PS Form 3811, July 1983

SENDER: Complete items 1, 2, 3 and 4.

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

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

3. Article Addressed to:
Mr. James R. Kolanek
Harris Corporation
P. O. Box 883
Melbourne, FL 32901

4. Type of Service:	Article Number
☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail	P 408 533 182

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee
X

6. Signature – Agent
X [signature]

7. Date of Delivery
3-10-86

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

DOMESTIC RETURN RECEIPT

P 408 533 182

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Mr. James R. Kolanek	
Street and No.	
P.O., State and ZIP Code	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return Receipt Showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date 3/6/86	

PS Form 3800, Feb. 1982

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILOING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT

Mr. James R. Kolanek
Environmental Services
Harris Corporation - Semiconductor Sector
Post Office Box 883
Melbourne, Florida 32901

March 4, 1986

Enclosed are Permit Numbers AC 05-108258 and AC 05-108260 to Harris Corporation which authorize the installation of two scrubbers at your semiconductor facility in Brevard County, Florida. These permits are issued pursuant to Section 403, Florida Statutes.

Any Party to these permits has the right to seek judicial review of the permits pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32301; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date these permits are filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality
Management

Copies furnished to:

Tom Sawicki

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on March 6, 1986 to the listed persons.

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to §120.52(9), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Patricia A. Adams — Clerk

March 6, 1986 — Date

Final Determination
Harris Semiconductor

The construction applications and attachments have been reviewed by the department. Public notice of the Department's Intent to Issue was published in the Today Newspaper issue on January 19, 1986. The Technical Evaluation and Preliminary Determination was available for public inspection at the DER's St. Johns River District Office and Bureau of Air Quality Management office.

Mr. James Kolanek, Manager, Environmental Service for Harris Semiconductor requested that the permits be modified as per Mr. Dennis R. Erdley's letter of December 13, 1985.

To be consistent with the permits issued on January 3, 1986, the Department will modify specific conditions No. 4, No. 5 and No. 8 of permit AC 05-108260. Specific condition No. 6 of permit No. AC 05-108258 will be deleted. The comments requesting these changes were received on December 13, 1985, from Mr. Dennis R. Erdley, Environmental Attorney for Harris Corporation-Semiconductor Sector. The comments will become attachments to the appropriate permits. The bureau's comments will follow and be numbered so as to correspond with the numbers of Mr. Erdley's comments, which will not be restated.

1. The bureau agrees with the proposed changes and the following Specific Conditions will be changed

a. Permit Affected
AC 05-108260

No. 4:

From: An inspection and maintenance plan shall be submitted to DER's St. Johns River District office as part of the operating permit application. The plan shall include provisions for the prevention and correction of VOC/solvent losses from leaks and equipment malfunction and a record system on the amount and type VOC/solvents purchased and reclaimed.

To: An inspection and maintenance plan shall be submitted to DER's St. Johns River District office as part of the operating permit application. The plan shall include provisions for the prevention and correction of VOC/solvent losses from leaks and equipment malfunction.

No. 5:

From: Compliance with the VOC/solvent emissions limit for the working stations and the scrubber system shall be determined through the use of a material balance of the VOC/solvents purchased and reclaimed.

To: Compliance with the VOC/solvent emissions limit for the working stations and the scrubber system shall be determined through sampling and analysis of the emissions by Method 25, 40 CFR 60 Appendix A, or other methods as approved by the Department. A sample shall be taken and analyzed, once a year, to determine the scrubber's efficiency. An annual report, summarizing the sampling results, shall be due sixty (60) days after the anniversary date of the operating permit and is to be submitted to DER's St. Johns River District office.

No. 8:

From: Annual reports, kept by month, shall be due 15 days after the anniversary date of the operating permit and are to be submitted to the DER's St. Johns River District office. The annual reports are to contain the amounts of all VOC/solvents by chemical, purchased and reclaimed.

To: A report shall be submitted, on September 1, 1986, and annual thereafter, to DER's St. Johns River District office. The report shall address the entire Harris Semiconductor facility and reflect the amounts of all VOC/solvents by chemical, purchased and reclaimed or disposed of off-site, and emitted (VOC/TPY).

2. In order to obtain operating permits, the actual operating efficiency of each scrubber will have to be demonstrated and submitted to the DER's St. Johns River District office along with other material required pursuant to FAC Rules 17-4.22 and 17-4.23.

Attachments to be Incorporated are:

Affected Permits: AC 05-108258 and AC 05-108260

4. Mr. Dennis R. Erdley's letter dated December 13, 1985.

The bureau will incorporate the changes to the Specific Conditions in the affected construction permits, as referenced above in the Final Determination. It is recommended that the construction permits be issued as drafted, with the above changes and attachments incorporated.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

PERMITTEE:
Harris Semiconductor
P. O. Box 883
Melbourne, Florida 32901

Permit Number: AC 05-108260
Expiration Date: June 30, 1986
County: Brevard
Latitude/Longitude: 28° 01' 20" N
80° 36' 10" W
Project: Building 63 VOC/Solvent Vapor Exhaust Scrubber

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the department and made a part hereof and specifically described as follows:

For the permitting of hood type work stations for the manufacture of semiconductors in Building 63. A 6,000 CFM fume scrubber manufactured by Beverly Pacific is installed to control VOC/solvent vapors at the permittee's existing facility located on Palm Bay Road. The UTM coordinates are Zone 17-538.7 km East and 3100.9 km North.

The source shall be in accordance with the permit application and plans, documents, amendments, and drawings except as otherwise noted on pages 5-7, Specific Conditions.

Attachments are as follows:

1. Application to Construct Air Pollution Sources, DER Form 17-1.202(1), and Mr. James R. Kolanek's cover letter dated August 8, 1985.

2. Mr. C. H. Fancy's letter dated September 12, 1985.

3. Mr. James R. Kolanek's letter with Attachments dated October 14, 1985.

4. Mr. Dennis R. Erdley's letter dated December 13, 1985.

PERMITTEE:
Harris Semiconductor

Permit Number: AC 05-108260
Expiration Date: June 30, 1986

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, unless specifically authorized by an order from the department.

GENERAL CONDITIONS:

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

a. Having access to and copying any records that must be kept under the conditions of the permit;

b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information:

a. a description of and cause of non-compliance; and

b. the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

GENERAL CONDITIONS:

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

10. The permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

11. This permit is transferable only upon department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD).
( ) Compliance with New Source Performance Standards.

14. The permittee shall comply with the following monitoring and record keeping requirements:

a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.

GENERAL CONDITIONS:

b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the date(s) analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

15. When requested by the department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the department, such facts or information shall be submitted or corrected promptly.

SPECIFIC CONDITIONS:

1. The maximum allowable VOC (volatile organic compounds)/solvent emissions from the work stations and scrubber system shall not exceed 0.005 pounds per year and 0.018 tons per year.

2. The VOC/solvent vapor exhaust scrubber must be on during the working hours.

3. The maximum operating hours allowed shall not exceed 24 hours per day, 264 days per year for a total of 6,336 hours per year.

SPECIFIC CONDITIONS:

4. An inspection and maintenance plan shall be submitted to DER's St. Johns River District Office as part of the operating permit application. The plan shall include provisions for the prevention and correction of VOC/solvent losses from leaks and equipment malfunction.

5. Compliance with the VOC/solvent emissions limit for the working stations and the scrubber system shall be determined through sampling and analysis of the emissions by Method 25 (40 CFR 60, Appendix A) or other methods as approved by the Department. A sample shall be taken and analyzed, once a year, to determine the scrubber's efficiency. An annual report, summarizing the sampling results, shall be due sixty (60) days after the anniversary date of the operating permit and is to be submitted to DER's St. Johns River District office.

6. A meter to measure the pressure drop shall be installed on the scrubber system.

7. Objectionable odors shall not be allowed off plant property.

8. A report shall be submitted on September 1, 1986, and annually thereafter, to DER's St. Johns River District office. The report shall address the entire Harris Semiconductor facility and reflect the amounts of all VOC/solvents by chemical, purchased and reclaimed or disposed of off-site, and emitted (VOC/TPY).

9. The construction shall reasonably conform to the plans and schedule submitted in the application. If the permittee is unable to complete construction on schedule, he must notify the Department in writing 60 days prior to the expiration of the construction permit and submit a new schedule and request for an extension of the construction permit. (FAC Rule 17-4.09)
To obtain a permit to operate, the permittee must demonstrate compliance with the conditions of the construction permit and submit a complete application for an operating permit, including the application fee, along with compliance test results and Certificate of Completion, to the Department's St. Johns River District office 90 days prior to the expiration date of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until its expiration date. Operation beyond the construction permit expiration date requires a valid permit to operate. (FAC Rules 17-4.22 and 17-4.23)
If the construction permit expires prior to the permittee requesting an extension or obtaining a permit to operate, then all activities at the project must cease and the permittee must apply for a new permit to construct which can take up to 90 days to process a complete application. (FAC Rule 17-4.10)

PERMITTEE:
Harris Semiconductor

Permit Number: AC 05-108260
Expiration Date: June 30, 1986

SPECIFIC CONDITIONS:

Issued this 28th day of Feb, 1986.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

VICTORIA J. TSCHINKEL, Secretary

____ pages attached.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

PERMITTEE:
Harris Semiconductor
P. O. Box 883
Melbourne, Florida 32901

Permit Number: AC 05-108258
Expiration Date: June 30, 1986
County: Brevard
Latitude/Longitude: 28° 01' 20" N
80° 36' 10" W
Project: Building 4 Acid Vapor Exhaust Scrubber

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the department and made a part hereof and specifically described as follows:

For the permitting of hood type work stations for the manufacture of semiconductors in Building 4. A 1,000 CFM fume scrubber manufactured by Beverly Pacific is installed to control acid vapors at the permittee's existing facility located on Palm Bay Road. The UTM coordinates are Zone 17-538.7 km East and 3100.9 km North.

The source shall be in accordance with the permit application and plans, documents, amendments, and drawings except as otherwise noted on pages 5-6, Specific Conditions.

Attachments are as follows:

1. Application to Construct Air Pollution Sources, DER Form 17-1.202(1), and Mr. James R. Kolanek's cover letter dated August 8, 1985.

2. Mr. C. H. Fancy's letter dated September 12, 1985.

3. Mr. James R. Kolanek's letter with Attachments dated October 14, 1985.

4. Mr. Dennis R. Erdley's letter dated December 13, 1985.

PERMITTEE:
Harris Semiconductor

Permit Number: AC 05-108258
Expiration Date: June 30, 1986

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, unless specifically authorized by an order from the department.

GENERAL CONDITIONS:

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

a. Having access to and copying any records that must be kept under the conditions of the permit;

b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information:

a. a description of and cause of non-compliance; and

b. the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

GENERAL CONDITIONS:

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

10. The permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

11. This permit is transferable only upon department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD).
( ) Compliance with New Source Performance Standards.

14. The permittee shall comply with the following monitoring and record keeping requirements:

a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.

GENERAL CONDITIONS:

b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reorts required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by department rule.

c. Records of monitoring infomration shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the date(s) analyses were performed:
- the person responsible for performing the analyses;
- the results of such analyses.

15. When requested by the department, the permittee shall within a reasonble time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the department, such facts or information shall be submitted or corrected promptly.

SPECIFIC CONDITIONS:

1. The acid vapor emissions from the work stations and scrubber system shall not exceed 0.0095 lb/hr and 0.007 tons per year.

2. The acid vapor exhaust scrubber must be on during the working hours.

3. The maximum operating hours allowed shall not exceed 10 hours per day, 3 days per week, and 52 weeks per year for a total of 1,560 hours per year.

4. A meter to measure the pressure drop shall be installed on the scrubber system.

5. Objectionable odors shall not be allowed off plant property.

PERMITTEE:
Harris Semiconductor

Permit Number: AC 05-108258
Expiration Date: June 30, 1986

SPECIFIC CONDITIONS:

6. The construction shall reasonably conform to the plans and schedule submitted in the application. If the permittee is unable to complete construction on schedule, he must notify the Department in writing 60 days prior to the expiration of the construction permit and submit a new schedule and request for an extension of the construction permit. (FAC Rule 17-4.09)
To obtain a permit to operate, the permittee must demonstrate compliance with the conditions of the construction permit and submit a complete application for an operating permit, including the application fee, along with compliance test results and Certificate of Completion, to the Department's St. Johns River District office 90 days prior to the expiration date of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until its expiration date. Operation beyond the construction permit expiration date requires a valid permit to operate. (FAC Rules 17-4.22 and 17-4.23)
If the construction permit expires prior to the permittee requesting an extension or obtaining a permit to operate, then all activities at the project must cease and the permittee must apply for a new permit to construct which can take up to 90 days to process a complete application. (FAC Rule 17-4.10)

Issued this 28th day of Feb
1986.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Victoria J. Tschinkel, Secretary

_____pages attached.

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee			
To:		Loctn.:	
To:		Loctn.:	
To:		Loctn.:	
From:		Date:	
Reply Optional [ ]	Reply Required [ ]		Info. Only [ ]
Date Due:		Date Due:	

TO: Victoria J. Tschinkel

FROM: for Clair Fancy

DATE: February 28, 1986

SUBJ: Approval of Attached Air Construction Permits

Attached for your approval and signature are two Air Construction Permits to Harris Corporation for their semiconductor facility in Brevard County, Florida.

Day 90, after which the permits would be issued by default, is March 4, 1986.

The Bureau recommends your approval and signature.

CF/pa

Attachments

Check Sheet

Company Name: HARRIS SEMICONDUCTOR
Permit Number: AC-05-108258, -108260
PSD Number:
Permit Engineer:

Application:

- [x] Initial Application
  - [x] Incompleteness Letters
  - [x] Responses
  - [ ] Waiver of Department Action
  - [ ] Department Response
  - [ ] Other

Cross References:

- [ ]
- [ ]
- [ ]

Intent:

- [x] Intent to Issue
- [x] Notice of Intent to Issue
- [x] Technical Evaluation
- [ ] BACT Determination
- [x] Unsigned Permit

Correspondence with:

- [ ] EPA
- [ ] Park Services
- [ ] Other

- [x] Proof of Publication
  - [ ] Petitions - (Related to extensions, hearings, etc.)
  - [ ] Waiver of Department Action
  - [ ] Other

Final Determination:

- [x] Final Determination
- [x] Signed Permit
- [ ] BACT Determination
  - [ ] Other

Post Permit Correspondence:

- [ ] Extensions/Amendments/Modifications
- [x] Other

PTA
10-3-88
Orlando, FL

Main File

HARRIS

RECEIVED
OCT 5 1988
DER - BAQM

FS-JRK-046-88

September 28, 1988

C. M. Collins, P.E
Program Administrator
Florida DER
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803

SUBJECT: HARRIS SEMICONDUCTOR
Air Permit Applications

Dear Mr. Collins:

Attached is the completed Waiver of 90 day time limit for the eleven operating permit applications referenced in your letter dated September 19, 1988.

This submittal is a revision to the waiver submitted in my letter of September 2, 1988. In addition a FAX of the attached was transmitted on September 28, 1988 as per the conversation between Nancy Baldisserotto of Harris and Mr. John Turner of your office.

If you should have any questions, please call me at (407) 724-7467.

Sincerely,

James R. Kolanek

J. R. Kolanek, Manager
Environmental Services

/pgc

Attachments

cc: John Turner, Orlando DER
Bruce Mitchell, Tallahassee DER
R. R. Sands
D. R. Erdley

Section 120.60, Florida Statutes

(2) When an application for a license is made as required by law, the agency shall conduct the proceedings required with reasonable dispatch and with due regard to the rights and privileges of all affected parties or aggrieved persons. Within 30 days after receipt of an application for a license, the agency shall examine the application, notify the applicant of any apparent errors or omissions, and request any additional information the agency is permitted by law to require. Failure to correct an error or omission or to supply additional information shall not be grounds for denial of the license unless the agency timely notified the applicant within this 30 day period. The agency shall notify the applicant if the activity for which he seeks a license is exempt from the licensing requirement and return any tendered application fee within 30 days after receipt of the original application or within 10 days after receipt of the timely requested additional information or correction of errors or omissions. Every application for license shall be approved or denied within 90 days after receipt of the original application or receipt of the timely requested additional information or correction of errors or omissions. Any application for a license not approved or denied within the 90-day period or within 15 days after conclusion of a public hearing held on the application, whichever is latest, shall be deemed approved and, subject to the satisfactory completion of an examination, if required as a prerequisite to licensure, [2](the license) shall be issued. The Public Service Commission, when issuing a license, and any other agency, if specifically exempted by law, shall be exempt from the time limitations within this subsection. Each agency, upon issuing or denying a license, shall state with particularity the grounds or basis for the issuance or denial of same, except where issuance is a ministerial act. On denial of a license application on which there has been no hearing, the denying agency shall inform the applicant of any right to a hearing pursuant to s. 120.57.

WAIVER OF 90 DAY TIME LIMIT

UNDER SECTION 120.60(2), FLORIDA STATUTES

License (Permit, Certification) Application No. * See Below
Applicant's Name: HARRIS SEMICONDUCTOR

The undersigned has read Section 120.60(2), Florida Statutes, and fully understands the Applicant's rights under that section.

With regard to the above referenced license (permit, certification) application, the Applicant hereby with full knowledge and understanding of (his) (her) (its) rights under Section 120.60(2), Florida Statutes, waives the right under Section 120.60(2), Florida Statutes, to have the application approved or denied by the State of Florida Department of Environmental Regulation within the 90 day time period prescribed in Section 120.60(2), Florida Statutes. Said waiver is made freely and voluntarily by the Applicant, is in (his) (her) (its) self-interest, and without any pressure or coercion by anyone employed by the State of Florida Department of Environmental Regulation.

This waiver shall expire on the 30 day of April 1990.

The undersigned is authorized to make this waiver on behalf of the applicant.

Carol A. Chapman

Notary Public, State of Florida
My Commission Expires March 31, 1989
Bonded Thru General Insurance, Inc.

Sworn to and subscribed before me this 28th day of September 1988.

James R. Kolanek
Signature

James R. Kolanek
Name of Signee

9-28-88
Date

*A005-121922
A005-121923
A005-121925
A005-121928
A005-121931
A005-121932
A005-121933
A005-121935
A005-121936
A005-121937
A005-121938

PM
9-8-88
Orlando, FL

File Copy

HARRIS

RECEIVED
SEP 12 1988
DER - BAQM

FS-JRK-034-89

September 2, 1988

Mr. Charles M. Collins
State of Florida
Department of Environmental Regulation
3319 Maguire Boulevard
Suite 232
Orlando, Florida 32803

Subject: Harris Semiconductor
Construction Air Permits

Dear Mr. Collins

This letter is in response to Mr. John Turner's call of 9-1-88, and a follow-up to my letter of 8-8-88.

Enclosed please find "Waiver of 90 Day Time Limit" forms for air permit number AC05-108260. This form was over looked when the other forms were submitted in August.

9-13-88 Spoke to J. Turner. Should have been with assoc. AO #, and should be resubmitted. PM

If you should have any questions, please call me at (407) 724-7467.

Sincerely,

James R. Kolanek

J. R. Kolanek, Manager
Environmental Services

/pgc

Enclosure

cc: N. A. Baldisserotto
D. R. Erdley
L. R. Hutker
B. Mitchell
R. R. Sands

RECEIVED

SEP 12 1988

DER - BAQM

WAIVER OF 90 DAY TIME LIMIT

UNDER SECTION 120.60(2), FLORIDA STATUTES

License (Permit, Certification) Application No. AC05-108260

Applicant's Name: HARRIS SEMICONDUCTOR

The undersigned has read Section 120.60(2), Florida Statutes, and fully understands the Applicant's rights under that section.

With regard to the above referenced license (permit, certification) application, the Applicant hereby with full knowledge and understanding of (his) (her) (its) rights under Section 120.60(2), Florida Statutes, waives the right under Section 120.60(2), Florida Statutes, to have the application approved or denied by the State of Florida Department of Environmental Regulation within the 90 day time period prescribed in Section 120.60(2), Florida Statutes. Said waiver is made freely and voluntarily by the Applicant, is in (his) (her) (its) self-interest, and without any pressure or coercion by anyone employed by the State of Florida Department of Environmental Regulation.

This waiver shall expire on the 01 day of NOV 1988.

The undersigned is authorized to make this waiver on behalf of the applicant.

James R. Kolanek

Signature

James R. Kolanek

Name of Signee

9-2-88

Date

Sworn to and subscribed before me this _____ day of _____ 19____.

HARRIS

FS-JRK-140-88

March 8, 1988

RECEIVED
MAR 14 1988
DER - BAQM

Mr. A. T. Sawicki
State of Florida
Department of Environmental Regulation
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803

SUBJECT: HARRIS SEMICONDUCTOR AIR PERMITS
Meeting of February 17, 1988

Dear Mr. Sawicki:

This letter is a follow-up to the meeting that was held in your offices on February 17, 1988 on the subject topic. We appreciate the Department's time and input on the issues pertinent to Harris' air permits.

During the course of the meeting the following information was requested by the DER:

1. A schedule for the co-generation project currently under review by Harris Semiconductor.

2. Generic industrial hygiene data for the semiconductor manufacturing areas.

3. Confirmation of the projected VOC emission level of 150 tons/year by a chemical inventory reconciliation.

Harris is currently compiling the above information. We shall forward the information to your attention as soon as it is available.

During the meeting Harris made the following recommendations:

1. That the existing 28 air emission source permits be consolidated into 11 permits on a per building basis.

2. Raising the total Harris Semiconductor VOC emission limit to 150 tons/year measured as propane.

3. Use of EPA method 25A to demonstrate compliance with source emissions.

4. Elimination of visible emission testing.

HARRIS
J. R. Kolanek, MS58-055
HARRIS CORPORATION
SEMICONDUCTOR SECTOR
P.O. BOX 883
MELBOURNE, FLORIDA 32901

MELBOURNE FL MAR 11'88
P.B. METER 6121163
U S POSTAGE
0.22

3-14-88

Looks reasonable! I

Mr. Bruce Mitchell
2600 Blair Stone Road
Tallahassee, Florida 32301

The following agreements were reached:

1. Harris would submit permit modifications on a by building basis starting with Building 54. The first permit modification request would be submitted in March. Future permit modifications would be submitted every two months.

2. Visible emission testing was deemed inappropriate, by today's standards, to demonstrate compliance with VOC emissions.

Finally, the DER requested Harris to resolve the issue of considering Harris Semiconductor and Harris Government Systems as separate or a single facility.

We appreciate your time and consideration in resolving these issues. We look forward to working with you and your staff. If you should have any questions, please contact me at (305) 724-7467.

Sincerely,

James R. Kolanek

J. R. Kolanek, Manager
Environmental Services

/pgc

cc: Bruce Mitchell

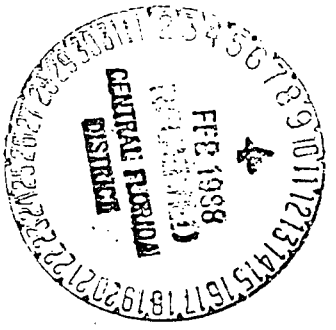
Copied CHF/BT
Bruce Mitchell 3.14.88

05-108260-258

HARRIS

FS-JRK-126-88

February 5, 1988



Mr. A. T. Sawicki
State of Florida
Department of Environmental Regulation
3319 Maguire Boulevard
Suite 232
Orlando, Florida 32803

Re: Harris Semiconductor Air Permits

Dear Mr. Sawicki:

This letter is to confirm our telephone conversation and meeting scheduled for February 17, 1988 at 10 a.m. in your offices.

As per our telephone conversation, the following technical issues will be the agenda for the meeting.

i. Monitoring work completed to date.

ii. Summary review of the monitoring data.

iii. Permit(s) consolidation.

iv. Increasing VOC limits on select sources.

v. Facility VOC reduction options.

It is our understanding that in addition to yourself, Mr. John Turner, and Garry Kubershi of the DER will be attending. In addition to myself, the following individuals from Harris shall be attending:

L. R. Hutker, R. R. Sands, and N. A. Baldisserotto.

I look forward to our meeting on the 17th. If you should have any questions, please feel free to contact me at (305) 724-7467.

Sincerely,

James R. Kolanek

J. R. Kolanek, Manager
Environmental Services

/pgc

DER
FEB 12
BAQM

2-12-88

FYI

4

HARRIS

FS-JRK-126-88

February 5, 1988

Mr. A. T. Sawicki
State of Florida
Department of Environmental Regulation
3319 Maguire Boulevard
Suite 232
Orlando, Florida 32803

Re: Harris Semiconductor Air Permits

Dear Mr. Sawicki:

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As per our telephone conversation, the following technical issues will be the agenda for the meeting.

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L. R. Hutker, R. R. Sands, and N. A. Baldisserotto.

I look forward to our meeting on the 17th. If you should have any questions, please feel free to contact me at (305) 724-7467.

Sincerely,

James R. Kolanek

J. R. Kolanek, Manager
Environmental Services

/pgc

DER
FEB 12
BAQM

PM
1-20-86
Cocoa, FL

CAPE PUBLICATIONS, INC.

The Times
Published Weekly on Wednesday

THE TRIBUNE
Published Weekly on Wednesday

FLORIDA TODAY
Published Daily

ST☆R-ADVOCATE
Published Weekly on Wednesday

DER
JAN 24 1986
BAQM

STATE OF FLORIDA
COUNTY OF BREVARD

Before the undersigned authority personally appeared **Linda L. Spicer** who on oath says that he/she is **Legal Advertising Clerk** of the **FLORIDA TODAY**, a newspaper published in Brevard County, Florida; that the attached copy of advertising being a Notice of application

permit to Harris Corporation to install hood type work stations

in the matter of

in the Court

was published in the FLORIDA TODAY NEWSPAPER

in the issues of January 18,1986

Affiant further says that the said **FLORIDA TODAY NEWSPAPER** is a newspaper published in said Brevard County, Florida and that the said newspaper has heretofore been continuously published in said Brevard County, Florida regularly as stated above, and has been entered as second class mail matter at the post office in **COCOA**, said Brevard County, Florida for a period of one year next preceeding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in said newspaper.

Linda L. Spicer

Sworn and subscribed to before me this 18th day of January A.D. 19 86

Mary E Kiehl

NOTARY PUBLIC

NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXPIRES SEPT 14 1987
BONDED THRU GENERAL INSURANCE UND.

State of Florida
Department of
Environmental Regulation
Notice of Proposed Agency
Action on Permit Applications

The Department of Environmental Regulation gives notice of its intent to issue permits to Harris Corporation to install hood type work stations for the manufacture of semiconductors. Scrubbers will be installed to control acid and VOC/solvent vapors at the applicant's facility located on Palm Bay Road in Palm Bay, Brevard County, Florida. A determination of best available control technology (BACT) was not required.

Persons whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must conform to the requirements of Chapters 17-103 and 28-5, Florida Administrative Code, and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32301, within fourteen (14) days of publication of this notice. Failure to file a request for hearing within this time period constitutes a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the proposed agency action. Therefore, persons who may not wish to file a petition may wish to intervene in the proceeding. A petition for intervention must be filed pursuant to Model Rule 28-5.207, Florida Administrative Code, at least five (5) days before the final hearing and be filed with the hearing officer if one has been assigned at the Division of Administrative Hearings, Department of Administration, 2009 Apalachee Parkway, Tallahasssee, Florida 32301. If no hearing officer has been assigned, the petition is to be filed with the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32301. Failure to petition to intervene within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes.

The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Dept. of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32301

Dept. of Environmental Regulation
St. Johns River District
3319 Maguire Blvd., Suite 232
Orlando, Florida 32803

Any person may send written comments on the proposed action to Mr. Bill Thomas at the department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the department's final determination.

TO78510—1T—1/18, 1986, Saturday

PS Form 3811, July 1983

SENDER: Complete items 1, 2, 3 and 4.

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

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

3. Article Addressed to:
Mr. James R. Kolanek
Harris Corporation
P. O. Box 883
Melbourne, FL 32901

4. Type of Service:
☐ Registered ☑ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number
P 408 533 639

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee
X

6. Signature – Agent
X

7. Date of Delivery

8. Addressee's Address *(ONLY if requested and fee paid)*
Harris Semiconductor
Willie J. Logan

DOMESTIC RETURN RECEIPT

P 408 533 639

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Mr. James R. Kolanek	
Street and No.	
P.O., State and ZIP Code	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return Receipt Showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	12/18/85

PS Form 3800, Feb. 1982

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

December 13, 1985

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. James R. Kolanek
Environmental Services
Harris Corporation - Semiconductor Sector
Post Office Box 883
Melbourne, Florida 32901

Dear Mr. Kolanek:

Attached is one copy of the Technical Evaluation and Preliminary Determination, and proposed permits to construct two scrubbers at your existing facility in Brevard County, Florida.

Before final action can be taken on your draft permits, you are required by Florida Administrative Code Rule 17-103.150 to publish the attached Notice of Proposed Agency Action in the legal advertising section of a newspaper of general circulation in Brevard County no later than fourteen days after receipt of this letter. The department must be provided with proof of publication within seven days of the date the notice is published. Failure to publish the notice may be grounds for denial of the permits.

Please submit, in writing, any comments which you wish to have considered concerning the department's proposed action to Mr. Bill Thomas of the Bureau of Air Quality Management.

Sincerely,

for C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality
Management

CHF/pa

Attachments

cc: Tom Sawicki

State of Florida
Department of Environmental Regulation
Notice of Proposed Agency Action
on Permit Applications

The Department of Environmental Regulation gives notice of its intent to issue permits to Harris Corporation to install hood type work stations for the manufacture of semiconductors. Scrubbers will be installed to control acid and VOC/solvent vapors at the applicant's facility located on Palm Bay Road in Palm Bay, Brevard County, Florida. A determination of best available control technology (BACT) was not required.

Persons whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must conform to the requirements of Chapters 17-103 and 28-5, Florida Administrative Code, and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32301, within fourteen (14) days of publication of this notice. Failure to file a request for hearing within this time period constitutes a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the proposed agency action. Therefore, persons who may not wish to file a petition may wish to intervene in the proceeding. A petition for intervention must be filed pursuant to Model Rule 28-5.207, Florida Administrative Code, at least five (5) days before the final hearing and be filed with the hearing officer if one has been assigned at the Division of Administrative Hearings, Department of Administration, 2009, Apalachee Parkway, Tallahassee, Florida 32301. If no hearing officer has been assigned, the petition is to be filed with the department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32301. Failure to petition to intervene within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes.

The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Dept. of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32301

Dept. of Environmental Regulation
St. Johns River District
3319 Maguire Blvd., Suite 232
Orlando, Florida 32803

Any person may send written comments on the proposed action to Mr. Bill Thomas at the department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the department's final determination.

