

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
DEGREASER INFORMATION SHEET

1. Company Name: Ortel Corporation
Equipment Address: 2001 W. Chestnut St.
Alhambra, CA 91803
Contact person: M. Nisenfeld
Telephone Number: (818) 281-3636
2. DEGREASER MANUFACTURER: Baron-Blakeslee
MODEL NO.: MLR 120 SERIAL NO.: 59625
3. DIMENSIONS:
A. INSIDE DIMENSIONS OF VAPOR TANK: 1'-0" W. x 1'-8" L.
(Width and length are measured at degreaser top opening)
B. OUTSIDE HEIGHT OF DEGREASER: 3'-4"
4. A. SPRAY PUMP HP: 1/25 TRANSFER PUMP HP: _____
5. METHOD OF HEATING:
 GAS _____ BTU/HR ELECTRIC 1.5 KW
 HEAT PUMP _____ HP STEAM
6. METHOD OF COOLING:
 WATER CHILLED WATER REFRIGERATION
2 HP
7. OPERATING SCHEDULE:
8 HOURS/DAY 5 DAYS/WEEK 50 WEEKS/YEAR
8. TYPE OF SOLVENT: Genesolv D % BY WEIGHT OF OTHER ORGANICS:
 TRICHLOROTRIFLUOROETHANE WITH _____
 1-1-1 TRICHLOROETHANE WITH _____
 _____ (Other, Copy of MSDS Attached)
9. QUANTITY OF SOLVENT LOSS:
AVERAGE: 7 GAL/DAY GAL/MONTH
MAXIMUM: _____ GAL/DAY
10. Comments:

ROUTING RECORD

| DATE | FROM | TO | ACTION |
|-------------|------|-----|--------|
| MAR 24 1988 | VHN | SL | TV |
| 3-25-88 | SL | VHN | P/O |
| | | | |
| | | | |
| | | | |
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| | | | |
| | | | |

CLASS IV

REFERENCE TO OTHER APCD RECORDS INCLUDING VARIANCES

ALPHA FILE

57733

10

| | |
|--|------------|
| NEWSOURCE | DATA ENTRY |
| <input type="checkbox"/> PC | |
| <input checked="" type="checkbox"/> OK | 3/29/88 |

AP 166989

111 029

13



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

PERMIT to OPERATE

9150 FLAIR DRIVE, EL MONTE, CALIFORNIA 91731

M 61437

Operation under this permit must be conducted in compliance with all information included with the initial application and the initial permit conditions. The equipment must be properly maintained and kept in good operating condition at all times. In accordance with Rule 206, this Permit to Operate or copy must be posted on or within 8 meters of equipment.

LEGAL OWNER OR OPERATOR: ORTEL CORPORATION
2001 WEST CHESTNUT STREET
EQUIPMENT LOCATED AT: ALHAMBRA, CALIFORNIA

APPL. NO. 166989

EQUIPMENT DESCRIPTION AND CONDITIONS:

DEGREASER, BARON-BLAKESLEE, VAPOR-SPRAY TYPE, MODEL MLR120, SERIAL NO. 59625; 1'-0" W. X 1'-8" L. (INSIDE DIMENSIONS) X 3'-4" H. (OUTSIDE DIMENSION), 1.5 K.W. ELECTRICALLY HEATED, WITH ONE 1/25 H.P. SPRAY PUMP AND ONE 1/2 H.P. REFRIGERATION UNIT.

-CONDITIONS-

1. ONLY TRICHLOROTRIFLUOROETHANE MAY BE USED AS THE CLEANING SOLVENT IN THIS EQUIPMENT.

-PAGE 1 OF 2-

This initial permit must be renewed by 03/01 ANNUALLY unless the equipment is moved, or changes ownership. If billing for annual renewal fee (Rule 301 f) not received by expiration date, contact office above.

This permit does not authorize the emission of air contaminants in excess of those allowed by Division 26 of the Health and Safety Code of the State of California or the Rules of the Air Quality Management District. This permit cannot be considered as permission to violate existing laws, ordinances, regulations or statutes of other government agencies.

EXECUTIVE OFFICER

BY RAQUEL M. PUERTA

DATE 03/31/88

FILE COPY

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

CONTINUATION OF PERMIT NO M 61437
(MUST BE DISPLAYED WITH PERMIT)

APPL NO 166989

-CONDITIONS-

2. THE TOTAL QUANTITY OF SOLVENTS LOSS FROM THIS EQUIPMENT MUST NOT EXCEED 1/2 GALLON IN ANY ONE DAY.
3. RECORDS MUST BE MAINTAINED TO PROVE COMPLIANCE WITH CONDITION NOS. 1 & 2, IN A FORMAT APPROVED IN WRITING BY THE DIRECTOR OF ENFORCEMENT OF THE DISTRICT. THE RECORDS MUST BE KEPT FOR A PERIOD OF NOT LESS THAN TWO YEARS AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.

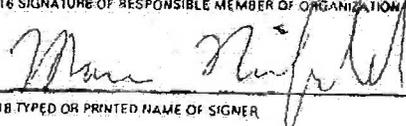
FILE COPY

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
9150 Flair Drive El Monte, CA 91731.

APPLICATION FOR PERMIT TO CONSTRUCT AND PERMIT TO OPERATE AND EXCAVATE AND
 FOR PLANS REQUIRED BY THE EXECUTIVE OFFICER
 FOR FEE INFORMATION AND SMALL BUSINESS EXEMPTION

SEE REVERSE SIDE

PLEASE TYPE OR PRINT

| | | | |
|---|--|---|---|
| 1A PERMIT TO BE ISSUED TO Ortel Corporation BUSINESS LICENSE NAME OF ORGANIZATION THAT IS TO RECEIVE PERMIT | | SCAQMD USE 57733 SEC: TS: ID NUMBER | |
| 1B Wim H.J. Selders, Israel Ury, Nadav Bar-Chaim NAME (OR NAMES) OF OWNER OR PRINCIPAL PARTNERS DOING BUSINESS AS (DBA) ABOVE ORGANIZATION | | | |
| 2A MAILING ADDRESS 2015 W. Chestnut Street Alhambra, CA 91803 NUMBER STREET CITY OR COMMUNITY STATE ZIP CODE | | | 3B |
| 3A EQUIPMENT LOCATION (IF SAME ENTER SAME) 2001 W. Chestnut Street Alhambra, CA 91803 NUMBER STREET CITY OR COMMUNITY STATE ZIP | | | 3B Raymond NEAREST INTERSECTING STREET |
| 4A CONTACT PERSON (INITIALS & NAME) M. Nisenfeld | | 4B CONTACT PHONE NO. (AREA & NO.) 818 281-3636 | |
| 5 EQUIPMENT APPLICATION IS HEREBY MADE FOR PERMIT TO OPERATE THE FOLLOWING EQUIPMENT Baron-Blakeslee Vapor Degreaser | | | |
| 6 IF THIS EQUIPMENT HAD A PREVIOUS WRITTEN PERMIT STATE NAME OF CORPORATION, COMPANY OR INDIVIDUAL OWNER THAT OPERATED THIS EQUIPMENT AND STATE PREVIOUS AIR POLLUTION CONTROL DISTRICT PERMIT NUMBER N/A | | | |
| 7 PERMIT APPLICATION FOR EQUIPMENT REINSTATE NON-PAYMENT P/O FEES DUE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> ALTERATION <input type="checkbox"/> CHANGE OF LOCATION <input type="checkbox"/> EXISTING EQUIPMENT IN OPERATION WITHOUT PRIOR PERMIT <input checked="" type="checkbox"/> CHANGE OF CONDITIONS <input type="checkbox"/> | | 8 TYPE OF ORGANIZATION CORPORATION <input checked="" type="checkbox"/> PARTNERSHIP <input type="checkbox"/> INDIVIDUAL OWNER <input type="checkbox"/> LOCAL GOV T AGENCY <input type="checkbox"/> STATE AGENCY <input type="checkbox"/> FEDERAL AGENCY <input type="checkbox"/> UTILITY <input type="checkbox"/> | |
| 9 ESTIMATED COST OF EQUIPMENT OR ALTERATION BASIC EQUIPMENT \$ 3,595.00 AIR POLLUTION CONTROL EQUIPMENT \$ N/A | | | |
| 10 FOR THE NEW CONSTRUCTION ALTERATION TRANSFER OF OWNERSHIP OR LOCATION WHAT IS ESTIMATED STARTING DATE? Existing ESTIMATED COMPLETION DATE? Existing | | | |
| 11 GENERAL NATURE OF BUSINESS Electro-Optics | | 12 PRINCIPAL PRODUCT Laser Transmitters | |
| 13 DO YOU CLAIM CONFIDENTIALITY OF DATA? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IF YES STATE NATURE OF DATA ON SEPARATE SHEET | | 14 NORMAL OPERATING HOURS OF SUBJECT EQUIPMENT HOURS/DAY 8 DAYS/WEEK 5 WEEKS/YEAR 50 | |
| 15 HAS A CEDA DOCUMENT BEEN PREPARED FOR THIS PROJECT? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> | | 16 ARE ALL COMPANIES FACILITIES IN CALIFORNIA IN COMPLIANCE WITH AIR POLLUTION RULES? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> | |
| 16 SIGNATURE OF RESPONSIBLE MEMBER OF ORGANIZATION  | | 17 OFFICIAL TITLE OF SIGNER Manager Facilities and Safety | |
| 18 TYPED OR PRINTED NAME OF SIGNER Marc Nisenfeld | | 19 PHONE NO. (818) 281-3636 | 20 DATE 3/3/88 |
| SIC NO | | EQUIP CAT NO | |
| APPLICATION NO 166989 | | PERMIT NO | |
| VALIDATION | | TYPE ORC | WORK UNITS A/C P/O |
| FILING FEE 250.00 | | ASSIGNMENT 10 UNIT ENGR | |
| 3/15/88 | | CHECK OR MONEY ORDER NO. 18107 | |

Form 400A

PRIOR VERSIONS NOT VALID

SEE REVERSE FOR FEES REQUIRED UPON FILING

(Continued on reverse)

C-1

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING DIVISION

CLASS IV EVALUATION - DEGREASER

| | | | |
|--------------|--------|------------|---------|
| PAGES | 3 | PAGE | 1 |
| APPL. NO. | 166989 | DATE | 3-25-88 |
| PROCESSED BY | SL | CHECKED BY | NHN |

Company name: Ortel Corp.

Mailing address: 2015 W. Chestnut St.
Alhambra, CA 91803

EQUIPMENT DESCRIPTION

Degreaser, Baron-Blakeslee, Vapor-Spray type, Model MLR 120,
Serial No. 59625; 1'-0" W. x 1'-8" L. (inside dimensions) x
3'-4" H. (outside dimension), 1.5-KW electrically heated, with
one $\frac{1}{2}$ -HP spray pump and one $\frac{1}{2}$ -HP refrigeration unit

located at 2001 W. Chestnut St.
Alhambra, CA 91803

Installation date : _____

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
 ENGINEERING DIVISION
 CLASS IV EVALUATION - DEGREASER

| | |
|--------------|------------|
| PAGES | PAGE |
| 3 | 2 |
| APPL. NO. | DATE |
| 166989 | 3-25-88 |
| PROCESSED BY | CHECKED BY |
| SL | VHN |

PROCESS DESCRIPTION

Solvent used : Trichlorotrifluoroethane
 Density : 13.1 #/gal ; RHC : 0
 Amount consumption : 7 []gal/day gal/mo
 Operation schedule : 8 hr/day, 5 day/wk, 50 wk/yr
 Consumption limit : 1/2 gal/day

EMISSIONS

Actual emissions:

$$\text{unRHC} = (7 \text{ gal/mo}) (12 \text{ mo/yr}) (1 \text{ yr}/250 \text{ day}) (13.1 \text{ \#/gal}) (1.00)$$

$$(\text{or}) = (\text{ \# gal/day}) (\text{ \# gal}) (0. \text{ \#})$$

$$= 4.4 \text{ \#/day} = 0.55 \text{ \#/hr}$$

$$\text{RHC} = (\text{ \# gal/mo}) (12 \text{ mo/yr}) (1 \text{ yr}/\text{ \# day}) (\text{ \# gal}) (0. \text{ \#})$$

$$(\text{or}) = (\text{ \# gal/day}) (\text{ \# gal}) (0. \text{ \#})$$

$$= \text{ \# gal/day} = \text{ \# gal/hr}$$

Maximum emissions:

$$\text{unRHC} = (0.5 \text{ gal/day}) (13.1 \text{ \#/gal}) (1.00) = 6.55 \text{ \#/day}$$

$$\text{RHC} = (\text{ \# gal/day}) (\text{ \# gal}) (0. \text{ \#}) (1.1) = \text{ \# gal/day}$$

NSR total:

| | RHC | NOX | SO2 | CO | PART | UNRHC |
|---|-----|-----|-----|----|------|-------|
| Existing emiss. total : | 0 | — | — | — | — | 0 |
| Emiss. from this appl. : | 0 | | | | | +7 |
| Emiss. from other pending applications* : | — | — | — | — | — | — |
| New total : | — | — | — | — | — | +7 |

* Permits are to be issued simultaneously with this permit.
 Applications nos.:

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING DIVISION

CLASS IV EVALUATION - DEGREASER

| | |
|--------------|------------|
| PAGES | PAGE |
| 3 | 3 |
| APPL. NO. | DATE |
| 166989 | 3-25-88 |
| PROCESSED BY | CHECKED BY |
| SL | VHA |

EVALUATION

- Rule 402 : Nuisance problems due to the operation of this degreaser are unlikely.
- Rule 442 : Trichlorotrifluoroethane is exempted by Rule 442(h)(8).
 Solvent used is non-photochemically reactive, complying with rule 442(f).
- Rule 1122 : Trichlorotrifluoroethane is exempted by definition in Rule 1122(a)(10).
 1,1,1-trichloroethane or trichlorotrifluoroethane containing 10% co-solvent or less is exempted by definition in Rule 1122(a)(10).
- Reg XIII : Trichlorotrifluoroethane is exempted by definition in Rule 1302(p).
 Emission of RHC is less than 1 #/day; BACT analysis is not required.

RECOMMENDATION

Issue a Permit to Construct/Operate with the following conditions:

1. Organic solvents used in this equipment must be clearly labeled as non-photochemically reactive by the supplier or, for bulk shipments, shown to be non-photochemically reactive on bills of lading or invoices.
2. Only trichlorotrifluoroethane may be used as the cleaning solvent in this equipment.
2. The cleaning solvent used in this equipment must contain at least _____ % by weight of trichlorotrifluoroethane.
2. The cleaning solvent used in this equipment must contain at least _____ % by weight of trichlorotrifluoroethane, 1,1,1-trichloroethane, or any combination of these solvents.
3. The total quantity of solvent loss from this equipment must not exceed 2 gallons in any one day.
4. Records must be maintained to prove compliance with conditions 2 and 3 in a format approved in writing by the Director of Enforcement. The records must be kept for at least two years and be made available to District personnel upon request.
5. _____

APPLICABILITY OF THIS PROCESSING FORM

1. Degreaser with 100% trichlorotrifluoroethane (i.e. Freon TF).
2. Degreaser with 1,1,1-trichloroethane or trichlorotrifluoroethane (e.g. Freon TE) with 10% co-solvent or less. The amount of co-solvent emission must be less than 1 #/day.



South Coast
AIR QUALITY MANAGEMENT DISTRICT

9150 FLAIR DRIVE, EL MONTE, CA 91731 (818) 572-6200

MAILING ADDRESS

ORTEL CORPORATION
2015 WEST CHESTNUT
ALHAMBRA, CA 91803

DATE:

03/31/88

EQUIPMENT
LOCATION

ATTN: M. NISENFELD

2001 WEST CHESTNUT STREET
ALHAMBRA, CALIFORNIA

PERMIT NO(S)

M61437

APPL NO(S)

166989

JBN

TRANSMITTED HERewith ARE THE PERMIT(S) LISTED ABOVE, AUTHORIZING YOU TO OPERATE THE DESCRIBED EQUIPMENT IN COMPLIANCE WITH RULE 206. (BILLING WHERE APPLICABLE WILL FOLLOW)

RULE 206. A person granted a permit under Rule 203 shall not operate or use any equipment unless the entire permit to operate or a legible facsimile of the entire permit is affixed upon the equipment in such a manner that the permit number, equipment description, and the specified operating conditions are clearly visible and accessible. In the event that the equipment is so constructed that the permit to operate or the legible facsimile cannot be so placed, the entire permit shall be mounted so as to be clearly visible in an accessible place within 8 meters (26 FEET) of the equipment or as otherwise approved by the Executive Officer.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Filing Fees

Except as noted following, a \$250 filing fee must accompany each application for Permit to Construct/Operate.

1. For small businesses the filing fee is \$160. The small business declaration form below must be completed in order to be considered a small business.
2. Each application for change of ownership requires a \$110 transfer fee.
3. All applicants, including state, local governmental and public districts, must pay a permit evaluation fee. Such fees are in addition to filing fees and change of ownership fees.
4. All state, local governmental agencies or public districts are exempt from paying filing fees and change of ownership fees.

SEE APPLICATION INSTRUCTIONS FORM 400-B FOR ADDITIONAL INSTRUCTIONS

Call (818) 672-6212 for assistance

SUPPLEMENTAL DATA FORMS REQUIRED

Special supplemental data forms must be completed for: BOILERS, LIQUID HEATERS, DEGREASERS, DRY CLEANING EQUIPMENT, OVENS, SPRAY BOOTHS and STORAGE TANKS.

MAKE CHECK PAYABLE TO "SOUTH COAST AQMD"

MAIL APPLICATION TO: SOUTH COAST AQMD

8150 Fair Drive

El Monte, CA 91731

SMALL BUSINESS DECLARATION

In order to be considered a small business as specified in Regulation XIII, this form must be completed. *If not a small business, do not complete this form.*

A "Small Business" is a business which is independently owned and operated and meets the following criteria or, if affiliated with another concern, the combined activities of both concerns meet these criteria:

- The number of employees is 10 or less; and
- The total annual receipts are \$500,000 or less.

