AIR PERMIT MODIFICATION
CONSTRUCTION APPLICATION

VAW of America, Inc.
St. Augustine, FL

Submitted to:

Florida Department of Environmental Protection
Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, FL 32256-7590

Attention: Mr. Christopher L. Kirts, P.E

Prepared By:

LAN Associates Engineering, Planning, Architecture, Surveying, Inc.
66 Cuna Street
St. Augustine, FL 32084

April 4, 2001
LAN Job #2.392.41

LAN
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April 2, 2001

BY OVERNIGHT DELIVERY

Christopher L. Kirts, P.E.
District Air Program Administrator
Florida Department of Environmental Protection
Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Fl 32256-7590

Subject: LAN Ref. 2.392.41
VAW of America, Inc.
St. Augustine, FL 32086
ID No. 1090013
Project 004

Dear Mr. Kirts:

Enclosed with this letter, please find an air permit construction modification application that your office requested in a letter dated October 19, 2000, in order to modify the Title V permit for our client, VAW of America, Inc. There are only a few substantial revisions as the basis for this construction permit application: 1) request additional VOC permitted allowances for the new combined EU#004 2) delete all "hourly" requirements from the permit for permit flexibility, and 3) delete chlorine permanently from facility use in Remelt Furnaces 1 & 2 (EU's 008 & 009). This letter will accompany the air permit construction/modification application to provide additional information and will also respond in numeric order to the issues raised in your October 19, 2000, letter.

1. As you requested, a construction modification application is submitted to revise the affected facility construction permits. As requested, all of the emission units are accounted for in this application. Pursuant to the application instructions, we have included a numeric hourly value for each emissions unit or pollutant limitation as to material processing, fuel usage, etc. However, we wish to delete all hourly rates in the permit as to annual consumption for

permit flexibility, pursuant to EPA White Paper #3. VAW is currently keeping all of the recordkeeping as required in the current Title V permit. However, in order to certify compliance, the annual consumption rate of the various materials is sufficient to meet the burden of compliance certification. This will allow VAW operational flexibility and also the ability to certify compliance. Therefore, please remove all appropriate "lbs/hr" from the permit and show only the requested "lbs. or tons/yr" as set forth in the application.

2. Information as requested in your letter as to various issues in the construction permit application is as follows:

2.1 Emission Units 004, 011, 012, 014, 015, will be combined as EU004, which was the original emission unit "Paintline Facility" and will reflect the facility-wide VOC and HAP emissions.

2.2 As requested, the permitted PM rates for EU's 008 and 009 (Remelt Furnaces 1 & 2) have been reduced substantially pursuant to the performance test conducted on September 20, 2000. The scrubber pressure drop of "20-30 inches H_20" is shown in the application as the surrogate parameter/numerical value. At the present time, we do not have adequate support in terms of historical data as this compliance requirement has not been a part of VAW's current Title V permit. We also wish to state that the scrubber is operated only during times of melting painted scrap. Even so, the performance test shows that VAW has low PM emissions. We are presently studying the compliance assurance correlation between PM and VE and will advise you of our progress in the matter. You will note from the performance test that the highest opacity for the test of EU's 008 & 009, was "0%."

2.3 EU010 has been indicated as an insignificant activity.

2.4 Your letter mentions that we should convert the Powder Paint Booth VE to "facility-wide" VE, or the General Visible Emissions Standard. We contacted the Department to that regard and received some verbal indication that this may not be required or may be a misunderstanding. In any regard, if it is required, we welcome the opportunity to discuss the matter with you further, if you believe that this is still an issue.

2.5 At this time, we wish to apply a cap for only HAP emissions from the facility. This will accomplish the goal of being non-major or synthetic minor as to HAP issues. This is needed as to secondary aluminum issues discussed further below. However, we are studying the issue of a VOC cap further. In our previous letter, we mentioned EPA's White Paper #3. Emission caps were suggested in the White Paper as one method of permit flexibility, and hence, our request for emission caps as a way to establish compliance certification, absent other controls. The third white paper is relatively new and precedent may not yet be established. White Paper #3 also stated that current permitting strategies may be already in use to establish the needed permit flexibility. Since this permit modification may be held in abeyance until the PSD issue (discussed below), we request an additional two weeks to study this issue of VOC capping. The

facility wide cap (as shown by the combined VOC units) may be sufficiently delineated by the annual raw material usage rates, so that an annual cap may not be needed.

3. The status of EU's 001, Remelt Furnace, 002 Holding Furnace, and 003, Homogenizer is the units should be permanently deleted from the permit. The building structure will be used in the future to house a new press for extrusion operations, which does not have air emissions issues.

4. Please withdraw the Title V Air Permit Revision Application upon the receipt of this construction permit application. We understand that we will need to submit another Title V application upon receipt of the approval for the construction permit.

As required in your letter, the appropriate certifications by VAW's responsible official, and our Professional Engineer Certification is made a part of this application. Please be advised that Mr. William Russell is no longer the Vice President of Operations. The position has been filled by Mr. Robert Keathley, who will have the same title. If additional information or additional forms are required to make this transition, please advise us immediately.

There have been verbal discussions with various members of your staff that perhaps a PSD determination may be required. This is based on the listing in 62 F.A.C. 212.400 of "secondary metal production facility." Up until recently, during the promulgation of the Secondary Aluminum Production NESHAP codified in 40 CFR 63, Subpart RRR, it was generally considered that VAW may have been loosely termed a secondary metal production facility. However, a lawsuit has required EPA to issue an applicability rule stay pending settlement of lawsuits filed against EPA. At this present time, stakeholders are working on modifying the language in the NESHAP that currently states:

> *"Aluminum die casting facilities, aluminum foundries, and aluminum extrusion facilities that process no materials other than materials generated within the facility, or clean charge purchased or otherwise obtained from outside the facility, and that do not operate sweat furnaces, thermal chip dryers, or scrap dryers/delacquering kilns/decoating kilns are not secondary aluminum production facilities."*

The stakeholders assured us that the language currently with EPA will remove the above facilities totally from the requirements of the NESHAP and hence VAW will not be a secondary metal production facility by federal definition. We are keeping in touch with the stakeholders and will advise the Department of the EPA decision as to applicability of the NESHAP to VAW. In the meantime, VAW asserts that it is not a secondary metal production facility and is not subject to PSD review. If that changes, we will be in a position to immediately respond to the Department's PSD review process.

If you have any questions about this letter or the permit application, please contact either Dr. Handi Wang or me directly.

Sincerely,

Judith Ann Van Houten
Compliance Manager

/jav
2-392-41-LFDEP-Kirts-020401-jvh.doc
Copies to: Mr. Robert Keathley/VAW (letter only)
Mr. Wayne LaPierre/VAW (letter and application)

Attachment: Air Permit Modification Construction Application

Department of
Environmental Protection

DIVISION OF AIR RESOURCES MANAGEMENT

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Identification of Facility Addressed in This Application

1. Facility Owner/Company Name : VAW of America, Inc.	
2. Site Name : VAW of America, Inc., St. Augustine	
3. Facility Identification Number : 1090013	[ ] Unknown
4. Facility Location : VAW of America, Inc., St. Augustine Street Address or Other Locator : 200 Riviera Blvd City : St. Augustine County : St. Johns	Zip Code : 32086
5. Relocatable Facility? [ ] Yes [X] No	6. Existing Permitted Facility? [X] Yes [ ] No

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official :

Name : Robert Keathley
Title : Vice President of Operation

2. Owner or Authorized Representative or Responsible Official Mailing Address :

Organization/Firm : VAW of America, Inc.
Street Address : PO Box 3887
City : St. Augustine
State : FL Zip Code : 32086

3. Owner/Authorized Representative or Responsible Official Telephone Numbers :

Telephone : (904)794-1500 Fax : (904)794-1508

4. Owner/Authorized Representative or Responsible Official Statement :

I, the undersigned, am the owner or authorized representative of the non-Title V source addressed in this Application for Air Permit or the responsible official, as defined in Rule 62-210.200, F.A.C., of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions units.*

Robert Keathley
Signature

4/2/01
Date

* Attach letter of authorization if not currently on file.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type
004	Al Tube Cleaning, Heat Treatment, and Painting Operations	AC1B
005	Powder Paintbooth	AC1E
006	Incinerator	AC1F
008	Remelt Furnace #1	AC1E
009	Remelt Furnace #2	AC1E

Purpose of Application and Category

Category I : All Air Operation Permit Applications Subject to Processing Under Chapter 62-213, F.A.C.

This Application for Air Permit is submitted to obtain :

[ ] Initial air operation permit under Chapter 62-213, F.A.C., for an existing facility which is classified as a Title V source.

[ ] Initial air operation permit under Chapter 62-213, F.A.C., for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number :

[ ] Air operation permit renewal under Chapter 62-213, F.A.C., for a Title V source.

Operation permit to be renewed :

[ ] Air operation permit revision for a Title V source to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number :

Operation permit to be revised :

[ ] Air operation permit revision or administrative correction for a Title V source to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application.

Operation permit to be revised/corrected :

[ ] Air operation permit revision for a Title V source for reasons other than construction or modification of an emissions unit.

Operation permit to be revised :

Reason for revision :

Category II : All Air Operation Permit Applications Subject to Processing Under Rule 62-210.300(2)(b), F.A.C.

This Application for Air Permit is submitted to obtain :

[ ] Initial air operation permit under Rule 62-210.300(2)(b), F.A.C., for an existing facility seeking classification as a synthetic non-Title V source.

Current operation/construction permit number(s) :

[ ] Renewal air operation permit under Fule 62-210.300(2)(b), F.A.C., for a synthetic non-Title V source.

Operation permit to be renewed :

[ ] Air operation permit revision for a synthetic non-Title V source.

Operation permit to be revised :

Reason for revision :

Category III : All Air Construction Permit Applications for All Facilities and Emissions Units

This Application for Air Permit is submitted to obtain :

[X] Air construction permit to construct or modify one or more emissions units within a facility (including any facility classified as a Title V source).

Current operation permit number(s), if any :
1090013-003-AV

[ ] Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

Current operation permit number(s) :

[ ] Air construction permit for one or more existing, but unpermitted, emissions units.

Application Processing Fee

Check one :

[ ] Attached - Amount : $0.00 [X] Not Applicable.

Construction/Modification Information

1. Description of Proposed Project or Alterations :

   The application is submitted to modify the air construction permits for the facility. The operations in Old Casthouse (Emission Units (EU) #1, #2, #3) are terminated. The original Painting Facility (EU #4), Solv Cleaning Operations (EUs #11, #12, #14, and #15) are combined (EU #4). The two Remelting Furnaces (EUs #8, #9) are modified for fuel use capacities. The Homogenizer (original EU #10) is changed to insignificant source. There is an increase in annual 140-solvent usage of 35 tons from the existing permit due to potential production increase. There is no actual construction activities connected with this application.

2. Projected or Actual Date of Commencement of Construction :

3. Projected Date of Completion of Construction :

Professional Engineer Certification

1. Professional Engineer Name : Guy D. Van Doren
   Registration Number : 40454

2. Professional Engineer Mailing Address :

   Organization/Firm : LAN Associates, Inc.
   Street Address : 66 Cuna Street
   City : St. Augustine State : FL Zip Code : 32084

3. Professional Engineer Telephone Numbers :
   Telephone : (904)824-6999 Fax : (904)824-0726

4. Professional Engineer Statement :

I, the undersigned, hereby certify, except as particularly noted herein, that :*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollutant control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain a Title V source air operation permit (check here [ ] if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [ ] if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ] if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature

Date 4/2/01

(seal)

* Attach any exception to certification statement.

Application Contact

1. Name and Title of Application Contact : Name : Handi Wang, Ph.D. Title : Senior Scientist
2. Application Contact Mailing Address : Organization/Firm : LAN Associates, Inc. Street Address : 66 Cuna Street City : St. Augustine State : FL Zip Code : 32084
3. Application Contact Telephone Numbers : Telephone : (904)824-6999 Fax : (904)824-0726

Application Comment

The Construction Permit Application is submitted as required in Mr. Kirts' letter dated October 19, 2000 (Attachment 1).

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility, Location, and Type

1. Facility UTM Coordinates : Zone : 17 East (km) : 469.87 North (km) : 3294.30			
2. Facility Latitude/Longitude : Latitude (DD/MM/SS) : 29 46 50 Longitude (DD/MM/SS) : 81 18 42			
3. Governmental Facility Code : 0	4. Facility Status Code : A	5. Facility Major Group SIC Code : 33	6. Facility SIC(s) : 3354 3365
7. Facility Comment :			

Facility Contact

1. Name and Title of Facility Contact : Wayne LaPierre Safety & Environmental Manager
2. Facility Contact Mailing Address : Organization/Firm : VAW of America, Inc. Street Address : 200 Riviera Blvd City : St. Augustine State : FL Zip Code : 32086
3. Facility Contact Telephone Numbers :. Telephone : (904)794-1500 Fax : (904)794-1508

Facility Regulatory Classifications

1. Small Business Stationary Source?	N
2. Title V Source?	Y
3. Synthetic Non-Title V Source?	N
4. Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?	Y
5. Synthetic Minor Source of Pollutants Other than HAPs?	N
6. Major Source of Hazardous Air Pollutants (HAPs)?	N
7. Synthetic Minor Source of HAPs?	Y
8. One or More Emissions Units Subject to NSPS?	N
9. One or More Emission Units Subject to NESHAP?	N
10. Title V Source by EPA Designation?	Y
11. Facility Regulatory Classifications Comment :	

B. FACILITY REGULATIONS

Rule Applicability Analysis

NA

B. FACILITY REGULATIONS

List of Applicable Regulations

62-210 F.A.C.

62-212 F.A.C.

62-213 F.A.C.

62-296 F.A.C.

62-297 F.A.C.

C. FACILITY POLLUTANTS

Facility Pollutant Information

1. Pollutant Emitted	2. Pollutant Classification
H120	SM
H186	SM

D. FACILITY POLLUTANT DETAIL INFORMATION

Facility Pollutant Information Pollutant 1

1. Pollutant Emitted :	H120
2. Requested Emissions Cap :	10.0000 (lbs/hour) 9.7200 (tons/year)
3. Basis for Emissions Cap Code :	ESCTIII
4. Facility Pollutant Comment :	The chemical is present in some paint products as a paint component. It is also used as solvent in painting equipment cleaning.

D. FACILITY POLLUTANT DETAIL INFORMATION

Facility Pollutant Information Pollutant 2

1. Pollutant Emitted :	H186
2. Requested Emissions Cap :	13.7000 (lbs/hour) 7.7000 (tons/year)
3. Basis for Emissions Cap Code :	ESCTIII
4. Facility Pollutant Comment :	Xylene is a component of some liquid paint products. It is also used as paint solvent for equipment cleaning.

D. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements for All Applications

1. Area Map Showing Facility Location :	Attachment 2
2. Facility Plot Plan :	Attachment 3
3. Process Flow Diagram(s) :	Attachment 4
4. Precautions to Prevent Emissions of Unconfined Particulate Matter :	NA
5. Fugitive Emissions Identification :	NA
6. Supplemental Information for Construction Permit Applic	Attachment 5-11

Additional Supplemental Requirements for Category I Applications Only

7. List of Proposed Exempt
8. List of Equipment/Activities Regulated under
9. Alternative Methods of Operation :
10. Alternative Modes of Operation (Emissions
11. Identification of Additional Applicable
12. Compliance Assurance Monitoring
13. Risk Management Plan Verification :
14. Compliance Report and Plan :
15. Compliance Certification (Hard-copy Requir

III. EMISSIONS UNIT INFORMATION

A. TYPE OF EMISSIONS UNIT
(Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 1

Al Tube Cleaning, Heat Treatment, and Painting Operations

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one :

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one :

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

Emissions Unit Information Section 1

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section : Al Tube Cleaning, Heat Treatment, and Painting Operations		
2. Emissions Unit Identification Number : 004 [ ] No Corresponding ID [ ] Unknown		
3. Emissions Unit Status Code : A	4. Acid Rain Unit? [ ] Yes [X] No	5. Emissions Unit Major Group SIC Code : 33
6. Emissions Unit Comment : The Solvent Cleaning operations locates in both the Main Plant and OPC Tube Mill with two dip tanks and three Age Ovens. The Painting facility includes 5 paintbooths (1 primer booth, 2 horizontal booths, 1 touch-up booth, 1 vertical booth), 1 bake oven, and 1 pyrolysis furnace, which are the same equipment as permitted. Modification is requested to increase hourly process rates and daily operation time schedule to allow flexible operation, and to request additional 35 tons/y r 140-solvent usage.		