RULES OF THE ADMINISTRATIVE COMMISSION
MODEL RULES OF PROCEDURE
CHAPTER 28-5
DECISIONS DETERMINING SUBSTANTIAL INTERESTS

28-5.15 Requests for Formal and Informal Proceedings

(1) Requests for proceedings shall be made by petition to the agency involved. Each petition shall be printed typewritten or otherwise duplicated in legible form on white paper of standard legal size. Unless printed, the impression shall be on one side of the paper only and lines shall be double spaced and indented.

(2) All petitions filed under these rules should contain:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name and address of the petitioner or petitioners;

(c) All disputed issues of material fact. If there are none, the petition must so indicate;

(d) A concise statement of the ultimate facts alleged, and the rules, regulations and constitutional provisions which entitle the petitioner to relief;

(e) A statement summarizing any informal action taken to resolve the issues, and the results of that action;

(f) A demand for the relief to which the petitioner deems himself entitled; and

(g) Such other information which the petitioner contends is material.

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of Application for Permits by:	)	
Harris Corporation	)	DER File No. AC 05-108260
P. O. Box 883	)	AC 05-108258
Melbourne, Florida 32901	)	

INTENT TO ISSUE

The Department of Environmental Regulation hereby gives notice of its Intent to Issue, and proposed order of issuance for, permits pursuant to Chapter 403, Florida Statutes, for the proposed project as detailed in the application specified above. The Department is issuing this Intent to Issue for the reasons stated in the attached Technical Evaluation and Preliminary Determination.

The applicant, Harris Corporation, applied on March 23, 1984, to DER for permits to install hood type work stations for the manufacture of semiconductors. Scrubbers will be installed to control acid and VOC/solvent vapors systems and dust collector at the applicant's existing facility in Brevard County, Florida

The Department has permitting jurisdiction under Chapter 403, Florida Statutes and Florida Administrative Code Rules 17-2 and 17-4. The project is not exempt from permitting procedures. The applicant was officially notified by the Department that air construction permits were required for the proposed work.

This intent to issue shall be placed before the Secretary for final action unless an appropriate petition for a hearing pursuant to the provisions of Section 120.57, Florida Statutes, is filed within fourteen (14) days from receipt of this letter or

publication of the public notice (copy attached) required pursuant to Rule 17-103.150, Florida Administrative Code, whichever occurs first. The petition must comply with the requirements of Section 17-103.155 and Rule 28-5.201, Florida Administrative Code (copy attached) and be filed pursuant to Rule 17-103.155(1) in the Office of General Counsel of the Department of Environmental Regulation at 2600 Blair Stone Road, Tallahassee, Florida 32301.

Petitions which are not filed in accordance with the above provisions are subject to dismissal by the Department. In the event a formal hearing is conducted pursuant to Section 120.57(1), all parties shall have an opportunity to respond, to present evidence and argument on all issues involved, to conduct cross-examination of witnesses and submit rebuttal evidence, to submit proposed findings of facts and orders, to file exceptions to any order or hearing officer's recommended order, and to be represented by counsel. If an informal hearing is requested, the agency, in accordance with its rules of procedure, will provide affected persons or parties or their counsel an opportunity, at a convenient time and place, to present to the agency or hearing officer, written or oral evidence in opposition to the agency's action or refusal to act, or a written statement challenging the grounds upon which the agency has chosen to justify its action or inaction, pursuant to Section 120.57(2), Florida Statutes.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the proposed agency action. Therefore, persons who may not wish to file a petition, may wish to intervene in the proceeding. A petition for intervention must be filed pursuant to Model Rule 28-5.207 at least five (5) days before the final hearing and be filed with the hearing officer if one has been assigned at the Division of

Administrative Hearings, 2009 Apalachee Parkway, Tallahassee, Florida 32301. If no hearing officer has been assigned, the petition is to be filed with the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32301. Failure to petition to intervene within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes.

Executed the 17 day of Dec., 1985, in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

for H. H. Thomas

C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality
Management

Copies furnished to:

Mr. James R. Kolanek
Mr. Tom Sawicki

CERTIFICATION

This is to certify that the foregoing Intent to Issue and all copies were mailed before the close of business on 12/18, 1985.

for H. L. Thomas

C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality
Management
2600 Blair Stone Road
Tallahassee, Florida 32301

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to §120.52(9), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Patricia B. Adams — Clerk

12-18-85 — Date

Technical Evaluation
and
Preliminary Determination

Harris Corporation Semiconductor Group
Brevard County
Melbourne, Florida

Permit Numbers:
AC 05-108258
AC 05-108260

Florida Department of Environmental Regulation
Bureau of Air Quality Management
Central Air Permitting

December 12, 1985

I. APPLICANT NAME AND ADDRESS

Harris Corporation Semiconductor Group
Post Office Box 883
Melbourne, Florida 32901

II. REVIEWING AND PROCESS SCHEDULE

Date of Receipt of Application: August 14, 1985.

Completeness Review (30 days):

Request for additional information: Incompleteness letter of September 12, 1985.

Response to Incompleteness letter: October 14, 1985.

Application's completeness date: October 14, 1985.

III. FACILITY INFORMATION

III.1 Facility Location

The proposed facility will be located on Palm Bay Road in Palm Bay, Brevard County, Florida. The UTM coordinates are Zone 17-538.7 km East and 3100.9 km North.

III.2 Standard Industrial Classification Code (SIC)

This facility is classified as follows:

Major Group 36 - Electrical and Electronic Machinery, Equipment, and Supplies

Group No. 367 - Electronics Components and Accessories

Industry No. 3674 - Semiconductors and Related Devices

III.3 Facility Category

Harris Corporation Complex is classified as minor emitting facility for volatile organic compounds (VOC) and acid mist.

The proposed project, the addition of two scrubbers, will control volatile organic compounds and acid mist emissions from operations at building 63 and building 4.

IV. PROJECT DESCRIPTION

The applicant intends to install laboratory type work stations to provide clean room conditions for the manufacture of semiconductors. Exhaust fumes of volatile organic compounds and

acid mist will be controlled by scrubber systems. The working stations will be installed in existing buildings.

V. PROCESS DESCRIPTION AND CONTROLS

The manufacture of the semiconductors involves the immersing of the material in various acids, VOC, and solvents. Acid, VOC, and solvent vapors are released into the air from both surface evaporation and material drying. Various gases contained in bottles are also used in the production of the semiconductors.

The released gases and acid, VOC and solvent vapors will be captured by a hood system and vented to a scrubber system. A material balance verification system will be employed at this facility to account for the VOC/solvent emissions released into the atmosphere. A program of sampling and analyses will be instituted to maintain proper scrubber effluents.

VI. RULE APPLICABILITY

The proposed project is subject to preconstruction review under the provisions of Chapter 403, Florida Statutes, and Rules 17-2 and 17-4, Florida Administrative Code.

The mentioned sources, two wet fume scrubbers, are located at Harris Corporation Complex in an area (Brevard County) currently designated attainment for all criteria pollutants in accordance with Rule 17-2.420.

Harris Corporation (semiconductor group) is a minor emitting facility (Rule 17-2.100). The current potential VOC emissions are estimated to be 38.52 tons per year (1984 inventory). This facility category, semiconductors and related devices, is not in the list of the 28 Table 500-1, Major Facility Category, nor are its emissions 250 tons per year or greater. Therefore, this facility is exempt from Prevention of Significant Deterioration (PSD) regulations, Rule 17-2.500.

This project as proposed (0.018 TPY of VOC and 0.003 TPY of acid mist) is a minor modification to a minor facility. It is exempt from new source review requirements in accordance with Rule 17-2.500(2)(d)3., Modification to Minor Facilities.

The proposed sources shall be permitted under Rule 17-2.520, Sources not Subject to Prevention of Significant Deterioration or Nonattainment Requirements.

The proposed sources shall comply with Rule 17-2.610, General Particulate Emission Limiting Standards and 17-2.620., General Pollutant Emission Limiting Standards.

VII. SOURCE IMPACT ANALYSIS

VII.1 Emissions Summary

The installation of the two wet fume scrubbers will control emissions of volatile organic compounds and acid mist. Specifically, freon TF, isopropyl alcohol (IPA), acetone, methyl alcohol and silicon tetrachloride.

The following table shows the permitted emissions for the new sources.

SOURCE	POLLUTANT			
	VOC		Acid Mist	
	lb/hr	tons/yr	lb/hr	tons/yr
Building 63 Solvent fumes	0.005	0.018		
Building 4 Acid fumes			0.0095	0.003

VII.2 Air Quality Analysis

From a technical review of the application, the Department has determined that the construction and operation of these sources will not have a detrimental impact on Florida's ambient air quality standards.

VII.3 Air Toxics Information

Currently, the Department is developing acceptable air emissions levels for toxic substances. Specifically, sources classified of Category A (carcinogens and highly toxic) and Category B (moderately toxic).

In the event toxics emission limits are set during the term of this permit or any subsequent permit which are different than the permitted emissions, the department may seek modification pursuant to 17-4.08 Florida Administrative Code.

VII. CONCLUSION

The maximum allowable VOC/solvent emissions from this modification to the existing facility should not cause any violation of Florida's ambient air quality standards. Even though there are no emissions standards for the acids and gases used, the applicant will be installing scrubber systems to reduce emissions and prevent odors from entering the outside atmosphere.

The use of a material balance verification system for the VOC/solvents will account for the emissions lost to the

atmosphere from the facility. A program of sampling and analyses employed by the applicant to maintain the scrubber systems should be adequate to keep emissions at their minimum and objectionable odors from escaping.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

PERMITTEE:
Harris Semiconductor
P. O. Box 883
Melbourne, Florida 32901

Permit Number: AC 05-108258
Expiration Date: June 30, 1986
County: Brevard
Latitude/Longitude: 28° 01' 20" N/
80° 36' 10" W
Project: Building 4 Acid Vapor Exhaust Scrubber

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the department and made a part hereof and specifically described as follows:

For the permitting of hood type work stations for the manufacture of semiconductors in Building 4. A 1,000 CFM fume scrubber manufactured by Beverly Pacific is installed to control acid vapors at the permittee's existing facility located on Palm Bay Road. The UTM coordinates are Zone 17-538.7 km East and 3100.9 km North.

The source shall be in accordance with the permit application and plans, documents, amendments, and drawings except as otherwise noted on pages 5 and 6, Specific Conditions.

Attachments are as follows:

1. Application to Construct Air Pollution Sources, DER Form 17-1.202(1), and Mr. James R. Kolanek's cover letter dated August 8, 1985.

2. Mr. C. H. Fancy's letter dated September 12, 1985.

3. Mr. James R. Kolanek's letter with Attachments dated October 14, 1985.

PERMITTEE:
Harris Semiconductor

Permit Number: AC 05-108258
Expiration Date: June 30, 1986

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, unless specifically authorized by an order from the department.

GENERAL CONDITIONS:

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

a. Having access to and copying any records that must be kept under the conditions of the permit;

b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information:

a. a description of and cause of non-compliance; and

b. the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

GENERAL CONDITIONS:

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

10. The permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

11. This permit is transferable only upon department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD).
( ) Compliance with New Source Performance Standards.

14. The permittee shall comply with the following monitoring and record keeping requirements:

a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.

GENERAL CONDITIONS:

b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the date(s) analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

15. When requested by the department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the department, such facts or information shall be submitted or corrected promptly.

SPECIFIC CONDITIONS:

1. The acid vapor emissions from the work stations and scrubber system shall not exceed 0.0095 lb/hr and 0.003 tons per year.

2. The acid vapor exhaust scrubber must be on during the working hours.

3. The maximum operating hours allowed shall not exceed 10 hours per day, 3 days per week, and 52 weeks per year for a total of 1,560 hours per year.

4. A meter to measure the pressure drop shall be installed on the scrubber system.

5. Objectionable odors shall not be allowed off plant property.

PERMITTEE:
Harris Semiconductor

Permit Number: AC 05-108258
Expiration Date: June 30, 1986

SPECIFIC CONDITIONS:

6. Annual reports, kept by month, shall be due 15 days after the anniversary date of the operating permit and are to be submitted to the DER's St. Johns River District office. The annual reports are to contain the amount of the chemical compounds used, purchased and reclaimed.

7. The construction shall reasonably conform to the plans and schedule submitted in the application. If the permittee is unable to complete construction on schedule, he must notify the Department in writing 60 days prior to the expiration of the construction permit and submit a new schedule and request for an extension of the construction permit. (FAC Rule 17-4.09)
To obtain a permit to operate, the permittee must demonstrate compliance with the conditions of the construction permit and submit a complete application for an operating permit, including the application fee, along with compliance test results and Certificate of Completion, to the Department's St. Johns River District office 90 days prior to the expiration date of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until its expiration date. Operation beyond the construction permit expiration date requires a valid permit to operate. (FAC Rules 17-4.22 and 17-4.23)
If the construction permit expires prior to the permittee requesting an extension or obtaining a permit to operate, then all activities at the project must cease and the permittee must apply for a new permit to construct which can take up to 90 days to process a complete application. (FAC Rule 17-4.10)

Issued this_____day of_____,
19__.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

_____
VICTORIA J. TSCHINKEL, Secretary

____ pages attached.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

PERMITTEE:
Harris Semiconductor
P. O. Box 883
Melbourne, Florida 32901

Permit Number: AC 05-108260
Expiration Date: June 30, 1986
County: Brevard
Latitude/Longitude: 28° 01' 20" N/
80° 36' 10" W
Project: Building 63 VOC/Solvent
Vapor Exhaust Scrubber

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the department and made a part hereof and specifically described as follows:

For the permitting of hood type work stations for the manufacture of semiconductors in Building 63. A 6,000 CFM fume scrubber manufactured by Beverly Pacific is installed to control VOC/solvent vapors at the permittee's existing facility located on Palm Bay Road. The UTM coordinates are Zone 17-538.7 km East and 3100.9 km North.

The source shall be in accordance with the permit application and plans, documents, amendments, and drawings except as otherwise noted on pages 5-7, Specific Conditions.

Attachments are as follows:

1. Application to Construct Air Pollution Sources, DER Form 17-1.202(1), August 8, 1985.

2. Mr. C. H. Fancy's letter dated September 12, 1985.

3. Mr. James R. Kolanek's letter with Attachments dated October 14, 1985.

PERMITTEE:
Harris Semiconductor

Permit Number: AC 05-108260
Expiration Date: June 30, 1986

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, unless specifically authorized by an order from the department.

GENERAL CONDITIONS:

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

a. Having access to and copying any records that must be kept under the conditions of the permit;

b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information:

a. a description of and cause of non-compliance; and

b. the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

GENERAL CONDITIONS:

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

10. The permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

11. This permit is transferable only upon department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD).
( ) Compliance with New Source Performance Standards.

14. The permittee shall comply with the following monitoring and record keeping requirements:

a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.

GENERAL CONDITIONS:

b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the date(s) analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

15. When requested by the department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the department, such facts or information shall be submitted or corrected promptly.

SPECIFIC CONDITIONS:

1. The maximum allowable VOC (volatile organic compounds)/solvent emissions from the work stations and scrubber system shall not exceed 0.005 pounds per year and 0.018 tons per year.

2. The VOC/solvent vapor exhaust scrubber must be on during the working hours.

3. The maximum operating hours allowed shall not exceed 24 hours per day, 264 days per year for a total of 6,336 hours per year.

PERMITTEE:
Harris Semiconductor

Permit Number: AC 05-108260
Expiration Date: June 30, 1986

SPECIFIC CONDITIONS:

4. An inspection and maintenance plan shall be submitted to the DER's St. Johns River District office as part of the operating permit application. The plan shall include provisions for the prevention and correction of VOC/solvent losses from leaks and equipment malfunction and a record system on the amount and types of VOC/solvents purchased and reclaimed.

5. Compliance with the VOC/solvent emissions limit for the working stations and the scrubber system shall be determined through the use of a material balance of the VOC/solvents purchased and reclaimed.

6. A meter to measure the pressure drop shall be installed on the scrubber system.

7. Objectionable odors shall not be allowed off plant property.

8. Annual reports, kept by month, shall be due 15 days after the anniversary date of the operating permit and are to be submitted to the DER's St. Johns River District office. The annual reports are to contain the amounts of all VOC/solvents by chemical, purchased and reclaimed.

9. The construction shall reasonably conform to the plans and schedule submitted in the application. If the permittee is unable to complete construction on schedule, he must notify the Department in writing 60 days prior to the expiration of the construction permit and submit a new schedule and request for an extension of the construction permit. (FAC Rule 17-4.09)
To obtain a permit to operate, the permittee must demonstrate compliance with the conditions of the construction permit and submit a complete application for an operating permit, including the application fee, along with compliance test results and Certificate of Completion, to the Department's St. Johns River District office 90 days prior to the expiration date of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until its expiration date. Operation beyond the construction permit expiration date requires a valid permit to operate. (FAC Rules 17-4.22 and 17-4.23)
If the construction permit expires prior to the permittee requesting an extension or obtaining a permit to operate, then all activities at the project must cease and the permittee must apply for a new permit to construct which can take up to 90 days to process a complete application. (FAC Rule 17-4.10)

PERMITTEE:
Harris Semiconductor

Permit Number: AC 05-108260
Expiration Date: June 30, 1986

SPECIFIC CONDITIONS:

Issued this_____day of_____,
19__.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

_____
VICTORIA J. TSCHINKEL, Secretary

____ pages attached.

HARRIS

DER

OCT 14 1985

BAQM

October 11, 1985

Mr. C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality Management
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

Reference: Air Permit No. AC05-108260 and AC05-108258
Your Letter of September 12, 1985

Dear Mr. Fancy:

This letter is in response to your letter of 9/12/85 requesting additional information on the subject permit applications.

1. Attachment 1 enclosed is an updated air emission inventory for all existing permitted sources and all sources for which permit applications have been submitted. The attachment lists potential and actual emissions for a twelve month period.

2. Harris Semiconductor's operations at its Palm Bay facility consist of the use of various types of gases, solvents, and acids employed in the manufacture of semiconductors. In addition to actual production operations, various support functions directly related to the production of semiconductors are conducted at the facility. No other chemical or manufacturing process other than those directly related to the production of semiconductors are performed at our facility.

3. VOC's emitted during the process are collected and scrubbed via the air pollution control equipment described in the corresponding permit application. Chlorinated hydrocarbons are collected and stored in 55 gallon drums; therefore, no VOC emissions are included in the proposed applications. The question of the evaporation ponds was addressed in my letter of August 21, 1985.

4. Attachment D of the permit applications included all assumptions and typical calculations used to estimate emissions. Reference material used included manufacturer's Material Safety Data Sheets and the fifth edition of the Properties of Industrial Materials by R. Irving Sax. Enclosed are material safety data sheets for chemicals covered by the subject permit applications.

5. Attachment 2 contains chemical characteristics of the compounds, operating schedules, and scrubber removal efficiencies used in the calculation of emissions.

6. Enclosed are the appropriate construction permit fees.

7. The 6000 CFM fume scrubber will be located on Building 63. Reference in Building 53 on Page 2 of the permit application is a clerical error and should have read Building 63.

8. The subject construction permits for Buildings 59, 62, and 63 have been incorporated in new permit applications submitted on May 22, 1985. This has been discussed with Mr. Bruce Mitchell of your office.

9. In regard to the applications submitted on 5/22/85 for Buildings 4, 55, 57, 58, 59, 61, 62, and 63, this information was discussed with Mr. Mitchell on 9/18/85.

If you should have any questions about the above or the enclosed information, please feel free to call me at (305) 724-7467.

Sincerely,

HARRIS SEMICONDUCTOR

James R. Kolanek

James R. Kolanek
Manager
Environmental Services

/lmv

Attachments

DER

OCT 14 1985

FEB 20 1980

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1387

BAQM

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
MALLINCKRODT, INC.	606/987-7000
ADDRESS (Number, Street, City, State, and ZIP Code) P.O. Box M, Paris, KY 40361	
CHEMICAL NAME AND SYNONYMS: METHYL ALCOHOL	TRADE NAME AND SYNONYMS: Wood Alcohol, Methanol
CHEMICAL FAMILY: Organic Alcohol	FORMULA: CH_3OH

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	149°F	SPECIFIC GRAVITY (H_2O=1)	0.79
VAPOR PRESSURE (mm Hg.) at 25°C	125	PERCENT, VOLATILE BY VOLUME (%)	100
VAPOR DENSITY (AIR=1)	1.11	EVAPORATION RATE (Ethyl Ether=1)	0.5
SOLUBILITY IN WATER	Infinitely		
APPEARANCE AND ODOR	Clear, colorless liquid. Char. odor.		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
Closed cup 52°F		6%	36.5%

EXTINGUISHING MEDIA
CO2, Dry Powder

SPECIAL FIRE FIGHTING PROCEDURES
Use water to keep fire exposed containers cool, to disperse vapors, to flush spills away from exposures, and to dilute spills to non-flammable mixtures.

UNUSUAL FIRE AND EXPLOSION HAZARDS
Explosion Hazard: Violent reaction with Cr_2O_3, (I_2+C_2H_5OH+H_gO), $Pb(ClO_4)_2$, $HClO_4$, P_2O_3.
Fire Hazard: Dangerous when exposed to heat, flame, or oxidizers.

(Continued on reverse side)

THIS INFORMATION APPLIES TO ALL GRADES!

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
TWA 200ppm; Toxicity - Oral LD_{50} Rat - 13,000 mg/Kg.

EFFECTS OF OVEREXPOSURE
Can cause blindness or death. Less severe effects may include headache, dizziness, nausea, narcosis, visual disturbances, dermatitis, and eye irritation.

EMERGENCY AND FIRST AID PROCEDURES
Ingestion: If victim is conscious, give water, induce vomiting and call doctor.
Inhalation: Give artificial respiration if victim is not breathing and call doctor.
Eye and Skin Contact: Immediately flush with large quantities of water and call doctor.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*
Oxidizing materials. (Refer also to Sec. IV.)

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
(1) Absorb on paper, evaporate on an iron pan in a hood.
(2) Dilute with water and flush to sewer.

WASTE DISPOSAL METHOD
(1) Atomize into a incinerator.
(2) Dilute with water and flush small amounts to sewer.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*
Self-contained breathing apparatus if exposure is prolonged.

VENTILATION	LOCAL EXHAUST		SPECIAL
	MECHANICAL *(General)*	X	OTHER

PROTECTIVE GLOVES: Rubber Gloves	EYE PROTECTION: Face Shield or Goggles

OTHER PROTECTIVE EQUIPMENT
Lab coat or coveralls.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Eliminate all sources of ignition.
Store in cool place.

OTHER PRECAUTIONS
Highly flammable!

Allied Chemical

CHEMICALS COMPANY

PRODUCT SAFETY DATA SHEET

A. GENERAL INFORMATION

TRADE NAME (COMMON NAME OR SYNONYM)
2-PROPANOL, ELECTRONIC GRADE
PARTICU-LO™ 2-PROPANOL

☒ C.A.S. NO. ☐ ALLIED PRODUCT CODE #
67-63-0

CHEMICAL NAME
Isopropanol, Isopropyl Alcohol, 2-Propanol

FORMULA
$(CH_3)_2CHOH$

MOLECULAR WEIGHT
60.11

COMPANY/PLANT ADDRESS (No., STREET, CITY, STATE AND ZIP CODE)
CHEMICALS COMPANY
POB 1139R
Morristown, N.J. 07960

CONTACT	PHONE NUMBER	ISSUED DATE	REVISED DATE
Director, Product Safety	(201) 455-4157	Nov., 1977	July, 1980

B. FIRST AID MEASURES

EMERGENCY PHONE NUMBER
(201) 455-2000

Inhalation: remove to fresh air, give oxygen if short of breath - call a physician.
Ingestion: Induce vomiting if victim is conscious and alert; if victim is not alert, black coffee and activated charcoal may be given. Never give anything by mouth to a person who is unconscious, call a physician.
Eyes: Wash thoroughly with water. Skin: Promptly remove soaked clothing and wash thoroughly with water.

C. HAZARDS INFORMATION

FIRE AND EXPLOSION

FLASH POINT	AUTO IGNITION TEMPERATURE	FLAMMABLE LIMITS IN AIR (% BY VOL.)
11.7 °C ☐ OPEN CUP ☒ CLOSED CUP	399 °C	LOWER 2.0 UPPER 12

UNUSUAL FIRE AND EXPLOSION HAZARDS
See Hazardous Decomposition Products, Section G.

HEALTH

INHALATION: Isopropyl alcohol is about twice as toxic as ethyl alcohol and produces similar symptoms of intoxication. Gross overexposures can produce severe or possibly fatal central nervous system depression. TCL_o (human): 400 ppm, symptom: irritation of mucous membranes.

INGESTION: The probable lethal dose in an adult is about 250 ml but as little as 20 ml may produce symptoms. Findings may include severe nausea, vomiting, abdominal pain, bleeding and central nervous system depression. Pulmonary damage including tracheo-bronchitis, bronchopneumonia and hemorrhagic pulmonary edema may occur as result of pulmonary excretion of the alcohol. Other problems that may occur include a fall in hemoglobin levels due to hemolysis and a reduction in blood sugar levels.

SKIN: Isopropyl alcohol does not seem to be significantly absorbed through the skin but the limited absorption may add to the effect of inhalation. Repeated exposures to the skin may result in dermatitis secondary to a defatting action.

EYES: Isopropyl alcohol vapors at 800 ppm are irritating to humans within 3-5 minutes. Contact with liquid alcohol produces intense stinging and burning. With prolonged contact to the liquid temporary damage to the corneal epithelium has been reported but healing has been prompt.

PERMISSIBLE CONCENTRATION: AIR 400 ppm
(SEE SECTION J)
Also, TLV = 400 ppm (skin)
Also, NIOSH Ceiling, Section K.

BIOLOGICAL:
None Established

UNUSUAL CHRONIC TOXICITY
None Known.

D. PRECAUTIONS/PROCEDURES

VENTILATION

General (mechanical). Local exhaust if heated or misted.

NORMAL HANDLING

See General Reference (a), Section J. Corrodes rubber - use neoprene. For cleaning tanks, use only a formal tank entry procedure based on accepted safety principles.

STORAGE

Avoid ignition sources and hot spots. Use Underwriter-approved explosion-proof electrical systems.

PRECAUTIONARY LABEL ☒ ATTACHED ☐ NOT ATTACHED DOT Classification: Flammable liquid.
Allied Chemical label 119-003758-15.1-78A (typical). WARNING! FLAMMABLE. HARMFUL IF INHALED. CAUSES IRRITATION.

SPILL OR LEAK

Remove personnel from the area. Remove all sources of ignition. Remove leaky sources to the outside if possible. Use personal protection equipment. Small Spills: mop up, wipe up, or soak up immediately. Place soaked wiping material in a metal container and seal. Large Spills: use water spray to disperse the vapors and to protect any men attempting to stop a leak; also to flush spills away from fire hazard exposures. If possible, dike up. Use water to dilute spills to non-flammable mixtures.

FIRE EXTINGUISHING AGENTS **RECOMMENDED**

Extinguishing Media: "Alcohol" foam, or CO_2. Water may be ineffective.

SPECIAL FIRE FIGHTING PRECAUTIONS

Wear self-contained breathing apparatus approved by NIOSH. Use water to cool exposed containers.

FIRE EXTINGUISHING AGENTS TO **AVOID**

Water may be ineffective.

SPECIAL PRECAUTIONS/PROCEDURES

See Reference (a), including personnel training.

E. PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION from TLV (400 ppm) up to 1000 ppm: Chemical cartridge respirator with organic vapor canister and full facepiece. 1000-5000 ppm: Gas mask, chin style, with organic vapor canister. Full facepiece types of supplied-air respirator or self-contained breathing apparatus for up to 20,000 ppm.

EYES AND FACE

Chemical goggles if there is reasonable probability of exposure to liquid or mist. Do not wear contact lenses.

HANDS, ARMS, AND BODY

rotective gloves and protective clothing if there is repeated or prolonged exposure to liquid or mist. Otherwise, full work clothing. Remove immediately any wet clothing.

OTHER CLOTHING AND EQUIPMENT

None generally required.

F. PHYSICAL DATA

MATERIAL IS (AT NORMAL CONDITIONS):	APPEARANCE AND ODOR
☒ LIQUID ☐ SOLID ☐ GAS ☐ _____	*Colorless liquid; slight odor, resembling a mixture of acetone and ethanol.* Pint bottles in boxes, drums 5 to 55-gal., red label, outside container.

BOILING POINT	SPECIFIC GRAVITY (H_2O = 1)	VAPOR DENSITY (AIR = 1)
82.5 °C	(Liquid) 0.785	2.1
MELTING POINT		
-88.5 °C		

SOLUBILITY IN WATER (% by weight)	pH	VAPOR PRESSURE (mm Hg at 20° C)
Complete	Neutral	33

EVAPORATION RATE (Butyl Acetate = 1)	% VOLATILES BY VOLUME (At 20° C)	
(Time to evaporate) < 1	100	

G. REACTIVITY DATA

STABILITY	CONDITIONS TO AVOID
☐ UNSTABLE ☒ STABLE	N.A.

INCOMPATIBILITY (MATERIALS TO AVOID)

Acetaldehyde, chlorine, ethylene oxide, hydrogen-palladium combination, hydrogen peroxide-sulfuric acid combination, hypochlorous acid, isocyanates, nitroform, perchloric acid, strong oxidants in general.

HAZARDOUS DECOMPOSITION PRODUCTS

We have no studies, but we would expect carbon monoxide, carbon dioxide, and possibly aldehydes.

HAZARDOUS POLYMERIZATION	CONDITIONS TO AVOID
☐ MAY OCCUR ☒ WILL NOT OCCUR	N.A.

H. HAZARDOUS INGREDIENTS (Mixtures Only)

N.A.

MATERIAL OR COMPONENT	%	HAZARD DATA (SEE SECT. J)

I. ENVIRONMENTAL

DEGRADABILITY

Unknown

OCTANOL/WATER PARTITION COEFFICIENT

Unknown

WASTE DISPOSAL METHODS*

Disposal of Isopropyl Alcohol may be subject to federal, state, and local regulations. Users of this product should review their operations in terms of applicable federal, state, and local laws and regulations, then consult with appropriate regulatory agencies before discharging or disposing of waste material.

*DISPOSER MUST COMPLY WITH FEDERAL, STATE AND LOCAL DISPOSAL OR DISCHARGE LAWS.

J. REFERENCES

PERMISSIBLE CONCENTRATION REFERENCES

OSHA Regulations, 29 CFR 1910.1000.
TLV from ACGIH 1979 list, "Threshold Limit Values For Chemical Substances. . ."

REGULATORY STANDARDS

DOT Regulations, 49 CFR 172.101.

