P 408 530 378

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—

NOT FOR INTERNATIONAL MAIL

(See Reverse)

(See Reverse)	1				
Sent to R. Bumgarner,					
Street and No. PT-30 Box 883					
P.O., State and ZIP Code Melbourne, FL	P.O., State and ZIP Code Melbourne, FL				
Postage	\$				
Certified Fee					
Special Delivery Fee					
Restricted Delivery Fee					
Return Receipt Showing to whom and Date Delivered	3 .				
Return Receipt Showing to whom, Date, and Address of Delivery	-:				
TOTAL Postage and Fees	\$ 52 5				
Return Receipt Showing to whom, Date, and Address of Delivery  TOTAL Postage and Fees  Postmark or Dete  Q/9/83					
Pi .					

S Form	SENDER: Complete items 1, 2, and 3.  Add your address in the "RETURN TO" space on reverse.				
Form 3811, Jan. 19	1. The following service is requested (check one.)  Show to whom and date delivered				
1979	Show to whom and date delivered				
g/S	(CONSULT POSTMASTER FOR FEES)				
RETURN	Mr. P. R. Bumgarner PT-30 Box 883 Melbourne, FL 32901				
RECEIPT R	3. ARTICLE DESCRIPTION: REGISTERED NO. CERTIFIED NO. INSURED NO. P408530378				
	(Always obtain signature of addressee or agent)				
DETINA DECEMP DECISIONED MANDE POLICIES	4. CATE Of DELIVERY  ADDRESS (Compists only if regulated)				
TIFIED MAIL	6. UNABLE TO DELIVER SECAUSE: CLARK'S INITIALS				

#### 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 7, 1983

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. P. R. Bumgarner, Manager Plant Engineering Harris Corporation PT-30 Box 883 Melbourne, Florida 32901

Dear Mr. Bumgarner:

Enclosed are Permit Numbers AC 05-54990 through AC 05-54996, dated September 6, 1983, to Harris Corporation, issued pursuant to Section 403, Florida Statutes.

Acceptance of these permits constitutes notice and agreement that the Department will periodically review these permits for compliance, including site inspections where applicable, and may initiate enforcement actions for violation of the conditions and requirements thereof.

Sincerely,

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

CHF/bjm

Enclosure

cc: Mr. Chester C. Bach, P.E., Harris Corporation Mr. Charles Collins, DER St. Johns River District

## Final Determination

## Semiconductor Production Process Harris Semiconductor Melbourne, Florida

# Application Numbers:

AC 05-54990

-54991

-54992

-54993

-54994

-54995

-54996

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

September 6, 1983

## Harris Semiconductor

The Bureau of Air Quality Management has reviewed the construction permit applications from Harris Semiconductor to install hood-type working stations with associated solvent and acid vapor exhaust scrubbers at their existing facility in Melbourne, Brevard County, Florida. The notice of the department's intent to issue was published in the Today Newspaper on August 4, 1983, and the Technical Review and Preliminary Determination was available for public inspection at the DER's St. Johns River District office and Bureau of Air Quality Management.

No letters or comments were received on the proposed action as a result of the public comment period. Therefore, the construction permits will be issued as drafted with the conditions as given in the proposed permits.

#### 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 05-54990

Date of Issue:

Expiration Date: June 1, 1984

County: Brevard

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

Project: Building 59 Solvent

Vapor Exhaust Scrubber

This permit is issued under the provisions of Chapter(s) 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 construction of hood type work stations for the manufacture of semiconductors in Building 59. A 20,000 CFM scrubber manufactured by Beverly Pacific will be installed to control solvent vapors. The modification will occur at the applicant's existing facility located on Palm Bay Road. The UTM coordinates are Zone 17-538.7 km East and 3100.9 km North.

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

#### Attachments are as follows:

- 1. Application to Construct Air Pollution Sources, DER Form 17-1.122(16).
- 2. William Thomas' letter dated May 21, 1982.
- 3. P. R. Bumgarner's letter dated August 2, 1982.
- 4. P. R. Bumgarner's letter dated September 13, 1982 (Confidential).
- 5. Bruce Mitchell's memo to file dated September 29, 1982.
- 6. C. H. Fancy's letter dated December 17, 1982.
- 7. P. R. Bumgarner's letter dated January 7, 1983.
- 8. P. R. Bumgarner's letter dated May 4, 1983.

Permit Number: AC 05-54990

Date of Issue:

Expiration Date: June 1, 1984

## **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 therefor 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.

Permit Number: AC 05-54990

Date of Issue:

Expiration Date: June 1, 1984

### GENERAL CONDITIONS:

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.

- 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:
  - Having access to and copying any records that must be kept under the conditions of the permit;
  - Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
  - 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 description of and cause of non-compliance; and a..
  - 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.

Permit Number: AC 05-54990

Date of Issue:

Expiration Date: June 1, 1984

### 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.

Permit Number: AC 05-54990

Date of Issue:

Expiration Date: June 1, 1984

#### 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) emissions from the work stations and scrubber system shall be 6597.5 pounds per year.
- 2. The solvent vapor exhaust scrubber must be on during the working hours.
- 3. The maximum operating hours shall be 24 hours per day, 264 days per year, for a total of 6,336 hours per year.

Permit Number: AC 05-54990

Date of Issue:

Expiration Date: June 1, 1984

### SPECIFIC CONDITIONS:

- 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 solvent losses from leaks and equipment malfunction and a record system on the amount and types of solvents purchased and reclaimed.
- 5. Compliance with the VOC emissions limit for the working stations and the scrubber system shall be determined. through the use of a material balance of the solvents purchased and reclaimed.
- 6. A meter to measure the pressure drop shall be installed on the scrubber system.
- 7. A Certificate of Completion shall be submitted to the DER's St. Johns River District office or its designee prior to receiving an operating permit or an application for an operating permit shall be applied for prior to 90 days before the expiration date of this permit. The permittee may continue to operate in compliance with all terms of this construction permit until its expiration date or the issuance of an operating permit.
- 8. Objectionable odors shall not be allowed on off-plant property.
- Annual reports, kept by month, shall be due 15 days after 9. 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's, by chemical, purchased and reclaimed.

Issued this 6 day of sistemuel 983.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

TSCHINKEL, Secretary

AC 05-54991

#### 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 05-54991

Date of Issue:

Expiration Date: June 1, 1984

County: Breward

Latitude/Longitude: 28° 01' 20"N/

80° 36' 10"W

Project: Building 59 Acid Vapor

Exhaust Scrubber

This permit is issued under the provisions of Chapter(s) 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 construction of hood type work stations for the manufacture of semiconductors in Building 59. A 40,000 CFM fume scrubber manufactured by Beverly Pacific will be installed to control acid vapors. The modification will occur at the applicant's existing facility located on Palm Bay Road. The UTM coordinates are Zone 17-538.7 km East and 3100.9 km North.

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

### Attachments are as follows:

- 1. Application to Construct Air Pollution Sources, DER Form 17-1.122(16).
- William Thomas' letter dated May 21, 1982.
- P. R. Bumgarner's letter dated August 2, 1982.
- 4. P. R. Bumgarner's letter dated September 13, 1982 (Confidential).
- 5. Bruce Mitchell's memo to file dated September 29, 1982.
- 6. C. H. Fancy's letter dated December 17, 1982.
- 7. P. R. Bumgarner's letter dated January 7, 1983.
- B. P. R. Bumgarner's letter dated May 4, 1983.

PERMITTEE: Harris Semiconductor I. D. Number:
Permit Number: AC 05-54991
Date of Issue:
Expiration Date: June 1, 1984

#### 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 therefor 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.

Permit Number: AC 05-54991

Date of Issue:

Expiration Date: June 1, 1984

#### GENERAL CONDITIONS:

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.

- 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:
  - Having access to and copying any records that must be kept under the conditions of the permit;
  - Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and:
  - 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 description of and cause of non-compliance; and a .
  - 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.

Permit Number: AC 05-54991

Date of Issue:

Expiration Date: June 1, 1984

#### 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.

Permit Number: AC 05-54991

Date of Issue:

Expiration Date: June 1, 1984

## 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 potential acid vapor emissions from the work stations and scrubber system is 141.0 pounds per year.
- 2. The acid vapor exhaust scrubber must be on during the working hours.
- 3. The maximum operating hours shall be 24 hours per day, 264 days per year, for a total of 6,336 hours per year.

Page	5	of	6
- 490		· • •	

PERMITTEE: Harris Semiconduc-

tor

I. D. Number:

Permit Number: AC 05-54991

Date of Issue:

Expiration Date: June 1, 1984

### SPECIFIC CONDITIONS:

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

- 5. A Certificate of Completion shall be submitted to the DER's St. Johns River District office or its designee prior to receiving an operating permit or an application for an operating permit shall be applied for prior to 90 days before the expiration date of this permit. The permittee may continue to operate in compliance with all terms of this construction permit until its expiration date or the issuance of an operating permit.
- 6. Objectionable odors shall not be allowed on off-plant property.

Issued this 6 day of leptember 1983.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

VICTORIA J. #SCHINKEL, Secretary

pages attached.

Page 6 of 6.

AC 05-54992

### 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 05-54992

Date of Issue:

Expiration Date: June 1, 1984

County: Brevard

Latitude/Longitude: 28° 01' 20"N/

80° 36' 10"W

Project: Building 62 Solvent

Vapor Exhaust Scrubber

This permit is issued under the provisions of Chapter(s) 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 construction of hood type work stations for the manufacture of semiconductors in Building 62. A 12,000 CFM fume scrubber manufactured by Beverly Pacific will be installed to control solvent vapors. The modification will occur at the applicant's existing facility located on Palm Bay Road. The UTM coordinates are Zone 17-538.7 km East and 3100.9 km North.

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

## Attachments are as follows:

- 1. Application to Construct Air Pollution Sources, DER Form 17-1.122(16).
- 2. William Thomas' letter dated May 21, 1982.
- 3. P. R. Bumgarner's letter dated August 2, 1982.
- 4. P. R. Bumgarner's letter dated September 13, 1982 (Confidential).
- 5. Bruce Mitchell's memo to file dated September 29, 1982.
- 6. C. H. Fancy's letter dated December 17, 1982.
- 7. P. R. Bumgarner's letter dated January 7, 1983.
- 8. P. R. Bumgarner's letter dated May 4, 1983.

Permit Number: AC 05-54992

Date of Issue:

Expiration Date: June 1, 1984

#### 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 therefor 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.

Permit Number: AC 05-54992

Date of Issue:

Expiration Date: June 1, 1984

#### GENERAL CONDITIONS:

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.

- 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:
  - Having access to and copying any records that must be kept under the conditions of the permit;
  - Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
  - 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 description of and cause of non-compliance; and a..
  - 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.

Permit Number: AC 05-54992

Date of Issue:

Expiration Date: June 1, 1984

## 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.

Permit Number: AC 05-54992

Date of Issue:

Expiration Date: June 1, 1984

### 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) emissions from the work stations and scrubber system shall be 72.2 pounds per year.
- 2. The solvent vapor exhaust scrubber must be on during the working hours.
- 3. The maximum operating hours shall be 8 hours per day, 264 days per year, for a total of 2,112 hours per year.

Page	5	of	6.

PERMITTEE: Harris Semiconductor

I. D. Number:

Permit Number: AC 05-54992

Date of Issue:

Expiration Date: June 1, 1984

## 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 solvent losses from leaks and equipment malfunction and a record system on the amount and types of solvents purchased and reclaimed.
- 5. Compliance with the VOC emissions limit for the working stations and the scrubber system shall be determined through the use of a material balance of the solvents purchased and reclaimed.
- 6. A meter to measure the pressure drop shall be installed on the scrubber system.
- 7. A Certificate of Completion shall be submitted to the DER's St. Johns River District office or its designee prior to receiving an operating permit or an application for an operating permit shall be applied for prior to 90 days before the expiration date of this permit. The permittee may continue to operate in compliance with all terms of this construction permit until its expiration date or the issuance of an operating permit.
- 8. Objectionable odors shall not be allowed on off-plant property.
- 9. 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's, by chemical, purchased and reclaimed.

Issued this 6 day of ptember 83.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

VICTORIA J. TSCHINKEL, Secretary

\_\_ pages attached.

AC 05-54993

#### STATE OF FLORIDA

# DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOR: GRAHAM GOVERNOR VICTORIA J. TSCHINKEL SECRETARY

#### PERMITTEE:

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

Permit Number: AC 05-54993

Date of Issue:

Expiration Date: June 1, 1984

County: Brevard

Latitude/Longitude: 28° 01' 20"N/

80° 36' 10"W

Project: Building 62 Solvent

Vapor Exhaust Scrubber

This permit is issued under the provisions of Chapter(s) 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 construction of hood type work stations for the manufacture of semiconductors in Building 62. A 1,200 CFM fume scrubber manufactured by Beverly Pacific will be installed to control solvent vapors. The modification will occur at the applicant's existing facility located on Palm Bay Road. The UTM coordinates are Zone 17-538.7 km East and 3100.9 km North.

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

### Attachments are as follows:

- 1. Application to Construct Air Pollution Sources, DER Form 17-1.122(16).
- William Thomas' letter dated May 21, 1982.
- P. R. Bumgarner's letter dated August 2, 1982.
- P. R. Bumgarner's letter dated September 13, 1982 (Confidential).
- Bruce Mitchell's memo to file dated September 29, 1982.
- C. H. Fancy's letter dated December 17, 1982.
- P. R. Bumgarner's letter dated January 7, 1983.
  P. R. Bumgarner's letter dated May 4, 1983.

Permit Number: AC 05-54993

Date of Issue:

Expiration Date: June 1, 1984

### **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 therefor 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.

PERMITTEE: Harris Semiconductor

I. D. Number:

Permit Number: AC 05-54993

Date of Issue:

Expiration Date: June 1, 1984

#### 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.

Permit Number: AC 05-54993

Date of Issue:

Expiration Date: June 1, 1984

### 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.

Permit Number: AC 05-54993

Date of Issue:

Expiration Date: June 1, 1984

### 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) emissions from the work stations and scrubber system shall be 14.8 pounds per year.
- 2. The solvent vapor exhaust scrubber must be on during the working hours.
- 3. The maximum operating hours shall be 8 hours per day, 264 days per year, for a total of 2,112 hours per year.

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Page	5	of	6

PERMITTEE: Harris Semiconduc-

tor

I. D. Number:

Permit Number: AC 05-54993

Date of Issue:

Expiration Date: June 1, 1984

## 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 solvent losses from leaks and equipment malfunction and a record system on the amount and types of solvents purchased and reclaimed.
- 5. Compliance with the VOC emissions limit for the working stations and the scrubber system shall be determined through the use of a material balance of the solvents purchased and reclaimed.
- 6. A meter to measure the pressure drop shall be installed on the scrubber system.
- 7. A Certificate of Completion shall be submitted to the DER's St. Johns River District office or its designee prior to receiving an operating permit or an application for an operating permit shall be applied for prior to 90 days before the expiration date of this permit. The permittee may continue to operate in compliance with all terms of this construction permit until its expiration date or the issuance of an operating permit.
- Objectionable odors shall not be allowed on off-plant property.
- 9. 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 all VOC's, by chemical, purchased and reclaimed.

Issued this 6 day osliptember 1983.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

VICTORIA J. TSCHINKEL, Secretary

AC 05-54994

## 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 05-54994

Date of Issue:

Expiration Date: June 1, 1984

County: Breward

Latitude/Longitude: 28° 01' 20"N/

80° 36' 10"W

Project: Building 62 Acid Vapor

Exhaust Scrubber

This permit is issued under the provisions of Chapter(s) 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 construction of hood type work stations for the manufacture of semiconductors in Building 62. A 24,000 CFM fume scrubber manufactured by Beverly Pacific will be installed to control acid vapors. The modification will occur at the applicant's existing facility located on Palm Bay Road. The UTM coordinates are Zone 17-538.7 km East and 3100.9 km North.

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

### Attachments are as follows:

- 1. Application to Construct Air Pollution Sources, DER Form 17-1.122(16).
- 2. William Thomas' letter dated May 21, 1982.
- 3. P. R. Bumgarner's letter dated August 2, 1982.
- 4. P. R. Bumgarner's letter dated September 13, 1982 (Confidential).
- 5. Bruce Mitchell's memo to file dated September 29, 1982.
- 6. C. H. Fancy's letter dated December 17, 1982.
- 7. P. R. Bumgarner's letter dated January 7, 1983.
- P. R. Bumgarner's letter dated May 4, 1983.

Permit Number: AC 05-54994

Date of Issue:

Expiration Date: June 1, 1984

## 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 therefor 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.

PERMITTEE: Harris Semiconductor

I. D. Number:
Permit Number: AC 05-54994
Date of Issue:

Expiration Date: June 1, 1984

#### 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.

Permit Number: AC 05-54994

Date of Issue:

Expiration Date: June 1, 1984

## **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.

Permit Number: AC 05-54994

Date of Issue:

Expiration Date: June 1, 1984

# **GENERAL CONDITIONS:**

- 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:

- The potential acid vapor emissions from the work stations and scrubber system is 4.6 pounds per year.
- The acid vapor exhaust scrubber must be on during the working 2: hours.
- The maximum operating hours shall be 8 hours per day, 264 3. days per year, for a total of 2,112 hours per year.

PERMITTEE: Harris Semiconductor

I. D. Number:

Permit Number: AC 05-54994

Date of Issue:

Expiration Date: June 1, 1984

# SPECIFIC CONDITIONS:

- 4. A meter to measure the pressure drop shall be installed on the scrubber system.
- 5. A Certificate of Completion shall be submitted to the DER's St. Johns River District office or its designee prior to receiving an operating permit or an application for an operating permit shall be applied for prior to 90 days before the expiration date of this permit. The permittee may continue to operate in compliance with all terms of this construction permit until its expiration date or the issuance of an operating permit.
- 6. Objectionable odors shall not be allowed on off-plant property.

Issued this 6 day of entemboo 83.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

VICTORIA J. TSCHINKEL, Secretary

\_\_\_\_ pages attached.

Page: 6: of 6.

AC 05-54995

#### STATE OF FLORIDA

# DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOB GRAHAM GOVERNOR VICTORIA J. TSCHINKEL. SECRETARY

#### PERMITTEE:

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

Permit Number: AC 05-54995

Date of Issue:

Expiration Date: June 1, 1984

County: Breward

Latitude/Longitude: 28° 01' 20"N/

80° 36' 10"W

Project: Building 63 Solvent

Vapor Exhaust Scrubber

For the construction of hood type work stations for the manufacture of semiconductors in Building 63. A 10,000 CFM fume scrubber manufactured by Beverly Pacific will be installed to control solvent vapors. The modification will occur at the applicant's existing facility located on Palm Bay Road. The UTM coordinates are Zone 17-538.7 km East and 3100.9 km North.

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

#### Attachments are as follows:

- 1. Application to Construct Air Pollution Sources, DER Form 17-1.122(16).
- 2. William Thomas' letter dated May 21, 1982.
- P. R. Bumgarner's letter dated August 2, 1982.
- 4. P. R. Bumgarner's letter dated September 13, 1982 (Confidential).
- 5. Bruce Mitchell's memo to file dated September 29, 1982.
- 6. C. H. Fancy's letter dated December 17, 1982.
- 7. P. R. Bumgarner's letter dated January 7, 1983.
- P. R. Bumgarner's letter dated May 4, 1983.

Permit Number: AC 05-54995

Date of Issue:

Expiration Date: June 1, 1984

#### 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 therefor 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.

Permit Number: AC 05-54995

Date of Issue:

Expiration Date: June 1, 1984

# GENERAL CONDITIONS:

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.

- 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:
  - Having access to and copying any records that must be kept under the conditions of the permit:
  - Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
  - 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
  - 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.

Permit Number: AC 05-54995

Date of Issue:

Expiration Date: June 1, 1984

# 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.

Permit Number: AC 05-54995

Date of Issue:

Expiration Date: June 1, 1984

# **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) emissions from the work stations and scrubber system shall be 237.8 pounds per year.
- 2. The solvent vapor exhaust scrubber must be on during the working hours.
- 3. The maximum operating hours shall be 24 hours per day, 264 days per year, for a total of 6,336 hours per year.

Page	5	of:	6
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PERMITTEE: Harris Semiconductor

I. D. Number:

Permit Number: AC 05-54995

Date of Issue:

Expiration Date: June 1, 1984

# 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 solvent losses from leaks and equipment malfunction and a record system on the amount and types of solvents purchased and reclaimed.
- 5. Compliance with the VOC emissions limit for the working stations and the scrubber system shall be determined through the use of a material balance of the solvents purchased and reclaimed.
- 6. A meter to measure the pressure drop shall be installed on the scrubber system.
- 7. A Certificate of Completion shall be submitted to the DER's St. Johns River District office or its designee prior to receiving an operating permit or an application for an operating permit shall be applied for prior to 90 days before the expiration date of this permit. The permittee may continue to operate in compliance with all terms of this construction permit until its expiration date or the issuance of an operating permit.
- Objectionable odors shall not be allowed on off-plant property.
- 9. 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's, by chemical, purchased and reclaimed.

Issued this 6 day of the 1983.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

VICTORIA J. TSCHINKEL, Secretary

\_\_ pages attached.

AC 05-54996

#### 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 05-54996

Date of Issue:

Expiration Date: June 1, 1984

County: Brevard

Latitude/Longitude: 28° 01 20 N/

80° 36' 10"W

Project: Building 63 Acid Vapor

Exhaust Scrubber

For the construction of hood type work stations for the manufacture of semiconductors in Building 63. A 50,000 CFM fume scrubber manufactured by Beverly Pacific will be installed to control acid vapors. The modification will occur at the applicant's existing facility located on Palm Bay Road. The UTM coordinates are Zone 17-538.7 km East and 3100.9 km North.

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

# Attachments are as follows:

- 1. Application to Construct Air Pollution Sources, DER Form 17-1.122(16).
- 2. William Thomas' letter dated May 21, 1982.
- 3. P. R. Bumgarner's letter dated August 2, 1982.
- 4. P. R. Bumgarner's letter dated September 13, 1982 (Confidential).
- 5. Bruce Mitchell's memo to file dated September 29, 1982.
- 6. C. H. Fancy's letter dated December 17, 1982.
- 7. P. R. Bumgarner's letter dated January 7, 1983.
- 8. P. R. Bumgarner's letter dated May 4, 1983.

Permit Number: AC 05-54996

Date of Issue:

Expiration Date: June 1, 1984

#### 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 therefor 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.

PERMITTEE: Harris Semiconductor

I. D. Number:

Permit Number: AC 05-54996

Date of Issue:

Expiration Date: June 1, 1984

# GENERAL CONDITIONS:

0 £ 2 F

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.

Permit Number: AC 05-54996

Date of Issue:

Expiration Date: June 1, 1984

# 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.

Permit Number: AC 05-54996

Date of Issue:

Expiration Date: June 1, 1984

# 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 potential acid vapor emissions from the work stations and scrubber system is 81.0 pounds per year.
- 2. The acid vapor exhaust scrubber must be on during the working hours.
- 3. The maximum operating hours shall be 24 hours per day, 264 days per year, for a total of 6,336 hours per year.

Page	5	of:	6

PERMITTEE: Harris Semiconduc-

tor

I. D. Number:

Permit Number: AC 05-54996

Date of Issue:

Expiration Date: June 1, 1984

# SPECIFIC CONDITIONS:

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

- 5. A Certificate of Completion shall be submitted to the DER's St. Johns River District office or its designee prior to receiving an operating permit or an application for an operating permit shall be applied for prior to 90 days before the expiration date of this permit. The permittee may continue to operate in compliance with all terms of this construction permit until its expiration date or the issuance of an operating permit.
- 6. Objectionable odors shall not be allowed on off-plant property.

Issued this a day autombur 1983.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

VICTORIA J. TSCHINKEL, Secretary

\_\_\_\_ pages attached.

Page 6 of 6.

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

# INTEROFFICE MEMORANDUM

For Ro And/Or To	uting To District Offic Other Than The Add	es ressee	,	
То:	Loctn.:			
То:	Loctn.:			**.
То:	Loctn.:			
From:				
Reply Optional [ ]				[]
Date Due:	Date Due:			
Office of the Secret	20 VIII) 203			

TO: Victoria J. Tschinkel

FROM: Clair Fancy C

DATE: September 6, 1983

SUBJ: Approval of Attached Air Construction Permits

Attached for your approval and signature are seven Air Construction Permits for which the applicant is Harris Semiconductor. The proposed project is for the installation of hood type working stations for the manufacture of semiconductors at the applicant's existing facility in Brevard County, Florida.

Day 90, after which the permits would be issued by default, is September 9, 1983.

The Bureau recommends your approval and signature.

CF/pa

Attachment

# Check Sheet

Com	ipany Name: Harris Semiconductor	
Perm	nit Number: AC 65-54990 +MOUGH AC65-54996	
PSD	Number:	
Perm	nit Engineer:	
Appli	Initial Application Cross References:  Incompleteness Letters  Responses  Waiver of Department Action  Department Response  Other	
Inten	It: Intent to Issue	
	Notice of Intent to Issue	
	Technical Evaluation	
<u> </u>	BACT Determination	
7	Unsigned Permit	
<u>ш</u> .	Correspondence with:	
	EPA	
	Park Services	
	U Other	•
$\Box$ .	Proof of Publication	
	Petitions - (Related to extensions, hearings, etc.)	
	Waiver of Department Action	٠.
	☐ Other	
Final	Determination:	
	Final Determination	
<b>9</b> .	Signed Permit	
Ц	BACT Determination	
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Post 1	Permit Correspondence:	
	Extensions/Amendments/Modifications	
	Other	

BEST AVAILABLE COPY

HARRIS

Character to be priced

05-104511-27 05-54990-96 05-108260-258



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.

Kolone

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,

J. R. Kolanek, Manager Environmental Services

/pgc

DER

FEB12

BAOM

ROUTING AND	ACTION NO
TRANSMITTAL SLIP	ACTION DUE DATE
1. TO: (NAME, OFFICE, LOCATION)	Initial
Bruce Mitchell	Date
2.	Initial
Sureau of Air Quality A	lanag - Date
3.	Initial
*	Date
· .	Initial
	Date
REMARKS:	INFORMATION
, :	Review & Return
IV T	Review & File
	Initial & Forward
	DISPOSITION
	Review & Respond
	Prepare Response
	For My Signature
•	. For Your Signature
DER	Let's Discuss
DER	Set Up Meeting
FEB 12	Investigate & Repor
12	Initial & Forward
BAONA	Distribute
	Concurrence
	For Processing
9× <b>**</b>	Initial & Return
FROM:	DATE 2/10/88
	PHONE

# NSPS INDEX ADDENDUM

<u>s</u>	UBPART	TITLE
	ĽĽ	Metallic Mineral Processing Plants
	RR	Sensitive Tape and Label Surface Coating Industry
	VV	Organic Chemical Manufacturing Industry; Equipment Leaks of VOC
	WW ·	Beverage Can Surface Coating Industry
	xx	Bulk Gasoline Terminals
	FFF	Flexible Vinyl and Urethane Coating and Printing
	GGG	Equipment Leaks of VOC in Petroleum Refineries
	ннн	Synthetic Fiber Production Facilities
	JJJ	Petroleum Dry Cleaners
	KKK	Equipment Leaks of VOC from Onshore Natural Gas Processing Plants
	000	Nonmetallic Mineral Processing Plants
	PPP	Wool Fiberglass Insulation Manufacturing Plants



August 16, 1983

Mr. C.H. Fancy, P.E. Bureau of Air Quality Management State of Florida DEPARTMENT OF ENVIRONMENTAL REGULATION 2600 Blair Stone Road Tallahassee, FL 32301-8241 DER
AUG 22 1983
BAOM

RE: Harris Semiconductor Permit Applications: AC 05-54990 through 54996

Dear Mr. Fancy:

Enclosed please find one (1) copy of proof of publication of the Notice of Proposed Agency Action regarding the above referenced permits.

If you require any additional information or have any questions or comments, please contact me at (305) 729-5736.

Sincerely,

HARRIS SEMICONDUCTOR

S.O. Peffer
Senior Environmental Engineer
Facilities Engineering

SOP/1sc Attachment

cc: P.R. Bumgarner

# CAPE PUBLICATIONS, INC.

# The Times

Published Weekly on Wednesday

# THE TRIBUNE

Published Weekly on Wednesday

# TODAY

Published Daily

STATE OF FLORIDA COUNTY OF BREVARD

Before the undersigned authority person	onally appeared Linda L. Spicer
who on oath says that he/she is Lec	aal Advertising Clerk
	newspaper published in Brevard County,
Florida; that the attached copy of adv	vertising being a
Legal Notice	
in the	matter of
Issue Permits ot Harri	s Semiconductor
·	in the Court
was published in theTOE	DAY NEWSPAPER
in the issues ofAugu	st 4, 1983
	W <sup>1</sup>
published in said Brevard County, Florente been continuously publis regularly as stated above, and has been the post office in <b>COCOA</b> , said one year next preceeding the first provertisement; and affiant further says the	ropay is a newspaper orida and that the said newspaper has shed in said Brevard County, Florida en entered as second class mail matter at Brevard County, Florida for a period of ublication of the attached copy of adata the has neither paid nor promised any unt, rebate, commission or refund for the tor publication in said newspaper.

A.D., 19

Notary Public State of Florida
My Commission Expires May 18, 1985
Bonded Cally 1107 Carl Insurance, Inc.

Sworn and subscribed to before me this

4 th day of

# STAR-ADVOCATE

Published Weekly on Wednesday

NOTICE OF PROPOSED

AGENCY ACTION
The Deportment of Environmental Regulation gives notice of
its intent to issue permits to Horris Semicanductor for the installation of hood-type working stations with associated solvent and
acid vapor scrubbers at their existirs focility in Mebbourne, Brevard County, Florida. A determination of Best Available Control
Technology (BACT) was not reguirad.

A person who is substantially offected by the Department's proposed permitting decision may request a hearing in accordance with Section 120.57. Florida Statutes, and Chapters 17-1 and 28-5. Florida Administrative Code. The request for hearinst must be filed (received) in the Office of General Counsel of the Department of 2800 Blair Stone; frood. Twin Towers Office Builder, with nowresser, Florida 2201, with now the properties of the proper

The Applications, technical revoluction and department intent are available for public inspection during normal, business, hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, exceptiegal holidays, at the following lacotions:

DER Bureau of Air Quality Management 600 Blair Stone Road Tallahassee, FL 32301

DER St. Johns River District: 3319 Maguire Bivd., Suite 232 Orlando, Florida 32803 Comments on this action shall be submitted in writing to Bill Thomas of Tallahassee office within thirty (30) doys of this notice.

# P 408 530 333 RECEIPT FOR CERTIFIED MAIL NO INSURANCE COVERAGE PROVIDED— NOT FOR INTERNATIONAL MAIL

(See Reverse)

(See Reverse)	
Sent to Mr. P. R. Bumgar	ner
Street and No. P. O. Box 883	1
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Special Delivery Fee	
Restricted Delivery Fee	1. 1.
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# DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOB GRAHAM GOVERNOR VICTORIA J. TSCHINKEL SECRETARY

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. P. R. Bumgarner Manager, Facilities Engineering Harris Corporation Post Office Box 883 Melbourne, Florida 32901

Dear Mr. Bumgarner:

Attached is one copy of the Technical Evaluation and Preliminary Determination, and proposed permits for the installation of hood-type working stations with associated solvent and acid vapor exhaust scrubbers at your existing facility in Melbourne, Brevard County, Florida.

The Preliminary Determination and proposed permits constitute a proposed action of the department and are subject to administrative hearing under the provisions of Chapter 120, Florida Statutes, if requested within fourteen days from receipt of this letter. Any petition for hearing must comply with the requirements of Florida Administrative Code Rule 28-5.201 and be filed with the Office of General Counsel, Florida Department of Environmental Regulation, Twin Towers Office Building, 2600 Blair Stone Road, Tallahassee, Florida 32301. Failure to file a request for hearing within fourteen days shall constitute a waiver of your right to a hearing. Filing is deemed complete upon receipt by the Office of General Counsel.

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

Sincerely,

C. H. Fancy, P.

Deputy Chief

Bureau of Air Quality

Management

CHF/BM/pa Attachments

cc: Mr. Chester C. Bach, P.E., Harris Corporation
Mr. Charles Collins, DER St. Johns River District

# Technical Evaluation

and

# Preliminary Determination

Semiconductor Production Process Harris Semiconductor Melbourne, Florida

# Application Numbers:

AC 05-54990 -54991 -54992 -54993 -54994 -54995 -54996

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

#### NOTICE OF PROPOSED AGENCY ACTION

The Department of Environmental Regulation gives notice of its intent to issue permits to Harris Semiconductor for the installation of hood-type working stations with associated solvent and acid vapor scrubbers at their existing facility in Melbourne Brevard County, Florida. A determination of Best Available Control Technology (BACT) was not required.

A person who is substantially affected by the Department's proposed permitting decision may request a hearing in accordance with Section 120.57, Florida Statutes, and Chapters 17-1 and 28-5, Florida Administrative Code. The request for hearing 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 shall constitute a waiver of any right such person may have to request a hearing under Section 120.57, Florida Statutes.

The applications, technical evaluation and department intent are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the following locations:

DER Bureau of Air Quality Management 2600 Blair Stone Road Tallahassee, FL 32301

DER St. Johns River District 3319 Maguire Blvd., Suite 232 Orlando, Florida 32803

Comments on this action shall be submitted in writing to Bill Thomas of Tallahassee office within thirty (30) days of this notice.

# 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.

#### I. PROJECT DESCRIPTION

# A. Applicant

) .

Harris Semiconductor P. O. Box 833 Melbourne, Florida 32901

# B. Project Description and Location

The applicant intends to install hood type working stations for the manufacture of semiconductors. The working stations will be installed in existing buildings (Bldgs. 59, 62, and 63). Exhaust fumes of volatile organic compounds (VOC) and acid vapors will be vented to scrubber systems.

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

# C. Process and Controls

The manufacture of the semiconductors involves the immersing of the material in various acids and/or solvents (VOC). Acid mists and VOC's are released into the air from both surface evaporation and material drying.

The released acid vapors and VOC's 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 emissions released into the atmosphere. A program of sampling and analyses will be instituted to maintain proper scrubber effluents.

# II. RULE APPLICABILITY

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

The proposed project is located in an area designated attainment for all pollutants. Therefore, review shall be in accordance with Rule 17-2.500, FAC, Prevention of Significant Deterioration.

The current annual VOC emissions are estimated to be 36.2 TPY (tons per year), which is by definition a minor facility according to Rule 17-2.100(100), FAC. Therefore, review shall be in accordance with Rule 17-2.500(2)(d)3., FAC, Modifications to Minor Facilities.

Table 1 reflects the potential VOC emissions from the proposed modification. Since the potential VOC emissions are 3.41 TPY, the project will be a minor modification to a minor facility and exempt from new source review requirements in accordance with Rule 17-2.500(2)(d)3., FAC. Therefore, the proposed modification will be permitted in accordance with Rule 17-2.600, FAC, Specific Source Emission Limiting Standards, or Rule 17-2.660, FAC, Standards of Performance for New Stationary Sources.

Table 1

Chemical	Potential VOC Emissions (lbs/yr)
Acetone Ethanol Freon <sup>1</sup> Methanol Microstrip <sup>2</sup> N-Butyl Acetate Photoresist <sup>2</sup> Propanol Xylene Total <sup>3</sup>	3332.6 76.2 170.0 375.1 21.1 76.7 2303.0 623.9 13.6 6822.2 (3.41 TPY)

<sup>&</sup>lt;sup>1</sup>Freon: 1,1,1-trichloroethane - exempt from Rule 17-2, FAC. <sup>2</sup>Constituents are confidential.

Since there is no specific emission limiting standard contained in Rule 17-2.600, FAC, nor is there any standards of performance for new stationary sources contained in Rule 17-2.660, FAC, the modification will be permitted in accordance with Rule 17-2.620, FAC, General Pollutant Emission Limiting Standards.

In Rule 17-2.620(1)(a), FAC, no person shall store, pump, handle, process, load, unload or use in any process or installation volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. Rule 17-2.620(2), FAC, states that no person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor. Objectionable odor is defined as any odor present in the outdoor atmosphere, which by itself or in combination with other odors, is or may be harmful or injurious to human health

<sup>3</sup>Total does not include the Freon.

or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance according to Rule 17-2.100(108), FAC.

#### III. SUMMARY OF EMISSIONS

# A. Emission Limitations

The regulated pollutant emissions from this modification to the existing facility are volatile organic compounds in accordance with Rule 17-2.620, FAC.

Specific acid solutions are also being used during the manufacturing operations. There are no specific emission limiting standards for these specific acids. However, the acid vapors will be scrubbed to reduce emissions.

Table 2 reflects the allowable VOC emissions and potential acid vapor emissions from Buildings 59, 62, and 63.

Table 2

Building		C Allowable rionsl	Potential Emis	Acid Vapor sions
	lbs/yr	TPY	lbs/yr	TPY
59 62 63	6597.5 87.0 137.7	3.30 0.04 0.07	141.0 4.6 81.0.	0.071 0.002 0.041

<sup>1</sup>VOC emissions do not include those that are exempt from Rule 17-2, FAC.

The permitted emissions are in compliance with all requirements of Rule 17-2, FAC.

# B. Air Quality Impacts

From the technical review of the applications and amendments, the bureau has determined that the modification at the existing facility will not cause a violation of Florida's ambient air quality standards.

# IV. CONCLUSIONS

The maximum allowable VOC 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 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's 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 lowest 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 05-54990

Date of Issue:

Expiration Date: June 1, 1984

County: Brevard

Latitude/Longitude: 28° 01' 20"N/

80° 36' 10"W

Project: Building 59 Solvent

Vapor Exhaust Scrubber

This permit is issued under the provisions of Chapter(s) 403

\_\_\_\_\_\_, Florida Statutes, and Florida Administrative Code Rule(s)

\_\_\_\_\_\_\_\_, 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 construction of hood type work stations for the manufacture of semiconductors in Building 59. A 20,000 CFM scrubber manufactured by Beverly Pacific will be installed to control solvent vapors. The modification will occur at the applicant's existing facility located on Palm Bay Road. The UTM coordinates are Zone 17-538.7 km East and 3100.9 km North.

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

# Attachments are as follows:

- 1. Application to Construct Air Pollution Sources, DER Form 17-1.122(16).
- 2. William Thomas' letter dated May 21, 1982.
- 3. P. R. Bumgarner's letter dated August 2, 1982.
- 4. P. R. Bumgarner's letter dated September 13, 1982 (Confidential).
- 5. Bruce Mitchell's memo to file dated September 29, 1982.
- C. H. Fancy's letter dated December 17, 1982.
- 7. P. R. Bumgarner's letter dated January 7, 1983.
- 8. P. R. Bumgarner's letter dated May 4, 1983.

Permit Number: AC 05-54990

Date of Issue:

Expiration Date: June 1, 1984

# 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 therefor 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.

Permit Number: AC 05-54990

Date of Issue:

Expiration Date: June 1, 1984

# GENERAL CONDITIONS:

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:
  - Having access to and copying any records that must be a. kept under the conditions of the permit;
  - Inspecting the facility, equipment, practices, or b. operations regulated or required under this permit; and
  - 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 description of and cause of non-compliance; and a.
  - 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.

Permit Number: AC 05-54990

Date of Issue:

Expiration Date: June 1, 1984

#### 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.

Permit Number: AC 05-54990

Date of Issue:

Expiration Date: June 1, 1984

### **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.

- 1. The maximum allowable VOC (Volatile organic compounds) emissions from the work stations and scrubber system shall be 6597.5 pounds per year.
- 2. The solvent vapor exhaust scrubber must be on during the working hours.
- 3. The maximum operating hours shall be 24 hours per day, 264 days per year, for a total of 6,336 hours per year.

Page	5	of	6
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Permit Number: AC 05-54990

Date of Issue:

Expiration Date: June 1, 1984

- 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 solvent losses from leaks and equipment malfunction and a record system on the amount and types of solvents purchased and reclaimed.
- Compliance with the VOC emissions limit for the working stations and the scrubber system shall be determined through the use of a material balance of the solvents purchased and reclaimed.
- A meter to measure the pressure drop shall be installed on the scrubber system.
- A Certificate of Completion shall be submitted to the DER's St. Johns River District office or its designee prior to receiving an operating permit or an application for an operating permit shall be applied for prior to 90 days before the expiration date of this permit. The permittee may continue to operate in compliance with all terms of this construction permit until its expiration date or the issuance of an operating permit.
- 8. Objectionable odors shall not be allowed on off-plant property.
- 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's by chemical, purchased and reclaimed.
Issued this day of, 1983.
STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION
VICTORIA J. TSCHINKEL, Secretary

# STATE OF FLORIDA

# DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOB GRAHAM GOVERNOR VICTORIA J. TSCHINKĖL SECRETARY

#### PERMITTEE:

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

Permit Number: AC 05-54991

Date of Issue:

Expiration Date: June 1, 1984

County: Brevard

Latitude/Longitude: 28° 01' 20"N/

80° 36' 10"W

Project: Building 59 Acid Vapor

Exhaust Scrubber

This permit is issued under the provisions of Chapter(s) 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 construction of hood type work stations for the manufacture of semiconductors in Building 59. A 40,000 CFM fume scrubber manufactured by Beverly Pacific will be installed to control acid vapors. The modification will occur at the applicant's existing facility located on Palm Bay Road. The UTM coordinates are Zone 17-538.7 km East and 3100.9 km North.

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

#### Attachments are as follows:

- 1. Application to Construct Air Pollution Sources, DER Form 17-1.122(16).
- 2. William Thomas' letter dated May 21, 1982.
- 3. P. R. Bumgarner's letter dated August 2, 1982.
- 4. P. R. Bumgarner's letter dated September 13, 1982 (Confidential).
- 5. Bruce Mitchell's memo to file dated September 29, 1982.
- 6. C. H. Fancy's letter dated December 17, 1982.
- 7. P. R. Bumgarner's letter dated January 7, 1983.
- 8. P. R. Bumgarner's letter dated May 4, 1983.