Emissions Unit Information Section 1

Al Tube Cleaning, Heat Treatment, and Painting Operations

Emissions Unit Control Equipment 1

1. Description : Fabric filters are used to control PM emissions from the five paintbooths; an afterburner has been used to destroy VOC from the pyrolysis furnace.
2. Control Device or Method Code : 21

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 1
Al Tube Cleaning, Heat Treatment, and Painting Operations

Emissions Unit Details

1. Initial Startup Date :		
2. Long-term Reserve Shutdown Date :		
3. Package Unit : Manufacturer :		Model Number :
4. Generator Nameplate Rating :	MW	
5. Incinerator Information : Dwell Temperature : Dwell Time : Incinerator Afterburner Temperature :		Degrees Fahrenheit Seconds Degrees Fahrenheit

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate :	5	mmBtu/hr	
2. Maximum Incinerator Rate :		lb/hr	tons/day
3. Maximum Process or Throughput Rate :	12		tons/hr
4. Maximum Production Rate :			
5. Operating Capacity Comment : Aluminum parts process rate include solvent cleaning & coating. LPG rate for Bake Oven, Pyrolysis and Age Oven are 21.7, 3.8, and 30 gal/hr , respectively (See Table 1, Attach. 6).			

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule :		
	24 hours/day	7 days/week
	52 weeks/year	8,760 hours/year

D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

Emissions Unit Information Section 1
Al Tube Cleaning, Heat Treatment, and Painting Operations

Rule Applicability Analysis

NA

List of Applicable Regulations

62-4.160(2) F.A.C.
62-210.200 (PTE), F.A.C.
62-213.205 F.A.C.

62-213.400 F.A.C.
62-296.320 F.A.C.

E. EMISSION POINT (STACK/VENT) INFORMATION

Emissions Unit Information Section 1

Al Tube Cleaning, Heat Treatment, and Painting Operations

Emission Point Description and Type :

1. Identification of Point on Plot Plan or Flow Diagram :	S3-S5, Attach. 3
2. Emission Point Type Code :	3
3. Descriptions of Emission Points Comprising this Emissions Unit : Each of 5 paintbooths has 1 fabric filter. All ovens have a stack for each.	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common : NA	
5. Discharge Type Code :	W
6. Stack Height :	30 feet
7. Exit Diameter :	2.00 feet
8. Exit Temperature :	80 °F
9. Actual Volumetric Flow Rate :	6,000 acfm
10. Percent Water Vapor :	2.00 %
11. Maximum Dry Standard Flow Rate :	5,749 dscfm
12. Nonstack Emission Point Height :	feet
13. Emission Point UTM Coordinates : Zone : 17 East (km) : 469.870 North (km) : 3,294.300	
14. Emission Point Comment : The emission point information is for the #1 Paintbooth. Stack data for other emision points are given in Attachment 7.	

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 1

Al Tube Cleaning, Heat Treatment, and Painting Operations

Segment Description and Rate : Segment 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Liquid propane is used as heating source for painted aluminum baking, pyrolysis furnace & aluminum heat treatment.	
2. Source Classification Code (SCC) : 10201002	
3. SCC Units : Thousand Gallons Burned (all liquid fuels)	
4. Maximum Hourly Rate : 0.06	5. Maximum Annual Rate : 274.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur :	8. Maximum Percent Ash :
9. Million Btu per SCC Unit : 90	
10. Segment Comment : Propane is used for three heating sources: Bake Oven, Pyrolysis Oven, and Age Oven.	

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 1

Al Tube Cleaning, Heat Treatment, and Painting Operations

Segment Description and Rate : Segment 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Surface coating with liquid paint products	
2. Source Classification Code (SCC) : 40200110	
3. SCC Units : Gallons Used	
4. Maximum Hourly Rate : 6.00	5. Maximum Annual Rate : 8,375.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur :	8. Maximum Percent Ash :
9. Million Btu per SCC Unit :	
10. Segment Comment : The annual liquid paint use rate is the same as the existing permit (#1090013-AV). The hourly rate is increased to allow flexible operation.	

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 1

Al Tube Cleaning, Heat Treatment, and Painting Operations

Segment Description and Rate : Segment 3

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Organic solvents used for aluminum tubes cleaning	
2. Source Classification Code (SCC) : 40100303	
3. SCC Units : Tons Used	
4. Maximum Hourly Rate : 0.05	5. Maximum Annual Rate : 207.12
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur :	8. Maximum Percent Ash :
9. Million Btu per SCC Unit :	
10. Segment Comment : Two different solvents are used: LPA solvent (58.5 tons/yr) is used in OPC Tube Mill; and 148.62 tons/yr 140-solvent is used in the Main Plant. Both are used to clean aluminum tubes.	

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 1

Al Tube Cleaning, Heat Treatment, and Painting Operations

Segment Description and Rate : Segment 4

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Paint equipment cleaning with butyl acetate	
2. Source Classification Code (SCC) : 40200903	
3. SCC Units : Tons Used	
4. Maximum Hourly Rate : 0.01	5. Maximum Annual Rate : 10.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur :	8. Maximum Percent Ash :
9. Million Btu per SCC Unit :	
10. Segment Comment : The solvent is used as substitute for equipment cleaning in Paintline.	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 1
Al Tube Cleaning, Heat Treatment, and Painting Operations

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
1 - VOC			EL
2 - H120			EL
3 - H186			EL
4 - PM			WP
5 - PM10			WP
6 - NOX			WP
7 - CO			WP

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 1
Al Tube Cleaning, Heat Treatment, and Painting Operations

Pollutant Potential/Estimated Emissions : Pollutant 1

1. Pollutant Emitted : **VOC**
2. Total Percent Efficiency of Control : %
3. Potential Emissions : 137.5000000 lb/hour 238.6000000 tons/year
4. Synthetically Limited? [ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: to tons/year
6. Emissions Factor Units Reference
7. Emissions Method Code :
8. Calculations of Emissions : Combined VOC emission rate = 137.5 lb/hr. Annual VOC emission from paint use = 31.43 ton/yr (same as existing permit). VOC emission from propane combustion & pyrolysis= 0.135 ton/yr. VOC emission = 58.5 ton/yr for OPC Tube Mill (Same as existing Permit). VOC emission = 148.62 tons/yr for 140 solvent (Main Plant). Total VOC emission capacity = 238.6 tons/yr. See Attachment 5 and 6 for detail calculation.
9. Pollutant Potential/Estimated Emissions Comment : The only increase in potential VOC emissions is 140 solvent in the Main Plant, where there is an increase solvent use capacity of 35 tons per year.

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 1
Al Tube Cleaning, Heat Treatment, and Painting Operations

Pollutant Potential/Estimated Emissions : Pollutant 2

1. Pollutant Emitted : **H120**
2. Total Percent Efficiency of Control : %
3. Potential Emissions : 10.0000000 lb/hour 9.7200000 tons/year
4. Synthetically Limited? [X] Yes [ ] No
5. Range of Estimated Fugitive/Other Emissions: to tons/year
6. Emissions Factor Units Reference
7. Emissions Method Code :
8. Calculations of Emissions : Maximum MEK use rate = 10 lbs/hr (for operation flexibility). MEK emission rate = MEK use rate = 10 lbs/hr. Annual MEK use capacity = 9.72 tons/yr (same as the existing permit). Annual MEK emission capcity = 9.72 tons/yr (same as use capacity).
9. Pollutant Potential/Estimated Emissions Comment :

Emissions Unit Information Section 1
Al Tube Cleaning, Heat Treatment, and Painting Operations

Pollutant Information Section 2

Allowable Emissions 1

1. Basis for Allowable Emissions Code :	OTHER			
2. Future Effective Date of Allowable Emissions :				
3. Requested Allowable Emissions and Units :	10.00	lbs/hr		
4. Equivalent Allowable Emissions :	10.00	lb/hour	9.72	tons/year
5. Method of Compliance : Record keeping				
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) : Hourly emission rate of MEK is maximized to allow operational flexibility. The annual MEK emission capacity is the same as the existing permit.				

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 1
Al Tube Cleaning, Heat Treatment, and Painting Operations

Pollutant Potential/Estimated Emissions : Pollutant 3

1. Pollutant Emitted : **H186**
2. Total Percent Efficiency of Control : %
3. Potential Emissions : 13.7000000 lb/hour 7.7000000 tons/year
4. Synthetically Limited? [X] Yes [ ] No
5. Range of Estimated Fugitive/Other Emissions: to tons/year
6. Emissions Factor Units Reference
7. Emissions Method Code : 2
8. Calculations of Emissions : Xylene use rate = emission rate = 13.7 lbs/hr (for operation flexibility) Xylene annual emission capacity = 7.7 tons/yr (same as the existing permit).
9. Pollutant Potential/Estimated Emissions Comment :

Emissions Unit Information Section 1
Al Tube Cleaning, Heat Treatment, and Painting Operations

Pollutant Information Section 3

Allowable Emissions 1

1. Basis for Allowable Emissions Code :		ESCTIII		
2. Future Effective Date of Allowable Emissions :				
3. Requested Allowable Emissions and Units :		13.70	lbs/hr	
4. Equivalent Allowable Emissions :				
	13.70	lb/hour	7.70	tons/year
5. Method of Compliance :				
Record keeping of solvent use and disposal.				
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :				
Hourly emission rate of xylene is maximized to allow operational flexibility. Annual emission capacity of xylene is the same as the existing permit.				

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 1
Al Tube Cleaning, Heat Treatment, and Painting Operations

Pollutant Potential/Estimated Emissions : Pollutant 4

1. Pollutant Emitted : **PM**
2. Total Percent Efficiency of Control : %
3. Potential Emissions : 0.1000000 lb/hour 0.1000000 tons/year
4. Synthetically Limited? [ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: to tons/year
6. Emissions Factor 1 Units lb/1000 gal Reference FIRE 6.22
7. Emissions Method Code : 3
8. Calculations of Emissions : PM emission rate = 0.6 lb/1000 gal x 55.5 gal/hr = 0.033 lb/hr. Annual PM emission = 0.033 lb/hr x 8760 hrs/yr/2000 lb/ton = 0.015 ton/yr. PM emission from Pyrolysis furnace = 0.1 lb/hr and 0.07 ton/yr. Total annual emission = 0.1 ton/yr.
9. Pollutant Potential/Estimated Emissions Comment :

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 1
Al Tube Cleaning, Heat Treatment, and Painting Operations

Pollutant Potential/Estimated Emissions : Pollutant 5

1. Pollutant Emitted : **PM10**
2. Total Percent Efficiency of Control : %
3. Potential Emissions : 0.1000000 lb/hour 0.1000000 tons/year
4. Synthetically Limited? [ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: to tons/year
6. Emissions Factor Units Reference
7. Emissions Method Code :
8. Calculations of Emissions : Same as PM
9. Pollutant Potential/Estimated Emissions Comment :

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 1
Al Tube Cleaning, Heat Treatment, and Painting Operations

Pollutant Potential/Estimated Emissions : Pollutant 6

1. Pollutant Emitted : **NOX**
2. Total Percent Efficiency of Control : %
3. Potential Emissions : 1.0550000 lb/hour 2.6000000 tons/year
4. Synthetically Limited? [ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: to tons/year
6. Emissions Factor 19 Units lb/1000 gal Reference FIRE 6.22
7. Emissions Method Code : 3
8. Calculations of Emissions : NOx emisison rate = 19 lb/1000 gal x 55.5 ga/hr = 1.055 lb/hr. Annual NOx emission capacity for bake oven = 2.12 tons/yr and Annual NOx emission capacity for heat treat oven =0.475 ton/yr (see Attach. 5 and 6 for calculation). Annual NOx emissions = 2.6 tons/yr.
9. Pollutant Potential/Estimated Emissions Comment :

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 1
Al Tube Cleaning, Heat Treatment, and Painting Operations

Pollutant Potential/Estimated Emissions : Pollutant 7

1. Pollutant Emitted : **CO**
2. Total Percent Efficiency of Control : %
3. Potential Emissions : 0.1780000 lb/hour 0.4400000 tons/year
4. Synthetically Limited? [ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: to tons/year
6. Emissions Factor 3 Units lb/1000 gal Reference FIRE 6.22
7. Emissions Method Code : 3
8. Calculations of Emissions : CO emission rate = 3.2 lb/1000 gal x 55.5 gal/hr = 0.178 llb/hr. Annual CO emisison capacity =0.36 ton/yr for Bake Oven & Pyrolysis. Annual CO emission capacity = 0.08 ton/yr for heat treatment. Total CO emissions = 0.44 ton/yr (see Attach. 5 and 6 for calculation).
9. Pollutant Potential/Estimated Emissions Comment :

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 1
Al Tube Cleaning, Heat Treatment, and Painting Operations

Visible Emissions Limitation : Visible Emissions Limitation 1

1. Visible Emissions Subtype :
2. Basis for Allowable Opacity :
3. Requested Allowable Opacity : Normal Conditions : % Exceptional Conditions : % Maximum Period of Excess Opacity Allowed : min/hour
4. Method of Compliance :
5. Visible Emissions Comment : NA

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 1
Al Tube Cleaning, Heat Treatment, and Painting Operations

Continuous Monitoring System Continuous Monitor 1

1. Parameter Code :	2. Pollutant(s):
3. CMS Requirement	
4. Monitor Information Manufacturer : Model Number : Serial Number :	
5. Installation Date :	
6. Performance Specification Test Date :	
7. Continuous Monitor Comment : NA	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION

Emissions Unit Information Section 1

Al Tube Cleaning, Heat Treatment, and Painting Operations

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

[ ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

[X] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[X] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code :		
PM : U	SO2 : U	NO2 : U
4. Baseline Emissions :		
PM :	lb/hour	tons/year
SO2 :	lb/hour	tons/year
NO2 :		tons/year
5. PSD Comment :		

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Emissions Unit Information Section 1

Al Tube Cleaning, Heat Treatment, and Painting Operations

Supplemental Requirements for All Applications

1. Process Flow Diagram :	Attachment 4A-C
2. Fuel Analysis or Specification :	NA
3. Detailed Description of Control Equipment :	NA
4. Description of Stack Sampling Facilities :	NA
5. Compliance Test Report :	NA
6. Procedures for Startup and Shutdown :	NA
7. Operation and Maintenance Plan :	NA
8. Supplemental Information for Construction Permit Application :	NA
9. Other Information Required by Rule or Statue :	NA

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operations :	NA
11. Alterntive Modes of Operation (Emissions Trading) :	NA

12. Identification of Additional Applicable Requirements :	NA
13. Compliance Assurance Monitoring Plan :	NA

14. Acid Rain Application (Hard-copy Required) :

NA	Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
NA	Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
NA	New Unit Exemption (Form No. 62-210.900(1)(a)2.)
NA	Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)

III. EMISSIONS UNIT INFORMATION

A. TYPE OF EMISSIONS UNIT
(Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 2

Powder Paintbooth

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one :

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one :

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

Emissions Unit Information Section 2

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section : Powder Paintbooth		
2. Emissions Unit Identification Number : 005 [ ] No Corresponding ID [ ] Unknown		
3. Emissions Unit Status Code : A	4. Acid Rain Unit? [ ] Yes [X] No	5. Emissions Unit Major Group SIC Code : 33
6. Emissions Unit Comment : Aluminum parts are coated with powder paint products. Air emissions associated with the operation are PM and PM10 only. There is no change in operation except to change daily operation hours for operation flexibility purpose.		

Emissions Unit Information Section 2

Powder Paintbooth

Emissions Unit Control Equipment 1

1. Description : Cyclone is used to control PM and PM10 potentially generated from the powder spray booth.
2. Control Device or Method Code : 8

Emissions Unit Information Section 2

Powder Paintbooth

Emissions Unit Control Equipment 2

1. Description : Air passes through the cyclone and is ducted into the Baghouse for further PM control
2. Control Device or Method Code : 18

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 2
Powder Paintbooth

Emissions Unit Details

1. Initial Startup Date :	
2. Long-term Reserve Shutdown Date :	
3. Package Unit : Manufacturer :	Model Number :
4. Generator Nameplate Rating : MW	
5. Incinerator Information : Dwell Temperature : Dwell Time : Incinerator Afterburner Temperature :	 Degrees Fahrenheit Seconds Degrees Fahrenheit

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate :	mmBtu/hr	
2. Maximum Incinerator Rate :	lb/hr	tons/day
3. Maximum Process or Throughput Rate :	1500	lb Al/hr
4. Maximum Production Rate :		
5. Operating Capacity Comment : The aluminum parts are coated with powder paint.		

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule :	
24 hours/day	7 days/week
52 weeks/year	8,760 hours/year

D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

Emissions Unit Information Section 2
Powder Paintbooth

Rule Applicability Analysis

NA

List of Applicable Regulations

62-4.160(2) F.A.C.
62-210.200 F.A.C.
62-296.320 F.A.C.
62-297.310 F.A.C.
62-297.620 F.A.C.

E. EMISSION POINT (STACK/VENT) INFORMATION

Emissions Unit Information Section 2

Powder Paintbooth

Emission Point Description and Type :

1. Identification of Point on Plot Plan or Flow Diagram :	#4-S3, Attach. 3	
2. Emission Point Type Code :	1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking : (limit to 100 characters per point)		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common : Air is discharged from the baghouse outside the building.		
5. Discharge Type Code :	F	
6. Stack Height :	0	feet
7. Exit Diameter :	0.0	feet
8. Exit Temperature :	80	°F
9. Actual Volumetric Flow Rate :	7400	acfm
10. Percent Water Vapor :	2.00	%
11. Maximum Dry Standard Flow Rate :	7091	dscfm
12. Nonstack Emission Point Height :	2	feet
13. Emission Point UTM Coordinates : Zone : 17 East (km) : 469.870 North (km) : 3294.300		
14. Emission Point Comment : Air is discharged into the atmosphere outside the building after PM control using a cyclone and a baghouse.		

