-L        | 08/17/2004 | 15:00 | 08/18/2004 | 12:35 |
| A4799605      | FB-A1            | 08/18/2004 | 07:00 | 08/19/2004 | 10:00 |
| A4807201      | FB-A1            | 08/18/2004 | 07:00 | 08/18/2004 | 12:35 |
| A4799608      | G28-1-L          | 08/17/2004 | 11:00 | 08/19/2004 | 10:00 |
| A4807204      | G28-1L           | 08/17/2004 | 11:00 | 08/18/2004 | 12:35 |
| A4807306      | G28-NX-1L        | 08/17/2004 | 16:30 | 08/18/2004 | 12:35 |
| A4807307      | MH28-NX-1L       | 08/17/2004 | 17:00 | 08/18/2004 | 12:35 |
| A4799607      | S28-1L           | 08/17/2004 | 10:00 | 08/19/2004 | 10:00 |
| A4807203      | S28-1L           | 08/17/2004 | 10:00 | 08/18/2004 | 12:35 |
| A4799609      | S28-2L           | 08/17/2004 | 15:30 | 08/19/2004 | 10:00 |
| A4807205      | S28-2L           | 08/17/2004 | 15:30 | 08/18/2004 | 12:35 |
| A4799610      | T28-1L           | 08/17/2004 | 16:00 | 08/19/2004 | 10:00 |
| A4807206      | T28-1L           | 08/17/2004 | 10:00 | 08/18/2004 | 12:35 |

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| A4804624             | FB-B1                   | 08/19/2004     | 07:00       | 08/20/2004      | 09:30       |
| A4804601             | GF-NY-1A                | 08/18/2004     | 14:30       | 08/20/2004      | 09:30       |
| A4804602             | GF-NY-1B                | 08/18/2004     | 14:30       | 08/20/2004      | 09:30       |
| A4804603             | GF-NY-2A                | 08/18/2004     | 15:00       | 08/20/2004      | 09:30       |
| A4804604             | GF-NY-2B                | 08/18/2004     | 15:00       | 08/20/2004      | 09:30       |
| A4804605             | GF-NY-3A                | 08/18/2004     | 15:30       | 08/20/2004      | 09:30       |
| A4804606             | GF-NY-3B                | 08/18/2004     | 15:30       | 08/20/2004      | 09:30       |
| A4804607             | GF-NY-4A                | 08/18/2004     | 16:00       | 08/20/2004      | 09:30       |
| A4804608             | GF-NY-4B                | 08/18/2004     | 16:00       | 08/20/2004      | 09:30       |
| A4804609             | GF-NY-5A                | 08/18/2004     | 16:30       | 08/20/2004      | 09:30       |
| A4804610             | GF-NY-5B                | 08/18/2004     | 16:30       | 08/20/2004      | 09:30       |
| A4804611             | GF-NY2-1A               | 08/19/2004     | 08:30       | 08/20/2004      | 09:30       |
| A4804612             | GF-NY2-1B               | 08/19/2004     | 08:30       | 08/20/2004      | 09:30       |
| A4804613             | GF-NY2-2A               | 08/19/2004     | 09:30       | 08/20/2004      | 09:30       |
| A4804614             | GF-NY2-2B               | 08/19/2004     | 09:30       | 08/20/2004      | 09:30       |
| A4804615             | GF-NY2-3A               | 08/19/2004     | 10:00       | 08/20/2004      | 09:30       |
| A4804616             | GF-NY2-3B               | 08/19/2004     | 10:00       | 08/20/2004      | 09:30       |
| A4804617             | GF-NY3-1A               | 08/19/2004     | 10:30       | 08/20/2004      | 09:30       |
| A4804618             | GF-NY3-1B               | 08/19/2004     | 10:30       | 08/20/2004      | 09:30       |
| A4804619             | GF-NY3-2A               | 08/19/2004     | 11:00       | 08/20/2004      | 09:30       |
| A4804620             | GF-NY3-2B               | 08/19/2004     | 11:00       | 08/20/2004      | 09:30       |
| A4804622             | GF-NY3-3A               | 08/19/2004     | 11:30       | 08/20/2004      | 09:30       |
| A4804623             | GF-NY3-3B               | 08/19/2004     | 11:30       | 08/20/2004      | 09:30       |

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| A4850905             | FB-C1                   | 08/20/2004     | 11:45       | 08/20/2004      | 12:15       |
| A4806603             | G28NX-1                 | 08/20/2004     | 10:00       | 08/21/2004      | 09:45       |
| A4850904             | G28NX-1                 | 08/20/2004     | 10:00       | 08/20/2004      | 12:15       |
| A4850901             | GF-76B2                 | 08/19/2004     | 14:00       | 08/20/2004      | 12:15       |
| A4806601             | MH28-1                  | 08/20/2004     | 09:30       | 08/21/2004      | 09:45       |
| A4850902             | MH28-1                  | 08/20/2004     | 09:30       | 08/20/2004      | 12:15       |
| A4806602             | T33-1                   | 08/20/2004     | 09:00       | 08/21/2004      | 09:45       |
| A4850903             | T33-1                   | 08/20/2004     | 09:00       | 08/20/2004      | 12:15       |
| A4850906             | TB-C1                   | 08/20/2004     |             | 08/20/2004      | 12:15       |