Permit Number: AC 05-54991

Date of Issue:

Expiration Date: June 1, 1984

### 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 therefor 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.

I. D. Number:

Permit Number: AC 05-54991

Date of Issue:

Expiration Date: June 1, 1984

### **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.

Permit Number: AC 05-54991

Date of Issue:

Expiration Date: June 1, 1984

#### 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.

Permit Number: AC 05-54991

Date of Issue:

Expiration Date: June 1, 1984

#### 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.

- 1. The potential acid vapor emissions from the work stations and scrubber system is 141.0 pounds per year.
- 2. The acid vapor exhaust scrubber must be on during the working hours.
- 3. The maximum operating hours shall be 24 hours per day, 264 days per year, for a total of 6,336 hours per year.

Page	5	of	6
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I. D. Number:

Permit Number: AC 05-54991

Date of Issue:

Expiration Date: June 1, 1984

# SPECIFIC CONDITIONS:

- 4. A meter to measure the pressure drop shall be installed on the scrubber system.
- 5. A Certificate of Completion shall be submitted to the DER's St. Johns River District office or its designee prior to receiving an operating permit or an application for an operating permit shall be applied for prior to 90 days before the expiration date of this permit. The permittee may continue to operate in compliance with all terms of this construction permit until its expiration date or the issuance of an operating permit.
- Objectionable odors shall not be allowed on off-plant property.

	Issued this day of, 1983.
·	STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION
	VICTORIA J. TSCHINKEL, Secretary
pages attached.	

Page 6 of  $\underline{6}$ .

#### 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 05-54992

Date of Issue:

Expiration Date: June 1, 1984

County: Brevard

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

Project: Building 62 Solvent

Vapor Exhaust Scrubber

This permit is issued under the provisions of Chapter(s) 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 construction of hood type work stations for the manufacture of semiconductors in Building 62. A 12,000 CFM fume scrubber manufactured by Beverly Pacific will be installed to control solvent vapors. The modification will occur at the applicant's existing facility located on Palm Bay Road. The UTM coordinates are Zone 17-538.7 km East and 3100.9 km North.

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

# Attachments are as follows:

- 1. Application to Construct Air Pollution Sources, DER Form 17-1.122(16).
- 2. William Thomas' letter dated May 21, 1982.
- P. R. Bumgarner's letter dated August 2, 1982.
- 4. P. R. Bumgarner's letter dated September 13, 1982 (Confidential).
- 5. Bruce Mitchell's memo to file dated September 29, 1982.
- 6. C. H. Fancy's letter dated December 17, 1982.
- 7. P. R. Bumgarner's letter dated January 7, 1983.
- 8. P. R. Bumgarner's letter dated May 4, 1983.

Permit Number: AC 05-54992

Date of Issue:

Expiration Date: June 1, 1984

#### 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 therefor 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.

I. D. Number: Permit Number: AC 05-54992

Date of Issue:

Expiration Date: June 1, 1984

### **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.

Permit Number: AC 05-54992

Date of Issue:

Expiration Date: June 1, 1984

# 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.
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- 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.

Permit Number: AC 05-54992

Date of Issue:

Expiration Date: June 1, 1984

# 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.

- 1. The maximum allowable VOC (Volatile organic compounds) emissions from the work stations and scrubber system shall be 72.2 pounds per year.
- The solvent vapor exhaust scrubber must be on during the working hours.
- 3. The maximum operating hours shall be 8 hours per day, 264 days per year, for a total of 2,112 hours per year.

tor

Date of Issue:

Permit Number: AC 05-54992

Expiration Date: June 1, 1984

### SPECIFIC CONDITIONS:

pages attached.

- 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 solvent losses from leaks and equipment malfunction and a record system on the amount and types of solvents purchased and reclaimed.
- Compliance with the VOC emissions limit for the working stations and the scrubber system shall be determined through the use of a material balance of the solvents purchased and reclaimed.
- A meter to measure the pressure drop shall be installed on the scrubber system.
- A Certificate of Completion shall be submitted to the DER's St. Johns River District office or its designee prior to receiving an operating permit or an application for an operating permit shall be applied for prior to 90 days before the expiration date of this permit. The permittee may continue to operate in compliance with all terms of this construction permit until its expiration date or the issuance of an operating permit.
- 8. Objectionable odors shall not be allowed on off-plant property.
- 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's, by chemical, purchased and reclaimed.

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	Issued this day of, 1983.
	STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION
	VICTORIA J. TSCHINKEL, Secretary

#### 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 05-54993

Date of Issue:

Expiration Date: June 1, 1984

County: Brevard

Latitude/Longitude: 28° 01' 20"N/

80° 36' 10"W

Project: Building 62 Solvent

Vapor Exhaust Scrubber

This permit is issued under the provisions of Chapter(s) 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 construction of hood type work stations for the manufacture of semiconductors in Building 62. A 1,200 CFM fume scrubber manufactured by Beverly Pacific will be installed to control solvent vapors. The modification will occur at the applicant's existing facility located on Palm Bay Road. The UTM coordinates are Zone 17-538.7 km East and 3100.9 km North.

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

### Attachments are as follows:

- 1. Application to Construct Air Pollution Sources, DER Form 17-1.122(16).
- 2. William Thomas' letter dated May 21, 1982.
- 3. P. R. Bumgarner's letter dated August 2, 1982.
- P. R. Bumgarner's letter dated September 13, 1982 (Confidential).
- 5. Bruce Mitchell's memo to file dated September 29, 1982.
- 6. C. H. Fancy's letter dated December 17, 1982.
- 7. P. R. Bumgarner's letter dated January 7, 1983.
- 8. P. R. Bumgarner's letter dated May 4, 1983.

Permit Number: AC 05-54993

Date of Issue:

Expiration Date: June 1, 1984

#### 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 therefor 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.

I. D. Number:

Permit Number: AC 05-54993

Date of Issue:

Expiration Date: June 1, 1984

### **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;
  - 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.

Permit Number: AC 05-54993

Date of Issue:

Expiration Date: June 1, 1984

# 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:

(PSD)

- ( ) Determination of Best Available Control Technology (BACT)( ) Determination of Prevention of Significant Deterioration
- ( ) 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.

Permit Number: AC 05-54993

Date of Issue:

Expiration Date: June 1, 1984

# **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.

- 1. The maximum allowable VOC (Volatile organic compounds) emissions from the work stations and scrubber system shall be 14.8 pounds per year.
- 2. The solvent vapor exhaust scrubber must be on during the working hours.
- 3. The maximum operating hours shall be 8 hours per day, 264 days per year, for a total of 2,112 hours per year.

Page	5	of	6
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tor

I. D. Number:

Permit Number: AC 05-54993

Date of Issue:

Expiration Date: June 1, 1984

## 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 solvent losses from leaks and equipment malfunction and a record system on the amount and types of solvents purchased and reclaimed.
- 5. Compliance with the VOC emissions limit for the working stations and the scrubber system shall be determined through the use of a material balance of the solvents purchased and reclaimed.
- 6. A meter to measure the pressure drop shall be installed on the scrubber system.
- 7. A Certificate of Completion shall be submitted to the DER's St. Johns River District office or its designee prior to receiving an operating permit or an application for an operating permit shall be applied for prior to 90 days before the expiration date of this permit. The permittee may continue to operate in compliance with all terms of this construction permit until its expiration date or the issuance of an operating permit.
- 8. Objectionable odors shall not be allowed on off-plant property.
- 9. 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 all VOC's, by chemical, purchased and reclaimed.

Issued	this	da y	of	,	1983.

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 05-54994

Date of Issue:

Expiration Date: June 1, 1984

County: Breward

Latitude/Longitude: 28° 01' 20"N/

80° 36' 10"W

Project: Building 62 Acid Vapor

Exhaust Scrubber

This permit is issued under the provisions of Chapter(s) 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 construction of hood type work stations for the manufacture of semiconductors in Building 62. A 24,000 CFM fume scrubber manufactured by Beverly Pacific will be installed to control acid vapors. The modification will occur at the applicant's existing facility located on Palm Bay Road. The UTM coordinates are Zone 17-538.7 km East and 3100.9 km North.

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

### Attachments are as follows:

- Application to Construct Air Pollution Sources, DER Form 1. 17-1.122(16).
- William Thomas' letter dated May 21, 1982. 2.
- P. R. Bumgarner's letter dated August 2, 1982. 3.
- P. R. Bumgarner's letter dated September 13, 1982 (Confidential).
- Bruce Mitchell's memo to file dated September 29, 1982.
- C. H. Fancy's letter dated December 17, 1982.
- P. R. Bumgarner's letter dated January 7, 1983.
- P. R. Bumgarner's letter dated May 4, 1983.

Permit Number: AC 05-54994

Date of Issue:

Expiration Date: June 1, 1984

#### 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 therefor 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.

I. D. Number:

Permit Number: AC 05-54994

Date of Issue:

Expiration Date: June 1, 1984

# 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.

Permit Number: AC 05-54994

Date of Issue:

Expiration Date: June 1, 1984

### **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.

Permit Number: AC 05-54994

Date of Issue:

Expiration Date: June 1, 1984

#### **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.

- 1. The potential acid vapor emissions from the work stations and scrubber system is 4.6 pounds per year.
- The acid vapor exhaust scrubber must be on during the working hours.
- 3. The maximum operating hours shall be 8 hours per day, 264 days per year, for a total of 2,112 hours per year.

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I. D. Number:

Permit Number: AC 05-54994

Date of Issue:

Expiration Date: June 1, 1984

# SPECIFIC CONDITIONS:

- 4. A meter to measure the pressure drop shall be installed on the scrubber system.
- 5. A Certificate of Completion shall be submitted to the DER's St. Johns River District office or its designee prior to receiving an operating permit or an application for an operating permit shall be applied for prior to 90 days before the expiration date of this permit. The permittee may continue to operate in compliance with all terms of this construction permit until its expiration date or the issuance of an operating permit.
- 6. Objectionable odors shall not be allowed on off-plant property.

	Issued this day of, 1983.
	STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION
	VICTORIA J. TSCHINKEL, Secretary
pages attached.	

Page 6 of 6.

#### 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 05-54995

Date of Issue:

Expiration Date: June 1, 1984

County: Brevard

Latitude/Longitude: 28° 01' 20"N/

80° 36' 10"W

Project: Building 63 Solvent

Vapor Exhaust Scrubber

This permit is issued under the provisions of Chapter(s) 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 construction of hood type work stations for the manufacture of semiconductors in Building 63. A 10,000 CFM fume scrubber manufactured by Beverly Pacific will be installed to control solvent vapors. The modification will occur at the applicant's existing facility located on Palm Bay Road. The UTM coordinates are Zone 17-538.7 km East and 3100.9 km North.

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

## Attachments are as follows:

- 1. Application to Construct Air Pollution Sources, DER Form 17-1.122(16).
- William Thomas' letter dated May 21, 1982.
- 3. P. R. Bumgarner's letter dated August 2, 1982.
- 4. P. R. Bumgarner's letter dated September 13, 1982 (Confidential).
- 5. Bruce Mitchell's memo to file dated September 29, 1982.
- 6. C. H. Fancy's letter dated December 17, 1982.
- 7. P. R. Bumgarner's letter dated January 7, 1983.
- 8. P. R. Bumgarner's letter dated May 4, 1983.

Permit Number: AC 05-54995

Date of Issue:

Expiration Date: June 1, 1984

#### 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 therefor 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.

I. D. Number:

Permit Number: AC 05-54995

Date of Issue:

Expiration Date: June 1, 1984

### 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;
  - 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.

Permit Number: AC 05-54995

Date of Issue:

Expiration Date: June 1, 1984

### 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.

Permit Number: AC 05-54995

Date of Issue:

Expiration Date: June 1, 1984

### 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.

- 1. The maximum allowable VOC (Volatile organic compounds) emissions from the work stations and scrubber system shall be 237.8 pounds per year.
- 2. The solvent vapor exhaust scrubber must be on during the working hours.
- 3. The maximum operating hours shall be 24 hours per day, 264 days per year, for a total of 6,336 hours per year.

I. D. Number:

Permit Number: AC 05-54995

Date of Issue:

Expiration Date: June 1, 1984

- 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 solvent losses from leaks and equipment malfunction and a record system on the amount and types of solvents purchased and reclaimed.
- 5. Compliance with the VOC emissions limit for the working stations and the scrubber system shall be determined through the use of a material balance of the solvents purchased and reclaimed.
- 6. A meter to measure the pressure drop shall be installed on the scrubber system.
- 7. A Certificate of Completion shall be submitted to the DER's St. Johns River District office or its designee prior to receiving an operating permit or an application for an operating permit shall be applied for prior to 90 days before the expiration date of this permit. The permittee may continue to operate in compliance with all terms of this construction permit until its expiration date or the issuance of an operating permit.
- 8. Objectionable odors shall not be allowed on off-plant property.
- 9. 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's, by chemical, purchased and reclaimed.

Issued this day of, 1983.
STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION
VICTORIA J. TSCHINKEL, Secretary

### 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 05-54996

Date of Issue:

Expiration Date: June 1, 1984

County: Brevard

Latitude/Longitude: 28° 01' 20"N/

80° 36' 10"W

Project: Building 63 Acid Vapor

Exhaust Scrubber

This permit is issued under the provisions of Chapter(s) 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 construction of hood type work stations for the manufacture of semiconductors in Building 63. A 50,000 CFM fume scrubber manufactured by Beverly Pacific will be installed to control acid vapors. The modification will occur at the applicant's existing facility located on Palm Bay Road. The UTM coordinates are Zone 17-538.7 km East and 3100.9 km North.

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

# Attachments are as follows:

- 1. Application to Construct Air Pollution Sources, DER Form 17-1.122(16).
- 2. William Thomas' letter dated May 21, 1982.
- 3. P. R. Bumgarner's letter dated August 2, 1982.
- 4. P. R. Bumgarner's letter dated September 13, 1982 (Confidential).
- 5. Bruce Mitchell's memo to file dated September 29, 1982.
- 6. C. H. Fancy's letter dated December 17, 1982.
- 7. P. R. Bumgarner's letter dated January 7, 1983.
- 8. P. R. Bumgarner's letter dated May 4, 1983.

Permit Number: AC 05-54996

Date of Issue:

Expiration Date: June 1, 1984

#### 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 therefor 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.

I. D. Number:
Permit Number: AC 05-54996
Date of Issue:
Expiration Date: June 1, 1984

#### 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;
  - 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.

Permit Number: AC 05-54996

Date of Issue:

Expiration Date: June 1, 1984

### 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.

PERMITTEE: Harris Semiconductor I. D. Number:

Permit Number: AC 05-54996

Date of Issue:

Expiration Date: June 1, 1984

#### 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 potential acid vapor emissions from the work stations and scrubber system is 81.0 pounds per year.
- 2. The acid vapor exhaust scrubber must be on during the working hours.
- 3. The maximum operating hours shall be 24 hours per day, 264 days per year, for a total of 6,336 hours per year.

Page	5	of	6

PERMITTEE: Harris Semiconduc- I. D. N

tor

I. D. Number:

Permit Number: AC 05-54996

Date of Issue:

Expiration Date: June 1, 1984

#### SPECIFIC CONDITIONS:

- 4. A meter to measure the pressure drop shall be installed on the scrubber system.
- 5. A Certificate of Completion shall be submitted to the DER's St. Johns River District office or its designee prior to receiving an operating permit or an application for an operating permit shall be applied for prior to 90 days before the expiration date of this permit. The permittee may continue to operate in compliance with all terms of this construction permit until its expiration date or the issuance of an operating permit.
- Objectionable odors shall not be allowed on off-plant property.

	Issued this day of, 1983.
	STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION
	VICTORIA J. TSCHINKEL, Secretary
pages attached.	
	Page 6 of 6.

408 530 332

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Dec recorde)		•
Sent to Mr. P. R. Bumga	rner	.,
Street and No. P. O. Box 883		:
P.O., State and ZIP Code Me.bourne, FL 3	2901	٠.
Postage	\$ _	
Certified Fee		
Special Delivery Fee		٠,
Restricted Delivery Fee	.;	
Return Receipt Showing to whom and Date Delivered		
Return Receipt Showing to whom, Date, and Address of Délivery	. ,	
TOTAL Postage and Fees	\$	
Postmark or Date	,	
7/22/83	· ,	
	÷	
And the second	,	

SENDER:	Complete items 1, 2, and 3. Add your address in the "RE reverse.	TURN TO" space on
1: The follow Show Show REST Show	ring service is requested (che to whom and date delivered to whom, date and address RICTED DELIVERY to whom and date delivered RICTED DELIVERY, to whom, date, and address	d
	SULT POSTMASTER FOR	FEES)
Post 0: Melbou	R. Bumgarner ffice Box 383 rne, FL 32901	L.
21	P408530332	INSURED NO.
I have received	ebtain signature of addresed the article described abo	
5. ADDRESS	Complete only if requested	POSTMANK!
A. DATE O	TO DELIVER BECAUSE:	UCLEAKS. INITIALS
<u> </u>		☆GPO: 1979-300-459

#### 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

July 22, 1983

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. P. R. Bumgarner Manager, Facilities Engineering Harris Corporation Post Office Box 883 Melbourne, Florida 32901

Dear Mr. Bumgarner:

Attached is a copy of the Public Notice for Harris Corporation's proposed permits for the installation of hood-type working stations with associated solvent and acid vapor exhaust scrubbers at your existing facility in Melbourne, Brevard County, Florida.

Before final action can be taken on your proposed permits, you are required by Florida Administrative Code Rule 17-1.62(3) 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 will be grounds for denial of the permits.

The Technical Evaluation and Preliminary Determination with draft permits will be mailed to you under separate cover. If you have any further questions or comments, please contact me at (904)488-1344.

Sincerely,

C. H. Fancy, P.E.

Deputy Chief

Bureau of Air Quality
Management

CHF/BM/pa Attachment

cc: Mr. Chester C. Bach, P.E., Harris Corporation
Mr. Charles Collins, DER St. Johns River District

#### NOTICE OF PROPOSED AGENCY ACTION

The Department of Environmental Regulation gives notice of its intent to issue permits to Harris Semiconductor for the installation of hood-type working stations with associated solvent and acid vapor scrubbers at their existing facility in Melbourne Brevard County, Florida. A determination of Best Available Control Technology (BACT) was not required.

A person who is substantially affected by the Department's proposed permitting decision may request a hearing in accordance with Section 120.57, Florida Statutes, and Chapters 17-1 and 28-5, Florida Administrative Code. The request for hearing 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 shall constitute a waiver of any right such person may have to request a hearing under Section 120.57, Florida Statutes.

The applications, technical evaluation and department intent are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the following locations:

DER Bureau of Air Quality Management 2600 Blair Stone Road Tallahassee, FL 32301

DER St. Johns River District 3319 Maguire Blvd., Suite 232 Orlando, Florida 32803

Comments on this action shall be submitted in writing to Bill Thomas of Tallahassee office within thirty (30) days of this notice.

May 4, 1983

She Pathy Bill

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

DER
MAY 1 6 1983
BAOM

Reference: Harris Semiconductor -- Construction Permit Applications

Nos. AC-05-54990, -91, -92, -93, -94, -95, -96

Dear Mr. Fancy:

The attached information is submitted in order to complete the construction permit applications referenced. Attachment A enclosed is to replace the Attachment A submitted with the applications; and represents updated, accurate data on the utilization, evaporation, and potential emissions for each source for which we are requesting permits. Attachment C presents Material Balance/Flow Diagram for the VOC/Acid materials utilized in each building and exhausted through the individual fume scrubbers.

Also attached are the basic assumptions and methodologies utilized in developing this data.

It is hoped that this material will satisfy your requirements. If you have any questions, please contact Rob Sands, our Environmental Engineer, at (305) 729-5736.

Sincerely,

HARRIS SEMICONDUCTOR

P. R. Bumgarner

Manager

Plant Engineering

PRB/1mp

Attachments

# ASSUMPTIONS/CALCULATIONS HARRIS SEMICONDUCTOR

Construction Permit Application Nos. AC-05-54990, -91, -92, -93, -94, -95, -96

- 1. Production modules are in operation approximately 264 days each year.
- 2. Building 62 operations (AC-05-54992, -93, -94) occur 8-hours each production day (2,112 hours/year).
- 3. Building 59 and Building 63 operations (AC-05-54990, -91, -95, -96) occur 24-hours each production day (6,336 hours/year).
- 4. The chemical usage volumes for Buildings 59, 62 & 63 were derived by surveying similar operations in the existing facility. A one time survey was conducted to determine the chemical volumes utilized during the survey period. However, frequent changes in production techniques, which are common in the semiconductor industry, make this data totally accurate only for that period in time in which the survey was conducted.
- 5. The Building 59 operation will be essentially the same as current operations in Building 6. The chemical usage volumes for Building 59 were derived by determining current Building 6 usage and increasing that number to account for the increase in production area in the new building.
- 6. The Building 63 operation will be essentially the same as current operations in Building 4. Therefore, the Building 63 chemical usage volumes were derived from a survey of the volumes of chemicals utilized in Building 4. These volumes were increased to account for an increase in product wafer size from 3 inch to 4 inch, and to account for the increase in production area in the new building.
- 7. Building 62 chemical usage volumes were determined by surveying current operations in the existing facility which will be moved to the new building upon completion.
- 8. A nonmoving static diffusion film of air over the surface of the process chemicals, due to the laminar flow hoods, creates a diffusion barrier on the surface of the liquid which reduces the normal evaporation rate at a given temperature. Therefore, the assumption is made that the effective vapor pressure, of any chemical vapor, at the top of the static diffusion film of air is only 30% (.3) of the saturation vapor pressure at the surface of the liquid.
- 9. Basis of evaporation calculation:

Mass of Liquid Evaporated	0.3 (P*)		Mass of Liquid Us	sed
Time	=	Х,	Time	

P\* = Saturation vapor pressure of liquid in tank

 $P_{+}$  = Total atmospheric pressure

10. Compliance verification for VOC emissions will be accomplished through an annual program of sampling and analysis. If compliance testing is required for acid mist from dedicated acid vapor scrubbers, it will be accomplished through sampling and analysis of the scrubber discharge water.

# ATTACHMENT A HARRIS SEMICONDUCTOR

FS-59-1 (AC-05-54990)

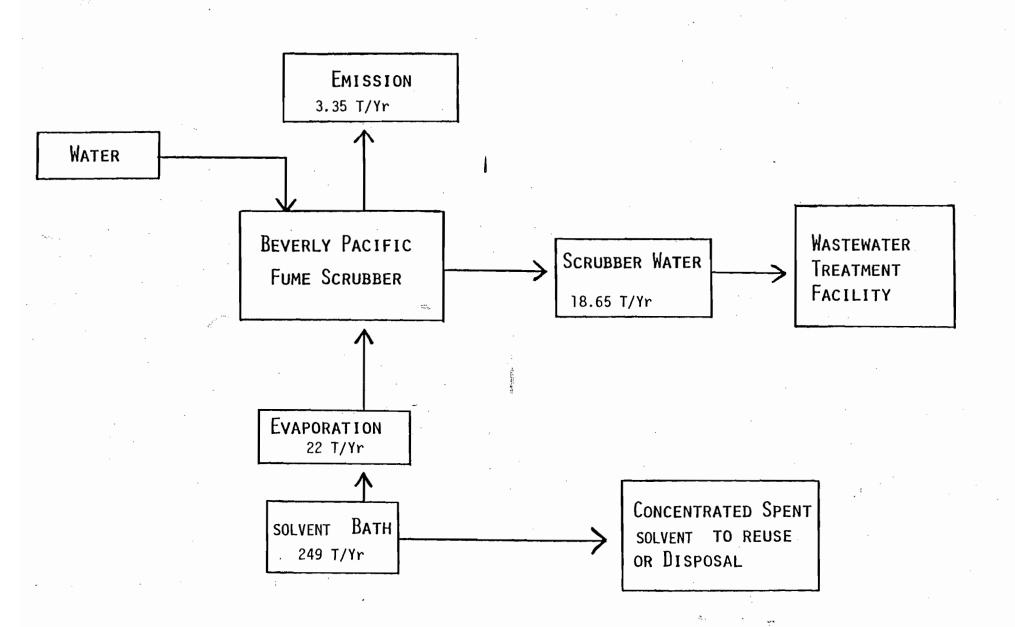
**BEST AVAILABLE COPY** 

· SYSTEM 1 SOLVENTS

### **BEST AVAILABLE COPY**

	UTILIZATION			EVAPO	<b>EVAPORATION</b>			EMISSION	
MICAL	1b/hr	1b/day	T/year	1b/hr	1b/day	Efficiency	1b/hr	1b/year	T/year
							. •		
·tone (Acetone)	48.2	1157.5	152.8	3.5	83.2	85%	.5	3292.8	1.6
hanol (Methanol)	9.9	237.6	31.4	.4	9.1	85%	.1	359.9	.2
panol (Propanol)	44.6	1069.7	141.2	.6	13.9	. 85%	.1	552.2	.3
utyl Acetate (N-Butyl	11.3	270.4	35.7	.1	1.6	85%	.01	63.4	.03
rostrip (Microstrip)	<sup>)</sup> 122.7	2943.9	388.6	2.4	58.1	85%	.4	2300.0	1.2
<pre>ist (Photoresist)</pre>	8.7	208.3	27.5	.02	.4	85%	∠.01	16.5	<.01
ene (Xylene)	3.6	87.3	11.5	.01	.3	85%	<.01	12.7	<.01
			•						
AL	249.0	5974.7	788.7	7.03	166.6		1.13	6597.5	3.35

SOLVENT VAPOR SCRUBBER FS-59-1 (AC-05-54990)

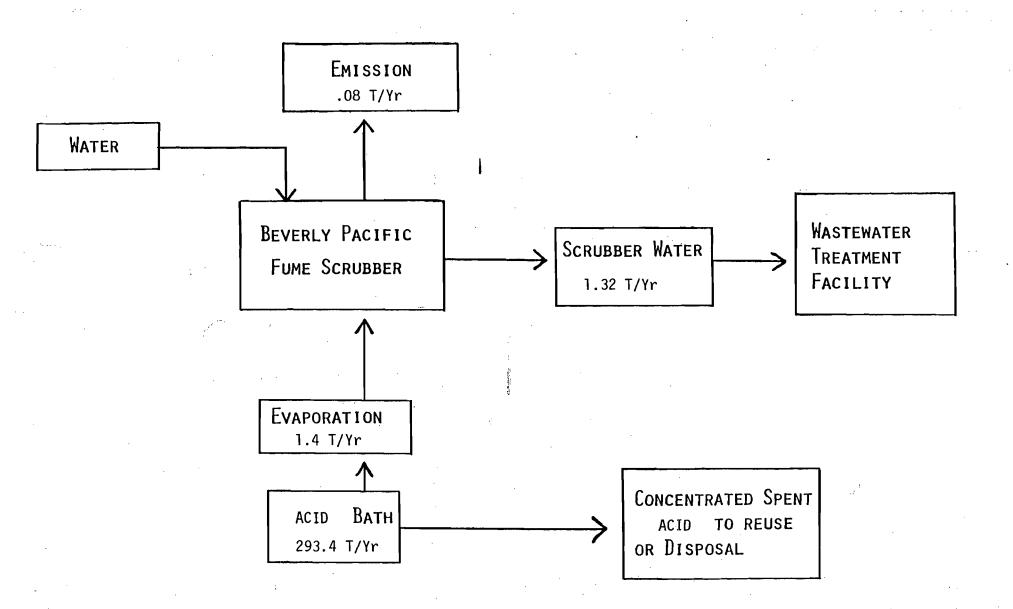


# ATTACHMENT A HARRIS SEMICONDUCTOR FS-59-2 (AC-05-54991)

**BEST AVAILABLE COPY** 

SYSTEM 2 ACID

1ICAL 1b/		UTILIZATION			EVAPORATION			EMISSION	
	1b/hr	lb/day	T/year	1b/hr	lb/day	Efficiency	lb/hr	lb/year	T/year
rofluoric Acid (Hydrofluoric Acid)	13.9	333.9	44.1	.08	1.9	95%	∠.01	24.4	.01
ric Acid	12.6	303.7	40.1	.04	1.0	95%	<.01	12.7	.01
(Nitric Acid) furic Acid (Sulfuric Acid)	127.9	3069.1	405.1	.05	1.2	95%	∠.01	15.8	.01
tic Acid	23.0	551.5	72.8	.1	2.4	95%	∠.01	31.7	.02
(Acetic Acid) onium Fluoride	24.4	586.0	77.4	.2	4.0	95%	<.01	53.2	.03
(Ammonium Fluoride sphoric Acid (Phosphoric Acid)	91.6	2198.9	290.2	.01	.2	95%	∠.01	3.2	<b>∠.</b> 01
AL	293.4	7043.1	929.7	.48	10.7		<.06	141.0	.08

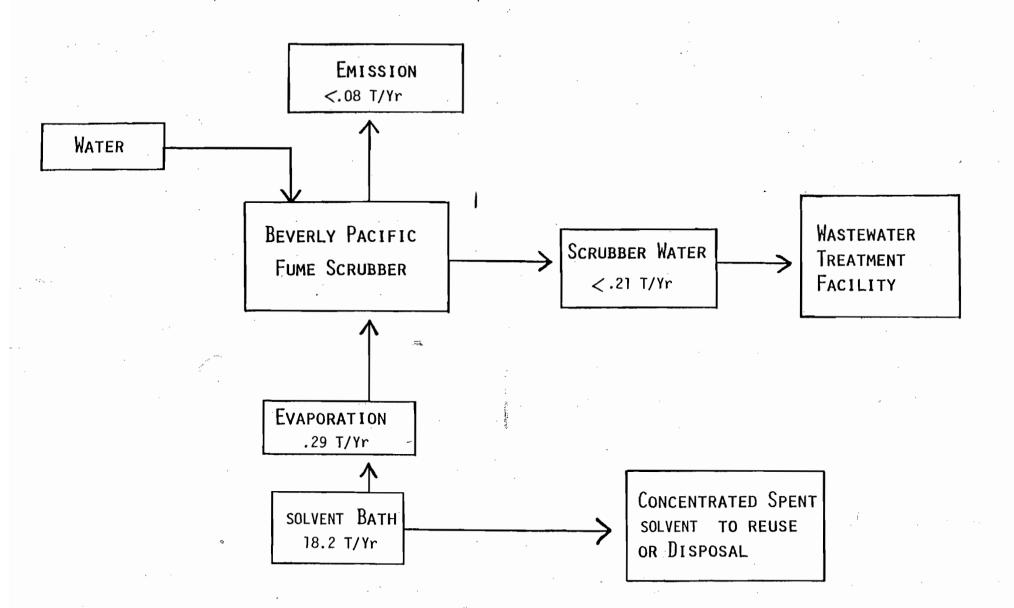


# ATTACHMENT A **BEST AVAILABLE COPY**HARRIS SEMICONDUCTOR FS-62A-1 (AC-05-54992)

SYSTEM 1 SOLVENT

	UTILIZATION			EVAPO	EVAPORATION			EMISSION	
1ICAL	lb/hr	1b/day	T/year	1b/hr	lb/day	Efficiency	1b/hr	lb/year	T/year
tone (Acetone)	1.1	8.6	1.1	.1	. 7	85%	.01	24.4	.01
nanol(Methanol)	1.i	8.9	1.2	.04	.3	85%	<.01	13.6	< .01
chloroethane(1,1,1-	.3.	2.1	.3	∠.01	<.05	85%	₹.01	1.9	<.01
trichloroethand ene (Xylene)	<sup>≘)</sup> 1.2	9.8	1.3	<b>4</b> .01	∠.01	. 85%	<b>&lt;.</b> 01	.8	<.01
<pre>panol(Propanol)</pre>	7.8	62.5	8.3	.1	.8	85%	.01	21.5	.01
yl Acetate (N-Butyl	3.3	26.3	3.3	.02	. 2	85%	∠.01	6.2	<.01
toresist (Photoresist	1.8	14.2	1.9	<.01 ⋅	.03	85%	∠.01	1.1	∠.01
rostrip (Microstrip)	.7	5.9	.8	.02	.1	85%	∠.01	4.6	<.01
AL .	17.3	138.3	18.2	.3	2.2		<.08	74.1	<.08

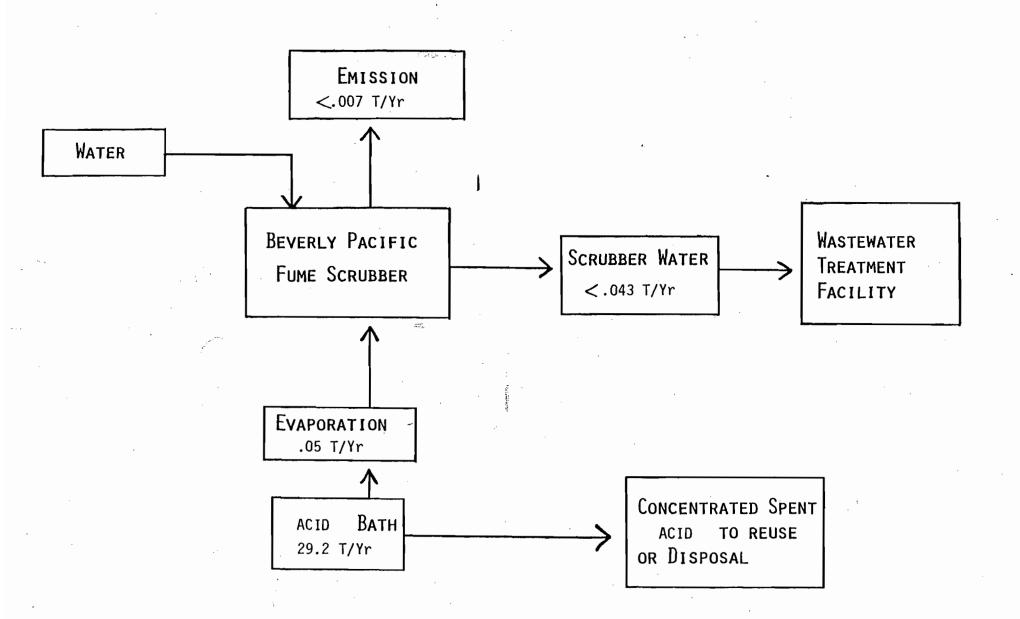
**BEST AVAILABLE COPY** 



# ATTACHMENT A **BEST AVAILABLE COPY**HARRIS SEMICONDUCTOR FS-62A-2 (AC-05-54994)

SYSTEM 2 ACID

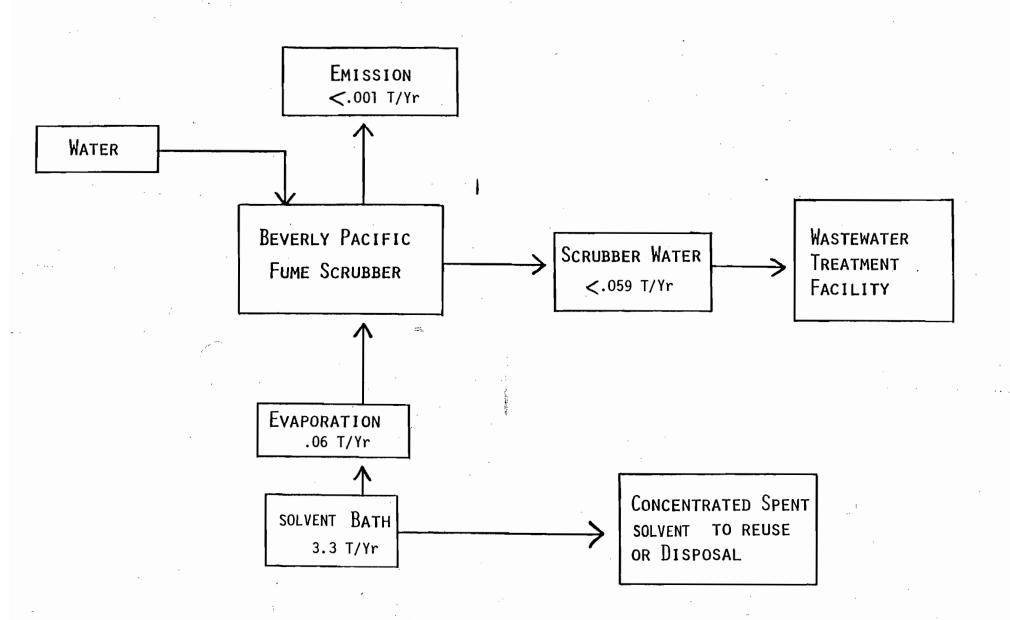
	UTILIZATION			EVAPOI	EVAPORATION			EM1SSION -	
MICAL	1b/hr	lb/day	T/year	lb/hr	lb/day	Efficiency	lb/hr	lb/year	T/year
tic Acid	.5	3.6	.5	∠.01	.2	95%	<.001	.2	<.001
(Acetic Acid) onium Fluoride	1.7	13.4	1.8	.01	.09	95%	<.001	1.2	<.001
(Ammonium Fluor rofluoric Acid	1.9	15.2	2.0	I .01	.08	95%	<.001	- 1.1	<b>∠.</b> 001
(Hydrofluoric A	3.1	24.9	3.3	.01	.08	95%	<.001	1.0	<.001
(Nitric Acid) furic Acid)	17.7	141.9	18.7	∠.01	.06	95%	<.001	.7	<.001
(Sulfuric Acid)	.4	3.0	.4	<b>∠.</b> 01	.03	95%	<.001	.4	<b>∠.</b> 001
rochloric Acid (Hydrochloric A sphoric Acid (Phosphoric Aci		18.8	2.5	<b>∠.</b> 01	∠.01	95%	<.001	.02	∠.001
AL .	27.7	220.8	29.2	∠.07	.37	. •	<b>∠.</b> 007	4.6	<.007



# ATTACHMENT A HARRIS SEMICONDUCTOR FS-62B-1 (AC-05-54993)

SYSTEM 3 SOLVENT

	UTILIZATION			EVAPO	EVAPORATION			EMISSION	
1ICAL	lb/hr	1b/day	T/year	lb/hr	lb/day	Efficiency	lb/hr '	lb/year	T/year
tone (Acetone)	.2	1.3	.2	.01	.09	85%	.002	3.7	.002
hanol (Methanol)	.1	1.0	.1	.∠.01	.04	85%	001	1.6	.001
,l-Trichloroethane	.3	2.6	.3	.01	.1	. 85%	.002	4.0	.002
(1,1,1-trichloroe ene (Xylene)	.2	1.2	.2	∠.01	<b>4.</b> 01	85%	<b>∠</b> .001	.1	<.001
panol (Propanol)	1.0	7.8	1.0	.01	.1	85%	.002	4.0	.002
yl Acetate (N-Butyl	. 4	3.5	.5	<.01	.02	85%	<b>∠.</b> 001	.8	<.001
Acetate) anol (Ethanol)	.9	7.3	1.0	.01	.1	85%	.002	4.6	.002
AL	3.1	24.7	3.3	∠.07	.46	· · · · · · · · · · · · · · · · · · ·	.01	18.8	<.001

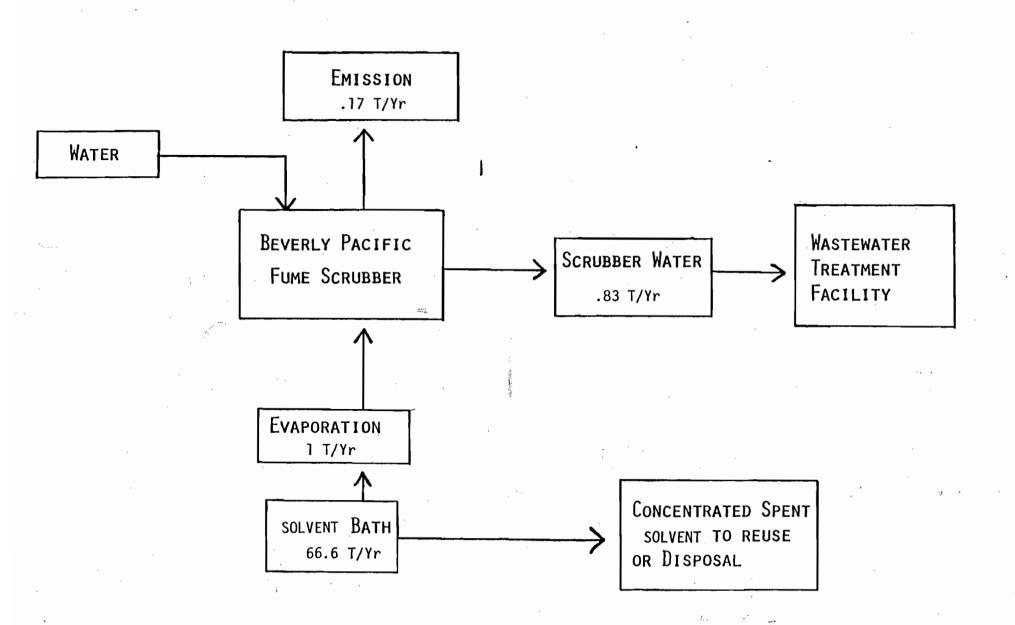


### **BEST AVAILABLE COPY**

# ATTACHMENT A HARRIS SEMICONDUCTOR FS-63-1 (AC-05-54995)

## SYSTEM 1 SOLVENT

	UTILIZATION			EVAPO	EVAPORATION			EMISSION	
MICAL	1b/hr	1b/day	T/year	1b/hr	1b/day	Efficiency	1b/hr	lb/year	T/year
							:		
panol (Propanol)	3.7	89.1	11.8	.05	1.2	85%	.01	46.2	.02
,l-Trichloroethane	4.4	104.9	·13.8	.17	4.1	85%	.03	164.1	.08
(1,1,1-trichloroe anol (Ethanol)	4.8	114.6	15.1	.07	1.8	. 85%	.01	71.6	.04
yl Acetate (N-Butyl	1.2	28.1	3.7	.01	.17	85%	∠.01	6.3	.01
Acetate) ist (Photoresist)	1.0	22.3	2.9	<.01	.04	85%	<.01	1.9	∠.01
ene (Xylene)	6.1	146.2	19.3	.01	.29	85%	∠.01	11.7	<.01
AL	21.2	505.2	66.6	.32	7.6		<.08	301.9	.17



# ATTACHMENT A HARRIS SEMICONDUCTOR FS-63-2 (AC-05-54996)

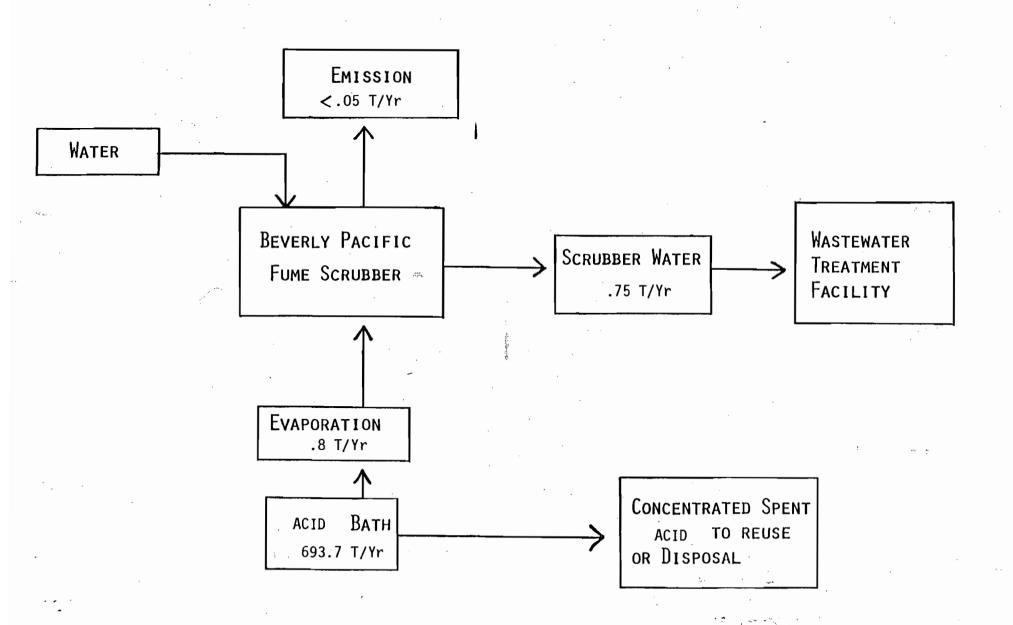
SYSTEM 2 ACID

		UTILIZATION			EVAPORATION			EMISSION	
MICAL	lb/hr	lb/day	T/year	lb/hr	lb/day	Efficiency	lb/hr	lb/year	T/year
rofluoric Acid	24.4	585.8	77.3	.14	3.2	95%	<b>∠</b> .01	42.4	.02
(Hydrofluoric rochloric Acid	3 5	84.0	.11.1	.04	.8	95%	<b>&lt;</b> .01	11.4	∠.01
(Hydrochloric ric Acid	Acid) 3.7	88.9	11.7	.01	.3	95%	₹.01	3.8	<.01
(Nitric Acid) furic Acid (Sulfuric Acid)	187.4 )	4496.6	593.6	.07	1.8	95%	<b>≺.</b> 01	23.4	<.01
AL	219.0	5255.3	693.7	.26	6.1		<b>∠.</b> 04	81.0	∠.05

# ATTACHMENT C

## MATERIAL BALANCE/FLOW DIAGRAM

ACID VAPOR SCRUBBER FS-63-2 (AC-05-54996)



January 7, 1983

11,8

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

DER

JAN 11 1983

BAQM

Dear Mr. Fancy:

We received a letter from you on December 20, 1982 concerning our construction applications (Nos. AC 05-54990, -91, -92, -93, -94, -95 and -96). The project associated with these permit applications has not been cancelled and Harris Semiconductor intends to pursue the requests for construction permits.