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 2

Powder Paintbooth

Segment Description and Rate : Segment 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Powder paint is used for aluminum parts coating.	
2. Source Classification Code (SCC) : 39999994	
3. SCC Units : Tons Used	
4. Maximum Hourly Rate : 0.02	5. Maximum Annual Rate : 96.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur :	8. Maximum Percent Ash :
9. Million Btu per SCC Unit :	
10. Segment Comment :	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 2
Powder Paintbooth

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
1 - PM	008	018	WP
2 - PM10	008	018	WP

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 2
Powder Paintbooth

Pollutant Potential/Estimated Emissions : Pollutant 1

1. Pollutant Emitted : **PM**
2. Total Percent Efficiency of Control : 95.00 %
3. Potential Emissions : 0.2500000 lb/hour 1.1000000 tons/year
4. Synthetically Limited? [ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: to tons/year
6. Emissions Factor Units Reference NA
7. Emissions Method Code : 0
8. Calculations of Emissions : Paint use rate = 40 lbs/hr. Over spray paint = 25% with 50% airborne. Emission rate = 40 lbs/hr x 25% x 50% x 5% = 0.25 lb/hr Operation schedule: 24 hours/day, 7 days/week, and 52 weeks/yr. Annual emissions = 0.25 lbs/hr x 8760 hours/yr/2000 lbs/ton = 1.1 tons/yr.
9. Pollutant Potential/Estimated Emissions Comment : Emission factor is based on best engineering estimate.

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 2
Powder Paintbooth

Pollutant Potential/Estimated Emissions : Pollutant 2

1. Pollutant Emitted : **PM10**
2. Total Percent Efficiency of Control : 95.00 %
3. Potential Emissions : 0.1250000 lb/hour 0.5500000 tons/year
4. Synthetically Limited? [ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: to tons/year
6. Emissions Factor Units Reference
7. Emissions Method Code :
8. Calculations of Emissions : We assumed that PM-10 emission rate is 50% of PM emission.
9. Pollutant Potential/Estimated Emissions Comment : Emission factor is based on best engineering estimate.

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 2
Powder Paintbooth

Visible Emissions Limitation : Visible Emissions Limitation 1

1. Visible Emissions Subtype :	VE		
2. Basis for Allowable Opacity :	RULE		
3. Requested Allowable Opacity :			
Normal Conditions :	5	%	
Exceptional Conditions :	20	%	
Maximum Period of Excess Opacity Allowed :	3	min/hour	
4. Method of Compliance : PM control with cyclone			
5. Visible Emissions Comment :			

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 2
Powder Paintbooth

Continuous Monitoring System Continuous Monitor 1

1. Parameter Code :	2. Pollutant(s):
3. CMS Requirement	
4. Monitor Information Manufacturer : Model Number : Serial Number :	
5. Installation Date :	
6. Performance Specification Test Date :	
7. Continuous Monitor Comment : NA	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION

Emissions Unit Information Section 2

Powder Paintbooth

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

[ ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

[X] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[X] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code :		
PM : U	SO2 : U	NO2 : U
4. Baseline Emissions :		
PM :	lb/hour	tons/year
SO2 :	lb/hour	tons/year
NO2 :		tons/year
5. PSD Comment :		

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Emissions Unit Information Section 2

Powder Paintbooth

Supplemental Requirements for All Applications

1. Process Flow Diagram :	Attachment 4D
2. Fuel Analysis or Specification :	NA
3. Detailed Description of Control Equipment :	NA
4. Description of Stack Sampling Facilities :	NA
5. Compliance Test Report :	NA
6. Procedures for Startup and Shutdown :	NA
7. Operation and Maintenance Plan :	NA
8. Supplemental Information for Construction Permit Application :	NA
9. Other Information Required by Rule or Statue :	NA

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operations :	NA
11. Alterntive Modes of Operation (Emissions Trading) :	NA

12. Identification of Additional Applicable Requirements :	NA
13. Compliance Assurance Monitoring Plan :	NA

14. Acid Rain Application (Hard-copy Required) :

NA	Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
NA	Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
NA	New Unit Exemption (Form No. 62-210.900(1)(a)2.)
NA	Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)

III. EMISSIONS UNIT INFORMATION

A. TYPE OF EMISSIONS UNIT
(Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 3

Incinerator

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one :

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one :

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

Emissions Unit Information Section 3

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section : Incinerator		
2. Emissions Unit Identification Number : 006 [ ] No Corresponding ID [ ] Unknown		
3. Emissions Unit Status Code : A	4. Acid Rain Unit? [ ] Yes [X] No	5. Emissions Unit Major Group SIC Code : 33
6. Emissions Unit Comment : The incinerator has been designed to destroy Type I waste: such as wood, paper, cardboard, cafeteria waste, and miscellaneous debris. There are no changes in manner of operation or process rate except to increase daily operation time to 10 hrs/day and 6 days/week.		

Emissions Unit Information Section 3

Incinerator

Emissions Unit Control Equipment 1

1. Description : Use two combustion chambers, the lower chamber and upper chamber. Waste is combusted in the lower chamber. The combustion gases then pass into the upper chamber to be fully combusted.
2. Control Device or Method Code : 25

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 3
Incinerator

Emissions Unit Details

1. Initial Startup Date :			
2. Long-term Reserve Shutdown Date :			
3. Package Unit : Manufacturer : Consumat Systems, Inc.			Model Number : C-120
4. Generator Nameplate Rating :	MW		
5. Incinerator Information : Dwell Temperature : Dwell Time : Incinerator Afterburner Temperature :	2,500 1.00		Degrees Fahrenheit Seconds Degrees Fahrenheit

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate :	1	mmBtu/hr		
2. Maximum Incinerator Rate :	400.00	lb/hr	2.00	tons/day
3. Maximum Process or Throughput Rate :				
4. Maximum Production Rate :				
5. Operating Capacity Comment : The design capacity for the incinerator is 560 lbs/hr.				

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule :	
10 hours/day	6 days/week
52 weeks/year	3,120 hours/year

D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

Emissions Unit Information Section 3
Incinerator

Rule Applicability Analysis

NA

List of Applicable Regulations

62-4.160 (2) F.A.C.
62-210.200(PTE) F.A.C.
62-296.401 F.A.C.

E. EMISSION POINT (STACK/VENT) INFORMATION

Emissions Unit Information Section 3

Incinerator

Emission Point Description and Type :

1. Identification of Point on Plot Plan or Flow Diagram :	S9, Attach. 3	
2. Emission Point Type Code :	1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking : (limit to 100 characters per point)		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common : Single emission point serves serve single emission unit.		
5. Discharge Type Code :	W	
6. Stack Height :	34	feet
7. Exit Diameter :	2.4	feet
8. Exit Temperature :	900	°F
9. Actual Volumetric Flow Rate :	6000	acfm
10. Percent Water Vapor :	5.00	%
11. Maximum Dry Standard Flow Rate :	2450	dscfm
12. Nonstack Emission Point Height :	0	feet
13. Emission Point UTM Coordinates : Zone : 17 East (km) : 469.870 North (km) : 3294.302		
14. Emission Point Comment :		

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 3

Incinerator

Segment Description and Rate : Segment 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Type I waste incineration	
2. Source Classification Code (SCC) : 50300101	
3. SCC Units : Tons Burned (all solid fuels)	
4. Maximum Hourly Rate : 0.20	5. Maximum Annual Rate : 624.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur : 0.00	8. Maximum Percent Ash : 10.00
9. Million Btu per SCC Unit :	
10. Segment Comment :	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 3
Incinerator

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
1 - PM			WP
2 - PM10			WP
3 - NOX			WP
4 - VOC			WP
5 - CO			WP
6 - SO2			WP

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 3
Incinerator

Pollutant Potential/Estimated Emissions : Pollutant 1

1. Pollutant Emitted : **PM**
2. Total Percent Efficiency of Control : %
3. Potential Emissions : 1.4000000 lb/hour 2.1800000 tons/year
4. Synthetically Limited? [ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: to tons/year
6. Emissions Factor 7 Units lb/ton Reference FIRE-6.22
7. Emissions Method Code : 3
8. Calculations of Emissions : PM emission rate = 7 lb/ton x 0.2 ton/hr = 1.4 lb/hr. Annual PM emission = 1.4 lb/hr x 3120 hrs/yr = 4368 lbs/yr/2000 lb/ton = 2.18 tons/yr.
9. Pollutant Potential/Estimated Emissions Comment :

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 3
Incinerator

Pollutant Potential/Estimated Emissions : Pollutant 2

1. Pollutant Emitted : **PM10**
2. Total Percent Efficiency of Control : %
3. Potential Emissions : 0.9400000 lb/hour 1.4700000 tons/year
4. Synthetically Limited? [ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: to tons/year
6. Emissions Factor Units Reference FIRE-6.22
7. Emissions Method Code : 3
8. Calculations of Emissions : PM10 emission factor = 4.7 lb/ton. PM10 emission rate = 4.7 lb/ton x 0.2 ton/hr = 0.94 lb/hr. PM10 annual emission = 0.94 lb/hr x 3120 hrs/yr = 2933 lbs/yr/2000lbs/ton = 1.47 tons/yr.
9. Pollutant Potential/Estimated Emissions Comment :

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 3
Incinerator

Pollutant Potential/Estimated Emissions : Pollutant 3

1. Pollutant Emitted : **NOX**
2. Total Percent Efficiency of Control : %
3. Potential Emissions : 0.6000000 lb/hour 0.9400000 tons/year
4. Synthetically Limited? [ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: to tons/year
6. Emissions Factor 3 Units lb/ton Reference FIRE-6.22
7. Emissions Method Code : 3
8. Calculations of Emissions : NOx emission rate = 3 lb/ton x 0.2 ton/hr = 0.6 lb/hr. Annual NOx emission capacity = 0.6 lb/hr x 3120 hrs/yr/2000 lb/ton = 0.94 ton/yr.
9. Pollutant Potential/Estimated Emissions Comment :

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 3
Incinerator

Pollutant Potential/Estimated Emissions : Pollutant 4

1. Pollutant Emitted : **VOC**
2. Total Percent Efficiency of Control : %
3. Potential Emissions : 0.6000000 lb/hour 0.9400000 tons/year
4. Synthetically Limited? [ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: to tons/year
6. Emissions Factor 3 Units lb/ton Reference FIRE-6.22
7. Emissions Method Code : 3
8. Calculations of Emissions : VOC emission rate = 3 lb/ton x 0.2 ton/hr = 0.6 lb/hr. VOC annual emission capacity = 0.6 lb/hr x 3120 hrs/yr/2000 lb/ton = 0.94 ton/yr.
9. Pollutant Potential/Estimated Emissions Comment :

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 3
Incinerator

Pollutant Potential/Estimated Emissions : Pollutant 5

1. Pollutant Emitted : ***CO***
2. Total Percent Efficiency of Control : %
3. Potential Emissions : 2.0000000 lb/hour 3.1200000 tons/year
4. Synthetically Limited? [ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: to tons/year
6. Emissions Factor 10 Units lb/ton Reference FIRE-6.22
7. Emissions Method Code : 3
8. Calculations of Emissions : CO emission rate = 10 lbs/ton x 0.2 ton/hr = 2 lb/hr. CO annual emission capacity = 2 lbs/hr x 3120 hrs/yr/2000 lb/ton = 3.12 ton/yr.
9. Pollutant Potential/Estimated Emissions Comment :

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 3
Incinerator

Pollutant Potential/Estimated Emissions : Pollutant 6

1. Pollutant Emitted : **SO2**
2. Total Percent Efficiency of Control : %
3. Potential Emissions : 0.5000000 lb/hour 0.7800000 tons/year
4. Synthetically Limited? [ ] Yes [ ] No
5. Range of Estimated Fugitive/Other Emissions: to tons/year
6. Emissions Factor Units Reference FIRE 6.22
7. Emissions Method Code : 3
8. Calculations of Emissions : SO2 emission rate = 2.5 lbs/ton x 0.2 tons/hr = 0.5 lb/hr. Annual SO2 emission = 0.5 lb/hr x 3120 hrs/yr/2000 lbs/ton = 0.78 ton/yr.
9. Pollutant Potential/Estimated Emissions Comment :

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 3
Incinerator

Visible Emissions Limitation : Visible Emissions Limitation 1

1. Visible Emissions Subtype :	VE	
2. Basis for Allowable Opacity :	RULE	
3. Requested Allowable Opacity :		
Normal Conditions :	5	%
Exceptional Conditions :	20	%
Maximum Period of Excess Opacity Allowed :	3	min/hour
4. Method of Compliance :		
Dust suppression/Record keeping		
5. Visible Emissions Comment :		

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 3
Incinerator

Continuous Monitoring System Continuous Monitor 1

1. Parameter Code :	2. Pollutant(s):
3. CMS Requirement	
4. Monitor Information Manufacturer : Model Number : Serial Number :	
5. Installation Date :	
6. Performance Specification Test Date :	
7. Continuous Monitor Comment : NA	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION

Emissions Unit Information Section 3

Incinerator

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

[ ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

[X] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[X] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code :		
PM : C	SO2 : U	NO2 : C
4. Baseline Emissions :		
PM :	lb/hour	tons/year
SO2 :	lb/hour	tons/year
NO2 :		tons/year
5. PSD Comment :		

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Emissions Unit Information Section 3

Incinerator

Supplemental Requirements for All Applications

1. Process Flow Diagram :	Attachment 4E
2. Fuel Analysis or Specification :	NA
3. Detailed Description of Control Equipment :	NA
4. Description of Stack Sampling Facilities :	NA
5. Compliance Test Report :	NA
6. Procedures for Startup and Shutdown :	NA
7. Operation and Maintenance Plan :	NA
8. Supplemental Information for Construction Permit Application :	NA
9. Other Information Required by Rule or Statue :	NA

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operations :	NA
11. Alterntive Modes of Operation (Emissions Trading) :	NA

12. Identification of Additional Applicable Requirements :	NA
13. Compliance Assurance Monitoring Plan :	NA

14. Acid Rain Application (Hard-copy Required) :

NA	Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
NA	Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
NA	New Unit Exemption (Form No. 62-210.900(1)(a)2.)
NA	Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)

III. EMISSIONS UNIT INFORMATION

A. TYPE OF EMISSIONS UNIT
(Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 4

Remelt Furnace #1

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one :

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one :

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

Emissions Unit Information Section 4

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section : Remelt Furnace #1		
2. Emissions Unit Identification Number : 008 [ ] No Corresponding ID [ ] Unknown		
3. Emissions Unit Status Code : A	4. Acid Rain Unit? [ ] Yes [X] No	5. Emissions Unit Major Group SIC Code : 33
6. Emissions Unit Comment : There is no change for this emission unit from the existing permit conditions except to increase fuel use capacity.		

Emissions Unit Information Section 4

Remelt Furnace #1

Emissions Unit Control Equipment 1

1. Description :
   Exhausted air is ducted to a venturi scrubber during the charging and melting of dealer scrap. PM and VOC will be removed via the scrubber at 90% efficiency. Scrubber data: Pressure drop: 20-30"

2. Control Device or Method Code : 2

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 4
Remelt Furnace #1

Emissions Unit Details

1. Initial Startup Date :	01-Sep-1996
2. Long-term Reserve Shutdown Date :	
3. Package Unit : Manufacturer : Thorpe Technologies, Inc.	Model Number : NA
4. Generator Nameplate Rating :	MW
5. Incinerator Information : Dwell Temperature :	Degrees Fahrenheit
Dwell Time :	Seconds
Incinerator Afterburner Temperature :	Degrees Fahrenheit

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate :	30	mmBtu/hr	
2. Maximum Incinerator Rate :		lb/hr	tons/day
3. Maximum Process or Throughput Rate :			11.4
4. Maximum Production Rate :			
5. Operating Capacity Comment : Aluminum melting rate = 11.4 tons/hr; Aluminum loading rate = 19.2 tons/hr. Furnace loading capacity is 32 tons/load. The entire processing cycle is 10 hr/load.			

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule :	
24 hours/day	7 days/week
52 weeks/year	8,760 hours/year

D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

Emissions Unit Information Section 4
Remelt Furnace #1

Rule Applicability Analysis

NA

List of Applicable Regulations

62-4.160 (2), FA.C.
62-210.200 (PTE), F.A.C.
62-296.310(1)(b)
62-297.310 F.A.C.