GENERAL

Reference (a)

AMIA Technical Guide No. 6, "Handbook of Organic Industrial Solvents", 2nd ed., 1961, American Mutual Insurance Alliance, 20 N. Wacker Driver, Chicago, IL., particularly section "Control of Solvent Exposures".
(b) NIOSH Criteria Document, March 1976.

(Continued Section K)

K. ADDITIONAL INFORMATION

(Continued from Section J)

(c) NIOSH Registry, Sequence No. NT 805000 (1978).
(d) Gleason, et. al., Clinical Toxicology of Commercial Products, 4th ed., 1976, pp. 185-188.
(e) Grant, W. M., Toxicology of the Eye, 2nd ed.
Charles C. Thomas, Springfield, IL. 1974, p. 610.
(f) Dreisbach, R. H., Handbook of Poisoning, 9th ed., Lange Medical Publications, Los Altos, CA., 1977, pp. 167-169.

NIOSH recommended a ceiling value of 800 ppm/15M, Ref. (b) and (c).

MATERIAL SAFETY DATA SHEET
ACCEPTED BY O.S.H.A. AS ESSENTIALLY SIMILIAR TO O.S.H.A. FORM 20
ASHLAND OIL INC., ESTIG, P.O.BOX 2459, COLUMBUS,OHIO 43216
24-HOUR EMERGENCY TELEPHONE: 606-324-1133 (LOCATED AT ASHLAND, KENTUCKY)

****

ASHLAND PRODUCT NAME: FREON TF 60#

HARRIS SEMICONDUCTOR
P O BOX 883
MELBOURNE FLA 32901

05 50 093 4035200-
DATA SHEET NO: 0000875-001
LATEST REVISION DATE: 04/78-78095
PRODUCT: 3400320
INVOICE: 128748
INVOICE DATE: 05/05/78
TO: HARRIS SEMICONDUCTOR
PALM BAY ROAD
PALM BAY FLA

ATTN: PURCHASING/SAFETY DEPT.

********** SECTION I-PRODUCT IDENTIFICATION **********

GENERAL OR GENERIC ID: HALOGENATED HYDROCARBON

HAZARD CLASSIFICATION: (99) NOT APPLICABLE

********** SECTION II-HAZARDOUS COMPONENTS **********

INGREDIENT	PERCENT	TLV
TRICHLOROTRIFLUOROETHANE	1000 PPM	

********** SECTION III-PHYSICAL DATA **********

PROPERTY	REFINEMENT	MEASUREMENT
INITIAL BOILING POINT	FOR PRODUCT	117.00 DEG F (47.22 DEG C @ 756.00 MMHG
VAPOR PRESSURE	FOR PRODUCT	334.00 MMHG @ 77.00 DEG F (25.00 DEG C
VAPOR DENSITY	AIR = 1	2.9
SPECIFIC GRAVITY		1.570 @ 77.00 DEG F (25.00 DEG C
PERCENT VOLATILES		100.00 %
EVAPORATION RATE	(BU AC = 1)	35.00

CONTINUED ON PAGE: 2

********** SECTION IV-FIRE AND EXPLOSION DATA **********

FLASH POINT(CLOSED CUP) NOT APPLICABLE

EXPLOSIVE LIMIT NOT APPLICABLE

EXTINGUISHING MEDIA: WATER FOG

HAZARDOUS DECOMPOSITION PRODUCTS: MAY FORM TOXIC MATERIALS:, CARBON DIOXIDE AND CARBON MONOXIDE, HYDROGEN CHLORIDE, PHOSGENE, HYDROGEN FLUORIDE, ETC.

SPECIAL FIREFIGHTING PROCEDURES: SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE.

UNUSUAL FIRE & EXPLOSION HAZARDS: NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

********** SECTION V-HEALTH HAZARD DATA **********

THRESHOLD LIMIT VALUE: 1000 PPM

EFFECTS OF OVEREXPOSURE: FOR PRODUCT

EYES - MAY CAUSE IRRITATION.
SKIN - PROLONGED OR REPEATED CONTACT CAN CAUSE MODERATE IRRITATION, DEFATTING, DERMATITIS.
BREATHING - EXCESSIVE INHALATION OF VAPORS CAN CAUSE NASAL AND RESPIRATORY IRRITATION, DIZZINESS, WEAKNESS, FATIGUE, NAUSEA, HEADACHE, AND POSSIBLE UNCONSCIOUSNESS.
IF SWALLOWED - MAY CAUSE GASTROINTESTINAL IRRITATION AND LARGE AMOUNTS MAY CAUSE SERIOUS HARM.

FIRST AID:

IF ON SKIN: THOROUGHLY WASH EXPOSED AREA WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. LAUNDER CONTAMINATED CLOTHING BEFORE RE-USE.

IF IN EYES: FLUSH WITH LARGE AMOUNTS OF WATER, LIFTING UPPER AND LOWER LIDS OCCASIONALLY, GET MEDICAL ATTENTION.

IF SWALLOWED: GIVE TWO GLASSES OF WATER; INDUCE VOMITING IMMEDIATELY BY STICKING FINGER DOWN THROAT. CALL A PHYSICIAN. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

IF BREATHED: IF AFFECTED, REMOVE INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF BREATHING HAS STOPPED GIVE ARTIFICIAL RESPIRATION. KEEP PERSON WARM, QUIET AND GET MEDICAL ATTENTION. DO NOT GIVE STIMULANTS. EPINEPHRINE OR EPHEDRINE MAY ADVERSELY AFFECT THE HEART WITH FATAL RESULTS.

CONTINUED ON PAGE: 3

********** SECTION VI-REACTIVITY DATA **********

HAZARDOUS POLYMERIZATION: CANNOT OCCUR
STABILITY: STABLE

INCOMPATABILITY: AVOID CONTACT WITH:, ALKALI METALS, POWDERED METALS

********** SECTION VII-SPILL OR LEAK PROCEDURES **********

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

SMALL SPILL: ABSORB LIQUID ON PAPER, VERMICULITE, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND TRANSFER TO HOOD.

LARGE SPILL: ELIMINATE ALL IGNITION SOURCES (FLARES, FLAMES INCLUDING PILOT LIGHTS, ELECTRICAL SPARKS). PERSONS NOT WEARING PROTECTIVE EQUIPMENT SHOULD BE EXCLUDED FROM AREA OF SPILL UNTIL CLEAN-UP HAS BEEN COMPLETED. STOP SPILL AT SOURCE, DIKE AREA OF SPILL TO PREVENT SPREADING, PUMP LIQUID TO SALVAGE TANK. REMAINING LIQUID MAY BE TAKEN UP ON SAND, CLAY, EARTH, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND SHOVELED INTO CONTAINERS.

WASTE DISPOSAL METHOD:

SMALL SPILL: ALLOW VOLATILE PORTION TO EVAPORATE IN HOOD. ALLOW SUFFICIENT TIME FOR VAPORS TO COMPLETELY CLEAR HOOD DUCT WORK. DESTROY REMAINING MATERIAL BY BURNING IN AN IRON PAN.

LARGE SPILL: DESTROY BY LIQUID INCINERATION WITH OFF-GAS SCRUBBER. MATERIAL COLLECTED ON ABSORBENT MATERIAL MAY BE DEPOSITED IN A POSTED TOXIC SUBSTANCE LANDFILL IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

********** SECTION VIII-PROTECTIVE EQUIPMENT TO BE USED **********

RESPIRATORY PROTECTION: IF TLV OF THE PRODUCT OR ANY COMPONENT IS EXCEEDED, A NIOSH/MESA JOINTLY APPROVED SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACE PIECE OPERATED IN PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE IS ADVISED; HOWEVER, OSHA REGULATIONS ALSO PERMIT OTHER NIOSH/MESA RESPIRATORS UNDER SPECIFIED CONDITIONS. (SEE YOUR SAFETY EQUIPMENT SUPPLIER).

VENTILATION: PROVIDE SUFFICIENT MECHANICAL (GENERAL) AND/OR LOCAL EXHAUST VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S).

PROTECTIVE GLOVES: WEAR RESISTANT GLOVES SUCH AS:, POLYVINYL ALCOHOL

EYE PROTECTION: CHEMICAL SPLASH GOGGLES IN COMPLIANCE WITH OSHA REGULATIONS ARE ADVISED; HOWEVER, OSHA REGULATIONS ALSO PERMIT OTHER TYPE SAFETY GLASSES. (SEE YOUR SAFETY EQUIPMENT SUPPLIER).

OTHER PROTECTIVE EQUIPMENT: TO PREVENT REPEATED OR PROLONGED SKIN CONTACT, WEAR IMPERVIOUS CLOTHING AND BOOTS.

CONTINUED ON PAGE: 4

********** SECTION IX-SPECIAL PRECAUTIONS OR OTHER COMMENTS **********

CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED. SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND/OR SOLID), ALL HAZARD PRECAUTIONS GIVEN IN THIS DATA SHEET MUST BE OBSERVED.

OVEREXPOSURE TO COMPONENTS HAS BEEN SUGGESTED AS A CAUSE OF THE FOLLOWING EFFECTS IN HUMANS:, LIVER ABNORMALITIES, KIDNEY DAMAGE

THE INFORMATION ACCUMULATED HEREIN IS BELIEVED TO BE ACCURATE BUT IS NOT WARRANTED TO BE WHETHER ORIGINATING WITH ASHLAND OR NOT. RECIPIENTS ARE ADVISED TO CONFIRM IN ADVANCE OF NEED THAT THE INFORMATION IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

Ashland Chemical Company
DIVISION OF ASHLAND OIL, INC.
P.O. BOX 2219, COLUMBUS, OHIO 43216 • (614) 889-3333

MATERIAL SAFETY DATA SHEET

ACCEPTED BY O.S.H.A. AS ESSENTIALLY SIMILIAR TO O.S.H.A. FORM 20

24-HOUR EMERGENCY TELEPHONE: 606-324-1133 (LOCATED AT ASHLAND, KENTUCKY)

ASHLAND PRODUCT NAME: ACETONE SEMI GRD 4X1 G POLYBTL

HARRIS SEMICONDUCTOR
P.O. BOX 883
MELBOURNE, FL 32901

05 61 018 4033770-
DATA SHEET NO: 0018744-001
LATEST REVISION DATE: 02/28-78044
PRODUCT: 7010280
INVOICE: 263926
INVOICE DATE: 12/12/81
TO:

ATTN: PURCHASING/SAFETY DEPT.

SECTION I-PRODUCT IDENTIFICATION

GENERAL OR GENERIC ID: KETONE

HAZARD CLASSIFICATION: (03) FLAMMABLE LIQUID (173.115)

SECTION II-HAZARDOUS COMPONENTS

INGREDIENT	PERCENT	PEL
ACETONE	>95 %	1000 PPM

SECTION III-PHYSICAL DATA

PROPERTY	REFINEMENT	MEASUREMENT
INITIAL BOILING POINT	FOR PRODUCT	133.00 DEG F (56.11 DEG C) @ 760.00 MMHG
VAPOR PRESSURE	FOR PRODUCT	226.30 MMHG @ 68.00 DEG F (20.00 DEG C)
VAPOR DENSITY	AIR = 1	2.0
SPECIFIC GRAVITY		.790 @ 68.00 DEG F (20.00 DEG C)
PERCENT VOLATILES		100.00 %
EVAPORATION RATE	(BU AC = 1)	6.00

SECTION IV-FIRE AND EXPLOSION DATA

FLASH POINT(CLOSED CUP) -4.00 DEG F
(-20.00 DEG C)

LOWER EXPLOSIVE LIMIT 2.6 %

EXTINGUISHING MEDIA: ALCOHOL FOAM OR CARBON DIOXIDE OR DRY CHEMICAL

HAZARDOUS DECOMPOSITION PRODUCTS: MAY FORM TOXIC MATERIALS:, CARBON DIOXIDE AND CARBON MONOXIDE, ETC.

SPECIAL FIREFIGHTING PROCEDURES: SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE.

UNUSUAL FIRE & EXPLOSION HAZARDS: MATERIAL IS HIGHLY VOLATILE AND READILY GIVES OFF VAPORS WHICH MAY TRAVEL ALONG THE GROUND OR BE MOVED BY VENTILATION AND IGNITED BY PILOT LIGHTS, OTHER FLAMES, SPARKS, HEATERS, SMOKING, ELECTRIC MOTORS, STATIC DISCHARGE, OR OTHER IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT.
NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

SECTION V-HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LEVEL: 1000 MG/CUM

EFFECTS OF OVEREXPOSURE: FOR PRODUCT

EYES - CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, BLURRED VISION.
SKIN - PROLONGED OR REPEATED CONTACT CAN CAUSE MODERATE IRRITATION, DEFATTING, DERMATITIS.
BREATHING - EXCESSIVE INHALATION OF VAPORS CAN CAUSE NASAL AND RESPIRATORY IRRITATION, DIZZINESS, WEAKNESS, FATIGUE, NAUSEA, HEADACHE, POSSIBLE UNCONSCIOUSNESS, AND EVEN ASPHYXIATION.
SWALLOWING - CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND DIARRHEA. ASPIRATION OF MATERIAL INTO THE LUNGS CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.

CONTINUED ON PAGE 2

SECTION V-HEALTH HAZARD DATA (CONTINUED)

FIRST AID:

IF ON SKIN: THOROUGHLY WASH EXPOSED AREA WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. LAUNDER CONTAMINATED CLOTHING BEFORE RE-USE.

IF IN EYES: FLUSH WITH LARGE AMOUNTS OF WATER, LIFTING UPPER AND LOWER LIDS OCCASIONALLY, GET MEDICAL ATTENTION.

IF SWALLOWED: DO NOT INDUCE VOMITING, KEEP PERSON WARM, QUIET, AND GET MEDICAL ATTENTION. ASPIRATION OF MATERIAL INTO THE LUNGS DUE TO VOMITING CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.

IF BREATHED: IF AFFECTED, REMOVE INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF BREATHING HAS STOPPED GIVE ARTIFICIAL RESPIRATION. KEEP PERSON WARM, QUIET AND GET MEDICAL ATTENTION.

SECTION VI-REACTIVITY DATA

HAZARDOUS POLYMERIZATION: CANNOT OCCUR
STABILITY: STABLE

INCOMPATABILITY: AVOID CONTACT WITH:, STRONG OXIDIZING AGENTS., STRONG ALKALIES., STRONG MINERAL ACIDS.

SECTION VII-SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

SMALL SPILL: ABSORB LIQUID ON PAPER, VERMICULITE, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND TRANSFER TO HOOD.

LARGE SPILL: ELIMINATE ALL IGNITION SOURCES (FLARES, FLAMES INCLUDING PILOT LIGHTS, ELECTRICAL SPARKS). PERSONS NOT WEARING PROTECTIVE EQUIPMENT SHOULD BE EXCLUDED FROM AREA OF SPILL UNTIL CLEAN-UP HAS BEEN COMPLETED. STOP SPILL AT SOURCE, DIKE AREA OF SPILL TO PREVENT SPREADING. PUMP LIQUID TO SALVAGE TANK. REMAINING LIQUID MAY BE TAKEN UP ON SAND, CLAY, EARTH, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND SHOVELED INTO CONTAINERS.

WASTE DISPOSAL METHOD:

SMALL SPILL: ALLOW VOLATILE PORTION TO EVAPORATE IN HOOD; ALLOW SUFFICIENT TIME FOR VAPORS TO COMPLETELY CLEAR HOOD DUCT WORK. DISPOSE OF REMAINING MATERIAL IN ACCORDANCE WITH APPLICABLE REGULATIONS.

LARGE SPILL: DESTROY BY LIQUID INCINERATION. CONTAMINATED ABSORBENT MAY BE DEPOSITED IN A LANDFILL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

SECTION VIII-PROTECTIVE EQUIPMENT TO BE USED

RESPIRATORY PROTECTION: IF TLV OF THE PRODUCT OR ANY COMPONENT IS EXCEEDED, A NIOSH/MSHA JOINTLY APPROVED AIR SUPPLIED RESPIRATOR IS ADVISED IN ABSENCE OF PROPER ENVIRONMENTAL CONTROL. OSHA REGULATIONS ALSO PERMIT OTHER NIOSH/MSHA RESPIRATORS UNDER SPECIFIED CONDITIONS. (SEE YOUR SAFETY EQUIPMENT SUPPLIER). ENGINEERING OR ADMINISTRATIVE CONTROLS SHOULD BE IMPLEMENTED TO REDUCE EXPOSURE.

VENTILATION: PROVIDE SUFFICIENT MECHANICAL (GENERAL AND/OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S).

PROTECTIVE GLOVES: WEAR RESISTANT GLOVES SUCH AS:, NATURAL RUBBER, NEOPRENE, BUNA-N

EYE PROTECTION: CHEMICAL SPLASH GOGGLES IN COMPLIANCE WITH OSHA REGULATIONS ARE ADVISED; HOWEVER, OSHA REGULATIONS ALSO PERMIT OTHER TYPE SAFETY GLASSES. (CONSULT YOUR SAFETY EQUIPMENT SUPPLIER)

OTHER PROTECTIVE EQUIPMENT: TO PREVENT REPEATED OR PROLONGED SKIN CONTACT, WEAR IMPERVIOUS CLOTHING AND BOOTS.

SECTION IX-SPECIAL PRECAUTIONS OR OTHER COMMENTS

CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED. SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND/OR SOLID), ALL HAZARD PRECAUTIONS GIVEN IN THIS DATA SHEET MUST BE OBSERVED.

OVEREXPOSURE TO MATERIAL HAS APPARENTLY BEEN FOUND TO CAUSE THE FOLLOWING EFFECTS IN LABORATORY ANIMALS:, KIDNEY DAMAGE, EYE DAMAGE

THE INFORMATION ACCUMULATED HEREIN IS BELIEVED TO BE ACCURATE BUT IS NOT WARRANTED TO BE WHETHER ORIGINATING WITH ASHLAND OR NOT. RECIPIENTS ARE ADVISED TO CONFIRM IN ADVANCE OF NEED THAT THE INFORMATION IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

LAST PAGE, SEE ATTACHMENT PAGE ENCLOSED.

Specialty Gas Material Safety Data Sheet

PRODUCT NAME	SILICON TETRACHLORIDE
EMERGENCY PHONE	(800) 523-9374; IN PENNSYLVANIA (800) 322-9092

AIR PRODUCTS AND CHEMICALS, INC.
BOX 538
ALLENTOWN, PA 18105
(215) 398-8257

TRADE NAME AND SYNONYMS	Silicon Tetrachloride
CHEMICAL NAME AND SYNONYMS	Silicon Tetrachloride, Tetrachlorosilane, Silicon Chloride
ISSUE DATE AND REVISIONS	1 April 1978
FORMULA	$SiCl_4$
CHEMICAL FAMILY	Inorganic Chloride

HEALTH HAZARD DATA

TIME WEIGHTED AVERAGE EXPOSURE LIMIT

No. T.W.A. has been established

SYMPTOMS OF EXPOSURE

Silicon tetrachloride is extremely irritating to the airway, eyes and skin. Depending on the intensity and duration of exposure, effects vary from mild irritation to severe destruction of tissues. Symptoms of exposure may include burning sensations, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Penetration of silicon tetrachloride into the lower airway may produce bronchitis,

(Continued on last page)

TOXICOLOGICAL PROPERTIES Inhalation rat LC50:8000 ppm/4 hours

Exposure to atmospheres contaminated with silicon tetrachloride is extremely irritating. Its odor and prompt irritant action provides a warning of exposure to toxic conditions. High concentrations are extremely destructive to the tissues of the airway, eyes and skin. Inhalation may have fatal consequences as a result of spasm, inflammation and edema of the larynx and bronchi; chemical pneumonitis and pulmonary edema. Exposure of the eyes to high concentrations may result in ulceration of the conjunctiva and cornea and destruction of all ocular tissues. Contact with the skin causes severe burns.

RECOMMENDED FIRST AID TREATMENT

RESCUE PERSONNEL SHOULD AVOID UNNECESSARY EXPOSURE.

Inhalation: Move the affected person to an uncontaminated atmosphere. If exposure has been to minor concentrations for a limited time, usually no treatment will be required. If breathing has stopped or is impaired, give assisted respiration (e.g. mouth-to-mouth). Supplemental oxygen should be administered. Keep the victim warm and quiet. Assure that the victim does not aspirate vomited material by use of positional drainage. Assure that mucus does not obstruct the airway. Seek medical attention at once.

Eye Contact: CONTACT LENSES SHOULD NOT BE USED BY PERSONS POTENTIALLY EXPOSED TO SILICON TETRACHLORIDE.

(Continued on last page)

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES
Silicon tetrachloride on contact with steam or water produces heat and toxic, corrosive hydrochloric acid.

PHYSICAL DATA

BOILING POINT 135.7°F (57.6°C)	LIQUID DENSITY AT BOILING POINT 92.8 lb/ft^3 (1486.5 kg/m^3)
VAPOR PRESSURE at 41°F 1.89 psia (13.06 kPa)	GAS DENSITY AT 70°F, 1 atm Liquid at 70°F
SOLUBILITY IN WATER Hydrolyzes rapidly	FREEZING POINT -90.4°F (-68°C)
APPEARANCE AND ODOR Colorless liquid with a sharp, pungent odor	

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) N/A	AUTO IGNITION TEMPERATURE N/A	FLAMMABLE LIMITS % BY VOLUME LEL UEL	N/A
EXTINGUISHING MEDIA Nonflammable		ELECTRICAL CLASSIFICATION Nonhazardous	
SPECIAL FIRE FIGHTING PROCEDURES N/A			
UNUSUAL FIRE AND EXPLOSION HAZARDS N/A			

REACTIVITY DATA

STABILITY Unstable		CONDITIONS TO AVOID
Stable	X	
INCOMPATIBILITY (Materials to avoid)	Water, alcohols	
HAZARDOUS DECOMPOSITION PRODUCTS	Chlorine, silicon dioxide, hydrogen chloride	
HAZARDOUS POLYMERIZATION May Occur		CONDITIONS TO AVOID
Will Not Occur	X	

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Flush the area with large quantities of water. Neutralize with $NaHCO_3$. Leaks should be detected with a soap water solution. Never use a flame to detect a leak. The odor gives ample warning of large leaks.

WASTE DISPOSAL METHOD

Do not attempt to dispose of waste or surplus silicon tetrachloride. Return all unused quantities to Air Products and Chemicals, Inc. for proper disposal.

SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)	Positive pressure self-contained breathing apparatus should be available for emergency use.	
VENTILATION	**LOCAL EXHAUST**	**SPECIAL**
Hood with forced ventilation	**MECHANICAL (Gen.)** X	**OTHER**
PROTECTIVE GLOVES	Rubber	
EYE PROTECTION	Safety goggles or glasses	
OTHER PROTECTIVE EQUIPMENT	Safety shoes, safety shower, eyebath, rubber apron.	

SPECIAL PRECAUTIONS*

SPECIAL LABELING INFORMATION

D.O.T. White Label, Corrosive Material

SPECIAL HANDLING RECOMMENDATIONS

Use silicon tetrachloride only in a well-ventilated area, preferably a hood with forced ventilation. Avoid dropping containers of silicon tetrachloride, or allowing them to strike each other violently. Always use a forklift, hoist or suitable drum cart for transporting. Systems should be purged with an inert gas prior to the introduction of silicon tetrachloride. Frequent equipment inspection should be made to detect and prevent leaks.

SPECIAL STORAGE RECOMMENDATIONS

Storage of silicon tetrachloride containers may be indoors in a cool, dry, well-ventilated area; however, outside or detached storage is preferred. Protect containers from extremes of weather and direct sunlight. Do not allow water to enter the container. Silicon tetrachloride is highly corrosive and reacts violently with water to form hydrogen chloride and clear gelatinous siloxane. Protect containers from accumulations of rainwater.

SPECIAL PACKAGING RECOMMENDATIONS

Silicon tetrachloride is highly corrosive when moist. Preferred materials of construction are stainless steel, borosilicate glass, or quartz. Iron and mild steel are acceptable for less critical purity applications. Stainless steel (Type 304 or 316), TEFLON®, PYREX® and quartz are considered to be compatible with silicon tetrachloride and should be used for lines and fittings.

OTHER RECOMMENDATIONS OR PRECAUTIONS

Leak check all equipment before use. Always use dry inert gas for pressurizing to produce liquid or vapor draw off and never use pressures above 64.7 psia (446.1 kPa). The silicon tetrachloride shipping container is equipped with a full length dip tube. The container may be used as a vaporizer by pressurizing the container with a carrier gas (pressure not to exceed 64.7 psia) through the center valve and withdrawing vapor from the outside valve. It may also be used as a liquid transfer vessel by pressurizing the container with carrier gas (pressure not to

(Continued on last page)

* Various Government agencies (i.e., Department of Transportation, Occupational Safety and Health Administration, Food and Drug Administration and others) may have specific regulations concerning the transportation, handling, storage or use of this product which will not be reflected in this data sheet. The customer should review these regulations to ensure that he is in full compliance.

Air Products and Chemicals, Inc.
Box 538, Allentown, Pa. 18105
(215) 398-8257

Air Products

Specialty Gas Department

HEALTH HAZARD DATA

SYMPTOMS OF EXPOSURE (Continued)

chemical pneumonitis and pulmonary edema. Contact of silicon tetrachloride with the eyes will cause pain, tearing, inflammation, swelling of tissue and possible destruction of the eye. Contact of silicon tetrachloride with the skin will cause burns.

RECOMMENDED FIRST AID TREATMENT (Continued)

Silicon tetrachloride contamination of the eyes should be treated by immediate and prolonged irrigation with large quantities of water. Assure adequate flushing of the eyes by separating the lids with fingers. Obtain medical assistance at once.

Skin Contact: Flush the affected areas promptly with large quantities of water for 15 minutes. Remove contaminated clothing as quickly as possible. Except in the most minor, superficial and localized burns, cover the affected area with a sterile dressing or clean sheeting and transport for medical care. DO NOT APPLY GREASES OR OINTMENTS. Control shock if present. Launder contaminated clothing before reuse. Contaminated footwear must generally be discarded.

SPECIAL PRECAUTIONS

OTHER RECOMMENDATIONS OR PRECAUTIONS (Continued)

exceed 64.7 psia) through the outside valve and withdrawing liquid from the center valve.

PS Form 3811, July 1983

SENDER: Complete items 1, 2, 3 and 4.

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

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

3. Article Addressed to:

Mr. James R. Kolanek
Harris Corporation
P. O. Box 883
Melbourne, FL 32901

4. Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number
P 085 152 653

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature - Addressee
X

6. Signature - Agent
X

7. Date of Delivery

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

MELBOURN FL SEP 16 1985 USPS

DOMESTIC RETURN RECEIPT

P 085 152 653

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Mr. James R. Kolanek	
Street and No.	
P.O., State and ZIP Code	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	9/12/85

PS Form 3800, Feb. 1982

☆ U.S.G.P.O. 1984-446-014

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

September 12, 1985

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. James R. Kolanek
Environmental Services
Harris Corporation - Semiconductor Sector
P. O. Box 883
Melbourne, Florida 32901

Dear Mr. Kolanek:

Re: Air Permit No. AC 05-108260 and AC 05-108258

The Bureau of Air Quality Management has received your applications for a permit to construct two scrubbers at Harris Corporation's chemical complex in Melbourne.

Based on our initial review of your proposal, it has been determined that additional information is needed before we can continue processing your applications. The information needed is as follows:

Application Information - DER Forms 17-1.202 submitted on August 14, 1985.

1. Please submit an updated air emission inventory of all permitted sources at this facility and their potential actual emissions.

2. Give a general description of your manufacturing process for semiconductors. Is there any other chemical or manufacturing process performed at your facility? If so, list each process, raw materials, products and wastes, and each source of air emissions related to each individual process.

3. Estimate the fugitive emissions, quantity and quality, from your facility. Do the total VOC emissions proposed include emissions from storage tanks, loss during the process, evaporation from ponds, etc? If not, please estimate those emissions.

4. Please submit engineering calculations of emissions estimates proposed. Include all reference materials, tables, etc. Provide a material Safety Data Sheet (MSDS) for the raw materials (solvents and acids) used during the process.

5. When listing hydrocarbon emissions (VOC) please indicate chemical composition, generic name and vapor pressure of each compound. How are you currently monitoring VOC emissions?

6. The construction permit fees for these sources are $200. Please send a check for this amount to our Tallahassee office (the check mentioned in you August 8, 1985, letter was not included with the applications forms).

7. In what building will the 6000 CFM wet fume scrubber be located (building 63 or 53)? Please see page 1 and 2 of the application submitted on August 14, 1985.

8. What is the current status of the operations performed in buildings 59-62-and 63? Are the operations in these buildings closed down? The permits for these sources were issued on September 6, 1983. According to our records all of those permits have expired. (Refer to permits No. AC 05-54991 through AC 05-54996). Please explain.

9. For operations that will be performed at buildings 4-55-57-58-59-61-62-63, we need the following clarification for each individual application. Refer to permits No. AC 05-104511 through No. AC 05-10452 . These applications forms were submitted on May 22, 1985.

Please indicate which of the following are applicable for each source:

A. Process being performed with control device currently in operation (no permit). Applying for a construction permit.

B. Starting a new process with new a control device. Applying for a construction permit.

C. Process being performed without a control device. Applying for a construction permit to install a control device.

D. Process being performed with a control device currently in operation. Applying for a permit to replace the control device.

E. Other - Please explain situation.

Confidential Records

Pursuant to Section 403.111, Florida Statutes, the review committee will ensure confidentiality of the information as requested. Please indicate and separate all information you consider to be confidential.

As soon as the above information is received, we will resume processing your applications. If you have any questions on this request, please call Teresa M. Heron at (904)488-1344, or write to me at the above address.

Sincerely,

C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality
Management

CHF/TH/s

HARRIS

August 8, 1985

Mr. C.H. Fancy
Deputy, Bureau Chief
DEPARTMENT OF ENVIRONMENTAL REGULATION
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32301

Reference: AIR PERMIT APPLICATIONS
HARRIS SEMICONDUCTOR

Dear Mr. Fancy:

Enclosed are one original and three copies of two (2) air permit construction applications for Harris Semiconductor's facility in Palm Bay. In addition, I have enclosed two checks for $100.00 each.

The Building 63 West Assembly scrubber will be used to scrub exhaust air from processes being relocated from other locations at the facility. The Sil-Tet scrubber is a container transfer operation. It is not a production operation and is therefore only used intermittently. Attachment D of the applications contains all assumptions, references, and typical calculations used in the applications.

If you should have any questions, please feel free to contact met at (305)724-7467.

Sincerely,

James R. Kolanek

James R. Kolanek
Manager
Environmental Services

JRK/lsc
Attachments

DER
AUG 14 1985
BAQM

BEST AVAILABLE COPY

THE FIRST NATIONAL BANK OF ATLANTA
AUGUSTA, GA.