The following information is submitted in response to the request for additional data presented at the meeting held September 28, 1982 and the subsequent interoffice memo dated September 29, 1982.

- A total mass balance is under development and will be made available to your office as soon as it is completed.
- 2. The attached chart details the Harris Semiconductor facility annual emissions by source and current permit number.
- 3. Please change the construction permit applications expiration date to September 1, 1983.
- 4. Harris Semiconductor will ensure compliance verification through a program of annual sampling and analyses of the scrubber effluents. The sampling and analysis program will comply with current methodologies for VOC detection in air emissions.

We sincerely regret the delay in responding to your request for additional data. If you have any questions please contact Rob Sands, our Environmental Engineer, at (305) 729-5736.

Sincerely,

HARRIS SEMICONDUCTOR

P. R. Bumgarner Manager

Facilities Engineering

PRB/1mp

cc: Bruce Mitchell-DER/Tallahassee

Attachment

# AIR POLLUTION PERMITS

Source Location	Permit <u>Number</u>	Acid Mist Tons/Year	H/C Emissions Tons/Year
BUILDING 4	A005-38485 (S) A005-36146 (F) A005-36147 (F) A005-36148 (S) A005-36149 (S) A005-36150 (S) A005-36152 (F) A005-36154 (F)	.032 .125 - .546 1.56 1.108 .867	.02 - .185 - - - - 1.60
BUILDING 6	A005-38486 (S) A005-36155 (F) A005-36156 (F) A005-36157 (F) A005-36158 (F) A005-36159 (F) A005-36160 (F)	1.014 - 3.384 4.995 -	1.977 - 3.784 2.640 2.246
BUILDING 51	A005-38487 (S) A005-36161 (S) A005-36162 (S) A005-36163 (S) A005-36164 (S) A005-36165 (S) A005-36166 (S)	.12 .354 - .171 .222	.07 3.361 8.68 .056 .084 10.879
BUILDING 54	A005-38488 (S) A005-36882 (S)	.063 1.139	.045 .4712
BUILDING 60	A005-38489 (S)	.094	.067
		15.794	36.1652

TOTAL

51.96

F = Fan Exhaust

S = Scrubber Exhaust

Add your address in the "RETURN TO" space on reverse.  F. The following service's requested (check one.)  Show to whom and date delivered
(CONSULT POSTMASTER FOR FEES)  D. ANTICLE ADDRESSED TO:  Mr. P. R. Bumquinger Manager  Plant Engineer Harris Corporation  PT-030 Box 883  Melbourne Florida 3290  3. ARTICLE DESCRIPTION:  REGISTERED NO.   INSURED NO.    O157892  (Always obtain signature of excresses or agent)  I have received the article described above.  STANATURE DAGRESSES DAUMerical agents  ONE DAGRESSES
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#### STATE OF FLORIDA

### DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOB GRAHAM GOVERNOR

VICTORIA J. TSCHINKEL SECRETARY

December 17, 1982

CERTIFIED MAIL

Mr. P. R. Bumgarner, Manager Plant Engineering Harris Corporation PT-030 Box 883 Melbourne, Florida 32901

Dear Mr. Bumgarner:

On May 21, 1982, an incompleteness letter was sent to you requesting additional information concerning applications to construct, Nos. AC 05-54990, -91, -92, -93, -94, -95, and -96. Then, on September 28, 1982, an incompleteness meeting was held in the DER-BAQM conference room with representatives of Harris Corporation and DER-CAPS's engineers. Since that time no response has been received by this office.

If the project has been canceled, the Bureau requests that a letter withdrawing the permit application be submitted. If the project is still to be completed, please submit the information requested in our letter of May 21, 1982, and interoffice memorandum dated September 29, 1982, by January 17, 1983. Sufficient time has elapsed for a response and the Bureau has the option to deny the permit.

If you have any questions, please contact Bruce Mitchell of my staff at (904) 488-1344.

Sincerely,

C. H. Fancy, P. E

Deputy Chief

Bureau of Air Quality

Mangement

CHF/BM/bjm

cc: Robert R. Sands
Chuck Collins
Martha Harrell Hall

### 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: File - Harris Semiconductor: Construction Permit Application Nos. AC 05-54990,-91, -92, -93, -94, -95, -96

THRU: Bill Thomas

FROM: Bruce Mitchell

DATE: September 29, 1982

SUBJ: Incompleteness meeting with the applicant at BAQM conference room at 10:30 AM on September 28, 1982.

The following data will be required in order to continue further processing of the referenced construction permit applications:

- Potential annual pollutant emissions by mass balance of the VOC materials utilized in categories of solvents and acids (show all calculations, assumptions, references, tables, etc.).
- 2. Facility annual emissions by source of all pollutants emitted.
- Request a change of the construction permit applications expiration date.
- 4. Since materials balance will be a specific condition requirement to account for the VOC emissions, detail the methodology that will be followed by the applicant in order to ensure compliance verification.

RBM/bjm

cc: P. R. Bumgarner Robert R. Sands Chuck Collins Martha Harrell Hall



BAQM

August 2, 1982

Mr. William Thomas, P.E.
Bureau of Air Quality Management
State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

Reference: Air Pollution Construction Applications for Harris

Semiconductor -- Your Letter Dated May 21, 1982

Dear Mr. Thomas:

Thank you for your response of May 21, 1982 in which you acknowledged receipt of and review of the seven (7) air pollution construction applications for the Harris Semiconductor expansion. The questions presented in the referenced letter are under review and a response will be forwarded in the near future.

If you have any questions, please do not hesitate to call me at (305) 724-7657.

Sincerely,

HARRIS SEMICONDUCTOR

P. R. Bumgarner

Manager

Plant Engineering

PRB/1mp

cc: R. R. Sands

L. J. Hart

P167682490

# RECEIPT FOR CERTIFIED MAIL

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### **DEPARTMENT OF ENVIRONMENTAL REGULATION**

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



BOB GRAHAM GOVERNOR VICTORIA J. TSCHINKEL SECRETARY

May 21, 1982

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. P. R. Bumgarner Manager, Facilities Engineering Harris Semiconductor Post Office Box 883 Melbourne, Florida 32901

Dear Mr. Bumgarner:

RE: Air Pollution Construction Applications
Harris Semiconductor

The Bureau of Air Quality Management (BAQM) is currently processing the subject seven air pollution construction applications for the Harris Palm Bay expansion. However, the applications have been determined incomplete until further information is received addressing the following questions:

- Section V, Part 3 requires attachment of the basis of the potential emission calculations. The applications as submitted show no relation between the potential emissions and the amount of solvents/acids used. Please provide some information that will verify potential emissions.
- 2. In each application, Attachment A refers to a "Utilization Rate" in pounds per hour, most of which are much greater than the potential emission discharge rates. Please indicate what becomes of the solvents/acids which are not controlled by the scrubbers. Are they recycled or reclaimed?
- 3. Verification of the proposed total net usage of solvents and acids is required on a tons per year basis. This net usage will be the amounts purchased minus the amounts reclaimed, recycled or captured in the scrubbing system. Any volatile materials used in the process that are not accounted for via a materials balance, are assumed to be emitted to the atmosphere.

Mr. P. R. Bumgarner Page Two May 21, 1982

- 4. Regarding the scrubbing liquids how many times is the liquid recycled before treatment and do you propose to monitor the solvent/acid content of the recycled water? Also, will caustic be used in the acid vapor scrubber systems?
- 5. Please indicate the specific chemical formula for the solvents Freon, Photoresist, and Microstrip. Also indicate which isomers are used of the Propanol and Butyl Acetate solvents. This is important, as certain Freons and other organic compounds are exempted from control requirements. This information will remain confidential upon your request.
- 6. Emissions in tons per year do not coincide with the hourly emission rate and the hours of operation (constant or 8736 hours/year) as applied for. Please clarify this discrepancy.

Processing of the applications will resume when these questions have been resolved. Don't hesitate to contact Tim Powell or myself at (904)488-1344 if you have any questions.

Sincerely,

William Thomas, P.E. Bureau of Air Quality

Management

WT/TP/pa

DEK PEKMIT APPLICATION TRACKING SYSTEM MASTER RECORD
FILE#000000054990 COE# DER PROCESSOR:THOMAS DER OFFICE:TLH
FILE NAME: HARRIS SEMICONDUCTOR DATE FIRST REC: 04/21/82 APPLICATION TYPE:AC
APPL NAME:HARRIS SEMICONDUCTOR APPL PHONE:(305)724-7657 PROJECT COUNTY:05
ADDR:PT-030 BOX 883 CITY:MELBOURNE ST:FLZIP:32901 AGNT NAME:CHESTER C. BACH AGNT PHONE:C305)724-7324
AGNT NAME:CHESTER C. BACH AGNT PHONE:C3050724-7324
AGNT NAME:CHESTER C. BACH AGNT PHONE:(305)724-7324  ADDR:HARRIS SEMICONDUCTOR, PT-30 BOX 883 CITY:MELBOURNE ST:FLZIP:32901
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REMARKS:STATIONARY; BLDG 59, SOLVENT VAPOR EXHAUST SCRUBBER (FS-59-1);
REC'D TLH 4/26/82

DER PERMIT APPLICATION TRACKING SYSTEM MASTER RECORD  FILE#000000054991 COE# DER PROCESSOR:THOMAS DER OFFICE:TLH  FILE NAME:HARRIS SEMICONDUCTOR DATE FIRST REC: 04/21/82 APPLICATION TYPE:AC  APPL NAME:HARRIS SEMICONDUCTOR APPL PHONE:(305)724-7657 PROJECT COUNTY:05  ADDR:PT-030 BOX 883 CITY:MELBOURNE ST:FLZIP:32901  AGNT NAME:CHESTER C. BACH AGNT PHONE:(305)724-7324
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REMARKS:STATIONARY; BLDG 59, ACID VAPOR EXHAUST SCRUBBER (FS-59-2);
REC'D TIH 4/24/82

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APPL NAME:HARRIS SEMICONDUCTOR APPL PHONE: (305)724-7657 PROJECT COUNTY:05
ADDR:PT-030 BOX 883 CITY:MELBOURNE ST:FLZIP:32901 AGNT NAME:CHESTER C. BACH AGNT PHONE:(305)724-7324 ADDR:HARRIS SEMICONDUCTOR, PT-030 BOX 883 CITY:MELBOURNE ST:FLZIP:32901
AGNT NAME: CHESTER C. BACH AGNT PHONE: (305)724-7324
ADDR:HARRIS SEMICONDUCTOR, PT-030 BOX 883 CITY:MELBOURNE ST:FLZIP:32901
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REMARKS:STATIONARY; BLDG 62 SOLVENT VAPOR EXHAUST SCRUBBER (FS-628-4);	

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April 16, 1982

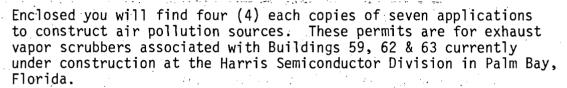
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APR 26 1982

**BAQM** 

Mr. Charles M. Collins
State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION
3319 Maguire Blvd., Suite 232
Orlando, Florida 32803

Mr. Collins:



Should you have any questions concerning these applications, please contact Robert Sands, our Environmental Engineer, at (305) 729-5736.

Sincerely,

HARRIS SEMICONDUCTOR

P. R. Bumgarner

Manager

Facilities Engineering

PRB/1mp

Attachments



### DEPARTMENT OF ENVIRONMENTAL REGULATION

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**BEST AVAILABLE COPY** 

1 See Section 17-2.02(15) and (22), Florida Administrative Code, (F.A.C.)

DER FORM 17-1.122(16) Page 1 of 10



### APR 21 1982

#### SAINT JOHNS RIVER DISTRICT



AC05-54990

APR 26 1989 TATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

### APACINAN TO OPERATE/CONSTRUCT

sou	RCE TYPE: Stationary	[X] New <sup>1</sup> [ ] Existing <sup>1</sup>	District S
APPI	LICATION TYPE: [ ] Construction [ ] Operation [	] Modification	( ) ( ) ( ) ( ) ( )
СОМ	PANY NAME: Harris Semiconductor		COUNTY: Brevard
Ideni No. 2	tify the specific emission point source(s) addressed in this 2, Gas Fired)Building 59, Solvent Vapor E	application (i.e. Lime Kiln No. Exhaust Scrubber (FS-	4 with Venturi Scrubber; Peeking Unit 59-1)
sou	RCE LOCATION: Street Palm Bay Road		City Palm Bay
	UTM: East <u>17-538700</u>	North	7-B1009-00
	Latitude 28 o 01 · 20		
APPI	LICANT NAME AND TITLE: P. R. Bumgarner, Ma	nager Facilities, End	lineering
	LICANT ADDRESS: P. O. Box 883, Melbourn	•	•
	·	BY APPLICANT AND ENGIN	EER
A.	APPLICANT	- Harris Semiconduct	tor
	I am the undersigned owner or authorized representative		
	pollution control source and pollution control facilities. Florida Statutes, and all the rules and regulations of the	y knowledge and belief. Furthe in such a manner as to comp department and revisions then	ly with the provision of Chapter 403, acf. I also understand that a permit, if then upon sale or legal transfer of the
•Att	ach letter of authorization	Signed: 0. C	Dum faine
		P.R. Bumgarner, M Name an	lor. Facilities Engineering d Title (Please Type)
	•	Date: <u>2-22-82</u>	Telephone No. <u>724-7657</u>
В.	PROFESSIONAL ENGINEER REGISTERED IN FLORIS	DA (where required by Chapter	471, F.S.)
	be in conformity with modern engineering principles appreprint application. There is reasonable assurance, in my erly maintained and operated, will discharge an effluent trules and regulations of the department. It is also agreed.	plicable to the treatment and disprofessional judgment, that the hat complies with all applicable that the undersigned will furnish operation of the pollution control	posal of pollutants characterized in the pollution control facilities, when propstatutes of the State of Florida and the split if authorized by the owner, the applical facilities and, if applicable, pollution
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	M com	·	•
	A STATE OF THE STA		
	Florida Registration No. 19710	COUNTY: Brevard  In this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Exhaust Scrubber (FS-59-1)  City Palm Bay  North 17-B1009-00  20 "N Longitude 80 o 36 o 10 "W  Manager Facilities, Engineering  Courne, FL 32901  ENTS BY APPLICANT AND ENGINEER  Stive* of Harris Semiconductor  of my knowledge and belief, Further, Lagree to maintain and open illities in such a manner as to comply with the provision of Cheese of the department and revisions thereof. Lalso understand that a me as and I will promptly notify the department upon sale or legal transfer.  P.R. Bumgarner, Mor. Facilities Engine Name and Title (Please Type)  Date: 2-22-82 Telephone No. 724-7657	704 7004
	Florida negistration No.		reseptione No.

#### SECTION II: GENERAL PROJECT INFORMATION

formance as a result of installation. State whether the project will result in full compliance, A	Attach additional sheet if necessary
· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
exhaust air is minimal. Air is exhausted through a 20,000 C	· · · · · · · · · · · · · · · · · · ·
by Beverly Pacific.	
· · · · · · · · · · · · · · · · · · ·	9-1-82
Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for project serving pollution control purposes. Information on actual costs shall be furnished permit.)	Individual components/units of the with the application for operation
Fan/Wet Scrubber \$30,200	
indicate any previous DEH permits, orders and notices associated with the emission point, i tion dates.	nctuding permit issuance and expi
Building 59 is new construction located approximately 1000 f	t. from Building
54 which has current operating permits.	
and Chapter 22F-2, Florida Administrative Code?Yes $\frac{\chi}{\chi}$ No Normal equipment operating time: hrs/day $\frac{24}{\chi}$ ; days/wk $\frac{7}{\chi}$ ; wks/yr $\frac{52}{\chi}$	; if power plant, hrs/yr
and Chapter 22F-2, Florida Administrative Code? Yes $\frac{\chi}{\chi}$ No Normal equipment operating time: hrs/day $\frac{24}{\chi}$ ; days/wk $\frac{7}{\chi}$ ; wks/yr $\frac{52}{\chi}$ if seasonal, describe:	; if power plant, hrs/yr
and Chapter 22F-2, Florida Administrative Code?Yes $\frac{\chi}{\chi}$ No Normal equipment operating time: hrs/day $\frac{24}{\chi}$ ; days/wk $\frac{7}{\chi}$ ; wks/yr $\frac{52}{\chi}$	; if power plant, hrs/yr
and Chapter 22F-2, Florida Administrative Code? Yes $\frac{\chi}{\chi}$ No Normal equipment operating time: hrs/day $\frac{24}{\chi}$ ; days/wk $\frac{7}{\chi}$ ; wks/yr $\frac{52}{\chi}$ if seasonal, describe:	; if power plant, hrs/yr
and Chapter 22F-2, Florida Administrative Code? YesX_ No  Normal equipment operating time: hrs/day24; days/wk7; wks/yr _52  if seasonal, describe:	; if power plant, hrs/yr
and Chapter 22F-2, Florida Administrative Code? Yes $\frac{\chi}{\chi}$ No Normal equipment operating time: hrs/day $\frac{24}{\chi}$ ; days/wk $\frac{7}{\chi}$ ; wks/yr $\frac{52}{\chi}$ if seasonal, describe:	; if power plant, hrs/yr
and Chapter 22F-2, Florida Administrative Code? YesX_ No  Normal equipment operating time: hrs/day24; days/wk7; wks/yr _52  if seasonal, describe:	; if power plant, hrs/yr
And Chapter 22F-2, Florida Administrative Code? YesX No Normal equipment operating time: hrs/day24; days/wk7; wks/yr52	; if power plant, hrs/yr
And Chapter 22F-2, Florida Administrative Code? Yes X No Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52	; if power plant, hrs/yr
Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52  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?  a. If yes, has "offset" been applied?	; if power plant, hrs/yr
And Chapter 22F-2, Florida Administrative Code? Yes X No Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52	; if power plant, hrs/yr
And Chapter 22F-2, Florida Administrative Code? Yes X No  Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52  If seasonal, describe:	; if power plant, hrs/yr
chedule of project covered in this application (Construction Permit Application Only)  tart of Construction 5-1-82	
And Chapter 22F-2, Florida Administrative Code? Yes X No Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52  If seasonal, describe:  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?  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.  3. Does the State "Prevention of Significant Deterioriation" (PSD) requirements apply to this source? If yes, see Sections VI and VII.  4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to	no no no
And Chapter 22F-2, Florida Administrative Code? Yes No Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52  If seasonal, describe:  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?  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.  3. Does the State "Prevention of Significant Deterioriation" (PSD) requirements apply to this source? If yes, see Sections VI and VII.  4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source?	no no no
And Chapter 22F-2, Florida Administrative Code? Yes No Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52  If seasonal, describe:  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?  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.  3. Does the State "Prevention of Significant Deterioriation" (PSD) requirements apply to this source? If yes, see Sections VI and VII.  4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source?  5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP)	no no no no

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

Danasia	Contan	ninants	Utilization		
Description	Type	% Wt	Rate - lbs/hr	Relate to Flow Diagram	
·					
See Attachment A			Relate to Flow Diagram		
			·		

В.	Process Rate, if applicable: (S	ee Section V, Item 1)	
	1. Total Process Input Rate (II	os/hr):n/a	
	O Designed Matches (the fiber)	Semiconductor wafer weighs 12 ams	

#### C. Airborne Contaminants Emitted:

-	Emiss	ion <sup>1</sup>	Allowe	d Emission <sup>2</sup>	Allowable <sup>3</sup>	Potential	Emission <sup>4</sup>	Relate	
Name of Contaminant	Maximum lbs/hr	Actual T/yr	. R	ate per 7-2, F.A.C.	Emission lbs/hr	lbs/hr	T/yr	to Flow Diagram	
See Attachment	A			·	n/a			See Attachment	E

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles <sup>5</sup> Size Collected (in microns)	Basis for Efficiency (Sec. V, It <sup>5</sup>
Beverly Pacific Corp.	Solvent vapor	85%	n/a	Mfg. design
Model # PS24VT/CB36		·		Data
	·			

<sup>&</sup>lt;sup>1</sup>See Section V, Item 2.

DER FORM 17-1.122(16) Page 3 of 10

<sup>&</sup>lt;sup>2</sup>Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. – 0.1 pounds per million BTU heat input)

<sup>&</sup>lt;sup>3</sup>Calculated from operating rate and applicable standard

<sup>&</sup>lt;sup>4</sup>Emission, if source operated without control (See Section V, Item 3)

<sup>&</sup>lt;sup>5</sup>If Applicable

Tuna	(Be Specific)	:	Cor	nsumption •		Maximum Heat Input (MMBTU/hr)	
1 ype	(De Specific)		avg/hr	max	./hr		
	.,						
Units Natural Gas,	MMCF/hr: Fuel	Oils, barrels/hr:	Coal, lbs/hr	•			
Fuel Analysis:							
Percent Sulfur:			·	Percent Ash:			•
					_		
Other Fuel Contami							
F. If applicable, i	indicate the per	cent of fuel used	for space heating	ng. Annual Ave	rage n/a		
		generated and m					
•		-			treatment f	osili+v	
- 301 00001	water ars	charged to	indus ci Ta i	wastewater	treatment ra	actiticy.	Type VI (Solid By-prod.)
	<del></del>					BTU/galMaximumftft	
				· <u>-</u> · · · · · · · · · · · · · · · · · · ·		1 <u>2</u>	
	25101	l Flow Characteri			0011		
Stack Height:				Stack Diameter			ft.
Water Vapor C	Content:		%	Velocity:	000	****	FPS
		SECTION	IV: INCINER	ATOR INFORM	ATION		
			n/a				
Type of Waste	Type O	Type I	Type II	Type III	Type IV	Type V	
Type of Waste	(Plastics)	(Rubbish)	(Refuse)	(Garbage)	(Pathological)	By-prod.)	
Lbs/hr						•	
Incinerated		!					
		1	<u> </u>			· ·	
Description of Waste	e						
Total Weight Incine	rated (lbs/hr) _			Design Capacity	(lbs/hr)		·
Approximate Numb	er of Hours of (	Operation per day	/ <u></u>		days/w	/eek	
Manufacturer							
Date Constructed _							

4	Volume	Heat Release		Fuel	Temperature
	(ft) <sup>3</sup>	(BTU/hr)	Туре	BTU/hr	(OF)
Primary Chamber			·		
Secondary Chamber					
Stack Height:		ft. Stack Diameter _		Stack To	emp
Gas Flow Rate:		ACFM		DSCFM* Velocit	ry FPS
*If 50 or more tons per d cess air.	lay design capac	ity, submit the emission	ons rate in grains	per standard cubic fo	oot dry gas corrected to 50% ex-
Type of pollution control	device: [ ] Cy	clone [ ] Wet Scrub	ber [] Afterb	urner [ ] Other (s	pecify)
Brief description of operat	ing characteristi	cs of control devices: _			
			· · · · · · · · · · · · · · · · · · ·		, 
·					
		·			<u> </u>
Ultimate disposal of any el	ffluent other tha	an that emitted from th	ne stack (scrubber	water, ash, etc.):	
_			-		
			-		
· · · · · · · · · · · · · · · · · · ·					

#### SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

- Total process input rate and product weight show derivation.
- 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, 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%" 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%" 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 8½" 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. An application fee of \$20, unless exempted by Section 17-4.05(3), F.A.C. 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

Contaminant	Rate or Concentration
•	
Has EPA declared the best available control tech	hnology for this class of sources (If yes, attach copy) [ ] Yes [ ] No
Contaminant	Rate or Concentration
	<del></del>
What emission levels do you propose as best ava	ailable control technology?
Contaminant	Rate or Concentration
•	
Describe the existing control and treatment tec	hnology (if any).
1. Control Device/System:	
2. Operating Principles:	
3. Efficiency: •	4. Capital Costs:
5. Useful Life:	6. Operating Costs:
7. Energy:	8. Maintenance Cost:
9. Emissions:	
Contaminant	Rate or Concentration
Contamilant	reace of Concession
<del></del>	

<sup>\*</sup>Explain method of determining D 3 above.

		a.	Height:	ft.	b.	Diameter:
		c.	Flow Rate:	ACFM	d.	Temperature:
•		e.	Velocity:	FPS		
E.	Des	crib	e the control and treatment technology ava	ailable (As	many	types as applicable, use additional pages if necessary
	1.		•			
		a.	Control Device:			
		b.	Operating Principles:			
		c.	Efficiency*:		d.	Capital Cost:
		e.	Useful Life:		f.	Operating Cost:
		g.	Energy*:		h.	Maintenance Cost:
		i.	Availability of construction materials and	I process ch	emic	eals:
		j.	Applicability to manufacturing processes:	•		
		k.	Ability to construct with control device,	install in av	ailab	le space, and operate within proposed levels:
	2.					
		a.	Control Device:			
		b.	Operating Principles:			
		C.	Efficiency*:	•	d.	Capital Cost:
		e.	Useful Life:	•	f.	Operating Cost:
		g.	Energy **:		h.	Maintenance Costs:
		i.	Availability of construction materials and	l process ch	emic	cals:
		j.	Applicability to manufacturing processes	<b>:</b>		
		k.	Ability to construct with control device,	install in av	/ailab	ole space, and operate within proposed levels:
•E:	kplaii	n me	ethod of determining efficiency.			
••E	nergy	to l	be reported in units of electrical power — k	KWH design	rate	
	3.					
		a.	Control Device:			
		b.	Operating Principles:			
		C.	Efficiency :		đ.	Capital Cost:
		е.	Life:		f.	Operating Cost:
		q.	Energy:		h.	Maintenance Cost:

<sup>\*</sup>Explain method of determining efficiency above.

i. Availability of construction materials and process ch	emicais:
j. Applicability to manufacturing processes:	
k. Ability to construct with control device, install in av	ailable space and operate within proposed levels:
4.	
a. Control Device	
b. Operating Principles:	
c. Efficiency*:	d. Capital Cost:
e. Life:	f. Operating Cost:
g. Energy:	h. Maintenance Cost:
i. Availability of construction materials and process ch	emicals:
j. Applicability to manufacturing processes:	
k. Ability to construct with control device, install in ay	ailable space, and operate within proposed levels:
Describe the control technology selected:	anable space, and operate within proposed revers.
Control Device:	•
2. Efficiency*:	3. Capital Cost:
4. Life:	5. Operating Cost:
6. Energy:	7. Maintenance Cost:
8. Manufacturer:	The Maintenance Cost.
9. Other locations where employed on similar processes:	
a. (1) Company:	
	(4) State:
(3) City: (5) Environmental Manager:	(4) State.
(6) Telephone No.:	
explain method of determining efficiency above.	
(7) Emissions*:	
Contaminant	Rate or Concentration
Contaminant	nate of Concentration
	·
(8) Process Rate*:	
b. (1) Company	
(1) Company:	
(2) Mailing Address:	IA) Seesan
(3) City:	(4) State:

F.

(7)	Emissions*:		
	Contaminant	Rate or Concentration	

**Environmental Manager:** 

(5)

<sup>10.</sup> Reason for selection and description of systems:

<sup>\*</sup>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 <sup>2</sup> • W	/ind spd/dir	•	
	Period of monitoring / / to / / month day year month day year			•
-				
	Other data recorded			
	Attach all data or statistical summaries to this application.	٠	•	•
	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
В.	Meteorological Data Used for Air Quality Modeling	•		•
	1Year(s) of data from/ / to/ /			
	2. Surface data obtained from (location)			
				<del></del>
	3. Upper air (mixing height) data obtained from (location)			· · · · · · · · · · · · · · · · · · ·
_	4. Stability wind rose (STAR) data obtained from (location)	<del></del>	•	
C.	Computer Models Used			
	1	•		
	2			
	3			
	4.	Modified?	If yes, att	ach 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 Rat	e		
	TSP	gra	ms/sec	
	so <sup>2</sup>	gra	ms/sec	
E.	Emission Data Used in Modeling			
	Attach list of emission sources. Emission data required is source name, description on p UTM coordinates, stack data, allowable emissions, and normal operating time.	oint source (	on NEDS	point number),
F.	Attach all other information supportive to the PSD review.			
*Spe	cify bubbler (B) or continuous (C).			
G.	Discuss the social and economic impact of the selected technology versus other applicable duction, taxes, energy, etc.). Include assessment of the environmental impact of the source	ole technologi es.	es (i.e., jo	bs, payroll, pro-

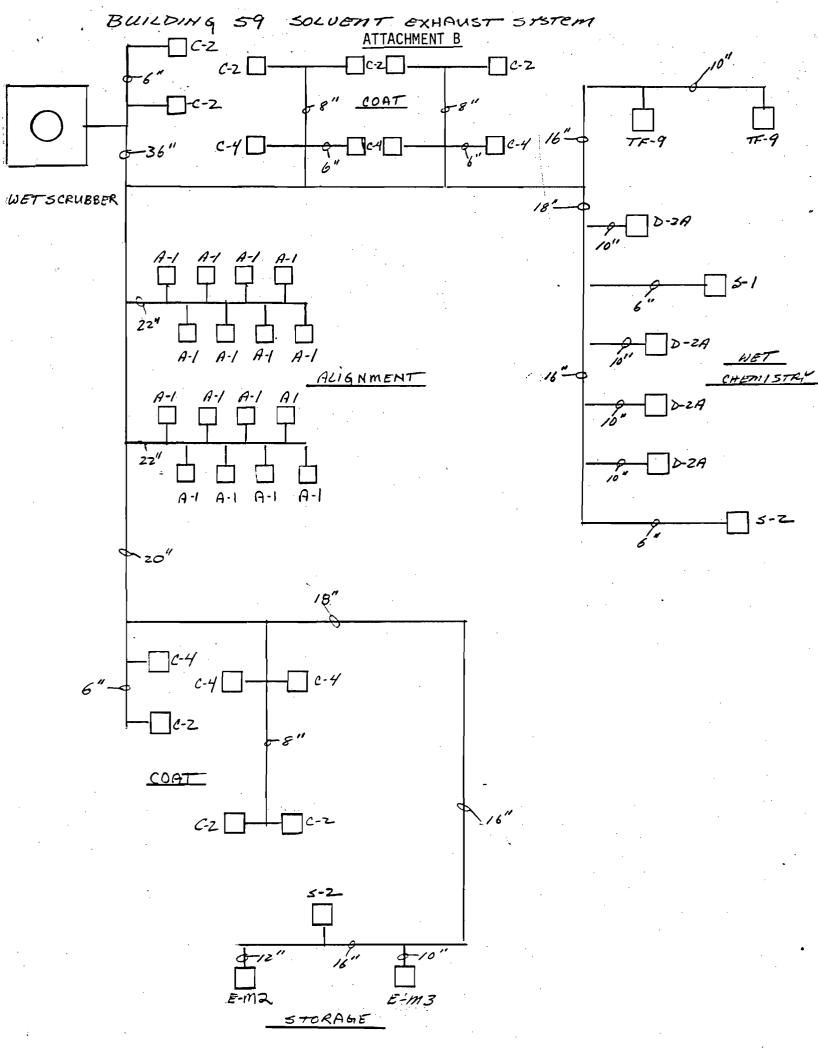
H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

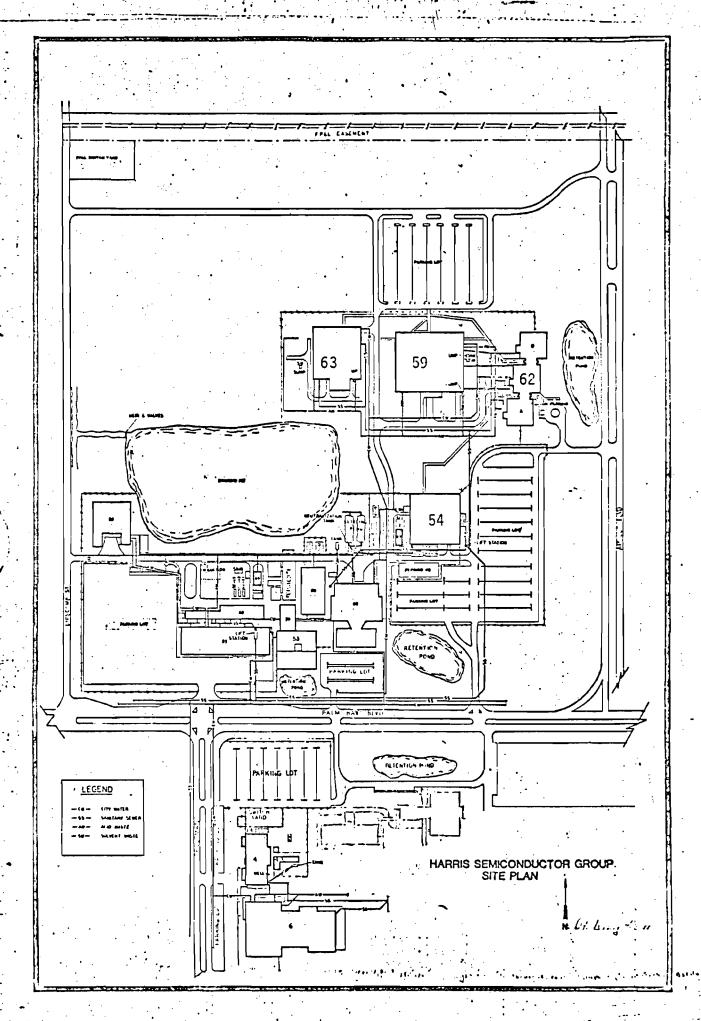
## ATTACHMENT A HARRIS SEMICONDUCTOR EXHAUST SCRUBBER - BUILDING 59

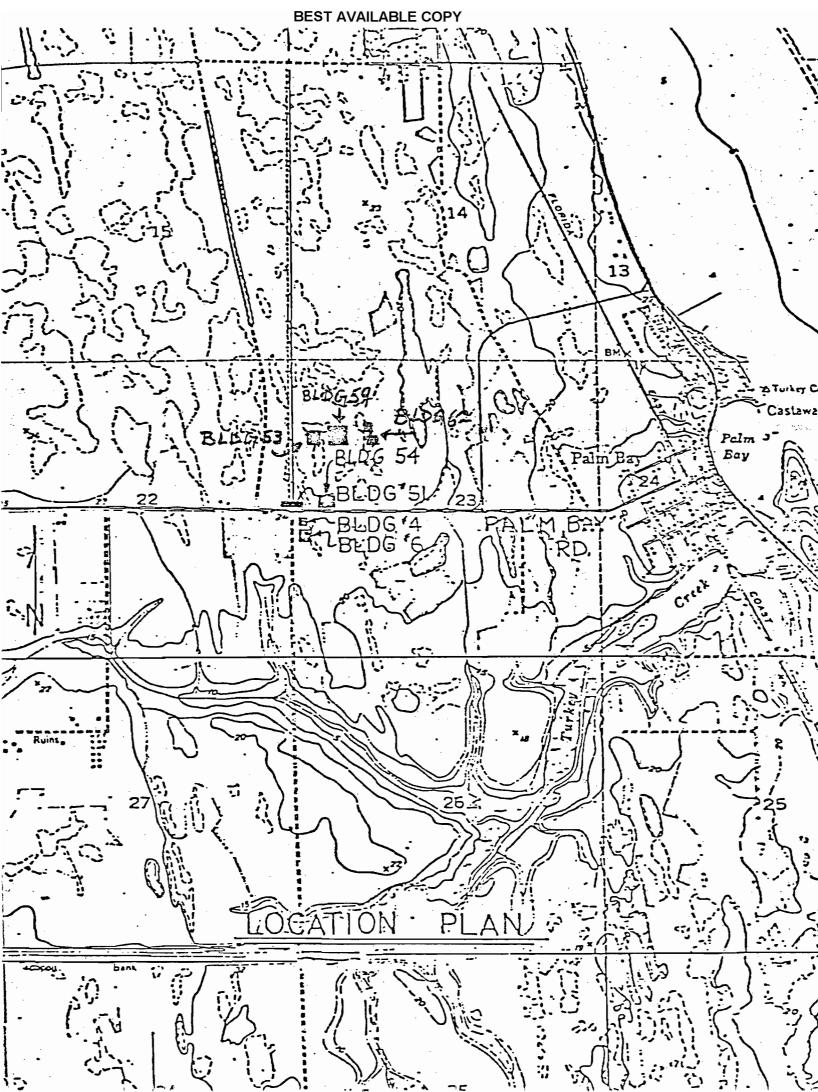
SYSTEM 1 SOLVENTS

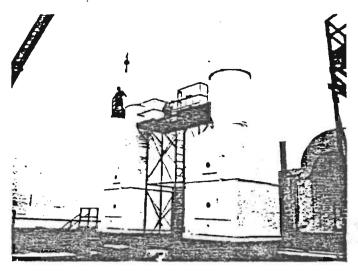
RAW	UTILIZATION	EMISS	ION	POTENTIAL	EMISSION
MATERIAL	RATE 1b/hr	MAXIMUM 1b/hr	ACTUAL ton/yr	lb/hr	ton/yr
Acetone	34.01	0.023	0.073	0.154	0.049
Methanol	1.56	0.149	0.473	0.995	3.15
Trichloroethylend	6.9	0.049	0.156	0.469	1.487
Xylene	1.71	0.101	0.320	0.672	2.128
Propanol .	35.03	0.028	0.090	0.186	0.590
Butyl Acetate	12.80	0.025	0.081	0.170	0.538
Freon	.27	0.017	0.054	0.113	0.359
Photoresist	3.27	0.18	0.570	1.2	3.802
Microstrip	42.47	0.132	0.420	0.876	2.799

DDC 2/10/02









#### AIR POLLUTION CONTROL EQUIPMENT

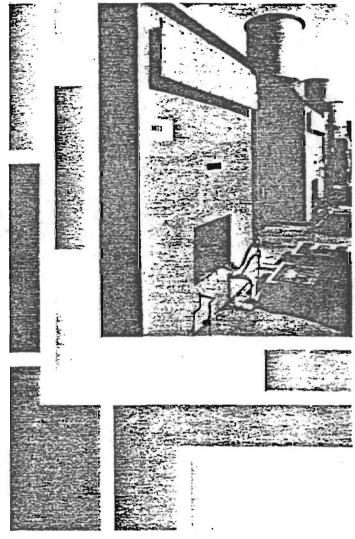
Over the years, more and more emphasis has been placed on air pollution control. There is little doubt more stringent standards and laws are forthcoming from State and Federal agencies regarding the demand for effective, well-designed air cleaning devices for industrial ventilation systems.