E. EMISSION POINT (STACK/VENT) INFORMATION

Emissions Unit Information Section 4

Remelt Furnace #1

Emission Point Description and Type :

1. Identification of Point on Plot Plan or Flow Diagram :	#1,2,6-S8, Attach. 3	
2. Emission Point Type Code :	3	
3. Descriptions of Emission Points Comprising this Emissions Unit : #1: Stack; #2: Venturi Scrubber.		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common : NA		
5. Discharge Type Code :	V	
6. Stack Height :	52	feet
7. Exit Diameter :	5.00	feet
8. Exit Temperature :	300	°F
9. Actual Volumetric Flow Rate :	49,200	acfm
10. Percent Water Vapor :	5.00	%
11. Maximum Dry Standard Flow Rate :	32,500	dscfm
12. Nonstack Emission Point Height :		feet
13. Emission Point UTM Coordinates : Zone : 17 East (km) : 470.978 North (km) : 3,296.852		
14. Emission Point Comment : Information for the Wet Scrubber (used during painted scrap melting): F8: 150; F9:7900 acfm; F10:10%; F11:6000 dscfm; F13: Zone 17, East 470.987 km and North 3296.852 km.		

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 4

Remelt Furnace #1

Segment Description and Rate : Segment 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Liquid propane combustion	
2. Source Classification Code (SCC) : 10201002	
3. SCC Units : Thousand Gallons Burned (all liquid fuels)	
4. Maximum Hourly Rate : 0.33	5. Maximum Annual Rate : 1,433.10
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur :	8. Maximum Percent Ash :
9. Million Btu per SCC Unit : 90	
10. Segment Comment :	

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 4

Remelt Furnace #1

Segment Description and Rate : Segment 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Melting 3000 tons/yr of dealer aluminum scrap and 20040 tons/yr of clean aluminum scrap or T-bar. Dealer scrap will mixed with clean scrap at no more than 50% dealer scrap per load.	
2. Source Classification Code (SCC) : 30400103	
3. SCC Units : Tons Processed	
4. Maximum Hourly Rate : 19.20	5. Maximum Annual Rate : 23,040.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur :	8. Maximum Percent Ash :
9. Million Btu per SCC Unit :	
10. Segment Comment :	

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 4

Remelt Furnace #1

Segment Description and Rate : Segment 3

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Aluminum liquid fluxing	
2. Source Classification Code (SCC) : 30400106	
3. SCC Units : Tons Used	
4. Maximum Hourly Rate : 0.01	5. Maximum Annual Rate : 23.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur :	8. Maximum Percent Ash :
9. Million Btu per SCC Unit :	
10. Segment Comment : See. MSDS in Attach. 12	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 4
Remelt Furnace #1

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
1 - PM	002		EL
2 - PM10	002		EL
3 - NOX			WP
4 - CO			WP
5 - VOC	002		WP

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 4
Remelt Furnace #1

Pollutant Potential/Estimated Emissions : Pollutant 1

1. Pollutant Emitted : **PM**
2. Total Percent Efficiency of Control : 90.00 %
3. Potential Emissions : 4.4500000 lb/hour 9.7500000 tons/year
4. Synthetically Limited? [ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: 1 1.00 to 5.00 tons/year
6. Emissions Factor Units Reference
7. Emissions Method Code : 3
8. Calculations of Emissions : PM emission rate for LPG combustion = 0.6 lb/1000 gal x 333 gal/hr = 0.2 lb/hr. PM emission rate for aluminum melting = 1.75 lb/hr. PM emission rate for fluxing fluxing = 2.5 lb/hr. Combine emission rate = 4.45 lb/hr (Table 3, Attach. 6). Annual PM emission capacity for LPG combustion = 0.43 ton/yr. Annual PM emission for Al melting = 7.67 tons/yr. Annual PM emission for fluxing = 1.64 ton/yr. Sum annual PM emissions = 9.74 tons/yr. See Attachment 5 and 6 for detail emission calculation.
9. Pollutant Potential/Estimated Emissions Comment : Compliance for scrubber: monitor scrubber parameters daily.

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 4
Remelt Furnace #1

Pollutant Potential/Estimated Emissions : Pollutant 2

1. Pollutant Emitted : **PM10**
2. Total Percent Efficiency of Control : 90.00 %
3. Potential Emissions : 2.3300000 lb/hour 5.0900000 tons/year
4. Synthetically Limited? [ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: 1 1.00 to 5.00 tons/year
6. Emissions Factor Units Reference
7. Emissions Method Code :
8. Calculations of Emissions : See Attachment 5 and 6 for detail emissions calculation.
9. Pollutant Potential/Estimated Emissions Comment : We assume that 50% of PM emission for aluminum melting and fluxing is PM10.

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 4
Remelt Furnace #1

Pollutant Potential/Estimated Emissions : Pollutant 3

1. Pollutant Emitted : **NOX**
2. Total Percent Efficiency of Control : %
3. Potential Emissions : 6.3300000 lb/hour 13.6000000 tons/year
4. Synthetically Limited? [ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: to tons/year
6. Emissions Factor 19 Units lb/1000 gal Reference FIRE
7. Emissions Method Code : 3
8. Calculations of Emissions : NOx emisison rate = 333 gal/hr x 19 lb/1000 gal = 6.33 lb/hr. Annual NOx emission = 1433100 gal/yr x 19 lb/1000 gal/2000 lb/ton = 13.6 tons/yr.
9. Pollutant Potential/Estimated Emissions Comment :

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 4
Remelt Furnace #1

Pollutant Potential/Estimated Emissions : Pollutant 4

1. Pollutant Emitted : **CO**
2. Total Percent Efficiency of Control : %
3. Potential Emissions : 18.1700000 lb/hour 6.7900000 tons/year
4. Synthetically Limited? [ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: to tons/year
6. Emissions Factor Units Reference FIRE
7. Emissions Method Code : 3
8. Calculations of Emissions : See Attachment 5 and 6 for detail calculation.
9. Pollutant Potential/Estimated Emissions Comment :

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 4
Remelt Furnace #1

Pollutant Potential/Estimated Emissions : Pollutant 5

1. Pollutant Emitted : **VOC**
2. Total Percent Efficiency of Control : %
3. Potential Emissions : 0.5880000 lb/hour 0.4260000 tons/year
4. Synthetically Limited? [ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: to tons/year
6. Emissions Factor Units Reference
7. Emissions Method Code :
8. Calculations of Emissions : See Attachment 5 and 6 for detail emission calculation.
9. Pollutant Potential/Estimated Emissions Comment :

Emissions Unit Information Section 4
Remelt Furnace #1

Pollutant Information Section 1

Allowable Emissions 1

1. Basis for Allowable Emissions Code :
2. Future Effective Date of Allowable Emissions :
3. Requested Allowable Emissions and Units :
4. Equivalent Allowable Emissions : lb/hour tons/year
5. Method of Compliance :
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) : NA

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 4
Remelt Furnace #1

Visible Emissions Limitation : Visible Emissions Limitation 1

1. Visible Emissions Subtype :	VE
2. Basis for Allowable Opacity :	RULE
3. Requested Allowable Opacity :	
Normal Conditions :	20 %
Exceptional Conditions :	%
Maximum Period of Excess Opacity Allowed :	min/hour
4. Method of Compliance :	
Visible emissions will be tested periodically as required.	
5. Visible Emissions Comment :	

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 4
Remelt Furnace #1

Continuous Monitoring System Continuous Monitor 1

1. Parameter Code :	2. Pollutant(s):
3. CMS Requirement	
4. Monitor Information Manufacturer : Model Number : Serial Number :	
5. Installation Date :	
6. Performance Specification Test Date :	
7. Continuous Monitor Comment : NA	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION

Emissions Unit Information Section 4

Remelt Furnace #1

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

[ ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

[X] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[X] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code :

PM : C	SO2 : C	NO2 : C

4. Baseline Emissions :

PM :	lb/hour	tons/year
SO2 :	lb/hour	tons/year
NO2 :		tons/year

5. PSD Comment :

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Emissions Unit Information Section 4

Remelt Furnace #1

Supplemental Requirements for All Applications

1. Process Flow Diagram :	Attach. 4F
2. Fuel Analysis or Specification :	NA
3. Detailed Description of Control Equipment :	Attach. 9&10
4. Description of Stack Sampling Facilities :	NA
5. Compliance Test Report :	NA
6. Procedures for Startup and Shutdown :	NA
7. Operation and Maintenance Plan :	NA
8. Supplemental Information for Construction Permit Application :	Attach. 11
9. Other Information Required by Rule or Statue :	NA

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operations :
11. Alterntive Modes of Operation (Emissions Trading) :

12. Identification of Additional Applicable Requirements :
13. Compliance Assurance Monitoring Plan :
14. Acid Rain Application (Hard-copy Required) : Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) New Unit Exemption (Form No. 62-210.900(1)(a)2.) Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)

III. EMISSIONS UNIT INFORMATION

A. TYPE OF EMISSIONS UNIT
(Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 5

Remelt Furnace #2

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one :

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one :

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

Emissions Unit Information Section 5

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section : Remelt Furnace #2		
2. Emissions Unit Identification Number : 009 [ ] No Corresponding ID [ ] Unknown		
3. Emissions Unit Status Code : A	4. Acid Rain Unit? [ ] Yes [X] No	5. Emissions Unit Major Group SIC Code : 33
6. Emissions Unit Comment : Only clean aluminum scrap and/or T-bar are processed in this furnace. There is no control equipment.		

Emissions Unit Information Section 5

Remelt Furnace #2

Emissions Unit Control Equipment 1

1. Description : NA
2. Control Device or Method Code :

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 5
Remelt Furnace #2

Emissions Unit Details

1. Initial Startup Date :	01-Sep-1996
2. Long-term Reserve Shutdown Date :	
3. Package Unit : Manufacturer : Thorpe Technologies, Inc.	Model Number :
4. Generator Nameplate Rating :	MW
5. Incinerator Information :	
Dwell Temperature :	Degrees Fahrenheit
Dwell Time :	Seconds
Incinerator Afterburner Temperature :	Degrees Fahrenheit

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate :	30	mmBtu/hr	
2. Maximum Incinerator Rate :		lb/hr	tons/day
3. Maximum Process or Throughput Rate :	12	tons/hr	
4. Maximum Production Rate :			
5. Operating Capacity Comment : Aluminum melting rate is 11.4 ton/hr. Aluminum loading rate for is 19.2 tons/hr, and furnace batch capacity is 30 tons.			

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule :	
24 hours/day	7 days/week
52 weeks/year	8,760 hours/year

D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

Emissions Unit Information Section 5
Remelt Furnace #2

Rule Applicability Analysis

NA

List of Applicable Regulations

62-4.160(2), F.A.C
62-210.200, F.A.C
62-296.310(1)(b)
62-297.310 F.A.C.

E. EMISSION POINT (STACK/VENT) INFORMATION

Emissions Unit Information Section 5

Remelt Furnace #2

Emission Point Description and Type :

1. Identification of Point on Plot Plan or Flow Diagram :	#3&7-S8, Attach. 3	
2. Emission Point Type Code :	1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking : (limit to 100 characters per point)		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common :		
5. Discharge Type Code :	V	
6. Stack Height :	52	feet
7. Exit Diameter :	5.0	feet
8. Exit Temperature :	300	°F
9. Actual Volumetric Flow Rate :	49200	acfm
10. Percent Water Vapor :	5.00	%
11. Maximum Dry Standard Flow Rate :	32500	dscfm
12. Nonstack Emission Point Height :	0	feet
13. Emission Point UTM Coordinates :		
Zone : 17	East (km) : 470.978	North (km) : 3296.820
14. Emission Point Comment :		

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 5

Remelt Furnace #2

Segment Description and Rate : Segment 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Liquid Propane Combustion in Furnace	
2. Source Classification Code (SCC) : 10201002	
3. SCC Units : Thousand Gallons Burned (all liquid fuels)	
4. Maximum Hourly Rate : 0.33	5. Maximum Annual Rate : 1,433.10
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur :	8. Maximum Percent Ash :
9. Million Btu per SCC Unit : 90	
10. Segment Comment :	

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 5

Remelt Furnace #2

Segment Description and Rate : Segment 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Aluminum Melting	
2. Source Classification Code (SCC) : 30400103	
3. SCC Units : Tons Processed	
4. Maximum Hourly Rate : 19.20	5. Maximum Annual Rate : 23,040.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur :	8. Maximum Percent Ash :
9. Million Btu per SCC Unit :	
10. Segment Comment : This furnace only melt clean aluminum.	

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 5

Remelt Furnace #2

Segment Description and Rate : Segment 3

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Aluminum Fluxing Operation	
2. Source Classification Code (SCC) : 30400106	
3. SCC Units : Tons Used	
4. Maximum Hourly Rate : 0.01	5. Maximum Annual Rate : 23.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur :	8. Maximum Percent Ash :
9. Million Btu per SCC Unit :	
10. Segment Comment : See MSDS infomation for flux materials in Attachment 12.	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 5
Remelt Furnace #2

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
1 - PM			EL
2 - NOX			WP
3 - VOC			EL
4 - CO			WP
5 - PM10			EL

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 5
Remelt Furnace #2

Pollutant Potential/Estimated Emissions : Pollutant 1

1. Pollutant Emitted : **PM**
2. Total Percent Efficiency of Control : %
3. Potential Emissions : 4.4500000 lb/hour 9.7400000 tons/year
4. Synthetically Limited? [ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: 1 1.00 to 5.00 tons/year
6. Emissions Factor Units Reference
7. Emissions Method Code : 3
8. Calculations of Emissions : See Attachment 5 and 6 for detail emission calcultion.
9. Pollutant Potential/Estimated Emissions Comment : PM emissions are from both propane combustion, aluminum melting & fluxing operation.

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 5
Remelt Furnace #2

Pollutant Potential/Estimated Emissions : Pollutant 2

1. Pollutant Emitted : **NOX**
2. Total Percent Efficiency of Control : %
3. Potential Emissions : 6.3300000 lb/hour 13.6000000 tons/year
4. Synthetically Limited? [ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: to tons/year
6. Emissions Factor 19 Units lb/1000 gal Reference FIRE
7. Emissions Method Code : 3
8. Calculations of Emissions : NOx emission factor = 19 lb/1000 gal LPG. NOx emission rate = 19 lb/1000 gal x 333 gal/hr = 6.33 lb/hr. Annual NOx emission = 19 lb/1000 gal x 1,433,100 gal/yr/2000 lb/ton = 13.6 tons/yr.
9. Pollutant Potential/Estimated Emissions Comment :

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 5
Remelt Furnace #2

Pollutant Potential/Estimated Emissions : Pollutant 3

1. Pollutant Emitted : **VOC**
2. Total Percent Efficiency of Control : %
3. Potential Emissions : 0.1700000 lb/hour 0.3590000 tons/year
4. Synthetically Limited? [ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: to tons/year
6. Emissions Factor Units Reference
7. Emissions Method Code :
8. Calculations of Emissions : VOC emission factor = 0.5 lb/1000 gal LPG. VOC emission rate = 0.5 lb/1000 gal x 333 gal/hr = 0.17 lb/hr. Annual VOC emission = 0.5 lb/1000 gal x 1,433,100 gal/yr/2000 lb/ton = 0.359 ton/yr.
9. Pollutant Potential/Estimated Emissions Comment :

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 5
Remelt Furnace #2

Pollutant Potential/Estimated Emissions : Pollutant 4

1. Pollutant Emitted : **CO**
2. Total Percent Efficiency of Control : %
3. Potential Emissions : 1.0700000 lb/hour 2.2900000 tons/year
4. Synthetically Limited? [ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: to tons/year
6. Emissions Factor 3 Units lb/1000 gal Reference FIRE
7. Emissions Method Code : 3
8. Calculations of Emissions : Propane use rate = 333 gal/hr. CO emission rate = 333 gal/hr x 3.2 lb/1000 gal = 1.07 lb/hr. Annual propane use = 1433100 gal/yr x 3.2 lb/1000 gal/2000 lb/ton = 2.29 tons/yr.
9. Pollutant Potential/Estimated Emissions Comment :

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 5
Remelt Furnace #2

Pollutant Potential/Estimated Emissions : Pollutant 5

1. Pollutant Emitted : **PM10**
2. Total Percent Efficiency of Control : %
3. Potential Emissions : 2.3300000 lb/hour 5.0900000 tons/year
4. Synthetically Limited? [ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: 1 1.00 to 5.00 tons/year
6. Emissions Factor Units Reference
7. Emissions Method Code :
8. Calculations of Emissions : PM10 emission rate: Propane combustion = 0.2 lb/hr; Aluminum melting = 0.878 lb/hr; Aluminum fluxing = 1.25 lb/hr; Total PM10 emission rate = 2.33 lbs/hr. PM10 annual emission: Propane combustion = 0.43 ton/yr; Aluminum melting = 0.3.84 ton/yr; Aluminum fluxing = 0.82 ton/yr; Total PM10 annual emission = 5.09 tons/yr.
9. Pollutant Potential/Estimated Emissions Comment : See Attachments 5 and 6 for detail emission calculation.