HARRIS

HARRIS CORPORATION
SEMICONDUCTOR GROUP

64-1327
611

023264

00000	06	05	85
ACCT. NO.	PAYABLE DATE		
CHECK NUMBER			

PAY 100********* DOLLARS AND 00*** CENTS

*******100 | 00****
CHECK AMOUNT

TO ORDER OF

Dept. of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32301

[redacted]

HARRIS SEMICONDUCTOR

COUNTERSIGNED

AUTHORIZED SIGNATURE

THE FIRST NATIONAL BANK OF ATLANTA
AUGUSTA, GA.

HARRIS

HARRIS CORPORATION
SEMICONDUCTOR GROUP

64-1327
611

023263

00000	06	05	85
ACCT. NO.	PAYABLE DATE		
CHECK NUMBER			

PAY 100********* DOLLARS AND 00**** CENTS

*******100 | 00***
CHECK AMOUNT

TO ORDER OF

Dept. of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32301

[redacted]

HARRIS SEMICONDUCTOR

COUNTERSIGNED

AUTHORIZED SIGNATURE

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

No 76095

RECEIPT FOR APPLICATION FEES AND MISCELLANEOUS REVENUE

Received from Harris Corporation Date Oct. 14, 1985

Address P.O. Box 483 Melbourne FL 32901 Dollars $ 200.00

Applicant Name & Address Same as above

Source of Revenue

Revenue Code 001031 Application Number AC 05-108260
PSD-05-108258

By Patricia F. Adams

AC 05-108258

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

ST. JOHNS RIVER DISTRICT
3319 MAGUIRE BOULEVARD
SUITE 232
ORLANDO, FLORIDA 32803

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Stationary [X] New[1] [ ] Existing[1]

APPLICATION TYPE: [X] Construction [ ] Operation [ ] Modification

COMPANY NAME: Harris Semiconductor COUNTY: Brevard

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) Sil-Tet Scrubber Building 4

SOURCE LOCATION: Street Palm Bay Road City Palm Bay

UTM: East 17-538700 North 17-3100900

Latitude 28 ° 01 ' 20 "N Longitude 80 ° 36 ' 10 "W

APPLICANT NAME AND TITLE: J. R. Kolanek, Manager/Environmental Services

APPLICANT ADDRESS: P. O. Box 883, Melbourne, Florida 32901-0101

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Harris Semiconductor

I certify that the statements made in this application for a construction permit are true, correct and complete to the best of my knowledge and belief. Further I agree to maintain and operate the pollution control source and pollution contro facilities in such a manner as to comply with the provision of Chapter 403, Florid Statutes, and all the rules and regulations of the department and revisions thereof. also understand that a permit, if granted by the department, will be non-transferabl and I will promptly notify the department upon sale or legal transfer of the permitte establishment.

*Attach letter of authorization

Signed: James R. Kolanek

J. R. Kolanek, Manager/Environmental Services
Name and Title (Please Type)

Date: 8-1-85 Telephone No. (305) 724-7467

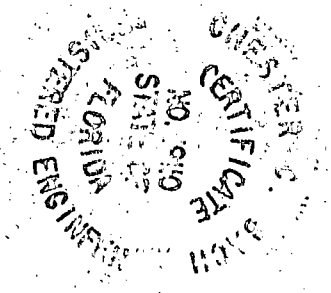
B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project hav been designed/examined by me and found to be in conformity with modern engineerin principles applicable to the treatment and disposal of pollutants characterized in th permit application. There is reasonable assurance, in my professional judgment, that

[1] See Florida Administrative Code Rule 17-2.100(57) and (104)

DER Form 17-1.202(1)
Effective October 31, 1982

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.



Signed Chester C Bach

Chester C. Bach, P.E.
Name (Please Type)

Harris Semiconductor
Company Name (Please Type)

P. O. Box 883, Melbourne, Florida 32901-0101
Mailing Address (Please Type)

Florida Registration No. 19110 Date: 8/2/85 Telephone No. (305) 724-7324

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

Current loading of 10 gallon containers of Silicon Tetrachloride is performed outdoors in the open. Proposed system will collect and scrub any routine emissions which currently could be released. Project consists of construction enclosed work area, ductwork, scrubber installation, and associated utilities.

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction July 1, 1985 Completion of Construction October 1, 1985

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Scrubber	$8,000.00
Installation	4,000.00
Total	$12,000.00

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

See Attachment A for a complete list of current Harris air permits.

E. Requested permitted equipment operating time: hrs/day 10 ; days/wk 3 ; wks/yr 52 ;
if power plant, hrs/yr_____; if seasonal, describe: N/A

F. If this is a new source or major modification, answer the following questions. (Yes or No)

1. Is this source in a non-attainment area for a particular pollutant? No

   a. If yes, has "offset" been applied?

   b. If yes, has "Lowest Achievable Emission Rate" been applied?

   c. If yes, list non-attainment pollutants.

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. No

3. Does the State "Prevention of Significant Deterioriation" (PSD) requirement apply to this source? If yes, see Sections VI and VII. No

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? No

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? No

H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source? No

   a. If yes, for what pollutants?

   b. If yes, in addition to the information required in this form, any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
See Attachment B			40 lb/hr	See Attachment C

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): N/A

2. Product Weight (lbs/hr): N/A

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
Silicon							
Tetrachloride	.0095	.003	N/A	N/A	119	0.059	See
							Attachment
							C

[1]See Section V, Item 2.

[2]Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

[3]Calculated from operating rate and applicable standard.

[4]Emission, if source operated without control (See Section V, Item 3).

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
Beverly Pacific	Silicon	95%	N/A	Mfg.
Wet Fume Scrubber	Tetrachloride			Design
Model#PS-2VT				Data
Serial#F-600				
In line exhaust				
Fan 18-12				

E. Fuels N/A

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	

*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis:

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

Other Fuel Contaminants (which may cause air pollution): _____

F. If applicable, indicate the percent of fuel used for space heating. N/A

Annual Average _____ Maximum _____

G. Indicate liquid or solid wastes gensrated and method of disposal.

Exhaust fumes from work area are scrubbed by water. Low concentrations of contaminants are absorbed by scrubber water which discharges to on-site wastewater treatment system.

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: 34 ft. Stack Diameter: 1.17 ft.

Gas Flow Rate: 1,000 ACFM 2,000 DSCFM Gas Exit Temperature: Ambient °F.

Water Vapor Content: 1 % Velocity: 31 FPS

SECTION IV: INCINERATOR INFORMATION N/A

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq.& Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day _____ day/wk _____ wks/yr. _____

Manufacturer _____

Date Constructed _____ Model No. _____

	Volume $(ft)^3$	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ ft. Stack Diamter: _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity: _____ FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: [ ] Cyclone [ ] Wet Scrubber [ ] Afterburner

[ ] Other (specify) _____

Brief description of operating characteristics of control devices: _____

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

SECTION V: SUPPLEMENTAL REQUIREMENTS

See Attachment D

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]

2. To a construction epplication, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of complisnce with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.

3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).

4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)

5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).

6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.

7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).

8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY N/A

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

[ ] Yes [ ] No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)

[ ] Yes [ ] No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration

D. Describe the existing control and treatment technology (if any).

1. Control Device/System:
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:

*Explain method of determining

5. Useful Life: 6. Operating Costs:

7. Energy: 8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height: ft. b. Diameter: ft.

c. Flow Rate: ACFM d. Temperature: °F.

e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

a. Control Device: b. Operating Principles:

c. Efficiency:[1] d. Capital Cost:

e. Useful Life: f. Operating Cost:

g. Energy:[2] h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

a. Control Device: b. Operating Principles:

c. Efficiency:[1] d. Capital Cost:

e. Useful Life: f. Operating Cost:

g. Energy:[2] h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

[1]Explain method of determining efficiency.
[2]Energy to be reported in units of electrical power - KWH design rate.

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:[1]

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:[2]

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

[1]Explain method of determining efficiency.
[2]Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

[1]Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION N/A

A. Company Monitored Data

1. _____no. sites _____ TSP _____( ) SO^{2}* _____ Wind spd/dir

Period of Monitoring ____/____/____ to ____/____/____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

*Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

a. Was instrumentation EPA referenced or its equivalent? [ ] Yes [ ] No

b. Was instrumentation calibrated in accordance with Department procedures?

[ ] Yes [ ] No [ ] Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from ____/____/____ to ____/____/____
month day year month day year

2. Surface data obtained from (location)_____

3. Upper air (mixing height) data obtained from (location)_____

4. Stability wind rose (STAR) data obtained from (location)_____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate	
TSP	_____	grams/sec
SO^2	_____	grams/aec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

ATTACHMENT A

Revised 1/7/85

DEPARTMENT OF ENVIRONMENTAL REGULATION
CURRENT AIR PERMITS
HARRIS SEMICONDUCTOR

BUILDING #	PERMIT #	DATE ISSUED	PROCESS	EXPIRATION DATE
4	A005-36146		Silicon wafer grinding exhaust (System 1)	11/19/85
4	A005-36148		4-EPI reactors with 4 scrubbers (System 6)	11/18/85
4	A005-36149		4-EPI reactors with 4 scrubbers (System 7)	11/18/85
4	A005-36150		4-EPI reactors with 4 scrubbers (System 8)	11/18/85
4	A005-36152		Silicon wafer chemical treatment scrubber (System 9)	11/19/85
4	A005-36154		Silicon wafer chemical treatment exhaust (System 10)	11/19/85
4	A005-38485		OSI/Diff. expansion exhaust scrubber	4/8/86
6	A005-65409	4/15/83	R&D hot acid vapor exhaust scrubber	4/12/84
6	A005-38486	4/9/81	Thin film acid scrubber	4/8/86

Revised 1/7/85

DEPARTMENT OF ENVIRONMENTAL REGULATION
CURRENT AIR PERMITS
HARRIS SEMICONDUCTOR

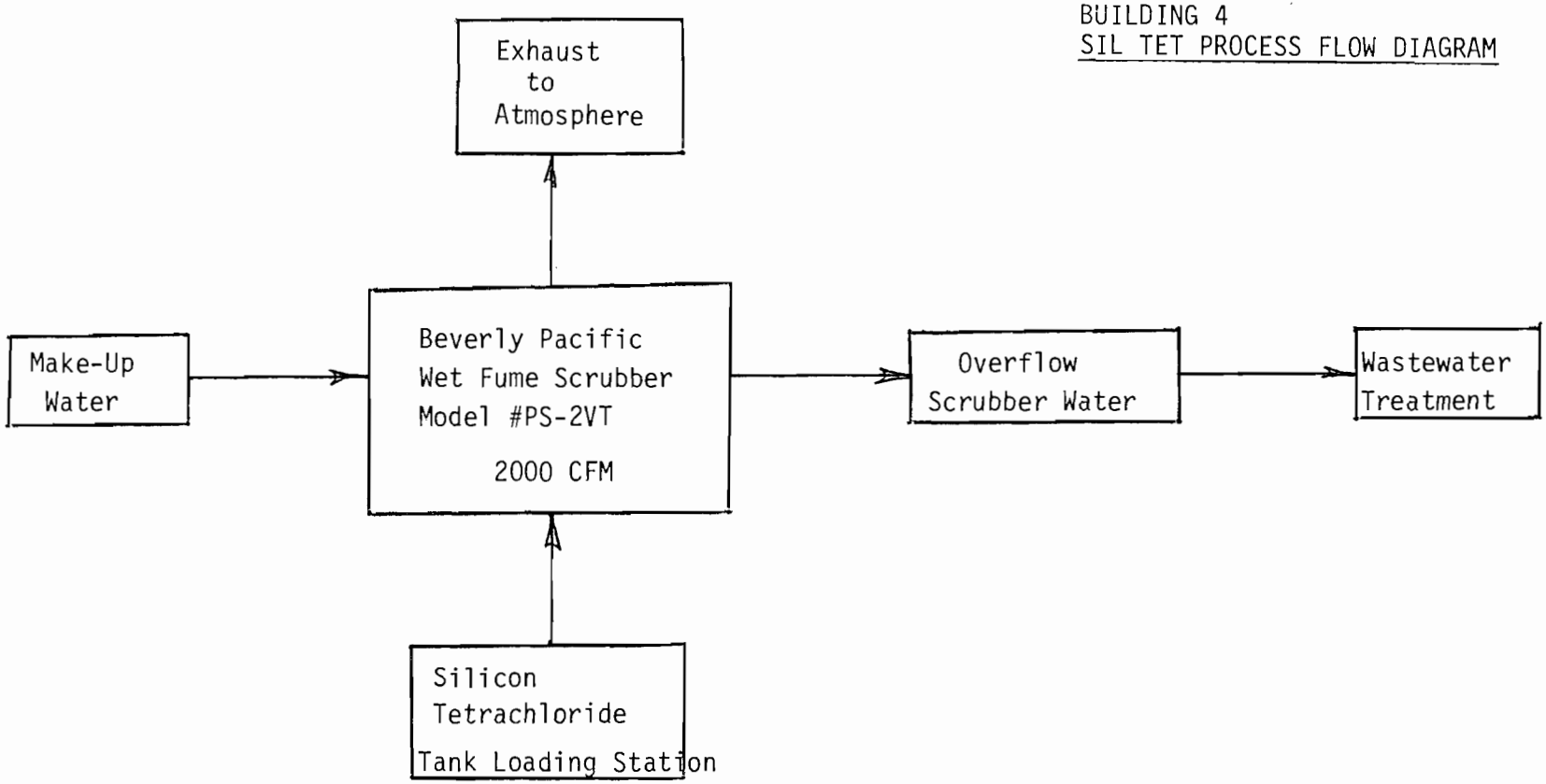
BUILDING #	PERMIT #	DATE ISSUED	PROCESS	EXPIRATION DATE
6	A005-79768	3/28/84	Acid mist scrubber (System 1)	3/27/89
6	A005-79767	4/9/84	Acid/solvent scrubber (System 6)	4/5/89
51	A005-36163	11/26/80	Silicon wafer chemical treatment air washer (System 3)	11/21/85
51	A005-36165	12/1/80	Silicon wafer chemical treatment air washer (System 5)	11/21/85
51	A005-38487	4/9/81	Analog expansion exhaust system wet scrubber	4/8/86
51	A005-71405	9/13/83	Silicon wafer treatment solvent scrubber	9/12/88
54	A005-38488	4/9/81	East module dual scrubbers	4/8/86
54	A005-65408	5/3/83	West module dual scrubbers	5/2/88
60	A005-38489	4/9/81	Photo mask - Acid/VOC fume scrubber	4/8/86

ATTACHMENT B
HARRIS SEMICONDUCTOR
BUILDING 4 - SIL TET TRANSFER SCRUBBER

Silicon Tetrachloride
(HCl)

Utilization Rate	40 lbs./hr.
Emissions	0.0095 lbs./hr.
	0.003 T/yr.
Potential Emissions	119 lbs./yr.
	0.059 T/yr.

ATTACHMENT C
HARRIS SEMICONDUCTOR
BUILDING 4
SIL TET PROCESS FLOW DIAGRAM



NOTE: NO WASTE GENERATED. PROCESS IS A CONTAINER TRANSFER PROCESS

ATTACHMENT D
HARRIS SEMICONDUCTOR
BUILDING 4 - SILICON TETRACHLORIDE
LOADING STATION

1. Scrubber is operated on an as need basis. Anticipated operation is as follows:

    a. 10 hrs./day
    b. 3 days/week
    c. 52 weeks/year
    d. 1560 hrs./yr.

2. Chemicals are not open to the atmosphere. Materials are transferred from 55 gallon shipping containers to 10 gallon use containers.

3. Basis of Potential Emissions:

    Because chemicals are not normally exposed to the atmosphere, it is assumed that the major source of chemical release to the scrubber is during line breaking procedures, when transfer connections are broken between the 55 gallon and 10 gallon containers.

    The total volume of the connecting tubing is 0.002 cubic feet. (0.015 gallons, 0.19 lbs.)

    It was assumed that 6-10 gallon containers are filled from each 55 gallon drum. At a usage rate of 104 (55)gallon drums per year, 624 (10)gallon cylinders would be filled.

4. Maximum emission rate was based on the assumption that the release rate to the scrubber is 0.19 lbs./hour, which is the total volume of the connection tubing.

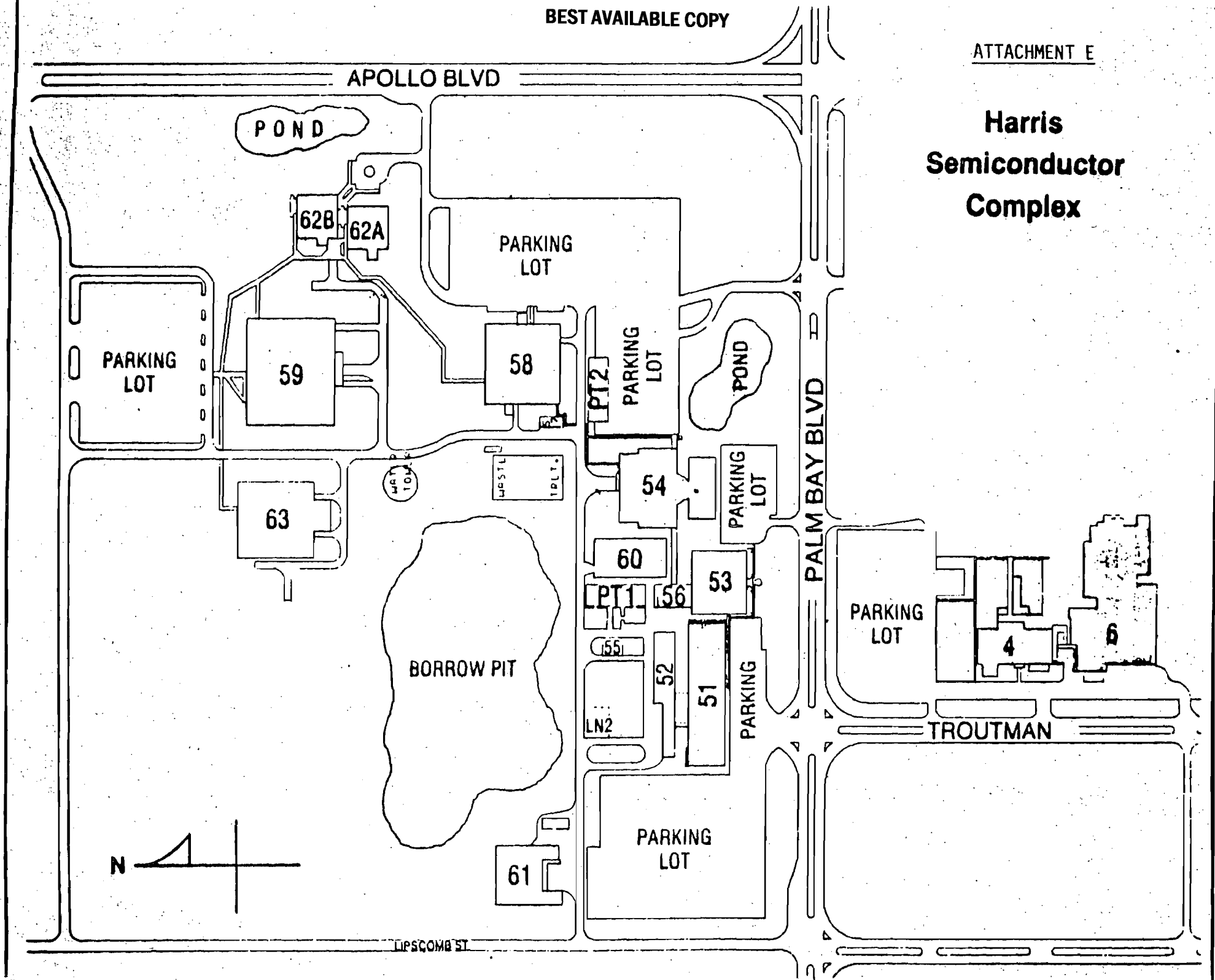
5. Silicon Tetrachloride reacts rapidly with moisture in the air and is converted to HCl.

6. Potential emissions are the total amounts of chemicals which would be released to the atmosphere if no pollution control equipment were utilized.