I hereby certify, under penalty of perjury, that the business enterprise containing the emission source(s) for which an SCAQMD Permit to Construct or Permit to Operate is being applied herein qualifies as a **SMALL BUSINESS** based on compliance with the following:

88 MAR 15 10:45

Signature of applicant

Date

Telephone Number

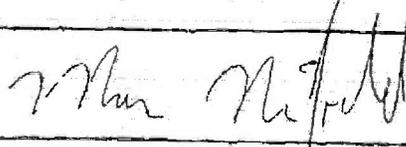
Printed or Typed Signature

Company Name

State law requires that we inform you about the Office of Permit Assistance. The Office of Permit Assistance is a state agency which is available to assist you and provide information relating to the permit approval process at the state and local level. Call (818) 822-8246 for information.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
INFORMATION REQUIRED FOR PROCESSING A DEGREASER

This form to be filled out completely and to accompany application
for permit (Form 400-A)

| | | |
|--|--|--|
| Business license name of corporation, company, or individual owner or governmental agency under which application (Form 400-A) is submitted Ortel Corporation | | |
| Degreaser Mfg Model, Serial No. Baron-Blakeslee Model MLR 120 Serial #59625 | | |
| Inside Dimensions of Tank 16" W. x 24" L. x 37" D | Outside Dimensions of Tank 17" W. x 25" L x 40" D | |
| Freeboard Height = 14" | Spray Pump H P. = 1/25 Transfer Pump H P. = N/A | |
| Method of Heating <input checked="" type="radio"/> Gas _____ Btu/hr <input type="radio"/> Electric 1.5 KW <input type="radio"/> Steam <input type="checkbox"/> | | |
| Operating Schedule | Hours/day: 8 Days/Week: 5 Weeks/Year: 50 | |
| Tank Covered when not in use ? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | |
| For Cold Degreaser only Cover <input type="checkbox"/> Water Cover <input type="checkbox"/> Other <input type="checkbox"/> | | |
| For Vapor Degreaser only Condenser Flow Switch <input type="checkbox"/> Spray Safety Switch <input checked="" type="checkbox"/> Vapor Level Switch <input checked="" type="checkbox"/> Carbon Adsorption Efficiency = N/A Chiller Cooling Capacity = 6000 Btu/hr/ft | | |
| For Conveyorized Degreaser only <input checked="" type="radio"/> Condenser Flow Switch <input type="checkbox"/> <input type="radio"/> Spray Safety Switch <input type="checkbox"/> <input type="radio"/> Vapor Level Switch <input type="checkbox"/> <input type="radio"/> Hood <input type="checkbox"/> <input type="radio"/> Drying Tunnel <input type="checkbox"/> Silhouette Dimension = | | |
| Quantity of Solvents used a. Perchloroethylene _____ 55-gallon drums per month b. 1-1-1 Trichloroethane _____ 55-gallon drums per month c. Other Freon TF _____ <1 _____ 55-gallon drums per month | | |
| Signature of Responsible Person | Name  | Title Manager Facilities and Safety |
| | Typed Marc Nisenfeld | Date March 2, 1988 |

- DEFINITIONS**
1. **FREEBOARD HEIGHT**
 - A For cold-cleaning tanks is the distance from the top of the solvent to the top of the tank
 - B For vapor-degreasing tanks is the distance from the solvent vapor-air interface to the top of the tank
 2. **SILHOUETTE** Is the clearance between each part and the edge of the degreaser

INSTRUCTIONS FOR PERMIT WORDING & FEE DATA

APPLICATION No. 166989

NEED EIR? YES NO

| | | |
|---|---|---|
| <p>DISPOSITION</p> <p><input checked="" type="checkbox"/> APPROVED</p> <p><input type="checkbox"/> DENIED</p> <p><input type="checkbox"/> CANCELED - DON'T REFUND FILING FEE</p> <p><input type="checkbox"/> CANCELED - REFUND FILING FEE</p> <p style="text-align: center;">SEE COMMENTS</p> | <p>PERMIT UNIT WORDING</p> <p><input type="checkbox"/> BELOW</p> <p><input type="checkbox"/> ON FIELD REPORT DATED _____</p> <p><input type="checkbox"/> ON PAGE _____ OF PROCESS SHEETS</p> <p><input checked="" type="checkbox"/> ON P.1 Class IV Eval.</p> | <p>CONDITIONS:</p> <p><input type="checkbox"/> NONE</p> <p><input type="checkbox"/> NUMBERS LISTED _____</p> <p><input type="checkbox"/> SPECIAL (SEE PERMIT UNIT WORDING & CONDITIONS)</p> <p><input checked="" type="checkbox"/> AS ON P.3 Class IV Eval.</p> |
|---|---|---|

PREVIOUS PERMIT NO NONE
 PERMIT UNIT WORDING & CONDITIONS:

() P/C () P/O () P/O NO P/C () NOTICE TO APPLY WRITTEN

- | | | |
|--|---|---|
| <input type="checkbox"/> CHANGE OF OWNERSHIP, large business | <input type="checkbox"/> ALTERATION | <input type="checkbox"/> TIME & MATERIALS |
| <input type="checkbox"/> CHANGE OF OWNERSHIP, small business | <input type="checkbox"/> FEDERAL GOVERNMENT | |
| <input type="checkbox"/> CHANGE OF CONDITIONS | <input type="checkbox"/> GOVERNMENT (OTHER) | |

| SCHEDULE | (1) HP | (2) 1000+ BTU | (3) KVA | (4) SQ FT | (5) GALLONS | (6) GASOLINE FUELING | (7) EXCEPTIONS |
|----------|--------|---------------|---------|-----------|-------------|----------------------|----------------|
| PATING | | | | | | | 7A |
| FEE | | | | | | | degreaser |

- DISPOSITIONED
1. PERMIT EVALUATION FEE - RULE 301 1(PX1)
 - A. SCHEDULE 7 STEP A = FEE \$ 57.00
 - B. TIME & MATERIALS (T & M) HOURS _____ X \$50/HOUR = FEE \$ _____
 - C. CHANGE OF OWNERSHIP (large business or ALTERATION - EXCEPT T & M)
 - SCHEDULE _____ STEP _____ = FEE _____ X 50% = FEE \$ _____
 - D. ADDITIONAL FEE FOR NO P/C ABOVE FEE \$ 57.00 X 50% = FEE \$ 28.50
 2. EIR/MODELING FEE - RULE 301 1(g) HOURS _____ X \$50/HOUR = FEE \$ _____
 3. 301(d)(1)(C) CREDIT OR DIFFERENCE DUE TO INCORRECT INFORMATION
- ADJUSTED FEE \$ _____

Comments: _____

TOTAL FEE \$ 85.50

REFUND _____

WORK UNITS _____

RECOMMENDED BY SL DATE 3-25-88 REVIEWING ENGINEER VHN DATE 3-25-88

PAGE 1 OF 1 PAGES

A E I S S H E E T

NAME OF FIRM Ortel Corp. COMPANY I.D. 057733

LOCATION ADDRESS 2001 W. Chestnut St., Alhambra, CA 91803

REASON FOR INACTIVATION: 1. ALTERATION 2. CHANGE OF OPERATOR 3. MOVED 4. REMOVED
5. OUT OF BUSINESS 6. BANKING ISSUED 7. OTHER _____

SUBS. APPLICATION NO. _____ INACTIVATION DATE / /

ACTION CODE (A) C D A = ADD DATA C = CHANGE DATA D = DELETE DATA

*PERMIT NUMBER M 61437

APPLICATION NUMBER 166989

*ISSUE DATE 03/31/87

**INSTALLATION DATE / /

**EQUIPMENT B CAT. _____

**EQUIPMENT C CAT. _____

**DESCRIPTION _____

PERMIT TYPE (B, C, or D) B

SCHEDULE/STEP 2 / A

*SECTION _____

*SECTOR _____

| EMISSIONS | R ₁ | R ₂ |
|-----------------|----------------|----------------|
| rHC | <u>000</u> | <u>000</u> |
| tHC | <u>550</u> | <u>550</u> |
| NO _x | _____ | _____ |
| SO ₂ | _____ | _____ |
| CO | _____ | _____ |
| Part | _____ | _____ |
| Other 1 _____ | _____ | _____ |
| Other 2 _____ | _____ | _____ |
| Other 3 _____ | _____ | _____ |

Weeks Operated _____ Mon Tues Weds Thurs Fri Sat Sun

Per Year 50 Daily Start Time 08 08 08 08 08 _____

Daily Stop Time 16 16 16 16 16 _____

*UTM Coordinates X _____

*Not to be completed by the engineer.

**Fill out only if different from application.

Engineer SL Date 3-25-88

SCAQMD
ENGINEERING DIVISION
NEW SOURCE REVIEW REGULATION XIII DATA SHEET

1 P/C 2 P/O 3 C/O

| |
|-----------------------------|
| COMPANY ID# <u>57733</u> |
| APPLICATION # <u>166989</u> |

COMPANY NAME Ortel Corp. DATE 3-25-88
EQUIPMENT LOCATION 2001 W. Chestnut St., Alhambra, CA 91803

APPLICABLE NEW SOURCE RULE: (equip. installed or Class I applic'n rec'd...)

- 1 None (before 10-8-76)
- 2 Rule 213 (before 7-1-79 and on or after 10-8-76)
- 3 Original Reg XIII (before 1-1-83 and on or after 7-1-79)
- 4 1st Revision Reg XIII (before 7-12-85 and on or after 1-1-83)
- 5 2nd Revision Reg XIII (on or after 7-12-85)

SPECIAL CASES:

- | | |
|---|--|
| 1 <input type="checkbox"/> Banking Ref Applic'n # _____ | 5 <input type="checkbox"/> Toxic Materials |
| 2 <input type="checkbox"/> Reg 13 Exempt | 6 <input type="checkbox"/> Banking Cert./Reg. Used |
| 3 <input type="checkbox"/> Mitigations | 7 <input type="checkbox"/> Rule 219 Exemptions |
| 4 <input type="checkbox"/> Tradeoffs | 8 <input type="checkbox"/> Alter.-Prev. App. # _____ |

EMISSION INCREASE OR DECREASE FROM THIS PERMIT UNIT CREDITED TO THIS LOCATION (Indicate "+" or "-"): () 1.1 factor used for Max

| CONTAMINANT | RHC | NO _x | SO _x | CO | Part | Lead | UnRHC |
|------------------------------|-----|-----------------|-----------------|----|------|------|-------|
| Max #/day | ○ | | | | | | +7 |
| Actual w/internal BACT #/day | ○ | | | | | | +7 |
| Actual w/o BACT #/day | ○ | | | | | | +7 |

REGULATION XIII EXEMPT EMISSIONS (Indicate "+" or "-")

Exempt by Rule 1304 () () or Rule 213(f) () ()

| CONTAMINANT | RHC | NO _x | SO _x | CO | Part | Lead | UnRHC |
|--------------|-----|-----------------|-----------------|----|------|------|-------|
| Max #/day | | | | | | | |
| Actual #/day | | | | | | | |

MITIGATIONS ACHIEVED CONCURRENT WITH THIS APPLIC'N (Indicate "+" or "-")

| APPLIC'N NUMBER | RHC #/day | NO _x #/day | SO _x #/day | CO #/day | Part #/day | Lead #/day | UnRHC #/day |
|-----------------|-----------|-----------------------|-----------------------|----------|------------|------------|-------------|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Engineer SL Date 3-25-88 Reviewing Engineer VHN Date 3 25 88

EXHIBIT 3.P

Air Pollution Control District
County of Los Angeles

RULES AND
REGULATIONS

March 3, 1967

434 South San Pedro Street, Los Angeles, California, 90013
MA 9-4711

RULE 65. (Cont.) & RULE 66.

entirely submerged when the liquid level is 18 inches above the bottom of the tank.

The provisions of this rule do not apply to any stationary tank which is used primarily for the fueling of implements of husbandry, as such vehicles are defined in Division 16(Section 36000, et seq.) of the Vehicle Code.

Rule 66. Organic Solvents.

a. A person shall not discharge more than 15 pounds of organic materials into the atmosphere in any one day from any article, machine, equipment or other contrivance in which any organic solvent or any material containing organic solvent comes into contact with flame or is baked, heat-cured or heat-polymerized, in the presence of oxygen, unless all organic materials discharged from such article, machine, equipment or other contrivance have been reduced either by at least 85 per cent overall or to not more than 15 pounds in any one day.

b. A person shall not discharge more than 40 pounds of organic material into the atmosphere in any one day from any article, machine, equipment or other contrivance used under conditions other than described in section(a), for employing, applying, evaporating or drying any photochemically reactive solvent, as defined in section(k), or material containing such solvent, unless all organic materials discharged from such article, machine, equipment or other contrivance have been reduced either by at least 85 per cent overall or to not more than 40 pounds in any one day.

c. Any series of articles, machines, equipment or other contrivances designed for processing a continuously moving sheet, web, strip or wire which is subjected to any combination of operations described in sections(a) or (b) involving any photochemically reactive solvent, as defined in section (k), or material containing such solvent, shall be subject to compliance with section(b). Where only non-photochemically reactive solvents or material containing only non-photo-

RULE 66. (Cont.).

chemically reactive solvents are employed or applied, and where any portion or portions of said series of articles, machines, equipment or other contrivances involves operations described in section(a), said portions shall be collectively subject to compliance with section(a).

d. Emissions of organic materials to the atmosphere from the clean-up with photochemically reactive solvents, as defined in section(k), of any article, machine, equipment or other contrivance described in sections(a), (b) or (c), shall be included with the other emissions of organic materials from that article, machine, equipment or other contrivance for determining compliance with this rule.

e. Emissions of organic materials to the atmosphere as a result of spontaneously continuing drying of products for the first 12 hours after their removal from any article, machine, equipment or other contrivance described in sections (a), (b) or (c), shall be included with other emissions of organic materials from that article, machine, equipment or other contrivance for determining compliance with this rule.

f. Emissions of organic materials into the atmosphere required to be controlled by sections(a), (b) or (c), shall be reduced by:

1. Incineration, provided that 90 per cent or more of the carbon in the organic material being incinerated is oxidized to carbon dioxide, or
2. Adsorption, or
3. Processing in a manner determined by the Air Pollution Control Officer to be not less effective than (1) or (2) above.

g. A person incinerating, adsorbing, or otherwise processing organic materials pursuant to this rule shall provide, properly install and maintain in calibration, in good working order and in operation, devices as specified in the authority to construct or the permit to operate, or as specified by the Air Pollution Control Officer, for indicating temperatures, pressures, rates of flow or other operating conditions neces-

sary to determine the degree and effectiveness of air pollution control.

h. Any person using organic solvents or any materials containing organic solvents shall supply the Air Pollution Control Officer, upon request and in the manner and form prescribed by him, written evidence of the chemical composition, physical properties and amount consumed for each organic solvent used.

i. The provisions of this rule shall not apply to:

1. The manufacture of organic solvents, or the transport or storage of organic solvents or materials containing organic solvents.
2. The use of equipment for which other requirements are specified by Rules 56, 59, 61 or 65 or which are exempt from air pollution control requirements by said rules.
3. The spraying or other employment of insecticides, pesticides or herbicides.
4. The employment, application, evaporation or drying of saturated halogenated hydrocarbons or perchloroethylene.

j. For the purposes of this rule, organic solvents include diluents and thinners and are defined as organic materials which are liquids at standard conditions and which are used as solvers, viscosity reducers or cleaning agents.

k. For the purposes of this rule, a photochemically reactive solvent is any solvent with an aggregate of more than 20 per cent of its total volume composed of the chemical compounds classified below or which exceeds any of the following individual percentage composition limitations, referred to the total volume of solvent:

1. A combination of hydrocarbons, alcohols, aldehydes, esters, ethers or ketones having an olefinic or cyclo-olefinic type of unsaturation: 5 per cent;
2. A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethyl-

RULE 66. (Cont.) & RULE 66.1.

benzene: 8 per cent;

3. A combination of ethylbenzene, ketones having branched hydrocarbon structures, trichloroethylene or toluene: 20 per cent.

Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than one of the above groups of organic compounds, it shall be considered as a member of the most reactive chemical group, that is, that group having the least allowable per cent of the total volume of solvents.

1. For the purposes of this rule, organic materials are defined as chemical compounds of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides, metallic carbonates and ammonium carbonate.

- m. This rule shall be effective on the date of its adoption as to any article, machine, equipment or other contrivance, not then completed and put into service. As to all other articles, machines, equipment or other contrivances, this rule shall be effective:

1. On July 1, 1967, for those emitting 500 pounds or more of organic materials in any one day.
2. On October 1, 1967, for those emitting 100 pounds or more but less than 500 pounds of organic materials in any one day.
3. On March 1, 1968, for those subject to compliance with section(a), and emitting 15 pounds or more but less than 100 pounds of organic materials in any one day, and for those subject to compliance with section(b), and emitting 40 pounds or more but less than 100 pounds in any one day.

Rule 66.1. Architectural Coatings.

- a. After July 1, 1967, a person shall not sell or offer for sale for use in Los Angeles County, in containers of one quart capacity or larger, any architectural coating containing photochemically reactive solvent, as defined in Rule 66

RULE 66.1. (Cont.) & RULE 66.2.

(k).

b. After July 1, 1967, a person shall not employ, apply, evaporate or dry in Los Angeles County any architectural coating, purchased in containers of one quart capacity or larger, containing photochemically reactive solvent, as defined in Rule 66(k).

c. After July 1, 1967, a person shall not thin or dilute any architectural coating with a photochemically reactive solvent, as defined in Rule 66(k).

d. For the purposes of this rule, an architectural coating is defined as a coating used for residential or commercial buildings and their appurtenances; or industrial buildings.

Rule 66.2. Disposal and Evaporation of Solvents.

A person shall not during any one day dispose of a total of more than 1½ gallons of any photochemically reactive solvent, as defined in Rule 66(k), or of any material containing more than 1½ gallons of any such photochemically reactive solvent by any means which will permit the evaporation of such solvent into the atmosphere.

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Proposed Amended Rule 1122 - Solvent Metal Cleaners
(Degreasers)

(a) Definitions

For the purpose of this rule, the following definitions shall apply:

- (1) Cold Cleaner is any batch loaded, non-boiling solvent degreaser.
- (2) Conveyorized Degreaser is any continuously loaded, conveyorized solvent degreaser, either boiling or non-boiling.
- (3) Drag-Out is that solvent carried out of a degreaser along with a part being removed from the degreaser. The solvent may exist as a liquid coating the part or as a liquid entrapped in irregular surfaces and cavities within or on the part.
- (4) Degreaser is any liquid container and ancillary equipment designed to clean and remove soils from metal surfaces using non-aqueous solvents.
- (5) Freeboard Height
 - (A) For cold cleaning tanks, freeboard height is the distance from the top of the solvent to the top of the tank.
 - (B) For vapor degreasing tanks, freeboard height is the distance from the solvent vapor-air interface to the top of the tank.