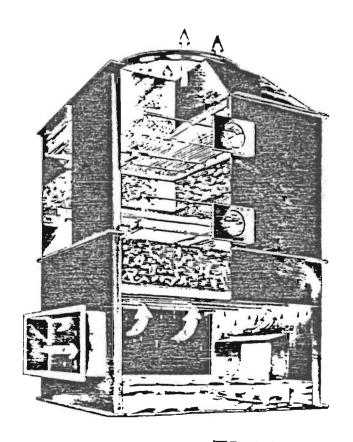
Beverly Pacific offers three (3) basic air pollution control units, totaling ten (10) variations, each with a multitude of standard and optional equipment available to meet your specific requirements.



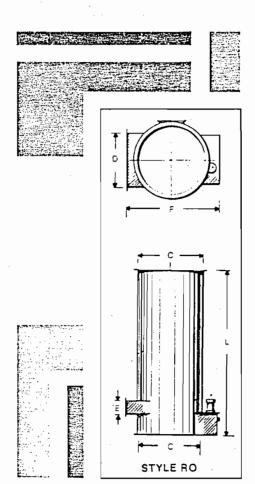
Beverly Pacific's Packed Scrubbers are designed for the removal of soluble gases, mists and particulate matter through "gas absorption" — where noxious gases are transferred from the air stream into a liquid state; and through "impingement" — where particulates are forced against a wetted packing media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

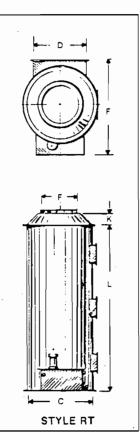


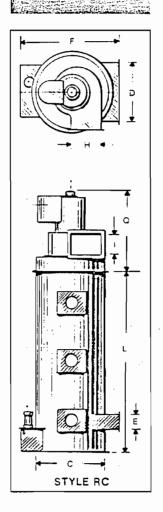


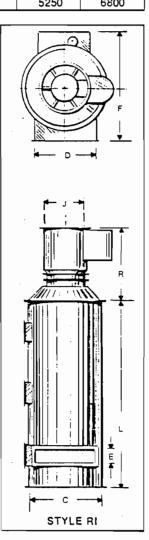
Professional management in										
		•	PACK		JBBER D MODEL N MENSIONS	UMBERS	ONAL CH	IART		
	PS-2	PS-4	PS-6	PS-8	PS-12	PS-18	PS-24	PS-30	PS-40	PS-50
Α	78	82	84	94	101	108	112	114	118	118
В	24	. 36	42	48	60	72	84	96	108	120
С	28	40	48	58	72	84	96	108	120	136
Q	22	34	40	46	58	70	80	92	104	116
E	. 6	. 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
Н	13%	163/8	221/2	261/4	291/2	351/4	39	471/4	52%	631/8
1.	10%	121/a	17	201/2	22¾	27	30	371/2	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
0	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
Т	36	48	54	60	. 72	84	96	108	120	132
WHEEL DIA.	121/4	15	20	241/2	27	33	361/2	441/2	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 MAKE-UP GPM	7 0.7	15 1.5	25 2.0	35 3.0	45 4.0	75 7.0	105 10.0	135 13.0	175 17.0	225 22.0
HT OP. WT.	388 220	745 385	1110 550	1570 770	2690 1210	4085 1925	5670 2750	7595 3795	11790 - 5390	16040 7040
VT OP. WT.	318	660	1060	1500	2630 1150	3910 1750	5470 2550	7400 3600	11650 5250	15800 6800

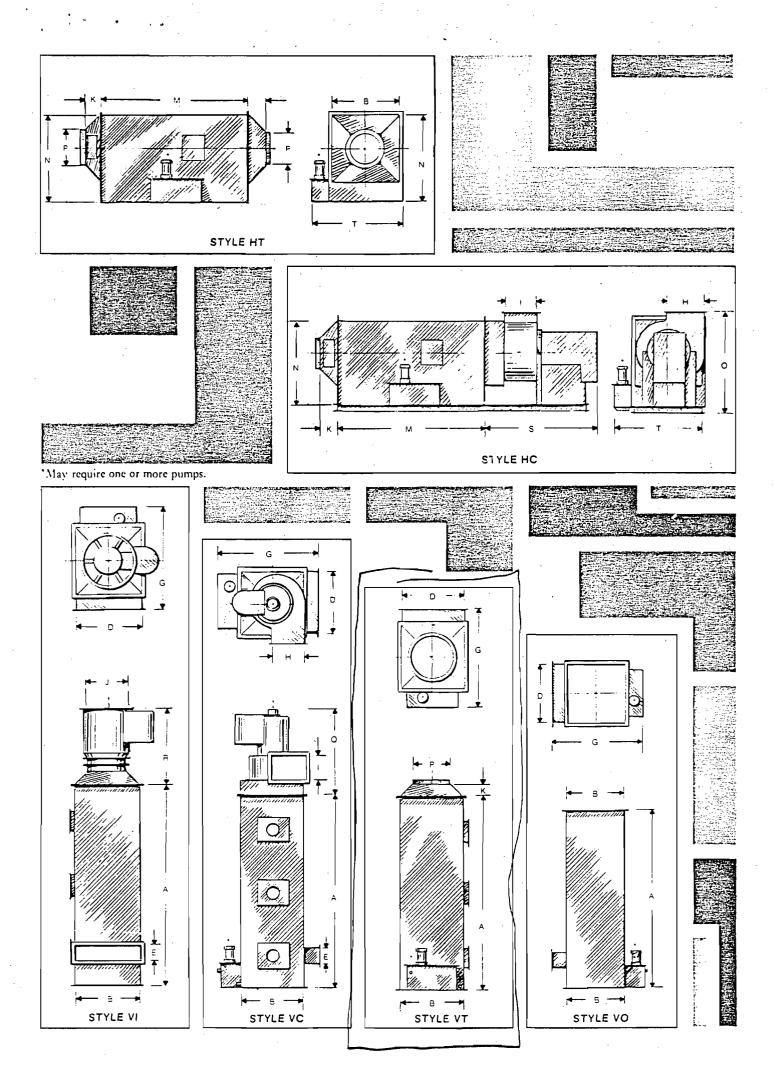












#### COMPUTERIZED PACKING MEDIA SELECTION

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.

#### CONSTRUCT!ON

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.

APR 21 1982

SAINT JOHNS RIVER DISTRICT

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STATE OF FLORIDA APR 26 19 DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICATION TO OPERATE/O AIR POLLUTION SOU

SOL	JRCE TYPE:	CTOMAT V	_ [X] New [ ] Existing	•
APP	LICATION TYPE:	[X] Construction [] Operation [	•	
CON	MPANY NAME: Ha	rris Semiconductor	COUNTY: Brevard	
lder No.	ntify the specific eroi 2, Gas Fired) BUT I	ssion point source(s) addressed in this ding 59 Acid Vapor Exhaust	pplication (i.e. Lime Kiln No. 4 with Venturi Scrubber; F Scrubber (FS-59-2)	eeking Unit
	JRCE LOCATION:	Street Palm Bay Road	City Palm Bay	
		UTM: East 17-538700	North17-3100900	
	•	Latitude 28 o 01 · 20		'w
APP	PLICANT NAME AN	DITLE: P.R. Bumgarner, Mg	. Facilities Engineering	
		PT-030 Box 883, Melbourne	·	
	and the second	SECTION I: STATEMENTS	BY APPLICANT AND ENGINEER	
Ä.	APPLICANT			
	I am the undersign	ed owner or authorized representative*	<sub>of</sub> <u>Harris Semiconductor</u>	
	I certify that the st	stements made in this application for a	construction	•
	pollution control Florida Statutes, a	source and complete to the best of this source and pollution control facilities and all the rules and regulations of the partment, will be non-transferable and I	knowledge and belief. Further, I agree to maintain and in such a manner as to comply with the provision of C department and revisions thereof. I also understand that will promptly notify the department upon sale or legal transfer.	Chooter 403, o permit, if
•At	tach letter of authori	zation ·	Signed: (S) com Paince	<u> </u>
			P.R. Bumgarner, Mgr. Facilities End	gineering
	•		Name and Title (Please Type)  Date: 2-22-82 Telephone No.724-7657	
		, 		<u></u>
₿.			A (where required by Chapter 471, F.S.)	
	be in conformity of permit application erly maintained arrules and regulation	with modern engineering principles app . There is reasonable assurance, in my ed operated, will discharge an effluent the ens of the department. It is also agreed t	tion control project have been designed/examined by me a icable to the treatment and disposal of pollutants charact professional judgment, that the pollution control facilities, at complies with all applicable statutes of the State of Figure 1 the undersigned will furnish, if authorized by the owning peration of the pollution control facilities and, if applicable Castle	erized in the , when prop- trida and the er, the appli-
			Chester C. Bach	
			Name (Please Type)	
	(Affix Seal)	Comment	Harris Semiconductor	· <u>-</u>
		The same of the sa	Company Name (Please Type)	
		50.50	FT-30 Box 883, Melbourne, FL 32901 Mailing Address (Please Type)	
	Florida Registratio	n No 19/10	Date: 2/22/82 Telephone No. 724-732	4
	i lorda negistratio	CHED FUELS	reteptione (to:	
1 <sub>Se</sub>	e Section 17-2.02(15	) and (22), Florida Administrative Code	(F.A.C.)	

#### SECTION II: GENERAL PROJECT INFORMATION

Describe the nature and extent of the project. Refer to pollution control equipment, and extent of installation. State whether the project will result in full compliance.	Attach additional sheet if necessar
Building 59 will utilize laboratory hood type work stations	
conditions for the manufacture of semiconductors, all chemic	· · · · ·
1-2 gallon containers in which the devices are immersed. Ve	ssel surface exposed
to exhaust air is minimal. Air is exhausted via a 40.000FM	fume scrubber manu-
factored by BEVERLY PACIFIC. Schedule of project covered in this application (Construction Permit Application Only)	
Start of Construction 5-1-82 Completion of Construction	9-1-82
Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for project serving pollution control purposes. Information on actual costs shall be furnished permit.)	r individual components/units of
·	··.·
	· · · · · · · · · · · · · · · · · · ·
Indicate any previous DER permits, orders and notices associated with the emission point, it tion dates.  Building 59 is new construction approximately 1000 ft. from	
current operating permits.	
Is this application associated with or part of a Development of Regional Impact (DRI) pursuand Chapter 22F-2, Florida Administrative Code? Yes _X No  Normal equipment operating time: hrs/day24; days/wk7; wks/yr52	
and Chapter 22F-2, Florida Administrative Code? Yes _X No  Normal equipment operating time: hrs/day24; days/wk7; wks/yr _52	
and Chapter 22F-2, Florida Administrative Code? Yes _X No  Normal equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52  if seasonal, describe:	
and Chapter 22F-2, Florida Administrative Code? Yes X No  Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52  if seasonal, describe:  If this is a new source or major modification, answer the following questions. (Yes or No)	; if power plant, hrs/yr
and Chapter 22F-2, Florida Administrative Code? Yes X No  Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52  if seasonal, describe:  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?	
and Chapter 22F-2, Florida Administrative Code? Yes X No  Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52  if seasonal, describe:  If this is a new source or major modification, answer the following questions. (Yes or No)	; if power plant, hrs/yr
and Chapter 22F-2, Florida Administrative Code? Yes X No  Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52  if seasonal, describe:  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?	; if power plant, hrs/yr
and Chapter 22F-2, Florida Administrative Code? YesX No  Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52  if seasonal, describe:	; if power plant, hrs/yr
and Chapter 22F-2, Florida Administrative Code? YesX No  Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52  if seasonal, describe:  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?  a. If yes, has "offset" been applied?  b. If yes, has "Lowest Achievable Emission Rate" been applied?	; if power plant, hrs/yr
and Chapter 22F-2, Florida Administrative Code? YesX No  Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52  If seasonal, describe:  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?  a. If yes, has "offset" been applied?  b. If yes, has "Lowest Achievable Emission Rate" been applied?	; if power plant, hrs/yr
and Chapter 22F-2, Florida Administrative Code? Yes _X No  Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52  if seasonal, describe:  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?  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	; if power plant, hrs/yr
and Chapter 22F-2, Florida Administrative Code?YesXNo Normal equipment operating time: hrs/day24; days/wk7; wks/yr52 if seasonal, describe:  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?  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.  3. Does the State "Prevention of Significant Deterioriation" (PSD) requirements	; if power plant, hrs/yr
and Chapter 22F-2, Florida Administrative Code? Yes X No  Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52  if seasonal, describe:  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?  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.  3. Does the State "Prevention of Significant Deterioriation" (PSD) requirements apply to this source? If yes, see Sections VI and VII.  4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to	

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

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

Description	Contar	ninants	Utilization	D.1
1	Type	% Wt	Rate - Ibs/hr	Relate to Flow Diagram
See Attachment A	÷			See Attachment B
•				
*				-

B. Process Rate, if an	plicable: (See	Section V,	Item 1)
------------------------	----------------	------------	---------

1. Total Process Input Rate (lbs/hr): \_\_\_\_n/a

2. Product Weight (lbs/hr): Semiconductor wafer is 12 gms

#### C. Airborne Contaminants Emitted:

Nome	Emissi	ion <sup>1</sup>	Allowed Emission <sup>2</sup>	Allowable <sup>3</sup>	Potential Emissio	l Heigte
Name of Contaminant	Maximum Ibs/hr	Actual T/yr	Rate per Ch. 17-2, F.A.C.	Emission lbs/hr	lbs/hr T/y	- +o Elou
See AttachmentA			n/a	n/a		See Attachment
					:	
			,			

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles <sup>5</sup> Size Collected (in microns)	Basis for Efficiency (Sec. V, It <sup>5</sup>
Beverly Pacific Corp.	Acid mist	95%	n/a	Mfg. design
Model #PS40 HT/CB49				Data
			·	

<sup>&</sup>lt;sup>1</sup>See Section V, Item 2.

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<sup>&</sup>lt;sup>2</sup>Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. — 0.1 pounds per million BTU heat input)

<sup>&</sup>lt;sup>3</sup>Calculated from operating rate and applicable standard

<sup>&</sup>lt;sup>4</sup>Emission, if source operated without control (See Section V, Item 3)

<sup>5</sup>If Applicable

E.		n/a
-	Fuels	- U/ O

Type	(Be Specific)	<u> </u>		nsumption*		Maximum Hea (MMBTU/I	
Турс			avg/hr	max.	/hr	(MMBTU)	/hr}
		· · ·	<u> </u>	· ·		· · · · · · · · · · · · · · · · · · ·	
	<del></del>				·		
	<del></del>	· · · · · · · · · · · · · · · · · · ·					
Inits Natural Gas,	MMCF/hr; Fuel	Oils, barrels/hr;	Coal, lbs/hr				
el Analysis:			·	•		. **	
rcent Sulfur:			<del></del>	Percent Ash:	,	•	
nsity:			lbs/gal	Typical Percent	Nitrogen:	· · · · · · · · · · · · · · · · · · ·	<del></del>
eat Capacity:		<del> </del>	BTU/Ib	<del>'</del> :			BTU/9
her Fuel Contam							
							·
If applicable,	indicate the perc	ent of fuel used	for space heating	ng. Annual Ave	rage	Maximum .	
<del></del>	<del> </del>						
Emission Stad	k Geometry and	Flow Character	istics (Provide d	ata for each stack	<):		
Stack Height:	3	5' 0"	ft.	Stack Diameter:	3' 8"		
Stack Height: Gas Flow Ra	30,000/4	0,000	ft.	Stack Diameter: Gas Exit Tempe	3' 8" rature: 74		c
Stack Height: Gas Flow Ra	3	0,000	ft.	Stack Diameter: Gas Exit Tempe	3' 8"		
Stack Height: Gas Flow Ra	30,000/4	0,000	ft.	Stack Diameter: Gas Exit Tempe	3' 8" rature: 74		c
Stack Height: Gas Flow Ra	30,000/4	0,000	ft.	Stack Diameter: Gas Exit Tempe	3' 8" rature: 74		c
Stack Height: Gas Flow Ra	30,000/4	0,000	ft. ACFM %	Stack Diameter: Gas Exit Tempe	3' 8" erature: 74 500		c
Stack Height: Gas Flow Ra	30,000/4	0,000	ft. ACFM %	Stack Diameter: Gas Exit Tempe Velocity:	3' 8" erature: 74 500		F
Stack Height: Gas Flow Ra	30,000/4	0,000	ftACFM%	Stack Diameter: Gas Exit Tempe Velocity:	3' 8" erature: 74 500	Type V (Lig & Gas	Type VI
Stack Height: Gas Flow Ra Water Vapor (	30,000/4 Content: 1	5' 0" 0,000 SECTION	ftft% IV: INCINERn/aType II	Stack Diameter: Gas Exit Tempe Velocity:  ATOR INFORM  Type III	3' 8"  rature: 74  500  ATION	Type V	Type VI
Stack Height: Gas Flow Ra Water Vapor (	30,000/4 Content: 1	5' 0" 0,000 SECTION	ftft% IV: INCINERn/aType II	Stack Diameter: Gas Exit Tempe Velocity:  ATOR INFORM  Type III	3' 8"  rature: 74  500  ATION	Type V (Lig & Gas	Type VI
Stack Height: Gas Flow Ra Water Vapor (	30,000/4 Content: 1	5' 0" 0,000 SECTION	ftft% IV: INCINERn/aType II	Stack Diameter: Gas Exit Tempe Velocity:  ATOR INFORM  Type III	3' 8"  rature: 74  500  ATION	Type V (Lig & Gas	Type VI
Stack Height: Gas Flow Ra Water Vapor (	Type O (Plastics)	SECTION Type I (Rubbish)	ft. ACFM % NIV: INCINER n/a Type II (Refuse)	Stack Diameter: Gas Exit Tempe Velocity:  ATOR INFORM  Type III (Garbage)	3' 8"  rature: 74  500  ATION	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Stack Height: Gas Flow Ra Water Vapor (	Type O (Plastics)	SECTION Type I (Rubbish)	ftftftft. ACFM%  N IV: INCINERn/aType II(Refuse)	Stack Diameter: Gas Exit Tempe Velocity:  ATOR INFORM  Type III (Garbage)	arature: 74 500  ATION  Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Stack Height: Gas Flow Ra Water Vapor (	Type O (Plastics)	SECTION Type I (Rubbish)	ftACFM%  IV: INCINERn/aType II (Refuse)	Stack Diameter: Gas Exit Tempe Velocity:  ATOR INFORM  Type III (Garbage)  Design Capacity	arature: 74 500  ATION  Type IV (Pathological)	Type V (Liq & Gas By prod.)	Type VI (Solid By-prod.)
Stack Height: Gas Flow Ra Water Vapor (  Type of Waste  bs/hr ncinerated  escription of Waste  pproximate Numb	Type O (Plastics)  e	SECTION Type I (Rubbish)	ftftft%  N IV: INCINER  n/a  Type II (Refuse)	Stack Diameter: Gas Exit Tempe Velocity:  ATOR INFORM  Type III (Garbage)  Design Capacity	arature: 74 500  ATION  Type IV (Pathological)	Type V (Liq & Gas By prod.)	Type VI (Solid By-prod.)

	Volume	Heat Release		Fuel	Temperature
	(ft)3	(BTU/hr)	Type	BTU/hr	(OF)
Primary Chamber					
Secondary Chamber					
Stack Height:	<u> </u>	ft. Stack Diameter		Stack To	emp
Sas Flow Rate:		ACFM		DSCFM* Velocit	ry FPS
If 50 or more tons per ocess air.	day design capa	city, submit the emission	ns rate in grains	per standard cubic fo	oot dry gas corrected to 50% ex
Expe of pollution control	device: [ ] C	cyclone [ ] Wet Scrubb	er [] Afterb	urner [ ] Other (s	pecify)
the er bound tion countrot					
•		•			
Brief description of opera		•			
•		•			
•		•			
•		•			
Brief description of opera	ting characterist	ics of control devices: _			
•	ting characterist	ics of control devices: _			
Brief description of opera	ting characterist	ics of control devices: _			
Brief description of opera	ting characterist	ics of control devices: _			

#### **SECTION V: SUPPLEMENTAL REQUIREMENTS**

Please provide the following supplements where required for this application.

- 1. Total process input rate and product weight show derivation.
- 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, 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 8¼" 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%" 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%" 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. An application fee of \$20, unless exempted by Section 17-4.05(3), F.A.C. 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

	Contaminant			Rate or Concentration
•				<u> </u>
<del></del>		<del></del>	·	
		<del></del>	·	· · · · · · · · · · · · · · · · · · ·
·				
Has EPA declared the	e best available control tech	nology for this	class of sources (if y	ves, attach copy) [ ] Yes [ ] No
	Contaminant	•		Rate or Concentration
				•
What emission levels	do you propose as best avai	liable control te	chnology?	
	Contaminant			Rate or Concentration
		· · · · · · · · · · · · · · · · · · ·	<del> </del>	
•	· · · · · · · · · · · · · · · · · · ·	<del>.</del>		<u> </u>
			·	
	<u>-</u>	•		
Describe the existing	control and treatment tech	nology (if any)	•	
1. Control Device/S	System:		÷	
2. Operating Princi	ples:	•		
3. Efficiency: *		4.	Capital Costs:	•
5. Useful Life:		6.	Operating Costs:	
7. Energy:			Maintenance Cost:	
9. Emissions:			- •	
	Contaminant			Rate or Concentration
				Tigge or content and it

<sup>\*</sup>Explain method of determining D 3 above.

•	10. Sta	ck Parameters				
١,	` a.	Height: ft.	ь.	Diameter:		
	c.	Flow Rate: ACFM	d.	Temperature:	•	
	e.	Velocity: FPS	;	· · · · · · · · · · · · · · · · · · ·	•	
E.	Describ	e the control and treatment technology available (As	many	types as applicable, use	additional pages if neces	sary)
	1.					
	: <b>a.</b>	Control Device:		•		
	b.	Operating Principles:				
		<i>₹</i>				
	c.	Efficiency*:	d.	Capital Cost:		
	e.	Useful Life:	. f.	Operating Cost:		
	g.	Energy*:	h.	Maintenance Cost:		•
	i.	Availability of construction materials and process of	hemio	als:		
•	j.	Applicability to manufacturing processes:				
	, k.	Ability to construct with control device, install in	availat	ele space, and operate wi	thin proposed levels:	
	2.			•		
	a.	Control Device:				
	b.	Operating Principles:		·	•	
	C.	Efficiency*:	d.	Capital Cost:		
	e.	Useful Life:	f.	Operating Cost:		
	9.	Energy **:	h.	Maintenance Costs:		
	i.	Availability of construction materials and process of	hemic	cals:		
	j.	Applicability to manufacturing processes:				
	, j. k.	Ability to construct with control device, install in	wailat	ale chace, and operate wi	ithin proposed levels:	
	~	Ability to construct with control device, install in		ne space, and operate wi	that proposed levels.	
<b>•</b> E.	valsis ma	ethod of determining efficiency.			•	
	•	be reported in units of electrical power — KWH design				
E (	3.	be reported in units of electrical power — KWH desig	jii rate	•		
		Control Position				
	a. L	Control Device:				
	b.	Operating Principles:		de la		
		Estiman.	_	Capital Care		
	C.	Efficiency*:	d.	Capital Cost:		
	8.	Life:	f.	Operating Cost:		
	g.	Energy:	h.	Maintenance Cost:		

<sup>\*</sup>Explain method of determining efficiency above.

·k.	Abil	ity to construct with contro	device, install in	n availab	ele space and operate within proposed levels:
4.					•
<b>a.</b>	Cont	rol Device			
b.	Oper	rating Principles:		·	
c.	Effic	iency*:	. •	ď.	Capital Cost:
e.	Life:			,. <b>'f.</b>	Operating Cost:
g.	Ener	gy:		h.	Maintenance Cost:
<b>i.</b>	Avai	lability of construction mat	erials and process	s chemic	als:
j.	Appl	icability to manufacturing (	orocesses:	*	
k.	Abili	ity to construct with contro	l device, install in	n availab	le space, and operate within proposed levels:
Describ	e the d	control technology selected:			
1. Co	ntrol [	Device:	•		
2. Eff	icienc	y <b>*</b> :		3.	Capital Cost:
. 4. Life	e:	•		5.	Operating Cost:
6. En	ergy:	•		7.	Maintenance Cost:
8. Ma	nufact	turer:			
9. Otl	her loc	ations where employed on	similar processes:	:	
a.					
	(1)	Company:	•		
	(2)	Mailing Address:	•		
	(3)	City:		(4)	State:
	(5)	Environmental Manager:			
	(6)	Telephone No.:		٠.	
olain me	thod o	of determining efficiency at	ove.		
	(7)	Emissions*:			
		Contaminant			Rate or Concentration
	(8)	Process Rate*:			
b.					•
	(1)	Company:			
	(2)	Mailing Address:			
	(3)	City:		(A)	State:
	101	- · · · · · · · · · · · · · · · · · · ·		(-)	- Ciurui

Availability of construction materials and process chemicals:

(5) Environmental Manager:					
(6) Telephone No.:					
(7) Emissions*:					
Contaminant	Rate or Concentration				
(8) Process Rate*:					
10 Reason for selection and description of systems:					

<sup>\*</sup>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	π/ α	•
	1 no sites TSP	( ) so <sup>2</sup> •	Nind spd/dir
	Period of monitoring//	to / / / month day year	
	Other data recorded		<del></del>
	Attach all data or statistical summaries to this applicati	on.	
	2. Instrumentation, Field and Laboratory	•	•
	a) Was instrumentation EPA referenced or its equiva	alent? Yes No	
	b) Was instrumentation calibrated in accordance wit	h Department procedures?	Yes No Unknown
В.	Meteorological Data Used for Air Quality Modeling		
	1 Year(s) of data from/ / month day year	to	
		•	
	2. Surface data obtained from (location)	· · · · · · · · · · · · · · · · · · ·	
	3. Upper air (mixing height) data obtained from (location	)	<del></del>
	4. Stability wind rose (STAR) data obtained from (location	on)	<u>.</u> .
C.	Computer Models Used		
	1.	·	_ Modified? If yes, attach description.
	2		_ Modified? If yes, attach description.
	3		
	4		_ Modified? If yes, attach description.
	Attach copies of all final model runs showing input data, r		
D.	Applicants Maximum Allowable Emission Data		·
	Pollutant	Emission Ra	te
	TSP		• .
	so <sup>2</sup>		·
_			grams/sec
E.	Emission Data Used in Modeling		
	Attach list of emission sources. Emission data required is UTM coordinates, stack data, allowable emissions, and no	s source name, description on promal operating time.	point source (on NEDS point number),
F.	Attach all other information supportive to the PSD review	<b>/.</b> .	
*Sp	ecify bubbler (B) or continuous (C).		

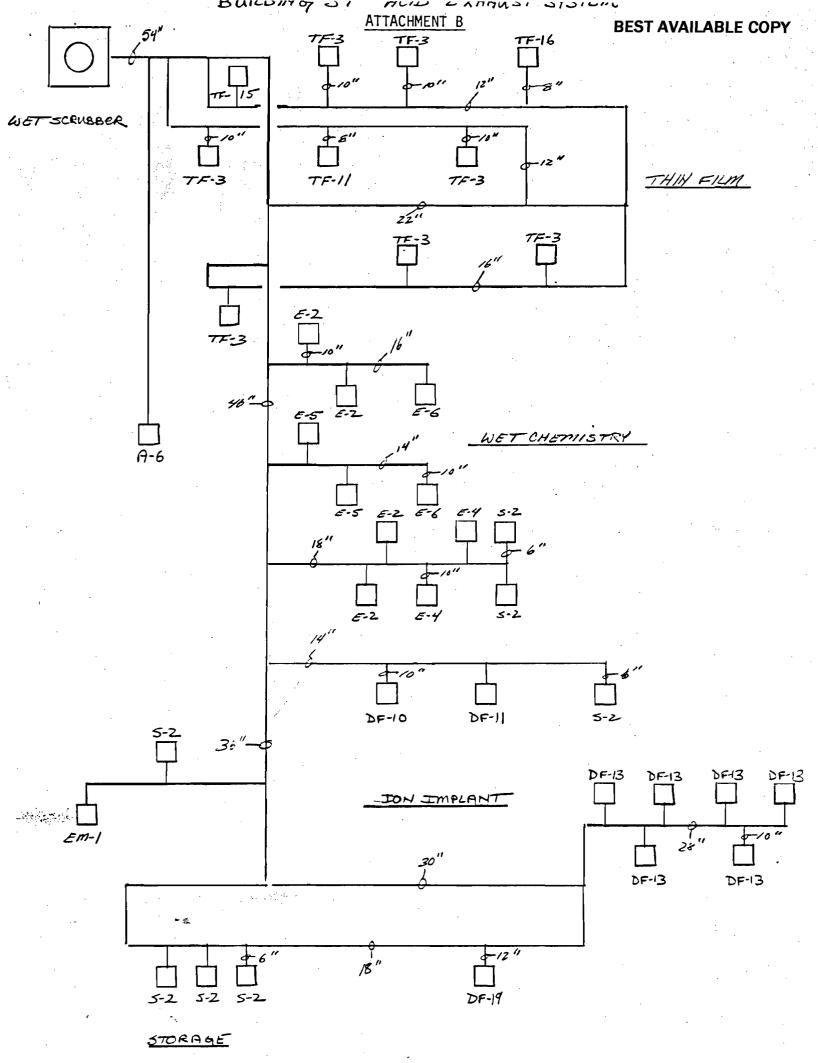
G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

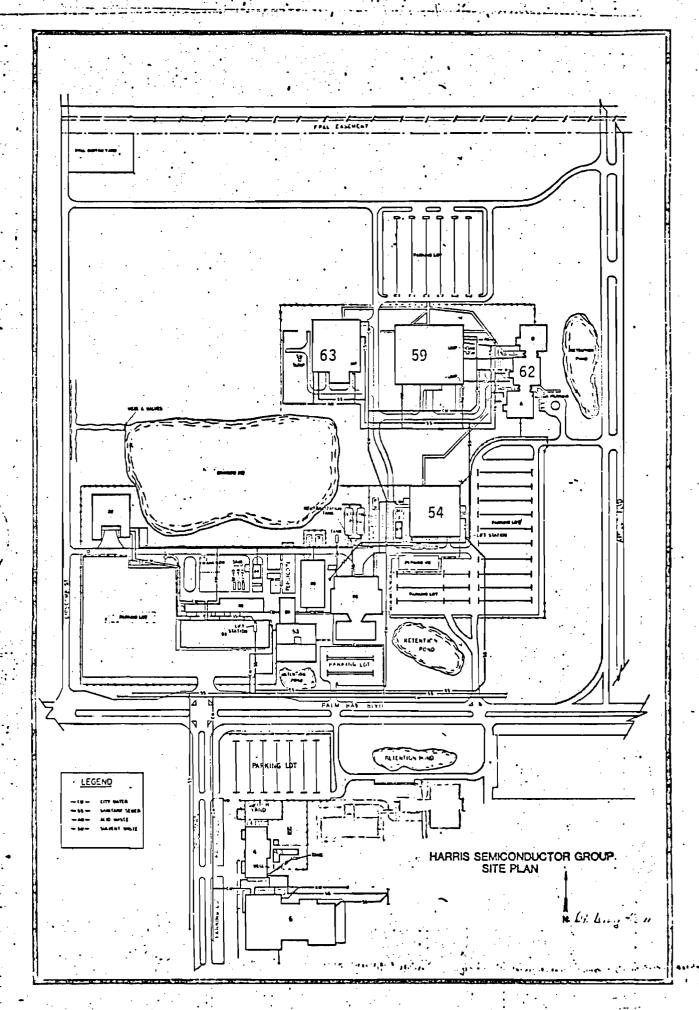
H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

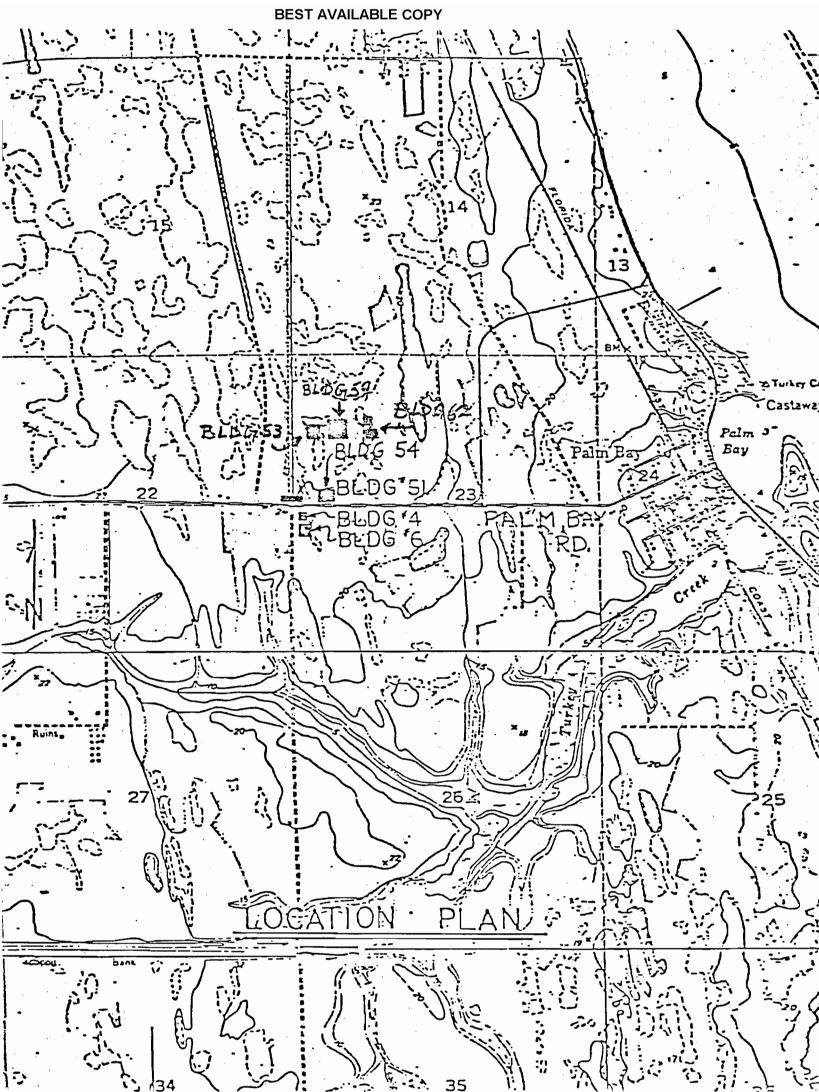
# ATTACHMENT A HARRIS SEMICONDUCTOR EXHAUST SCRUBBER - BUILDING 59

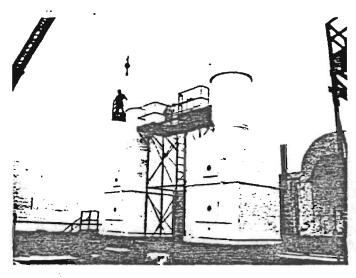
SYSTEM 2 ACID

RAW	UTILIZATION	EMISS	ION	POTENTIAL EMISSION		
MATERIAL	RATE 1b/hr	MAXIMUM 1b/hr	ACTUAL ton/yr	lb/hr	ton/yr	
Acetic Acid	4.18	0.003	0.009	0.060	0.189	
Ammonium Fluoride	14.9	0.014	0.045	0.283	0.897	
Hydrofluoric	17.29	0.007	0.021	0.131	0.414	
Nitric .	26.51	0.009	0.027	0.173	0.548	
Sodium Hydroxide	25.31	0.009	0.027	0.173	0.548	
Sulfuric	169.89	0.021	0.067	0.425	1.346	
Hydrochloric	3.86	0.001	0.0032	0.02	0.063	
Phosphoric	21.5	0.007	0.021	0.13	0.412	









#### AIR POLLUTION CONTROL EQUIPMENT

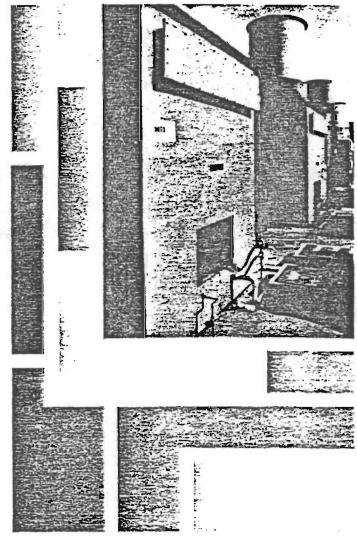
Over the years, more and more emphasis has been placed on air pollution control. There is little doubt more stringent standards and laws are forthcoming from State and Federal agencies regarding the demand for effective, well-designed air cleaning devices for industrial ventilation systems.

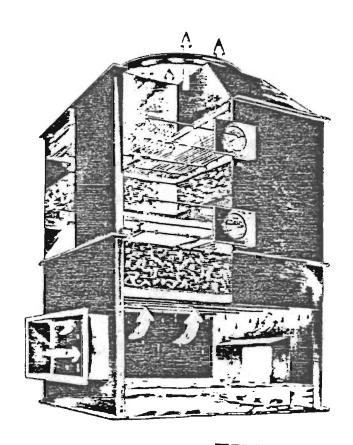
Beverly Pacific offers three (3) basic air pollution control units, totaling ten (10) variations, each with a multitude of standard and optional equipment available to meet your specific requirements.



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.

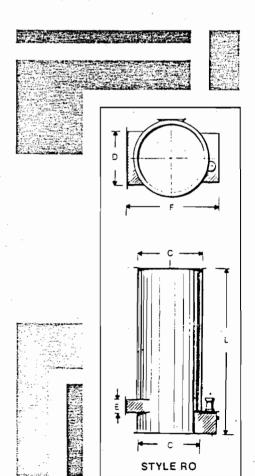
Recirculated scrubbing liquid is used for contaminate saturation and for irrigation of the packing media. Scrubbing efficiency depends largely on uniform distribution of scrubbing liquid, which Beverly Pacific achieves with low pressure, large orifice, non-plugging spray nozzles contained in a uniquely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



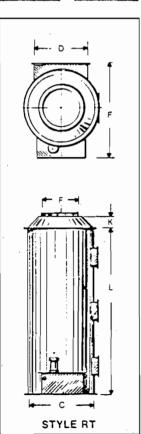


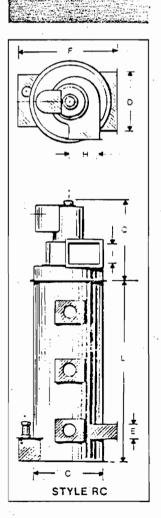
## PACKED SCRUBBER DIMENSIONAL CHART MODEL NUMBERS DIMENSIONS IN INCHES

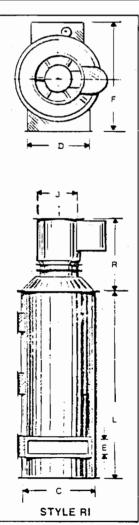
-										
	P\$-2	PS-4	PS-6	PS-8	PS-12	PS-18	PS-24	PS-30	( PS-40	PS-50
Α	78	82	84	94	101	108	112	114	118	118
В	24	36	42	48	60	72	84	96	108	120
С	28	40	48	58	72	84	96	108	120	136
D	22	34	40	46	58	70	80	92	104	116
Ε	6	8	10	11	12	16	18	20	24	24
F	46	58	66	76	90	102	114	126	138	154
G	42	54	60	66	78	90	102	114	126	138
н	13%	16%	221/2	261/4	291/2	351/4	39	471/4	52%	63%
1	10%	12%	17	201/2	22¾	27	30	371/2	40¾	493/4
J	18	22	28	34	38	45	50	62	66	8 <b>0</b>
К	6	8	10	10	12	16	19	20	24	24
L	84	87	89	104	112	118	122	124	128	128
М	64	64	· 70·	77	89	102	102	102	114	114
N	35	49	55	62	76	88	103	116	128	. 142
0	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.	121/4	15	20	241/2	27	33	361/2	441/2	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 MAKE-UP GPM	7 0.7	15 1.5	25 2.0	35 3.0	45 4.0	75 7.0	105 10.0	135 13.0	175 17.0	225 22.0
HT OP. WT.	388 220	745 385	1110 550	1570 770	2690 1210	4085 1925	5670 2750	7595 3795	11790 5390	1604 <b>0</b> 704 <b>0</b>
VT OP. WT. VT SHIP WT.	318 150	660 300	1060 500	1500 700	2630 1150	3910 1750	5470 2550	7400 3600	11650 5250	158 <b>00</b> 6800

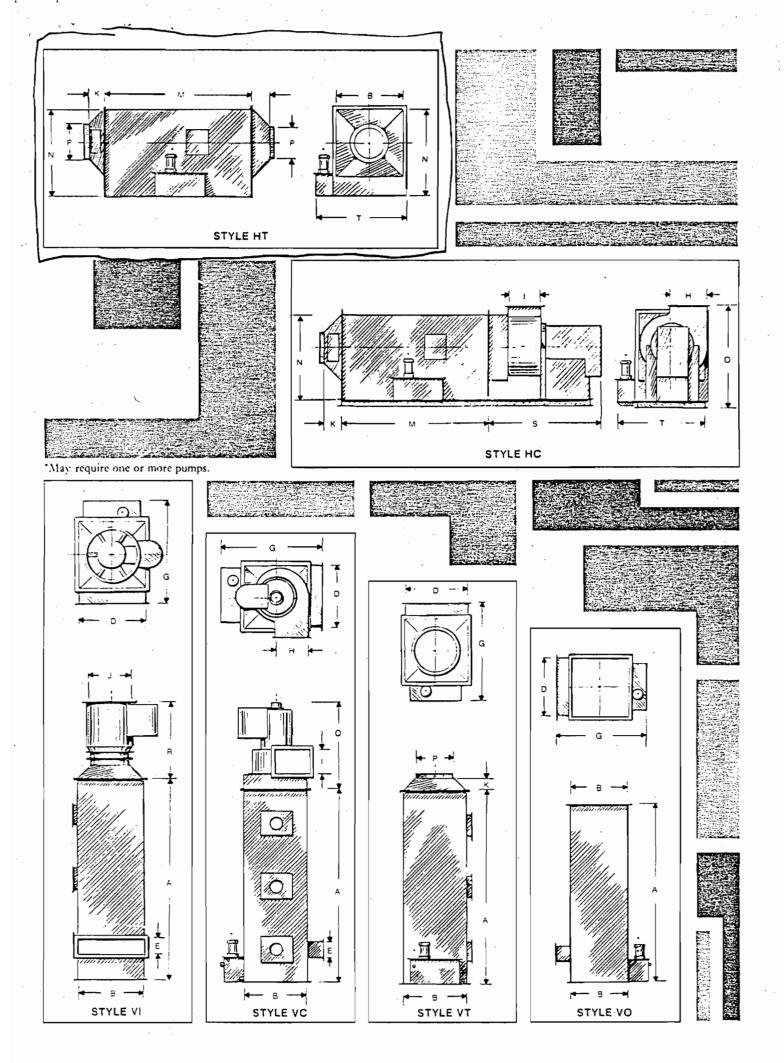












#### COMPUTERIZED PACKING MEDIA SELECTION

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.