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 5
Remelt Furnace #2

Visible Emissions Limitation : Visible Emissions Limitation 1

1. Visible Emissions Subtype :	VE
2. Basis for Allowable Opacity :	RULE
3. Requested Allowable Opacity :	
Normal Conditions :	20 %
Exceptional Conditions :	%
Maximum Period of Excess Opacity Allowed :	min/hour
4. Method of Compliance :	
Annual VE testing	
5. Visible Emissions Comment :	

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 5
Remelt Furnace #2

Continuous Monitoring System Continuous Monitor 1

1. Parameter Code :	2. Pollutant(s):
3. CMS Requirement	
4. Monitor Information Manufacturer : Model Number : Serial Number :	
5. Installation Date :	
6. Performance Specification Test Date :	
7. Continuous Monitor Comment : NA	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION

Emissions Unit Information Section 5

Remelt Furnace #2

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

[ ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

[X] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[X] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code :		
PM : C	SO2 : C	NO2 : C
4. Baseline Emissions :		
PM :	lb/hour	tons/year
SO2 :	lb/hour	tons/year
NO2 :		tons/year
5. PSD Comment :		

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Emissions Unit Information Section 5

Remelt Furnace #2

Supplemental Requirements for All Applications

1. Process Flow Diagram :	Attach. 4G
2. Fuel Analysis or Specification :	NA
3. Detailed Description of Control Equipment :	NA
4. Description of Stack Sampling Facilities :	NA
5. Compliance Test Report :	NA
6. Procedures for Startup and Shutdown :	NA
7. Operation and Maintenance Plan :	NA
8. Supplemental Information for Construction Permit Application :	Attach. 5,6,11
9. Other Information Required by Rule or Statue :	NA

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operations :
11. Alterntive Modes of Operation (Emissions Trading) :

12. Identification of Additional Applicable Requirements :
13. Compliance Assurance Monitoring Plan :
14. Acid Rain Application (Hard-copy Required) : Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) New Unit Exemption (Form No. 62-210.900(1)(a)2.) Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)

LIST OF ATTACHMENTS

Attachment No.	Title
1	Florida DEP letter of October 19, 2000
2	VAW Location Map
3	Site Plans
	S1) Key Plan
	S2) Treatment Plant
	S3) Paintline Building
	S4) OPC Tube Mill
	S5) Main Plant
	S6) SAW Building
	S7) No. 4 Press Building
	S8) New Casthouse Building
	S9) Trash Incinerator
4	Process Flow Diagrams
	a) Process Flow Diagram for the Paintline Operation
	b) Process Flow Diagram for the OPC Tube Mill Operation
	c) Process Flow Diagram for 140-Solvent Cleaning Operation
	d) Process Flow Diagram for the Powder Paintbooth Operation
	e) Process Flow Diagram for the Incinerator
	f) Process Flow Diagram for the #1 Remelting Furnace Operation
	g) Process Flow Diagram for the #2 Remelting Furnace Operation
5	Emission Calculations

Attachment 1

Florida DEP Letter of October 19, 2000

Department of Environmental Protection

Jeb Bush
Governor

Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7590

David B. Struhs
Secretary

CERTIFIED - RETURN RECEIPT

October 19, 2000

Mr. William L. Russell
Vice President of Operation
VAW of America, Inc.
PO Box 3887
St. Augustine, FL 32086

Dear Mr. Russell:

St. Johns County - AP
VAW o f America, Inc.
Secondary Aluminum Facility
I.D. No. 1090013
Project 004, Air Title V Permit Revision Application
Request for Additional Information (RAI)

On September 26, 2000, the Department received the application for a Title V permit revision for the above facility.

However, in order to continue processing your application, the Department will need the additional information requested below pursuant to Rules 62-213.420(1)(b)4., F.A.C., 62-4.070(1), and 62-4.055(1) F.A.C.

1. A construction permit application is required because the requested revisions will have to be made in a construction permit to modify all of the affected previous construction permits. In addition, due to the T5 procedures, the remainder of EUs (Emissions Units) will need to be included the construction permit application.

2. The construction permit application needs to include EUs as follows:
   1. Combine current EUs 004, Painting Facility; 011, OPC Solvent Tank; 012, OPC Age Oven; 014, Workshop & 015, 140 Solvent Tank as EU 004, Facility-wide VOCs and HAPs emitting activities.
   2. EUs 008, Remelt Furnace #1 & 009, Remelt Furnace #2 – for each, the permitted PM rates need to be reduced based on the tests results and the periodic monitoring issue must be addressed by provide numerical values that can be assigned as surrogate parameters; such as, wet scrubber pressure drop, scrubber water flow, etc. A correlation to the PM and VE emissions must be shown for assuring compliance with the pollutant emission limits. The numerical values must be adequately supported by (historical data, performance tests, etc.).

3. EU 010, Homogenizing Furnaces #1 & #2 – do not include as an EU, but include as an insignificant activity.
4. EU 005, Powder Paint Booth – currently the VE needs to be changed to the Facility-wide VE, the General Visible Emissions Standard, Rule 62-296.320(4)(b), F.A.C. with testing required in accordance with Rule 62-297.310(7)(b), F.A.C.
5. Provide the reasons for requesting a CAP for each - VOC, PM/PM10, NOX, CO, SO2, H120 & H186 and periodic monitoring methods to be used to shown compliance.

3. Provide the status of EUs 001, Remelt Furnace; 002, Holding Furnace & 003, Homogenizer.

4. Please submit a request to withdraw this Air Title V Permit Revision Application (Project 004) with the construction permit application requested above. After receipt of the modification construction permit, submit another application for a Title V permit revision and format/arrange it to be in agreement with the modification construction permit.

Responsible Official (R.O.) Certification Statement:

Rule 62-213.420, F.A.C. requires that all Title V permit applications must be certified by a responsible official. Due to the nature of the information requested above, the responsible official should certify the response. Please complete the Application for Air Permit – Title V Source, DEP Form No. 62-210.900(1), effective February 11, 1999.

Professional Engineer (P.E.) Certification Statement:

Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. As a result, a professional engineer registered in the State of Florida should certify your response. Please complete the Application for Air Permit – Title V Source, DEP Form No. 62-210.900(1), effective February 11, 1999.

The Department must receive a response from you within 90 (ninety) days of receipt of this letter, unless you (the applicant) request additional time under Rule 62-213.420(1)(b)6., F.A.C.

If you should have any questions, please call Johnny Cole at 904-448-4310x236.

Sincerely,

Christopher L. Kirts, P.E.
District Air Program Administrator

CLK:TLC

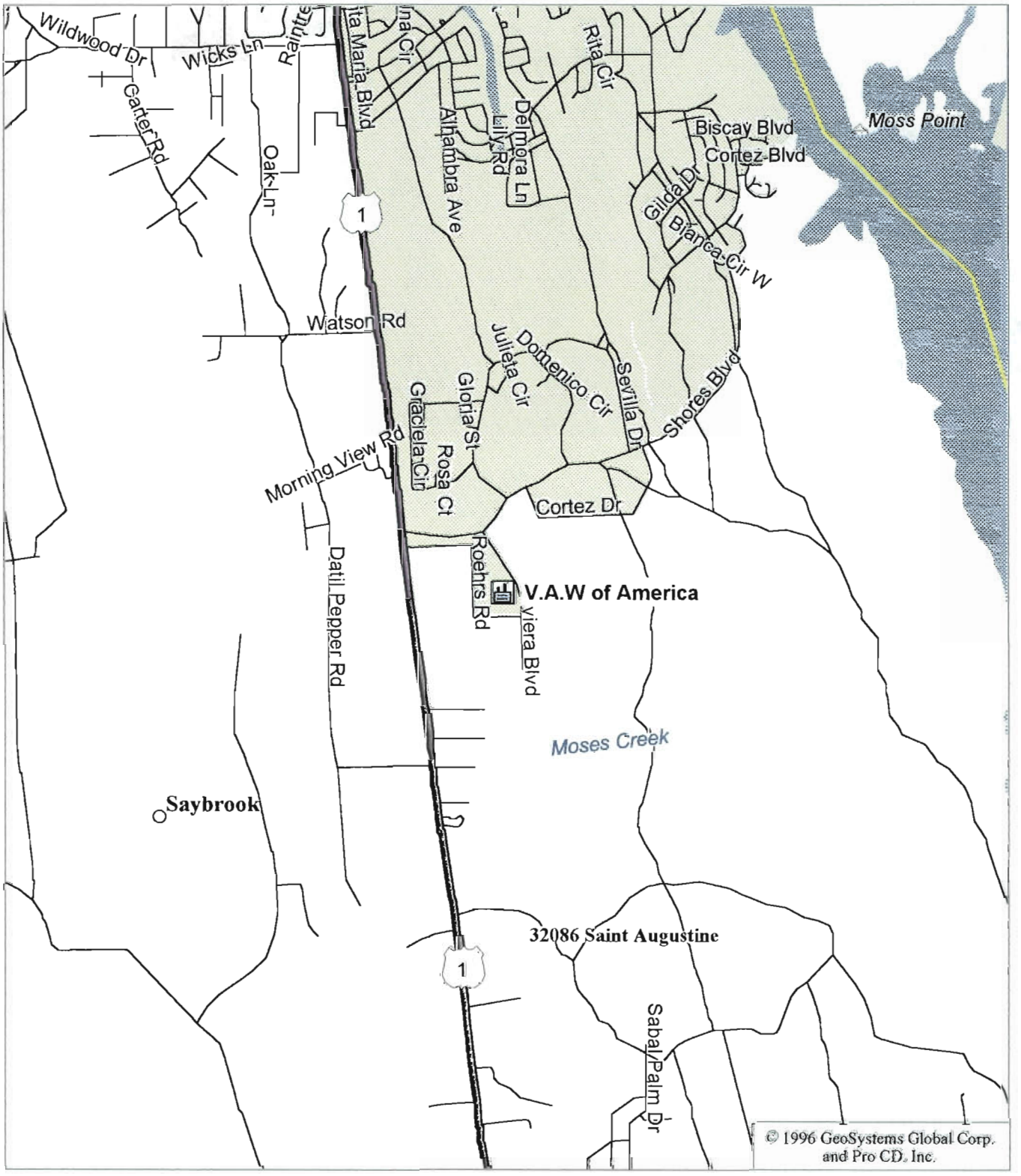
Enclosure: Application for Air Permit - Title V Source

c: Guy D. Van Doren, P.E. - LAN Associates, Inc.

Attachment 2

VAW Location Map

Site Location Map

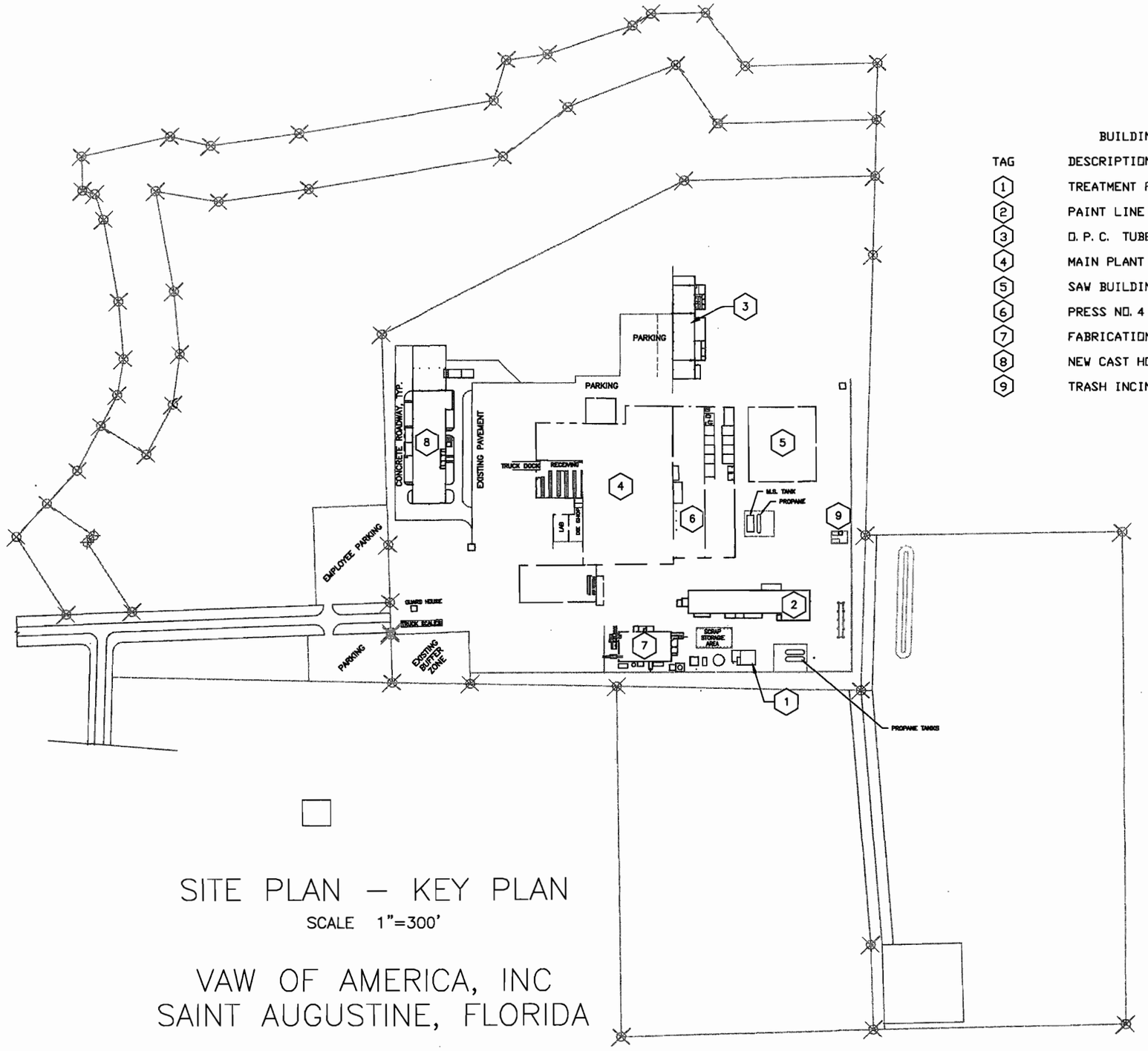


ProCD®

Attachment 3

Site Plans

Site Plan 1
Key Plan



BUILDING SCHEDULE

TAG	DESCRIPTION	FIGURE NOS.
1	TREATMENT PLANT	S2
2	PAINT LINE	S3
3	O. P. C. TUBE MILL	S4
4	MAIN PLANT	S5
5	SAW BUILDING	S6
6	PRESS NO. 4 BUILDING	S7
7	FABRICATION	
8	NEW CAST HOUSE	S8
9	TRASH INCINERATOR	S9

SITE PLAN – KEY PLAN

SCALE 1"=300'

VAW OF AMERICA, INC
SAINT AUGUSTINE, FLORIDA

REVISION :

DATE : 03/01/01

CHECKED : HW

DRAWN : T JONES

SCALE : AS NOTED

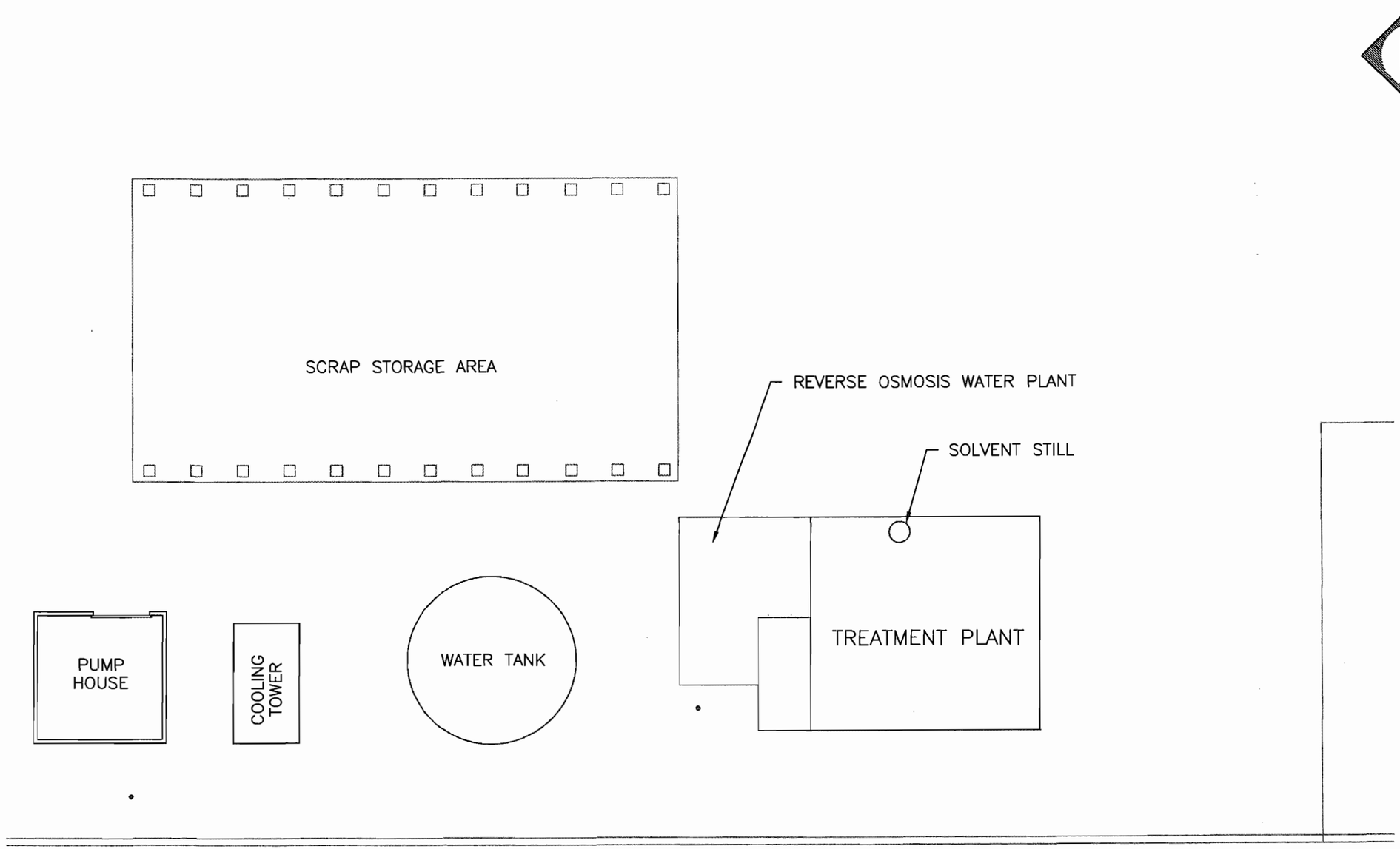
LAN ASSOCIATES INC.
environmental and facilities engineering
66 CUNA STREET, ST. AUGUSTINE, FL 32084-3619 (904)824-6999