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- (6) Freeboard Ratio is the freeboard height divided by the smaller of the length or width of the degreaser.
- (7) Open-Top Vapor Degreaser is any batch loaded, boiling solvent degreaser.
- (8) Solvent is any non-aqueous organic liquid used to clean and remove soils from metal surfaces in a degreasing operation. These solvents are principally derived from petroleum and include petroleum distillates, chlorinated hydrocarbons, ketones, and alcohols. They are used alone or in blends to remove water insoluble soils for cleaning purposes and to prepare parts for painting, plating, repair, inspection, assembly, heat treatment, or machining.
- (9) Solvent metal cleaning (degreasing) means those processes using non-aqueous solvents to clean and remove soils, oils, dirt, and grease from metal surfaces by dissolving or dispersing them with organic compounds which do not adhere to the surface being cleaned.
- (10) Volatile Organic Compound is any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, methane, 1, 1, 1 trichloroethane,

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methylene chloride, and trichlorotrifluoroethane.

- (11) Wipe Cleaning is that method of cleaning which utilizes a material such as a rag wetted with a solvent, coupled with a physical rubbing process to remove contaminants from metal surfaces.
- (12) High-Vapor Cutoff Thermostat is a combination safety switch consisting of a temperature sensor located above the design vapor level of an open-top degreaser or conveyORIZED degreaser, and a response switch that shuts off heat to the sump. High vapor thermostats must have manual reset capability only.
- (13) Vapor-up Switch is a start-up device that senses that solvent vapors have reached a predetermined level in an open-top vapor degreaser or conveyORIZED degreaser.
- (14) Chiller is a control device to ensure that the vapor does not rise above the design vapor level. Design requirements for these devices, including but not limited to, refrigerated chillers, water jackets, and condensing coils, are specified in paragraph (b)(5)(B).

(b) Equipment Requirements

A person who uses solvent to clean or degrease metal

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shall use a device for such operations which includes all of the following equipment:

- (1) A container for the solvent. The articles being cleaned are either immersed in the solvent or suspended above the solvent for brushing or flushing.
- (2) An apparatus or cover for the solvent tank which prevents solvent evaporation when not processing work in the degreaser. The cover shall be closed or in place on the tank at all times except while processing work through the degreaser.
- (3) A facility for draining cleaned parts such that the drained solvent or drag-out is returned to the solvent container.
- (4) For cold solvent cleaning at least one of the following control devices:
 - (A) A freeboard such that the freeboard ratio is equal to or greater than 0.75;
 - (B) A water cover if the solvent is insoluble in and heavier than water; or
 - (C) Any other system of equivalent control, approved by the Executive Officer.
- (5) For open-top vapor degreasing or conveyORIZED degreasing the following equipment:

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- (A) All of the following safety switches:
- (i) ~~condenser-flow-switch-and-thermostat,~~
and
 - (i) high vapor cutoff thermostat with manual reset, and
 - (ii) ~~spray-safety-switch,~~ and
 - (ii) for degreasers equipped with fixed or flexible spray devices, a vapor-up thermostat which will allow spray operation only after the vapor zone has risen to the design vapor level.
 - (iii) ~~vapor-level-control-device.~~
- (B) One of the following or a combination of the following control devices approved by the Executive Officer:
- (i) a freeboard such that the freeboard ratio is greater than or equal to 0.75;
 - (ii) ~~refrigerated~~ freeboard chiller, designed such that the cooling capacity is at least 100 BTU per hour per foot of degreaser perimeter.
 - (iii) carbon adsorption system having a capture efficiency of 90 percent in terms of the organic input to the bed.

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- (iv) a control system which has a control efficiency equivalent to any of the above.
- (6) For conveyORIZED degreasers, all of the following control measures:
- (A) A hood or enclosure with a delivery system or ductwork to collect degreaser emissions, exhausting to a carbon adsorber, or equivalent control method approved by the Executive Officer.
 - (B) Either a drying tunnel, which is an extension from the exit of the conveyORIZED degreaser to allow more time for the cleaned parts to dry completely, with resulting emissions captured by the main control enclosure, or other means such as a rotating (tumbling) basket, sufficient to prevent cleaned parts from carrying solvent liquid out of the degreaser, and
 - (C) Entrances and exits shall silhouette work such that the average clearance between each part and the edge of the degreaser opening is either less than 10 cm or less than 10 percent of the width of the opening.

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- (D) Both of the following safety switches:
- (i) high vapor cutoff thermostat with manual reset, and
 - (ii) vapor-up thermostat which will allow conveyor movement only after the vapor zone has risen to the design vapor level.

(c) Operating Requirements

A person who uses solvent to clean or degrease metal shall conform to the following operating requirements:

- (1) Solvent shall not leak from any portion of the degreasing equipment.
- (2) Solvent, including waste solvent, shall not be stored or disposed of in such a manner as will cause or allow its evaporation into the atmosphere.
- (3) After distillation recovery of waste solvent, solvent residues shall not contain more than 20 percent volatile organic compound by volume.
- (4) A device designed to function as an anti-evaporation cover for a degreaser shall not be displaced or removed for more than five consecutive minutes unless processing work in the degreaser or performing maintenance on the degreaser.
- (5) For cold cleaning, cleaned parts shall be drained

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for at least 15 seconds or until dripping ceases.

- (6) Degreaser construction shall be such that the liquid solvent from the cleaned parts drains into a trough or equivalent device and is returned to the cold solvent bath.
- (7) Solvent flow cleaning, if used, shall consist only of a continuous fluid stream, rather than a fine, atomized, or shower-type spray, and such operation shall not cause liquid solvent to splash outside of the solvent container.
- (8) ~~Air or gas agitation of the solvent bath shall not be used.~~

Solvent agitation, where necessary, shall be achieved only by pump recirculation, or by means of a mixer, or with ultrasonics.

Air agitation of the solvent bath shall be used only under the following conditions:

- (A) The air flow into the air agitation cleaner may not exceed two pounds per square inch gage.
 - (B) The top or cover must remain closed while the air agitation system is in operation.
- (9) For open-top vapor degreasers, solvent drag-out shall be minimized by the following measures:

January 15, 1982

Proposed Amended Rule 442 - Usage of Solvents

- (a) A person shall not discharge organic materials into the atmosphere from equipment in which organic solvents or materials containing organic solvents are used, unless such emissions have been reduced by at least 85% or to the following:
- (1) Organic materials that come into contact with flame or are baked, heat cured or heat polymerized, are limited to 1.4 kilograms (3.1 pounds) per hour not to exceed 6.5 kilograms (14.3 pounds) per day.
 - (2) Organic materials emitted into the atmosphere from the use of photochemically reactive solvents are limited to 3.6 kilograms (7.9 pounds) per hour, not to exceed 18 kilograms (39.6 pounds) per day, except as provided in subsection (a)(1). All organic materials emitted for a drying period of 12 hours following their application shall be included in this limit.
 - (3) Through and including November 30, 1980, organic materials emitted into the atmosphere from the use of non-photochemically reactive solvents are limited to 180 kilograms (396 pounds) per hour not to exceed 1,350 kilograms (2,970 pounds) per day, except as provided in subsection (a)(1). All organic materials emitted for drying period of 12 hours following their application shall be included in this limit.

- (4) On and after December 1, 1980, organic materials emitted into the atmosphere from the use of nonphotochemically reactive solvents are limited to 36.8 kilograms (81 pounds) per hour not to exceed 272 kilograms (600 pounds) per day, effective December 1, 1980.

All organic materials emitted for a drying period of 12 hours following their application shall be included in this limit.

- (5) The provisions of subsection (a)(4) shall not apply to:
- (A) Coating application to aerospace subassemblies or assemblies prior to March 3, 1983, provided the emission of organic materials from the use of non-photochemically reactive solvents is limited to 100 kilograms (220 pounds) per hour not to exceed 600 kilograms (1,320 pounds) per day, effective December 1, 1980.
 - (B) Use of undertread cementers in tire manufacturing processes prior to March 3, 1983, provided the emission of organic materials from the use of undertread cementers is limited to 180 kilograms (396 pounds) per hour not to exceed 1,350 kilograms (2,970 pounds) per day effective December 1, 1980.
 - (C) Any primer or topcoat application line of a motor vehicle or motor vehicle component production line for a light or medium-duty vehicle (as defined in Section 1900, Title 13, California Administrative Code) prior to March 3, 1983, provided the emissions of organic materials from the use of non-photochemically reactive solvents is limited to 180

kilograms (396 pounds) per hour not to exceed 1,350 kilograms
(2,970 pounds) per day.

- (6) A person operating equipment which is subject to the provisions of subsection (a)(4) shall comply with the following increments of progress:
- (A) Submit by September 1, 1978₁, to the Executive Officer a control plan which describes the steps that will be taken to achieve compliance with the provisions of this rule.
 - (B) By December 1, 1978₁, negotiate and sign all necessary contracts for emission control systems or issue orders for the purchase of component parts to accomplish emission control.
 - (C) By June 1, 1979₁, initiate construction or installation of emission control equipment.
 - (D) By June 1, 1980₁, complete construction or installation of emission control equipment.
 - (E) By December 1, 1980₁, assure final compliance with the provisions of subsection (a)(4) of this rule.
- (b) Equipment designed for processing in a continuous web, strip or wire which emit organic materials shall be collectively subject to the limitations stated in subsection (a)(1).
- (c) Emissions of organic materials into the atmosphere required to be controlled by subsection (a) shall be reduced by:
- (1) Incineration, provided that 90 percent or more of the carbon in the organic material being incinerated is oxidized to non-organic

materials, or

- (2) Incineration, provided that the concentration of organic material following incineration is less than 50 ppm, calculated as carbon and with no dilution, or
 - (3) Adsorption, or
 - (4) Processing in a manner determined by the Air Pollution Control Officer to be not less effective than (1) or (3) above.
- (d) A person shall not use any organic solvent containing a total of 4 percent or more by volume of the materials described in Rule 102 under PHOTOCHEMICALLY REACTIVE SOLVENT for the commercial cleaning of garments and fabrics unless the emission of organic materials into the atmosphere has been reduced by at least 90 percent by weight.
- (e) A person shall not use photochemically reactive solvent to thin, reduce or dilute industrial and commercial metal surface coatings unless the emission of organic materials into the atmosphere has been reduced by at least 85 percent by weight.
- (f) A person shall not use photochemically reactive solvent in industrial and commercial surface cleaning or degreasing operations unless the emission of organic materials into the atmosphere has been reduced by at least 85 percent by weight.
- (g) A person shall not during any one day dispose of a total of more than 5 liters (1.3 gallons) of any photochemically reactive solvent, or of any

photochemically reactive solvent, or of material containing more than 5 liters (1.3 gallons) of any photochemically reactive solvent by any means which will permit the evaporation of such solvent into the atmosphere.

(h) The provisions of this rule shall not apply to:

- (1) The manufacture of organic solvents, or the transport or storage of organic solvents, or the transport or storage of materials containing organic solvents.
- (2) The use of equipment for which other requirements are specified by Rules 461, 462, 463, or 464 or which are exempt from air pollution control requirements by said rules.
- (3) The spraying or other employment of organic solvents as insecticides, pesticides, or herbicides.
- (4) The use of water reducible materials, provided that:
 - (A) The volatile content of such material is not photochemically reactive and consists of at least 80 percent water by volume, and
 - (B) The organic solvent or any material containing organic solvent does not come into contact with flame.
- (5) The use of high solid materials, provided that:
 - (A) The volatile content of such materials is not photochemically reactive and does not exceed 20 percent by volume of said material, and
 - (B) More than 50 percent by volume of such volatile material is

evaporated before entering a chamber heated above ambient application temperature, and

- (C) The organic solvent or any material containing organic solvent does not come into contact with flame.
- (6) The use of ultra high solid materials, provided that:
- (A) The volatile content of such material is not photochemically reactive and does not exceed 5 percent by volume of said material, and
 - (B) The organic solvent or any material containing organic solvent does not come into contact with flame.
- (7) The use of equipment which complies with the emission limits and/or solvent coating formulation requirements specified in source specific rules of Regulation XI.
- (8) The use of ~~1-1-1-Trichloroethane~~,
1,1,1-trichloroethane, methylene chloride, and trichlorotrifluoroethane.

RULE 442 - Usage of Solvents

(a) A person shall not discharge organic materials into the atmosphere from equipment in which organic solvents or materials containing organic solvents are used, unless such emissions have been reduced by at least 85% or to the following:

- (1) Organic materials that come into contact with flame or are baked, heat cured or heat polymerized, are limited to 1.4 kilograms (3.1 pounds) per hour not to exceed 6.5 kilograms (14.3 pounds) per day.
- (2) Organic materials emitted into the atmosphere from the use of photochemically reactive solvents are limited to 3.5 kilograms (7.9 pounds) per hour, not to exceed 18 kilograms (39.6 pounds) per day, except as provided in subsection (a)(1). All organic materials emitted for a drying period of 12 hours following their application shall be included in this limit.
- (3) Through and including November 30, 1980, organic materials emitted into the atmosphere from the use of non-photochemically reactive solvents are limited to ~~480~~ 180 kilograms (396 pounds) per hour not to exceed 1550 kilogram (3420 pounds) per day,

except as provided in subsection (a)(1). All organic materials emitted for a drying period of 12 hours following their application shall be included in this limit.

- (4) On and after December 1, 1980, organic materials emitted into the atmosphere from the use of non-photochemically reactive solvents are limited to 35.8 kilograms (81 pounds) per hour not to exceed 272 kilograms (600 pounds) per day, effective December 1, 1980.

All organic materials emitted for a drying period of 12 hours following their application shall be included in this limit.

- (5) The provisions of subsection (a)(4) shall not apply to:

- (A) Coatings-applied Coating application to aerospace subassemblies or vehicle assemblies prior to March 3, 1984, provided the emission of organic materials from the use of non-photochemically reactive solvents is limited to 100 kilograms (220 pounds) per hour not to exceed 600 kilograms (1320 pounds) per day, effective December 1, 1980.

- (B) Use of undertread cementers in tire manufacturing processes prior to March 3, 1985, provided the emission of organic materials from the use of undertread cementers is limited to 480 180 kilograms (396 pounds) per hour not to exceed 1350 kilograms (2970 pounds) per day effective December 1, 1980.
- (C) Any primer or topcoat application line of a motor vehicle or motor vehicle component production line for a light or medium-duty vehicle (as defined in Section 1900, Title 15, California Administration Code) prior to March 3, 1985, provided the emission of organic materials from the use of non-photochemically reactive solvents is limited to 480 180 kilograms (396 pounds) per hour not to exceed 1350 kilograms (2970 pounds) per day effective December 1, 1980.
- (d) A person operating equipment which is subject to the provisions of subsection (a)(4) shall comply with the following increments of progress:
- (A) Submit by September 1, 1978 to the Executive Officer a control plan which describes the steps that will be taken to achieve compliance with the provisions of this rule.

- (B) By December 1, 1978 negotiate and sign all necessary contracts for emission control systems or issue orders for the purchase of component parts to accomplish emission control.
 - (C) By June 1, 1979, initiate construction or installation of emission control equipment.
 - (D) By June 1, 1980, complete construction or installation of emission control equipment.
 - (E) By December 1, 1980, assure final compliance with the provisions of subsection (a)(4) of this rule.
- (b) Equipment designed for processing in a continuous web, strip or wire which emit organic materials shall be collectively subject to the limitations stated in subsection (a)(1).
- (c) Emissions of organic materials into the atmosphere required to be controlled by subsection (a) shall be reduced by:
- (1) Incineration, provided that 90 percent or more of the carbon in the organic material being incinerated is oxidized to non-organic materials, or
 - (2) Incineration, provided that the concentration of organic material following incineration is less than 50 ppm, calculated as carbon and with no dilution, or

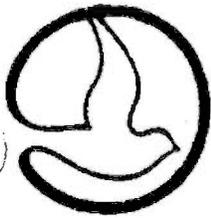
- (3) Adsorption, or
 - (4) Processing in a manner determined by the Air Pollution Control Officer to be not less effective than (1) or (3) above.
- (d) A person shall not use any organic solvent containing a total of 4 percent or more by volume of the materials described in Rule 102 under PHOTOCHEMICALLY REACTIVE SOLVENT for the commercial cleaning of garments and fabrics unless the emission of organic materials into the atmosphere has been reduced by at least 90 percent by weight.
- (e) A person shall not use photochemically reactive solvent to thin, reduce, or dilute industrial and commercial metal surface coatings unless the emission of organic materials into the atmosphere has been reduced by at least 85 percent by weight.
- (f) A person shall not use photochemically reactive solvent in industrial and commercial surface cleaning or degreasing operations unless the emission of organic materials into the atmosphere has been reduced by at least 85 percent by weight.
- (g) A person shall not during any one day dispose of a total of more than 9 liters (2.3 gallons) of any photochemically reactive solvent, or of any material

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containing more than 5 liters (1.3 gallons) of any photochemically reactive solvent by any means which will permit the evaporation of such solvent into the atmosphere.

- (h) The provisions of this rule shall not apply to:
- (1) The manufacture of organic solvents, or the transport or storage of organic solvents, or the transport or storage of materials containing organic solvents.
 - (2) The use of equipment for which other requirements are specified by Rules 461, 462, 463, or 464, or which are exempt from air pollution control requirements by said rules.
 - (3) The spraying or other employment of organic solvents as insecticides, pesticides, or herbicides.
 - (4) The use of water reducible materials, provided that:
 - (A) The volatile content of such material is not photochemically reactive and consists of at least 80 percent water by volume, and
 - (B) The organic solvent or any material containing organic solvent does not come into contact with flame.

- (5) The use of high solid materials, provided that:
- (A) The volatile content of such materials is not photochemically reactive and does not exceed 20 percent by volume of said material, and
 - (B) More than 50 percent by volume of such volatile material is evaporated before entering a chamber heated above ambient application temperature, and
 - (C) The organic solvent or any material containing organic solvent does not come into contact with flame.
- (6) The use of ultra high solid materials, provided that:
- (A) The volatile content of such material is not photochemically reactive and does not exceed 5 percent by volume of said material, and
 - (B) The organic solvent or any material containing organic solvent does not come into contact with flame.
- (7) The use of equipment for which complies with the emission limits and/or solvent coating formulation requirements ~~other requirements are~~ specified in ~~these~~ specific rules of Regulation XI.
- (8) The use of 1,1,1-Trichloroethane.



South Coast
AIR QUALITY MANAGEMENT DISTRICT

9150 FLAIR DRIVE, EL MONTE, CA 91731 (818) 572-6200

Agenda 4(B)

April 21, 1988

South Coast Air Quality
Management District Board

Set a Public Hearing to Adopt
Proposed Rule 1164 - Semiconductor Manufacturing

Proposed Rule 1164 has been developed to control the emissions of volatile organic compounds (VOC) from semiconductor manufacturing operations. Control measure I-14 of the 1987 Air Quality Management Plan, under development, also recommended that VOC emissions from this industry be subjected to greater controls for ozone abatement within the District. District Rule 1122 - Solvent Cleaners (Degreasers), which is applicable to solvents used to clean or degrease surfaces, captures some of the VOC emissions from semiconductor operations. The proposed rule, however, is source specific and more stringent. It includes provisions specific to semiconductor manufacture, such as photoresist operations, developing, stripping and equipment cleanup, which are not addressed in Rule 1122, and requires several limits on VOC emissions from solvent-related activities that are more stringent than current Rule 1122.