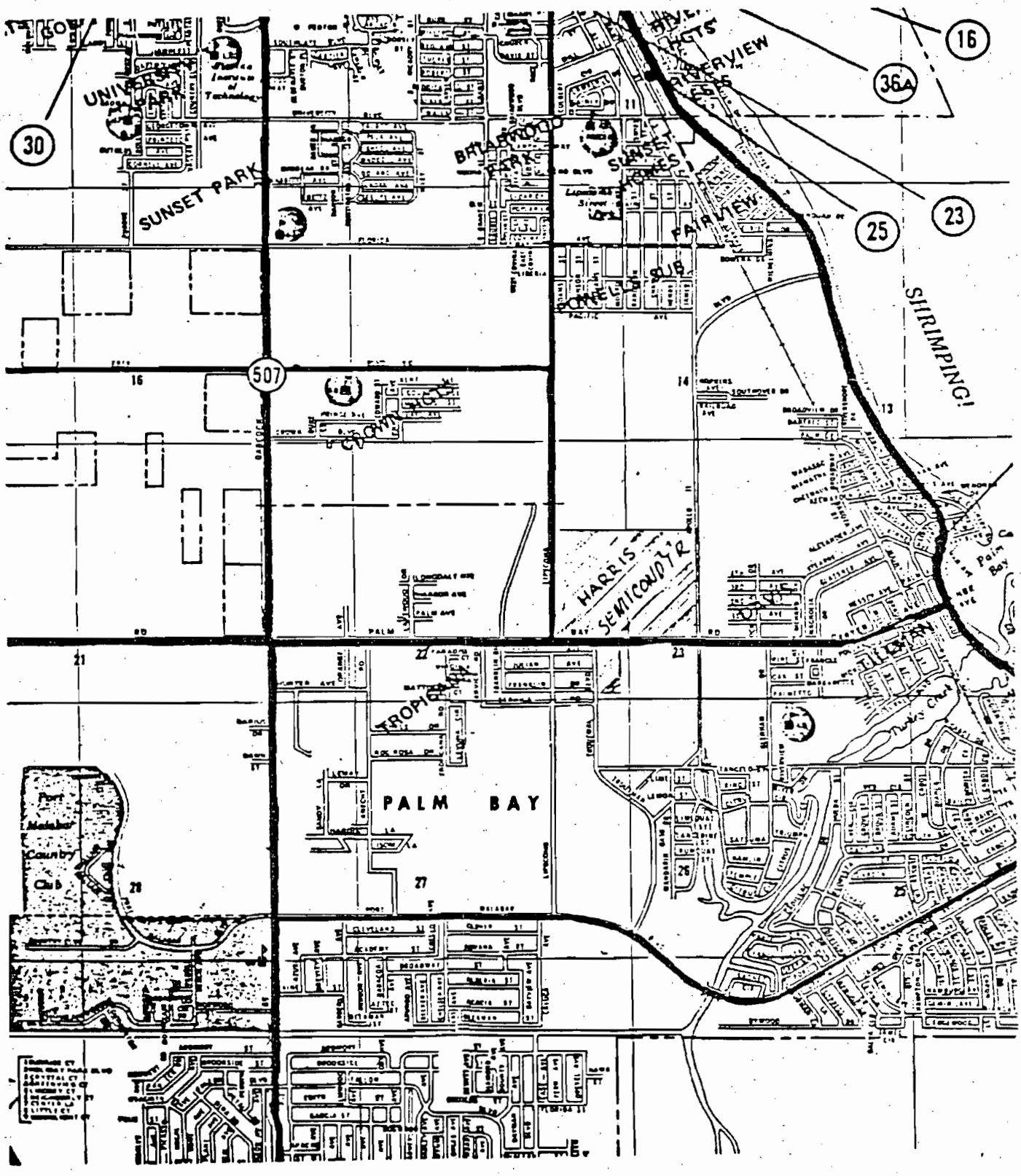
/lmv

ATTACHMENT E

Harris Semiconductor Complex



ATTACHMENT F

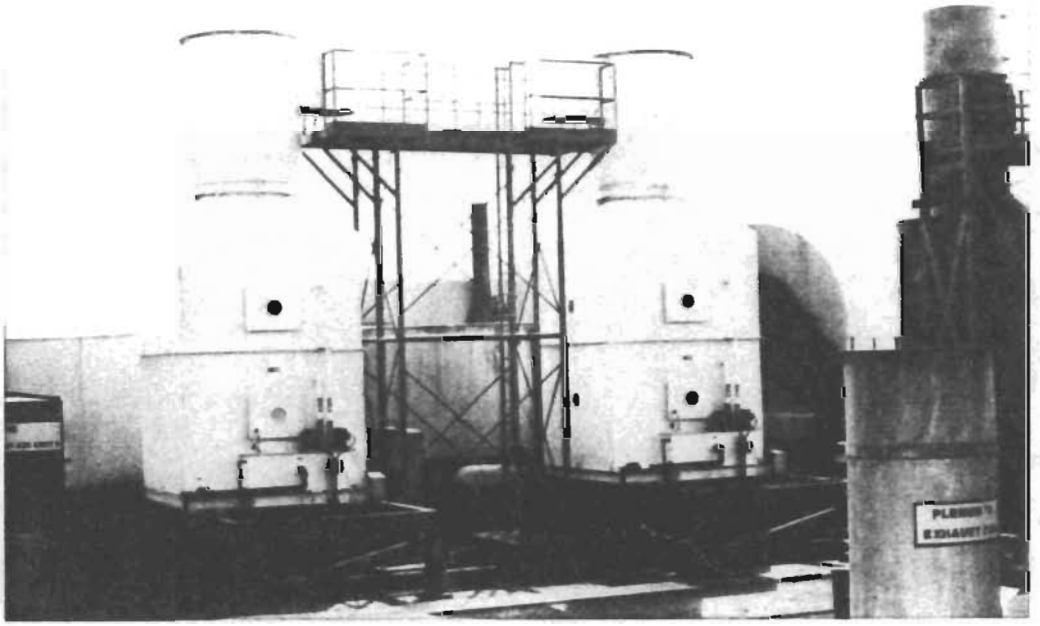


AREA MAP SHOWING FACILITY SITE

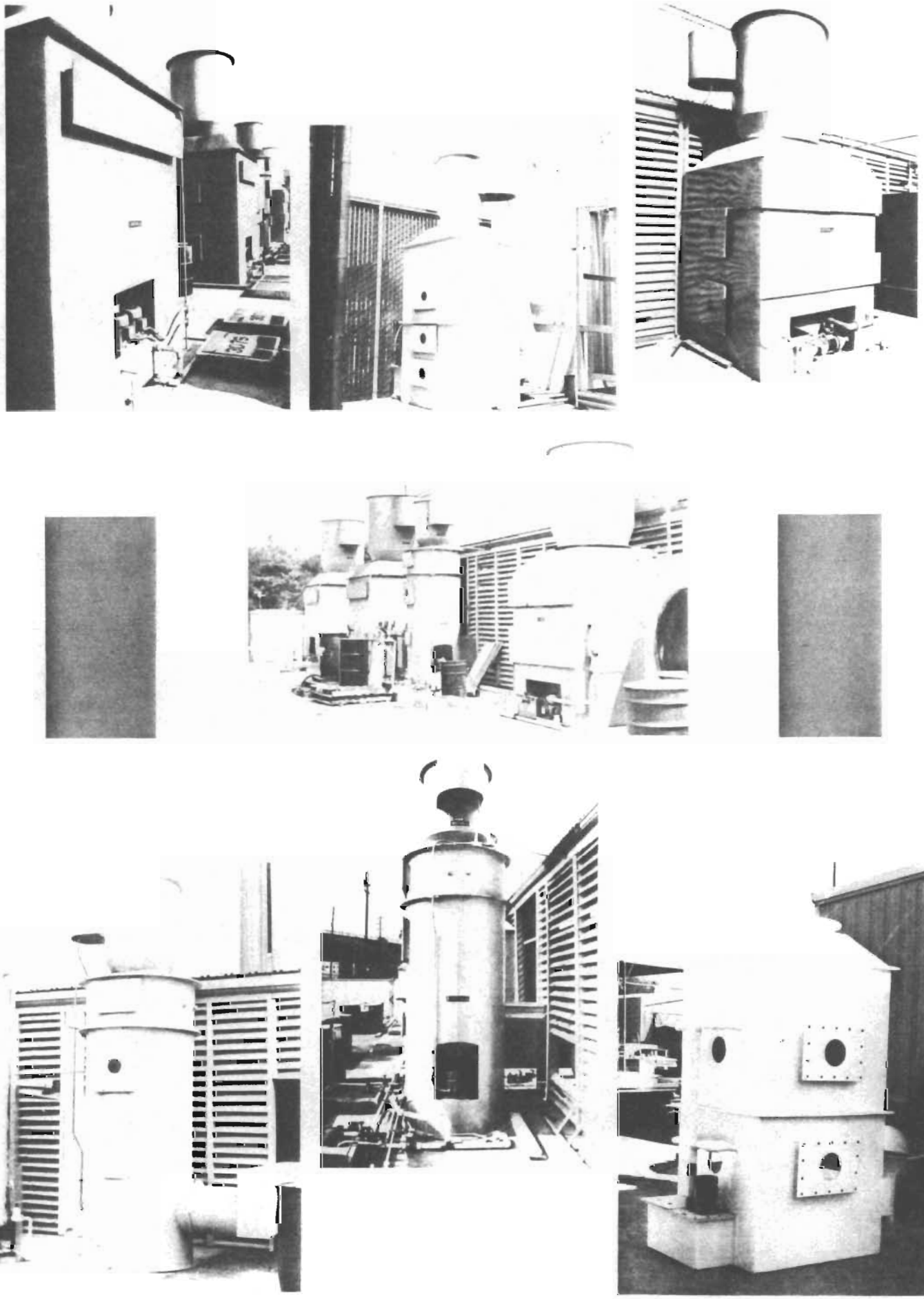
HARRIS SEMICONDUCTOR

BEVERLY PACIFIC CORPORATION

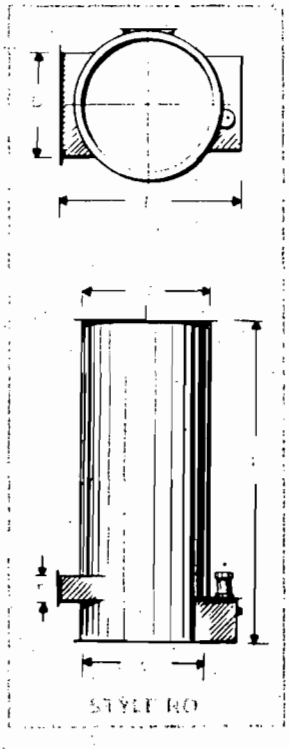
SCRUBBERS

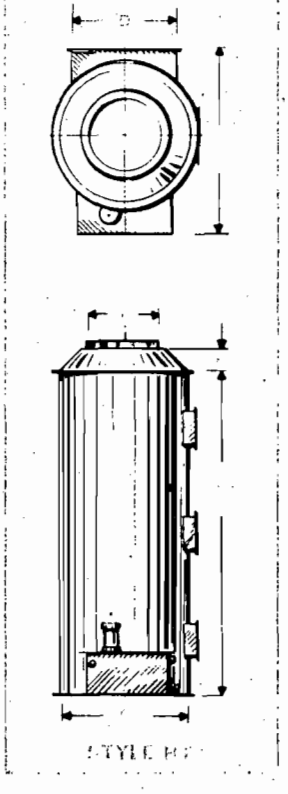


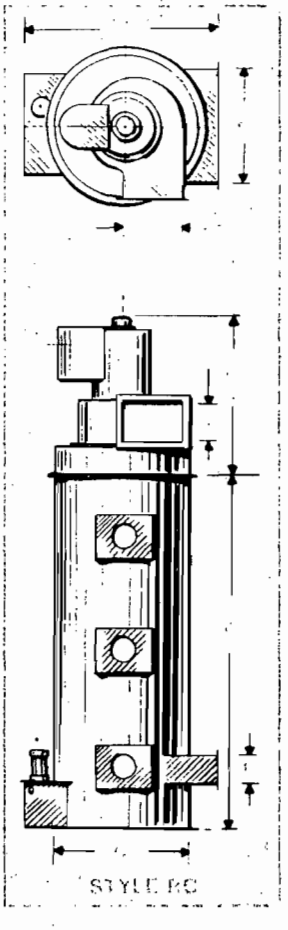
FIBERGLASS REINFORCED PLASTIC

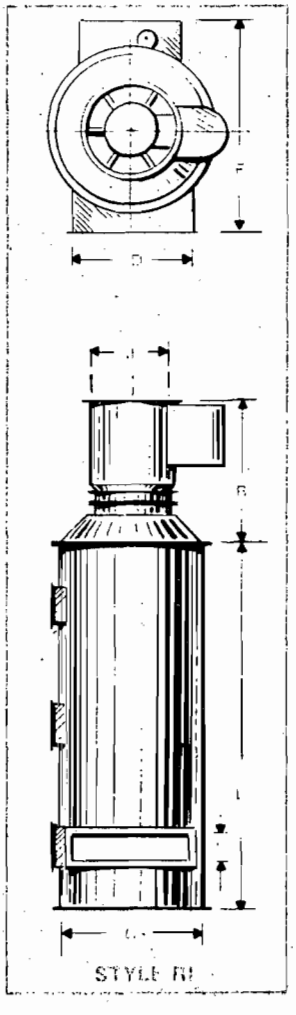


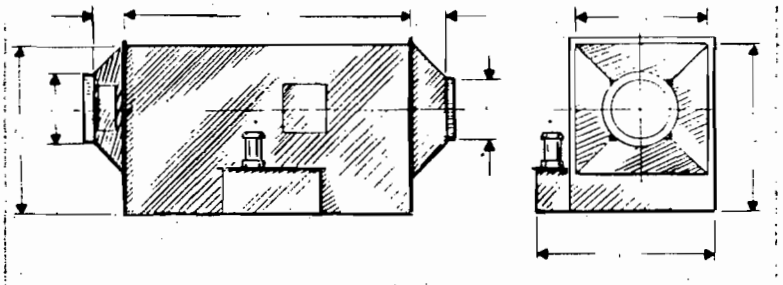
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
A	78	82	84	94	101	108	112	114	118	118
B	24	36	42	48	60	72	84	96	108	120
C	28	40	48	58	72	84	96	108	120	136
D	22	34	40	46	58	70	80	92	104	116
E	6	8	10	11	12	16	18	20	24	24
F	46	58	66	76	90	102	114	126	138	154
G	42	54	60	66	78	90	102	114	126	138
H	13⅜	16⅜	22½	26¼	29½	35¼	39	47¼	52⅜	63⅞
I	10⅜	12⅞	17	20½	22¾	27	30	37½	40¾	49¾
J	18	22	28	34	38	45	50	62	66	80
K	6	8	10	10	12	16	19	20	24	24
L	84	87	89	104	112	118	122	124	128	128
M	64	64	70	77	89	102	102	102	114	114
N	35	49	55	62	76	88	103	116	128	142
O	38	52	58	65	79	91	106	119	131	145
P	14	16	22	26	30	36	42	50	54	66
Q	45	50	61	64	68	72	78	86	93	103
R	35	44	55	65	75	85	94	108	120	141
S	46	52	59	69	72	79	82	97	100	110
T	36	48	54	60	72	84	96	108	120	132
WHEEL DIA.	12¼	15	20	24½	27	33	36½	44½	49	60
CFM x 1000	1-2	2-4	4-6	6-8	8-12	12-18	18-24	24-30	30-40	40-50
RECIRC. GPM	7	15	25	35	45	75	105	135	175	225
MAKE-UP GPM	0.7	1.5	2.0	3.0	4.0	7.0	10.0	13.0	17.0	22.0
HT OP. WT.	388	745	1110	1570	2690	4085	5670	7595	11790	16040
HT SHIP WT.	220	385	550	770	1210	1925	2750	3795	5390	7040
VT OP. WT.	318	660	1060	1500	2630	3910	5470	7400	11650	15800
VT SHIP WT.	150	300	500	700	1150	1750	2550	3600	5250	6800

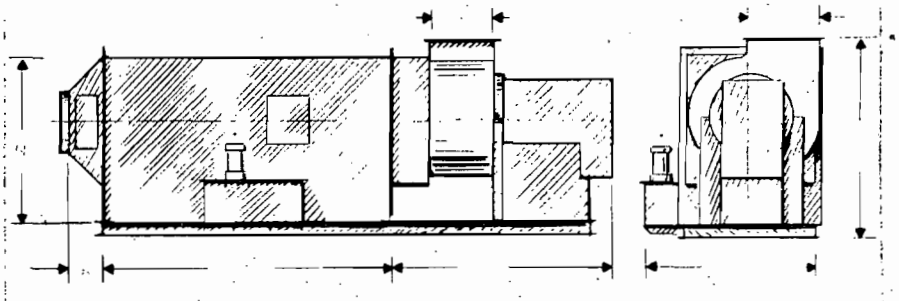




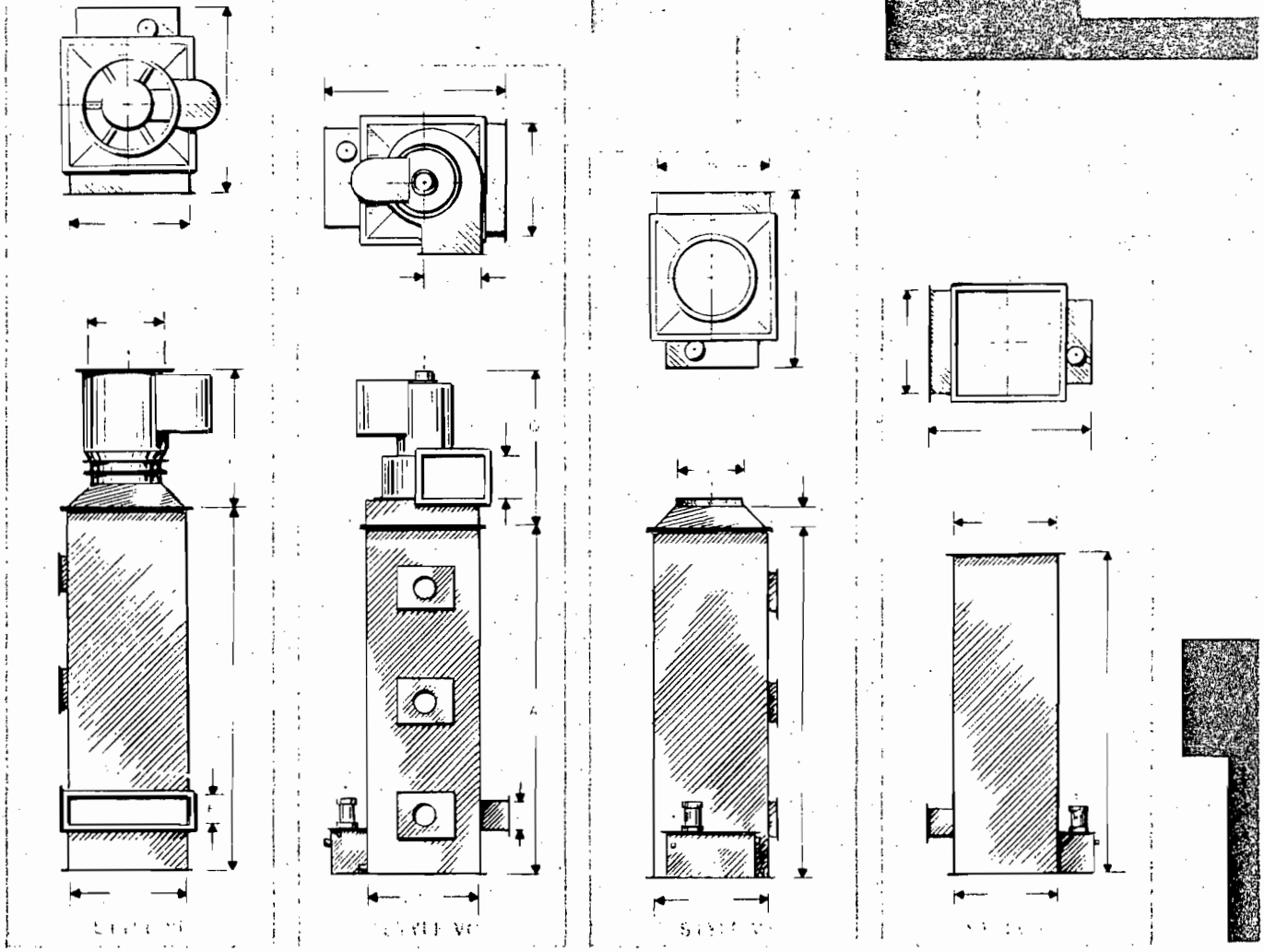








*May require one or more pumps.



COMPUTERIZED PACKING MEDIA SELECTION

The most common mistake made by scrubber manufacturers today is the use of only one type of packing media for all types of contaminant removal. Beverly Pacific Corporation scrubbers are designed with a computer program assist to determine the most beneficial packing media to achieve high removal efficiency coupled with low pressure drop providing the user with the ultimate in lower operating costs consistent with the contaminant removal requirements.

SCRUBBER CONFIGURATIONS

Beverly Pacific Corporation manufactures scrubbers of both crossflow and counter-current configurations.

The CROSSFLOW design is of low profile, rectangular shape wherein the contaminated air stream moves horizontally through the packing media and is scrubbed by the liquid flowing downward through the packing. This configuration is ideal for roof-top mounting and is available in ten (10) standard sizes with or without integral centrifugal fans.

The COUNTER-CURRENT design is offered in two (2) configurations, round or rectangular. While the round tower unit is the most economical in initial cost, the rectangular tower unit permits larger CFM volume using the same amount of floor space. In the counter-current design, the contaminated airstream flows up through the packing media and is scrubbed by the liquid flowing downward. The round and rectangular tower units are each offered in ten (10) sizes and are available with or without integral inline or centrifugal fans.

SCRUBBER MAKE-UP WATER CONSUMPTION

Beverly Pacific's scrubber design is based on a scrubbing liquid recirculation rate of 5 GPM per 1000 CFM of contaminated air. Of that 5 GPM, losses due to absorption and/or evaporation range from 0.2 GPM to 0.6 GPM, depending on inlet gas temperature and gas stream dust load.

ENTRAINMENT SEPARATION

The unique design of Beverly Pacific's mist eliminator section provides up to 99+% moisture particle entrapment at a pressure drop of approximately 0.5" W.G.

CONSTRUCTION

The structural housings are fabricated of Fiberglass Reinforced Plastic (FRP) materials which provide structural strength, are corrosion-resistant and light in weight. Resin selection depends on the corrosive element involved. Resins can also be of fire-retardant grade if required. Our construction technique employs the use of female molds resulting in an extremely smooth, attractive, gelcoated exterior surface (note the upper right photo on the facing page). Beverly Pacific Corporation's construction methods meet or exceed the requirements of NBS-PS 15-69 for custom contact-molded reinforced polyester chemical resistant process equipment.

OPTIONAL EQUIPMENT, FITTINGS AND ACCESSORIES

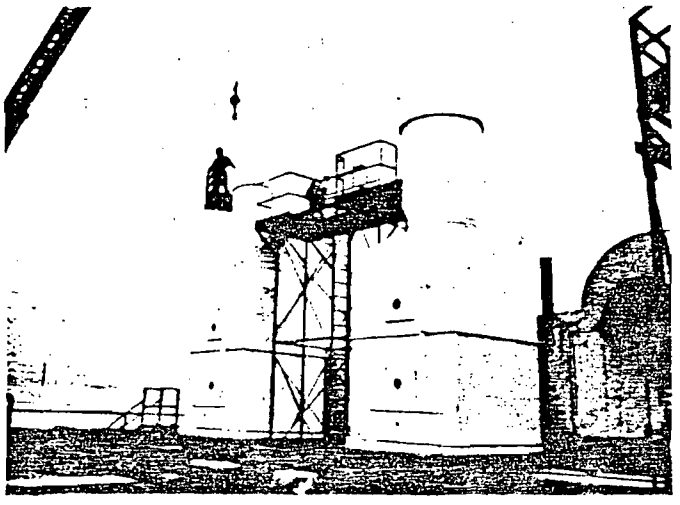
FITTINGS, such as drain, overflow, make-up water, access doors, etc. can usually be located to facilitate installation and maintenance.

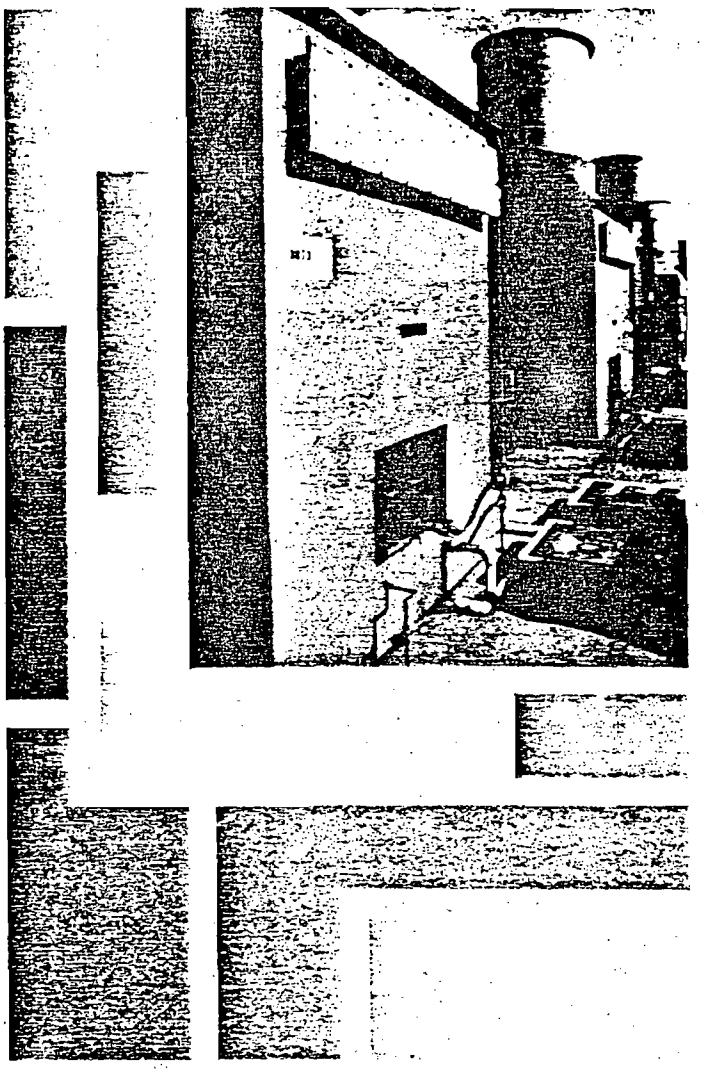
RECIRCULATION RESERVOIR(S) are normally an integral part of the scrubber but, if required, can be furnished for remote installation.

RECIRCULATION PUMP(S) can be located within the built-in reservoir, but can also be installed in remote reservoir units.

SPECIAL RESERVOIR(S) can be furnished in applications where it is necessary to remove non-soluble particulate accumulation to prevent pump damage and minimize maintenance.

pH CONTROL SENSING/METERING equipment can be provided where contaminate absorption requires the addition of acid or caustic to the recirculated scrubbing liquid.





AIR POLLUTION CONTROL EQUIPMENT

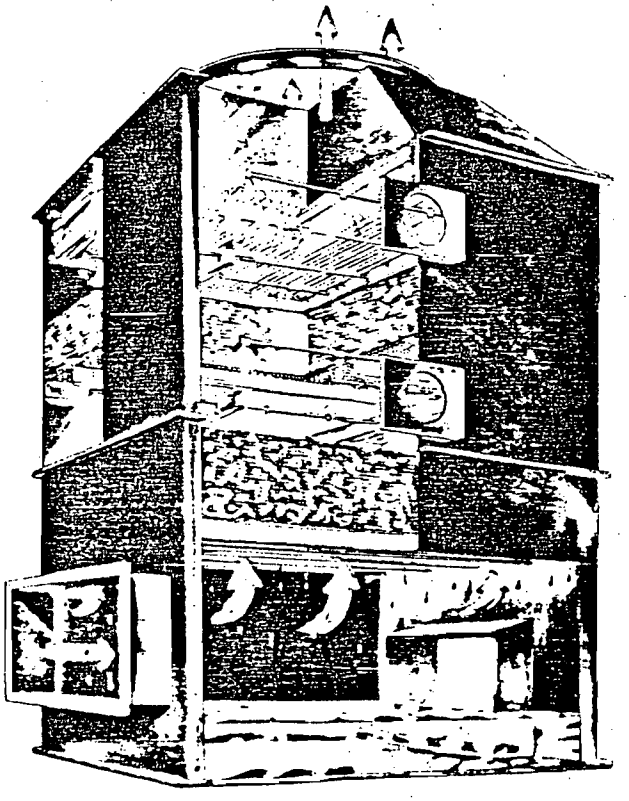
Over the years, more and more emphasis has been placed on air pollution control. There is little doubt more stringent standards and laws are forthcoming from State and Federal agencies regarding the demand for effective, well-designed air cleaning devices for industrial ventilation systems.

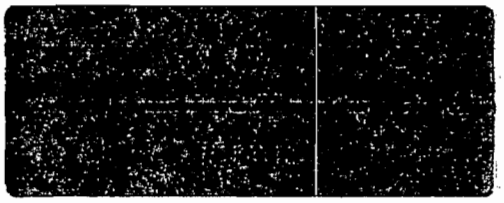
Beverly Pacific offers three (3) basic air pollution control units, totaling ten (10) variations, each with a multitude of standard and optional equipment available to meet your specific requirements.

PRINICIPLE OF PACKED SCRUBBER OPERATION

Beverly Pacific's **Packed Scrubbers** *are designed for the removal of soluble gases, mists and particulate matter through "gas absorption" — where noxious gases are transferred from the air stream into a liquid state; and through "impingement" — where particulates are forced against a wetted packing media surface.*

Recirculated scrubbing liquid is used for contaminate saturation and for irrigation of the packing media. Scrubbing efficiency depends largely on uniform distribution of scrubbing liquid, which Beverly Pacific achieves with low pressure, large orifice, non-plugging spray nozzles contained in a uniquely designed spray header assembly.

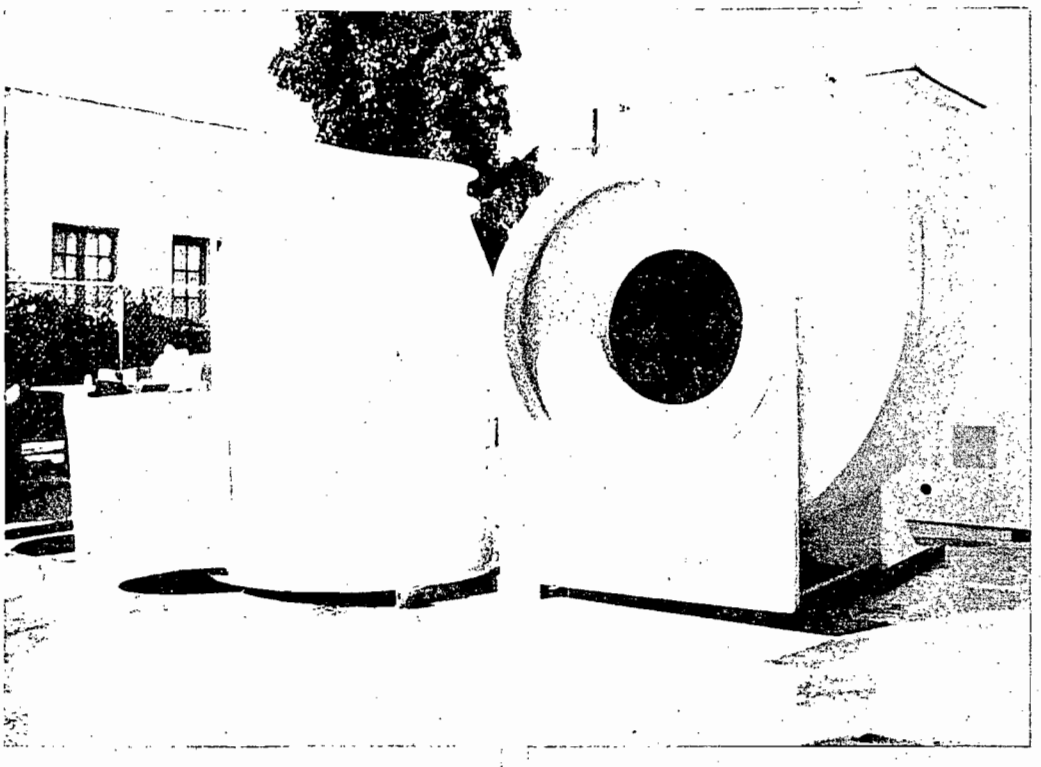




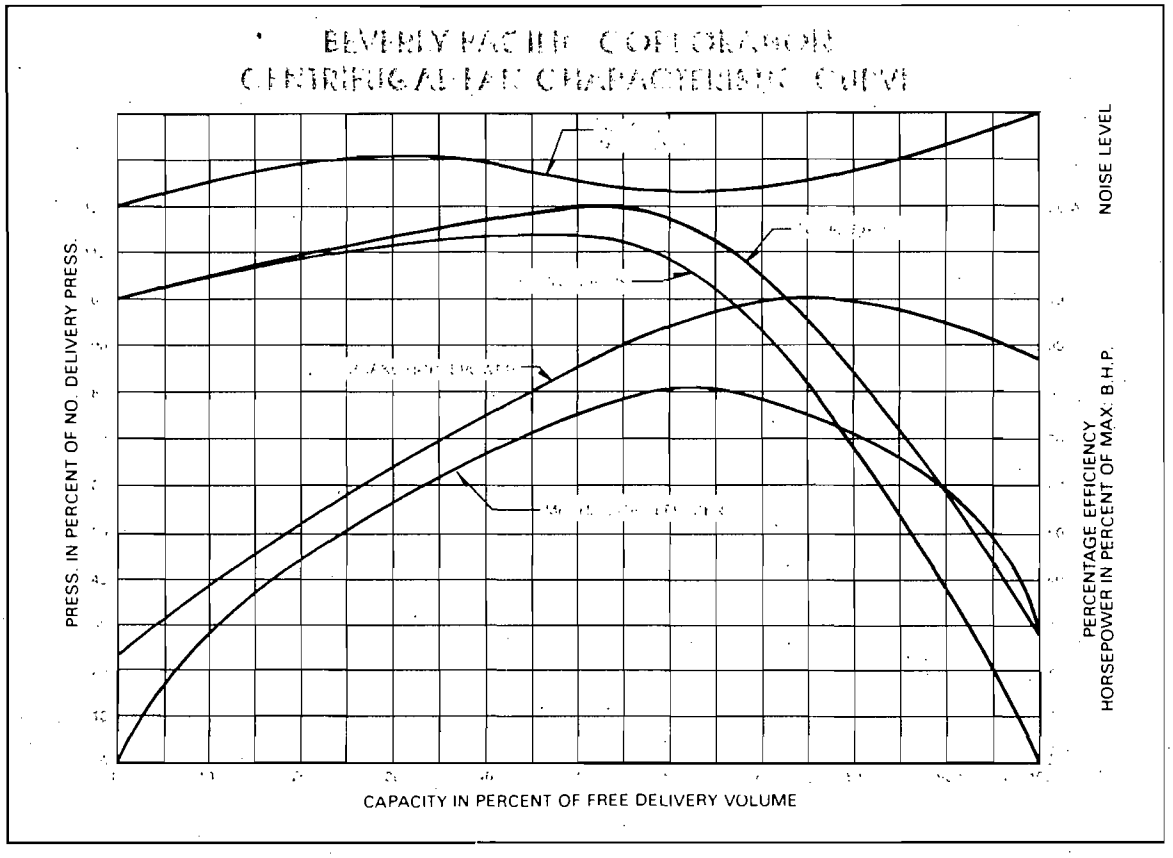
BEVERLY PACIFIC CORPORATION

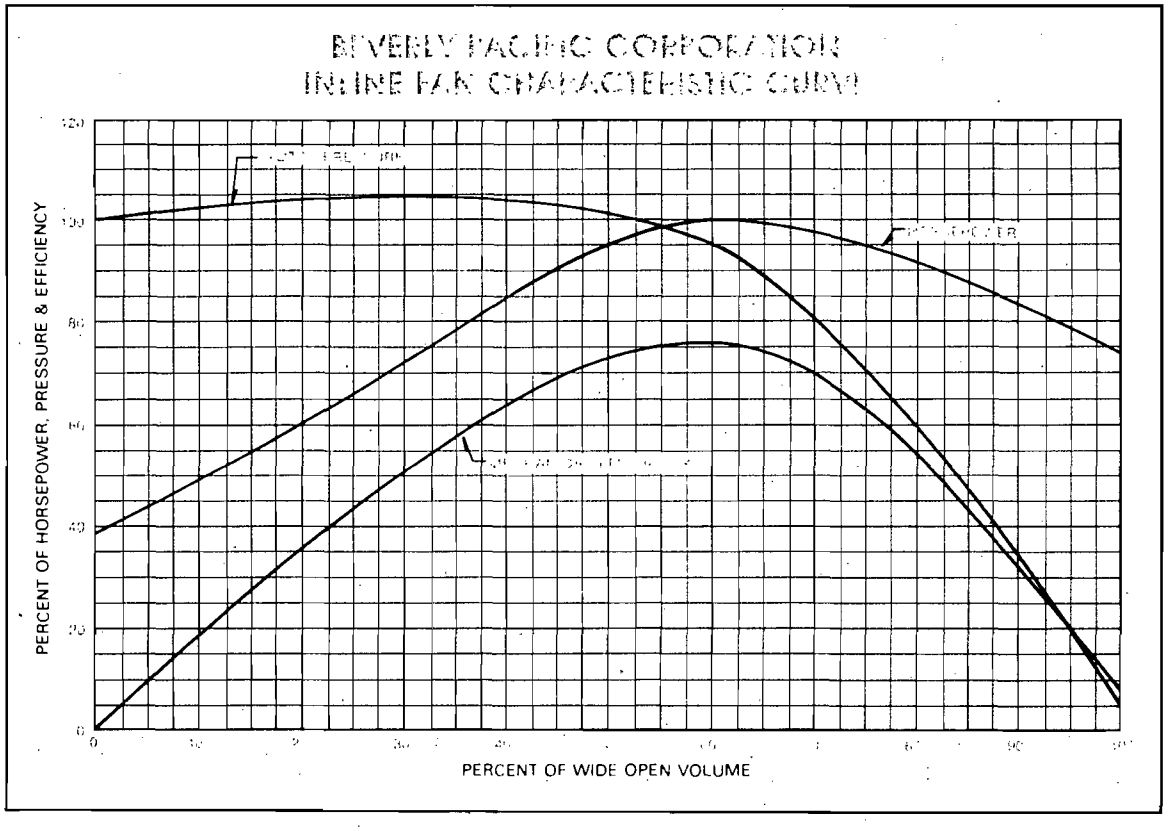
Industrial Systems Division

EXHAUST FANS



FIBERGLASS REINFORCED PLASTIC

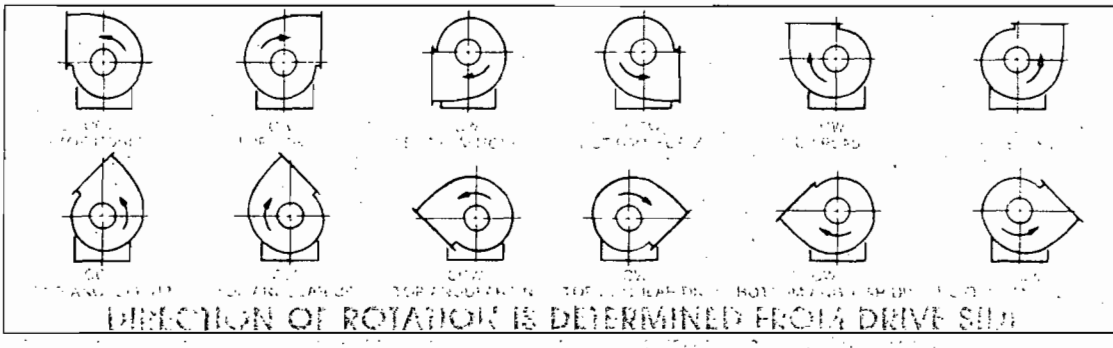

BEVERLY PACIFIC CORPORATION
CENTRIFUGAL FAN CHARACTERISTIC CURVE
PRESS. IN PERCENT OF NO. DELIVERY PRESS.
NOISE LEVEL
PERCENTAGE EFFICIENCY
HORSEPOWER IN PERCENT OF MAX. B.H.P.
CAPACITY IN PERCENT OF FREE DELIVERY VOLUME


BEVERLY PACIFIC CORPORATION
INLINE FAN CHARACTERISTIC CURVE
PERCENT OF HORSEPOWER, PRESSURE & EFFICIENCY
PERCENT OF WIDE OPEN VOLUME