JOB NO. 2.392.41

DWG. FILE CODE 39241001

FIGURE NO. S1

Site Plan 2
Treatment Plant



SITE PLAN – TREATMENT PLANT

SCALE 1"=20'

VAW OF AMERICA, INC
SAINT AUGUSTINE, FLORIDA

REVISION :

DATE : 03/01/01

CHECKED : HW

DRAWN : T JONES

SCALE : AS NOTED

LAN ASSOCIATES INC.
environmental and facilities engineering
66 CUNA STREET, ST. AUGUSTINE, FL 32084-3619 (904)824-6999

JOB NO. 2.392.41

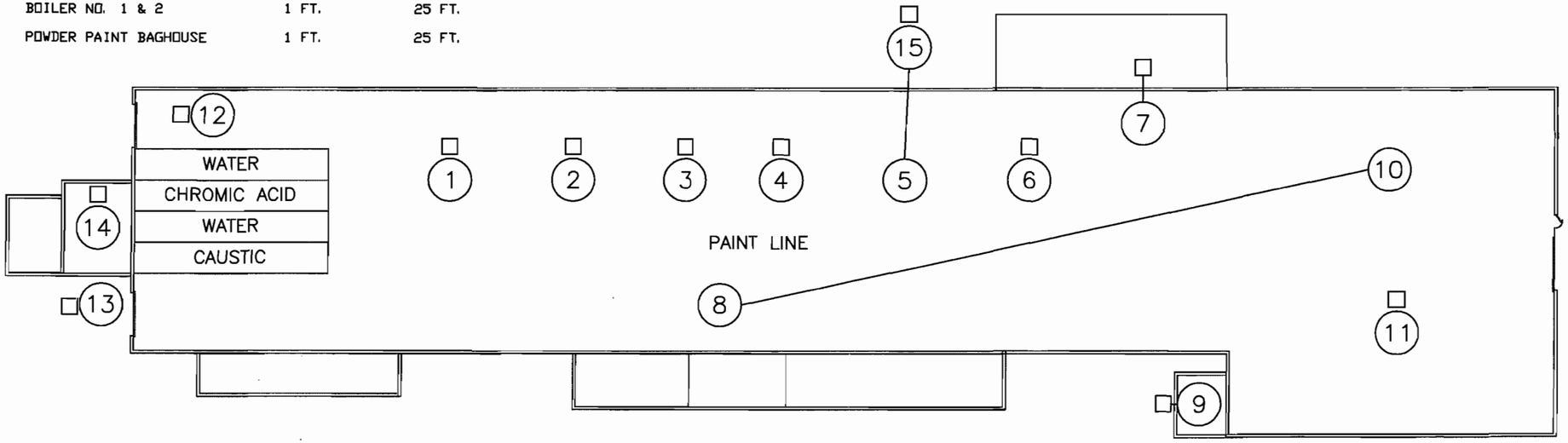
DWG. FILE CODE 39241002

FIGURE NO. S2

Site Plan 3
Paintline Building

STACK/EMISSION POINT SCHEDULE

TAG	DESCRIPTION	STACK DIMENSIONS DIAMETER	HEIGHT
(1)	R & D BOOTH	23' SQ.	30 FT
(2)	PRIME BOOTH	23' SQ.	30 FT.
(3)	HORIZONTAL BOOTH	23 SQ.	30 FT.
(4)	HORIZONTAL BOOTH	23' SQ.	30 FT.
(5)	POWDER BOOTH	N/A	N/A
(6)	TOUCH UP BOOTH	23' SQ.	30 FT.
(7)	VERTICAL BOOTH	23' SQ.	30 FT.
(8)	BAKE OVEN	19' x 14'	30 FT.
(9)	PYROLYSIS FURNACE	1.2 FT.	25 FT.
(10)	VERTICAL PRETREATMENT DRY OFF OVEN	2.75 FT.	30 FT.
(11)	VERTICAL PRETREATMENT STACK		
(12)	HORIZONTAL PRETREATMENT DRY OFF OVEN	10'x10'	30 FT.
(13)	CAUSTIC TANK STACK	30'x30'	30 FT.
(14)	BOILER NO. 1 & 2	1 FT.	25 FT.
(15)	POWDER PAINT BAGHOUSE	1 FT.	25 FT.



SITE PLAN – PAINT LINE BUILDING

SCALE 1"=30'

VAW OF AMERICA, INC
SAINT AUGUSTINE, FLORIDA

REVISION :

DATE : 03/01/01

CHECKED : HW

DRAWN : T JONES

SCALE : AS NOTED

LAN ASSOCIATES INC.
environmental and facilities engineering
66 CUNA STREET, ST. AUGUSTINE, FL 32084-3619 (904)824-6999

JOB NO. 2.392.41

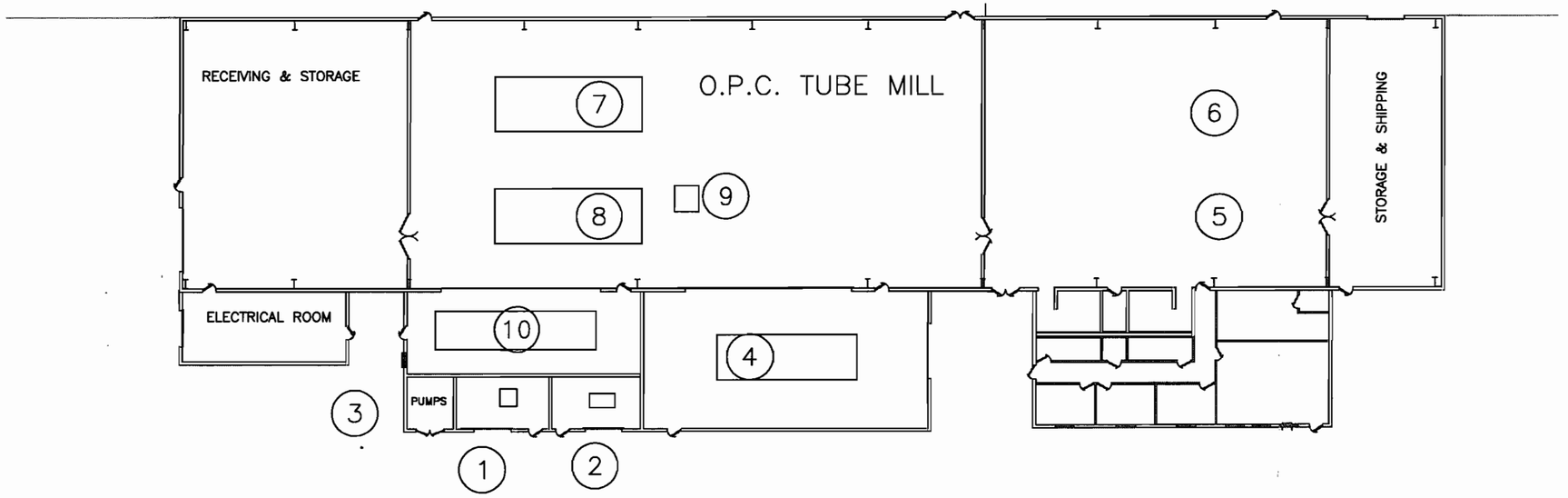
DWG. FILE CODE 39241003

FIGURE NO. S3

Site Plan 4
OPC Tube Mill

STACK/EMISSION POINT SCHEDULE

TAG	DESCRIPTION	CONTROL	STACK DIMENSIONS DIAMETER	HEIGHT
①	VACUUM STILL			
②	BOILER STACK			
③	SOLVENT AREA WALL FAN			
④	AGE OVEN STACK			
⑤	OLIVER CUTTER	CYCLONE & BAGS		
⑥	METLSAW	CYCLONE & BAGS		
⑦	DRAWBENCH			
⑧	DRAWBENCH			
⑨	STRAIGHTNER			
⑨	SOLVENT TANK			



SITE PLAN – O.P.C. TUBE MILL

SCALE 1"=40'

VAW OF AMERICA, INC
SAINT AUGUSTINE, FLORIDA

REVISION :

DATE : 03/01/01

CHECKED : HW

DRAWN : T JONES

SCALE : AS NOTED

LAN ASSOCIATES, INC.
environmental and facilities engineering
66 CUNA STREET, ST. AUGUSTINE, FL 32084-3619 (904)824-6999

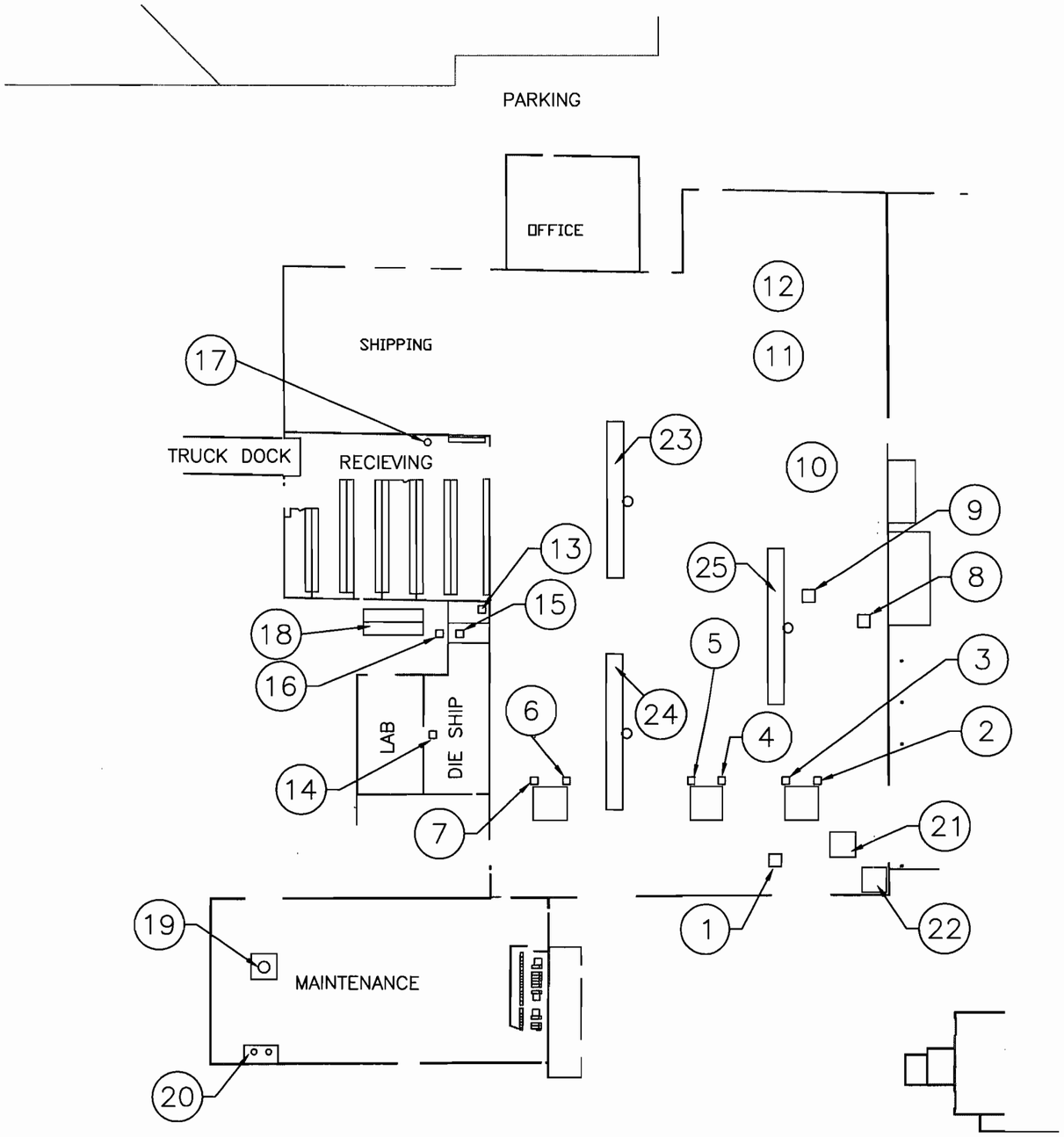
JOB NO. 2.392.41

DWG. FILE CODE 39241004

FIGURE NO. S4

Sht. 4 of 9

Site Plan 5
Main Plant



SITE PLAN – MAIN PLANT

SCALE 1"=80'

VAW OF AMERICA, INC
SAINT AUGUSTINE, FLORIDA

STACK/EMISSION POINT SCHEDULE

TAG	DESCRIPTION	CONTROL	STACK DIMENSIONS DIAMETER	HEIGHT
1	BILLET BENCH SAW	N/A		
2	PRESS #1 HOT SAW	CYCLONE & BAGS		
3	PRESS #1 COLD SAW	CYCLONE & BAGS		
4	PRESS #2 HOT SAW	CYCLONE & BAGS		
5	PRESS #2 COLD SAW	CYCLONE & BAGS		
6	PRESS #3 HOT SAW	CYCLONE & BAGS		
7	PRESS #3 COLD SAW	CYCLONE & BAGS		
8	BENCH TUBING SAW #1	CYCLONE & BAGS		
9	BENCH TUBING SAW #2			
10	BENCH TUBING SAW #3	CYCLONE & BAGS		
11	BENCH TUBING SAW #4	CYCLONE & BAGS		
12	BENCH SAW NO. 5	CYCLONE & BAGS		
13	CAUSTIC TANK	N/A		
14	NITRIDING FURNACE	N/A		
15	GRITSHOT	N/A		
16	DIE SHOP BOILER	N/A		
17	WOOD SAW	CYCLONE & BAGS		
18	SPENT CAUSTIC NEUTRALIZATION TANKS	N/A		
19	WELDING	N/A		
20	SILK SCREENING	N/A		
21	140 SOLVENT TANK	N/A		
22	STILL	N/A		
23	AGE OVEN #1			
24	AGE OVEN #2			
25	AGE OVEN #3			

REVISION :