Proposed Rule 1164 is based on a similar rule for semiconductor manufacturing adopted July 6, 1983, by the Bay Area Air Quality Management District (BAAQMD), which hosts the largest segment of California's semiconductor industry in the Silicon Valley. The proposed rule has tighter requirements than the Bay Area rule. However, VOC in the solvent is limited to 200 g/L or the vapor pressure is limited to no more than 33 mm Hg at 20°C, a 90 percent control on VOC emissions from positive photoresist operations, extensive equipment cleanup requirements, and a greater freeboard ratio.

There are three major parts to the rule, each intended for control of a portion of the typical semiconductor manufacture process. It specifies several equipment requirements, including covers for reservoirs, freeboard ratios of 1, or use of low-vapor-pressure solvents (33 mm Hg at 20°C), an equivalent emission control system for solvent cleaning stations. All VOC emissions from positive and negative photoresist operations are subjected to a 90 percent control. Improved equipment cleanup procedures are required along with the use of low-VOC solvents (200 g/L or less) or low-vapor-pressure solvents (33 mm Hg at 20°C). Facilities emitting less than 5 lb/day of VOC will be exempted from the requirements of the rule. An Alternative Emission Control Plan is provided as an option, as in other District solvent and coating rules, to allow the required emission reductions to be achieved elsewhere, in an equivalent and approved manner.

Public comments led to several adjustments in the body of the rule. It was concluded that the required emission reductions could be achieved through the use of low-vapor-pressure solvents, as an alternative to low-VOC-content solvents. ARB and

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April 21, 1988

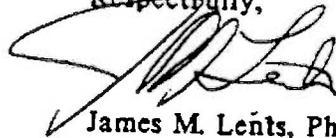
BAAQMD also supported the use of low-vapor-pressure solvents. The Alternative Emissions Control Plan was provided as a result of public request, to allow the facility some flexibility without compromising total air-quality benefits. The lead time following rule adoption was increased to 12 months, in partial response to the industry's stated need of 18 months. However, the exemption level was lowered from 5 lb/day in each of the three categories in the rule requirements (for a possible total of 15 lb/day per facility) to a total of 5 lb/day for the entire facility. This revision is based on improved cost analysis, and is not expected to impact the affected industry strongly.

It is estimated that the proposed rule will reduce VOC emissions from semiconductor manufacturing by about 1.3 tons per day, from an estimated Basin-wide VOC emission of 1.5 tons per day. This is over and above the reductions obtained due to the adoption of Rule 1122. The overall cost-effectiveness for this rule is expected to range from \$5,000 to \$22,000 per ton of VOC reduced, depending on plant operating conditions and different control technologies applicable. Most of the cost is associated with control of VOC emissions from photoresist operations. Smaller operations tend to incur higher costs, while larger manufacturers incur lower costs, per ton of pollutants controlled. Staff studies indicate that there are about 50 manufacturers located within the District, mostly serving the defense and aerospace industries.

THEREFORE, IT IS RECOMMENDED THAT YOUR BOARD

- Set a public hearing for the July 8, 1988 Board Meeting to adopt Rule 1164 - Semiconductor Manufacturing.

Respectfully,



James M. Lentz, Ph.D.
Executive Officer

Attachments

CLG:LMB:AG:jg
(BL1164)

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April 14, 1988

PROPOSED RULE 1164 - SEMICONDUCTOR MANUFACTURING

(a) Purpose

The purpose of this rule is to control emissions of volatile organic compounds from semiconductor device manufacturing operations. Semiconductor device manufacturing includes all processing from crystal growth through circuit separation and encapsulation, including wafer production, oxidation, photoresist operation, etching, doping, and epitaxial growth operation. This rule is applicable to all direct, indirect, and support stations associated with the manufacture or production of semiconductor devices.

(b) Definitions

- (1) Exempt Compound is any of the following: 1,1,1-trichloroethane, methylene chloride, trifluoromethane (FC-23), trichlorotrifluoroethane (CFC-113), dichlorodifluoromethane (CFC-12), trichlorofluoromethane (CFC-11), chlorodifluoromethane (CFC-22), dichlorotetrafluoroethane (CFC-114), and chloropentafluoroethane (CFC-115).
- (2) Freeboard Height is the distance from the top of the solvent or solvent overflow drain to the top of the sink or reservoir.
- (3) Freeboard Ratio is the freeboard height divided by the smaller of the length or width of the sink or reservoir.

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- (4) Grams of VOC per Liter of Coating, less water and less exempt compounds, is the weight of VOC per combined volume of VOC and coating solids, and can be calculated by:

Grams of VOC per liter of coating, less water and less exempt

$$\text{compounds} = \frac{W_s - W_w - W_{es}}{V_m - V_w - V_{es}}$$

- Where:
- W_s = weight of volatile compounds in grams
 - W_w = weight of water in grams
 - W_{es} = weight of exempt compounds in grams
 - V_m = volume of material in liters
 - V_w = volume of water in liters
 - V_{es} = volume of exempt compounds in liters

- (5) Grams of VOC per Liter of Material is the weight of VOC per volume of material and can be calculated by :

$$\text{Grams of VOC per liter of material} = \frac{W_s - W_w - W_{es}}{V_m}$$

- Where:
- W_s = weight of volatile compounds in grams
 - W_w = weight of water in grams
 - W_{es} = weight of exempt compounds in grams
 - V_m = volume of material in liters

- (6) Masking is applying a photoresist maskant material or overlaying a stencil to apply, impress, transfer, or otherwise effect a pattern on or into another substance.

- (7) Photoresist Maskant, Maskant, or Photoresist is a coating applied directly to a component to protect surface areas when chemical milling, etching, or other chemical surface operations are performed on the component.
- (8) Photoresist Operation is a process for the application and development of photoresist masking solution on a wafer, including preparation (except primary cleaning), soft bake, develop, hard bake, and stripping, and can be generally subdivided as follows:
 - (A) Negative Photoresist Operation is a process where the maskant hardens when exposed to light and the unhardened maskant is stripped, exposing wafer surface for etching.
 - (B) Positive Photoresist Operations is a process where the maskant softens when exposed to light and the softened maskant is stripped, exposing wafer surface for etching.
- (9) Semiconductor Manufacture is any process or operation performed to produce semiconductor devices or related solid state devices, including but not limited to diodes, zeners, stacks, and/or rectifiers, integrated microcircuits, transistors, solar cells, light-sensing devices, and light-emitting devices.
- (10) Solvent is any material containing VOC or any exempt compound and that dissolves or can dissolve another substance and includes developers and stripping agents.

- (11) Solvent Cleaning Station is a workplace equipped to remove surface contaminants using a liquid or vapor solvent containing volatile organic compounds.
- (12) Stripping is the removal of spent photoresist maskant from the product after etching, or the removal of oxide stencil from the product after diffusion.
- (13) Volatile Organic Compound (VOC) is any volatile compound of carbon excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds as listed in subparagraph (b)(1) above.

(c) Requirements

(1) Solvent Cleaning Stations

After July 1, 1989, a person shall not operate a solvent cleaning station at a semiconductor manufacturing facility unless the following requirements are satisfied.

- (A) All heated or unheated reservoirs, sinks, tanks and containers which transfer, store, or hold VOC-containing material shall be provided with a full cover or equivalent emission control system. These covers must remain closed except while production, sampling, maintenance, or loading or unloading procedures require operator access.
- (B) All heated or unheated reservoirs and sinks holding VOC-containing fluids shall have a freeboard ratio greater than or

equal to 1.0, or be equipped with an equivalent emission control system, unless the composite vapor pressure of the VOC-containing fluid does not exceed 33 mm Hg (0.64 psia) at 20°C (68°F).

- (C) VOC-containing materials in a solvent flow shall be applied only as a continuous unbroken stream and not as a dispersed, fine, atomized, or shower type spray, and the method of application shall prevent liquid losses through splashing.
- (D) Liquid solvent leaks of 3 drops per minute or more shall be repaired within 24 hours of detection or the equipment shall be shut down until replaced or repaired.
- (E) All equipment at a solvent cleaning station shall be operated and maintained in proper working order.

(2) Photoresist Operations

After July 1, 1989, a person shall not allow photoresist operations at a semiconductor manufacturing facility unless all VOC-containing vapors are vented to emission control devices which reduce VOC emissions by at least 90 percent by weight.

(3) Cleanup Solvents

After July 1, 1989, a person shall not use VOC-containing materials for the purpose of cleaning equipment at a semiconductor manufacturing facility unless the following requirements are satisfied:

- (A) The VOC content of the fluid shall not exceed 200 grams per liter (1.7 pounds per gallon) of material; or the composite vapor

pressure of the VOC-containing materials shall not exceed 33 mm Hg (0.64 psia) at a temperature of 20°C (68°F); or the components being cleaned are totally enclosed during the washing, rinsing, and draining processes; or the cleanup solvents are flushed or drained in a manner that does not allow evaporation into the atmosphere.

- (B) Only nonabsorbent, closed containers shall be used for the storage, transfer, or disposal of all accessories including cloth, paper, and other materials clearly used for cleanup with solvents.

(d) **Alternative Emission Control Plan**

After July 1, 1989, an owner/operator may achieve compliance with paragraph (c) by achieving equivalent VOC emission reductions obtained by alternative control methods provided the applicant submits an Alternative Emission Control Plan that is enforceable by the District and receives specific written approval of the Alternative Emission Control Plan from the Executive Officer prior to implementation. The Alternative Emission Control Plan shall:

- (1) Contain, as a minimum, all data, records, and other information necessary to determine eligibility for alternative emission control, including but not limited to:
 - (A) A list of materials/equipment/operations subject to alternative emission control;
 - (B) Daily hours of utilization for applicable materials/equipment/operations;

PROPOSED RULE 1171 - SOLVENT CLEANING OPERATIONS

(a) Purpose and Applicability

The purpose of this rule is to reduce emissions of volatile organic compounds (VOC) and stratospheric ozone-depleting or global-warming compounds from solvent cleaning operations, and from the storage and disposal of these materials used in solvent cleaning operations.

This rule applies to all persons who engage in the production, repair, maintenance, or servicing of parts, products, tools, machinery, equipment, or general work areas, and to all persons who store and dispose of VOC-containing materials used in solvent cleaning operations.

(b) Definitions

For the purpose of this rule, the following definitions shall apply:

- (1) AEROSOL PRODUCT is a hand-held, nonrefillable container which expels pressurized product ingredients by means of a propellant-induced force.
- (2) APPLICATION LINE is that portion of a motor vehicle assembly production line which applies surface and other coatings to motor vehicle bodies, hoods, fenders, cargo boxes, doors, and grill opening panels.
- (3) APPURTENANCES are accessories to an architectural structure, including, but not limited to: hand railings, cabinets, bathroom and kitchen fixtures, fences, rain-gutters and down-spouts, window screens, lamp-posts, (heating and air conditioning) equipment, other mechanical equipment, large fixed stationary tools and concrete forms.
- (4) ARCHITECTURAL COATINGS are any coatings applied to stationary structures and their appurtenances, to mobile homes, to pavements, or to curbs.
- (3)(5) CURED COATINGS, CURED INKS, AND CURED ADHESIVES are coatings, inks, and adhesives which are dry to the touch.
- (4)(6) ELECTRONIC ASSEMBLY means all portions of an assembly, including circuit card assemblies, printed wire assemblies, printing wiring boards, soldered joints, ground wires, bus bars, and other electrical fixtures, except for the actual cabinet in which the assembly is housed.

(5)(7) EXEMPT COMPOUNDS are any of the following compounds:

(A) Group I

trifluoromethane (HFC-23)
chlorodifluoromethane (HCFC-22)
dichlorotrifluoroethane (HCFC-123)
tetrafluoroethane (HFC-134a)
dichlorofluoroethane (HCFC-141b)
chlorodifluoroethane (HCFC-142b)
1,1,1-trifluoroethane (HFC-143a)
1,1-difluoroethane (HFC-152a)
cyclic, branched, or linear, completely fluorinated alkanes
cyclic, branched, or linear, completely fluorinated ethers with no
unsaturations
cyclic, branched, or linear, completely fluorinated tertiary amines with
no unsaturations
sulfur-containing perfluorocarbons with no unsaturations and with
sulfur bonds only to carbon and fluorine

(B) Group II

methylene chloride
carbon tetrachloride
1,1,1-trichloroethane (methyl chloroform)
trichlorotrifluoroethane (CFC-113)
dichlorodifluoromethane (CFC-12)
trichlorofluoromethane (CFC-11)
dichlorotetrafluoroethane (CFC-114)
chloropentafluoroethane (CFC-115)

~~Use of Group II compounds may be restricted because they are either toxic, potentially toxic, or upper atmosphere ozone depleters, or cause other environmental impacts. Specifically, the District Board has established a policy to phase out chlorofluorocarbons (CFC) on or before 1997.~~

(6)(8) FACILITY means a business or businesses engaged in solvent cleaning operations which are owned or operated by the same person or persons and are located on the same or contiguous parcels.

(7)(9) FLEXOGRAPHIC PRINTING is a letterpress method utilizing flexible rubber or other elastomeric plate and rapid drying liquid inks.

- (8)(10) GRAMS OF VOC PER LITER OF MATERIAL is the weight of VOC per volume of material and can be calculated by the following equation:

$$\text{Grams of VOC per liter of material} = \frac{W_s - W_w - W_{es}}{V_m}$$

Where: W_s = Weight of volatile compounds in grams
 W_w = Weight of water in grams
 W_{es} = Weight of exempt compounds in grams
 V_m = Volume of material in liters

- (9)(11) GRAPHIC ARTS are all screen, gravure, letterpress, flexographic, and lithographic printing processes.
- (10)(12) GRAVURE PRINTING is an intaglio process in which the ink is carried in minute etched or engraved wells on a roll or cylinder. The excess ink is removed from the surface by a doctor blade.
- (11)(13) JANITORIAL CLEANING is the cleaning of building or facility components, such as the floor, ceiling, walls, windows, doors, stairs, bathrooms, etc.
- (12)(14) LETTERPRESS PRINTING is the method in which the image area is raised relative to the nonimage area and the ink is transferred to the paper directly from the image surface.
- (13)(15) LITHOGRAPHIC PRINTING is a plane-o-graphic method in which the image and nonimage areas are on the same plane.
- (14)(16) LIQUID LEAK is the visible ~~detection-of-a~~ liquid solvent leak from the container at a rate of more than three (3) drops per minute, or the ~~detection~~ of a visible liquid mist.
- (15)(17) MAINTENANCE CLEANING is a solvent cleaning operation carried out to keep parts, products, tools, machinery, equipment, or general work areas in clean and good operational condition.
- (16)(18) MANUFACTURING PROCESS is the process of making goods or articles by hand or by machinery.
- (17)(19) NON-ABSORBENT CONTAINERS are containers made of nonporous material which do not allow the migration of the liquid solvent through it.
- (18)(20) NON-ATOMIZED SOLVENT FLOW is the use of a solvent to remove uncured adhesives, uncured inks, uncured coatings, and contaminants from an article in the form of a liquid stream without atomization.
- (19)(21) NON-LEAKING CONTAINERS are containers without liquid leaks.

- (20)(22) PERSON is any firm, business establishment, association, partnership, corporation or individual, whether acting as principal, agent, employee, or other capacity including any governmental entity or charitable organization.
- (21)(23) PRINTING in the graphic arts is any operation that imparts color, design, alphabet, or numerals on a substrate.
- (22)(24) REMOTE RESERVOIR COLD CLEANER is a cleaning device in which liquid solvent is pumped from a solvent container to a sink-like work area and the solvent from the sink-like area drains into an enclosed solvent container while parts are being cleaned.
- (23)(25) REPAIR CLEANING is a solvent cleaning operation carried out during a repair process.
- (24)(26) REPAIR PROCESS is the process of returning a damaged object or an object not operating properly to good condition.
- (25)(27) SCREEN PRINTING is a process in which the printing ink passes through a web or a fabric to which a refined form of stencil has been applied. The stencil openings determine the form and dimensions of the imprint.
- (26)(28) SOLVENT is a VOC-containing liquid used to perform solvent cleaning operations.
- (27)(29) SOLVENT CLEANING OPERATION is the removal of loosely held uncured adhesives, uncured inks, uncured coatings, and contaminants which include, but are not limited to, dirt, soil, and grease from parts, products, tools, machinery, equipment, and general work areas. Each distinct method of cleaning in a cleaning process which consists of a series of cleaning methods shall constitute a separate solvent cleaning operation.
- (28)(30) SOLVENT CONTAINER is that part of a cleaning device that holds the solvent.
- (29)(31) SOLVENT FLUSHING is the use of a solvent to remove uncured adhesives, uncured inks, uncured coatings, or contaminants from the internal surfaces and passages of the equipment by flushing solvent through the equipment.
- (30)(32) STRIPPING is the removal of cured coatings, cured inks, and cured adhesives.
- (31)(33) SURFACE PREPARATION is the removal of contaminants such as dust, soil, oil, grease, etc., prior to coating, adhesive, or ink applications.
- (34) ULTRAVIOLET INKS are inks which dry by polymerization reaction induced by ultraviolet energy.

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(32)(35) VOC COMPOSITE PARTIAL PRESSURE is the sum of the partial pressures of the compounds defined as VOCs.

VOC Composite Partial Pressure is calculated as follows:

$$PP_c = \sum_{i=1}^n \frac{(W_i)(VP_i)/MW_i}{\frac{W_w}{MW_w} + \frac{W_e}{MW_e} + \sum_{i=1}^n \frac{W_i}{MW_i}}$$

Where:

W_i = Weight of the "i"th VOC compound, in grams

W_w = Weight of water, in grams

W_e = Weight of exempt compound, in grams

MW_i = Molecular weight of the "i"th VOC compound, in $\frac{g}{g\text{-mole}}$

MW_w = Molecular weight of water, in $\frac{g}{g\text{-mole}}$

MW_e = Molecular weight of exempt compound, in $\frac{g}{g\text{-mole}}$

PP_c = VOC composite partial pressure at 20°C, in mm Hg

VP_i = Vapor pressure of the "i"th VOC compound at 20°C, in mm Hg

(33)(34) VOLATILE ORGANIC COMPOUND (VOC) is any chemical compound which contains the element carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds.

(34)(35) WIPE CLEANING is the method of cleaning a surface by physically rubbing it with a material such as a rag, paper, or a cotton swab moistened with a solvent.