CENTRIFUGAL INDUSTRIAL EXHAUST FANS

MID-RANGE CFM RECOMMENDED	2,150	2,625	3,200	3,900	4,750	5,800	7,075	8,650	10,550	12,875	15,700	19,150
FAN WHEEL DIAMETER	12¼	13½	15	16½	18¼	20	22¼	24½	27	30	33	36½
A	13½	14½	16½	18¼	20	22	24½	26	29¼	32¼	36	40
B	10⅜	11⅜	12⅞	14⅜	15	17	18¾	20½	22¾	25	27	30
C	13⅜	14⅞	16⅜	18⅜	20	22½	24	26¼	29½	32	35¼	39
D	34¼	35¼	40 7/16	42 7/16	45	47¾	54	57¼	61½	64¾	66¾	69¾
E	22¼	22½	27¼	29¾	32⅜	36½	39¼	43¼	49	53	58¾	65¼
F	15	16	18	19	20	23	26	28	30	33	36	51½
G	11	11½	12½	14	15½	17¼	19	21½	23	25½	28½	30½
H	13⅜	14⅜	15⅞	17⅜	18	21	22¾	24½	26¾	29	31	34
I	16	16	18¼	18¾	20	20½	23	23	25	26	26	26
J	3	3	4	4	4	4	6	6	6	6	6	6
K	9¼	10¼	11¼	12½	13½	15	16	18	20½	22	24	27
L	9¼	10¼	11¼	12½	13½	15	16	18	20½	22	24	27
M	3½	3¾	4¼	4½	5	5¾	6⅜	6⅝	7⅜	8¼	9½	10½
DRIVE SHAFT DIAMETER	1	1	1 3/16	1 3/16	1 7/16	1 7/16	1 11/16	1 11/16	1 15/16	1 15/16	1 15/16	2 3/16
SHIPPING WEIGHT POUNDS	170	205	230	400	550	600	650	720	850	1,000	1,380	1,610

DESIGNATION OF DIRECTION OF ROTATION AND DISCHARGE



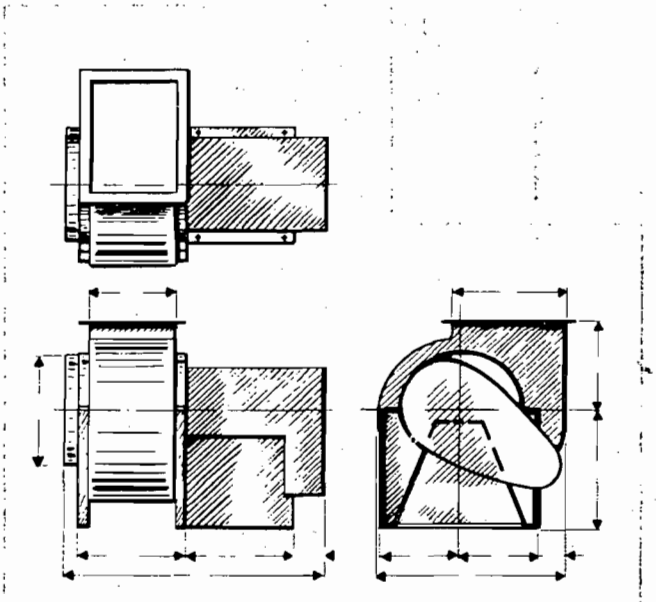
DIRECTION OF ROTATION IS DETERMINED FROM DRIVE SIDE

INLINE EXHAUST FANS

MID-RANGE CFM RECOMMENDED	2,550	3,842	4,648	5,614	6,948	8,424	10,242	12,644	15,300	18,718	22,761	27,822
FAN WHEEL DIAMETER	12¼	15	18¼	20	22¼	24½	27	30	33	36½	40½	44½
P	21"	28"	32½"	36½"	40"	47"	53"	55"	58"	63¾"	70"	78"
Q	14"	16"	20"	22"	24"	26"	30"	32"	36"	42"	46"	50"
R	18"	22"	26"	28"	32"	34"	38"	42"	45"	50"	56"	62"
S	2"	2"	2"	2"	2"	3"	3"	3"	3"	3"	3"	3"
T	23"	28"	31"	32"	34"	35"	37"	39"	40½"	45"	52"	63"
U	2"	2"	2"	2"	2"	3"	3"	3"	3"	3"	3"	3"
DRIVE SHAFT DIAMETER	1	1 3/16	1 7/16	1 7/16	1 11/16	1 11/16	1 15/16	1 15/16	1 15/16	2 3/16	2 3/16	2 7/16
SHIPPING WEIGHT POUNDS	90	130	290	320	350	380	450	525	730	850	1,110	1,250

DIMENSIONAL CHART

19,150	23,375	28,525	34,775	42,450	51,775	63,175	MID-RANGE CFM RECOMMENDED
36½	40¼	44½	49	54¼	60	66	FAN WHEEL DIAMETER
40	44½	49	54	60	66	72	A
30	34½	37½	40¾	44¾	49¾	54¾	B
39	43	47¼	52⅜	57⅝	63⅞	70¼	C
69¾	79¾	84¾	88	93	97⅜	104⅜	D
65¼	72½	79½	88¼	97	108	119	E
51½	42	49¾	49	54	59	64	F
30½	34½	37½	41	46	50½	55	G
34	40½	43½	46¾	50¾	53¾	60¾	H
26	27½	29½	29½	31¼	33	33	I
6	8	8	8	8	8	8	J
27	25¾	26¾	30	34	37	40	K
27	25¾	26¾	30	34	37	40	L
10¼	11¼	12¼	14⅝16	15⅝16	17⅝	19⅞	M
2³⁄16	2³⁄16	2⁷⁄16	2⁷⁄16	2¹⁵⁄16	2¹⁵⁄16	2¹⁵⁄16	DRIVE SHAFT DIAMETER
1,610	2,050	2,300	2,650	3,110	3,525	4,000	SHIPPING WEIGHT POUNDS

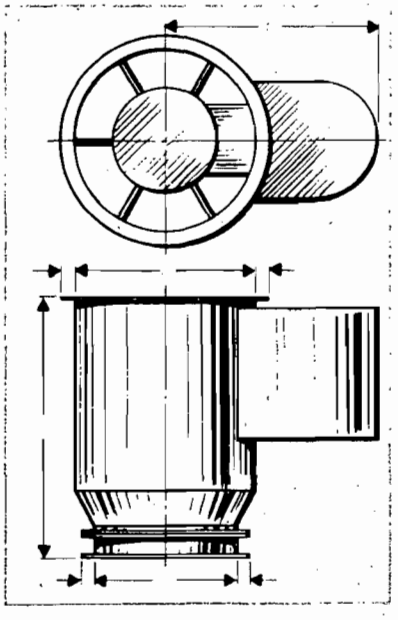


STANDARD CLASSIFICATIONS FOR SPARK RESISTANT CONSTRUCTION

Type	Construction
	All parts of the fan in contact with the air or gas being handled shall be made of non-ferrous material.
	The fan shall have an entirely non-ferrous wheel and non-ferrous ring about the opening through which the shaft passes.
	The fan shall be so constructed that a shift of the wheel or shaft will not permit two ferrous parts of the fan to rub or strike.

DIMENSIONAL CHART

27,822	33,733	41,349	50,579	61,201	MID-RANGE CFM RECOMMENDED
44½	49	54¼	60	66	FAN WHEEL DIAMETER
78"	84"	93"	104"	116"	P
50"	54"	60"	66"	72"	Q
62"	66"	72"	80"	88"	R
3"	3"	3"	3"	3"	S
63"	65"	68"	72"	76"	T
3"	3"	3"	3"	3"	U
2⁷⁄16	2⁷⁄16	2¹⁵⁄16	2¹⁵⁄16	2¹⁵⁄16	DRIVE SHAFT DIAMETER
1,250	1,420	1,650	1,800	2,100	SHIPPING WEIGHT POUNDS



EXHAUST FAN INTRODUCTION

Beverly Pacific's complete line of centrifugal and inline exhaust fans have proven their reliability with years of successful, continuous corrosive service throughout the nation and around the world.

Our solid "FRP" construction defies corrosion and each is designed to provide smooth, quiet and maintenance-free operation . . . this superior combination permits peak performance with the lowest possible power consumption.

A wide selection of standard models, types and sizes are available to meet your specific requirements.

FAN WHEEL SUPERIORITY

The Beverly Pacific fan wheels are fabricated of corrosion-resistant Fiberglass Reinforced Plastic (FRP) materials. The fan wheel design is that of a "backward curve blade," Class II construction, and are available in standard sizes of 12¼" through 66" diameters.

All of Beverly Pacific's fan wheels are both statically and dynamically balanced and run on a test stand prior to final assembly to insure continuous, vibration-free performance.

Every surface in contact with the air stream is corrosion resistant. The steel hub (providing the positive-lock connection to the drive shaft) is totally encapsulated in the wheel laminate and even the weight added during the wheel balancing process is corrosion resistant, Fiberglass Reinforced Plastic materials.

Should your particular requirement involve moving a volume of only a few hundred CFM at ¼" S.P. or over 80,000 CFM at 6" S.P., Beverly Pacific has a proven standard size to meet your requirement.

EXHAUST FANS STANDARD AND OPTIONAL EQUIPMENT

Standard Equipment: Beverly Pacific's centrifugal fans are equipped with a scroll bottom drain and flanged discharge outlet, and are furnished with a purchaser's choice of twelve (12) discharge outlet directions and a choice of right or left fan wheel rotation. Both of our fan styles, centrifugal and inline, are equipped with an OSHA approved belt guard and powered by 230-460/30/60 Hz motors . . . totally enclosed, fan-cooled, (TEFC) up to 20 horsepower, and Multi-guard motors are furnished when horsepower requirements are 25 or larger. Also, as standard equipment, Beverly Pacific furnishes the following list of first-line, top quality drive components which were selected based on motor horsepower, RPM, tip speed and weight of fan wheel, with a safety factor of 1.3 times the motor horsepower.

a. BEARINGS — Beverly Pacific furnishes Dodge-Type K pillow blocks on the inline model. These Dodge bearings have Timken-tapered roller bearings, are fully self-aligning and designed to meet the stringent demands of power transmission. Based on radial and thrust load computations, bearing life expectancy is in excess of 100,000 hours.

b. SHEAVES — Beverly Pacific Corporation furnishes Dodge sheaves, which are cast from the finest quality gray iron and machined to rigid quality control specifications. Groove design and spacing conforms to ASA, MPTA and RMA standards. These sheaves are equipped with Taper-Lock bushings, a superior mounting well recognized and widely used in industry.

c. V-BELTS — Beverly Pacific furnishes Dodge Sealed-Life Belts, Type A, B and C which have a longer wearing protective cover, crowned top, concave sidewall, exceptional stability and an improved cord section which prevents failures caused by cord separation.

d. WHEEL BACKING PLATES — Beverly Pacific uses Rex taper-lock, single-duty, Type B, steel sprocket, in the backing plate of all FRP fan wheels. This steel sprocket is completely embedded and encased with FRP materials to prevent corrosion attack.

e. DRIVE SHAFTS — Beverly Pacific uses ground and polished, 1045 TGP shafting rounds, as produced by Inland Steel. This medium carbon steel is used because of its greater strength and hardness. The mechanical properties, based on ¾" — 1¼" diameter round bars of 1045, include a tensile strength of 98,000 PSI, yield strength of 59,000 PSI and a Brinnel Hardness of 212.

OPTIONAL EQUIPMENT:

Optional exhaust fan components are available, at an additional cost, to meet the purchaser's special requirements.

a. CLEAN-OUT DOORS — To provide access to fan wheel and scroll interior in severe contaminant loading service.

b. WEATHER COVERS — To aid the protection of motor and power transmission drive components from environmental elements.

c. DISCHARGE TRANSITIONS — To convert the exhaust fan rectangular discharge opening for installation of cylindrical discharge stack.

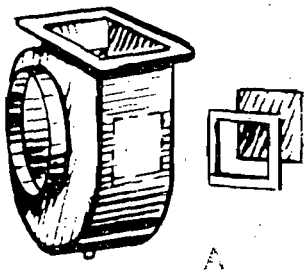
d. FLANGED INLETS — To provide a bolted connection between exhaust fan inlet and flanged exhaust duct.

e. VIBRATION ISOLATORS — To minimize operational noise level and vibration annoyance of mezzanine and/or roof-mounted installations.

f. DRIVE COMPONENTS — Purchaser preference of special drive components (other than Beverly Pacific's standards) may be substituted to meet those special requirements.

g. FLEX CONNECTORS — To provide a vibration-minimizing connection between flange-less duct and fan inlet or discharge outlet transition and stack.

h. ADJUSTABLE MOTOR BASE — To provide easier belt tension adjust or replacement.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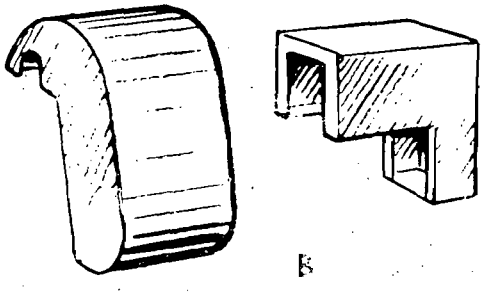
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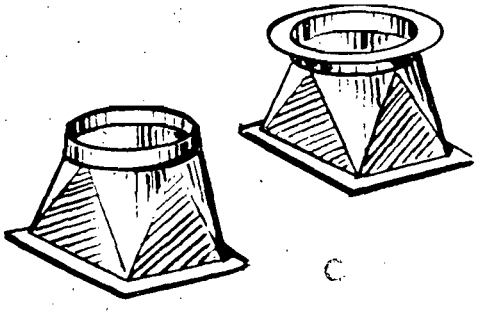
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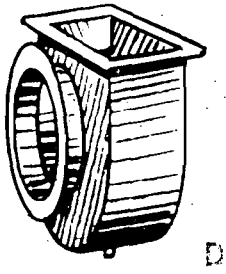
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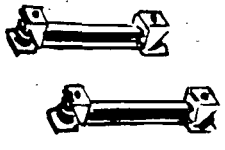
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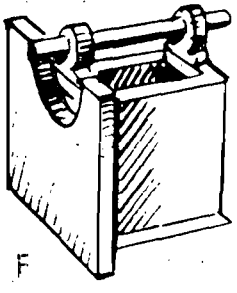
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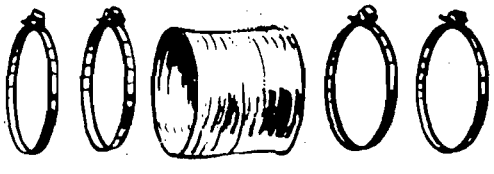
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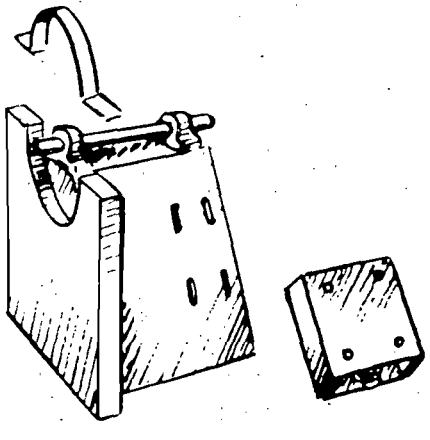
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AC 05-108260

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

ST. JOHNS RIVER DISTRICT
3319 MAGUIRE BOULEVARD
SUITE 232
ORLANDO, FLORIDA 32803

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

ALEX SENKEVICH
DISTRICT MANAGER

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Stationary [X] New[1] [ ] Existing[1]

APPLICATION TYPE: [X] Construction [ ] Operation [ ] Modification

COMPANY NAME: Harris Semiconductor COUNTY: Brevard

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) Building 63 West Assembly Scrubber

SOURCE LOCATION: Street Palm Bay Road City Palm Bay

UTM: East 17-538700 North 17-3100900

Latitude 28 ° 01 ' 20 "N Longitude 80 ° 36 ' 10 "W

APPLICANT NAME AND TITLE: J.R. Kolanek, Manager, Environmental Services

APPLICANT ADDRESS: P.O. Box 883, Melbourne, Florida 32901

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Harris Semiconductor

I certify that the statements made in this application for a construction permit are true, correct and complete to the best of my knowledge and belief. Further I agree to maintain and operate the pollution control source and pollution contro facilities in such a manner as to comply with the provision of Chapter 403, Florid Statutes, and all the rules and regulations of the department and revisions thereof. also understand that a permit, if granted by the department, will be non-transferabl and I will promptly notify the department upon sale or legal transfer of the permitte establishment.

*Attach letter of authorization

Signed: James R. Kolanek

J.R. Kolanek, Manager, Environmental Services
Name and Title (Please Type)

Date: 8/2/85 Telephone No. (305)724-7467

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project hav been designed/examined by me and found to be in conformity with modern engineerin principles applicable to the treatment and disposal of pollutants characterized in th permit application. There is reasonable assurance, in my professional judgment, that

[1] See Florida Administrative Code Rule 17-2.100(57) and (104)

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed Chester C Bach

Chester C. Bach, P.E.
Name (Please Type)

Harris Semiconductor
Company Name (Please Type)

P.O. Box 883, Melbourne, Florida
Mailing Address (Please Type)

Florida Registration No. 19110 Date: 8/2/85 Telephone No. (305)724-7324

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

Building 53 West Assembly utilizes laboratory type work stations to provide clean room conditions for the manufacture of Semiconductors. All chemicals are utilized in 1-2 gallon containers, vessel surface area exposed to exhaust is minimal. Air is exhausted via a 16,000 CFM wet fume scrubber located on the roof.

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction 8/1/85 Completion of Construction 12/1/85

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Scrubber/Fan - $16,000

Installation - $ 4,000

TOTAL - $20,000

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

See Attachment A for a complete list of current Harris Air Permits.

MQAB

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ;

if power plant, hrs/yr_____; if seasonal, describe: N/A

F. If this is a new source or major modification, answer the following questions. (Yes or No)

1. Is this source in a non-attainment area for a particular pollutant? No

   a. If yes, has "offset" been applied?

   b. If yes, has "Lowest Achievable Emission Rate" been applied?

   c. If yes, list non-attainment pollutants.

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. No

3. Does the State "Prevention of Significant Deterioriation" (PSD) requirement apply to this source? If yes, see Sections VI and VII. No

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? No

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? No

H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source? No

   a. If yes, for what pollutants?

   b. If yes, in addition to the information required in this form, any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other then Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
See Attachment B			3.462	See Attachment C

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): N/A

2. Product Weight (lbs/hr): N/A

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
Solvent Fumes	0.005	0.018	N/A	N/A	0.039	0.122	See
							Attachment
							C

[1]See Section V, Item 2.

[2]Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

[3]Calculated from operating rate and applicable standard.

[4]Emisaion, if source operated without control (See Section V, Item 3).

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
TRi-MER	Solvent	85%	N/A	Mfg.
Wet Fume Scrubber	Vapors			Design Data
Model F/W-5				
TRi-MER Blower				
Model 30				

E. Fuels N/A

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	

*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis:

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

Other Fuel Contaminants (which may cause air pollution): _____

F. If applicable, indicate the percent of fuel used for space heating. N/A

Annual Average _____ Maximum _____

G. Indicate liquid or solid wastes generated and method of disposal.

Low concentrations of solvent vapors are adsorbed by scrubber water. The scrubbers discharge to an on-site wastewater treatment system.

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: _____ ft. Stack Diameter: 2 ft.

Gas Flow Rate: 6,000 ACFM 14,000 DSCFM Gas Exit Temperature: 74 °F.

Water Vapor Content: 1 % Velocity: 31.6 FPS

SECTION IV: INCINERATOR INFORMATION

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq.& Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day _____ day/wk _____ wks/yr. _____

Manufacturer _____

Date Constructed _____ Model No. _____

	Volume $(ft)^3$	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ ft. Stack Diamter: _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity: _____ FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: [ ] Cyclone [ ] Wet Scrubber [ ] Afterburner

[ ] Other (epecify) _____

Brief description of operating characteristics of control devices: _____

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

SECTION V: SUPPLEMENTAL REQUIREMENTS

See Attachment D

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]

2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.

3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).

4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)

5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).

6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.

7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).

8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY N/A

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

[ ] Yes [ ] No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)

[ ] Yes [ ] No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration

D. Describe the existing control and treatment technology (if any).

1. Control Device/System:
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:

*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height: ft.

b. Diameter: ft.

c. Flow Rate: ACFM

d. Temperature: °F.

e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

[1]Explain method of determining efficiency.
[2]Energy to be reported in units of electrical power - KWH design rate.

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availsbility of construction materials and process chemicals:

j. Applicsbility to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:[1]

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:[2]

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

[1]Explain method of determining efficiency.
[2]Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

[1]Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION N/A

A. Company Monitored Data

1. _____ no. sites _____ TSP _____ ( ) SO^2* _____ Wind spd/dir

Period of Monitoring ____/____/____ to ____/____/____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

*Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

a. Was instrumentation EPA referenced or its equivelent? [ ] Yes [ ] No

b. Was instrumentation calibrated in accordance with Department procedures?

[ ] Yes [ ] No [ ] Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from ____/____/____ to ____/____/____
month day year month day year

2. Surface data obtained from (location)_____

3. Upper air (mixing height) data obtained from (location)_____

4. Stability wind rose (STAR) data obtained from (location)_____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate	
TSP	_____	grams/sec
SO^2	_____	grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

ATTACHMENT A

Revised 1/7/85

DEPARTMENT OF ENVIRONMENTAL REGULATION
CURRENT AIR PERMITS
HARRIS SEMICONDUCTOR

BUILDING #	PERMIT #	DATE ISSUED	PROCESS	EXPIRATION DATE
4	A005-36146		Silicon wafer grinding exhaust (System 1)	11/19/85
4	A005-36148		4-EPI reactors with 4 scrubbers (System 6)	11/18/85
4	A005-36149		4-EPI reactors with 4 scrubbers (System 7)	11/18/85
4	A005-36150		4-EPI reactors with 4 scrubbers (System 8)	11/18/85
4	A005-36152		Silicon wafer chemical treatment scrubber (System 9)	11/19/85
4	A005-36154		Silicon wafer chemical treatment exhaust (System 10)	11/19/85
4	A005-38485		OSI/Diff. expansion exhaust scrubber	4/8/86
6	A005-65409	4/15/83	R&D hot acid vapor exhaust scrubber	4/12/84
6	A005-38486	4/9/81	Thin film acid scrubber	4/8/86

Revised 1/7/85

DEPARTMENT OF ENVIRONMENTAL REGULATION
CURRENT AIR PERMITS
HARRIS SEMICONDUCTOR

BUILDING #	PERMIT #	DATE ISSUED	PROCESS	EXPIRATION DATE
6	A005-79768	3/28/84	Acid mist scrubber (System 1)	3/27/89
6	A005-79767	4/9/84	Acid/solvent scrubber (System 6)	4/5/89
51	A005-36163	11/26/80	Silicon wafer chemical treatment air washer (System 3)	11/21/85
51	A005-36165	12/1/80	Silicon wafer chemical treatment air washer (System 5)	11/21/85
51	A005-38487	4/9/81	Analog expansion exhaust system wet scrubber	4/8/86
51	A005-71405	9/13/83	Silicon wafer treatment solvent scrubber	9/12/88
54	A005-38488	4/9/81	East module dual scrubbers	4/8/86
54	A005-65408	5/3/83	West module dual scrubbers	5/2/88
60	A005-38489	4/9/81	Photo mask - Acid/VOC fume scrubber	4/8/86

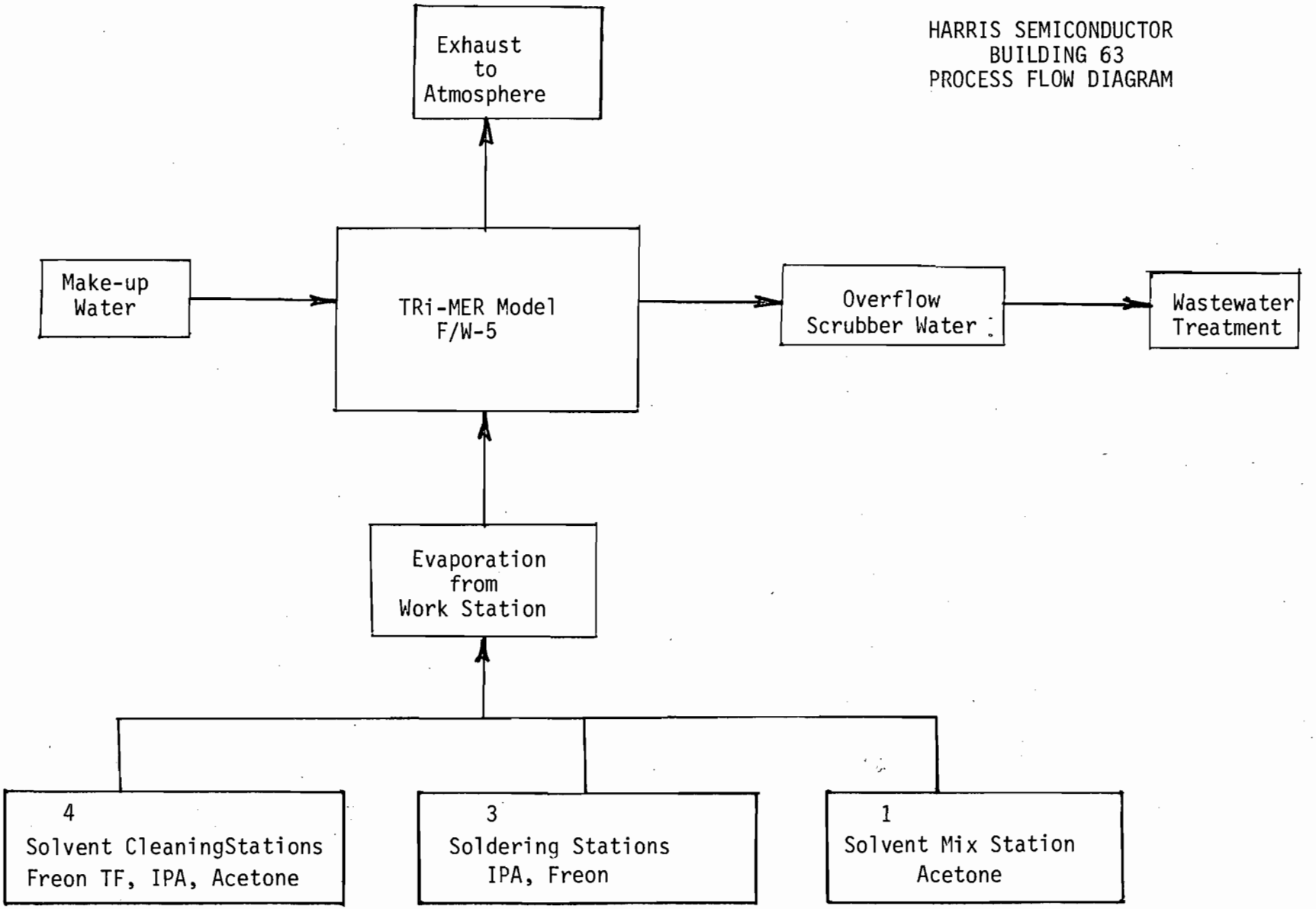
ATTACHMENT B

HARRIS SEMICONDUCTOR
BUILDING 63 WEST ASSEMBLY SCRUBBER

CHEMICAL	UTILIZATION RATE lb/hr	EMISSIONS lb/hr	EMISSIONS t/yr	POTENTIAL EMISSIONS lb/hr	POTENTIAL EMISSIONS t/yr
Freon TF	0.9344	.00055	.00175	0.00369	0.01169
IPA	2.4864	.00485	.01539	0.0324	0.1025
Acetone	0.0273	.00029	.00093	0.00196	0.0062
Methyl Alchol	0.0139	.00008	.00026	0.00055	0.0017
TOTAL	3.462	0.00577	0.01833	0.0386	0.12209

ATTACHMENT C

HARRIS SEMICONDUCTOR
BUILDING 63
PROCESS FLOW DIAGRAM



NOTE: All concentrated chemicals are collected for recycle or disposal.

ATTACHMENT D

BUILDING 63 WEST ASSEMBLY

1. Scrubbers are operated 24 hours/day, 365 days/year. Emissions calculations are based on a production schedule of 8 hours/day, 22 days/month, 12 months/year or 6336 hours/year.

2. Chemical usage are based on a survey of similar types of operations currently employeed at other locations at the facility.

3. Basis of Potential Emissions -

   A non moving, static diffusion film of air over the surface of the chemicals, as a result of the laminar flow hoods, creates a diffusion barrier which reduces the normal rate of evaporation at any given temperature. Therefore, the assumption is made that the effective vapor pressure of the vapor at the top of the static diffusion film is only 30% at the surface of the liquid.

4. Calculations of Emissions -

$$\text{Mass Liquid Evaporated/Time} = \frac{0.3\ (P1)}{Pt} \times \frac{\text{Mass Liquid}}{\text{Time}}$$

   P1 = Saturated Vapor Pressure of Liquid

   Pt = Total Atmospheric Temperature

5. Reference material used were Material Safety Data Sheets of Chemicals in Question and the fifth Edition of Properties of Industrial Chemicals by N. Irving Sax.