DATE : 03/01/01

CHECKED : HW

DRAWN : T JONES

SCALE : AS NOTED

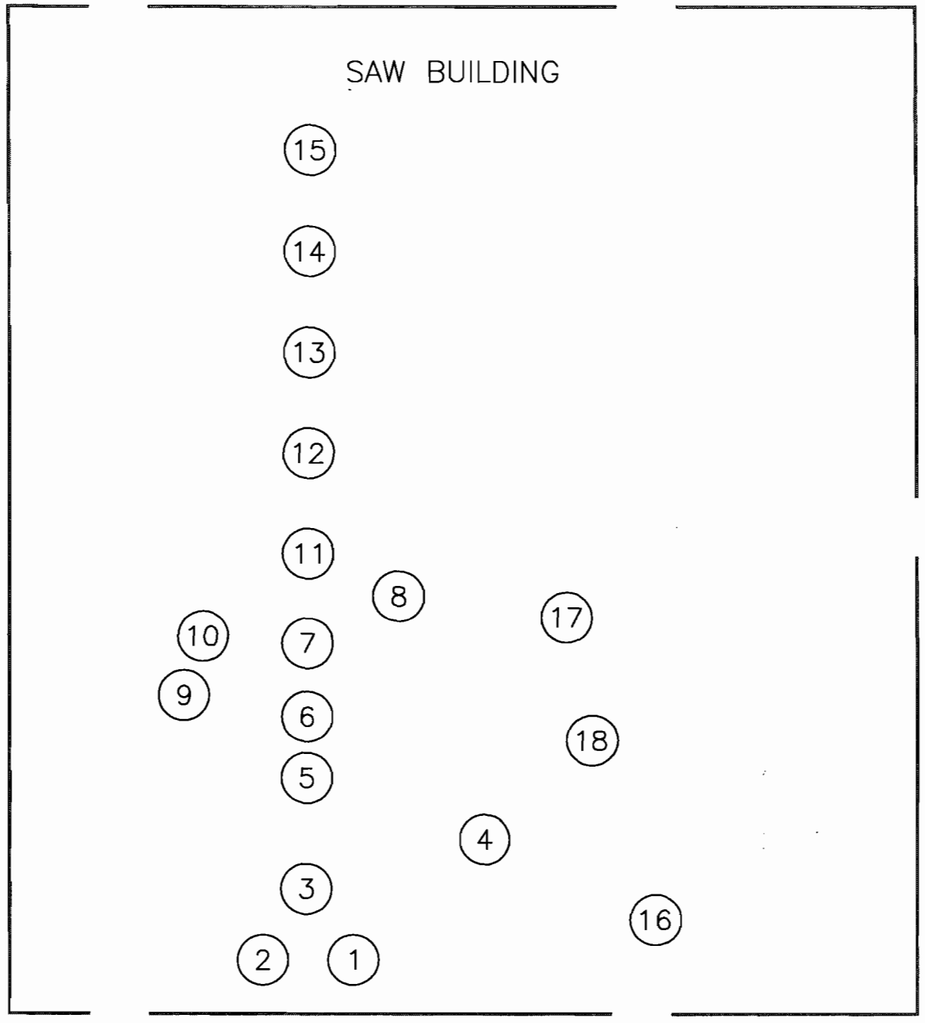
LAN ASSOCIATES INC.
environmental and facilities engineering
66 CUNA STREET, ST. AUGUSTINE, FL 32084-3619 (904)824-6999

JOB NO. 2.392.41

DWG. FILE CODE 39241005

FIGURE NO. S5

Site Plan 6
SAW Building



STACK/EMISSION POINT SCHEDULE

TAG	DESCRIPTION	CONTROL	STACK DIMENSIONS DIAMETER	HEIGHT
1	RASAMAT END DEBURR	DUST COLLECTOR		
2	DEBURR/BUFFER	DUST COLLECTOR		
3	GRINDING WHEEL	DUST COLLECTOR		
4	KALTENBACH CUTOFF SAW	DUST COLLECTOR		
5	BUFFER			
6	CTD CUTOFF SAW	DUST COLLECTOR		
7	EATON SAW	DUST COLLECTOR		
8	ROHBI CUTTER	DUST COLLECTOR		
9	WEGOMA DOUBLE MITTER			
10	TABLE SAW			
11	OLIVER SAW	DUST COLLECTOR		
12	SAMPSON SAW	DUST COLLECTOR		
13	ROHBI CUTOFF SAW	DUST COLLECTOR		
14	B-O SAW	DUST COLLECTOR		
15	WAGNER CUTOFF SAW	DUST COLLECTOR		
16	OLIVER COUPLING SAW	DUST COLLECTOR		
17	COLD SAW			
18	AGE OVEN		0.75 FT	35 FT.

SITE PLAN – SAW BUILDING

SCALE 1"=30'

VAW OF AMERICA, INC
SAINT AUGUSTINE, FLORIDA

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environmental and facilities engineering
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JOB NO. 2.392.41

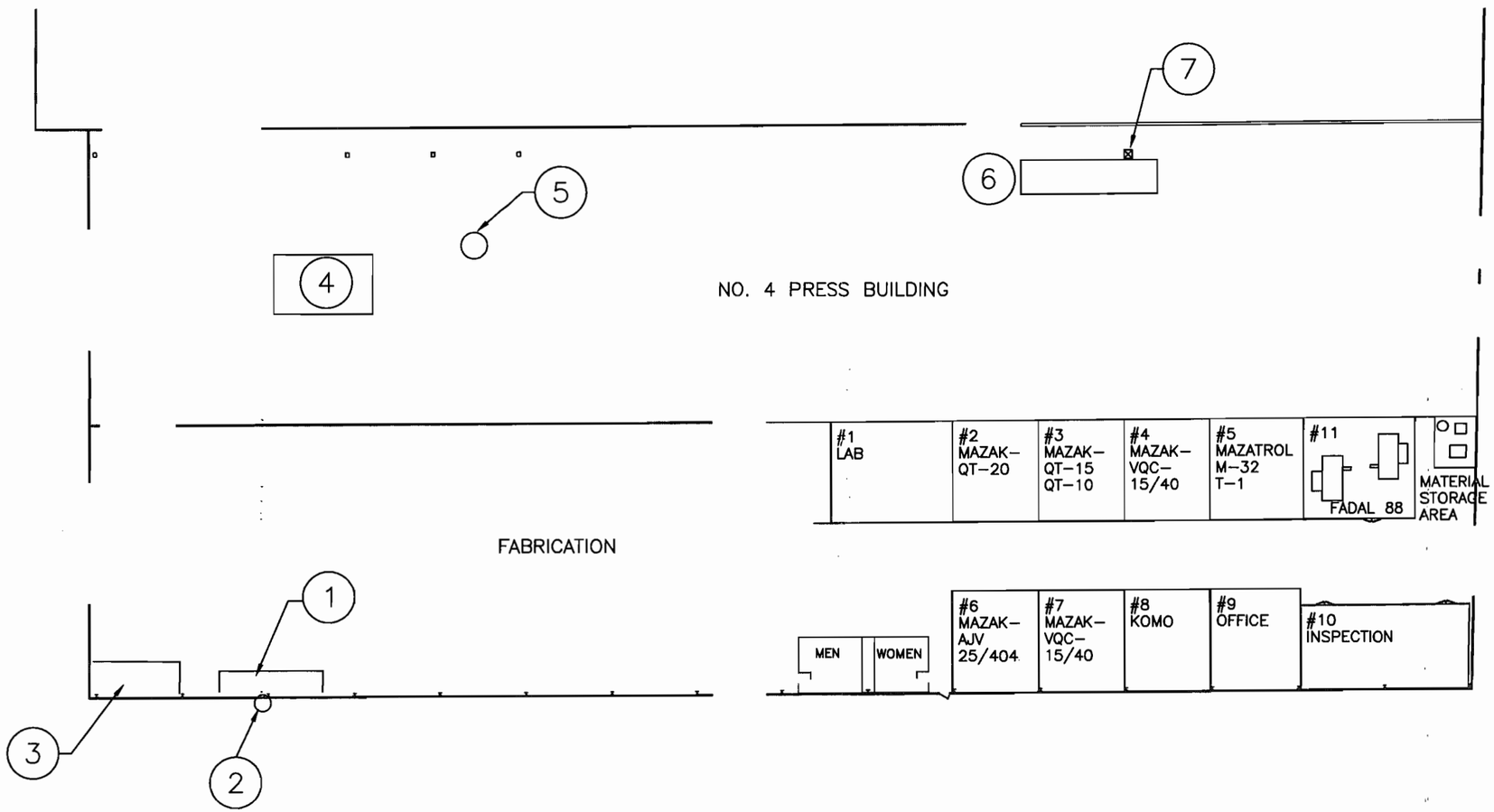
DWG. FILE CODE 39241006

FIGURE NO. S6

Site Plan 7
No. 4 Press Building

STACK/EMISSION POINT SCHEDULE

TAG	DESCRIPTION	STACK DIMENSIONS DIAMETER	HEIGHT
(1)	ULTRASONIC WASHING		
(2)	UNTRASONIC WASHER STACK	15"x15"	10 FT.
(3)	WELDING AREA		
(4)	NO. 4 PRESS		
(5)	COLD SAW DUST COLLECTOR		
(6)	NO. 4 AGE OVEN		
(7)	NO. 4 AGE OVEN STACK		



SITE PLAN – NO.4 PRESS BUILDING

SCALE 1"=40'

VAW OF AMERICA, INC
SAINT AUGUSTINE, FLORIDA

REVISION :

DATE : 03/01/01

CHECKED : HW

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SCALE : AS NOTED

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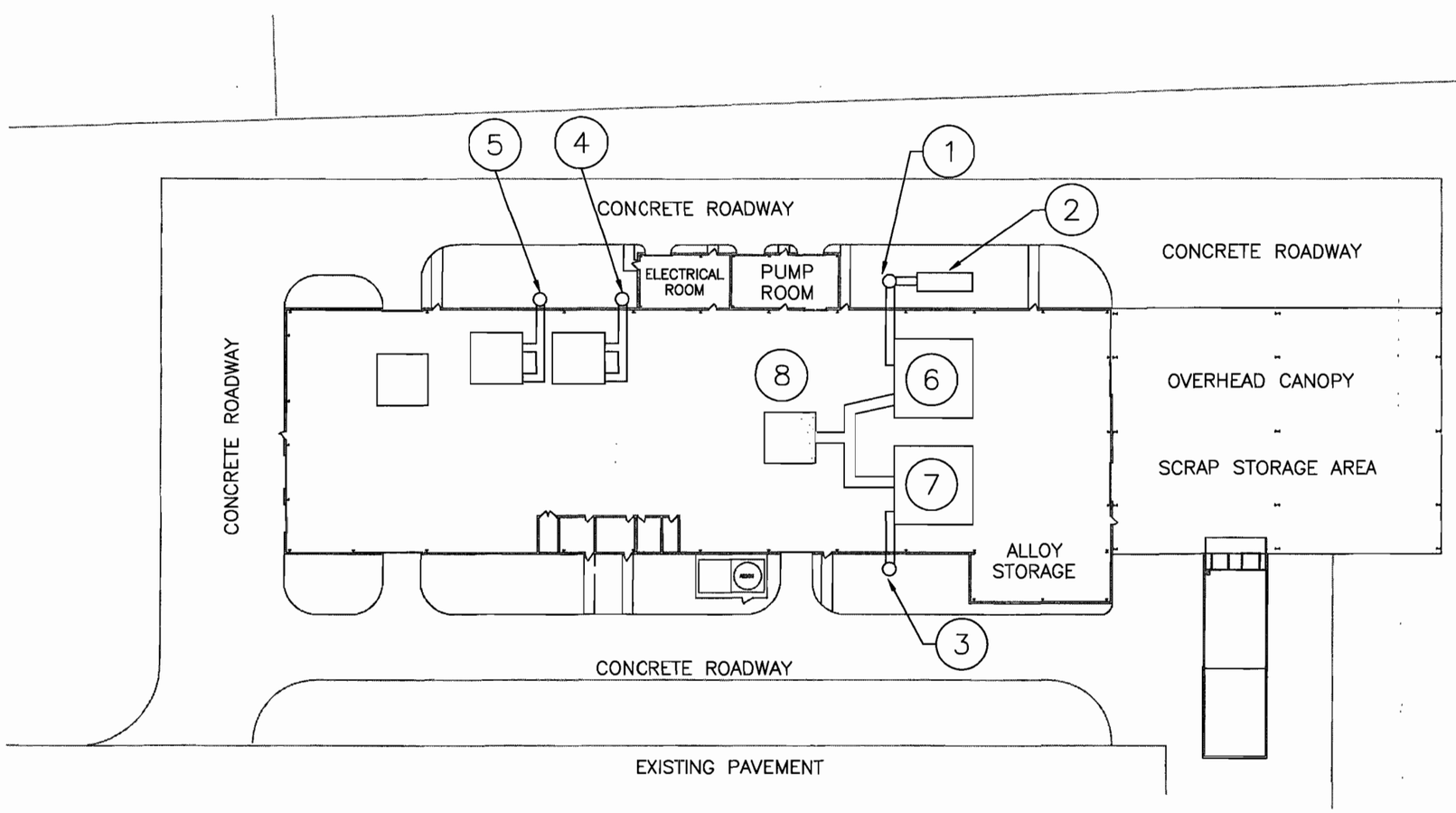
JOB NO. 2.392.41

DWG. FILE CODE 39241007

FIGURE NO. S7

Site Plan 8
New Casthouse Building



STACK/EMISSION POINT SCHEDULE

TAG	DESCRIPTION	CONTROL	STACK DIMENSIONS DIAMETER	HEIGHT
①	#1 MELTING FURNACE STACK			
②	#1 MELTING FURNACE	SCRUBBER		
③	#2 MELTING FURNACE STACK			
④	#1 HOMOGENIZER STACK			
⑤	#2 HOMOGINIZER STACK			
⑥	#1 MELTING/HOLDING FURNACE			
⑦	#2 MELTING/HOLDING FURNACE			
⑧	CASTING			

SITE PLAN – NEW CAST HOUSE BUILDING

SCALE 1"=50'

VAW OF AMERICA, INC
SAINT AUGUSTINE, FLORIDA

REVISION :

DATE : 03/01/01
CHECKED : HW
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SCALE : AS NOTED

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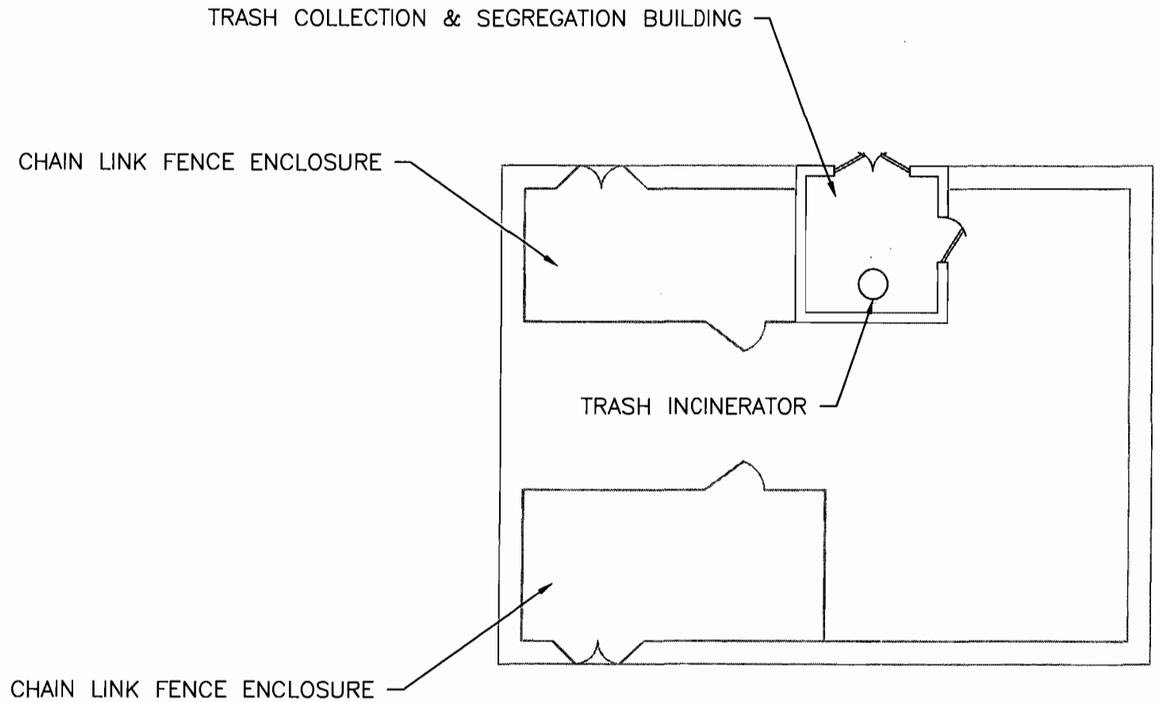
JOB NO. 2.392.41
DWG. FILE CODE 39241008
FIGURE NO. S8

Site Plan 9
Trash Incinerator



N

SITE PLAN – TRASH INCINERATOR

SCALE 1"=10'

VAW OF AMERICA, INC
SAINT AUGUSTINE, FLORIDA

REVISION :

DATE : 03/01/01

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JOB NO. 2.392.41

DWG. FILE CODE 39241009

FIGURE NO. S9

Attachment 4

Process Flow Diagrams

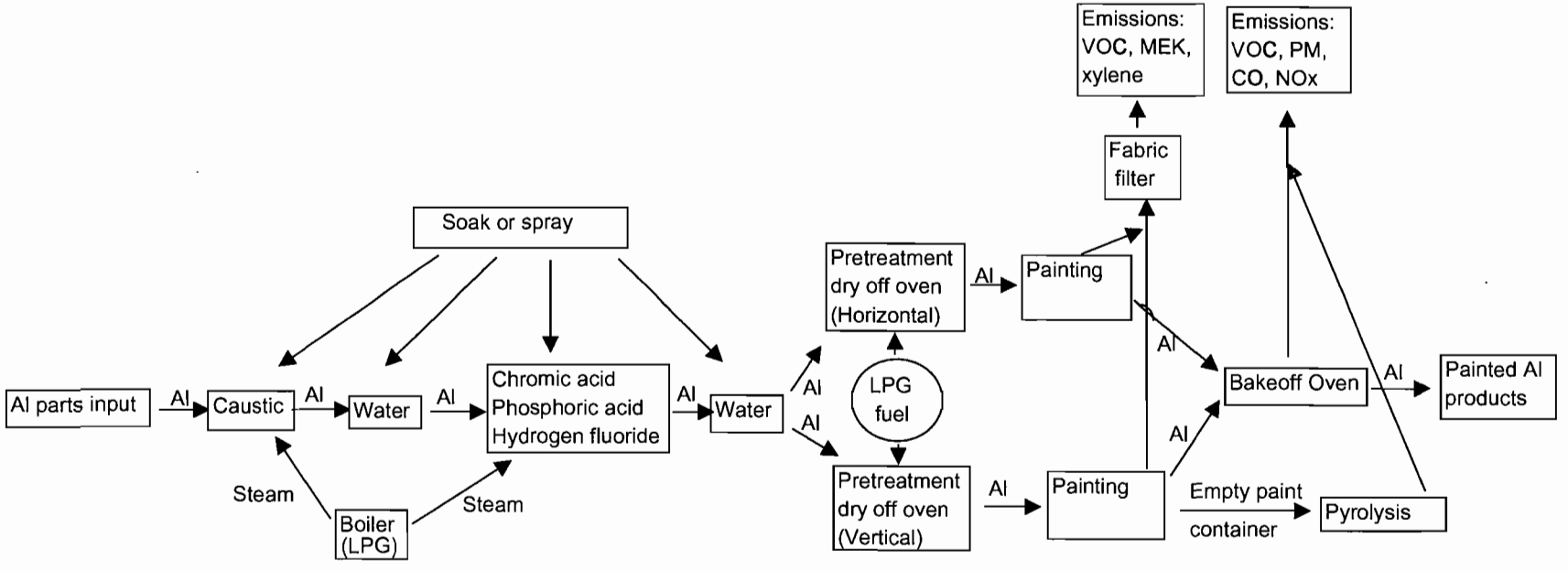
Diagram A
Process Flow Diagram for
Paintline Operation

Attachment 4A

Process Flow Diagram for the Paintline Operation

VAW of America, Inc.