(c) Requirements

(1) Solvent Requirements

A person shall not use a solvent to perform solvent cleaning operations, including the use of cleaning devices or methods, unless the solvent complies ~~complying~~ with the applicable requirements set forth below:

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- (A) Substrates Cleaning During Manufacturing Processes, and Surface Preparation for Coating, Adhesive, or Ink Applications.
The solvents used on substrates for cleaning during the manufacturing process or for surface preparation prior to coating, adhesive, or ink applications shall contain VOC equal to or less than the limits specified below:
- (i) On and after July 1, 1992, the limit shall be 200 grams of VOC per liter of material.
 - (ii) On and after July 1, 1993, the limit shall be 70 grams of VOC per liter of material.
- (B) Repair and Maintenance Cleaning ..
On and after July 1, 1992, the solvents used for repair or maintenance cleaning shall have a VOC content of ~~850~~ 900 grams or less of VOC per liter of material and a VOC composite partial pressure of 20 mm Hg or less at 20°C (68° F).
- (C) Cleaning of Coatings and Adhesives Application Equipment
On and after July 1, 1992, the solvents used for cleaning coatings or adhesives application equipment shall have a VOC content of 950 grams or less of VOC per liter of material and a VOC composite partial pressure of 35 mm Hg or less at 20°C (68° F).
- (D) Cleaning of Polyester Resin Application Equipment
On and after July 1, 1992, the solvents used for cleaning polyester resin application equipment shall comply with ~~meet~~ one of the limits specified below:
- (i) The solvent shall have a VOC content of 200 grams or less of VOC per liter of material; or
 - (ii) The solvent shall have a VOC content of 1100 grams or less of VOC per liter of material and a VOC composite partial pressure of 1.0 mm Hg or less at 20°C (68°F); or
 - (iii) A solvent reclamation system shall be used if the solvent contains more than 200 grams of VOC per liter of material or the solvent has a VOC composite partial pressure of more than 1.0 mm Hg at 20°C (68°F) and contains more than 1100 grams of VOC per liter of material, and the solvent usage exceeds four (4) gallons per day per facility. The reclamation system

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shall operate at least at 80 percent efficiency. The solvent residues for on-site reclamation system shall not contain more than 20 percent VOC, by weight.

(E) ~~Cleaning of Inks and Varnishes~~ Application Equipment

On and after July 1, 1992, the solvents used for cleaning of inks ~~or varnishes~~ application equipment in graphic arts shall meet the limits specified below:

- (i) The solvents used in screen printing shall have a VOC content of 1070 grams or less of VOC per liter of material and a VOC composite partial pressure of 5 mm Hg or less at 20°C (68°F).
- (ii) The solvents used in lithographic and letterpress printing not subject to (c)(1)(E)(iv) shall have a VOC content of ~~850~~ 900 grams or less of VOC per liter of material and a VOC composite partial pressure of 25 mm Hg or less at 20°C (68°F).
- (iii) The solvents used in graphic arts printing operations not subject to ~~(c)(1)(E)(i), and (c)(1)(E)(ii), or (c)(1)(E)(iv)~~ shall have a VOC content of 100 grams or less of VOC per liter of material and a VOC composite partial pressure of 3 mm Hg at 20°C (68°F).
- (iv) The solvents used in graphic arts printing operations, except screen printing to remove ultraviolet inks from application equipment shall have a VOC content of 800 grams or less of VOC per liter of material and a VOC composite partial pressure of 33 mm Hg or less at 20°C (68°F).

(F) Cleaning of Electronic Assemblies

On and after July 1, 1992, the solvents used for manufacturing or maintenance cleaning of electronic assemblies shall have a VOC content of ~~800~~ 900 grams or less of VOC per liter of material and a VOC composite partial pressure of 33 mm Hg or less at 20°C (68°F).

(2) Cleaning Devices and Methods Requirements

On and after July 1, 1992, a person shall not perform solvent cleaning operations unless one of the following cleaning devices or methods is used:

- (A) Wipe cleaning; ~~or~~
 - (B) Spray bottles or containers with a maximum capacity of 16-fluid ounces from which solvents are applied without a propellant-induced force; ~~or~~
 - (C) Cleaning equipment which has a solvent container that can be, and is, closed during cleaning operations, except when depositing and removing objects to be cleaned, and is closed during nonoperation with the exception of maintenance and repair to the cleaning equipment itself; ~~or~~
 - (D) Cleaning device which is listed in the Office of Operations' manual "Alternative Devices for Rule 1171. Compliance" dated July 1, 1991. The Executive Officer shall periodically update the manual to identify any additional cleaning devices determined by the Executive Officer to result in equivalent or lower emissions; ~~or~~
 - (E) Remote reservoir cold cleaner used pursuant to the provisions of paragraph (c)(3); ~~or~~
 - (F) Non-atomized solvent flow method where the cleaning solvent is collected in a container or a collection system which is closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container; or
 - (G) Solvent flushing method where the cleaning solvent is discharged into a container which is closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure build-up inside the container. The discharged solvent from the equipment must be collected into containers without atomizing into the open air. The solvent may be flushed through the system by air or hydraulic pressure, or by pumping.
- (3) Remote Reservoir Cold Cleaners
- Any person owning or operating a remote reservoir cold cleaner shall comply with all of meet the following requirements:
- (A) Prevent solvent vapors from escaping from the solvent container by using such devices as a cover or a valve when the remote reservoir is not being used, cleaned, or repaired;

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EXHIBIT 4

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September 25, 2012

VIA E-MAIL

Mr. Curt Charmley
Engineering Geologist
California Regional Water Quality Control Board
Los Angeles Region
320 W. 4th Street, Suite 200
Los Angeles, CA 90013
ccharmle@waterboards.ca.gov

Re: Draft Cleanup and Abatement Order No. R4-2012-0020
2015 W. Chestnut St., Alhambra, CA (File No. 115.0003, Site ID No. 2040293)

Dear Mr. Charmley:

As invited by the letter of the Regional Water Quality Control Board ("RWQCB") dated July 25, 2012, this letter provides the comments of LSI Corporation ("LSI"), successor to Agere Systems, Inc. ("Agere Systems" or "Agere"), on the above-referenced draft Cleanup and Abatement Order ("2012 draft CAO") regarding the facility at 2015 West Chestnut Street in Alhambra, California ("Facility"). As you know, LSI, because of its merger with Agere Systems, is addressing potential historical environmental liabilities of Ortel Corporation ("Ortel") at the Facility that predate Agere's January 2003 sale of the Ortel assets to EMCORE Corporation ("Emcore"). LSI appreciates the comment period extension that the RWQCB provided to all parties by letter dated August 28, 2012, and the opportunity to talk with you and other RWQCB representatives on September 13, 2012.

All documents previously submitted to the RWQCB by Agere Systems and LSI are hereby incorporated by reference into these comments, including but not limited to the LSI comments dated October 25, 2010 ("2010 Comments") and all Exhibits and other materials submitted with those comments. We also request that these comments and enclosures be included in the administrative record for this matter.

INTRODUCTION AND SUMMARY

The 2012 draft CAO incorrectly includes LSI and its predecessors Agere and Ortel (collectively "LSI" for purposes of these comments) as named "Dischargers." LSI's 2010 Comments explained in detail why LSI is not a "discharger" under California law, State Water Board policy, and all known facts, and why LSI therefore should not be named in a CAO regarding the Facility. LSI will not repeat those comments here. To the best of LSI's knowledge, there has not been any change in relevant California law or State Water Board policy since October 2010. Moreover, no additional facts have been placed in the administrative record that show LSI caused or permitted any wastes to be discharged or deposited where the waste is or probably will be discharged into the waters of the State. LSI submitted additional information to the RWQCB on January 4, 2011 in support of statements made on pages 6-7 of the 2010 Comments (see affidavit of Henry A. (Hank) Blauvelt dated December 15, 2012, concerning the activities of Ortel in Buildings 5 and 6 of the Ortel facility). Another copy of the Blauvelt affidavit is enclosed with and incorporated by reference into these comments.

For all of the reasons set forth in the 2010 Comments, LSI is not a "discharger" under State Water Board policy and California law. LSI is not a current Facility owner or a current lessee,¹ and neither LSI nor the RWQCB has identified any evidence that LSI or its subsidiaries or corporate predecessors actively discharged wastes to the soil or groundwater at the Facility. Based on the available evidence, LSI is simply a former lessee,² and a former parent corporation of a former lessee.³ We have not identified any State Water Board opinions or California case law upholding a CAO against a former lessee that was not involved in the activity that created the pollution problem. Even current owners and current lessees, which sometimes have been named in CAOs on the grounds that they have both control over the property and knowledge of the contamination, are held responsible for taking action only if the "primarily" liable party -- the entity that caused the pollution condition -- has defaulted on its responsibilities. California law does not allow the State Water Board to impose huge groundwater remediation liabilities on a former lessee that did not contribute to the pollution conditions at issue.

LSI has provided substantial evidence to the RWQCB that the chlorinated solvent plume observed in groundwater beneath the site comes from an offsite upgradient source (or sources). LSI also has provided substantial evidence to the RWQCB that the solvents and stabilizers observed in soil gas at the site, and any incremental contribution of such materials to the groundwater plume, resulted from the activities of the pre-1980 electric transformer/component manufacturers previously occupying the land that is now occupied in part by Building 2 of the Ortel facility, including but not limited to Trimas. While the RWQCB has added Trimas to the draft CAO, it also has erroneously named LSI and its corporate predecessors in the draft CAO. LSI requests that it and its corporate predecessors (former Ortel Corporation, former Lucent Technologies, and former Agere Systems) be removed from the 2012 draft CAO, and that Emcore also be removed to the extent it has been named as a result of activities occurring or conditions existing prior to Agere's January 2003 sale of the Ortel assets to Emcore.

¹ Note (h) to Table 1 on page 3 of the 2012 draft CAO incorrectly characterizes Agere Systems as the current lessee. The current lessee is Emcore, which is operating the Ortel assets that it purchased in January 2003.

² Lucent/Agere leased the property from June 2000 to October 2005.

³ Ortel Corporation, which leased the facility between 1981 and 2000, changed its name to Agere Systems Opto West, Inc. on January 27, 2003. Agere Systems Opto West, Inc. dissolved effective September 30, 2004.

Regardless of the entities to which the RWQCB issues a CAO, the CAO should be revised to avoid unnecessary litigation over unfounded and inappropriate technical requirements. While it appears that some CAO technical requirements were modified based on the 2010 Comments, other inappropriate requirements were not modified.

In its 2010 Comments, LSI indicated a willingness to discuss with the RWQCB an appropriately scoped CAO that reflects LSI's status under State Water Board policy and California law, the current state of the information regarding LSI, upgradient dischargers, and historical dischargers, and the other LSI comments concerning the draft CAO. As noted during our September 13, 2012 telephone conference, based on the lack of any response to LSI's proposal since it was made and LSI's continuing expenditures on groundwater monitoring in the subsequent two years, LSI has withdrawn the offer in the 2010 Comments. LSI remains willing to consider a proposal from the RWQCB that makes sense under the circumstances as they currently exist.

DISCUSSION

1. The Law Continues to Support LSI's Position

Paragraph 9(a) of the 2012 draft CAO makes a broad finding about the "Dischargers" and lumps them all together. No specific findings are made regarding discharges by Ortel. The 2012 draft CAO also states that the "Dischargers have, used, and/or discharged VOCs, including TCE and various solvent stabilizers, on the Site." Without more, neither storage nor use of VOCs gives rise to liability under California law for the cleanup of VOCs found in subsurface soil or groundwater. There must be some connection between the VOC storage or use and a release of VOCs to the subsurface. No such connection has been shown for Ortel.

LSI will not repeat its 2010 Comments here. To the best of LSI's knowledge, it is still the case that the State Water Board has never approved the issuance of a CAO to an entity solely because it is located over a groundwater plume emanating from an offsite upgradient source or solely because it is a former lessee of property that was contaminated by an unrelated prior lessee or prior owner. Moreover, in *Redevelopment Agency of the City of Stockton v. BNSF Railway Company, et al.*, 643 F.3d 668 (9th Cir. 2011), the Ninth Circuit Court of Appeals followed *City of Modesto Redevelopment Agency v. Superior Court*, 119 Cal. App. 4th 28, 13 Cal. Rptr. 3d 865 (2004) in holding that railroads were not liable for a petroleum spill that had occurred on other property but then had migrated through a french drain constructed by the railroads. The Ninth Circuit favorably quoted the conclusion in *City of Modesto* that "the words 'causes or permits' within section 13304 were not intended 'to encompass those whose involvement with a spill was remote and passive,'" and held that the railroads had engaged in no active, affirmative, or knowing conduct with regard to the passage of contamination through the French drain and into the soil. *See* 643 F.3d at 678. The reasoning and result in *Redevelopment Agency of the City of Stockton* directly supports LSI's position on its lack of liability under California Water Code Section 13304 for the groundwater contamination discovered beneath the Facility.

The 2010 Comments describe the presence of the chlorinated solvent plume from upgradient sources, the likelihood of TCE use and onsite disposal by the predecessors at the property, the consistency of the soil gas results with TCE and solvent stabilizer releases that occurred prior to the regrading and redevelopment of the site, the absence of any affirmative

evidence of releases of solvents to the environment during Ortel's period of operations, Ortel's careful solvent handling practices, and the paved nature of the facility since 1981. Since the 2010 Comments, LSI has provided other information indicating that Ortel was not a source of the TCE observed in groundwater at the upgradient end of the Facility. In the face of this information, the mere presence of TCE in soil gas and groundwater beneath the Ortel facility does not constitute evidence of a discharge from the Ortel operations.

2. Certain Requirements in the Draft CAO Are Technically Unsupported and Should Be Modified

Although LSI has provided information showing that it and its predecessors are not "dischargers" with respect to the Site and should not be named in any CAO for the Site, we provide the following technical comments for RWQCB to consider as it moves forward with respect to persons that are potentially liable at the Site. Modifying the CAO to address the following comments may reduce disputes relating to the CAO.

a. Sequencing of Required Actions

The first required action in the 2012 draft CAO is to develop and update a Site Conceptual Model ("SCM"), including a preliminary human health risk assessment ("HHRA"). The RWQCB has not previously indicated that a preliminary HHRA was necessary at this Site. For a preliminary HHRA to be of any value, it needs to be based on relevant data. The soil vapor data from the probes in the vicinity of Buildings 2 and 4, however, are now about 10 years old, which is too dated to support a valid preliminary HHRA and SCM. If a preliminary HHRA and SCM were prepared before current soil vapor data were collected, they would just need to be redone.

LSI suggests that a shallow soil gas survey, which is currently an element of Task 3, be the first required action in any CAO for the Site, to support subsequent actions. Sampling locations can consist of existing soil gas probes and new sampling locations as appropriate to support a preliminary HHRA and potential indoor air sampling. For the same reason, soil samples could be collected during the soil gas survey to provide Site-specific physical soil properties for use in the SCM and the preliminary HHRA. The SCM and preliminary HHRA should not be required until after the data from the soil and soil gas sampling have been received and evaluated.

b. Scope of Required Actions

The 2012 draft CAO imposes several other requirements that are unsupported and should be modified, regardless of who is implementing the CAO. As noted in the 2012 draft CAO, Section 13267(b)(1) of the California Water Code provides that "the regional board shall provide the person [discharger] with a written explanation with regard to the need for the [technical or monitoring program] reports, and shall identify the evidence that support requiring that person to provide the reports." This requirement has not been satisfied with respect to the investigation and remediation elements discussed below, as to LSI or any other person.

i. Indoor Air Sampling at All Site Buildings and Adjacent Properties

Task 2 of the 2012 draft CAO requires indoor air sampling “inside the buildings located on the Site, and outside at adjacent properties as appropriate to assess human health threat posed to the occupants of the buildings from potential vapor intrusion as result of volatilization of VOCs from the underlying contaminated soil and shallow groundwater.”

First, the requirement should be modified to start with the buildings in the vicinity of the highest soil gas concentrations. If sampling in those buildings did not suggest any threat to the occupants, there would be no reason to undertake indoor air sampling in other buildings on the Site. During our September 13 telephone conference, RWQCB representatives suggested that the approach in the 2012 draft CAO may be modified to address this point.

Second, it does not make sense to provide for indoor air sampling “outside at adjacent properties.” (Or, for that matter, inside at adjacent properties, unless a technical basis for such sampling exists.) There is a separate requirement to sample ambient air upwind and downwind of the buildings where indoor air sampling is being done. The clause referring to indoor air sampling outside at adjacent properties should be deleted. During our September 13 telephone conference, RWQCB representatives suggested that the approach in the 2012 draft CAO may be modified to address this point as well.

ii. Characterization and Delineation of Contaminants in Soil

Task 3 of the 2012 draft CAO requires delineation of “the vertical and horizontal extent of wastes onsite and offsite in the soil matrix” There has not been any showing, however, that onsite soils contain hazardous substances or pose a risk to human health or groundwater quality.

All investigations at the site to date have focused on soil gas and groundwater. None of the limited soil sampling to date has suggested a need for further delineation or remediation of contaminants in the unsaturated soil matrix. Most soil samples taken during the installation of vapor probes or monitoring wells have not shown the presence of TCE. Only three of 36 soil samples collected in June 2000 showed the presence of TCE, and the three samples had low TCE concentrations ranging from 5.8 micrograms per kilogram (ug/kg) to 38 ug/kg.⁴ Because, as has been the case at this site, VOCs are more likely to be detected in the vapor phase, the RWQCB typically relies on soil gas data rather than soil data to delineate VOC impacts at a site. Thus, the soil delineation requirements should be deleted.