**BEST AVAILABLE COPY** 



ACO5 - 54992

APR 21 1982

SAINT JOHNS
RIVER DISTRICT

DER FORM 17-1.122(16) Page 1 of 10

DEPARTED TO PERATE/CONSTRUCT
AIR POLLUTION SOURCES

APR 1982

RECEIVED
Saint Johns River
District

9 C 7 C 2

SOURCE TYPE: Stationary	[X] New <sup>1</sup> [ ] Existing <sup>1</sup>
APPLICATION TYPE: [X] Construction [ ] Operation [ ]	Modification
COMPANY NAME: Harris Semiconductor	COUNTY: Brevard
Identify the specific emission point source(s) addressed in this a No. 2, Gas Fired) Building 62 Solvent Vapor Exhau	pplication (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Unit ist Scrubber (FS-62A -1)
SOURCE LOCATION: Street Palm Bay Road	City Palm Bay
UTM: East 17-538700	North <u>17-3100900</u>
Latitude 28 • 01 · 20 "	N Longitude <u>80</u> o <u>36</u> , <u>10</u> , w
APPLICANT NAME AND TITLE: P. R. Bumgarner, Mar	nager Facilities Engineering
APPLICANT ADDRESS: PT-030 Box 883, Melbourne.	, FL 32901
SECTION I: STATEMENTS B	Y APPLICANT AND ENGINEER
A. APPLICANT	
I am the undersigned owner or authorized representative $^{ullet}$ o	f <u>Harris Semiconductor</u>
pollution control source and pollution control facilities in Florida Statutes, and all the rules and regulations of the o	knowledge and belief. Further, I agree to maintain and operate the n such a manner as to comply with the provision of Chapter 403, lepartment and revisions thereof. I also understand that a permit, if will promptly notify the department upon sale or legal transfer of the
*Attach letter of authorization	Signed: Dum Paine
	P. R. Bumgarner, Mgr., Facilities Engineerin Name and Title (Please Type)
,	Date: 2-22-82 Telephone No. 724-7657
B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA	
be in conformity with modern engineering principles appli permit application. There is reasonable assurance, in my pi erly maintained and operated, will discharge an effluent that rules and regulations of the department. It is also agreed the	ion control project have been designed/examined by me and found to cable to the treatment and disposal of pollutants characterized in the rofessional judgment, that the pollution control facilities, when propose complies with all applicable statutes of the State of Florida and the at the undersigned will furnish, if authorized by the owner, the appliparation of the pollution control facilities and, if applicable, pollution
	Signed: Chester Back
	Chester C. Bach
(Affix Seal)	Name (Please Type)
	Harris Semiconductor Company Name (Please Type)
	PT-30 Box 883, Melbourne, FL 32901
10. 9.10	Mailing Address (Please Type)
Florida Registration No. 19710	Date: <u>2/22/82</u> Telephone No. <u>724-7324</u>
1See Section 17-2.02(15) and (22), Florida Administrative Code,	(F.A.C.)

# SECTION II: GENERAL PROJECT INFORMATION

Describe the nature and extent of the project. Refer to pollution control equipment, and ex formance as a result of installation. State whether the project will result in full compliance. A	pected improvements in source per-
Building 62 will utilize laboratory hood type work stations t	to provide clean room
conditions for the manufacture of semiconductors. All chemic	
1-2 gallon containers in which the devices are immersed. Vess	
exhaust air is minimal. Air is exhausted via A. 12,000 CFM fi	•
by Beverly Pacific. Schedule of project covered in this application (Construction Permit Application Only)	
Start of Construction 5-1-82 Completion of Construction	9-1-82
Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for project serving pollution control purposes. Information on actual costs shall be furnished permit.)  Fan/West Scrubber \$21,000.00	with the application for operation
421,000.00	
	·
Indicate any previous DER permits, orders and notices associated with the emission point, in tion dates.	ncluding permit issuance and expira-
Building 62 is new construction located approximated 1000 fee	et from Building 54
Normal equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 if seasonal, describe:	
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.	
<ol><li>Does best available control technology (BACT) apply to this source? If yes, see Section VI.</li></ol>	no
3. Does the State "Prevention of Significant Deterioriation" (PSD) requirements 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
Attach all supportive information related to any answer of "Yes". Attach any justification for considered questionable.	or any answer of "No" that might be

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

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

Description	Cont	aminants	Utilization	Paleta to Flour Discours
Description	Туре	% Wt	Rate - Ibs/hr	Relate to Flow Diagram
See Attachment A				See Attachment B
•				

В.	Process Rate, if applicable: (See Section V, Item 1)	
	1. Total Process Input Rate (lbs/hr):n/a	
	2. Product Weight (lbs/hr): Semiconductor wafer weighs 12 qms.	

#### C. Airborne Contaminants Emitted:

N	Emiss	ion <sup>1</sup>	Allowed Emission <sup>2</sup>	Allowable <sup>3</sup>	Potential	Emission <sup>4</sup>	Relate	
Name of Contaminant	Maximum lbs/hr	Actual T/yr	Rate per Ch. 17-2, F.A.C.	Emission lbs/hr	lbs/hr	T/yr	to Flow Diagram	
See Attachment A				n/a			See Attachment	В
								İ

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles <sup>5</sup> Size Collected (in microns)	Basis for Efficiency (Sec. V, It <sup>5</sup>
Beverly Pacific Corp. Model #PS12 VT/CB27	Solvent vapors	85%	n/a	Mfg. Design Data

<sup>1</sup>See Section V, Item 2.

51f Applicable

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<sup>&</sup>lt;sup>2</sup>Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. – 0.1 pounds per million BTU heat input)

<sup>&</sup>lt;sup>3</sup>Calculated from operating rate and applicable standard

<sup>&</sup>lt;sup>4</sup>Emission, if source operated without control (See Section V, Item 3)

E.	Fuels	n/a
----	-------	-----

Type (Be Specific)			Consumption*			Maximum Heat Input	
.,,,,,	(De opecine)		avg/hr	max	./hr	(MMBTU)	/hr) ·
nits Natural Gas,	MMCE/br: Fuel	Oile harrale/he	Coal lbs/bs				· · · · · · · · · · · · · · · · · · ·
el Analysis:		Ons, Darreis, III,		•			
				Percent Ash:	·		•
					Nitrogen:		
at Capacity:			BTU/Ib				BTU/c
				•			
	nants (winch me	iy cadac ali polio					
12 11 12				A 1 A	n/a	14-	
					erage <u>n/a</u>	Maximum .	
Indicate liquid	or solid wastes	generated and m	ethod of disposi	al.		•	
			•		treatment	facility	
. —		onar gea co	indus cr Tu i	was cewa cer	CI Ed Chieff C	iaciiicy.	<del></del>
							<del> </del>
		·			· · · · · · · · · · · · · · · · · · ·		
Emission Stac	k Geometry and	Flow Character	istics (Provide da	ata for each stac	k):		·
Emission Stack	25100		istics (Provide da		•		
Stack Height:	35'0"		ft.	Stack Diameter	•		
Stack Height: Gas Flow Rat	35'0" e: 8500/12,0	000	ft.	Stack Diameter	: 28"		0
Stack Height: Gas Flow Rat	35'0" e: 8500/12,0	000	ft.	Stack Diameter	: 28" erature: 74		0
Stack Height: Gas Flow Rat	35'0" e: 8500/12,0	000	ft.	Stack Diameter	: 28" erature: 74		0
Stack Height: Gas Flow Rat	35'0" e: 8500/12,0	000	ft. ACFM %	Stack Diameter Gas Exit Tempo Velocity:	: 28" erature: 74 500		0
Stack Height: Gas Flow Rat	35'0" e: 8500/12,0	000	ft.	Stack Diameter Gas Exit Tempo Velocity:	: 28" erature: 74 500		0
Stack Height: Gas Flow Rat	35'0" e: 8500/12,0 Content: 1	SECTION	ftACFM% IV: INCINERA	Stack Diameter Gas Exit Tempo Velocity:	: 28" erature: 74 500		0
Stack Height: Gas Flow Rat Water Vapor 0	35'0" e: 8500/12,0	000	ftACFM%	Stack Diameter Gas Exit Tempo Velocity:	: 28" erature: 74 500	Type V (Liq & Gas	Type VI
Stack Height: Gas Flow Rat Water Vapor 0	35'0" e: 8500/12,0 Content: 1	SECTION	ACFM  ACFM  W  IV: INCINERA  n/a  Type II	Stack Diameter Gas Exit Tempo Velocity:  ATOR INFORM	: 28" erature: 74 500  MATION Type IV	Type V	oF
Stack Height: Gas Flow Rat Water Vapor C	35'0" e: 8500/12,0 Content: 1	SECTION	ACFM  ACFM  W  IV: INCINERA  n/a  Type II	Stack Diameter Gas Exit Tempo Velocity:  ATOR INFORM	: 28" erature: 74 500  MATION Type IV	Type V (Liq & Gas	Type VI
Stack Height: Gas Flow Rat Water Vapor C	35'0" e: 8500/12,0 Content: 1	SECTION	ACFM  ACFM  W  IV: INCINERA  n/a  Type II	Stack Diameter Gas Exit Tempo Velocity:  ATOR INFORM	: 28" erature: 74 500  MATION Type IV	Type V (Liq & Gas	Type VI
Stack Height: Gas Flow Rat Water Vapor C	35'0" e: 8500/12,0 Content: 1  Type O (Plastics)	SECTION Type I (Rubbish)	Type II (Refuse)	Stack Diameter Gas Exit Tempo Velocity:  ATOR INFORM  Type III (Garbage)	: 28" erature: 74 500  MATION Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid
Stack Height: Gas Flow Rat Water Vapor C  Type of Waste  os/hr cinerated	35'0" e: 8500/12,0 Content: 1  Type O (Plastics)	SECTION Type I (Rubbish)	Type II (Refuse)	Stack Diameter Gas Exit Tempo Velocity:  ATOR INFORM  Type III (Garbage)	: 28" erature: 74 500  MATION Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Stack Height: Gas Flow Rat Water Vapor C  Type of Waste  bs/hr cinerated  scription of Wast	35'0" e: 8500/12,0 Content: 1  Type O (Plastics)	SECTION  Type I (Rubbish)	Type II (Refuse)	Stack Diameter Gas Exit Tempo Velocity:  ATOR INFORM  Type III (Garbage)  Design Capacity	: 28" erature: 74 500  MATION  Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Stack Height: Gas Flow Rat Water Vapor C  Type of Waste bs/hr scinerated scription of Wast tal Weight Incine	35'0" e: 8500/12,0 Content: 1  Type O (Plastics)  rated (lbs/hr) — er of Hours of C	SECTION Type I (Rubbish)	Type II (Refuse)	Stack Diameter Gas Exit Tempo Velocity:5  ATOR INFORM  Type III (Garbage)  Design Capacity	: 28" erature: 74 600  MATION Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Stack Height: Gas Flow Rat Water Vapor C  Type of Waste  bs/hr ncinerated  escription of Waste  proximate Numb	35'0" e: 8500/12,0 Content: 1  Type O (Plastics)  rated (lbs/hr) — er of Hours of C	SECTION Type I (Rubbish)	Type II (Refuse)	Stack Diameter Gas Exit Tempo Velocity:  ATOR INFORM  Type III (Garbage)  Design Capacity	: 28" erature: 74 600  MATION Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By prod.)

					. '	
	Volume	Heat Release		Fuel	Temperature	
	(ft) <sup>3</sup>	(BTU/hr)	Туре	BTU/hr	(OF)	
Primary Chamber				, .		
Secondary Chamber						
ack Height:		ft. Stack Diameter _		Stack Tem	p	
					FF	
of 50 or more tons per ocess air.	day design capa	city, submit the emissio	ons rate in grains p	per standard cubic foot	dry gas corrected to 50% e	
ype of pollution control	device: [ ] C	yclone [ ] Wet Scrub	ber [] Afterbu	urner [ ] Other (spec	eify)	
rief description of opera						
ici desaription or opera			•	2.		
		· · ·		<del></del>		
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Itimate disposal of any e	ffluent other th	an that emitted from th	e stack (scrubber	water, ash, etc.):		
		·				
		· · · · · · · · · · · · · · · · · · ·			·	

#### **SECTION V: SUPPLEMENTAL REQUIREMENTS**

Please provide the following supplements where required for this application.

- 1. Total process input rate and product weight show derivation.
- 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, 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%" 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 8½" 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 8½" 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. An application fee of \$20, unless exempted by Section 17-4.05(3), F.A.C. 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

Contaminant	Rate or Concentration
Has EPA declared the best available control techn	nology for this class of sources (If yes, attach copy) [ ] Yes [ ] No
Contaminant	Rate or Concentration
·	
	<u> </u>
<u> </u>	
What emission levels do you propose as best avail	able control technology?
Contaminant	Rate or Concentration
	<del></del>
· · · · · · · · · · · · · · · · · · ·	
Describe the existing control and treatment tech	nology (if any).
1. Control Device/System:	
2. Operating Principles:	
3. Efficiency:	4. Capital Costs:
5. Useful Life:	6. Operating Costs:
7. Energy:	8. Maintenance Cost:
9. Emissions:	<del></del> <del>-</del>
Contaminant	Rate or Concentration
·	Mate of Concentration
-	

•	10. Sta	ck Parameters				. •	
	a.	Height:	ft.	ь.	Diameter:		
	c.	Flow Rate:	ACFM	d.	Temperature:		
•	e.	Velocity:	FPS	•		•	-
E.	Describ	e the control and treatment tech	nology available (As	many	types as applicable, use	additional pages if necess	ary).
	1.						
	a.	Control Device:					
	ь.	Operating Principles:				•	
	C.	Efficiency*:		d.	Capital Cost:	•	
	e.	Useful Life:			Operating Cost:		
	g.	Energy*:		h.	Maintenance Cost:		
	i.	Availability of construction ma	iterials and process ch	nemic	als:		
	<b>j.</b>	Applicability to manufacturing			:		
	k.	Ability to construct with contr	ol device, install in a	/ailab	le space, and operate wit	thin proposed levels:	
		•				•	
	2.	•	. '				
	a.	Control Device:					
	b.	Operating Principles:	•				
	C.	Efficiency*:		d.	Capital Cost:		
	e.	Useful Life:	• .	f.	Operating Cost:	•	
	g.	Energy **:		h.	Maintenance Costs:		
	i.	Availability of construction ma	iterials and process ch	nemic	cals:	•	
	j.	Applicability to manufacturing	processes:		٠.		
	k.	Ability to construct with contr	•	vailab	ole space, and operate wi	thin proposed levels:	
						·	
*E	xplain me	ethod of determining efficiency.					
		be reported in units of electrical	power – KWH design	ı rate			
	3.	•					
	a.	Cantral Device:					
	b.	Operating Principles:					
	_*	•					
	C.	Efficiency*:		d.	Capital Cost:		
• .	8,	Life:	•	f.	Operating Cost:		
	g.	Energy:		h.	Maintenance Cost:		
	3'	" ar					

٥F

<sup>\*</sup>Explain method of determining efficiency above.

			•		
	licability to manufacturing processes:		•	•	
k. Abi	lity to construct with control device, inst	all in availab	ole space and operate wit	thin proposed levels:	
4.					
	trol Device	•			
b. Ope	rating Principles:			٠.	
:	ciency*:	d.	Capital Cost:		٠
e. Life	·	<b>f.</b>	Operating Cost:		
g. Ene		· h.	Maintenance Cost:	•	•
i. Ava	ilability of construction materials and pro	ocess chemic	als:		
j. App	licability to manufacturing processes:		•.		
	ity to construct with control device, inst	all in availat	ole space, and operate wi	thin proposed levels:	
	control technology selected:				
1. Control	Device:			•	
2. Efficienc		3.	Capital Cost:		
4. Life:	•	5.	Operating Cost:		
6. Energy:		7.			•
8. Manufac	turer				ı
	cations where employed on similar proce	eccec.			
a.	cations where employed on similar proce				
a. (1)	Company:				
		•			
(2)	Mailing Address:	(4)	. Canan		
(3)	City:	(4)	State:		
(5)	Environmental Manager:				
(6)	Telephone No.:		• .		
	of determining efficiency above.				
(7)	Emissions*:		_		
	Contaminant		Rate	or Concentration	
	· · · · · · · · · · · · · · · · · · ·			• • • • • • • • • • • • • • • • • • • •	
		<del></del>			
		<u> </u>		•	
(8)	Process Rate*:				
b.					
(1)	Company:		*	•	
	Mailing Address:				
(2)	_				

i. Availability of construction materials and process chemicals:

(6) (7)	Telephone No.: Emissions*:	
Contaminant		Rate or Concentration
		<del></del>
· · · · ·		

10. Reason for selection and description of systems:

Environmental Manager:

<sup>\*</sup>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

Α.	Company Monitored Data	
	1 no sites TSP ( ) SO <sup>2</sup> * W	ind spd/dir
	Period of monitoring / / to/ /	
	month day year month day year	
	Other data recorded	
	Attach all data or statistical summaries to this application.	
	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
В.	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.	•
	2	•
	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 Rat	e
	TSP	grams/sec
	so <sup>2</sup>	grams/sec
E.	Emission Data Used in Modeling	
	Attach list of emission sources. Emission data required is source name, description on p UTM coordinates, stack data, allowable emissions, and normal operating time.	oint source (on NEDS point number),
F.	Attach all other information supportive to the PSD review.	
*Spe	cify bubbler (B) or continuous (C).	
G.	Discuss the social and economic impact of the selected technology versus other applicate duction, taxes, energy, etc.). Include assessment of the environmental impact of the source	ole technologies (i.e., jobs, payroll, pro- es.

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 HARRIS SEMICONDUCTOR EXHAUST SCRUBBER - BUILDING 62A

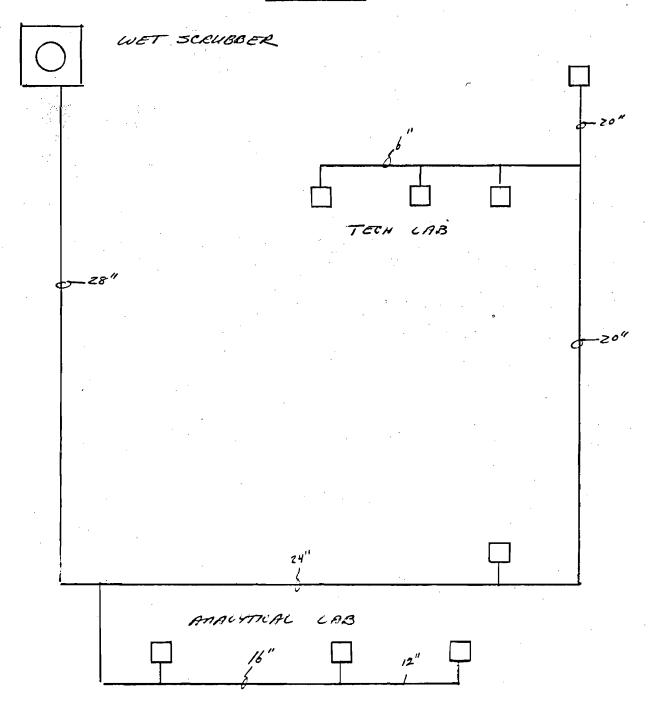
SYSTEM 1 SOLVENT

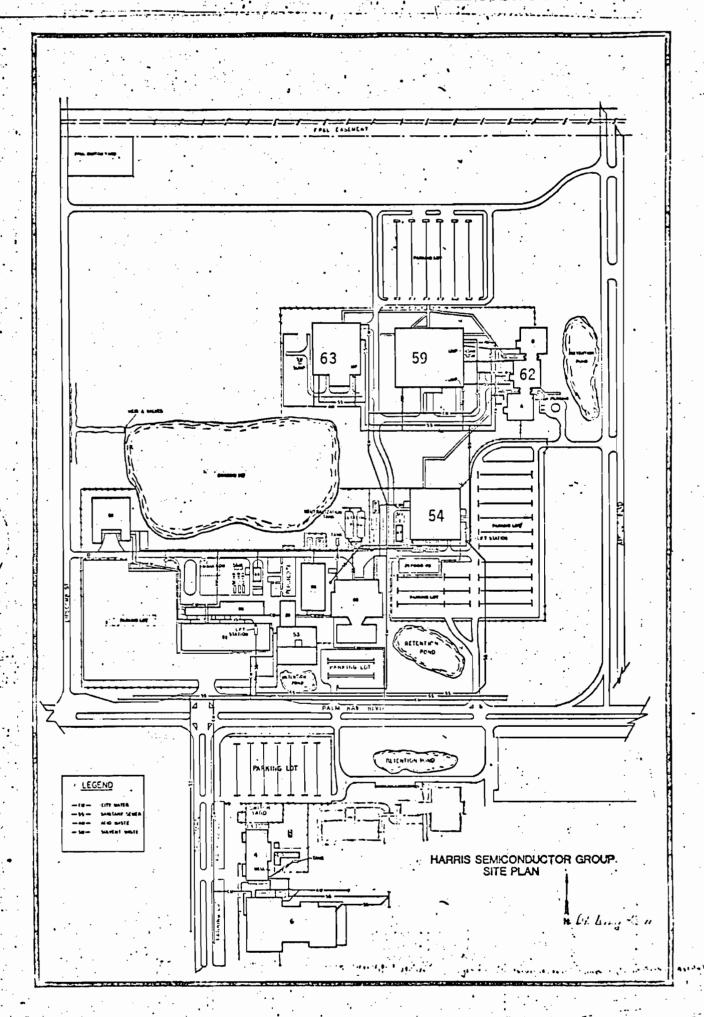
RAW	UTILIZATION	EMISS	ION	POTENTIAL EMISSION		
MATERIAL	RATE 1b/hr	MAXIMUM 1b/hr	ACTUAL ton/yr	lb/hr_	ton/yr	
Acetone	1.07	0.013	0.042	0.087	0.277	
Methanol	1.11	0.085	0.269	0.567	1.796	
Trichloroethylem	25.7	0.040	0.127	0.267	0.847	
Xylene	1.22	0.057	0.182	0.382	1.212	
Propanol '	7.81	0.016	0.050	0.106	0.336	
Butyl Acetate	3.29	0.015	0.049	0.103	0.326	
Freon	1.67	0.0096	0.031	0.065	0.204	
Photoresist	1.78	0.18	0.570	1.2	3.802	
Microstrip	. 74	0.075	0.239	0.503	1.594	
.						

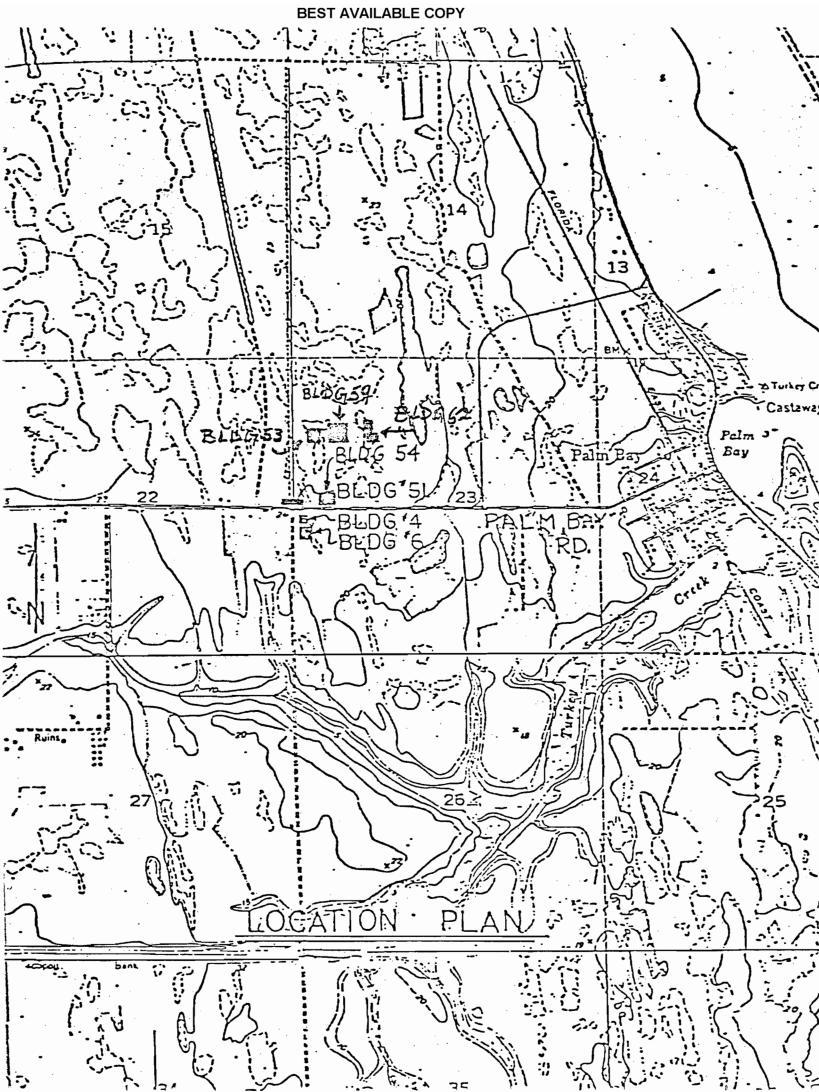
PDS-2/10/82

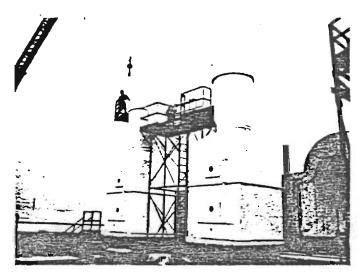
BUILDING 62-A SOLVENT EXHAUST SYSTEM

ATTACHMENT B









## AIR POLLUTION CONTROL EQUIPMENT

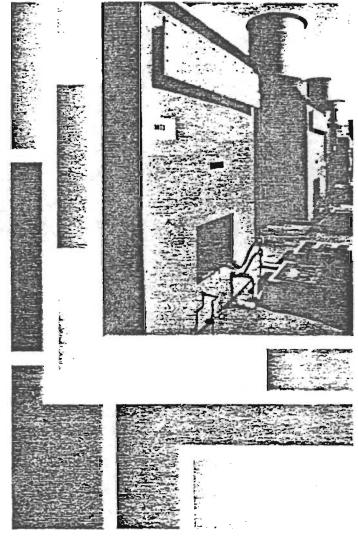
Over the years, more and more emphasis has been placed on air pollution control. There is little doubt more stringent standards and laws are forthcoming from State and Federal agencies regarding the demand for effective, well-designed air cleaning devices for industrial ventilation systems.

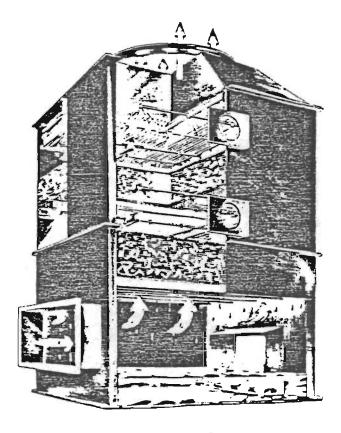
Beverly Pacific offers three (3) basic air pollution control units, totaling ten (10) variations, each with a multitude of standard and optional equipment available to meet your specific requirements.



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.

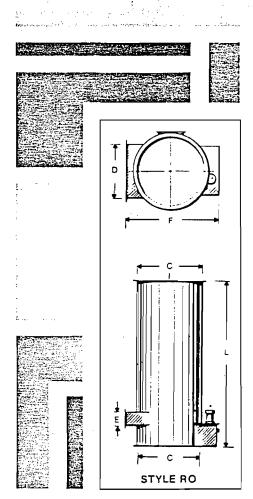




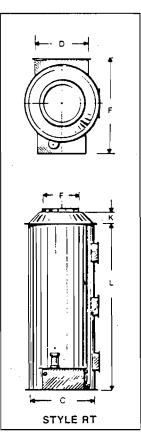


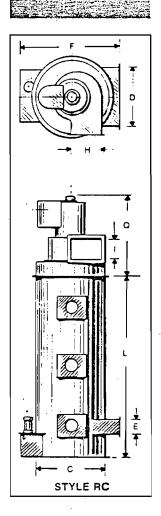
# PACKED SCRUBBER DIMENSIONAL CHART MODEL NUMBERS DIMENSIONS IN INCHES

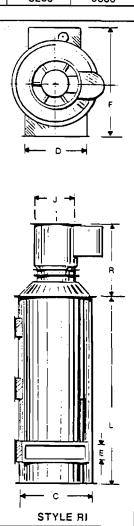
Minimum to Michigan with	PS-2	PS-4	PS-6	PS-8	PS-12	PS-18	PS-24	PS-30	PS-40	PS-50
Α	78	82	84	. 94	101	108	112	114	118	118
В	24	36	- 42	48	60	72	84	96	108	120
С	28	40	48	58	72	84	96	108	120	136
D	22	34	40	46	58	70	80	92	104	116
E	6	8	10	11	12	16	18	20	24	24
F	. 46	58	66	76	90	102	114	126	138	154
· G	. 42	54	60	66	78	90	102	114	126	138
н	13%	16%	221/2	261/4	291/2	351/4	39	471/4	52%	63%
ı	10%	121/8	17	201/2	22¾	27	30	371/2	40¾	49¾
J	18	22	28	34	38	45	50	62	66	80
К	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
0	38	52	58	65	79	91	106	119	131	145
Р	. 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.	121/4	15	20	241/2	27	33	361/2	441/2	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 MAKE-UP GPM	7 0.7	15 1.5	25 2.0	35 3.0	45 4.0	75 7.0	105 10.0	135 13.0	175 17.0	225 22.0
HT OP. WT. HT SHIP WT.	388 220	745 385	1110 550	1570 770	2690 1210	4085 1925	5670 2750	7595 3795	11790 5390	16040 7040
VT OP. WT. VT SHIP WT.	318 150	660 300	1060 500	1500 700	2630 1150	3910 1750	5470 2550	7400 3600	11650 5250	15800 68 <b>0</b> 0

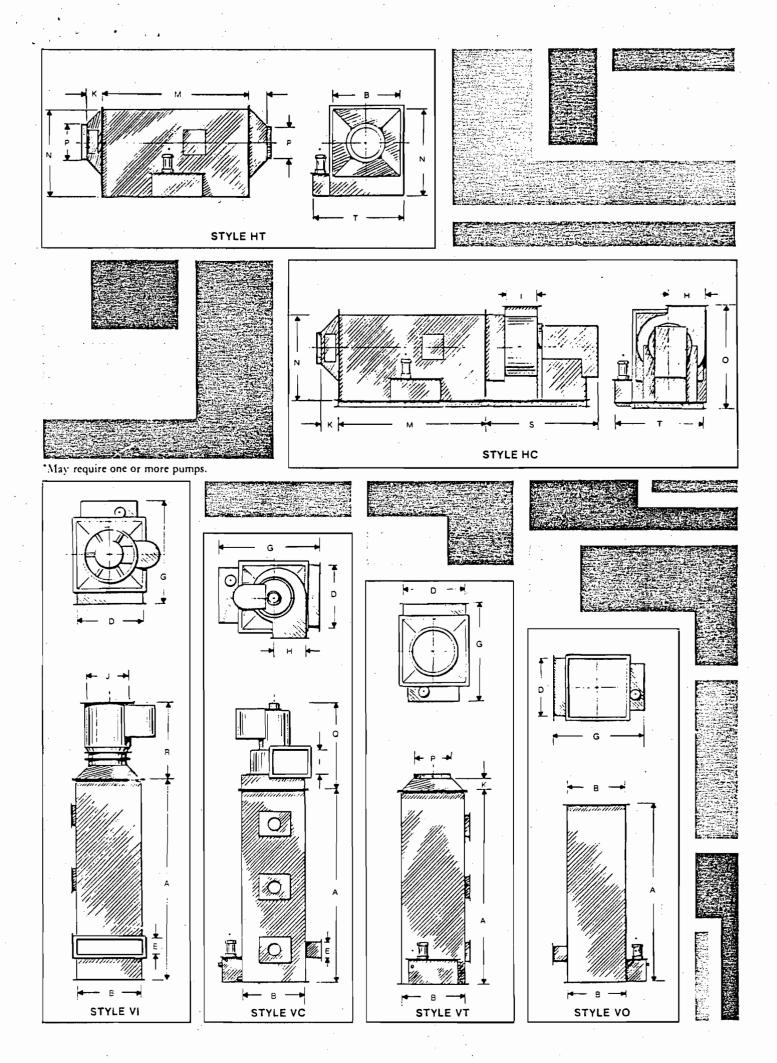












# COMPUTERIZED PACKING MEDIA SELECTION

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.

**BEST AVAILABLE COPY** 



APR 21 1982

SAINT JOHNS RIVER DISTRICT

# DER

APR 26 1982 STATE OF FLORIDA

BAQMON TO OPERATE/CONSTRUCT
AIR POLLUTION SOURCES

AC 05-54993

Mailing Address (Please Type)

Date: 2-22-82

		A STATE OF THE STA
SOU	RCE TYPE: Stationary	[X] New <sup>1</sup> [ ] Existing SEE
	LICATION TYPE: [K] Construction [ ] Operation [	] Modification
CON	MPANY NAME: Harris Semiconductor	county: Brevard
lden No. 3	tify the specific emission point source(s) addressed in this 2. Gas Fired) Building 62 Solvent Vapor Exha	application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Unit
sou	RCE LOCATION: Street Palm Bay Road	City Palm Bay
	UTM: East 17-538700	North <u>17-3100900</u>
	Latitude 28 0 01 , 20	"N Longitude <u>80 ° 36 ' 10 '</u> W
APP	LICANT NAME AND TITLE: P. R. Bumgarner, M	anager Facilities Engineering
	LICANT ADDRESS: PT-030 Box 883, Melbourn	
,,,,		
	SECTION I: STATEMENTS	BY APPLICANT AND ENGINEER
A.	APPLICANT	
	I am the undersigned owner or authorized representative*	of Harris Semiconductor
*Att	pollution control source and pollution control facilities. Florida Statutes, and all the rules and regulations of the	y knowledge and belief. Further, I agree to maintain and operate the in such a manner as to comply with the provision of Chapter 403, department and revisions theraof. I also understand that a permit, if will promptly notify the department upon sale or legal transfer of the  Signed:  P. R. Bumgarner, Manager Facilities Eng.  Name and Title (Please Type)  Date: 2-22-82 Telephone No. 724-7657
_		
В.	be in conformity with modern engineering principles app permit application. There is reasonable assurance, in my erly maintained and operated, will discharge an effluent the rules and regulations of the department. It is also agreed to	tion control project have been designed/examined by me and found to licable to the treatment and disposal of pollutants characterized in the professional judgment, that the pollution control facilities, when proposal complies with all applicable statutes of the State of Florida and the hat the undersigned will furnish, if authorized by the owner, the applicable peration of the pollution control facilities and, if applicable, pollution  Signed:  Chester C. Bach  Name (Please Type)  Harris Semiconductor  Company Name (Please Type)
	The state of the s	PT-030 Box 883, Melbourne, FL 32901

Florida Registration No.

#### SECTION II: GENERAL PROJECT INFORMATION

•	o provide clean room
conditions for the manufacture of semiconductures. All chemic	als are utilized in
1-2 gallon containers in which the devices are immersed. Vess	sel surface exposed t
exhaust air is minimal. Air is exhausted via A. 1200 CFM fume	
by Beverly Pacific. Schedule of project covered in this application (Construction Permit Application Only)	
Start of Construction 5-1-82 Completion of Construction _	9-1-82
Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for project serving pollution control purposes. Information on actual costs shall be furnished permit.)	individual components/units of
Fan/Wet Scrubber \$12,000.00	
Indicate any previous DER permits, orders and notices associated with the emission point, in tion dates.  Building 62 is new construction located approximately 1000 ft	-
which has current operating permits.	
and Chapter 22F-2, Florida Administrative Code? Yes _X No	
Normal equipment operating time: hrs/day 24 ; days/wk _ 7 ; wks/yr 52 if seasonal, describe:	; if power plant, hrs/yr
Normal equipment operating time: hrs/day 24; days/wk _ 7; wks/yr 52	; if power plant, hrs/yr
Normal equipment operating time: hrs/day 24; days/wk _ 7; wks/yr 52	
Normal equipment operating time: hrs/day 24 ; days/wk _ 7 ; wks/yr 52 if seasonal, describe:	
Normal equipment operating time: hrs/day 24; days/wk _ 7; wks/yr 52  if seasonal, describe:	
Normal equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 if seasonal, describe:  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?	
Normal equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 if seasonal, describe:  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?  a. If yes, has "offset" been applied?	
Normal equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 if seasonal, describe:  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?  a. If yes, has "offset" been applied?  b. If yes, has "Lowest Achievable Emission Rate" been applied?	
Normal equipment operating time: hrs/day 24 ; days/wk _ 7 ; wks/yr 52 if seasonal, describe:	no
Normal equipment operating time: hrs/day 24 ; days/wk _ 7 ; wks/yr 52  If seasonal, describe:  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?  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.  3. Does the State "Prevention of Significant Deterioriation" (PSD) requirements	no
Normal equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52  if seasonal, describe:  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?  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.  3. Does the State "Prevention of Significant Deterioriation" (PSD) requirements apply to this source? If yes, see Sections VI and VII.  4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to	no no no

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

D	Conta	minants	Utilization			
Description	Type	% Wt	Rate - lbs/hr	Relate to Flow Diagram		
See Attachment A				See Attachment B		
·						
•						

B.	Process Rate,	if applicable:	(See Section V, Iter	n 1)
----	---------------	----------------	----------------------	------

1. Total Process Input Rate (lbs/hr): \_\_\_\_\_n/a

2. Product Weight (lbs/hr): Silicone wafer weighs 12 gms.

## C. Airborne Contaminants Emitted:

	Emiss	ion <sup>1</sup>	Allowed Emission <sup>2</sup>	Allowable <sup>3</sup>	Potential Emission <sup>4</sup>		Relate	
Name of Contaminant	Maximum lbs/hr	Actual T/yr	Rate per Ch. 17-2, F.A.C.	Emission lbs/hr	lbs/hr	T/yr	to Flow Diagram	
								1
See AttachmentA				n/a		-	See Attachment	] :
·	ĺ					-		
			,					İ

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles <sup>5</sup> Size Collected (in microns)	Basis for Efficiency (Sec. V, It <sup>5</sup>
Beverly Pacific Corp.	Solvent vapor	85%	n/a	Mfg. Design
Model #PS-2VT/CB-12				
				·

<sup>&</sup>lt;sup>1</sup>See Section V, Item 2.