6. If verification of solvent vapors is required, it will be accomplished through a sampling and analytical program.

7. Scrubber efficiencies are provide by the manufacturer.

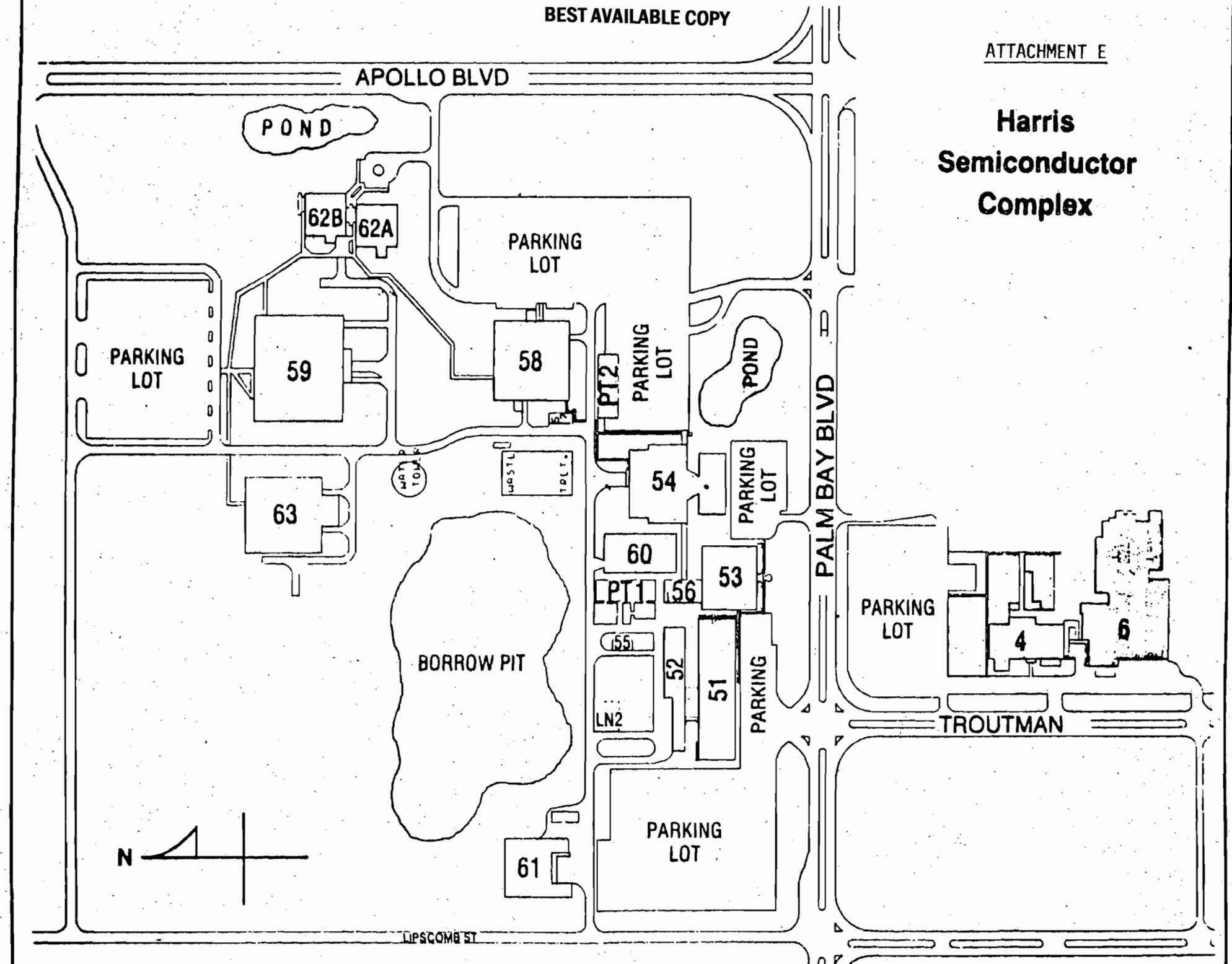
8. Potential emissions are equal to the evaporation rate of the chemical times the utilization rate.

8/2/85

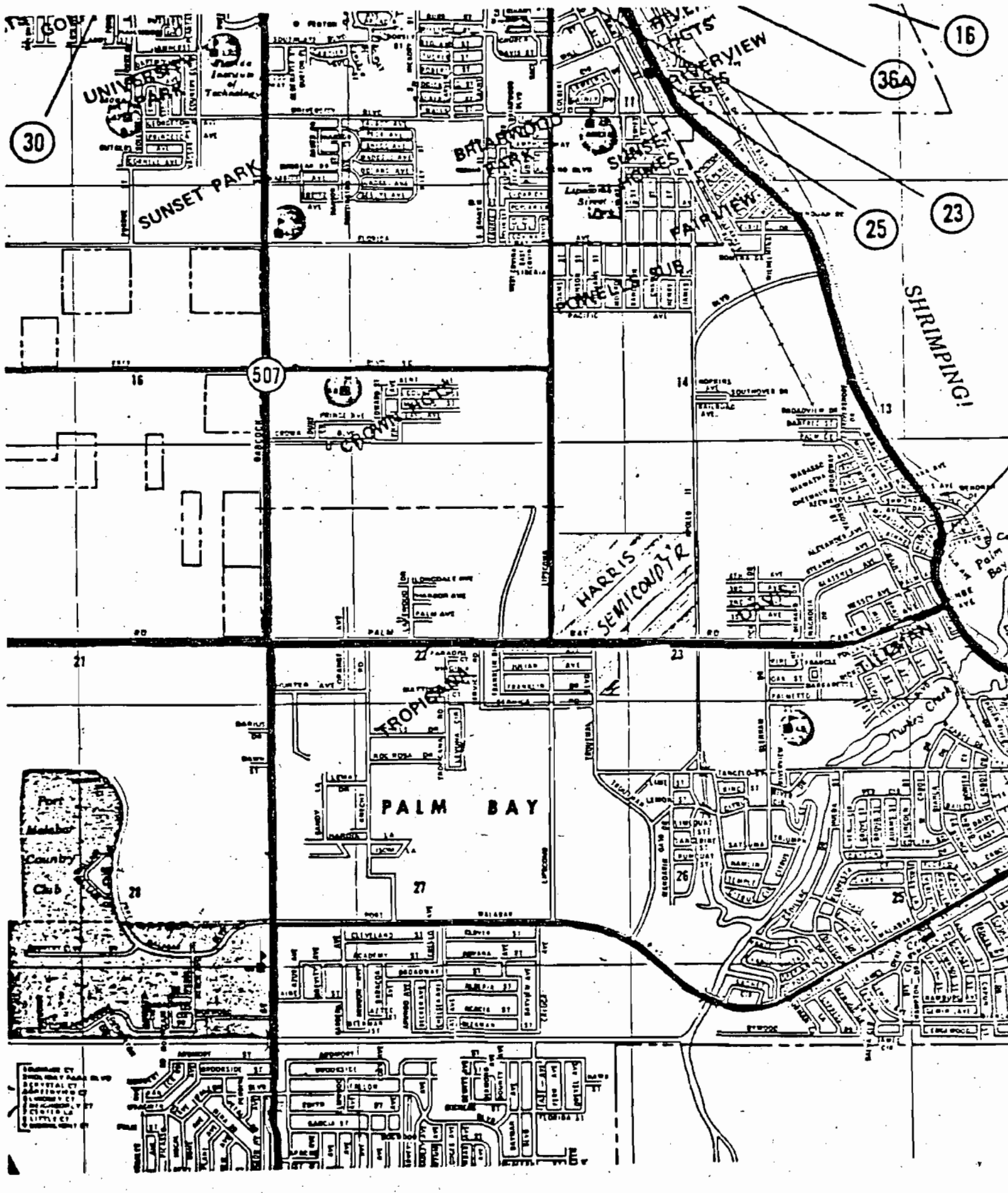
BEST AVAILABLE COPY

ATTACHMENT E

Harris Semiconductor Complex



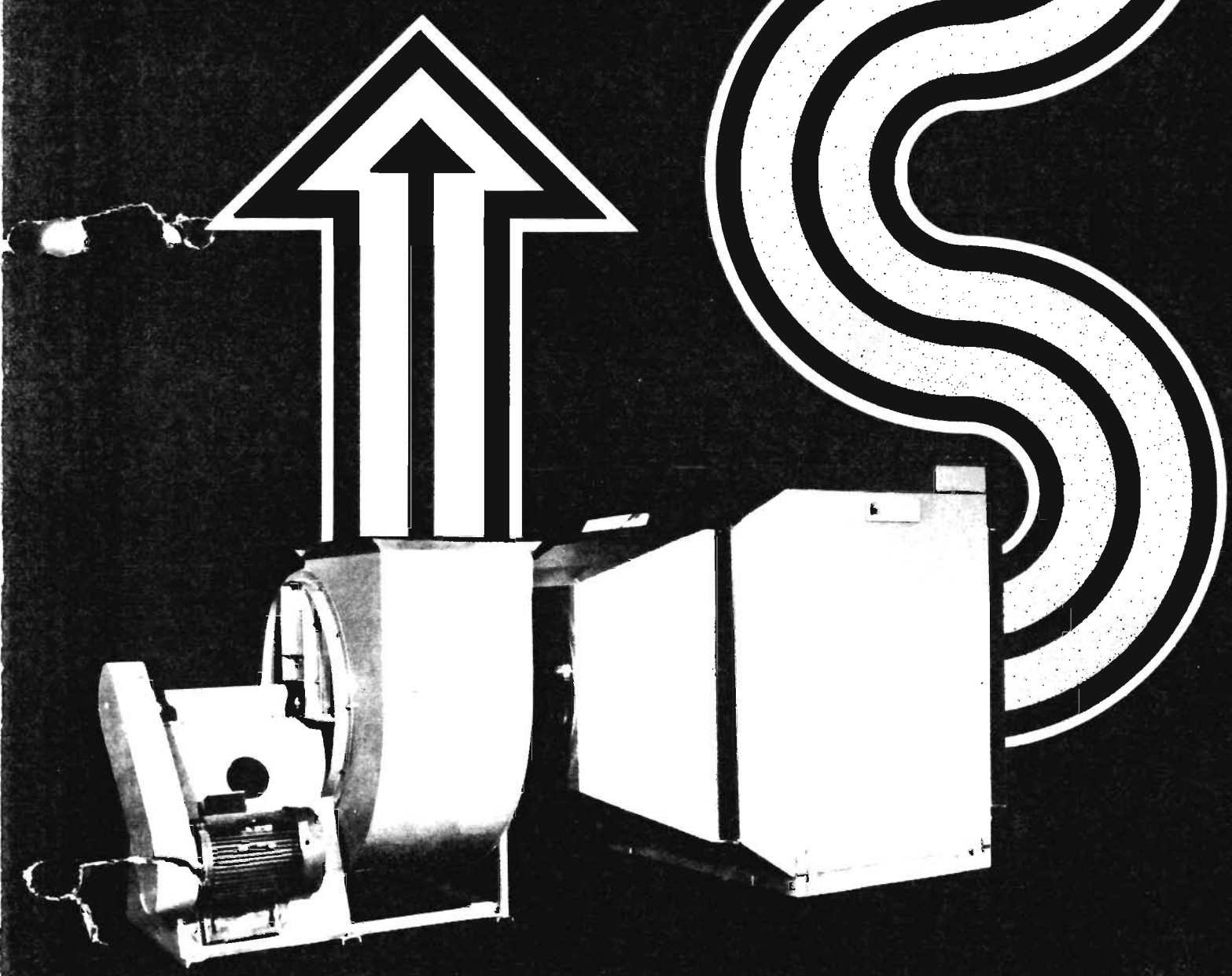
ATTACHMENT F



AREA MAP SHOWING FACILITY SITE

HARRIS SEMICONDUCTOR

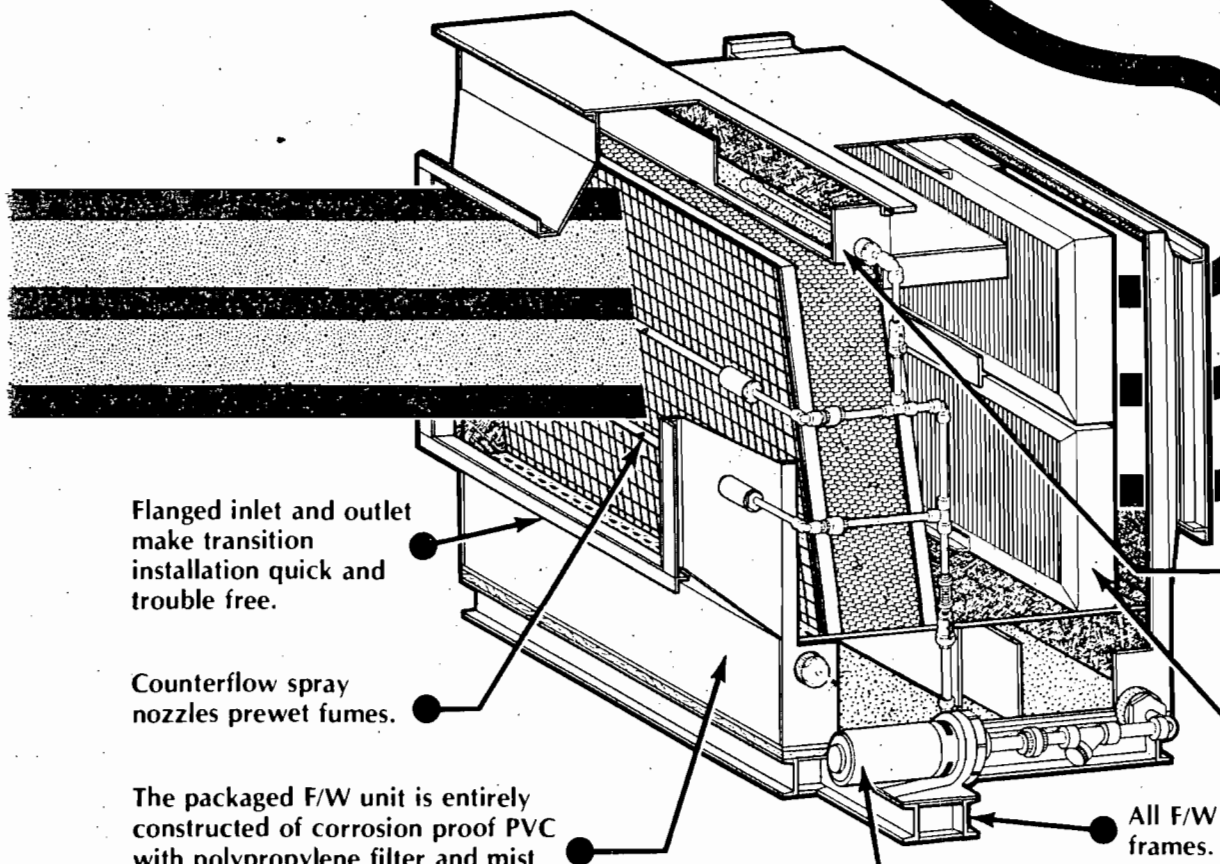
The Tri-Mer Fume Washer



Designers and Manufacturers of Corrosion Control Systems

Design Features of the Tri-Mer Fume Washer

TRI-MER fume washers offer an efficient economically packaged solution to your corrosive fume problems. Couple this unit to a TRI-MER all PVC fan, or use your existing fan, and you're ready for operation. A simple inexpensive installation.



Flanged inlet and outlet make transition installation quick and trouble free.

Counterflow spray nozzles prewet fumes.

The packaged F/W unit is entirely constructed of corrosion proof PVC with polypropylene filter and mist eliminator packs.

An overflow weir keeps the polypropylene filter pack flooded with water.

Downstream mist eliminator packs pull excess moisture from the air stream.

All F/W units come with self supporting frames.

Units through Model F/W-9 are available with integral recirculation tank and pump as shown.

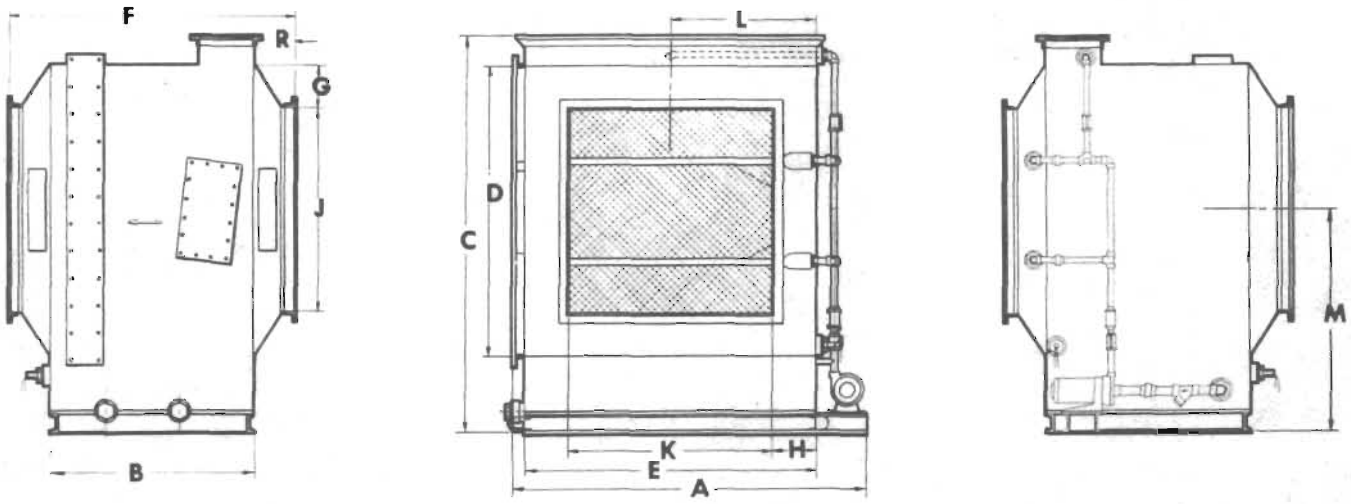
NOTE — Models F/W-10 through F/W-16 require remote recirculation tanks per manufacturers suggestion.

F/W with integral recirculation tank.

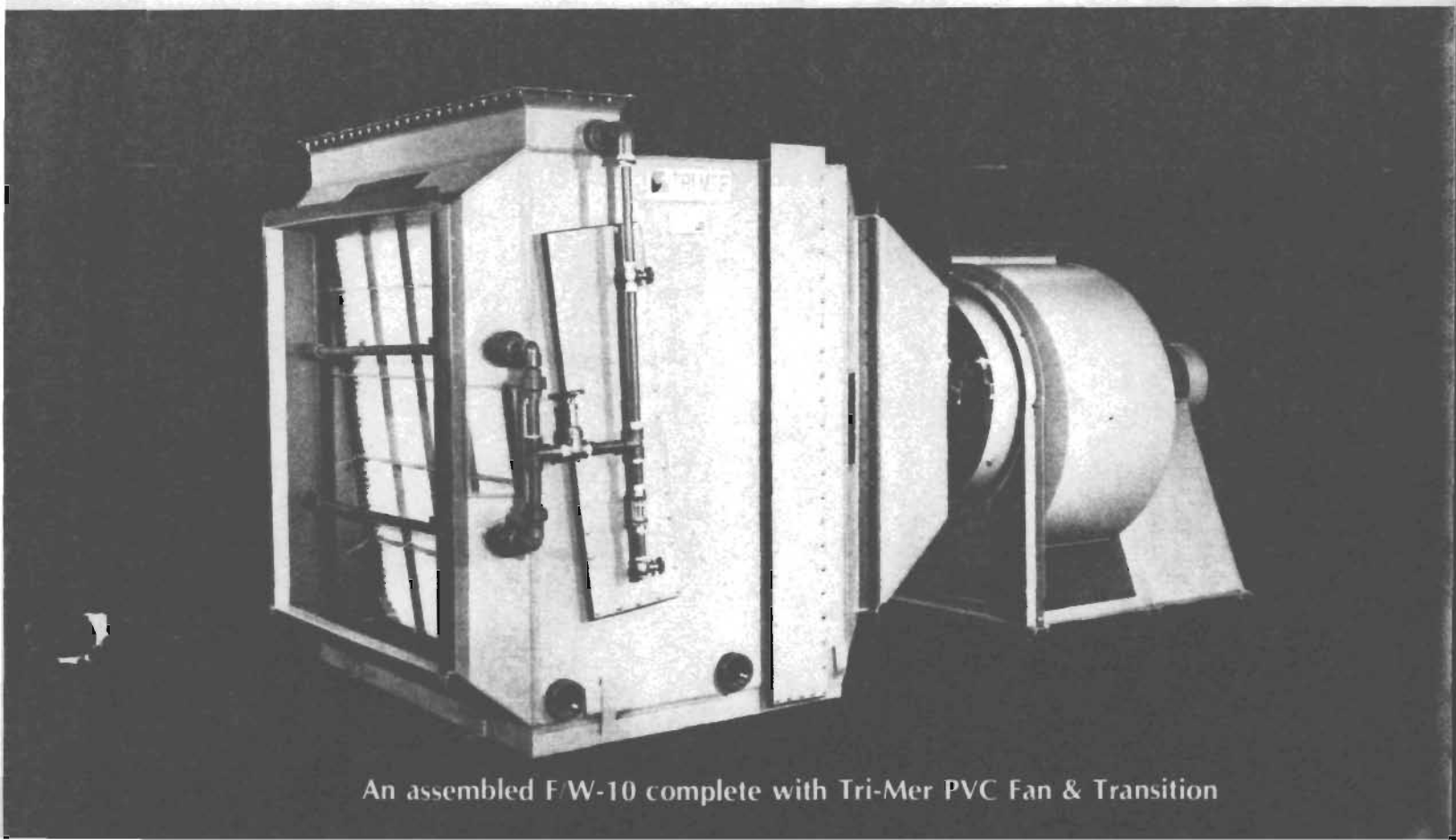
F/W	A		B	C	D	E	F	G	H	J	K	L	M		R	CHANNEL	ANGLE	DRAIN	G.P.M.	No. OF HEADERS	PIPE	CFM CAPACITY
1	3'-11½"	4'-4½"	3'-6"	4'-3"	5'-3"	3'-4"	3'-4"	4'-10"	6"	6"	28°	28°	1'-8"	2'-0¾"	3'-0¾"	8"	4"@5.4#	1½"x1½"x3/16"	3"	8	2	¾"	3,000 to 5,500
2	4'-3½"	4'-8½"	3'-10"	4'-6¾"	5'-6¾"	3'-8"	3'-4"	5'-2"	4½"	4½"	35°	35°	1'-10"	2'-2¾"	3'-2¾"	8"	4"@5.4#	1½"x1½"x3/16"	3"	9	2	¾"	5,500 to 7,000
3	5'-0½"	5'-5½"	3'-6"	5'-3¾"	6'-3¾"	4'-5"	4'-5"	4'-10"	8"	8"	37°	37°	2'-4½"	2'-7¼"	3'-7¼"	8"	4"@5.4#	1½"x1½"x3/16"	3"	12	2	¾"	7,000 to 9,500
4	5'-6"	5'-11"	4'-0"	5'-8¾"	6'-8¾"	4'-10"	4'-10"	5'-6"	6½"	6½"	45°	45°	2'-5"	2'-9¾"	3'-9¾"	9"	4"@5.4#	2"x2"x¼"	3"	14	2	¾"	9,500 to 11,500
5	6'-0"	6'-5"	3'-8½"	6'-2¾"	7'-2¾"	5'-4"	5'-4"	5'-2½"	9½"	9½"	45°	45°	2'-8"	3'-0¾"	4'-0¾"	9"	4"@5.4#	2"x2"x¼"	3"	16	2	¾"	11,500 to 14,000
6	6'-8"	7'-1"	4'-1½"	6'-10¾"	7'-10¾"	6'-0"	6'-0"	6'-1½"	11"	11"	50°	50°	3'-0"	3'-4¾"	4'-4¾"	1'-0"	4"@5.4#	2"x2"x¼"	3"	19	2	¾"	14,000 to 17,000
7	6'-11"	7'-5"	3'-10¾"	7'-3"	8'-3"	6'-4"	6'-4"	5'-10⅜"	11"	11"	54°	54°	3'-2"	3'-6¾"	4'-6¾"	1'-0"	4"@5.4#	2"x2"x¼"	3"	22	2	¾"	17,000 to 20,000
8	7'-8"	8'-1"	4'-3"	7'-10¾"	8'-10¾"	7'-0"	7'-0"	6'-3"	1'-0½"	1'-0½"	59°	59°	3'-6"	3'-9¾"	3'-9¾"	1'-0"	4"@5.4#	2"x2"x¼"	3"	28	2	¾"	20,000 to 24,000
9	8'-5"	9'-0"	4'-0¾"	8'-8"	9'-8"	7'-9"	7'-9"	6'-0¾"	1'-1½"	1'-1½"	66°	66°	3'-10½"	4'-2¾"	5'-2¾"	1'-0"	4"@5.4#	2"x2"x¼"	3"	34	3	¾"	24,000 to 30,000
10	9'-7"		4'-5"	9'-11⅝"		8'-11"	8'-11"	6'-5"	1'-3½"	1'-3½"	76°	76°	4'-5½"	5'-0¼"		1'-0"	6"@8.2#	2"x2"x¼"	3"	44	3	1"	30,000 to 40,000
11	12'-1"		4'-2½"	9'-9¾"		8'-9"	11'-5"	6'-2½"	10"	2'-2"	85°	85°	5'-8"	4'-11¼"		1'-0"	6"@8.2#	2"x2"x¼"	3"	56	3	1"	40,000 to 50,000
12	14'-5"		4'-5½"	9'-9¾"		8'-9"	13'-9"	8'-5½"	10"	2'-7½"	85°	102°	6'-10½"	4'-11¼"		2'-0"	6"@8.2#	2"x2"x¼"	3"	66	3	1"	50,000 to 60,000
14	17'-9"		4'-5½"	9'-9¾"		8'-9"	17'-1"	8'-5½"	10"	3'-2½"	85°	128°	8'-5½"	4'-11¼"		2'-0"	6"@8.2#	2"x2"x¼"	3"	81	3	1"	60,000 to 75,000
15	20'-8"		4'-2½"	9'-9¾"		8'-9"	19'-10"	8'-2½"	10"	3'-9½"	85°	147°	9'-11"	4'-11¼"		2'-0"	6"@8.2#	2"x2"x¼"	3"	93	3	1½"	75,000 to 87,000
16	20'-8"		4'-7"	11'-0¾"		10'-0"	20'-0"	8'-7"	1'-5½"	3'-0"	85°	240°	10'-0"	5'-6¾"		2'-0"	6"@8.2#	2"x2"x¼"	3"	106	3	1½"	87,000 to 100,000

* NOTE — For exact unit weight check with manufacturers.

* NOTE — Double pack models are available where particularly heavy loadings exist. Check with manufacturer for dimensional changes.



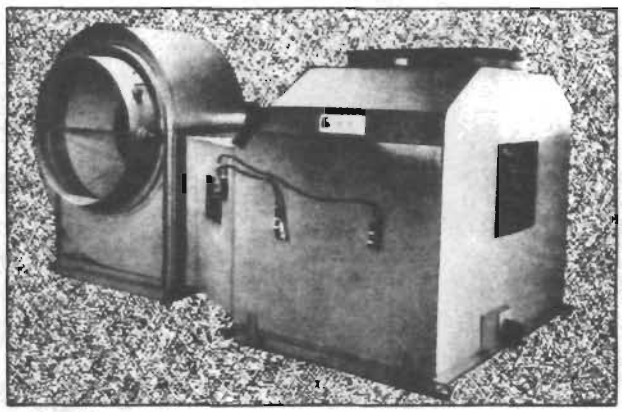
Typical three view drawing of units with integral recirculation tanks.



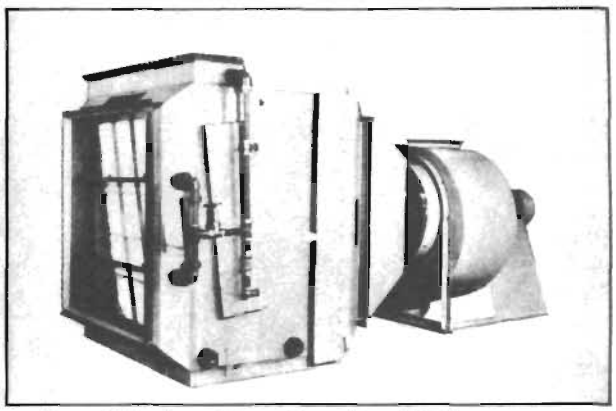
An assembled F/W-10 complete with Tri-Mer PVC Fan & Transition

Other TRI-MER PVC Equipment

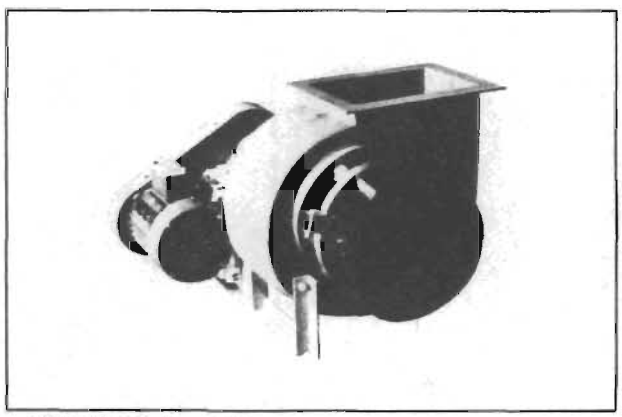
As long time specialists in designing corrosive fume control systems, TRI-MER offers a complete line of PVC air movers and associated equipment. This includes the patented fan/separator (fume scrubber), fume washers (crossflow scrubbers), PVC centrifugal fans, an *all PVC* stack fan, as well as PVC hoods and duct. Special fabrications such as consoles, tanks, and small plating lines are available.



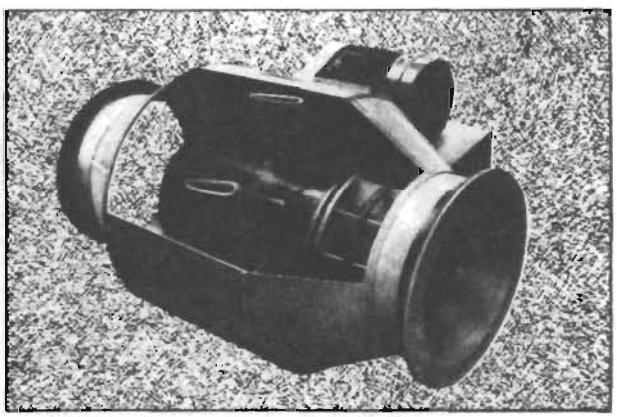
Fan/Separator



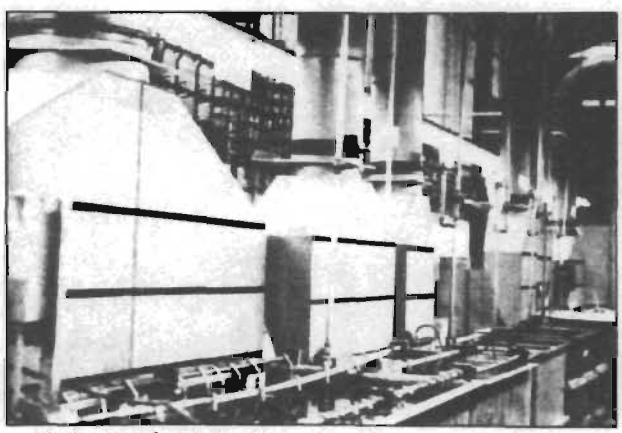
Fume/Washer (Crossflow Scrubber)



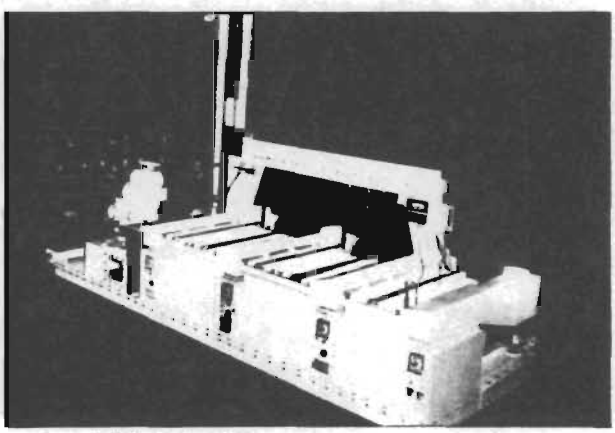
PVC Centrifugal Fan



PVC Stack Fan (Cutaway View)



PVC Hoods & Duct



Special Fabrications

Tri-Mer Corporation
Factory and Main Offices
1400 Monroe, Owosso, Michigan 48867
Phone (517) 723-7838 Telex 228545

Tri-Mer Corporation
California Sales Offices
P.O. Box 1152, Costa Mesa, California 92626
Phone: (714) 548-5853

EUROPEAN REPRESENTATIVE
JAEGER K. G.
D BRAUNSCHWEIG, WEST GERMANY

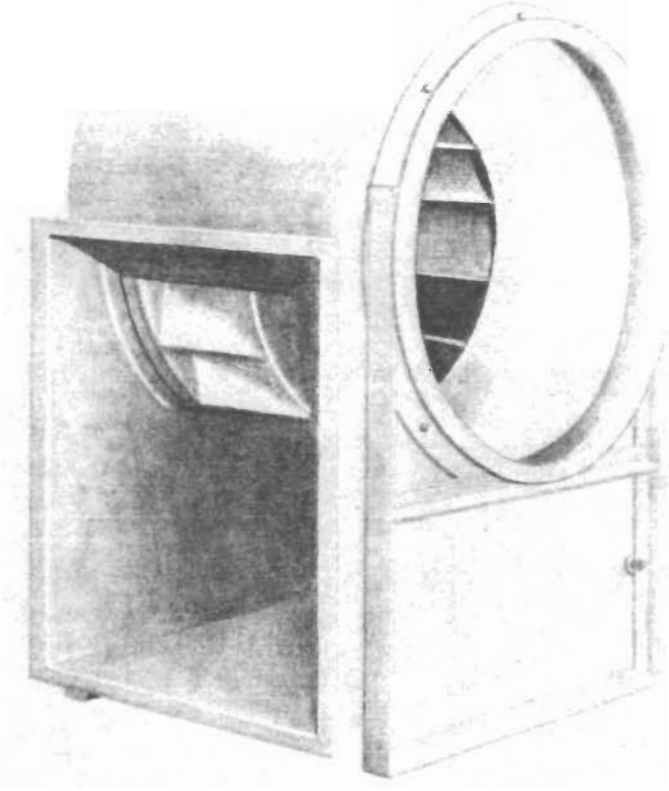
Litho in U.S.A.