⁴ LSI notes that the 2012 draft CAO mistakenly states that “[t]he results of the soil sample analyses indicated the presence of TCE at 283 µg/kg at 80 feet bgs.” CAO, page 5, § 7.d. The depth of those soil samples was 180.5 feet bgs, which indicates that the soils were collected from the capillary fringe just above the groundwater level of 182.3 feet bgs measured during installation of groundwater monitoring well EMW-1. Additionally, two soil samples were collected in November 2006 from the capillary fringe during the installation of groundwater monitoring wells EMW-2 and EMW-3. TCE was not detected above 2 µg/kg at EMW-2 and was detected at 4.6 µg/kg at EMW-3. Based on the depth to groundwater and fluctuations in the groundwater table over time, these data reflect the influence of the groundwater plume and do not suggest any need for soil investigation or remediation.

iii. Characterization and Delineation of Petroleum Hydrocarbons, Heavy Metals, Emergent Chemicals

Task 3 of the 2012 draft CAO appears to require the delineation of various substances other than VOCs, such as TPH, heavy metals, and various emergent chemicals like NDMA and perchlorate. (But see comment 2(b)(v), below.) Based on the available site data and site use history, there is no evidence that these substances were released at the facility. Nor is there any evidence that TPH, heavy metals, NDMA, or perchlorate are present or constitute a risk in soil, soil gas, or groundwater at the site. Accordingly, the requirements in the draft CAO for delineation and remediation of these substances in soil, soil gas, and groundwater should be deleted.

iv. Cleanup of Wastes in Groundwater

Task 4 of the 2012 draft CAO appears to require the remediation of substances in groundwater beneath the Site to levels that meet water quality objectives in the Basin Plan, including California's MCLs and Notification Levels for drinking water. (But see comment 2(b)(v) below.) This requirement appears to ignore the available Site data showing that the chlorinated solvent plume in groundwater beneath the Site originates at one or more offsite upgradient sources rather than from the Site.⁵ There is no technical basis to require persons associated with the Site to remediate this plume simply because it passes beneath the Site. (It also passes beneath many other properties, likely including properties side-gradient to the Site.) The available Site data do not support the feasibility of remediating groundwater at the Site as long as this plume continues to arrive from one or more offsite upgradient sources. The requirement to remediate groundwater beneath the Site should be deleted from this CAO pending elimination of the plume resulting from offsite upgradient source(s).

During our September 13 telephone conference, RWQCB representatives suggested that the approach in the 2012 draft CAO may be modified to clarify that the RWQCB does not expect potentially responsible parties at the Site to address the groundwater plume emanating from one or more upgradient sources.

v. Cleanup of "Wastes ... Originating From The Site"

Task 3.a. of the 2012 draft CAO refers to delineation of wastes, including various specific constituents "from the Site." Is the clause "from the Site" intended to limit the scope of the characterization requirement to substances that Site data have shown are present in the relevant environmental medium at the Site? If it is, the limitation should be clarified to address comment 2(b)(iii) above.

Similarly, Task 4.A of the 2012 draft CAO requires the development and implementation of a "comprehensive Remedial Action Plan (RAP) for cleanup of wastes in the soil matrix, soil vapor and groundwater originating from the Site...." Is the clause "originating from the Site" intended to limit the scope of the remedial action requirement to wastes that originate from the

⁵ During our September 13, 2012 telephone conference, RWQCB representatives stated that "the Regional Board has never disputed the existence of an upgradient source." The 2012 draft CAO, however, does not acknowledge that the chlorinated solvents in groundwater beneath the Site come from an upgradient source. Instead, the 2012 draft CAO misleadingly implies that the groundwater plume results from discharges at the Site.

Site, and to exclude contamination that enters the Site from one or more upgradient offsite sources? If it is, the limitation should be clarified to address comment 2(b)(iv) above.

vi. Quarterly Groundwater Sampling

Task 5 of the 2012 draft CAO requires quarterly groundwater monitoring. As explained in the 2010 Comments, LSI performed quarterly groundwater monitoring from the first quarter of 2007 through the first quarter of 2008. Based on the consistency of the groundwater data collected during those five quarterly monitoring events, LSI requested and received approval to modify the frequency of groundwater monitoring and reporting from a quarterly to an annual basis. See First Quarter 2008 Groundwater Monitoring Report, at 5 (April 15, 2008). Groundwater concentrations continue to be stable. Thus, there is no basis to increase the frequency of groundwater monitoring, and any required monitoring and reporting should continue on an annual basis unless and until a technical basis for a change exists.

vii. Time Schedule

The deadlines in Attachment B (Time Schedule) are infeasible, for the reasons set forth in the 2010 Comments. LSI assumes that these deadlines are “placeholders” and would be replaced by feasible deadlines if and when any final CAO were issued. LSI also notes that the required actions listed in Attachment B are not entirely consistent with the required actions set forth on pages 9-11 of the 2012 draft CAO.

3. Other Factual Statements in the Draft CAO Are Incorrect

Paragraph 4 on page 2 of the 2012 draft CAO states that Agere and LSI “occupied the Site,” in addition to Ortel and Emcore. This is incorrect - Agere and LSI never occupied the Site.

As stated in footnote 1, above, note (h) to Table 1 on page 3 of the 2012 draft CAO is incorrect, as Agere is not the current lessee of the buildings on the Property and Emcore is not currently subleasing the buildings from Agere. As of October 2005, Agere ceased leasing the facility and subleasing it to Emcore. LSI is not a current owner, operator, or lessee of the subject property. (Emcore, the lessee of the facility since October 2005, is not a predecessor or affiliate of Agere/LSI; it is an independent and unaffiliated entity.)

Paragraph 7.d on page 5 of the 2012 draft CAO consistently misstates in micrograms per liter (ug/L) the concentrations of 1,2,3-TCP in Site groundwater. All of the observed numerical values for 1,2,3-TCP stated in this paragraph were in nanograms per liter (ng/L).

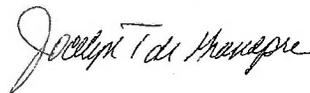
Paragraph 7.h on page 5 of the 2012 draft CAO incorrectly implies that the TCE in groundwater beneath the Site comes from TCE in soil at the Site. The data do not support this conclusion. The text misleadingly omits (and should report) the fact that:

- the highest TCE concentration at the Site (3200 ug/L) was observed in upgradient well EMW-2 (Paragraph 7.d misleading ignores this maximum concentration);
- the TCE concentrations at EMW-2 are typically higher at EMW-2 than at EMW-1;

- the PCE concentrations are typically several times higher in EMW-2 than in EMW-1;
- the Site data and use history do not indicate the groundwater contamination at EMW-2 is from an onsite source; and
- the above information indicates the presence of a currently unidentified upgradient source or sources of the TCE, PCE, and related compounds observed in Site groundwater.

LSI hopes that the above comments assist the RWQCB in its technical discussions with the entities that should be responsible for addressing any remaining RWQCB requests for investigation or remediation at the Site.

Sincerely,



Jocelyn de Grandpre

Enclosure

cc:

Jeffrey Hu, LARWQCB
Frances McChesney, State Water Resources Control Board
Lisa Hanusiak, U.S. EPA Region IX
Jim Collins, U.S. EPA Region IX
Steve Arbaugh, U.S. EPA Region IX
Scott D. Houthuysen, LSI
Carol Serlin, ENVIRON
Steve Jawetz, Beveridge & Diamond, P.C.

January 4, 2011

VIA E-MAIL

Curt M. Charmley
Engineering Geologist, R.G.
California Regional Water Quality Control Board,
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Re: Draft Cleanup and Abatement Order No. R4-2010-0008R
2015 W. Chestnut St., Alhambra, CA (File No. 115.0003, Site ID No. 2040293)

Dear Curt:

I attach a copy of a declaration provided by Henry A. (Hank) Blauvelt concerning the activities of Ortel Corporation in Buildings 5 and 6 of the Ortel facility. This declaration is submitted in support of the statements made on pages 6-7 of the letter to you from Jocelyn de Grandpre of LSI Corporation dated October 25, 2010. Please consider this declaration and add it to the administrative record matter for this matter. Thank you.

Sincerely,



Steven M. Jawetz

Enclosure

cc:
Jeffrey Hu, LARWQCB
Jeff Ogata, State Water Resources Control Board
Jim Collins, U.S. EPA Region IX
Steve Arbaugh, U.S. EPA Region IX
Lisa Hanusiak, U.S. EPA Region IX
Jocelyn de Grandpre, LSI
Scott D. Houthuysen, LSI
Ryan Livengood, LSI

DECLARATION OF HENRY A. BLAUVELT

I, Henry A. Blauvelt, hereby declare:

1. The following facts are within my personal knowledge.
2. I am currently employed as the Chief Scientist at Emcore Corporation. I was hired at Emcore in December 2007. Prior to my current job, I worked as the Chief Technology Officer at Xponent Photonics (2001-2007).
3. From January 1985 until September 2001, I was employed by Ortel Corporation ("Ortel") at 2015 West Chestnut Street (a.k.a. Chestnut Street), Alhambra, California. I was initially hired by Ortel as a Staff Scientist, but by the time I left in September 2001 I was the Chief Technologist.
4. Around two years after I started working at Ortel, the company purchased a vapor degreaser and placed it in Building 2. While I generally recall the vapor degreaser being acquired, I was not involved with the purchase or use of the unit. I have limited knowledge of the degreaser's operations and of the substances or solvents that were used, although I do believe that Freon was used until chlorofluorocarbons ("CFCs") were taken off the market.
5. During the time I was employed at Ortel, I frequently entered the building known as Building 5, which had the address 711-721 South Palm Avenue, and I occasionally entered the building known as Building 6, which had the address of 718 South Date Avenue. I am generally familiar with the Ortel activities that occurred in those buildings.
6. Ortel used Building 5 for office space, final mechanical assembly, electrical testing, and some shipping and receiving activities.
7. To the best of my knowledge, any possible solvent use by Ortel in Building 5 would have been limited to the final assembly process, for the cleaning of circuit boards after the

hand soldering of a small number of components (e.g., finished laser modules) to the circuit boards. To the extent that this occurred, solvent would have been applied to the circuit boards with cotton swabs or similar applicators (e.g., to remove soldering flux). The quantity of solvent stored and used in this area for this purpose would have been very small. I am not aware of any reason why chlorinated solvents, rather than solvents like isopropyl alcohol or acetone, would have been used for this purpose.

8. The Ortel operations in Building 6 involved the same types of operations as in Building 5, but for a different product line.

9. To the best of my knowledge, the quantities and uses of solvents by Ortel in Building 6, to the extent that such solvent use occurred, would have been very similar to the small quantities and limited uses of solvents in Building 5. As with Building 5, I am not aware of any reason why chlorinated solvents would have been used in Building 6.

10. I do not recall any spills or releases into the environment of any solvents during the period I was employed at Ortel.

I certify under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Dated: 15th day of December, 2010
in Alhambra, California


Henry A. Blauvelt

EXHIBIT 5

May 23, 2003

**RESPONSE OF AGERE SYSTEMS INC. TO FEBRUARY 10, 2003 INFORMATION
REQUEST BY U.S. ENVIRONMENTAL PROTECTION AGENCY**

INTRODUCTION

This is the response of Agere Systems Inc. ("Agere") to the February 10, 2003 Request for Information ("Information Request") by the U.S. Environmental Protection Agency ("EPA") regarding the facility located at 2015 West Chestnut St., Alhambra, CA ("facility"). The Ortel Division of Emcore Corporation ("Emcore") currently operates the facility. As explained below, Lucent acquired Ortel Corporation ("Ortel") in June 2000 and Ortel was later transferred to Agere. In January 2003, Agere sold the Ortel assets to Emcore. In connection with that sale, Emcore leased the facility from Agere. The sale agreement provides that Agere will fully indemnify Emcore for any pre-existing environmental liabilities associated with the facility, and gives Agere access to facility documents after the sale for the purpose of complying with governmental requirements.

Agere is responding to EPA's Information Request with the cooperation of former Agere employees with knowledge of the relevant facts. Almost all of the information and documentation provided in this response was obtained from Ortel Division personnel. Notwithstanding Agere's diligent efforts, there may be additional information or documentation of which Agere is unaware that is responsive to this request.

Subject to the objections noted in or at the end of these responses, and without waiving any objections or privileges, Agere submits the following responses to the enumerated requests:

RESPONSES TO FEBRUARY 2003 EPA INFORMATION REQUESTS

1. **State the full name, address, and telephone number, position(s) held by and tenure of the individual(s) answering any of these questions on behalf of Agere Systems, Inc. concerning the facility located at 2015 West Chestnut Street, Alhambra, California.**

RESPONSE:

Jocelyn T. de Grandpre, Esq.
Corporate Counsel (November 2000 to present)
Agere Systems, Inc.
1110 American Parkway Northwest
Room 12J306
Allentown, PA 18109
(610) 712-1634

Mark Kanipe
Senior Manager, Facilities Operations
(Employed by Emcore since January 2003, and associated with the facility since 1990)
2015 West Chestnut Street
Alhambra, CA 91803
(626) 293-3662

Assisting Agere with the preparation of its response to the Information Request:

Steven M. Jawetz, Esq.
Bret C. Cohen, Esq.
Beveridge & Diamond, P.C.
1350 I Street, NW, Suite 700
Washington, DC 20005
(202) 789-6045

If EPA has any questions about these responses, desires any further information, or wishes to contact any individual mentioned in these responses or in the associated documents, please contact Jocelyn de Grandpre.

- a. **Identify the managers or individuals responsible for environmental matters at the facility. Provide their full name, current or last known address, telephone number and the dates each individual held such a position.**

RESPONSE:

Since January 2003, Emcore has operated the facility. Two individuals responsible for environmental matters are:

Mark Kanipe
Senior Manager, Facilities Operations
(Employed by Emcore since January 2003, and associated with the facility since 1990)
2015 West Chestnut Street
Alhambra, CA 91803
(626) 293-3662

Wilson Mark
Facilities Operation
(Employed by Emcore since January 2003, and associated with the facility since 1995)
2015 West Chestnut Street
Alhambra, CA 91803
(626) 293-3657

As Senior Manager, Facilities Operations, Mr. Kanipe also serves as the Environmental Health and Safety manager at the facility.

The following individual was responsible for environmental matters at the facility between 1980 and 1990, but he left Ortel in 1990, and Agere does not have his address or telephone number:

Marc Nisenfield
Facilities Manager (1981 to 1990)
Ortel Corporation

2. **Identify the dates you owned the real property. If you are not the owner of the real property, provide the name, address and phone number of the owner. Provide a copy of the lease(s), rental agreement(s) or any other document(s) that establishes your relationship to the owner during your tenancy.**

RESPONSE:

Since the date the facility began operations in December 1981, all buildings have been leased. Copies of the current leases are provided as **Exhibit 1**. Since the date of the asset sale to Emcore in 2003, Agere has been subleasing the buildings to Emcore.

Buildings 1, 2, 3, 4, and 7 were and are leased from RIM Development Company ("RIM") and possibly owned by either Wayne or Robert Tam. RIM's contact information is:

RIM Development Company
2225 W. Commonwealth Ave., #206
Alhambra, CA 91801
(626) 282-1212

Agere believes that Building 5 is owned by Mrs. Wai Fong Un and that RIM manages the property. Building 6, which is currently vacant and for which the lease expires June 6, 2003, was owned by Hui-Min Tsao, who sold the building in July 2002 to:

Sal Aguilar Printing, Inc.
800 S. Palm Ave., Unit 6
Alhambra, CA 91803
(626) 570-6746

Agere believes that Buildings 9 and 10 are owned by:

Robert N. Cohen
P.O. Box 441
Lake Arrowhead, CA 92352
(909) 337-3749

Since 1997, Ortel has also leased property owned by Southern California Edison that is located to the east of the facility, across Raymond Avenue. Ortel has used the property as a parking lot since the inception of the lease.

Agere believes that Ortel purchased the property located at 819 S. Palm Ave, Alhambra, CA in October 1994. Agere sold the property to U-Stor-It in April 2002. The sales agreement and supporting documentation is provided as **Exhibit 2**.

3. **Identify and explain the present operational status (e.g., active, suspended, defunct, merged, and/or dissolved) of Agere Systems, Inc.**

RESPONSE:

Agere is currently active in the businesses of wireless data, high-density storage, and multi-service networking. In particular, Agere designs, develops, and manufactures integrated circuits that access, move, and store information in a broad range of computing and communications applications. Agere also offers related software and reference designs.

- a. **Provide the date this business was incorporated, formed or organized. If the business is operating under a fictitious business name, identify the fictitious name and provide a copy of the Fictitious Business Name Statement filed with the county in which it is doing business. Identify the State in which the business was incorporated, formed or organized. Provide a copy of the Articles of Incorporation, Partnership Agreements, or Articles of Organization together with any and all amendments.**

RESPONSE:

Agere was incorporated in Delaware on August 1, 2000 as a wholly owned subsidiary of Lucent Technologies Inc. The original Certificate of Incorporation was filed under the name "Lucent ME Corp." On December 5, 2000, pursuant to a Certificate of Merger, Agere Systems Inc. was merged into Lucent ME Corp. The name of the surviving corporation was, as of that date, changed to Agere Systems Inc. On February 1, 2001, Lucent began the separation of Agere by transferring to Agere the assets and liabilities related to Lucent's integrated circuits and optoelectronic components businesses. In late May 2001, there was an initial public offering of Agere stock, but Lucent continued to own a majority of the total outstanding common stock of Agere. Lucent completed the spin-off of Agere by distributing all of the Agere common stock it owned to its stockholders on June 1, 2002. Agere's Articles of Incorporation, together with amendments, are provided as **Exhibit 3**.

- b. **Identify and explain any and all mergers, acquisitions, takeovers, including any sale of assets, or investments in another company or corporation equating to 5% or more of that company by Agere Systems, Inc., its predecessors, subsidiaries, and affiliated corporations, from January 1, 1975, to the date of this letter. You may provide a copy of Agere Systems, Inc.'s most current Form 10K or Annual Report or an equivalent document in satisfaction of this question, if it provides specific information, such as dates, names, and type of transactions.**

RESPONSE:

Exhibit 4 contains a copy of Agere's most current Form 10-K. Lucent acquired Ortel on April 27, 2000. Lucent transferred Ortel to Agere on February 1, 2001. In January 2003, Agere sold certain assets, including the operations at the facility, to Emcore.

- c. **List the names, titles, telephone number(s), and current or last known addresses of all individuals who are currently or were officers, directors, and/or shareholders of Agere Systems, Inc. You may provide a copy of Agere Systems, Inc.'s most current Form 10K or Annual Report in satisfaction of this question, if it provides the specific information requested above.**

RESPONSE:

As noted above, **Exhibit 4** contains a copy of Agere's most current Form 10-K.

4. **Identify all current and former business addresses within Los Angeles County, for Agere Systems, Inc. and any of its subsidiaries, operating divisions, plants, or branches, and identify the dates and the name or names under which Agere Systems, Inc. and any such subsidiary, division, plant or branch conducts or conducted business at each such address.**

RESPONSE:

See **Table 1**, below.