5<sub>If Applicable</sub>

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2

<sup>&</sup>lt;sup>2</sup>Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. – 0.1 pounds per million BTU heat input)

<sup>&</sup>lt;sup>3</sup>Calculated from operating rate and applicable standard

<sup>&</sup>lt;sup>4</sup>Emission, if source operated without control (See Section V, Item 3)

Type	(Re Specific)		Cor	sumption*	1	Maximum Heat In		
Type (Be Specific)			avg/hr	max./hr		(MMBTU/hr)		
					:	<del>'</del>		
			···-					
	· · · · · · · · · · · · · · · · · · ·		<del></del>			· · · · · · · · · · · · · · · · · · ·	······································	
	<del></del>		·	<del>- </del>		<del>.</del>		
<u> </u>						<u> </u>	·	
Units Natural Gas,	MMCF/hr; Fuel	Oils, barrels/hr;	Coal, lbs/hr					
Fuel Analysis:				•				
Percent Sulfur:				-			•	
Density:	<del> </del>	<del></del>	lbs/gal	Typical Percent	Nitrogen:	· · · · · · · · · · · · · · · · · · ·	<del></del>	
Heat Capacity:			BTU/lb	<del></del>		·	BTU/ga	
Other Fuel Contami								
		<u> </u>	<u> </u>			·		
F. If applicable, i	indicate the per	cent of fuel used	for space heating	ig. Annual Ave	erage <u>n/a</u>	Maximum	·	
					_			
		generated and m			treatment f	acility		
- 3C1 GDDC	Water ara	ichar ged to	Tildus cr Tai	was cewa cer	treatment i	actificy.	· · · · · · · · · · · · · · · · · · ·	
					· · · · · · · · · · · · · · · · · · ·		<del></del>	
					·			
H. Emission Stac	k Geometry and	Flow Character	istics (Provide d	ata for each stac	k):			
Stack Height:	15'0"		ft.	Stack Diameter	:14"	<u> </u>	ft	
	e: <u>· 1200</u>				erature: 74		0F	
					500			
Water Wapor C	ontent.		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Velocity.				
						•		
·		SECTION	IV: INCINER	ATOR INFORM	IATION			
			n/a				r	
	Type O	Type I	Type II	Type III	Type IV	Type V	Type VI	
. Type of Waste	(Plastics)	(Rubbish)	(Refuse)	(Garbage)	(Pathological)	(Liq & Gas By-prod.)	(Solid By-prod.)	
. !		1		<u> </u>		- • • • • • • • • • • • • • • • • • • •	i , , , , , , , , , , , , , , , , , , ,	
Lbs/hr				}				
Incinerated		}						
	<del></del>						<u> </u>	
Description of Waste								
Total Weight Incine	rated (lbs/hr) _			Design Capacity	/ (lbs/hr)		· · · · · · · · · · · · · · · · · · ·	
Approximate Numb								
Manufacturer								
				Madal N-		<u> </u>		
Date Constructed _				Model No. —	<del></del>			

•	Volume	Heat Release		Fuel	Temperature	
	(ft),3	(BTU/hr)	Type	BTU/hr	(°F)	
Primary Chamber						
Secondary Chamber						
Stack Height:	;	ft. Stack Diameter	·	Stack Tem	np	
Gas Flow Rate:		ACFM	· · · · · · · · · · · · · · · · · · ·	_ DSCFM* Velocity	FPS	
*If 50 or more tons per ocess air.	day design capac	ity, submit the emissic	ons rate in grains	per standard cubic foo	t dry gas corrected to 50% ex-	
Type of pollution control	device: [ ] Cy	clone [ ] Wet Scrub	ber [] Afterbu	rner [ ] Other (spe	cify)	
Brief description of opera	ting characteristi	cs of control devices: _		·		
					· .	
		t.				
Ultimate disposal of any e	ffluent other tha	n that emitted from th	e stack (scrubber	water, ash, etc.):		
<u> </u>	·		•			
				-		

#### SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

- 1. Total process input rate and product weight show derivation.
- 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, 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 8½" 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 8½" 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 8½" 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. An application fee of \$20, unless exempted by Section 17-4.05(3), F.A.C. 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

Contaminant  Rate or Concentration  What emission levels do you propose as best available control technology?  Contaminant  Rate or Concentration	Contaminant	Rate or Concentration
Has EPA declared the best available control technology for this class of sources (If yes, attach copy) [] Yes [] No Contaminant Rate or Concentration  What emission levels do you propose as best available control technology? Contaminant Rate or Concentration  Describe the existing control and treatment technology (if any).  1. Control Device/System: 2. Operating Principles: 3. Efficiency: 4. Capital Costs: 5. Useful Life: 6. Operating Costs: 7. Energy: 8. Maintenance Cost: 9. Emissions:	•	· · · · · · · · · · · · · · · · · · ·
Has EPA declared the best available control technology for this class of sources (If yes, attach copy) [] Yes [] No  Contaminant Rate or Concentration  What emission levels do you propose as best available control technology?  Contaminant Rate or Concentration  Describe the existing control and treatment technology (if any).  1. Control Device/System:  2. Operating Principles:  3. Efficiency:  4. Capital Costs:  5. Useful Life:  6. Operating Costs:  7. Energy:  8. Maintenance Cost:  9. Emissions:	·	
Has EPA declared the best available control technology for this class of sources (If yes, attach copy) [] Yes [] No  Contaminant Rate or Concentration  What emission levels do you propose as best available control technology?  Contaminant Rate or Concentration  Describe the existing control and treatment technology (if any).  1. Control Device/System:  2. Operating Principles:  3. Efficiency:  4. Capital Costs:  5. Useful Life:  6. Operating Costs:  7. Energy:  8. Maintenance Cost:  9. Emissions:		
Contaminant  Rate or Concentration  What emission levels do you propose as best available control technology?  Contaminant  Rate or Concentration  Describe the existing control and treatment technology (if any).  1. Control Device/System:  2. Operating Principles:  3. Efficiency:  4. Capital Costs:  5. Useful Life:  6. Operating Costs:  7. Energy:  8. Maintenance Cost:  9. Emissions:		·
What emission levels do you propose as best available control technology?  Contaminant Rate or Concentration  Describe the existing control and treatment technology (if any).  1. Control Device/System:  2. Operating Principles:  3. Efficiency:  4. Capital Costs:  5. Useful Life:  6. Operating Costs:  7. Energy:  8. Maintenance Cost:  9. Emissions:	Has EPA declared the best available control tech	nnology for this class of sources (If yes, attach copy) [ ] Yes [ ] No
What emission levels do you propose as best available control technology?  Contaminant Rate or Concentration  Describe the existing control and treatment technology (if any).  1. Control Device/System:  2. Operating Principles:  3. Efficiency: 4. Capital Costs:  5. Useful Life: 6. Operating Costs:  7. Energy: 8. Maintenance Cost:  9. Emissions:	Contaminant	Rate or Concentration
What emission levels do you propose as best available control technology?  Contaminant  Rate or Concentration  Describe the existing control and treatment technology (if any).  1. Control Device/System:  2. Operating Principles:  3. Efficiency:  4. Capital Costs:  5. Useful Life:  6. Operating Costs:  7. Energy:  8. Maintenance Cost:  9. Emissions:	<u> </u>	
What emission levels do you propose as best available control technology?  Contaminant  Rate or Concentration  Describe the existing control and treatment technology (if any).  1. Control Device/System:  2. Operating Principles:  3. Efficiency:  4. Capital Costs:  5. Useful Life:  6. Operating Costs:  7. Energy:  8. Maintenance Cost:  9. Emissions:		<u> </u>
Contaminant  Rate or Concentration  Describe the existing control and treatment technology (if any).  1. Control Device/System:  2. Operating Principles:  3. Efficiency:  4. Capital Costs:  5. Useful Life:  6. Operating Costs:  7. Energy:  8. Maintenance Cost:  9. Emissions:		
Contaminant  Rate or Concentration  Describe the existing control and treatment technology (if any).  1. Control Device/System:  2. Operating Principles:  3. Efficiency:  4. Capital Costs:  5. Useful Life:  6. Operating Costs:  7. Energy:  8. Maintenance Cost:  9. Emissions:		
Contaminant  Rate or Concentration  Describe the existing control and treatment technology (if any).  1. Control Device/System:  2. Operating Principles:  3. Efficiency:  4. Capital Costs:  5. Useful Life:  6. Operating Costs:  7. Energy:  8. Maintenance Cost:  9. Emissions:	What emission levels do you propose as best avai	ilable control technology?
Describe the existing control and treatment technology (if any).  1. Control Device/System:  2. Operating Principles:  3. Efficiency:  4. Capital Costs:  5. Useful Life:  6. Operating Costs:  7. Energy:  8. Maintenance Cost:		
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Describe the existing control and treatment technology (if any).  1. Control Device/System:  2. Operating Principles:  3. Efficiency:  4. Capital Costs:  5. Useful Life:  6. Operating Costs:  7. Energy:  8. Maintenance Cost:  9. Emissions:		
<ol> <li>Control Device/System:</li> <li>Operating Principles:</li> <li>Efficiency:         <ul> <li>4. Capital Costs:</li> </ul> </li> <li>Useful Life:</li></ol>	·	
<ol> <li>Control Device/System:</li> <li>Operating Principles:</li> <li>Efficiency:         <ul> <li>4. Capital Costs:</li> </ul> </li> <li>Useful Life:             <ul> <li>Operating Costs:</li> <li>Energy:                   <ul> <li>Maintenance Cost:</li> <li>Emissions:</li> </ul> </li></ul></li></ol>	<u> </u>	
<ol> <li>Operating Principles:</li> <li>Efficiency: *</li></ol>	Describe the existing control and treatment tech	nnology (if any).
<ol> <li>Operating Principles:</li> <li>Efficiency: 4. Capital Costs:</li> <li>Useful Life: 6. Operating Costs:</li> <li>Energy: 8. Maintenance Cost:</li> <li>Emissions:</li> </ol>	1. Control Device/System:	
<ol> <li>Efficiency: * 4. Capital Costs:</li> <li>Useful Life: 6. Operating Costs:</li> <li>Energy: 8. Maintenance Cost:</li> <li>Emissions:</li> </ol>	•	
<ul> <li>5. Useful Life:</li> <li>6. Operating Costs:</li> <li>7. Energy:</li> <li>8. Maintenance Cost:</li> <li>9. Emissions:</li> </ul>		4. Capital Costs:
7. Energy: 8. Maintenance Cost: 9. Emissions:	•	· · · · · · · · · · · · · · · · · · ·
9. Emissions:		
Contaminant Rate or Concentration	·	
	Contaminant	Rate or Concentration
	<del></del>	
	· · · · · · · · · · · · · · · · · · ·	<del></del>

10	. Sta	ck Parameters					
`	a.	Height:	ft.	b.	Diameter:		
	c.	Flow Rate:	ACFM	d.	Temperature:		
•	e.	Velocity:	FPS			•	
De	scrib	e the control and treatment technology av	ailable (As	many	types as applicable, us	e additional pages if nec	essary).
1.						. *	•
*	a.	Control Device:					
	<b>b</b> .	Operating Principles:			·		
	c.	Efficiency*:		d.	Capital Cost:		
	e.	Useful Life:		, f. ·	Operating Cost:		
	g.	Energy*:		h.	Maintenance Cost:		•
	i,	Availability of construction materials and	d process ch	nemic	als:		*
		•				•	
	j.	Applicability to manufacturing processes	:				
	k.	Ability to construct with control device,	install in av	/ailab	le space, and operate w	ithin proposed levels:	
2	! <b>.</b>	•					
	a.	Control Device:					
	b.	Operating Principles:				· .	
	C.	Efficiency*:		d.	Capital Cost:		
	e.	Useful Life:		f.	Operating Cost:		
	g.	Energy**:		h.	Maintenance Costs:		
	i.	Availability of construction materials and	d process ch	nemic	als:		
	į.	Applicability to manufacturing processes	••				
	j. k.	Ability to construct with control device,		طماندي	ula enaga, and anarata u	iithin proposed lavaler	
		Ability to construct with control device,	mistan in at	Vallau	ne space, and operate w	ittiitt proposed levels.	
E.,_1_	:	shad of determining officions.					
		ethod of determining efficiency.	/\\!!! daa:aa				
Energ 3		be reported in units of electrical power — l	Navu desigi	ı rate	•		
•		Control Device:					
	a.						•
	b.	Operating Principles:					
	_	Efficiency*:		د.	Capital Costs		
	C.	Efficiency*:		d.	Capital Cost:		•
	€.	Life:		f.	Operating Cost:		
	Q.	Energy:		h.	Maintenance Cost:		

٥F

E.

<sup>\*</sup>Explain method of determining efficiency above.

k. Ability to construct with control device, install	in available space and operate within proposed leve	ls:
4.		
a. Control Device	•	
b. Operating Principles:		
c. Efficiency*:	d. Capital Cost:	
e. Life:	f. Operating Cost:	
g. Energy:	h. Maintenance Cost:	•
i. Availability of construction materials and proce	s chemicals:	•
j. Applicability to manufacturing processes:		
	n available space, and operate within proposed leve	els:
Describe the control technology selected:		
1. Control Device:	•	
2. Efficiency*:	3. Capital Cost:	
4. Life:	5. Operating Cost:	
6. Energy:	7. Maintenance Cost:	
8. Manufacturer:	·	,
9. Other locations where employed on similar processe	:	
a.		
(1) Company:		
(2) Mailing Address:		ή.
(3) City:	(4) State:	
(5) Environmental Manager:		
(6) Telephone No.:		
plain method of determining efficiency above.		
(7) Emissions*:		•
Contaminant	Rate or Concentration	
	<u> </u>	
·		
(8) Process Rate*:		
<b>b.</b>		
(1) Company:		
(2) Mailing Address:		
(3) City:	(4) State:	

Availability of construction materials and process chemicals:

(7)	Emissions*:		•	•	
	Contaminant		· ,	Rate or Concent	ration

Environmental Manager:

(5)

<sup>10.</sup> Reason for selection and description of systems:

<sup>\*</sup>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 <sup>2</sup> • v	Vind spd/dir		
	Period of monitoring / / to / / month day year month day year	• •		
	Other data recorded			· · · · · · · · · · · · · · · · · · ·
	Attach all data or statistical summaries to this application.			
	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
В.	Meteorological Data Used for Air Quality Modeling			
	1Year(s) of data from/ / / to to/ / / month day year	e.		
	2. Surface data obtained from (location)	<del> </del>	<del></del>	<del></del>
	3. Upper air (mixing height) data obtained from (location)	·		· — ,
	4. Stability wind rose (STAR) data obtained from (location)	<del> </del>	•	
C.	Computer Models Used			· ·
	1	_ Modified?	If yes, at	tach description.
	2	_ Modified?	If yes, at	tach description.
	3	_ Modified?	If yes, at	tach description.
	4	_ Modified?	If yes, at	tach description.
	Attach copies of all final model runs showing input data, receptor locations, and principle	output table	s.	
D.	Applicants Maximum Allowable Emission Data			•
	Pollutant Emission Ra	te		
	TSP	gra	ms/se <b>c</b>	
	so <sup>2</sup>	gra	ms/sec	
E.	Emission Data Used in Modeling			
	Attach list of emission sources. Emission data required is source name, description on pUTM coordinates, stack data, allowable emissions, and normal operating time.	point source (	on NEDS	S point number),
F.	Attach all other information supportive to the PSD review.	ż		
*Spe	ecify bubbler (B) or continuous (C).			•
G.	Discuss the social and economic impact of the selected technology versus other applica duction, taxes, energy, etc.). Include assessment of the environmental impact of the source	ble technolog	ies (i.e., j	obs, payroll, pro-

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 HARRIS SEMICONDUCTOR EXHAUST SCRUBBER - BUILDING 62B

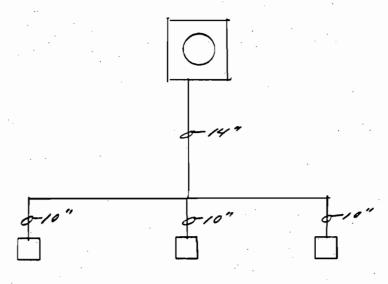
SYSTEM 3 SOLVENT

RAW	UTILIZATION	EMISS	SION	POTENTIAL EMISSION			
MATERIAL	RATE 1b/hr	MAXIMUM 1b/hr	ACTUÁL ton/yr	1b/hr	ton/yr		
Acetone	.164	0.002	0.005	0.01	0.033		
Methanol	.130	0.010	0.032	0.066	0.210		
Trichloroethylem	•	0.005	0.015	0.031	0.099		
Xylene	.15	0.007	0.021	0.045	0.142		
Propanol '	.97	0.002	0.006	0.012	0.039		
Butyl Acetate	.44	0.002	0.005	0.011	0.036		
Freon	.17	0.001	0.004	0.007	0.024		
Ethanol	.91	0.0008	0.003	0.006	0.018		
	,						

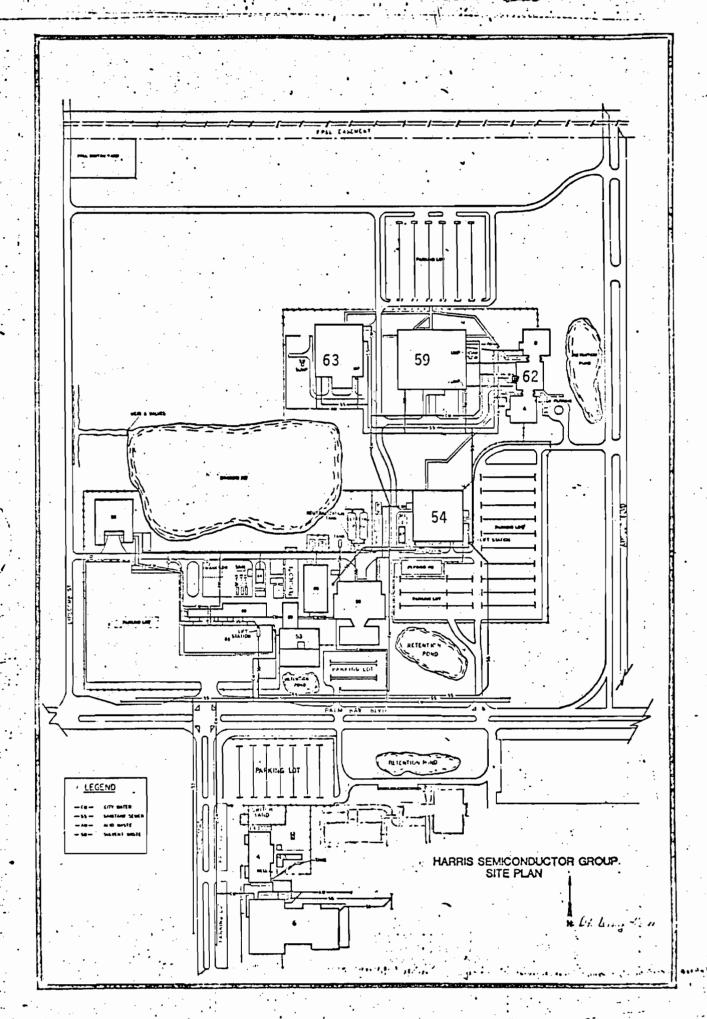
DDC 2/10/02

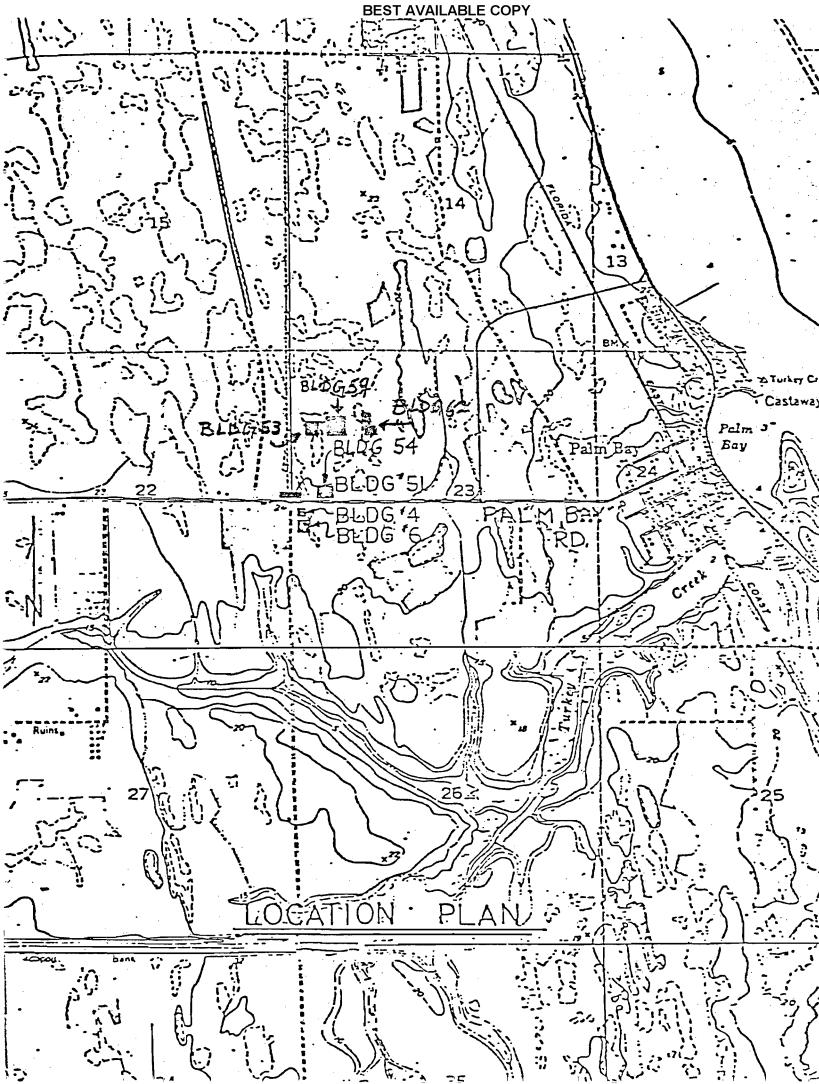
# BUILDING 62-B SOLVENT EXHAUST SYSTEM

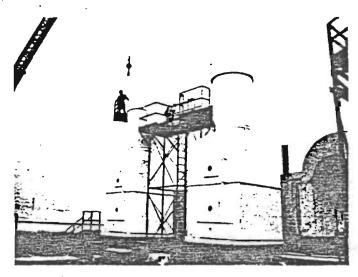
# ATTACHMENT B



TECH LAG







### AIR POLLUTION CONTROL EQUIPMENT

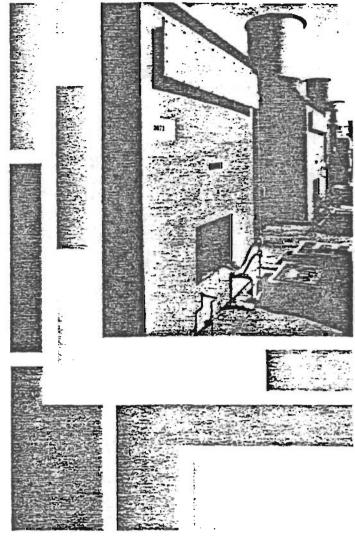
Over the years, more and more emphasis has been placed on air pollution control. There is little doubt more stringent standards and laws are forthcoming from State and Federal agencies regarding the demand for effective, well-designed air cleaning devices for industrial ventilation systems.

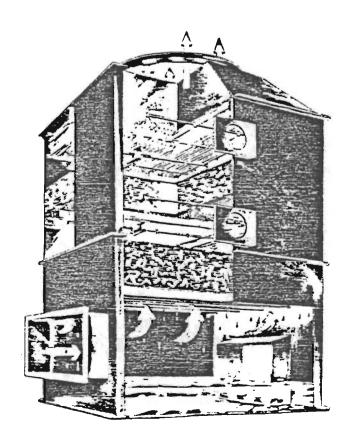
Beverly Pacific offers three (3) basic air pollution control units, totaling ten (10) variations, each with a multitude of standard and optional equipment available to meet your specific requirements.



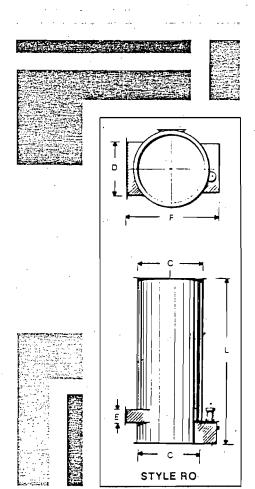
Beverly Pacific's Packed Scrubbers are designed for the removal of soluble gases, mists and particulate matter through "gas absorption" — where noxious gases are transferred from the air stream into a liquid state; and through "impingement" — where particulates are forced against a wetted packing media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

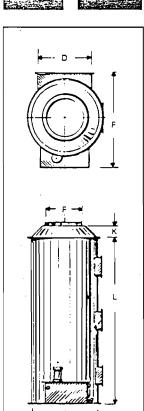
Recirculated scrubbing liquid is used for contaminate saturation and for irrigation of the packing media. Scrubbing efficiency depends largely on uniform distribution of scrubbing liquid, which Beverly Pacific achieves with low pressure, large orifice, non-plugging spray nozzles contained in a uniquely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



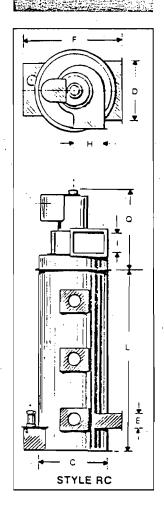


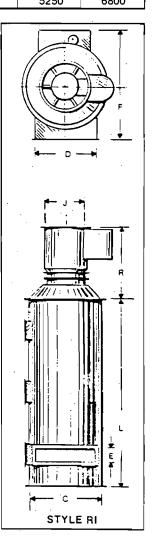
	PACKED SCRUBBER DIMENSIONAL CHART  MODEL NUMBERS  DIMENSIONS IN INCHES									
Mar Bada James Caral	PS-2	PS-4	PS-6	PS-8	PS-12	PS-18	PS-24	PS-30	PS-40	PS-50
Α	. 78	82	84	94	101	108	112	114	118	118
В	24	- 36	42	48	60	72	84	96	108	120
С.	28	40	48	58	72	84	96	108	120	136
D	22	34	40	46	58	70	80	92	104	116
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
н	13%	16¾	221/2	261/4	291/2	351/4	39	471/4	52%	63%
1	10%	12%	17	201/2	22¾	27	30	371/2	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
М	64	64	70	77	89	102	102	102	114	114
N	35	49	55	62	76	88	103	116	128	142
0	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
Ţ	36	48	54	60	72	84	96	108	120	132
WHEEL DIA.	121/4	15	20	241/2	27	33	361/2	441/2	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 MAKE-UP GPM	7 0.7	15 1.5	25 2.0	35 3.0	45 4.0	75 7.0	105 10.0	135 13.0	175 17.0	225 22.0
HT OP. WT.	388 220	745 335	1110 550	1570 770	2690 1210	4085 1925	5670 2750	7595 3795	11790 5390	16040 7040
VT OP. WT.	318 150	660 300	1060 500	1500 700	2630 1150	3910 1750	5470 2550	7400 3500	11650 5250	15800 6800

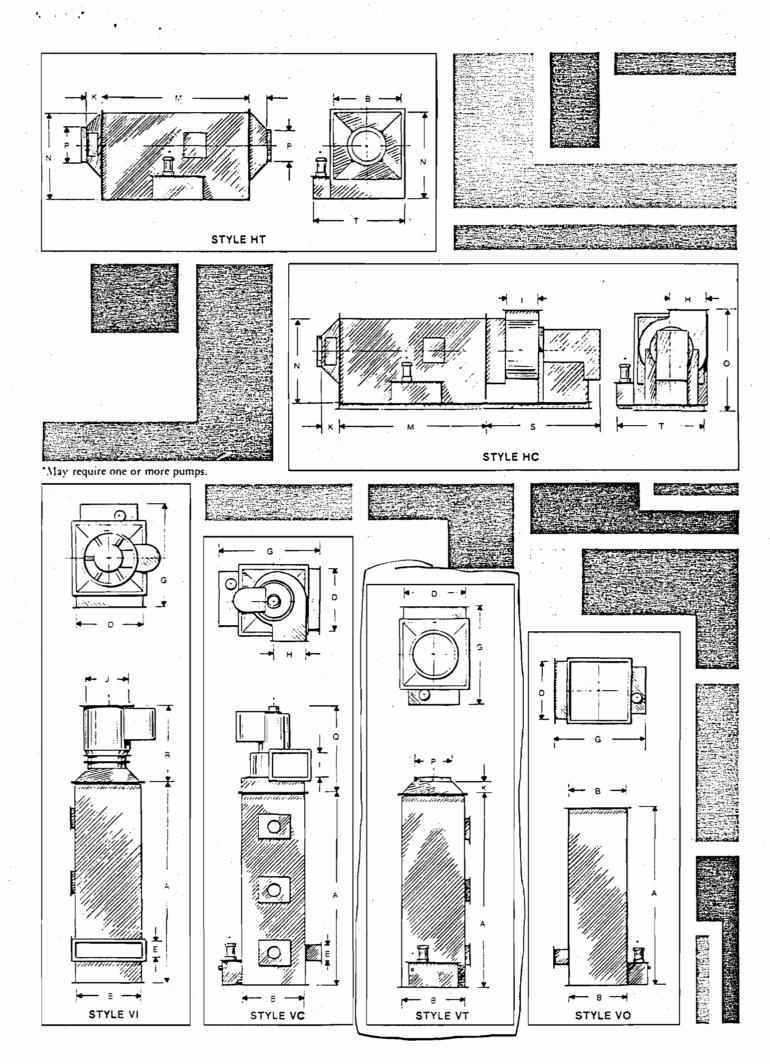




STYLE RT







# 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.

APR 21 1982

SAINT JOHNS RIVER DISTRICT

APR 26 1982



SOURCE TYPE: Stationary	[X] New <sup>1</sup> [] Existing <sup>1</sup>
APPLICATION TYPE: [X] Construction [ ] Operation [ ] N	Modification
COMPANY NAME: Harris Semiconductor	COUNTY: Brevard
Identify the specific emission point source(s) addressed in this app No. 2, Gas Fired) Building 62 Acid Vapor Exhaust S	olication (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Unit Crubber (FS-62A-2)
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: P.R. Bumgarner, Manag	ger Facilities Engineering
APPLICANT ADDRESS: PT-030 Box 883, Melbourne,	
SECTION I: STATEMENTS BY  A. APPLICANT	APPLICANT AND ENGINEER
I am the undersigned owner or authorized representative of .	Harris Semiconductor
pollution control source and pollution control facilities in Florida Statutes, and all the rules and regulations of the de-	nowledge and belief. Further, I agree to maintain and operate the such a manner as to comply with the provision of Chapter 403, partment and revisions thereof. I also understand that a permit, if II promptly notify the department upon sale or legal transfer of the
*Attach letter of authorization	Signed: O. D. Wungainer
	P.R. Bumgarner, Mgr. Facilities Engineering Name and Title (Please Type)
,	Date: 2-23-82 Telephone No. 724-7657
B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA	
This is to certify that the engineering features of this pollution be in conformity with modern engineering principles application. There is reasonable assurance, in my properly maintained and operated, will discharge an effluent that rules and regulations of the department. It is also agreed that cant a set of instructions for the proper maintenance and operated.	n control project have been designed/examined by me and found to able to the treatment and disposal of pollutants characterized in the fessional judgment, that the pollution control facilities, when proposomplies with all applicable statutes of the State of Florida and the the undersigned will furnish, if authorized by the owner, the application of the pollution control facilities and, if applicable, pollution
2001000	Signed: Chester Back
·············	Chester C. Bach
(Affix Seal)	Name (Please Type) Harris Semiconductor  Company Name (Please Type)
NO. 12110 The second se	PT-30 Box 883, Melbourne, FL 32901
SINE OF	Mailing Address (Please Type)
Florida Registration No.	Date: 2-23-82 Telephone No. 724-7324

### SECTION II: GENERAL PROJECT INFORMATION

Describe the nature and extent of the project. Refer to pollution control equipment, and exformance as a result of installation. State whether the project will result in full compliance. A Building 62 will utilize laboratory hood type work stations	ttach additional sheet if necessary.
conditions for the manufacture of semiconductors. All chemic	
1-2 gallon containers in which the devices are immersed. Ves	sel surface exposed to
exhaust air is minimal. Air is exhausted via A 24,000 cfm fu	
by Beverly Pacific. Schedule of project covered in this application (Construction Permit Application Only)	· · · · · ·
Start of Construction5-1-82 Completion of Construction _	9-1-82
Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for project serving pollution control purposes. Information on actual costs shall be furnished permit.)  Fan/Wet Scrubber \$19,400.00	individual components/units of the with the application for operation
<del></del>	
Indicate any previous DER permits, orders and notices associated with the emission point, in tion dates.  Building 62 is new construction located approximately 1000 for	
which has current operating permits.	
and Chapter 22F-2, Florida Administrative Code? Yes _X No  Normal equipment operating time: hrs/day; days/wk 7; wks/yr 52  if seasonal, describe:	_ ; if power plant, hrs/yr
	· · · · · · · · · · · · · · · · · · ·
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?	
and the same the first the same and the same	_no
a. If yes, has "offset" been applied?	_no
b. If yes, has "Lowest Achievable Emission Rate" been applied?	_no
	_no
b. If yes, has "Lowest Achievable Emission Rate" been applied?	no
<ul> <li>b. If yes, has "Lowest Achievable Emission Rate" been applied?</li> <li>c. If yes, list non-attainment pollutants.</li> <li>2. Does best available control technology (BACT) apply to this source? If yes, see</li> </ul>	
<ul> <li>b. If yes, has "Lowest Achievable Emission Rate" been applied?</li> <li>c. If yes, list non-attainment pollutants.</li> <li>2. Does best available control technology (BACT) apply to this source? If yes, see Section VI.</li> <li>3. Does the State "Prevention of Significant Deterioriation" (PSD) requirements</li> </ul>	no

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

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

<b>D</b>	Contan	ninants	Utilization			
Description	Type % Wt		Rate - lbs/hr	Relate to Flow Diagram		
See Attachment A			:	See Attachment B		
			<del>-</del>			
•						

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

1. Total Process Input Rate (lbs/hr): \_\_\_\_n/a

2. Product Weight (lbs/hr): semiconductor wafer weighs 12 gms.

### C. Airborne Contaminants Emitted:

Name of Contaminant	Emission <sup>1</sup>		Allowed Emission <sup>2</sup>	Allowable <sup>3</sup>	Potential Emission <sup>4</sup>		Relate	
	Maximum lbs/hr	Actual T/yr	Rate per Ch. 17-2, F.A.C.	Emission lbs/hr	lbs/hr	T/yr	to Flow Diagram	
							1500	
SeeAttachment A				n/a			See Attachmen	

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles <sup>5</sup> Size Collected (in microns)	Basis for Efficiency (Sec. V, It <sup>5</sup>
Beverly Pacific Corp.	Acid mist	95%	n/a	Mfa. Desian
Model #PS 24HT/CB40				Data
·				

<sup>&</sup>lt;sup>1</sup>See Section V, Item 2.

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<sup>&</sup>lt;sup>2</sup>Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. — 0.1 pounds per million BTU heat input)

<sup>&</sup>lt;sup>3</sup>Calculated from operating rate and applicable standard

<sup>&</sup>lt;sup>4</sup>Emission, if source operated without control (See Section V, Item 3)

<sup>5&</sup>lt;sub>If Applicable</sub>

E.	Fuels	n/a
		11/0

Type (Be Specific)		: -	Cor	nsumption *		Maximum He	
			avg/hr	max	/hr	(MMBTU	/hr) 
	·						
Units Natural Gas,	MMCF/hr; Fuel	Oils, barrels/hr;	Coal, lbs/hr				
uel Analysis:				:.		•	•
ercent Sulfur:				Percent Ash:		·	
ensity:	-		lbs/gal	Typical Percent	Nitrogen:		
eat Capacity:			BTU/Ib				BTU/g
ther Fuel Contami	nants (which ma	ay cause air pollu	ition):			· · · · · · · · · · · · · · · · · · ·	
			<del></del>		<u>.</u>	· · · · · · · · · · · · · · · · · · ·	<u> </u>
If applicable,	indicate the perc	ent of fuel used	for space heating	ng. Annual Ave	rage <u>n/a</u>	Maximum .	
•		generated and m					
Scrubbe	r water dis	charged to	industrial	wastewater	treatment i	facility	
	,	· · · · · · · · · · · · · · · · · · ·					
	•	Flow Character					
Stack Height:	34"		ft.	Stack Diameter	:3'7'		
Stack Height: Gas Flow Rai	34" te: 21000/24	000	ft.	Stack Diameter Gas Exit Tempe	: 3'7' erature: 74		o
Stack Height: Gas Flow Rat	34" te: 21000/24		ft.	Stack Diameter Gas Exit Tempe	: 3'7' erature: 74		o
Stack Height: Gas Flow Rat	34" te: 21000/24	000	ft.	Stack Diameter Gas Exit Tempe	: 3'7' erature: 74		o
Stack Height: Gas Flow Rat	34" te: 21000/24	000	ft. ACFM %	Stack Diameter Gas Exit Tempe Velocity:	: 3'7' erature: 74 500		o
Stack Height: Gas Flow Rat	34" te: 21000/24	000	ft. ACFM %	Stack Diameter Gas Exit Tempe	: 3'7' erature: 74 500		o
Stack Height: Gas Flow Rat	34" te: 21000/24	000	ft. ACFM % IV: INCINER	Stack Diameter Gas Exit Tempe Velocity:	: 3'7' :rature: 74 500 ATION		o
Stack Height: Gas Flow Rat	34" te: 21000/24 Content: 1	SECTION	ft. ACFM % IV: INCINER n/a Type II	Stack Diameter Gas Exit Tempe Velocity:	: 3'7' :rature: 74 500  ATION	Type V (Liq & Gas	Type VI
Stack Height: Gas Flow Rai Water Vapor (	34" te: 21000/24 Content: 1	000 SECTION	ft. ACFM % IV: INCINER	Stack Diameter Gas Exit Tempe Velocity:	: 3'7' :rature: 74 500 ATION	Type V	o
Stack Height: Gas Flow Rater Vapor (	34" te: 21000/24 Content: 1	SECTION	ft. ACFM % IV: INCINER n/a Type II	Stack Diameter Gas Exit Tempe Velocity:	: 3'7' :rature: 74 500  ATION	Type V (Liq & Gas	Type VI
Stack Height: Gas Flow Rat Water Vapor (	34" te: 21000/24 Content: 1	SECTION	ft. ACFM % IV: INCINER n/a Type II	Stack Diameter Gas Exit Tempe Velocity:	: 3'7' :rature: 74 500  ATION	Type V (Liq & Gas	Type VI
Stack Height: Gas Flow Rat Water Vapor (	34" te: 21000/24 Content: 1	SECTION	ft. ACFM % IV: INCINER n/a Type II	Stack Diameter Gas Exit Tempe Velocity:	: 3'7' :rature: 74 500  ATION	Type V (Liq & Gas	Type VI
Stack Height: Gas Flow Rat Water Vapor (	34" te: 21000/24 Content: 1  Type O (Plastics)	SECTION Type I (Rubbish)	ft. ACFM % IV: INCINER n/a Type II	Stack Diameter Gas Exit Tempe Velocity:	: 3'7' :rature: 74 500  ATION	Type V (Liq & Gas	Type VI
Stack Height: Gas Flow Rat Water Vapor (	34" te: 21000/24 Content: 1  Type O (Plastics)	SECTION Type I (Rubbish)	ftACFM%  I IV: INCINER n/a  Type II (Refuse)	Stack Diameter Gas Exit Tempe Velocity:  ATOR INFORM  Type III (Garbage)	rature: 74 500  ATION  Type IV (Pathological)	Type V (Liq & Gas By prod.)	Type VI (Solid By-prod.)
Stack Height: Gas Flow Rai Water Vapor (  Type of Waste  Lbs/hr Incinerated  escription of Wast	Type O (Plastics)	SECTION  Type I (Rubbish)	ft. ACFM % IV: INCINER n/a Type II (Refuse)	Stack Diameter Gas Exit Tempe Velocity:  ATOR INFORM  Type III (Garbage)  Design Capacity	ature: 3'7'  Frature: 74  500  ATION  Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By prod.)
Stack Height: Gas Flow Rai Water Vapor (  Type of Waste  Lbs/hr Incinerated  Jescription of Waste  Cotal Weight Incine	Type O (Plastics)  erated (lbs/hr)	SECTION  Type I (Rubbish)	Type II (Refuse)	Stack Diameter Gas Exit Tempe Velocity:  ATOR INFORM  Type III (Garbage)  Design Capacity	atture: 3'7'  Frature: 74  500  ATION  Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By prod.)
Stack Height: Gas Flow Rai Water Vapor (  Type of Waste  Lbs/hr Incinerated  escription of Wast	Type O (Plastics)  erated (lbs/hr)	SECTION  Type I (Rubbish)  Operation per day	ftftACFM%  IV: INCINER n/a  Type II (Refuse)	Stack Diameter Gas Exit Tempe Velocity:  ATOR INFORM  Type III (Garbage)  Design Capacity	atture: 3'7'  Frature: 74  500  ATION  Type IV (Pathological)	Type V (Liq & Gas By prod.)	Type VI (Solid By-prod.)

	Volume	Heat Release		Fuel	Temperature		
	(ft)3	(BTU/hr)	Туре	BTU/hr	(°F)		
Primary Chamber			· ·				
Secondary Chamber							
Stack Height:		ft. Stack Diameter		Stack Tem	р		
					FP\$		
*If 50 or more tons per cess air.	day design capac	city, submit the emissi	ons rate in grains	per standard cubic foo	t dry gas corrected to 50% ex-		
Type of pollution control	device: [ ] C	yclone [ ] Wet Scrul	ober [] Afterb	urner [ ] Other (spec	cify)		
Brief description of opera	ting characterist	ics of control devices:	· · ·				
<del> </del>		<del></del>					
Ultimate disposal of any	effluent other th	an that emitted from th	he stack (scrubber	water, ash, etc.):	•		

### SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

- 1. Total process input rate and product weight show derivation.
- 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, 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%" 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%" 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 8½" 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. An application fee of \$20, unless exempted by Section 17-4.05(3), F.A.C. 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

Contam	ninant			Rate or Cond	centration
•		. <u> </u>			
	<u> </u>	<del> </del>	<u>· – </u>	<del></del>	
	<del></del>	·	<del></del>	· · · · · · · · · · · · · · · · · · ·	·
<del></del>	·	<del></del>			<del></del>
Has EPA declared the best avail	lable control techno	ology for this	class of sources (If y	yes, attach cop	y) [] Yes [] No
Contam	ninant			Rate or Cond	
					•
What emission levels do you pr		ible control t	echnology?		
Contam				Rate or Cond	
·· · · · · · · · · · · · · · · · · ·					<del></del>
•		<u> </u>			
<del></del>					
· · · · · · · · · · · · · · · · · · ·					
Describe the existing control ar	nd treatment techn	ology (if any	).		
1. Control Device/System:					•
2. Operating Principles:					
3. Efficiency: *		4.	Capital Costs:		•
5. Useful Life:		6.	Operating Costs:		
7. Energy:		8.	Maintenance Cost:		
9. Emissions:					
Contam	ninant			Rate or Cond	centration

<sup>\*</sup>Explain method of determining D 3 above.

10.	Sta	ck Parameters	,			•	
, ,	a.	Height:		ft. b.	Diameter:		
	C.	Flow Rate:	AC	FM d.	Temperature:	•	·
•	e.	Velocity:	F	PS		•	
. De	scribe	the control and treatment tech	nology available	(As man	y types as applicable, us	se additional pages i	f necessary).
1.							
	a.	Control Device:	•		•		
	b.	Operating Principles:					
•	•	· •					
	C.	Efficiency*:		d.	Capital Cost:		• •
	e.	Useful Life:	•	f.	Operating Cost:		
	g.	Energy *:	•	h.	Maintenance Cost:		
	i.	Availability of construction ma	terials and proce	ss chemi	cals:		
					••	•	
	j.	Applicability to manufacturing	processes:	•		·	
	k.	Ability to construct with contr	ol device, install	in availa	ble space, and operate v	vithin proposed leve	ils:
2.					•		
	a.	Control Device:					
	b.	Operating Principles:					
				,			
	c.	Efficiency*:		d.	Capital Cost:		
	e.	Useful Life:		f.	Operating Cost:		
	g.	Energy**:		h.	Maintenance Costs:	•	
	i,	Availability of construction ma	iterials and proce	ss chemi	cals:		
		A colitantino			·		
	j.	Applicability to manufacturing		,		tak to many a 1 ha	. 1
	<b>K.</b> .	Ability to construct with contr	of device, install	in availa	bie space, and operate v	within proposed leve	215:
•							
		thod of determining efficiency.					
		pe reported in units of electrical	power – KWH d	esign rati	ē.		
3.							
	a.	Control Device:		•	:		
	b.	Operating Principles:					
		men . A		_			
	C.	Efficiency *:		d.			
	8.	Life:		f,	Operating Cost:		
	g.	Energy:		h.	Maintenance Cost:		

ft. OF

<sup>\*</sup>Explain method of determining efficiency above.