PVC

UNPLASTICIZED POLYVINYL CHLORIDE

NON-OVERLOADING BLOWERS

(BACKWARD INCLINED BLADES)



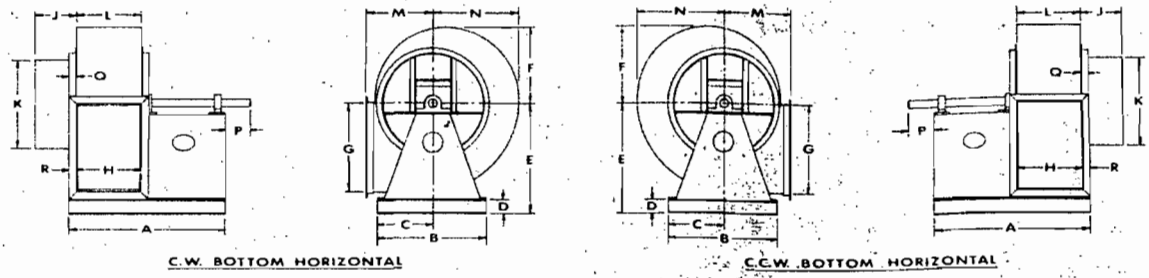
® Tri-Mer® Corporation

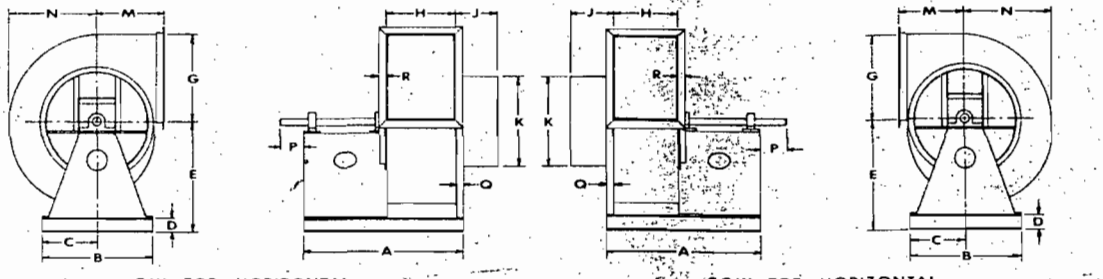
Air Pollution Control Systems

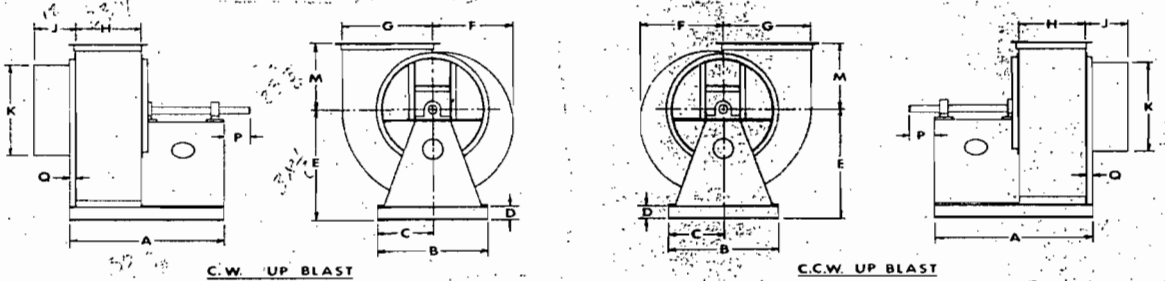
DESIGN • ENGINEERING • MANUFACTURING

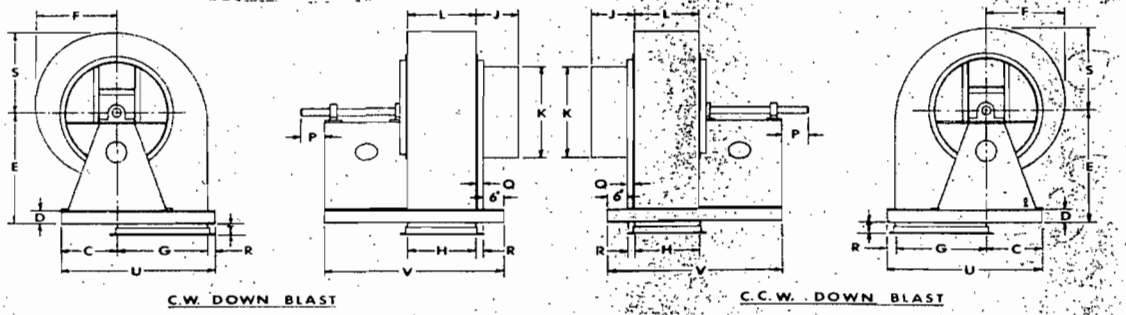
1400 Monroe Street • Owosso, Michigan 48867 • 517-723/5124 • Telex 228545

SWSI ARRANGEMENT 1









DIMENSIONS — CLASS II

CERTIFIED PRINTS FURNISHED UPON REQUEST

MODEL Nº	WHEEL DIA	SHAFT DIA	KEYWAY	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V
105	10 1/2	1	1/4 X 1/8 X 3 1/2	21 5/8	12	6	4	15 1/2	8 1/4	11 1/2	8 3/8	12	11	8 5/8	9	10 1/4	4	—	1 1/2	10 1/4	3	19	27 5/8
122	12 1/4	1	1/4 X 1/8 X 3 1/2	28 3/8	16	8	4	19 9/16	10	13	9 3/8	12	13	9 3/8	10 1/2	11 3/8	4	1 1/4	1 1/2	11 3/8	3	22 1/2	34 3/8
150	15	1 7/16	3/8 X 3/16 X 3 1/2	31 1/2	20	10	4	22 1/2	12 1/4	16	11 3/4	12	16	11 3/4	12 3/8	14	4	1 1/4	1 1/2	14	3	27 1/2	37 1/2
182	18 1/4	1 7/16	3/8 X 3/16 X 3 1/2	34 1/4	25	12 1/2	4	26	15	19 1/2	14 1/4	12	19	14 1/4	14 3/8	17	4	1 1/2	1 1/2	17	3	33 1/2	40 1/4
222	22 1/4	1 11/16	3/8 X 3/16 X 3 1/2	41 1/4	30	15	4	30 1/4	18 1/4	23 3/4	17 1/8	12	24	17 1/4	17 1/4	20 3/4	4	1 1/2	2	20 3/4	4	40 3/4	47 1/4
245	24 1/2	1 11/16	3/8 X 3/16 X 3 1/2	45 1/8	32	16	4	32 5/8	20 1/8	26 1/8	19 1/8	12	26	19 1/8	19 1/4	22 3/4	4	2	2	22 3/4	4	44 1/8	51 1/8
270	27	1 15/16	1/2 X 1/4 X 3 1/2	48 3/4	34	17	4	34 3/8	22	28 1/4	21 1/4	12	28	21 1/4	21 1/2	25 1/4	4 3/4	2	2	25 1/4	4	47 1/4	54 3/4
300	30	1 15/16	1/2 X 1/4 X 4	50 7/8	40	20	4	38 1/2	24 3/8	32	23 3/8	12	32	23 3/8	23 3/8	28	5 1/4	2	2	28	4	54	56 7/8
330	33	2 3/16	1/2 X 1/4 X 4	54 7/8	44	22	4	41 1/2	27	35	25 7/8	12	35	25 7/8	25 5/8	30 3/4	4 1/2	2	2	30 3/4	4	59	60 7/8
365	36 1/2	2 7/16	5/8 X 3/16 X 4 1/2	57 1/2	50	25	4	45 1/2	29 7/8	39	28 1/2	12	39	28 1/2	28	34	4 1/2	2	2	34	4	66	63 1/2
402	40 1/4	2 11/16	5/8 X 3/16 X 4 1/2	62 1/8	54	27	4	49 1/2	32 7/8	43	31 1/8	12	44	31 1/8	30 3/8	37 1/2	5 1/2	2	2	37 1/2	4	72	68 1/8
445	44 1/2	2 11/16	5/8 X 3/16 X 5	67 1/2	59	29 1/2	4	54	36 1/4	47 3/8	35	12	48	35	34	41 1/4	5 1/2	2 1/2	2	41 1/4	4	78 7/8	73 1/2
490	49	2 15/16	3/4 X 3/8 X 5	72 1/2	69	34 1/2	4	58 3/4	40 3/8	52 1/4	38 1/2	12	53	38 1/2	37 1/8	45 3/4	5 1/2	2 1/2	2	45 3/4	4	88 3/4	76 1/2
540	54	3 3/16	3/4 X 3/8 X 5	77 3/4	69	34 1/2	6	66 7/8	44 1/2	58 3/8	43 3/4	12	60	43 3/4	43 1/2	50	5 1/2	2 1/2	2	50	4	94 7/8	83 3/4
600	60	3 7/16	3/4 X 3/8 X 5	80 1/4	75	37 1/2	6	73 3/4	46 3/4	64 3/4	45 3/4	12	64	45 3/4	46	53 1/2	6 1/2	2 1/2	2	53 1/2	4	104 1/4	86 1/4

1974

REVISED 1-1-74

WHY SPECIFY A TRI-MER BLOWER

Summarizing our unique combination of product benefits, TRI-MER blowers offer you . . .

Exceptional Corrosion Resistance
Compatability With Pollution Control Systems
Fire Retardancy
Excellence in Design and Materials
Easy Installation and Maintenance
Quality Control and Fine Balance
Wide Range of Sizes and Discharge Configurations
Broad Selection of Accessories

NOW LET'S LOOK AT PERFORMANCE
HERE ARE SOME FACTS YOU NEED TO KNOW:

When ordering a blower, most buyers are concerned with three parameters; C.F.M., static pressure, and horsepower required. Occasionally outlet velocity may be important. C.F.M. concerns the volume of air you wish to move, static pressure corresponds to pressure drop, and horsepower required relates to efficiency.

Static pressure or resistance to air flow in a system is usually measured in inches of water. It equals the sum of all the pressure losses due to friction through the ductwork including straight sections, restrictions, and turns. Static pressure is sometimes calculated, sometimes estimated, and sometimes measured on an equivalent system. Whatever your method of determining your requirement, our **backwardly-inclined non-overloading** wheel design will protect your operation if system changes occur. In the event of static pressure change, only the C.F.M. and velocity will be altered; horsepower requirement remains essentially the same for the fan speed selected originally.

The table below illustrates this power limiting principle used in our Type I unplasticized PVC fans. **Note that color band on chart corresponds to best selection bands (shaded areas) on capacity tables.**

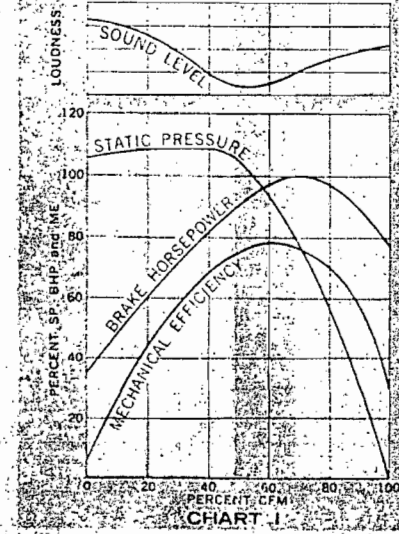


CHART I
TYPICAL FAN PERFORMANCE

Design and Performance

Moderate Efficiency in Working Range — maximum efficiency level covers best selection area of static pressure curve, well to the right of peak allowing ample pressure reserve at most efficient rating points.

Lowest Sound Level in Working Range — Lowest sound level falls in best pressure selection range.

Non-overloading Horsepower Characteristic — brake horsepower levels off at at point that allows economical selection of motors that will not overload if system changes occur.

CAPACITY TABLES

TRI-MER CORPORATION
Air Pollution Control Systems

SIZE 30

Wheel Diameter — 30" | Wheel Circumference — 7.85 | Inlet Diameter — 33⅜" | Fan Outlet Area — 5.17 sq. ft. | Safe RPM — 1530 | Maximum BHP — 5.25 $\left(\frac{RPM}{1000}\right)^3$

CFM	OV	¼" SP		⅜" SP		½" SP		⅝" SP		¾" SP		1" SP		2" SP		3" SP		4" SP		5" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4136	800	400	.32	435	.42	467	.53	496	.64	525	.75	579	.99										
4653	900	432	.39	466	.51	496	.63	523	.75	550	.87	600	1.13	785	2.32								
5170	1000	465	.48	497	.61	526	.74	552	.87	577	1.01	625	1.28	797	2.52								
5687	1100	498	.57	528	.72	556	.86	582	1.01	607	1.15	651	1.45	813	2.75	962	4.27						
6204	1200	532	.69	561	.84	588	1.01	613	1.16	636	1.32	680	1.63	833	3.01	972	4.55	1105	6.33				
6721	1300	566	.82	594	.98	620	1.15	644	1.33	667	1.49	709	1.84	855	3.27	987	4.88	1113	6.69				
7238	1400	602	.97	628	1.15	653	1.33	676	1.51	698	1.69	740	2.07	880	3.58	1006	5.24	1124	7.07	1240	9.11		
7755	1500	638	1.14	662	1.33	686	1.52	708	1.72	730	1.91	770	2.31	906	3.91	1027	5.64	1140	7.52	1250	9.57	1354	11.8
8272	1600	675	1.34	697	1.53	720	1.73	741	1.94	762	2.15	801	2.57	934	4.26	1050	6.06	1158	7.97	1262	10.1	1363	12.3
9306	1800	749	1.81	769	2.01	788	2.22	808	2.45	828	2.68	864	3.15	992	5.05	1099	6.98	1202	9.07	1296	11.2	1390	13.5
10340	2000	824	2.37	842	2.59	860	2.83	877	3.07	895	3.31	930	3.84	1051	5.93	1155	8.05	1250	10.3	1340	12.6	1427	15.1
11374	2200	900	3.06	916	3.29	931	3.54	948	3.81	964	4.08	997	4.63	1113	6.92	1212	9.23	1304	11.6	1389	14.1	1469	16.6
12408	2400	978	3.91	991	4.14	1005	4.38	1021	4.68	1035	4.96	1064	5.54	1177	8.05	1272	10.5	1359	13.1	1440	15.7	1518	18.4
13442	2600	1055	4.86	1066	5.09	1079	5.37	1093	5.66	1106	5.96	1135	6.61	1240	9.26	1335	12.1	1419	14.8	1496	17.5		
14476	2800	1132	5.97	1144	6.26	1155	6.53	1168	6.85	1181	7.17	1206	7.82	1305	10.6	1396	13.6	1479	16.5				
15510	3000	1210	7.27	1220	7.54	1232	7.87	1242	8.16	1254	8.51	1277	9.19	1373	12.2	1460	15.3						
16544	3200	1288	8.73	1297	9.02	1308	9.36	1317	9.66	1329	10.1	1350	10.7	1439	13.9	1525	17.2						
17578	3400	1366	10.4	1375	10.7	1385	11.1	1395	11.4	1403	11.7	1424	12.5	1508	15.7								

BHP shown does not include belt drive loss.

TRI-MER CORPORATION
Air Pollution Control Systems

SIZE 33

Wheel Diameter — 33" | Wheel Circumference — 8.63 | Inlet Diameter — 36⅝" | Fan Outlet Area — 6.26 sq. ft. | Safe RPM — 1390 | Maximum BHP — 8.54 $\left(\frac{RPM}{1000}\right)^3$

CFM	OV	¼" SP		⅜" SP		½" SP		⅝" SP		¾" SP		1" SP		2" SP		3" SP		4" SP		5" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5008	800	348	.35	380	.47	410	.59	438	.72	466	.85	518	1.12										
5634	900	375	.43	405	.56	434	.71	460	.84	485	.98	534	1.27										
6260	1000	403	.52	432	.67	459	.82	483	.97	507	1.12	553	1.44	717	2.84								
6886	1100	432	.64	459	.79	484	.96	508	1.12	531	1.29	574	1.62	728	3.11								
7512	1200	461	.76	486	.93	510	1.11	533	1.29	555	1.46	596	1.83	742	3.37	876	5.14						
8138	1300	492	.91	515	1.09	538	1.28	560	1.47	581	1.66	621	2.06	760	3.68	886	5.51	1005	7.55				
8764	1400	522	1.08	544	1.27	566	1.46	587	1.67	607	1.88	645	2.29	778	4.02	899	5.91	1012	7.99				
9390	1500	554	1.27	574	1.47	594	1.68	614	1.89	634	2.11	671	2.56	800	4.39	914	6.34	1023	8.48	1126	10.8		
10016	1600	585	1.48	604	1.69	624	1.91	643	2.14	661	2.37	697	2.85	821	4.77	932	6.81	1036	9.01	1136	11.4	1231	13.9
11268	1800	650	2.01	667	2.22	684	2.46	700	2.71	717	2.96	750	3.48	868	5.63	971	7.84	1069	10.2	1160	12.7	1248	15.3
12520	2000	716	2.64	730	2.87	743	3.12	761	3.39	776	3.67	806	4.23	917	6.59	1015	9.02	1105	11.5	1191	14.1	1275	16.9
13772	2200	783	3.42	795	3.66	808	3.92	822	4.22	836	4.49	864	5.12	969	7.68	1062	10.3	1147	13.1	1228	15.8	1306	18.6
15024	2400	848	4.32	860	4.61	873	4.91	885	5.17	898	5.51	923	6.12	1021	8.88	1112	11.8	1193	14.6	1270	17.6	1345	20.7
16276	2600	916	5.43	927	5.71	937	5.99	948	6.31	960	6.61	983	7.28	1076	10.2	1162	13.3	1240	16.4	1315	19.6	1385	22.8
17528	2800	983	6.66	993	6.96	1003	7.27	1013	7.61	1024	7.93	1045	8.65	1133	11.8	1214	15.1	1291	18.4	1362	21.8		
18780	3000	1050	8.11	1060	8.42	1069	8.75	1078	9.09	1088	9.44	1108	10.2	1188	13.4	1268	16.9	1342	20.5				
20032	3200	1119	9.77	1127	10.1	1136	10.4	1144	10.8	1153	11.1	1172	11.9	1247	15.3	1322	18.9						
21284	3400	1186	11.6	1195	12.1	1203	12.3	1212	12.7	1218	13.1	1236	13.9	1306	17.3	1378	21.2						

BHP shown does not include belt drive loss.

TRI-MER CORPORATION
Air Pollution Control Systems

SIZE 36

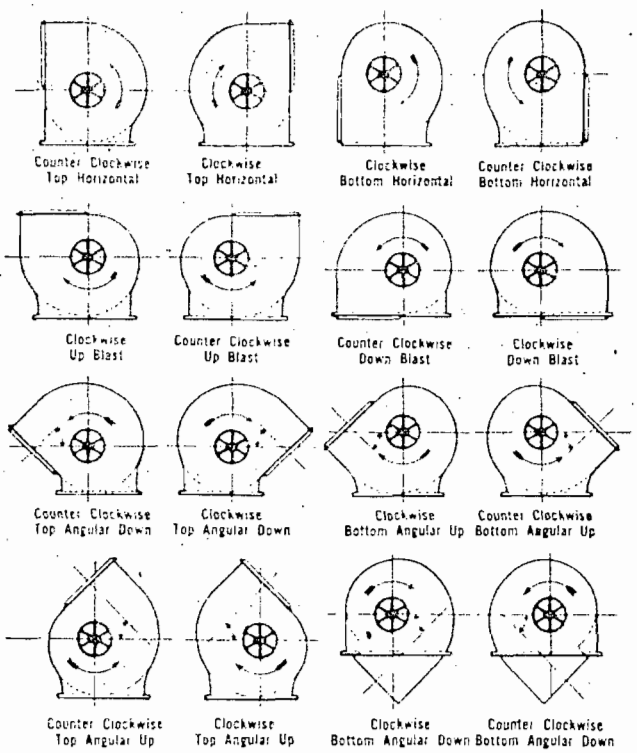
Wheel Diameter — 36½" | Wheel Circumference — 9.55 | Inlet Diameter — 40⅞" | Fan Outlet Area — 7.66 sq. ft. | Safe RPM — 1255 | Maximum BHP — 15.3 $\left(\frac{RPM}{1000}\right)^3$

CFM	OV	¼" SP		⅜" SP		½" SP		⅝" SP		¾" SP		1" SP		2" SP		3" SP		4" SP		5" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6128	800	300	.41	330	.55	356	.69	382	.83	407	.99	455	1.33										
6894	900	324	.51	351	.66	376	.81	399	.97	422	1.14	466	1.49	629	3.19								
7660	1000	348	.61	374	.78	397	.95	419	1.13	440	1.31	481	1.67	633	3.41								
8426	1100	373	.73	397	.93	419	1.11	440	1.31	460	1.49	498	1.88	640	3.67	770	5.85						
9192	1200	398	.88	422	1.09	442	1.29	462	1.51	481	1.71	517	2.12	650	3.97	774	6.18						
9958	1300	424	1.04	446	1.28	466	1.49	485	1.71	503	1.94	537	2.38	663	4.31	780	6.55	890	9.13				
10724	1400	451	1.23	472	1.48	491	1.72	508	1.96	526	2.19	559	2.67	679	4.69	789	6.98	894	9.57				
11490	1500	478	1.45	497	1.71	515	1.96	533	2.22	549	2.47	580	2.98	695	5.09	801	7.45	901	10.1	997	13.1		
12256	1600	505	1.69	524	1.97	541	2.24	557	2.51	572	2.77	603	3.32	713	5.53	814	7.97	910	10.7	1001	13.6	1091	16.8
13788	1800	560	2.25	577	2.57	593	2.87	607	3.16	621	3.46	650	4.08	753	6.54	846	9.14	933	11.9	1018	14.9	1101	18.3
15320	2000	616	2.94	632	3.31	646	3.63	659	3.96	672	4.29	699	4.97	794	7.65	882	10.5	963	13.4	1041	16.5	1118	19.9
16852	2200	673	3.78	688	4.19	700	4.54	712	4.89	724	5.25	748	5.97	838	8.94	921	12.1	997	15.1	1071	18.4	1142	21.8
18384	2400	730	4.78	744	5.21	755	5.61	767	5.99	778	6.38	800	7.18	884	10.4	963	13.7	1035	17.1	1104	20.4	1171	24.1
19916	2600	788	5.94	800	6.42	811	6.85	822	7.26	832	7.67	853	8.52	932	12.1	1006	15.5	1075	19.1	1140	22.7	1205	26.5
21448	2800	845	7.28	857	7.83	867	8.25	876	8.68	886	9.13	906	10.1	981	13.8	1051	17.5	1117	21.3	1180	25.2	1240	29.2
22980	3000	903	8.81	915	9.41	924	9.88	933	10.4	942	10.8	960	11.8	1031	15.8	1098	19.8	1161	23.8	1222	28.1		
24512	3200	961	10.6	973	11.3	981	11.8	989	12.2	998	12.7	1015	13.7	1081	17.9	1145	22.2	1205	26.5				
26044	3400	1019	12.5	1031	13.3	1038	13.8	1046	14.3	1054	14.9	1070	15.9	1133	20.4	1193	24.8	1252	29.4				

BHP shown does not include belt drive loss.

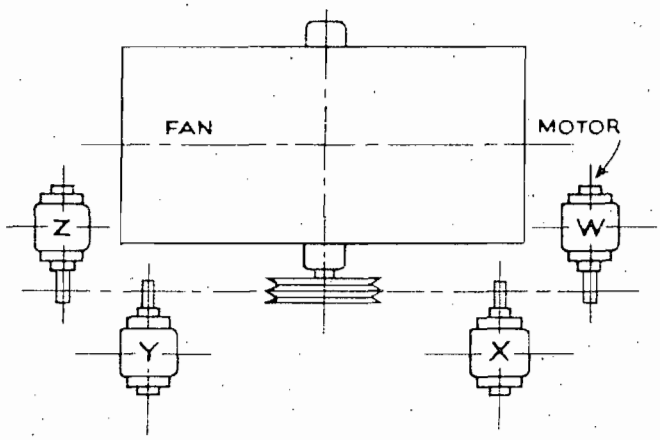
STANDARD NOMENCLATURE

Direction of Rotation and Discharge



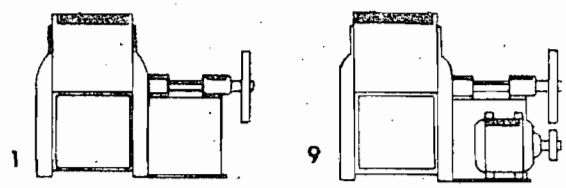
Direction of rotation is determined from the drive side. On single inlet fans, drive side is considered as opposite inlet, regardless of actual drive location.

STANDARD MOTOR POSITIONS



The location of motor is determined from plan view of the blower, designating the motor position by letters W, X, Y and Z as the case may be.

ARRANGEMENTS OF DRIVE



ARRANGEMENT No. 1, SWSI

For belt drive or direct connection. Wheel overhung. Two bearings on base. Furnished in sizes 122 to 600 inclusive. Single inlet only.

ARRANGEMENT No. 9, SWSI

For belt drive. Arrangement No. 1 designed for mounting prime mover on side of base. Furnished in sizes 122 to 600 inclusive. Single inlet only.

SWSI – Class II

Heavier design than Class I. A one piece intermediate stiffening ring is also welded into each blade. Tip speed limit approximately 13000 FPM and 6 inches total pressure.

CONSTRUCTION FEATURES

- HOUSING—All P.V.C.
- WHEEL—P.V.C. and Coated Steel
- INLET—1½" P.V.C. Angle Flange
- OUTLET—1½" P.V.C. Angle Flange
- DRAIN—2" P.V.C. Flanged
- CLEANOUT DOOR—P.V.C. Bolted
- STEEL FRAME—Epoxy Coated

Blowers are very rugged with heavy angle iron bracing, over capacity shaft and bearings. Formed P.V.C. venturi inlets give streamlined flow into the wheel with its own matching cone for very high efficiency and quiet operation. OPERATING TEMPERATURES UP TO 155°F.

SPECIFICATIONS

FUME SCRUBBER W/BLOWER -- BUILDING 63 WEST

1.0 General

Furnish F.O.B. Harris Semiconductor, Palm Bay, Florida, a fume scrubber and fan unit as specified herein.

2.0 Construction

2.1 Scrubber Section:

2.1.1 The fume scrubber shall be constructed of minimum 3/8" black polypropylene complete with flanged inlet and outlet.

2.1.2 The unit shall be complete with a minimum 30 inch packing depth consisting of polypropylene saddles.

2.1.3 The unit shall include an integral recirculating system complete with CPVC pump, sump level control float valve assembly, interconnecting PVC piping, and 14 inch deep sump. The piping connections and pump shall be located on the left hand side as you face the scrubber discharge.

2.2 Fan Section:

2.2.1 The fan section is to be constructed of black polypropylene with a backward inclined centrifugal fan wheel constructed of stainless steel. The fan wheel shall be keyed to the shaft and is to be designed for continuous operation at the maximum rated fan speed and motor horsepower. Bearings to be heavy duty, self aligning, double row, spherical roller pillow block type.

2.2.2 Internal hardware shall be stainless steel with resin coat.

2.2.3 Blower shall have slip inlet and flanged outlet.

2.2.4 The fan position shall be clockwise rotation and upblast discharge.

3.0 Motor & Drive

3.1 Motor shall be T.E.F.C., 30 H.P., 1750 RPM, 230/460 Volt, 3 Phase.

3.2 Drive package shall be variable pitch and shall be selected with a service factor of 1.15.

3.3 O.S.H.A. approved motor and drive cover shall be epoxy coated steel.

4.0 Supports

4.1 The scrubber unit shall be supplied on an integral structural steel base constructed of 3" channel with epoxy coating.

4.2 The fan section shall be supported on epoxy coated structural steel and be furnisehd with rubber-in-shear vibration isolators.

5.0 Design Conditions - Air

5.1	Fume Scrubber	FS63-3
	Air Quantity (CFM)	14,000
5.2	Blower Unit	
	Initial Air Quantity (CFM)	6,000
	Future Air Quantity (CFM)	14,000
	Static Pressure (Total/External) Inches of H_2O	3.0 / 1.5
	Motor (H.P./Initial B.H.P.)	7.5 / 4.0

6.0 Contaminants

The manufacturer shall supply Harris with a list of expected removal rate efficiencies for the contaminants involved when furnished with the input chemicals/concentrations at a future date.

7.0 Unit Basis of Design

Fume Scrubber: Tri-Mer Model F/W-5
Fan Unit: Tri-Mer Model 30 Blower