TABLE 1
Current or Former Business Addresses for Agere in Los Angeles County

| NAME & ADDRESS | CITY | STATE | ZIP CODES | CURRENT LEASE COMMENCEMENT DATE | LEASE EXPIRATION DATE |
|---|----------|------------|------------|---------------------------------|-----------------------|
| ORTEL 2015-2025 WEST CHESTNUT ST. BLDGS 1 & 2 | ALHAMBRA | CALIFORNIA | 91803-1542 | 10/1/91 | 9/30/05 |
| ORTEL 2001-2011 WEST CHESTNUT ST. BLDGS 1 & 2 | ALHAMBRA | CALIFORNIA | 91803-1542 | 10/1/91 | 9/30/05 |
| ORTEL 708 SOUTH PALM AVENUE BLDG 3 | ALHAMBRA | CALIFORNIA | 91803-1542 | 10/1/91 | 9/30/05 |
| ORTEL 707 SOUTH RAYMOND AVENUE BLDG 4 | ALHAMBRA | CALIFORNIA | 91803-1542 | 10/1/91 | 9/30/05 |
| ORTEL 711-721 SOUTH PALM AVENUE BLDG 5 | ALHAMBRA | CALIFORNIA | 91803-1542 | 7/1/94 | 9/30/05 |
| ORTEL 718 SOUTH DATE AVENUE BLDG 6 | ALHAMBRA | CALIFORNIA | 91803-1542 | 6/19/98 | 6/30/03 |
| ORTEL 704 & 706 SOUTH PALM AVENUE BLDG 7 | ALHAMBRA | CALIFORNIA | 91803-1542 | 2/1/96 | 9/30/05 |

| NAME & ADDRESS | CITY | STATE | ZIP CODES | CURRENT LEASE COMMENCEMENT DATE | LEASE EXPIRATION DATE |
|--|--------------------|------------|------------|---------------------------------|-----------------------|
| ORTEL 700 SOUTH PALM AVENUE BLDG 9 | ALHAMBRA | CALIFORNIA | 91803-1542 | 2/24/97 | 8/31/03 |
| ORTEL 628 SOUTH PALM AVENUE BLDG 10 | ALHAMBRA | CALIFORNIA | 91803-1542 | 4/1/97 | 8/31/03 |
| ORTEL 4920 RIVERGRADE ROAD BLDGS 16 & 18 | IRWINDALE | CALIFORNIA | 91706-1404 | 2/1/00 | 9/30/10 |
| ORTEL RAYMOND AVE. (parking lot leased from S. Cal. Ed.) | ALHAMBRA | CALIFORNIA | 91803-1542 | 12/23/97 | 11/20/07 |
| AGERE SYSTEMS 1230 ROSECRANS BOULEVARD (office space) | MANHATTAN BEACH | CALIFORNIA | 90266-2477 | 7/1/00 | 7/31/05 |

5. **Identify and explain all business operations at the facility, including such information as the size of the facility, number of employees, dates of operation, product(s) manufactured, and a description of the daily activities. Include a historical perspective of all changes in operations over time. In addition provide the following information:**

RESPONSE:

According to Mr. Nadav Bar-Chaim, a current Vice President of Marketing at Ortel, Ortel began operations at the facility in about December 1981. The facility had about three employees. According to Mr. Kanipe, there were approximately 80 employees in 1990. The business peaked between 1999 and 2000, when there were approximately 1,000 employees. Currently, the facility has approximately 210 employees.

The facility consists of optoelectronics manufacturing operations, including a wafer fabrication facility, an assembly area for components related to lasers and photodiodes, research and development operations, general offices, and related functions. Products manufactured from 1983 through the present include lasers, photodiodes, rack mounted systems, transmitters, amplifiers, telecommunications components, and other communication products. The SIC code for the operation is 3674. The daily operations are described in detail starting on page 2 of the Hazardous Waste Source Reduction And Management Review Act of 1989 Plan Summary (Oct. 2002), provided in **Exhibit 11**. (Note: Documents are grouped according to the question to which Agere believes they are most responsive.)

The size of the facility, and how the size has changed over time, is described in response to Information Request 5(a).

- a. **A scaled map of the facility which includes the locations of significant buildings and features. Indicate the location of any maintenance shops, machine shops, degreasers, liquid waste tanks, chemical storage tanks and fuel tanks. Provide a physical description of the facility and identify the following:**

RESPONSE:

Exhibit 5 contains a labeled aerial photograph from 1999 that includes the facility. In addition, Exhibit 5 contains detailed maps of Buildings 1 and 2 showing the building features. The physical description of the facility is as follows.

- 1) **Surface structures (e.g., buildings, tanks containment and/or storage areas, etc.);**

RESPONSE:

The facility began operations in December 1981 and occupied one-half of Building 1. As the business grew, additional buildings were leased and incorporated into the facility. In 1990, the facility's operations were performed in one-half of Building 1, Building 2 in its entirety, and one-quarter of Building 4. Building 1 was and is used for wafer fabrication and offices. Building 2 was and is used for manufacturing, light assembly, and offices. Building 4 was and is used for shipping and receiving, a small machine shop, a break room, an exercise room, and for manufacturing. All three buildings are each approximately 12,500 square feet in size. In 2001, an addition was made to the west and north sides of Building 1.

Between 1990 and 1992, Building 3 and the remaining portions of Building 4 were added to the facility. Building 3 was and is used for engineering, research and development, and offices. The building consists of approximately 12,500 square feet. In 1992, the remaining portion of Building 1 was occupied by Ortel and added to the facility. Buildings 1, 2, 3, and 4 have the address of 2015 W. Chestnut Street. In the northwest corner of Building 4 there is a machine shop which fabricates manufacturing equipment used in the facility. Additional information regarding the machine shop is provided in response to Information Request 5(a)(7).

Building 5 was added to the facility in 1995 and has an address of 711-721 S. Palm Ave. The building consists of approximately 18,000 square feet and has been used for manufacturing and offices.

In 1996, Ortel purchased 819 S. Palm Ave. The building on this property was demolished in 1996. This property remains vacant. According to a Phase I Environment Site Assessment performed on this property in April 1996 by ATC Environmental, Inc., the property was previously used primarily for furniture manufacturing. The Phase I report is provided in **Exhibit 15**. As noted in response to Information Request 2, the property was sold in 2002.

Building 6 was added to Ortel's operations in 1996 and was used for light assembly. The building is approximately 8,900 square feet and is located at 718 South Date Ave. Ortel's lease for Building 6 expires in June 2003, and the building is currently vacant.

Buildings 7, 9, and 10 were occupied in 1997 and were used for administrative offices. Building 7 consists of approximately 8,000 square feet and Buildings 9 and 10 consist of approximately 7,500 square feet each. Ortel currently occupies Building 7. Starting in 2001, Agere occupied Buildings 9 and 10 and used them for administrative offices. Currently, Building 9 is vacant and Building 10 is subleased to CEIS Bio Lab, Inc. Building 7 is located at

704 and 706 S. Palm Ave., Building 9 is located at 700 S. Palm Ave., and Building 10 is located at 628 S. Palm Ave.

Portable trailers were also used at the facility from 1994 until 2000. Two trailers, known as Buildings 1T and 2T, were located west of Building 1 along Palm Avenue. Two additional trailers, known as Buildings 3T and 4T, were located between Buildings 1 and 3.

According to Mr. Kanipe, there are no maintenance shops at the facility. Maintenance is performed either off site for gas powered vehicles or on site by a contractor who services electric equipment.

There are three diesel generators at the facility, all with above-ground small diesel fuel tanks. The first generator, located in Building 2, is a 60 kilowatt unit that has a 60 gallon diesel fuel tank. The second generator, located outside of Building 3, is also a 60 kilowatt unit with a 60 gallon diesel fuel tank. The third generator, also located outside of Building 3, is a 1,000 kilowatt unit with a 300 gallon diesel fuel tank.

The facility has four above-ground storage tanks ("ASTs") that contain liquid nitrogen. The tanks are 1,500 gallons each and are located adjacent to Buildings 2, 4 and 5 and on top of Building 2. The facility also has one above ground tank used for hydrogen storage. The hydrogen tank is located in a bunker between Buildings 1 and 3 and has a capacity of 44,000 cubic feet.

According to information contained in Schedule 3.7(c) of the Agere and Emcore Asset Purchase Agreement ("APA"), provided in **Exhibit 6**, the facility had a 150-gallon AST from 1985-1992.¹ The AST was removed from the facility in 1994. The AST is further described in response to Information Request 6(b).

2) Subsurface structures (e.g., underground tanks, sumps, pits, clarifiers, etc.);

RESPONSE:

There are no underground tanks at the facility. There were two concrete boxes at the facility, located to the west end of Building 1, that were part of the previous pH neutralization equipment. These concrete boxes were 3 inches below grade and were approximately 134 and 89 gallons. Prior to 2001, the facility's liquid waste stream entered the concrete boxes, where the pH was treated before discharge to the sanitary sewer district. After the addition to Building 1 in 2001, pH neutralization was moved inside Building 1 and the facility stopped using both concrete boxes. The concrete boxes were subsequently removed.

¹ As indicated in Section 6.4 of the APA (included in Exhibit 6), the APA is a confidential document between Emcore and Agere. Agere is providing, with the permission of Emcore, a portion of the APA that appears responsive to the Information Request. (Note: The pertinent schedule is mislabeled in the original as Schedule 3.7(d); it is actually Schedule 3.7(c) and relates to section 3.7(c) of the APA.)

The facility has an underground sump pump between Buildings 1 and 4 that is used to pump rainwater off site.

- 3) **Groundwater and dry wells, including drilling logs, date(s) of construction or completion, details of construction, uses of the well(s), date(s) well(s) was/were abandoned, depth to groundwater, depth of well(s), and depth to and of screened interval(s);**

RESPONSE:

At the request of the RWQCB, Agere attempted to install one monitoring well in March 2002. Groundwater was never encountered during installation and a soil vapor monitoring probe was installed inside of the boring. Details of the attempted groundwater monitoring well installation can be found in **Exhibit 7**.

- 4) **Past and present stormwater drainage system and sanitary sewer system, including septic tank(s) and subsurface disposal field(s);**

RESPONSE:

The pH neutralization system is located in the southwestern portion of Building 1. In the pH neutralization room there is a mixing bed through which liquid waste passes before the treated liquid waste is pumped to the sanitary sewer system. This pH neutralization process replaced the previous system, described in response to Information Request 5(a)(2), in 2001.

- 5) **Any and all additions, demolitions, or changes of any kind to physical structures on, under, or about the facility, or to the property itself (e.g., excavation work) and state the date(s) on which such changes occurred;**

RESPONSE:

Information responsive to this request is provided in Agere's response to Information Request 5(a), 5(a)(1), and 5(a)(2).

- 6) **Indicate the location of all waste storage or waste accumulation areas, waste disposal areas, dumps, leach fields, burn pits and any other disposal locations;**

RESPONSE:

Agere did not locate any information that indicated that onsite waste disposal occurred. According to Mr. Kanipe, to the best of his knowledge, the facility never had, and currently does not have, a leach field, a dump, burn pits, or any other onsite disposal locations.

Non-hazardous waste is accumulated in dumpsters at each of the buildings and removed offsite for disposal. All hazardous waste is also removed offsite for disposal. Hazardous waste storage, all of which has been less than 90-day storage, is discussed below.

According to Mr. Kanipe, hazardous waste storage has been conducted in two ways since he began with Ortel in 1990. From 1990 through 2001, all hazardous waste at the facility was stored in an outside storage area located north of Building 2. The storage area had a metal roof and a diked concrete floor and was surrounded by a metal chain link fence. In 2001, the facility stopped using this area for hazardous waste storage. Mr. Kanipe believes that hazardous waste was stored in the same storage area prior to 1990, but he does not have personal knowledge of that fact.

Since 2001, all hazardous waste has been stored in a segregated area in the northern renovated portion of Building 1. The waste storage area has metal grates on the floors with a concrete containment pit beneath the grate. Access to the waste storage area is from the exterior of Building 1, with no interior access. The waste storage area is monitored with security surveillance equipment.

- 7) **Provide a list of all chemicals used in the production and maintenance activities at these facilities, identifying the chemical composition and quantities used. Provide copies of Material Safety Data Sheets for all chemicals used; and**

RESPONSE:

Agere objects to this request as overbroad in scope, unauthorized by law to the extent it is overbroad, and unduly burdensome. Over the last 20 years, Ortel has used numerous chemicals in its manufacturing and research and development activities. Obtaining information on "all chemicals" used at the facility is not feasible. In addition, the request goes beyond the specific chemicals for which EPA has evidence of a release or threatened release to the environment. Notwithstanding the foregoing, and without any waiver of its objection, Agere is providing EPA with a compilation of MSDSs and other documents from Ortel that contain information on chemicals used at the facility, as described below.

The MSDS compilation is provided as **Exhibit 8**. According to Mr. Kanipe, the process for acquisition and compilation of the MSDSs has been as follows. All purchases of chemicals are made by the purchasing department, regardless of where the chemicals will be used at the facility. When purchasing a product, the purchasing department asks the vendor to send the MSDS for the product to the Senior Manager for Facilities Operations, Mr. Kanipe. Upon receipt of the MSDS, Mr. Kanipe places the MSDS in the MSDS compilation in alphabetical order. Additional copies of the MSDS are placed at the location within the facility where the product is used.

Agere has no knowledge of the MSDS acquisition process prior to 1990. According to Mr. Kanipe, when he started the MSDS compilation in 1990, he began with approximately twenty MSDSs left by the previous Facilities Manager. Mr. Kanipe is unaware of the products to which those MSDSs may have pertained, and he has no records containing that information. Since 1990, Mr. Kanipe has added the MSDSs that he has received to the MSDS compilation.

MSDSs are also included in the business plans that are provided in response to Information Request 5(a)(8). The MSDSs in the business plans are for products that were used in the year covered by the business plan and are not a compilation over time.

In response to Agere's March 25, 2003 Freedom of Information Act ("FOIA") request to EPA Region IX, the Waste Management Division provided Agere with a Notification of Hazardous Waste Activity form for the Ortel facility dated January 1986. The form (which is marked as a "first notification") indicates that the facility was a Very Small Quantity Generator ("VSQG") of F003 waste. No further information is provided regarding specific chemicals. This form is provided in **Exhibit 9**.

In addition, Agere is providing numerous other documents that appear to discuss the use of chemicals at the facility. These documents are provided in **Exhibit 10**.

According to Mr. Helio Gomez (the machine shop manager at the facility), as reported to Agere by Mr. Kanipe, the machine shop had a degreaser from approximately 1994 through 1998. The degreaser was serviced by Safety-Kleen and used the product "Spray Penetrant 611," a product that consists of petroleum distillates, 2-butoxyethanol, and propane, and that does not contain any of the chemicals listed by EPA in Information Request 6. The MSDS for "Spray Penetrant" is located in Exhibit 8, within Tab S.

Mr. Steven Arbaugh (U.S. EPA) agreed during a conversation on May 22, 2003, that Agere need not provide copies of several reports discussing hydrogen gas. Each of these reports discusses the steps to be taken in the event of an accidental release of hydrogen at the facility. The reports include a description of prevention programs, consequences analysis, operating procedures, training, maintenance, etc. The reports that Agere is not providing are listed below:

- California Accidental Release Prevention (CalARP) Program (Hydrogen Gas), prepared for Ortel Corporation, by AEC (December 1999).
- California Accidental Release Prevention Program (CalARP) Flammable Substances (Hydrogen Gas), prepared for Agere Systems, by AEC (August 2001).
- Risk Management Plan For Agere Systems, Inc. Flammable Substances (Hydrogen Gas), by AEC (August 2001).

- 8) **Provide copies of hazardous material business plans and chemical inventory forms (originals and updates) submitted to city, county and State agencies.**

RESPONSE:

Hazardous material business plans for 1998, 1999, and 2001 through 2003 were located in Ortel's files and are provided as **Exhibit 11**. According to Mr. Kanipe, the facility does not have a copy of the hazardous material business plan for 2000.

6. Identify and provide the following information for any chemicals or substances which are or were transported to or are or were used at the facility and which contain or contained trichloroethylene; perchloroethylene (commonly known as tetrachloroethene); 1,1,1-trichloroethane; 1,2,3-trichloropropane; carbon tetrachloride, 1, 4-dioxane, hexavalent chromium, n-nitrosodimethylamine, perchlorate, or any product, mixture, or combination of these chemicals in any measurable quantity, provide the following information:
- a. The trade or brand name, chemical composition, quantity used for each chemical or product and the Material Safety Data Sheet for each product;

RESPONSE:

Agere was unable to locate any Agere or Ortel personnel with personal knowledge of whether products containing the chemicals referenced in Information Request 6 were used at the facility prior to 1990. Agere does, however, have anecdotal information that products containing some of the chemicals listed by EPA may have been used prior to 1990. In addition, Ortel personnel report that 1,1,1-trichloroethane was used in small quantities in the research and development department between 1990 and 1994. No information was identified suggesting that any such products or chemicals were released or disposed of at the facility. The information that Agere obtained on these topics is described below.

A Draft "Historical Review and Limited Subsurface Investigation" prepared by Ninyo & Moore for Lucent in August 2000 states that 1,1,1-trichloroethane was used at the site from approximately 1985 through 1990 as a degreaser. The Ninyo and Moore report is provided as **Exhibit 12.**² Certain MSDSs provided in the MSDS compilation and summarized in **Table 2**, below, also indicate that products containing 1,1,1-trichloroethane may have been used at the facility prior to 1990. The manner and location of such use is not known, but may have been in a vapor degreaser. According to Mr. Kanipe, 1,1,1-trichloroethane was not used for vapor degreasing, or for any similar purpose, after 1990.

Mr. Kanipe believes that some of the chemicals referenced by EPA were tested by the facility's research and development department in small quantities up through approximately 1994. The only MSDSs that Agere located for the chemicals listed in EPA's Information Request 6 are provided in the MSDS compilation and are listed in Table 2.

² According to Ninyo & Moore, the only version of this report was in "draft" form, and neither Agere nor Ortel has located any other version of this report.