	, ,,,	nability of construction materials ar	ia process energy		,				
j.	Арр	licability to manufacturing processe	?s:						
k.		ity to construct with control device		ble	e space and operate v	vithin prop	osed levels	:	
4.		:	• .						
a.	Con	trol Device							
<b>b.</b>	Oper	rating Principles:					٠		
		•							
c.	Effic	ciency*:	d.		Capital Cost:				
e.	Life	:	f.		Operating Cost:				
g.	Ener	gy:	h.		Maintenance Cost:				•
i.	Avai	lability of construction materials ar	nd process chemi	ca	ls:				
•		Park IIIa.							
j.		licability to manufacturing processe		L1.		ielain nana	and love		
k,		ity to construct with control device control technology selected:	, install in availal	DIE	e space, and operate	within prop	ozea ievei	<b>5.</b>	
		Device:					•		
			•		Capital Cost:				
2. Eff		: <b>y</b> :	3.						
4. Life			5.		Operating Cost:				
6. Ene	-	•	7.		Maintenance Cost:				
8. Ma		•							
9. Oth	her loc	cations where employed on similar p	orocesses:						
a.		- •							
	(1)	Company:					•		
	(2)	Mailing Address:			_				
	(3)	City:	(4	)	State:				
	(5)	Environmental Manager:							
	(6)	Telephone No.:							
*Explain me		of determining efficiency above.	•						
	(7)	Emissions*:							
		Contaminant	•		Ra	te or Conce	ntration		
<del></del>									
·			<u> </u>		<del></del>		······································		
									<u> </u>
	(8)	Process Rate*:						,	
b.									
	(1)	Company:							
	(2)	Mailing Address:							
	(3)	City:	(4	()	State:				

F.

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• '	(5)	Environmental Manager:					
	(6)	Telephone No.:		٠			
	(7)	Emissions*:			•		•
		Contaminant		*.	.Rate oi	Concentration	
	(8)	Process Rate*:					
10.	Reason 1	or selection and description of system	ns:				

<sup>\*</sup>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

	1 no sites TSP ( ) SO <sup>2</sup> * W	'ind spd/dir	•	
	Period of monitoring / / / to / / / month day year month day year	•		
	Other data recorded		·	
	Attach all data or statistical summaries to this application.			
	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
В.	Meteorological Data Used for Air Quality Modeling		•.	· .
	1Year(s) of data from/ / / to/ /		·	
	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	<b>i.</b>	
D.	Applicants Maximum Allowable Emission Data			
	Pollutant Emission Rat	· e		
	TSP	gran	ms/sec	
	so <sup>2</sup>			
E.	Emission Data Used in Modeling	_		
	Attach list of emission sources. Emission data required is source name, description on p	oint source (	on NEDS no	int number\
	UTM coordinates, stack data, allowable emissions, and normal operating time.			

- F. Attach all other information supportive to the PSD review.
- \*Specify bubbler (B) or continuous (C).

Company Monitored Data

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.

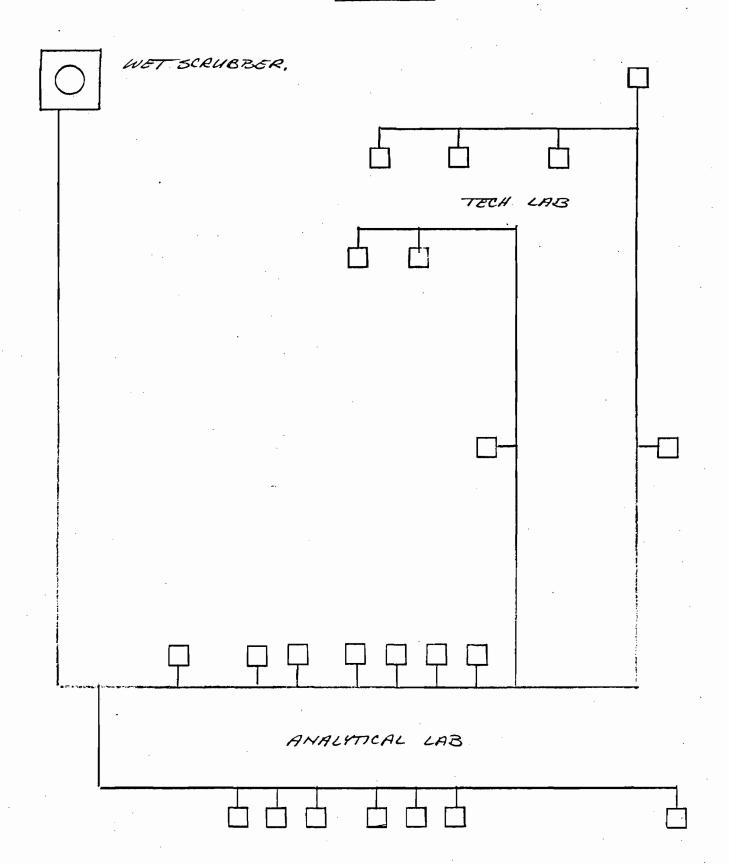
### BEST AVAILABLE COPY

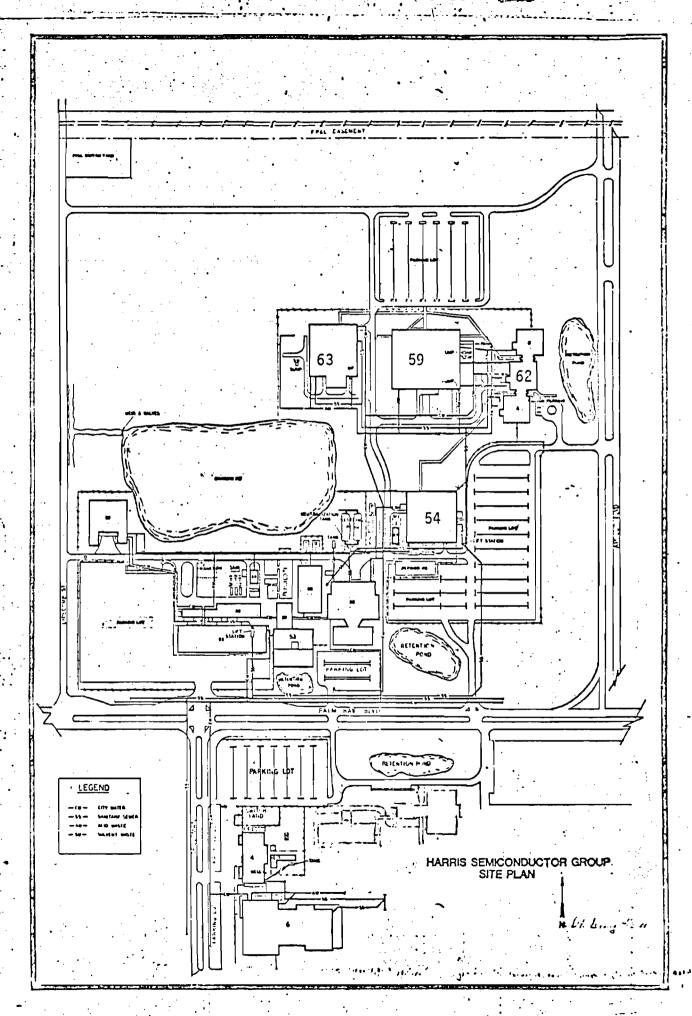
### ATTACHMENT A HARRIS SEMICONDUCTOR EXHAUST SCRUBBER - BUILDING 62A

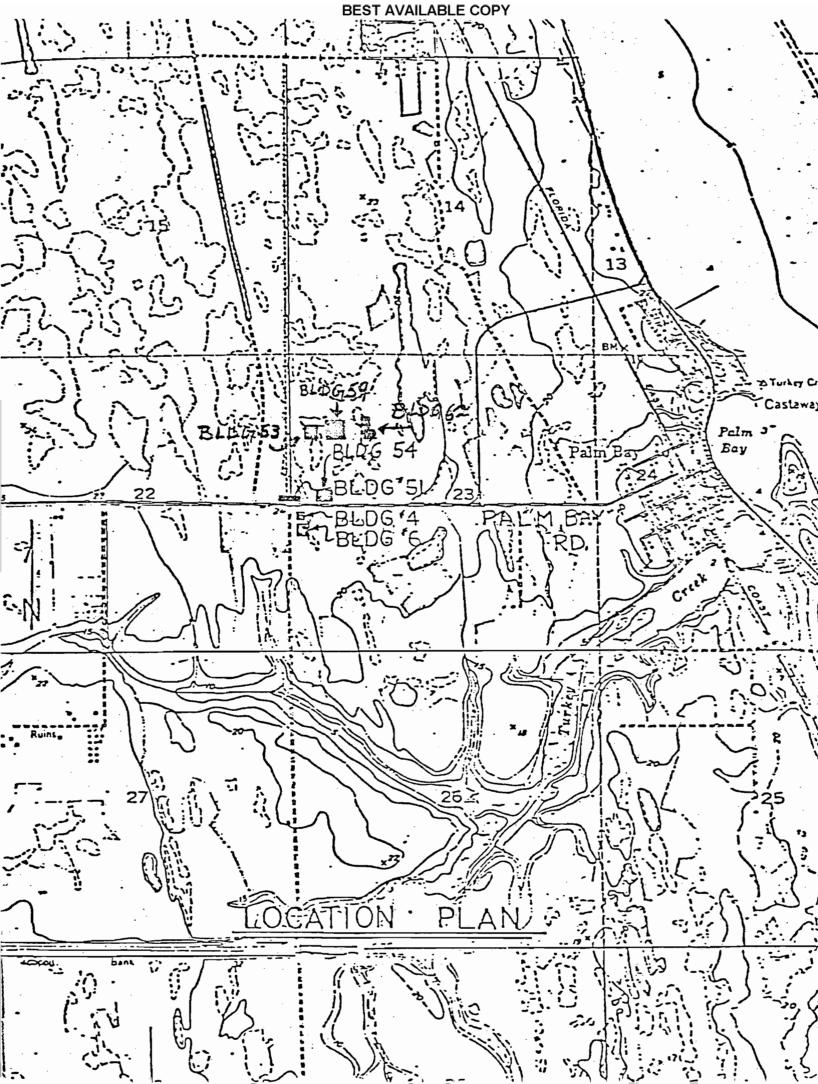
SYSTEM 2 ACID

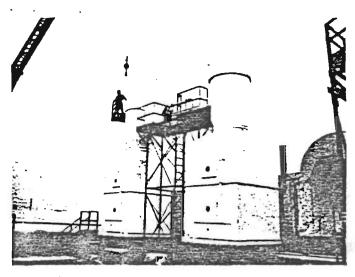
RAW	UTILIZATION	EMIS	SION	POTENTIAL	. EMISSION
MATERIAL	RATE 1b/hr	MAXIMUM 1b/hr	ACTUAL ton/yr	1b/hr	ton/yr
Acetic Acid	1.364	0.002	0.006	0.040	0.127
Ammonium Fluoride	5.03	0.009	0.030	0.19	0.602
Hydrofluoric	5.70	0.004	0.014	0.088	0.278
Nitric	9.34	0.006	0.018	0.116	0.368
Sodium Hydroxide	8.92	0.006	0.018	0.116	0.368
Sulfuric	53.22	0.014	0.045	0.285	0.904
Hydrochloric	1.11	0.0007	0.002	0.0135	0.043
Phosphoric	7.068	0.004	0.014	0.087	0.277
				•	
· ·					
				.;	
·					

### BUILDING 62-A ACID EXHAUST SCRUBBER ATTACHMENT B









### AIR POLLUTION CONTROL EQUIPMENT

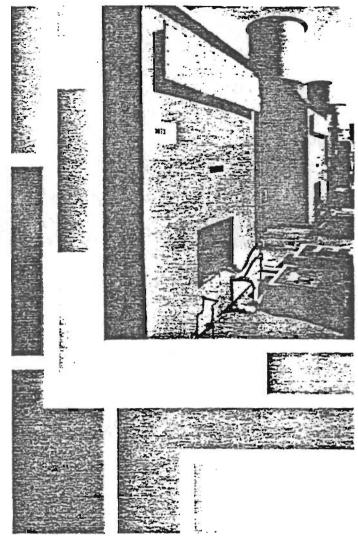
Over the years, more and more emphasis has been placed on air pollution control. There is little doubt more stringent standards and laws are forthcoming from State and Federal agencies regarding the demand for effective, well-designed air cleaning devices for industrial ventilation systems.

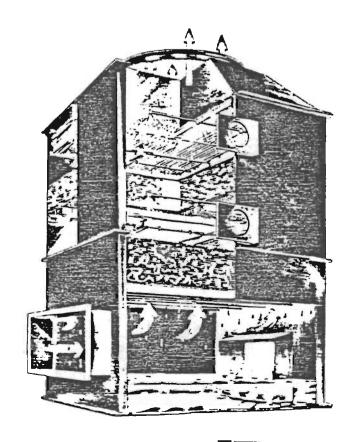
Beverly Pacific offers three (3) hasic air pollution control units, totaling ten (10) variations, each with a multitude of standard and optional equipment available to meet your specific requirements.



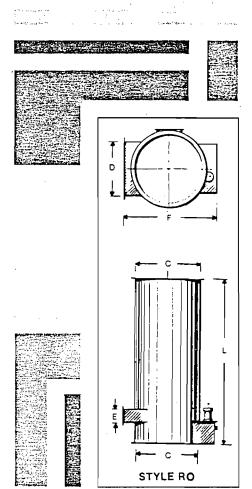
Beverly Pacific's Packed Scrubbers are designed for the removal of soluble gases, mists and particulate matter through "gas absorption" — where noxious gases are transferred from the air stream into a liquid state; and through "impingement" — where particulates are forced against a wetted packing media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

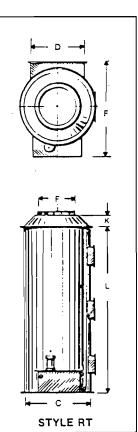


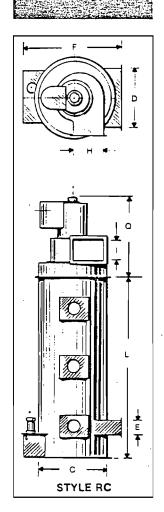


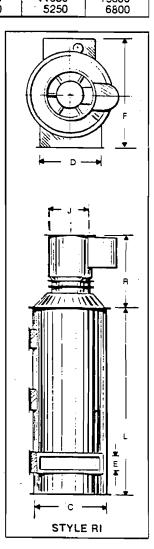
			PACK		JBBER DI MODEL N IENSIONS	UMBERS	ONAL CH	IART		
Marine of Article Control	PS-2	PS-4	PS-6	PS-8	PS-12	PS-18	PS-24	PS-30	PS-40	PS-50
Α	78	82	84	94	101	108	112	114	118	118
В	24	36	42	48	60	72	84	96	108	120
С	28	40	48	58	.72	84	96	108	120	136
D	22	34	40	46	58	70	80	92	104	116
E	. 6	8	10	11	12	16	18	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
Н	13%	16¾	221/2	261/4	291/2	351/4	39	471/4	52%	63%
1	10%	12%	17	201/2	22¾	27	30	371/2	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
0	38	52	58	65	79	91	106	119	131	145
Р	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.	121/4	15	20	241/2	27	33	361/2	441/2	49	60
CFM x 1000	1-2	2-4	4-6	6-8	8-12	12-18	18-24	24-30	<b>30</b> -40	40-50
RECIRC. GPM MAKE-UP GPM	7 0.7	15 1.5	25 2.0	35 3.0	45 4.0	75 7.0	105 10.0	135 13.0	175 17.0	225 22.0
HT OP. WT. HT SHIP WT.	388 220	745 385	1110 550	1570 770	2690 1210	4085 1925	5670 2750	75 <b>95</b> 3795	11790 5390	16040 7040
VT OP. WT. VT SHIP WT.	318 150	660 300	1060 500	1500 700	2630 1150	3910 1750	5470 2550	7400 3600	11650 5250	15800 6800

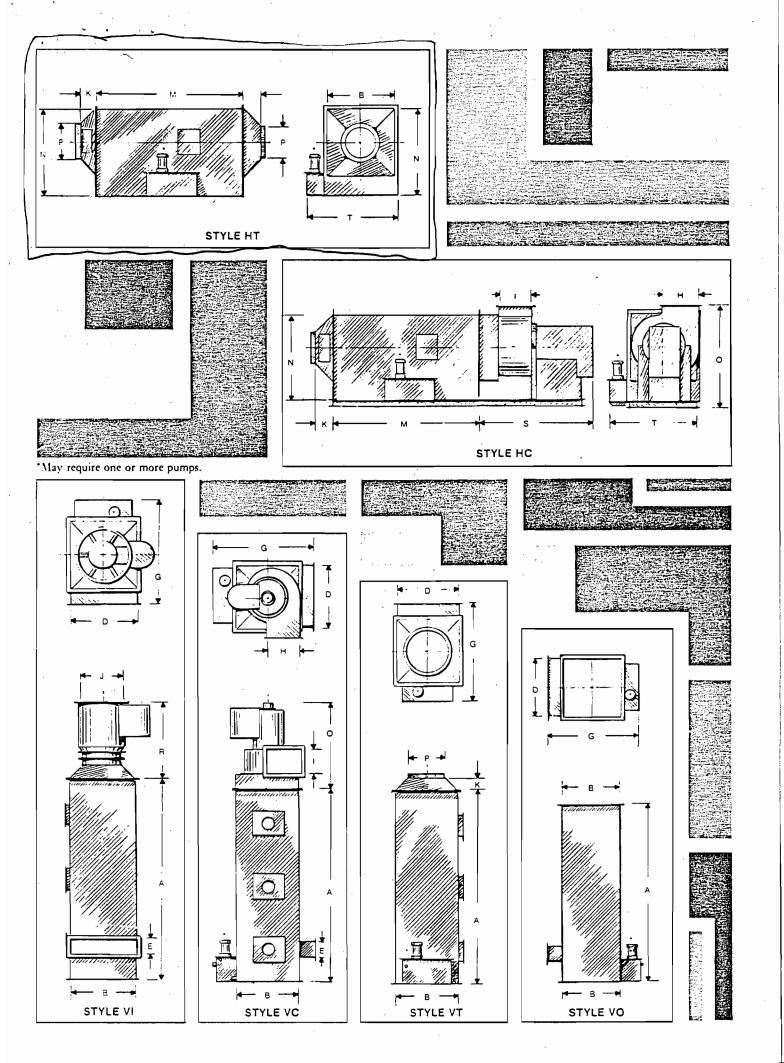












### COMPUTERIZED PACKING MEDIA SELECTION

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.

# APR 21 1982



AC 05-54995

SAINT JOHNS RIVER DISTRICT

### STATE OF FLORIDA STATE OF FLORIDA ENVIRONMENTAL REGULATION

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

	•••		S Dain Same River S
sou	RCE TYPE: Stationary	[X] New1 [ ] Existing	
APP	LICATION TYPE: [X] Construction [ ] Operation [ ]	Modification	\$29C#\$2
COM	PANY NAME: Harris Semiconductor		COUNTY: Brevard
lden No. 1	tify the specific emission point source(s) addressed in this ap 2. Gas Fired) <u>Building 63 Solvent Vapor Exha</u> u	oplication (i.e. Lime Kiln N ust Scrubber (FS-63	o. 4 with Venturi Scrubber; Peeking Unit
sou	RCE LOCATION: Street Palm Bay Road	· · · · · · · · · · · · · · · · · · ·	City Palm Bay
•••		North	17-3100900
	UTM: East 17-538700  Latitude 28 o 01 , 20 "	North	80 <u>o 36</u> · 10 ·w
	LICANT NAME AND TITLE: P.R. Bumgarner, Mana		
			Theel thy
APP	LICANT ADDRESS: PT-030 Box 883, Melbourne	, FL 32901	· · · · · · · · · · · · · · · · · · ·
	SECTION I: STATEMENTS B	Y APPLICANT AND ENGI	NEER
A.	APPLICANT	•	
	1 am the undersigned owner or authorized representative* of	Harris Semiconduc	tor
	I certify that the statements made in this application for a permit are true, correct and complete to the bast of my pollution control source and pollution control facilities in Florida Statutes, and all the rules and regulations of the digranted by the department, will be non-transferable and I we permitted establishment.	knowledge and belief. Furt I such a manner as to con epartment and revisions the	aply with the provision of Chapter 403, areof. I also understand that a permit, if
*Att	tach letter of authorization	Signed:	Dun gaine
		P.R. Bumgarner,	Mgr. Faciaties Engineering
			and Title (Please Type)
		Date: 2-23-82	_ Telephone No. <u>724-7657</u>
₿.	PROFESSIONAL ENGINEER REGISTERED IN FLORIDA	(where required by Chapte	er 471, F.S.)
	This is to certify that the engineering features of this pollution be in conformity with modern engineering principles applied permit application. There is reasonable assurance, in my prerly maintained and operated, will discharge an effluent that rules and regulations of the department. It is also agreed that cant a set of instructions for the proper maintenance and operators.	able to the treatment and one of the control of the control of the complies with all applicabet the undersigned will furnity.	disposal of pollutants characterized in the ne pollution control facilities, when prople statutes of the State of Florida and the sh, if authorized by the owner, the appli-
	Sources.	Signed: Chart	en CBack
		Chester C. Bach	
	7 7 7	N	ame (Please Type)
	(Affix Seal)	Harris Semicondu	
			ny Name (Please Type)
	13. cm 62		1bourne, FL 32901
	19 160	Mailing Date: 2-23-82	Address (Please Type) 724-7324
	Florida Registration No.	Date:	Telephone No. 724-7324
-	**************************************		

### SECTION II: GENERAL PROJECT INFORMATION

A.	Describe the nature and extent of the project. Refer to pollution control equipment, and exformance as a result of installation. State whether the project will result in full compliance. A	spected improvements in source per-
	Building 63 will utilize laboratory hood type work stations	to provide clean room
	conditions for the manufacture of semiconductors. All chemic	
	1-2 gallon containers in which the devices are immersed. Ves	
	exhaust air is minimal. Air is exhausted via a 10,000 cfm fu	•
В.	by Beverly Pacific.  Schedule of project covered in this application (Construction Permit Application Only)	
U.	Start of Construction5-1-82 Completion of Construction	0_1_92
C.	Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for project serving pollution control purposes. Information on actual costs shall be furnished	individual components/units of the
	permit.)	
	Fan/Wet Scrubber \$30,500.00	
D.	Indicate any previous DER permits, orders and notices associated with the emission point, is tion dates.	ncluding permit issuance and expira-
	Building 63 is new construction located approximately 1000 f	t from building 54
Ε.	Is this application associated with or part of a Development of Regional Impact (DRI) pursua and Chapter 22F-2, Florida Administrative Code? Yes _X No	ant to Chapter 380, Florida Statutes,
F.	Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52	if nower plant hrs/vr
٠.	if seasonal, describe:	
	ii seasonal, describe.	
_		
G.	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.	
		•
	<ol><li>Does best available control technology (BACT) apply to this source? If yes, see Section VI.</li></ol>	no
	<ol><li>Does the State "Prevention of Significant Deterioriation" (PSD) requirements apply to this source? If yes, see Sections VI and VII.</li></ol>	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)	<b>n</b> o
	apply to this source?	<u>no</u>

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:

Danningia	Conta	minants	Utilization	D.1 51 51
Description	Type	% Wt	Rate - Ibs/hr	Relate to Flow Diagram
See Attachment A				See Attachment B
			· · · · · · · · · · · · · · · · · · ·	

B.	Process Rate, if applicable: (See Section V, Item 1)	
	1. Total Process Input Rate (lbs/hr):	
	2 Product Weight (lbs/br): semiconductor_wafer weighs 12 gms.	

### C. Airborne Contaminants Emitted:

	Emiss	ion <sup>1</sup>	Allowed Emission <sup>2</sup>	Allowable <sup>3</sup>	Potential 8	mission <sup>4</sup>	Relate
Name of Contaminant	Maximum Ibs/hr	Actual T/yr	Rate per Ch. 17-2, F.A.C.	Emission lbs/hr	ibs/hr	T/yr	to Flow Diagram
See Attachment A			n/a	n/a			See Attachment

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles <sup>5</sup> Size Collected (in microns)	Basis for Efficiency (Sec. V, It <sup>5</sup>
Beverly Pacific Corp.	Solvent Vapor	85%	n/a	Mfg. Design
Model# PS12VT/CB24				Data
				,

<sup>1</sup>See Section V, Item 2.

DER FORM 17-1.122(16) Page 3 of 10

<sup>&</sup>lt;sup>2</sup>Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. – 0.1 pounds per million BTU heat input)

<sup>&</sup>lt;sup>3</sup>Calculated from operating rate and applicable standard

<sup>&</sup>lt;sup>4</sup>Emission, if source operated without control (See Section V, Item 3)

<sup>5</sup>If Applicable

		•		n/	٠.
E	-		F 1 .	117	•
<b>E</b> .			Fuels	,	•

Tun	(Be Specific)	i i	Co	nsumption*		Maximum He	at Input
ı ypı	e (pe Specific)		avg/hr	max	./hr	(MMBTU	/hr)
			·				
						* 1	
Inits Natural Gas	MMCF/hr: Fuel	Oils, barrels/hr:	Coal lbs/hr				
el Analysis:	,,						
-				Percent Ash: _			•
					t Nitrogen:		
-			_				
					•		
If applicable,	indicate the pero	cent of fuel used	for space heati	ng. Annual Av		Maximum	
If applicable, Indicate liqui Scrubbe	indicate the perod or solid wastes en water dis	generated and machanged to	for space heating thou of disposition industrial	ng. Annual Avisal. <u>was tewa ter</u>	erage <u>n/a</u> r treatment s	Maximum	·
Scrubbe Scrubbe Emission Stack Height:	indicate the perod or solid wastes en water dis	generated and machanged to	for space heating thou of disposition industrial districtions (Provide distriction)	ng. Annual Avisal.  was tewa text  lata for each stack	erage <u>n/a</u> treatment to the control of the contro	Maximum	
If applicable, Indicate liqui Scrubbe Emission Stack Stack Height: Gas Flow Ra	indicate the perod or solid wastes or water disconnective and 35'0" te: 8000/10,	generated and machanged to	for space heatinethod of disposition industrial distriction is the space of the spa	ng. Annual Avestal.  Was tewater  lata for each stack  Stack Diameter  Gas Exit Temp	eragen/a  r_treatment f  ck):	Maximum	
If applicable, Indicate liqui Scrubbe Emission Stack Stack Height: Gas Flow Ra	indicate the perod or solid wastes en water dis	generated and machanged to	for space heatinethod of disposition industrial distriction is the space of the spa	ng. Annual Avisal.  was tewa text  lata for each stack	eragen/a  r_treatment f  ck):	Maximum	
If applicable, Indicate liqui Scrubbe Emission Stack Stack Height: Gas Flow Ra	indicate the perod or solid wastes or water disconnective and 35'0" te: 8000/10,	generated and machanged to	for space heatinethod of disposition industrial distriction is the space of the spa	ng. Annual Avestal.  Was tewater  lata for each stack  Stack Diameter  Gas Exit Temp	eragen/a  r_treatment f  ck):	Maximum	
If applicable, Indicate liqui Scrubbe Emission Stack Stack Height: Gas Flow Ra	indicate the perod or solid wastes or water disconnective and 35'0" te: 8000/10,	generated and machanged to	for space heatinethod of dispositions (Provide districts)  istics (Provide dispositions)  ACFM	ng. Annual Avestal.  Was tewater  lata for each stace  Stack Diameter  Gas Exit Temp  Velocity:	eragen/a  r_treatment f  ek):  r:24"  erature:74 500	Maximum	
If applicable, Indicate liqui Scrubbe Emission Stack Stack Height: Gas Flow Ra	indicate the perod or solid wastes or water disconnective and 35'0" te: 8000/10,	generated and machanged to	for space heatinethod of dispositions (Provide districts)  istics (Provide dispositions)  ACFM	ng. Annual Avestal.  Was tewater  lata for each stack  Stack Diameter  Gas Exit Temp	eragen/a  r_treatment f  ek):  r:24"  erature:74 500	Maximum	

				by prod./	į by prod./
Lbs/hr Incinerated					
Description of Waste  Total Weight Incinerated (lbs/hr)					
Approximate Number of Hours of O	peration per day	·	days	/week	
Manufacturer		<del></del>			
Date Constructed		Model No.			

1 · 1 · 1	A Ologie   Lieur Heisesse		,		reinberature
	(ft)3	(BTU/hr)	Type	BTU/hr	(OF)
Primary Chamber					· .
Secondary Chamber	·			·	
Stack Height:		ft. Stack Diameter		Stack Tem	p
Gas Flow Rate:	·	ACFM	-	DSCFM* Velocity .	FPS
					dry gas corrected to 50% ex
Type of pollution control	device: [ ] C	yclone [ ] Wet Scru	bber [] Afterb	rner [ ] Other (spec	cify)
Brief description of operat	ting characteristi	ics of control devices:	_		
,			•		
<del></del>	<del> </del>			· · · · · · · · · · · · · · · · · · ·	,
**************************************		· · · · · · · · · · · · · · · · · · ·		<del>*************************************</del>	
<del> </del>	<del> </del>				
	<del></del>	· ·			
Ultimate disposal of any e	ffluent other tha	an that emitted from t	he stack (scrubber	water, ash, etc.):	÷
				· · · · · · · · · · · · · · · · · · ·	
<del></del>	<u> </u>				
·			· 	·	
•					

Fuel

### **SECTION V: SUPPLEMENTAL REQUIREMENTS**

Please provide the following supplements where required for this application.

- 1. Total process input rate and product weight show derivation.
- 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, 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 8½" 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%" 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%" 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. An application fee of \$20, unless exempted by Section 17-4.05(3), F.A.C. 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

Contaminant		•	Rate or Concentration	
<u> </u>				
*	·	•		· · · · · · · · · · · · · · · · · · ·
	· ·	•		
Has EPA declared the best available control tech	nology for this	class of sources (If y	ves, attach copy) [ ] Yes	[ ] No
Contaminant			Rate or Concentration	
		· · · · · · · · · · · · · · · · · · ·	•	
What emission levels do you propose as best avai	lable control to	echnology?		
Contaminant			Rate or Concentration	
· · · · · · · · · · · · · · · · · · ·	<del></del>	<del></del>		
	·			
-			<del></del>	
	<u> </u>			· · · · · · · · · · · · · · · · · · ·
Describe the existing control and treatment tech	nology (if any	) <b>.</b> .	•	
1. Control Device/System:				
2. Operating Principles:			*	
3. Efficiency: *	4.	Capital Costs:		
5. Useful Life:		Operating Costs:	•	
•				
7. Energy:	o. <sub>.</sub>	Maintenance Cost:	⊌∙	*
9. Emissions:		• •		
Contaminant	,	•	Rate or Concentration	
	<del>_</del>			<del>.</del>

<sup>\*</sup>Explain method of determining D 3 above.

	, 10. Sta	ck Parameters	•			•	
, ,	a.	Height:	ft	. b.	Diameter:		•
	c.	Flow Rate:	ACFM	1 d.	Temperature:		
•	e.	Velocity:	FPS	•		•	
E.	Describ	e the control and treatment t	echnology available (A	s many	types as applicable, us	se additional pages if necess	ary)
	1.		•			٠.	
	a.	Control Device:					
	b.	Operating Principles:					
	•	•				•	
	C.	Efficiency*:		d.	Capital Cost:	•	
	e.	Useful Life:		f.	Operating Cost:		
	g.	Energy*:	•	h.	Maintenance Cost:	·	•
	i.	Availability of construction	materials and process	chemic	als:		
	٠						
	j.	Applicability to manufactur	ring processes:				٠
	k.	Ability to construct with co	entrol device, install in	availab	le space, and operate v	vithin proposed levels:	
					,		
	2.	•	·		·		
	a.	Control Device:					
•	b.	Operating Principles:				•	
	,						
	c.	Efficiency*:		d.	Capital Cost:		
	e.	Useful Life:		f.	Operating Cost:		
	g.	Energy **:	•	∴h.	Maintenance Costs:		
	i.	Availability of construction	materials and process	chemic	eals:		
		Applicability to manufactur				•	
	j.	Ability to construct with co	•	availab	la engas, and anarata i	within proposed lavelet	
	k.	Ability to construct with co	milioi device, mstan m	availat	ne space, and operate v	vitiliii proposed levels.	
<b>•</b> c.	.alaia — .	shad of determining offician	<b></b>			,	
	-	ethod of determining efficien		4-			
E1		be reported in units of electri	cal power — Kwn desi	gn rate	•		
	3.	Control Davison	•				
	a. L	Control Device:					
	b.	Operating Principles:			·		
		man			O a local O		
	C.	Efficiency*:	• .	d.	Capital Cost:		
	е.	Life:		t.	Operating Cost:		
	_	Engrave		<b>I</b>	Maintanana Cart		

<sup>\*</sup>Explain method of determining efficiency above.

j.	App	licability to manufacturing pro	ocesses:		·
k.	Abil	ity to construct with control c	device, install in av	ailab	ele space and operate within proposed levels:
4.	•				
a.	Cont	rol Device			
b.	Oper	ating Principles:		•	
		•			
C.	Effic	iency*:		d.	Capital Cost:
e.	Life			f.	Operating Cost:
g.	Ener	gy:	•	h.	Maintenance Cost:
i.	Avai	lability of construction materi	ials and process ch	nemic	als:
:	A	liaahilitu ta maayfaaturing ara			
j.		licability to manufacturing pro		عادانه،	de many and annual wishin many and levels
k.		,	•	raliad	le space, and operate within proposed levels:
		control technology selected:	-		•
	ontrol [			_	
	fficienc	y*:		3.	Capital Cost:
4. Li				5.	Operating Cost:
	nergy:			7.	Maintenance Cost:
8. M	anufact	turer:			
9. O	ther lo	ations where employed on sin	nilar processes:		
a.					
	(1)	Company:			
	(2)	Mailing Address:	•		
	(3)	City:		(4)	State:
	(5)	Environmental Manager:			
	(6)	Telephone No.:			•
Explain m	ethod	of determining efficiency abov	/e.		•
	(7)	Emissions*:			
		Contaminant			Rate or Concentration
			· ·		
				_	
				_	·
•	(8)	Process Rate*:			
b.	,				
	(1)	Company:	·		
	(2)	Mailing Address:	•		
	(3)	City:		(4)	State:
	(5)	U1171		(7)	

i. Availability of construction materials and process chemicals:

(5) Environmental Manager:						
(6) Telephone No.:						
(7) Emissions*:						
Contaminant	Rate or Concentration					
(8) Process Rate*:						

<sup>10.</sup> Reason for selection and description of systems:

<sup>\*</sup>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

	Other data recorded		
	Attach all data or statistical summaries to this application.	•.	
	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
В.	Meteorological Data Used for Air Quality Modeling		
	1 Year(s) of data from/ / to/ /		
	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 table	<b>S.</b>
D.	Applicants Maximum Allowable Emission Data		
	Pollutant Emission Rate	e .	
	TSP	gra	ims/sec
	so <sup>2</sup>	gra	ms/sec
E.	Emission Data Used in Modeling		
	Attach list of emission sources. Emission data required is source name, description on prUTM coordinates, stack data, allowable emissions, and normal operating time.	oint source	(on NEDS point number),
F.	Attach all other information supportive to the PSD review.		
*Spe	ecify bubbler (B) or continuous (C).		
G.	Discuss the social and economic impact of the selected technology versus other applicable duction, taxes, energy, etc.). Include assessment of the environmental impact of the source		ies (i.e., jobs, payroll, pro-

Company Monitored Data

Period of monitoring

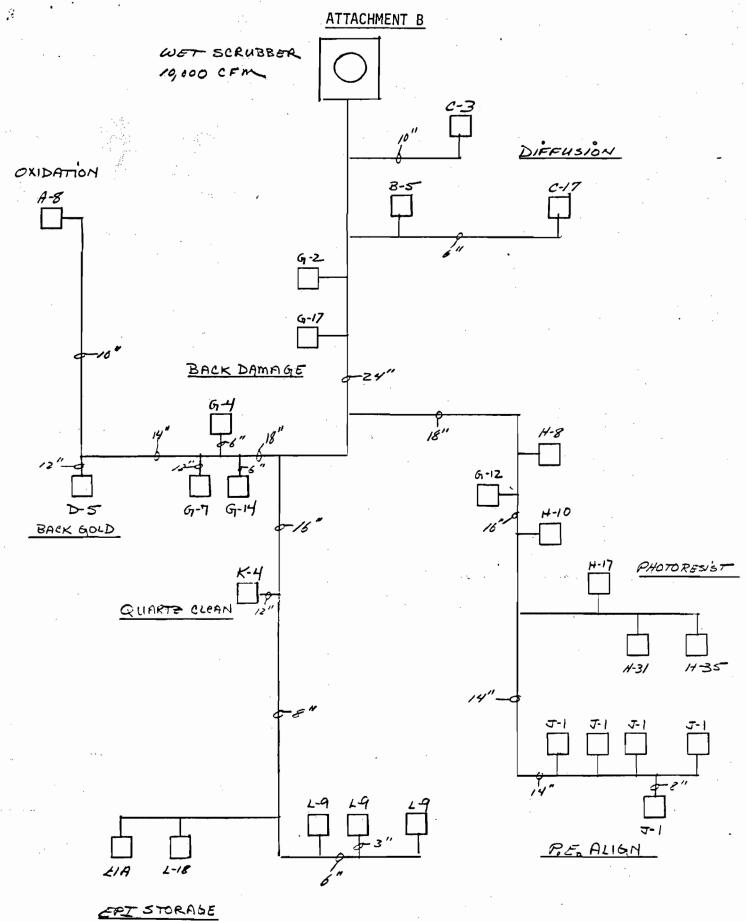
\_ no sites .

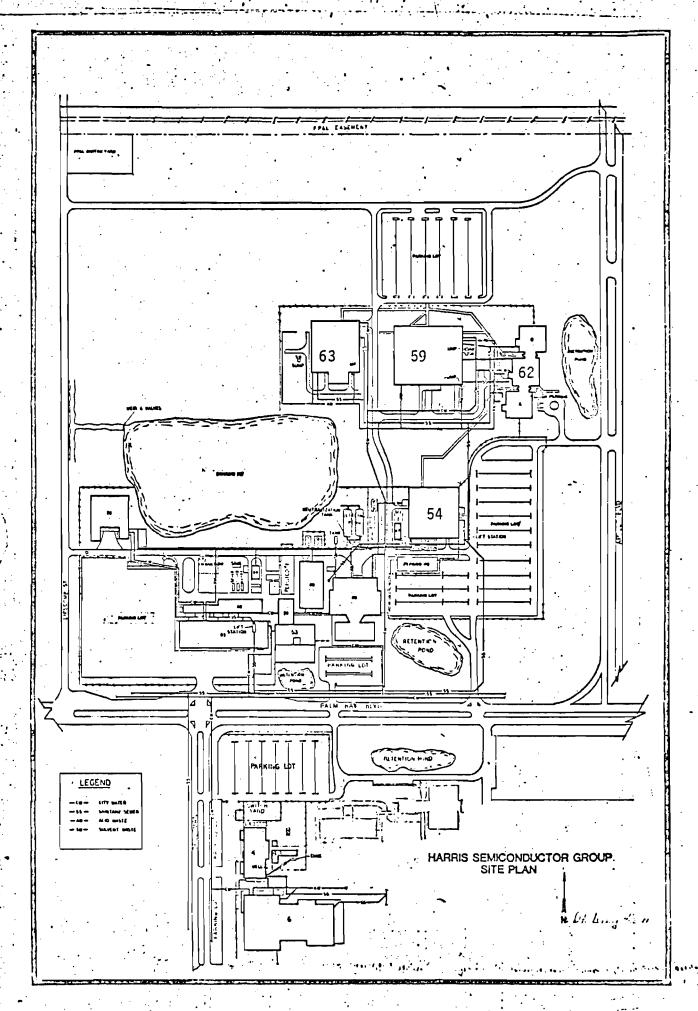
H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

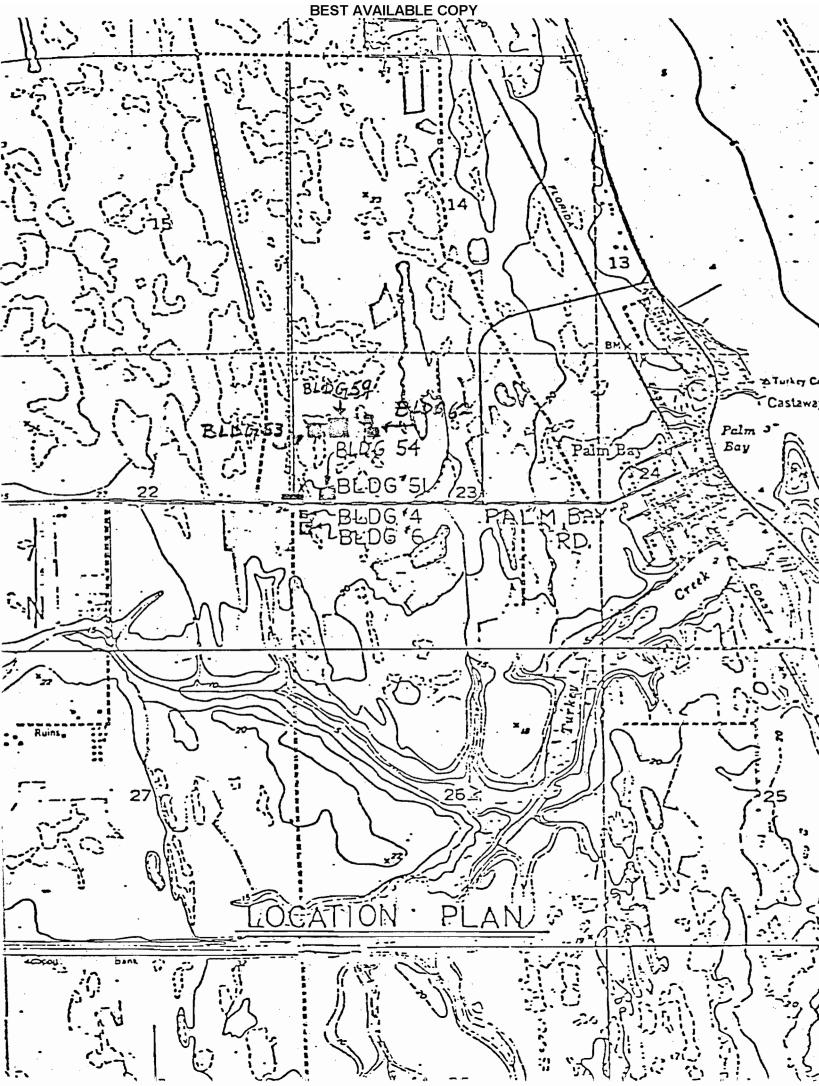
## ATTACHMENT A HARRIS SEMICONDUCTOR EXHAUST SCRUBBER - BUILDING 63

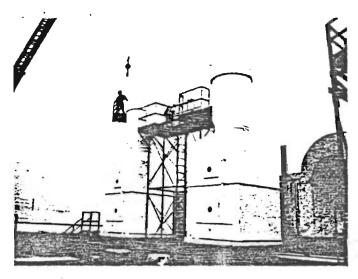
SYSTEM 1 SOLVENT

RAW	UTILIZATION	EMISS	SION	POTENTIAL EMISSION			
MATERIAL	RATE 1b/hr	MAXIMUM lb/hr	ACTUAL ton/yr	lb/hr	ton/yr		
Acetone	.984	0.012	0.036	0.077	0.244		
Methanol	.977	0.075	1.577	0.498	0.236		
Trichloroethylen	22.48	0.035	0.111	0.235	0.744		
Xylene	1.07	0.050	0.160	0.336	1.064		
· ·					· .		
Propanol .	6.83	0.014	0.044	0.093	0.295		
Butyl Acetate	2.85	0.013	0.040	0.085	0.269		
Freon	1.39	0.008	0.027	0.057	0.179		
Photoresist	1.09	0.11	0.570	1.2	3.801		
Ethanol	6.86	0.006	0.020	0.042	0.020		
·		. :		•			
			·				
		•					
		•					
ŕ					•		
					.*		
.	·						









### AIR POLLUTION CONTROL EQUIPMENT

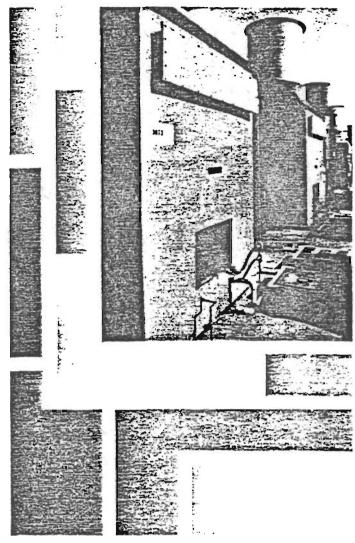
Over the years, more and more emphasis has been placed on air pollution control. There is little doubt more stringent standards and laws are forthcoming from State and Federal agencies regarding the demand for effective, well-designed air cleaning devices for industrial ventilation systems.

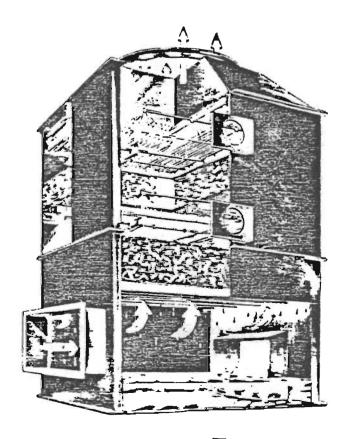
Beverly Pacific offers three (3) basic air pollution control units, totaling ten (10) variations, each with a multitude of standard and optional equipment available to meet your specific requirements.



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.

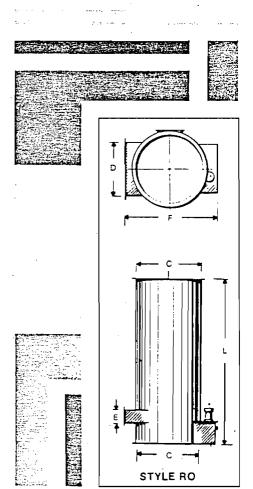
Recirculated scrubbing liquid is used for contaminate saturation and for irrigation of the packing media. Scrubbing efficiency depends largely on uniform distribution of scrubbing liquid, which Beverly Pacific achieves with low pressure, large orifice, non-plugging spray nozzles contained in a uniquely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

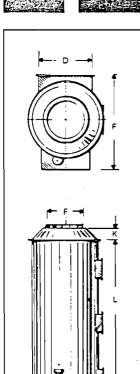




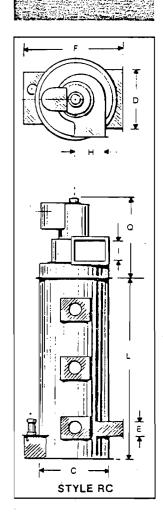
### PACKED SCRUBBER DIMENSIONAL CHART MODEL NUMBERS DIMENSIONS IN INCHES

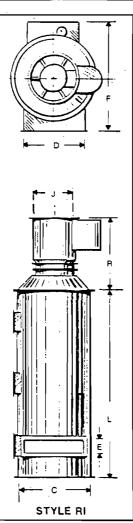
-														
	PS-2	PS-4	PS-6	PS-8	PS-12	PS-18	PS-24	PS-30	PS-40	PS-50				
A	78	82	84	94	101.	108	. 112	114	118	118				
В	24	36	42	48	60	72	84	96	108	120				
C	28	40	48	58	72	84	96	108	120	136				
D	22	34	40	46	58	70 .	80	92	104	116				
E	6	8	10	11	12	16	18	20	24	24				
F	46	58	66	76	90	102	114	126	138	154				
G	42	54	60	66	78	90	102	114	126	138				
н	13%	163/8	221/2	261/4	291/2	. 351/4	39	471/4	52 <del>%</del>	63 %				
1	10%	121/8	17	201/2	22¾	27	30	371/2	40¾	49%				
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				
М	64	64	70	77	89.	102	102	102	114	114				
N	35	49	55	62	76	88	103	116	128	142				
0	38	52	58	65	79	91	106	119	131	145				
Р	14	16	22	26	30	36	42	50	54	66				
a	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				
Τ	36	48	54	60	72	84	96	108	120	132				
WHEEL DIA.	121/4	15	20	241/2	27	33	361/2	441/2	49	60				
CFM x 1000	1-2	2-4	46	6-8	8-12	12-18	18-24	24-30	30-40	40-50				
RECIRC, GPM MAKE-UP GPM	7 0.7	15 1.5	25 2.0	35 3.0	45 4.0	75 7.0	105 10.0	135 13.0	175 17.0	225 22.0				
HT OP. WT. HT SHIP WT.	388 220	745 385	1110 550	1570 770	2690 1210	4085 1925	5670 2750	7595 3795	11790 5390	16040 7040				
VT OP. WT. VT SHIP WT.	318 150	660 300	1060 500	1500 700	2630 1150	3910 1750	5470 2550	7400 3600	11650 5250	15800 6800				

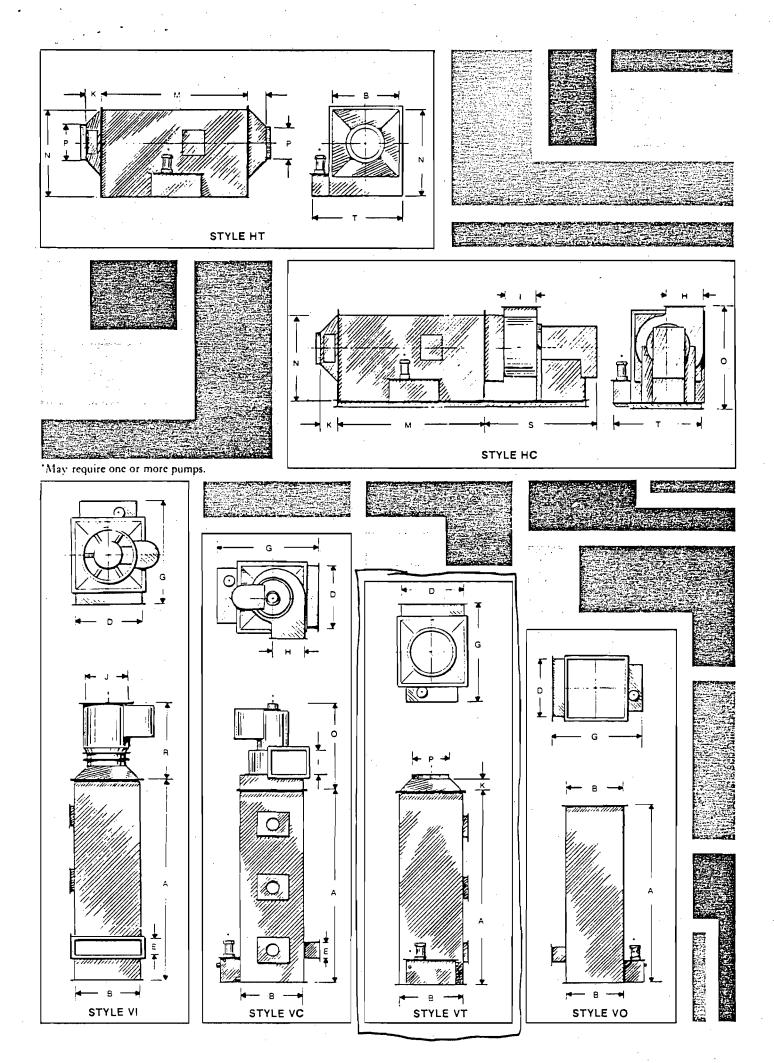




STYLE RT







### 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

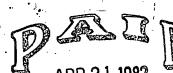
FITTINGS, such as drain, overflow, make-up water, access doors, etc. can usually be located to facilitate installation and maintenance.

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.



APR 21 1982

SAINT JOHNS DIVER DISTRICT

F ENVIRONMENTAL REGULATION APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

	MIATIV D	10 0.4		District S
SOU	RCE TYPE:S	tationary	[X] New <sup>1</sup> [ ] Existing <sup>1</sup>	
appi	LICATION TYPE:	[X] Construction [ ] Operation [	] Modification	63456
COM	PANY NAME:	Harris Semiconductor	·	COUNTY: Brevard
		nission point source(s) addressed in this uilding 63, Acid Exhaust Vap		
sou	RCE LOCATION:	Street Palm Bay Road		City Palm Bay
		UTM: East 17-538700	North1	
		Latitude <u>28</u> o <u>01</u> · <u>20</u>		80 o 36 · 10 ·w
APPI	LICANT NAME A	ND TITLE: P. R. Bumgarner, Ma	nager Facilities Eng	ineering
APPI	LICANT ADDRES	s: PT-030 Box 883, Melbourn	e, FL 32901	•
			•	
		SECTION I: STATEMENTS	BY APPLICANT AND ENGIN	NEER
A.	APPLICANT		Hannida Card III	
	I am the undersig	ned owner or authorized representative* statements made in this application for a	of Harris Semiconduc	tor
	pollution control Florida Statutes, granted by the d permitted establishment		in such a mannar as to comdepartment and revisions the will promptly notify the department.	ply with the provision of Chapter 403 reof. I also understand that a permit; is artment upon sale or legal transfer of the
Att	ach letter of autho	rization	Signed: () · () · (	Dum Jainer
				<pre>qr. Faciloties Engineering nd Title (Please Type)</pre>
				Telephone No. <u>724-7657</u>
В.	PROFESSIONAL	ENGINEER REGISTERED IN FLORIC	•	·
	This is to certify be in conformity permit application erly maintained rules and regulations.	that the engineering features of this pollur with modern engineering principles appoint. There is reasonable assurance, in my and operated, will discharge an effluent thions of the department. It is also agreed tructions for the proper maintenance and controls.	tion control project have been licable to the treatment and d professional judgment, that the test complies with all applicable hat the undersigned will furnis	designed/examined by me and found to isposal of pollutants characterized in the e pollution control facilities, when proper statutes of the State of Florida and the sh, if authorized by the owner, the appli
		•	Signed:	N Uzach
	IASSIM CIV			nme (Please Type)
	(Affix Seal)	Si Jan Mangaga	Harris Semicond	
				ny Name (Flease Type) Melbourne, FL 32901
		STATE CO	<del></del>	Address (Please Type)
	Florida Registrat	ion No. 1914010 25	Date: 2-23-82	Telephone No. 724-7324

1See Section 17-2.02(15) and (22), Florida Administrative Code, (F.A.C.) DER FORM 17-1.122(16) Page 1 of 10

#### SECTION II: GENERAL PROJECT INFORMATION

A.	Describe the nature and extent of the project. Refer to pollution control equipment, and extended formance as a result of installation. State whether the project will result in full compliance. At	pected improvements in source per-
	Building 63 will utilize laboratory hood type work station to	
	conditions for the manufacture of semiconductors. All chemicals	
	gallon containers in which the devices are immersed. Vessel sur	
	exhaust air is minimal. Air is exhausted via a 50,000 cfm fume	scrubber manufactured
В.	by Beverly Pacific. Schedule of project covered in this application (Construction Permit Application Only)	
	Start of Construction 5-1-82 Completion of Construction	9-1-82
C.	Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for project serving pollution control purposes. Information on actual costs shall be furnished permit.)	individual components/units of the with the application for operation
	Fan/Wet Scrubber \$34,000.00	·
		<u> </u>
	•	
D.	Indicate any previous DER permits, orders and notices associated with the emission point, in tion dates.	cluding permit issuance and expira-
	Building 63 is new construction loacted approximately 1000 ft.	from Building 54 which
	has current operating permits.	
F.	Normal equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 if seasonal, describe:	; if power plant, hrs/yr;
		<del></del>
G.	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	no
	Section VI.	
	<ol><li>Does the State "Prevention of Significant Deterioriation" (PSD) requirements apply to this source? If yes, see Sections VI and VII.</li></ol>	_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
	••••	

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

DER FORM 17-1.122(16) Pege 2 of 10

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

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

Danniasia.	Contar	ninants	Utilization	Dalama Standi
Description	Type	% Wt	Rate - lbs/hr	Relate to Flow Diagram
· .				
		·		
SeeAttachment A			·	See Attachment B
	1			

В.	Process Rate, if applicable: (See Section V, Item 1)	•
	1. Total Process Input Rate (lbs/hr): n/a	

2. Product Weight (lbs/hr): semiconductor wafer weighs 12 gms.

#### C. Airborne Contaminants Emitted:

Name of Contaminant	Emission <sup>1</sup>		Allowed Emission <sup>2</sup>	Allowable <sup>3</sup>	Potential Emission <sup>4</sup>		Relate
	Maximum lbs/hr	Actual T/yr	Rate per Ch. 17-2, F.A.C.	Emission lbs/hr	lbs/hr	T/yr	to Flow Diagram
				·			
See Attachment	A			n/a			See Attachment

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles <sup>5</sup> Size Collected (in microns)	Basis for Efficiency (Sec. V, It <sup>5</sup>
Beverly Pacific Corp.	Acid mist	95%	n/a	Mfg. Design
Model # PS50HT/CB60				Data
		·		
				.

<sup>1</sup>See Section V, Item 2.

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<sup>&</sup>lt;sup>2</sup>Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. — 0.1 pounds per million BTU heat input)

<sup>3</sup>Calculated from operating rate and applicable standard

<sup>&</sup>lt;sup>4</sup>Emission, if source operated without control (See Section V, Item 3)

<sup>51</sup>f Applicable

Type	(Be Specific)		Cor	sumption*		Maximum Hea	
	100 optomor		avg/hr	max	./hr	(MMBTU)	/hr)
					· !		
						·, -	
*Units Natural Gas,	MMCF/hr: Fuel	Oils, barrels/hr;	Coal, lbs/hr				
Fuel Analysis:	•						
Percent Sulfur:		·		Percent Ash:			•
Density:							·
Heat Capacity:							
Other Fuel Contami							
		· · · · · · · · · · · · · · · · · · ·		— :.		, , , , , , , , , , , , , , , , , , , ,	•
F. If applicable, i	ndicate the new	rent of fivel used	for space heating	a Appual Ave	erage	Maximum	•
		generated and m					•
<u>Scrubber</u>	<u>water disc</u>	<u>harged to i</u>	<u>ndustrial v</u>	<u>vastewater</u>	treatment fa	cility	
H. Emission Stack	· Coometry and	Flow Character	istine (Provide d	ata for each stac	٠.٤١٠	1,4 4	
	31'0				: <u>416"</u>		·
					erature: 74		
					500		· FP:
Water Vapor C	ontent.			Velocity.			
			* N				
		ocotion.	I IV: INCINER	4700 INFORM			
		SECTION	n/a	ATOR INFORM	ATION		
		<u> </u>	Τ	· T			·
Type of Waste	Type O (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq & Gas	Type VI (Solid
	(1 1834163)	(110001311)	(1101430)	(Carbage)	(i athological)	By-prod.)	By-prod.)
Lbs/br						•	
Incinerated							
<u> </u>		,	L		,		
Description of Waste				<del></del>	· · · · · · · · · · · · · · · · · · ·		
Total Weight Inciner					y (lbs/hr)		
Approximate Numb	er of Hours of C	Operation per da	У		days/v	veek	
Manufacturer							
Date Constructed				Model No			

	Volume	Heat Release		- Uei	Temperature
	(ft) <sup>3</sup>	(BTU/hr)	Type	BTU/hr	(°F)
Primary Chamber					
Secondary Chamber				·	•
Stack Height:		ft. Stack Diameter	·	Stack Tem	р
Gas Flow Rate:		ACFM		_ DSCFM* Velocity	FPS
					t dry gas corrected to 50% ex
Type of pollution control	device: [ ] C	yclone [ ] Wet Scrub	ber [] Afterbu	irner [ ] Other (spec	:ify)
Brief description of operat	ting characteristi	cs of control devices: _			
<del></del>			<del></del>	· · · · · · · · · · · · · · · · · · ·	
Ultimate disposal of any e	ffluent other the	an that emitted from th	e stack (scrubber	water, ash, etc.):	
	<del></del>				
<u> </u>			· · · · · · · · · · · · · · · · · · ·		
<del></del>				· · · · · · · · · · · · · · · · · · ·	<del></del>

#### SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

- 1. Total process input rate and product weight show derivation.
- 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, 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 8½" 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%" 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 8½" 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. An application fee of \$20, unless exempted by Section 17-4.05(3), F.A.C. 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

•	Contaminant			Rate or Concentration	
			•		
			•		
Has EPA declared the	best available control technology f	or this	s class of sources (If y	/es, attach copy) [ ] Yes	[ ] No
•	Contaminant			Rate or Concentration	
				•	
·					
What emission levels o	do you propose as best available cor	ntroi t		·	
	•				•
•	Contaminant			Rate or Concentration	
·	Contaminant			Rate or Concentration	
•	Contaminant	_		Rate or Concentration	
•		  		Rate or Concentration	
Describe the existing	Contaminant  control and treatment technology (				
Describe the existing of the control Device/S	control and treatment technology (				
	control and treatment technology (				
1. Control Device/S	control and treatment technology (	(if any			
<ol> <li>Control Device/S</li> <li>Operating Princip</li> </ol>	control and treatment technology (	(if any	).		
<ol> <li>Control Device/S</li> <li>Operating Princip</li> <li>Efficiency: *</li> </ol>	control and treatment technology (	(if any 4. 6.	).  Capital Costs:		
<ol> <li>Control Device/S</li> <li>Operating Princip</li> <li>Efficiency: *</li> <li>Useful Life:</li> </ol>	control and treatment technology (	(if any 4. 6.	Capital Costs: Operating Costs:		
<ol> <li>Control Device/S</li> <li>Operating Princip</li> <li>Efficiency: *</li> <li>Useful Life:</li> <li>Energy:</li> </ol>	control and treatment technology (	(if any 4. 6.	Capital Costs: Operating Costs:		
<ol> <li>Control Device/S</li> <li>Operating Princip</li> <li>Efficiency: *</li> <li>Useful Life:</li> <li>Energy:</li> </ol>	control and treatment technology ( ystem: eles:	(if any 4. 6.	Capital Costs: Operating Costs:		

<sup>\*</sup>Explain method of determining D 3 above.

10	. 314	CK Parameters			•	
	<b>a.</b>	Height:	ft. b.	Diameter:		. •
	C.	Flow Rate: AC	FM d.	Temperature:	· · ·	
	e.	Velocity:	PS		• • .	
De	scrib	e the control and treatment technology available	(As man	y types as applicable, us	se additional pages if	necessary).
1.						
:	a.	Control Device:		·		
	b.	Operating Principles:				
					: :	
	C.	Efficiency*:	d.	Capital Cost:		•
	ė.	Useful Life:	f.	· Operating Cost:	•	
	9.	Energy*:	h.	Maintenance Cost:		•
	i.	Availability of construction materials and proce	ss chemi	cals:		*.
	j.	Applicability to manufacturing processes:				
	k.	Ability to construct with control device, install	in availai	ble space, and operate v	vithin proposed levels	:
		•				
2	•					
	a.	Control Device:				
	b.	Operating Principles:				
	C.	Efficiency*:	d.	• •		
	e.	Useful Life:	f.	Operating Cost:		
	g.	Energy **:	∵h.	Maintenance Costs:		
	· i.	Availability of construction materials and proce	ss chemi	cals:		
	j.	Applicability to manufacturing processes:			· · · . · ·	
	ķ.	Ability to construct with control device, install	in availa	ble space, and operate v	vithin proposed levels	:
		,				
cola	in me	ethod of determining efficiency.			•	
-		be reported in units of electrical power — KWH d	esion rati	<b>e</b> .		•
3				-		
	a.	Control Device:				
	ъ.	Operating Principles:				
:						
	<b>c</b> .	Efficiency*:	d.	Capital Cost:		
	-	Life:	f.	Operating Cost:		
	g.	Energy:		Maintenance Cost:		

٥Ę

<sup>\*</sup>Explain method of determining efficiency above.

	•		Park Warran and Control			• •	
	j.		licability to manufacturing processes:			•	
		Abil	ity to construct with control device, in	stall in availab	ie space and operate	within proposed levels:	
	4.	C	mat Davisa			•	
	а.		trol Device		•		
	b.	Oper	rating Principles:				
			•				
	C.	•	ciency*:	d.	Capital Cost:	· .	
	. e.	Life:		<b>1.</b>	Operating Cost:	•	v
	g.	Ener	•	' h.	Maintenance Cost:		• •
	i.	Avai	lability of construction materials and p	rocess chemic	als:		
	j.	App	licability to manufacturing processes:	· .		· .•	
	k.	Abili	ity to construct with control device, in	stall in availab	le space, and operate	within proposed levels:	
1	Describe	e the d	control technology selected:				
•	1. Cor	ntrol [	Device:		. •	•	
	2. Effi	icienc	у•:	3.	Capital Cost:		
	4. Life	e:		5.	Operating Cost:		
	6. Ene	rgy:		7.	Maintenance Cost:		
	8. Mar	nufact	turer:			· ·	• ,
	9. Oth	ner loc	cations where employed on similar pro-	esses:		•	
	a.						
	44.44	(1)	Company:			·	
		(2)	Mailing Address:				
		(3)	City:	(4)	State:		
		(5)	Environmental Manager:	• • •			
		(6)	Telephone No.:			•	
x o	lain me		of determining efficiency above.		•		
		(7)	Emissions*:			-	•
		\',	Contaminant		· R	ate or Concentration	
			·	·	•••	etc of congentration	
							•
		/0)	P P-+-*				
		(8)	Process Rate*:				<i>;</i>
	b.	,,,					
		(1)	Company:				
		(2)	Mailing Address:				
		(3)	City:	(4)	State:		· ·

i. Availability of construction materials and process chemicals:

· '	. (3)	Elivitorinic Manager.								
	(6)	Telephone N	lo.:		•					
•	(7)	Emissions*:					•		•	
		Con	taminant			·	Rate or	Concentration		
-			e di sala		<del></del>					
. •		1. J.								
	(8)	Process Rate	•:		· .					

<sup>10.</sup> Reason for selection and description of systems:

<sup>\*</sup>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

( ) so2+

Wind spd/dir

n/a

	Other data recorded	·					
	Attach all data or statistical summaries to this application.						
	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					
3.	Meteorological Data Used for Air Quality Modeling						
	1Year(s) of data from/ / to/ / to/ /						
	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 <sup>2</sup>						
Ε.	Emission Data Used in Modeling	•					
	Attach list of emission sources. Emission data required is source name, description on pour UTM coordinates, stack data, allowable emissions, and normal operating time.	oint source (on NEDS point number),					
F.	Attach all other information supportive to the PSD review.						
*Spe	ecify bubbler (B) or continuous (C).						
G.	Discuss the social and economic impact of the selected technology versus other applicab duction, taxes, energy, etc.). Include assessment of the environmental impact of the source	le technologies (i.e., jobs, payroll, pros.					

Company Monitored Data

Period of monitoring

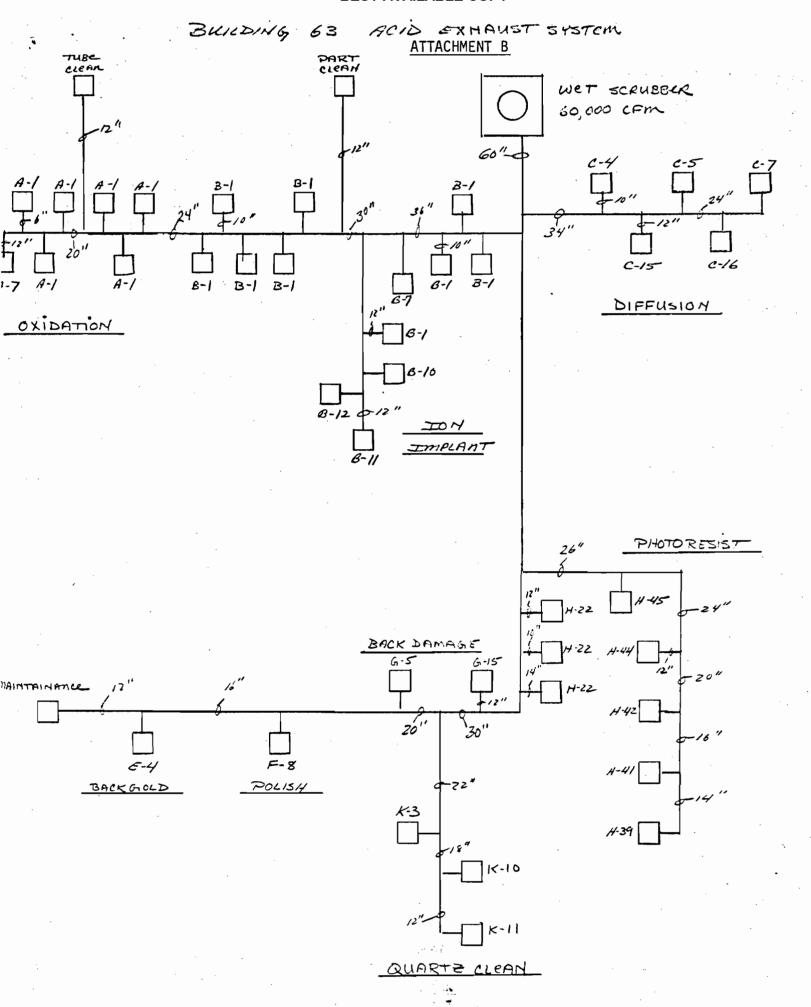
H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

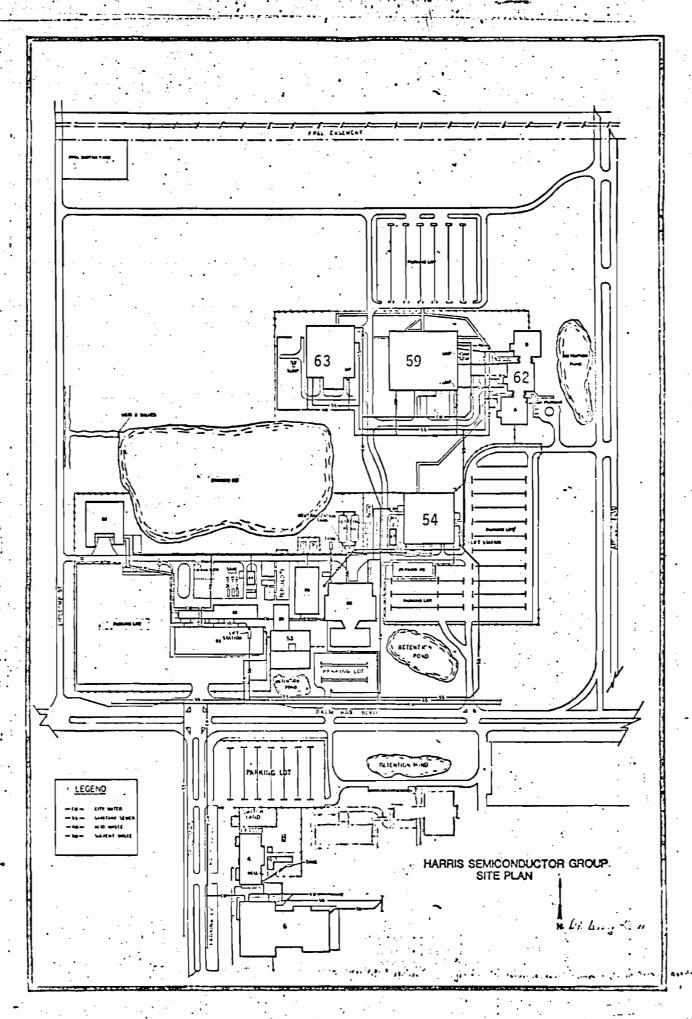
# ATTACHMENT A HARRIS SEMICONDUCTOR EXHAUST SCRUBBER - BUILDING 63

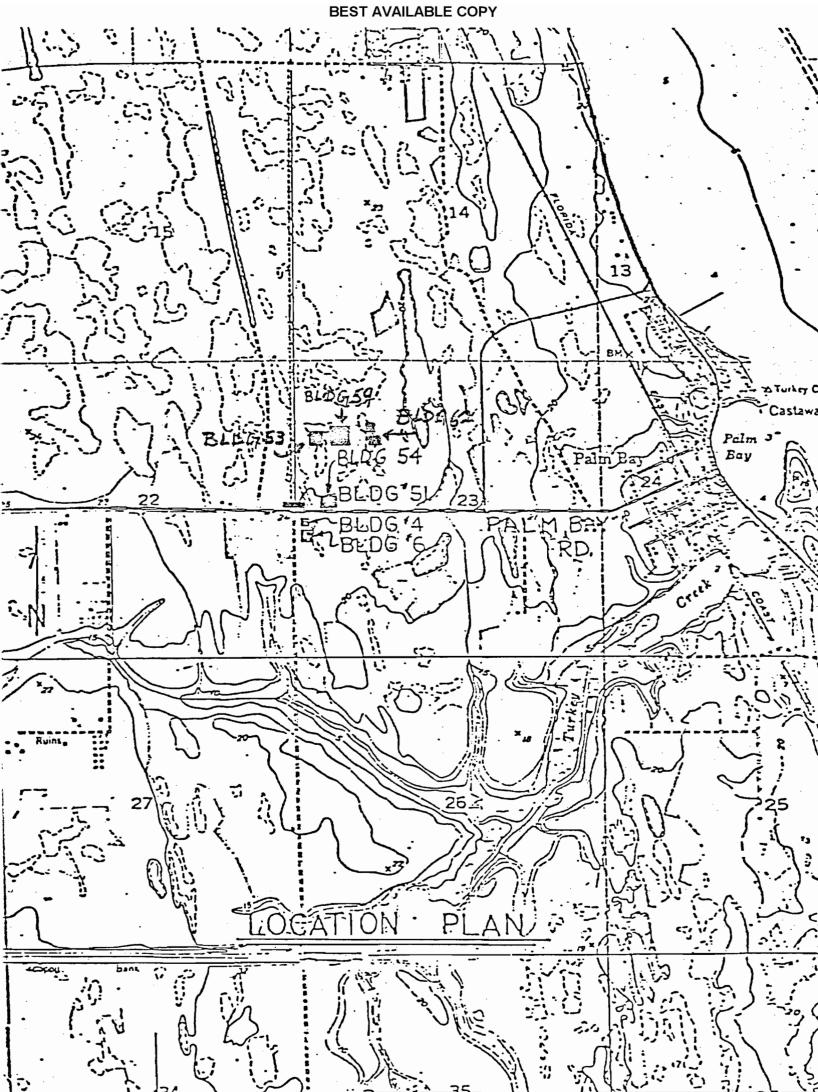
SYSTEM 2 ACID

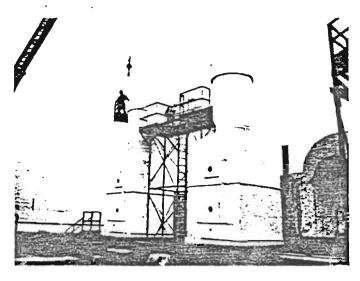
RAW	UTILIZATION	EMISS	SION	POTENTIAL EMISSION			
MATERIAL	RATE 1b/hr	MAXIMUM 1b/hr	ACTUAL ton/yr	lb/hr	ton/yr		
Acetic Acid 3.41		0.005	0.015	0.094	0.298		
Ammonium Fluoride	12.29	0.022	0.070	0.445	1.41		
Hydrofluoric	14.254	0.01	0.033	0.205	0.650		
Nitric	21.8	0.014	0.043	0.272	0.862		
Sodium Hydroxide	20.82	0.014	0.043	0.272	0.862		
Sulfuric	125.46	0.033	0.106	0.668	2.116		
Hydrochloric	3.18	0.002	0.005	0.2044	0.997		
Phosphoric	17.67	0.01	0.032	0.204	0.648		

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#### AIR POLLUTION CONTROL EQUIPMENT

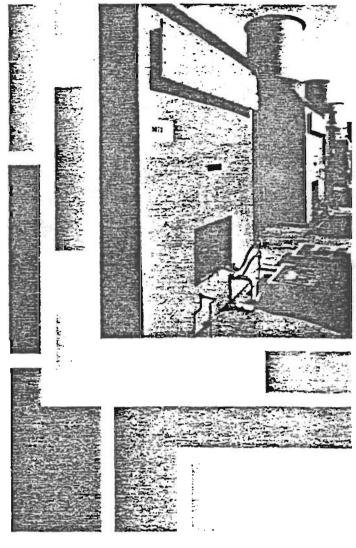
Over the years, more and more emphasis has been placed on air pollution control. There is little doubt more stringent standards and laws are forthcoming from State and Federal agencies regarding the demand for effective, well-designed air cleaning devices for industrial ventilation systems.

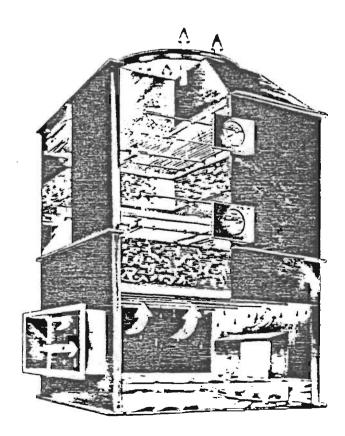
Beverly Pacific offers three (3) basic air pollution control units, totaling ten (10) variations, each with a multitude of standard and optional equipment available to meet your specific requirements.



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.

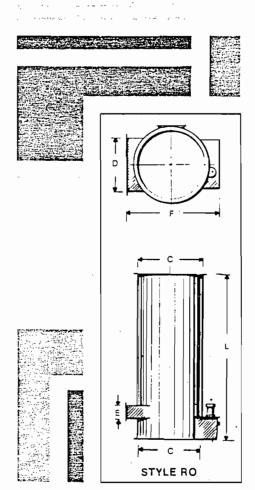
Recirculated scrubbing liquid is used for contaminate saturation and for irrigation of the packing media. Scrubbing efficiency depends largely on uniform distribution of scrubbing liquid, which Beverly Pacific achieves with low pressure, large orifice, non-plugging spray nozzles contained in a uniquely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



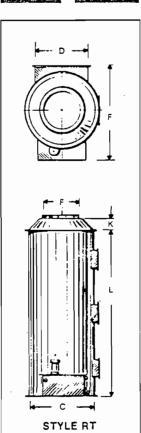


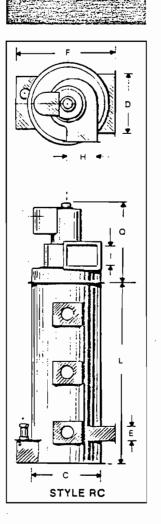
# PACKED SCRUBBER DIMENSIONAL CHART MODEL NUMBERS DIMENSIONS IN INCHES

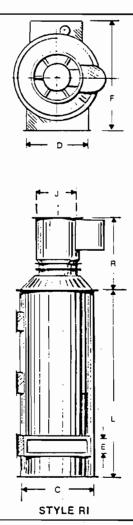
	PS-2	PS-4	PS-6	PS-8	PS-12	PS-18	PS-24	PS-30	PS-40	PS-50
A	78 .	82	_ 84	94	101	108	112	114	118	118
В	24	36	42	48	60	72	84	96	108	120
C	28	40	48	58	72	84	.96	108	120	136
D	22	34	40	46	58	70	80	92	104	116
E	6	8	. 10	11.	12	16	18	20	24	24
F	46	58	66	76	90	102	114	126	138	154
G	42	54	60	66	78	90	102	114	126	138
Н	13%	16%	221/2	261/4	291/2	351/4	39	471/4	52%	63%
1	10%	12%	_ 17	. 20½	22¾	27	30	371/2	40¾	49%
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
М	64	64	70	77	89	102	102	102	114	114
N	35	49	55	62	76	88	103	116	128	142
0	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.	121/4	15	20	241/2	27	33	361/2	441/2	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 MAKE-UP GPM	7 0.7	15 1.5	25 2.0	35 3.0	45 4.0	75 7.0	105 10.0	135 13.0	175 17.0	225 22.0
HT OP. WT.	388 220	745 385	1110 550	1570 770	2690 1210	4085 1925	5670 2750	7595 3795	11790 5390	16040 7040
VT OP. WT. VT SHIP WT.	318 150	660 300	1060 500	1500 700	2630 1150	3910 1750	5470 2550	7400 3600	11650 5250	15800 6800

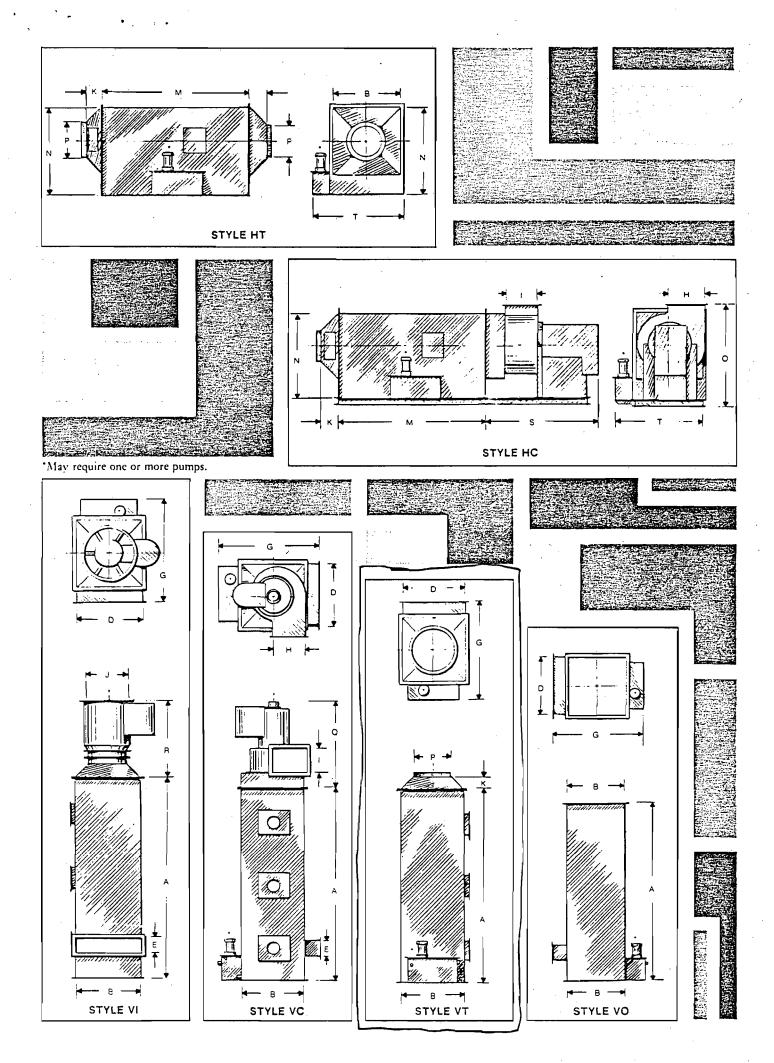












#### COMPUTERIZED PACKING MEDIA SELECTION

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 Cl<sup>2</sup>M 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.