TABLE 2
List of Products Containing Chemicals Identified by EPA in Information Request 6

| Product Name | Manufacturer | Chemical | MSDS Compilation Tab Location | MSDS Date |
|---------------------------------------|---------------------------------|---|--|------------------------|
| Accelerator | Pacer Tech. | 1,1,1-trichloroethane | Tab A | Jan. 1991 |
| Clear Urethane Seal Coat (Aerosol) | CRC Chemicals | 1,1,1-trichloroethane | Tab C | Nov. 1985 |
| Electrical Quality Silicone (Aerosol) | CRC Chemicals | 1,1,1-trichloroethane | Tab E | Nov. 1985 |
| Solvent-Flux Remover | Miller-Stephenson | 1,1,1-trichloroethane | Tab F | Mar. 1989 |
| Loncosolve TMS | Lonco | "1,1,2-trichloro-1,2,2-trifluoroethane" | Tab M | Oct. 1985 |
| PC-81 | Multicore Solders, Inc. | 1,1,1-trichloroethane | Tab P | Nov. 1985 |
| Red Urethane Seal Coat (Aerosol) | CRC Chemicals | 1,1,1-trichloroethane | Tab R | Nov. 1985 |
| Resist Strip J-100 | Indust-Ri-Chem Laboratory, Inc. | perchloroethylene | Tab R | Dec. 1985 |
| 1,1,1-Trichloroethane | J.T. Baker, Inc. | Trichloroethane | Tab T | May 1989 |
| Trichloroethane | Mallinckrodt, Inc. | Trichloroethane | Tab T | Aug. 1985 |
| Not Identified | Eastman Kodak, Co. | trichloroethylene | Tab T | Mar. 1975 |
| 1,1,1-Trichloroethane | J.T. Baker, Inc. | 1,1,1-trichloroethane | Tab Z | Jan. 1986 |
| Chlorothene | Mallinckrodt, Inc. | 1,1,1-trichloroethane | Tab Z | Feb. 1988 (or 1989) |
| Rapid Tap | Relton Corp. | 1,1,1-trichloroethane | Tab Z | Dec. 1985 |
| 1,1,1-Trichloroethane | Rho-Chem Corp. | 1,1,1-trichloroethane | Tab Z | Aug. 1979 |

Based on information obtained from Mr. Kanipe, Ortel has used primarily two solvents for vapor degreasing, in small quantities, since 1990. From approximately 1990 to 1994, Ortel used the product Blaco-Tron TF, manufactured by Baron Blakeslee. (This product was routinely called "Vapo-Kleen" or "TMS" by facility personnel, for historical reasons; therefore, the remainder of this response refers to this product as "Vapo-Kleen.") The product does not contain any of the chemicals listed by EPA in Information Request 6. Vapo-Kleen's primary ingredient is trichlorotrifluoroethane. The August 2000 Ninyo and Moore report, previously referenced, states that Ensolv was used in the vapor degreasers from 1990 through the present. According to Mr. Kanipe this information is partially incorrect, as Vapo-Kleen was used from 1990 to 1994. The MSDS for Blaco-Tron (aka Vapo-Kleen) is located at Tab B in the MSDS compilation.

From approximately 1994 to the present, Ortel has used the product EnSolv in its vapor degreasers. EnSolv is manufactured by Enviro Tech International, Inc. and EnSolv's primary ingredients are n-propyl bromide and 1,3-dioxolane. The MSDS for EnSolv is located at Tab E in the MSDS compilation.

- b. The location(s) where each chemical or product is or was, used, stored and disposed of. In addition, identify the kinds of wastes, (e.g., scrap metal, construction debris, motor oil, solvents, waste water), quantities and methods of disposal for each chemical or product;**

RESPONSE:

Agere did not locate specific information indicating that products containing the chemicals listed in Information Request 6 were used at the facility, other than the hazardous waste manifests discussed below. As noted in the response to Information Request 6(a), Mr. Kanipe indicated that, since the start of his employment in 1990 and until approximately 1994, products containing chemicals identified by EPA in Information Request 6 were used in research and development that occurred in Building 3. Mr. Kanipe believes that such products were not tested or used at the facility after about 1994. Since these products were purchased in small quantities, they may have been stored in metal chemical storage cabinets in the research and development area. Use of these products is believed by Mr. Kanipe to primarily have occurred under chemical laboratory hoods or in laboratory beakers. Waste product was disposed of with other solvents in the same manner as described below for disposal of Vapo-Kleen and EnSolv. Mr. Kanipe is not aware of any spills or leaks of products containing the chemicals referenced in EPA's Information Request 6. Mr. Kanipe would most likely have knowledge of any releases since 1990, because he is a member of the facility's emergency response team.

Neither Agere, nor the Ortel employees questioned for these responses, have knowledge of the degreasing process prior to 1990, but the process is believed to have been similar to the process described below.

According to Mr. Kanipe, since at least 1990, Vapo-Kleen and EnSolv have been used to clean circuit boards and lasers in the vapor degreaser room, which is located in the middle of the northern portion of Building 2. (As noted previously, Vapo-Kleen and EnSolv do not contain any of the chemicals listed by EPA in Information Request 6.) From 1990 until 1995 the facility had one vapor degreaser, and since 1995 the facility has had two vapor degreasers. The room does not have any floor drains, and until January 2003 the room did not have any water service whatsoever. Mr. Kanipe believes that a vapor degreaser was used prior to 1990 in the same vapor degreaser room, but he has no personal knowledge of such use.

The vapor degreasers each hold approximately four gallons of solvent, two gallons on each side of the degreaser. Each vapor degreaser sits on top of a plastic containment tray with a one to two inch lip. Mr. Kanipe does not believe that there have been any spills of solvent from the vapor degreaser(s). Any drips of solvent were onto the containment tray and were cleaned up using rags. The rags were then disposed of as hazardous waste.

Between 1990 and 1992, and perhaps earlier, Vapo-Kleen was stored in a 150 gallon AST located to the immediate northeast of Building 2.³ According to Mr. Kanipe, the AST sat on a diked (approximately 6 inches tall) concrete pad. Mr. Kanipe remembers that there were no cracks on the concrete pad and that no drains were located near the pad. The tank was constructed of stainless steel. Solvent was removed from the tank via a manual spigot and hose with a ball valve, fittings, and seals. The solvent was transported from the AST to the vapor degreaser using a stainless steel cart. The cart had four wheels with a 15-gallon tank. According to Mr. Kanipe, solvent was transferred to the tank using the fitted hose and the cart's tank was never filled to capacity. Mr. Kanipe does not recall any spills from either the AST or transport cart. The AST was taken out of service in 1992 and was removed from the facility in 1994.

According to Mr. Kanipe, transfer of solvent to and from the vapor degreaser was performed in a similarly careful manner. Solvent from the transport cart was transferred to the vapor degreaser using a hand pump. Spent solvent was removed from the vapor degreaser via a spigot, with an attached hose, on the bottom of the vapor degreaser. The hose was connected to a two-gallon plastic container into which the degreaser was emptied. The two-gallon plastic container was placed on the plastic containment tray under the vapor degreaser. The hose had a bend clamp designed to prevent leakage from the hose when not in use. Mr. Kanipe does not recall any spills of solvent, and any drops of solvent were cleaned using a rag that was disposed of as hazardous waste.

After the spent solvent was removed from the vapor degreaser, an employee would carry the two-gallon plastic containers of spent solvent to the waste disposal area (as described in response to Information Request 5(a)(6)). In the storage area was a 55-gallon drum for spent solvent. The drum sat on top of a plastic containment skid. The person carrying the spent solvent from the vapor degreaser would open a bung on the drum and place a large plastic square pan, designed for funneling liquid into the drum, into the bung. The spent solvent would then be poured into the square pan and would enter the drum. After the spent solvent was emptied into the drum, the funnel was wiped with rags, which were disposed of as hazardous waste. According to Mr. Kanipe, during all handling of the solvent, personnel would wear proper protective gear and respirators. Mr. Kanipe does not recall any spills during this process.

Since 1992, the products used in the vapor degreasers have been stored in 55-gallon drums in the liquid storage area currently located in the northern portion of Building 1, which is described above in the response to Information Request 5(a)(6). According to Mr. Kanipe, all of

³ According to Mr. Kanipe, a statement in a report by ATC entitled "Preliminary Site Characterization," dated June 15, 2000 (provided in Exhibit 15), reflects a misunderstanding. The report states that Mr. David Rasmussen (of the Regional Water Quality Control Board) believed that trichloroethylene was stored in an AST at the facility. According to Mr. Kanipe, Mr. Rasmussen was relying on information obtained from Mr. Kanipe. Mr. Kanipe notes that, at the time, he thought Vapo-Kleen contained 1,1,1-trichloroethane or trichloroethylene, and that he did not distinguish between those compounds in his discussions with Mr. Rasmussen. When he subsequently reviewed the MSDS for Vapo-Kleen, Mr. Kanipe determined that Vapo-Kleen does not contain any of the chemicals in EPA's Information Request 6.

the same general procedures, precautions, and containment equipment described above were used from 1992 through the present, other than cessation of the use of the AST in 1992.

Hazardous waste was and is disposed of offsite by outside vendors. Ortel retained and has provided hazardous waste disposal shipping manifests relating to disposal from late 1987 through the present. (Very few manifests were available for the period before 1990.) These manifests are provided as **Exhibit 13**.

The manifests available from the period before 1990 do not specifically refer to any of the chemicals listed in Information Request 6. From 1990 to 1993, the manifests indicate the periodic disposal of hazardous waste containing 1,1,1-trichloroethane. According to Mr. Kanipe, 1,1,1-trichloroethane was used at the facility only in small quantities for testing purposes in the research and development department. The 1,1,1-trichloroethane that was used for testing purposes, however, was disposed of in the same drums as the spent Vapo-Kleen, which did not contain 1,1,1-trichloroethane or any of the other chemicals listed in Information Request 6. In 1994, the manifests indicate the disposal of F002 waste, but do not specifically refer to any of the chemicals listed in Information Request 6. One manifest in February 1995 indicates the disposal of 10 gallons of trichloroethylene. Mr. Kanipe believes that the trichloroethylene remained from research and development activities prior to 1990.

Mr. Kanipe does not believe that 1,1,1-trichloroethane or any of the other chemicals listed in Information Request 6 were used at the facility's vapor degreaser, research and development department, or any other facility location after approximately 1994. There are some manifests in Exhibit 13, however, indicating sporadic disposal of hazardous waste containing 1,1,1-trichloroethane between 1994 and 2001. Mr. Kanipe has stated that the waste disposal company was using an outdated waste profile during that period; as a result, the disposal company filled out the manifests incorrectly. **Exhibit 14** contains three documents (two brief letters and a portion of an audit report) explaining that the manifests between July 1999 and June 2000 incorrectly indicated the disposal by Ortel of hazardous waste containing 1,1,1-trichloroethane.⁴ The material was actually Ensolv, which as noted previously does not contain 1,1,1-trichloroethane or any other chemical listed in Information Request 6. Mr. Kanipe believes that the waste disposal company was also using an outdated and inaccurate waste profile for Ortel's solvent waste from 1994 or 1995 through July 1999. However, Ortel has been unable to obtain documentation of the mistaken waste profile for that time period. Clean Harbors, the waste disposal company, has reported that it is currently unable to locate such documentation.

Exhibit 13 also includes a July 9, 2002 manifest that indicates the disposal of 16 gallons of 1,1,1-trichloroethane. According to Mr. Kanipe, during a facility inspection in 2002, several bottles of a product containing 1,1,1-trichloroethane were discovered in a metal chemical storage closet in the research and development department. As reflected in the July 9, 2002 manifest, the

⁴ Agere notes that the audit report page provided in Exhibit 14 incorrectly states that the discrepancy involved the use of "1,1,1-Trichloroethylene." (The remaining portions of the AEC report are either not responsive to EPA's Information Request or are included in other exhibits.)

bottles were disposed of off site by the disposal company. Mr. Kanipe believes that the 1,1,1-trichloroethane remained from research and development activities prior to approximately 1994.

- c. **The quantity purchased (in gallons), the time period which it was used, and identity of all persons who used it; and**

RESPONSE:

Agere objects to this information request, in part, as overbroad in scope, unauthorized by law to the extent it is overbroad, and unduly burdensome. Agere has no reasonable process by which it could identify all employees since 1981 who may have used products containing the chemicals identified by EPA in Information Request 6. Notwithstanding the foregoing, and without any waiver of its objection, Agere did not locate any information specifically identifying persons who used such products or chemicals. According to Ortel, two former employees who may have worked with such products in the research and development department are Henry Blauvelt and Joel Paslaski. Neither of these individuals are currently employed by Agere or Ortel, or have been so employed for several years. Their last known addresses are:

Henry Blauvelt
1160 Oakwood Drive
San Marino, CA 91108

Joel Paslaski
412 Rosemont Blvd.
San Gabriel, CA 91775

According to the head of purchasing at Ortel, Mr. Raoul Ramos, Ortel retains paper copies of purchasing records for only five years. Based on his review, Mr. Kanipe believes that there are no paper copies of purchasing records showing any of the chemicals identified by EPA in Information Request 6. According to Mr. Ramos, a portion of the purchasing system has been electronic since 1993. Mr. Ramos does not believe that any of the chemicals identified by EPA in Information Request 6 are in the electronic portion of the purchasing system. According to Mr. Ramos, Emcore's IT department is currently searching its electronic purchasing system database for products that contain the chemicals in Information Request 6. If any information responsive to EPA's Information Request is identified, Agere will supplement this response.

- d. **Identify the supplier(s) and provide copies of all contracts, service orders, shipping manifests, invoices, receipts, canceled checks or any other documents pertaining to the supply of chemical or product.**

RESPONSE:

As explained in response to Information Request 6(c), Mr. Kanipe and Mr. Ramos believe that there are no paper copies of purchasing records for the chemicals listed in EPA's Information Request 6. If the search of the electronic portion of the purchasing system identifies additional responsive information, Agere will supplement this response as needed. Agere did not identify any information indicating the supplier(s) to Ortel of products containing the chemicals

listed in Information Request 6. The MSDSs listed in Table 2, above, indicate the manufacturers of the named products. (See response to Information Request 6(b) for hazardous waste shipping manifests.)

- 7. Provide copies of all technical or analytical environmental information including, but not limited to, data and documents related to soil, water (ground and surface), geology, hydrogeology, soil sampling, soil gas sampling, or air quality on and about each facility, and any known releases of hazardous substances to any media (soil, water or air) on and about this facility. Do not provide copies of environmental documents sent to the Los Angeles RWQCB but reference these documents in your response.**

RESPONSE:

Agere has included, as **Exhibit 15**, copies of documents responsive to this Information Request. Agere may have included in Exhibit 15 some documents sent to the Los Angeles RWQCB.

Several of the documents provided in Exhibit 15 indicate low levels of trichloroethylene ("TCE") in soil gas (vapor) at depths of between 5 and 15 feet below ground surface at the facility. Ninyo & Moore, as shown in Exhibit 12, performed soil gas sampling between 10 and 50 feet and the analytical results generally showed increasing levels of TCE in soil gas with depth. Significantly higher levels of TCE in soil gas were identified in analytical results from samples collected at depths of 65 to 120 feet. According to Mr. Kanipe, the consultants who performed these subsurface investigations have suggested that these analytical results indicate the TCE contamination is coming from offsite.

Soil sampling at the facility by Ninyo & Moore, as shown in Exhibit 12, also suggests that the TCE contamination did not originate at the facility. Two soil samples from borings at the northeastern portion of the facility showed low levels of TCE (10 and 38 parts per billion) in soil at depths of 40 and 50 feet below ground surface, with no detections closer to the surface in the same locations. Although a very low concentration of TCE (5.8 parts per billion) was found in one soil sample taken at five feet below ground surface beneath the vapor degreaser room, soil samples collected in the same location at a depth of 15 feet below ground surface did not show any TCE. Soil samples collected to the east and north of the vapor degreaser room did not show TCE (or any other volatile organic compound) at any depth. Similarly, soil samples collected from the location of the former AST did not show TCE or any other volatile organic compound.

Based on the analytical results from the soil and soil gas sampling at the facility, Agere believes that the subsurface TCE contamination is likely coming from offsite. Although solvent contamination is prevalent in the area, the most likely source appears to be the Southern California Edison ("SCE") property located to the east of the facility. According to Mark Kanipe, the SCE property is contaminated with TCE and other hazardous substances as a result of a previous creosote coating operation on the property and a major railcar spill (of solvent) on the SCE property that occurred about 100 yards northeast of the Ortel facility boundary. Agere understands that several subsurface investigations performed at the SCE facility identified significant levels of TCE contamination.

In August 2001, a remedial action plan was approved for a portion of the SCE property, near the Ortel facility, by the California Department of Toxic Substances Control ("DTSC"). Two DTSC fact sheets are provided as **Exhibit 16**. Beginning in approximately January 2002, the DTSC oversaw the construction of an in-situ thermal desorption system on the SCE property to address Area of Concern 2 (2.5 acres of soil contaminated with creosote and pentachlorophenol).

- 8. Identify any prior operators of the facility and provide the dates each business operated. To the best of your knowledge, describe the types of operations that occurred at the facility address. Provide copies of all environmental documents and facility information in your possession regarding prior operators.**

RESPONSE:

Historical information regarding prior operators of portions of the facility is included in the Ninyo & Moore report that was discussed previously and that is provided as **Exhibit 12**. According to Ninyo & Moore, the facility has had several historical uses, including use by a machine shop, electric motor manufacturer, offices, and residences. The Ninyo & Moore report includes a document from the Los Angeles County Health Department indicating that in 1971 and 1972, a previous occupant of 710 Palm Avenue used perchloroethylene in a degreaser.

According to Mr. Kanipe, while Ortel occupied a portion of Building 1, the remaining portion of the building was used by a publisher of adult material. Building 3 was partially used as a seafood and meat warehouse. Building 4 was partially used by a speaker manufacturer for assembly of speakers. Also according to Mr. Kanipe, other historical operations at the location of the current Ortel facility may have included a foundry and garment manufacturing.

- 9. Identify all insurance policies held by you from the time you purchased the real property until the present. Provide the name and address of each insurer, the policy number, the amount of coverage and policy limits, the type of policy, and the expiration date of each policy. Include all comprehensive general liability policies and "first party" property insurance policies, and all environmental impairment insurance. Provide a complete copy of each policy.**

RESPONSE:

This Information Request seeks all insurance policies from the time the respondent purchased the real property until the present. Agere does not own and has never owned the real property in question. Notwithstanding the foregoing, Agere is providing information responsive to this request.

In a telephone conversation on May 13, 2003, Mr. Steven Arbaugh confirmed that Agere could provide certificates of insurance in lieu of copies of actual insurance policies. He also agreed that the certificates could be limited to the period following the acquisition of Ortel by Lucent in June 2000. **Exhibit 17** contains the relevant certificates of insurance.

10. **Identify all indemnification or restitution agreements, contribution actions, and any other sources or arrangements through which you may recover expenses associated with the Site.**

RESPONSE:

Agere has not identified any indemnification or restitution agreements through which it may recover expenses associated with the Site. Agere has not initiated any contribution actions related to the Site.

GENERAL OBJECTIONS

1. Agere asserts all privileges it may have with respect to information potentially responsive to the Information Request, including the attorney-client privilege, work-product privilege, all privileges related to materials generated in anticipation of litigation, and any other privilege under law, and Agere does not intend to waive any such privilege as to any document subject to such privilege that is inadvertently included in the response to the Information Request.
2. Agere objects to Instruction 7, on the ground that EPA has no authority to impose a general continuing obligation on Agere to supplement these responses. Agere will, of course, comply with any lawful future requests that are within EPA's authority.
3. Agere objects to the Request's definition of "you" because the term is overbroad, and it is not possible for Agere to answer questions on behalf of all the persons identified therein.

EXHIBIT 6