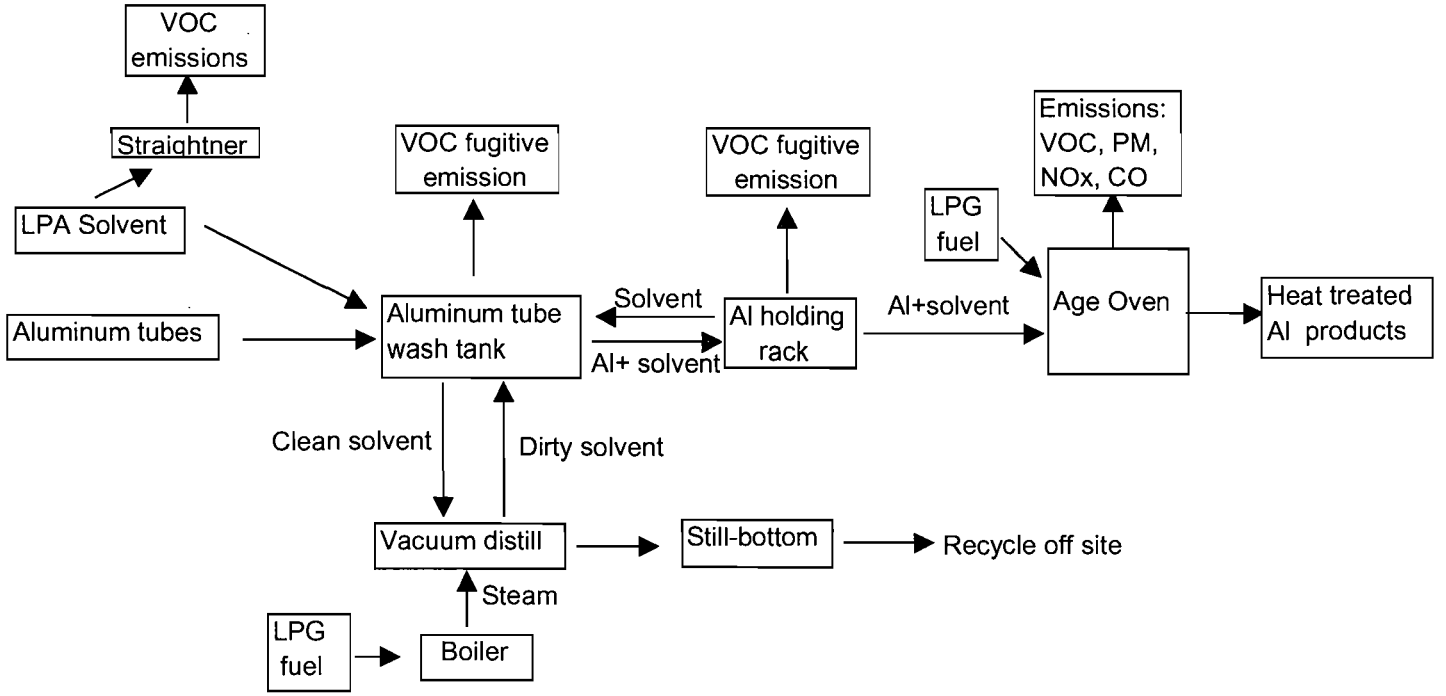
St. Augustine, FL



LAN Associates, Inc.
Ref. #2.392.41
March 22, 2001

Diagram B
Process Flow Diagram for
OPC Tube Mill Operation

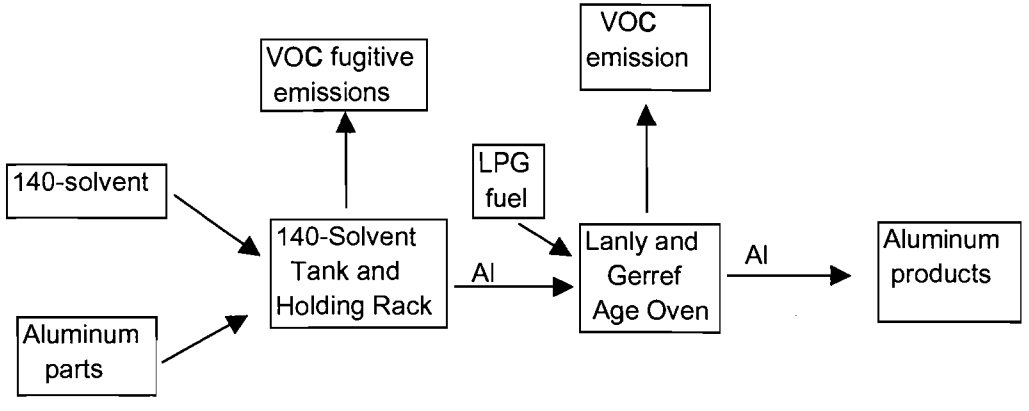
Attachment 4B
Process Flow Diagram for the OPC Tube Mill Operation
VAW of America, Inc.
St. Augustine, FL



LAN Associates, Inc.
Ref. #2.392.41
March 22, 2001

Diagram C
Process Flow Diagram for
140-Solvent Cleaning Operation

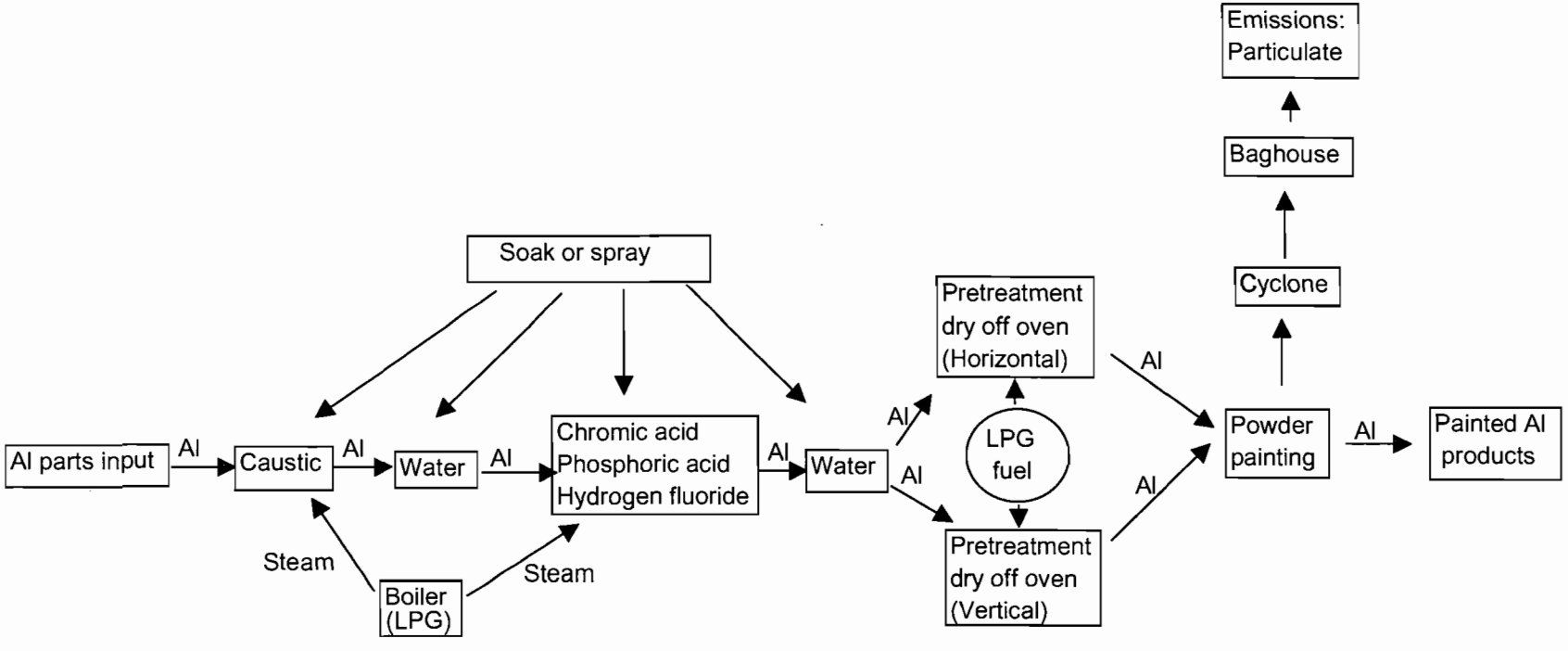
Attachment 4C
Process Flow Diagram for 140-Solvent Cleaning Operation
VAW of America, Inc.
St. Augustine, FL



LAN Associates, Inc.
Ref. 2.392.41
March 22, 2001

Diagram D
Process Flow Diagram for
Powder Paintbooth Operation

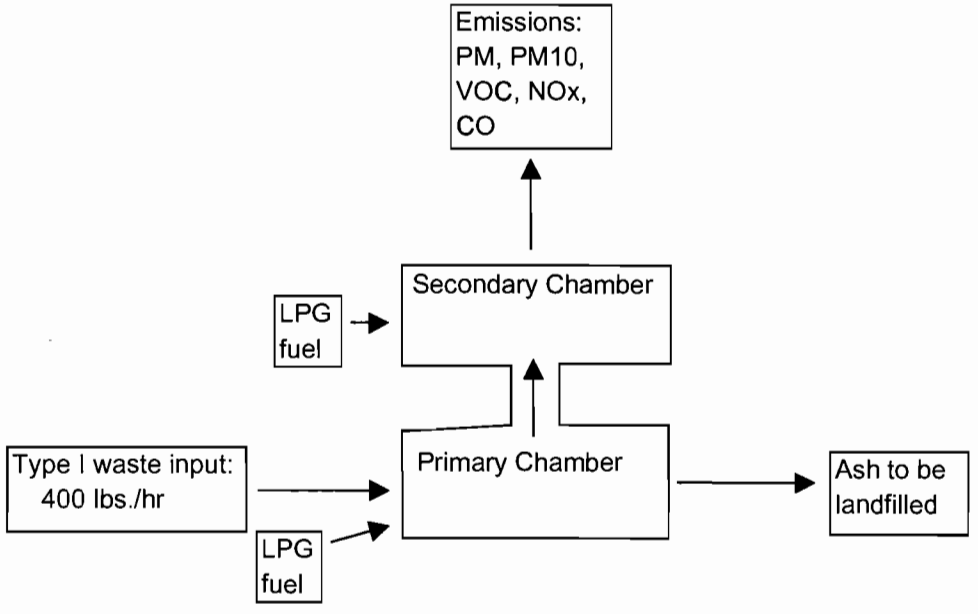
Attachment 4D
Process Flow Diagram for the Powder Paintbooth Operation
VAW of America, Inc.
St. Augustine, FL



LAN Associates, Inc.
Ref. 2.392.41
March 22, 2001

Diagram E
Process Flow Diagram for Incinerator

Attachment 4E
Process Flow Diagram for the Incinerator
VAW of America, Inc.
St. Augustine, FL

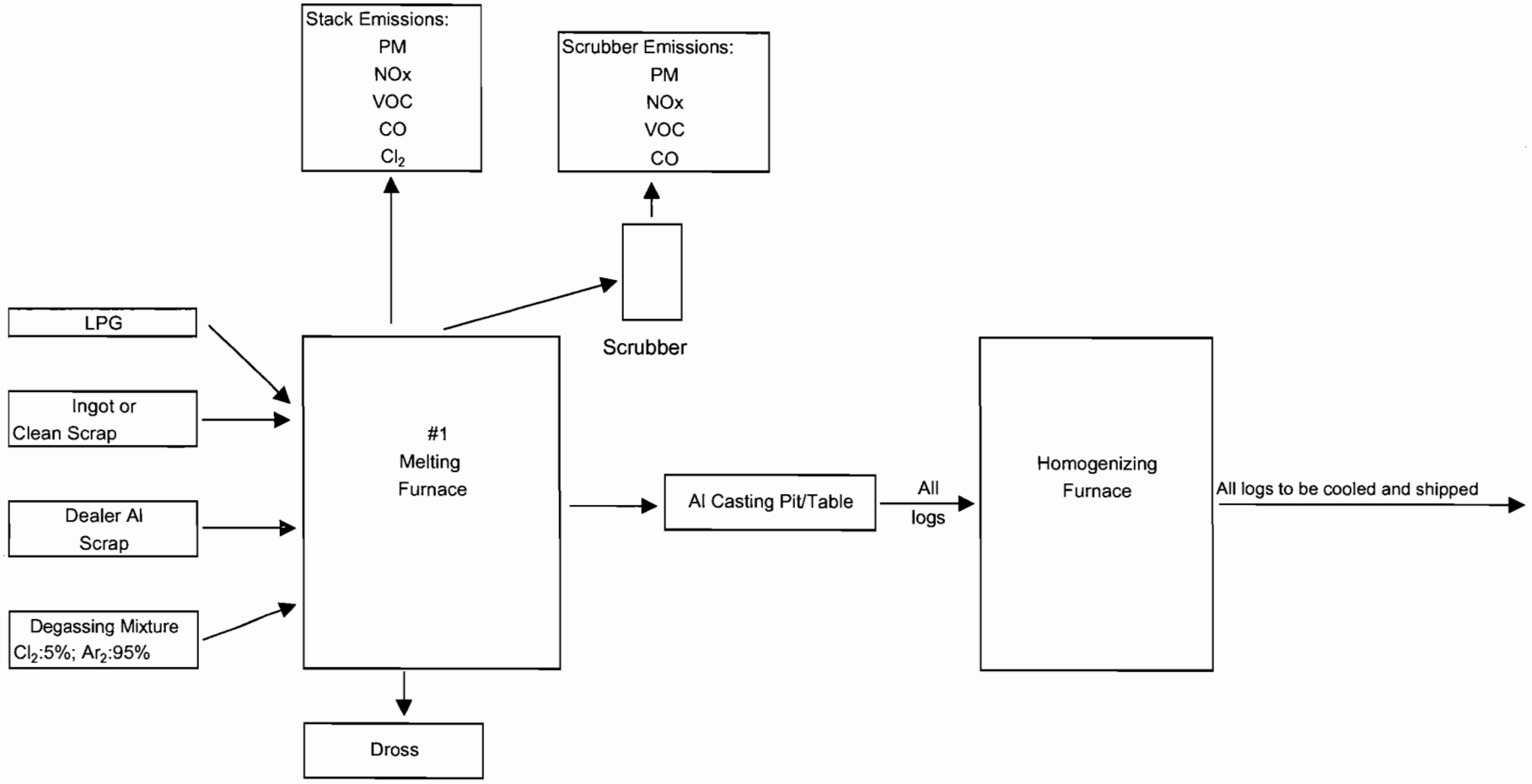


LAN Associates, Inc.
Ref. #2.392.41
March 22, 2001

Diagram F
Process Flow Diagram for
#1 Remelting Furnace Operation

Attachment 4F

Process Flow Diagram for the #1 Remelting Furnace Operation
VAW of America, Inc.

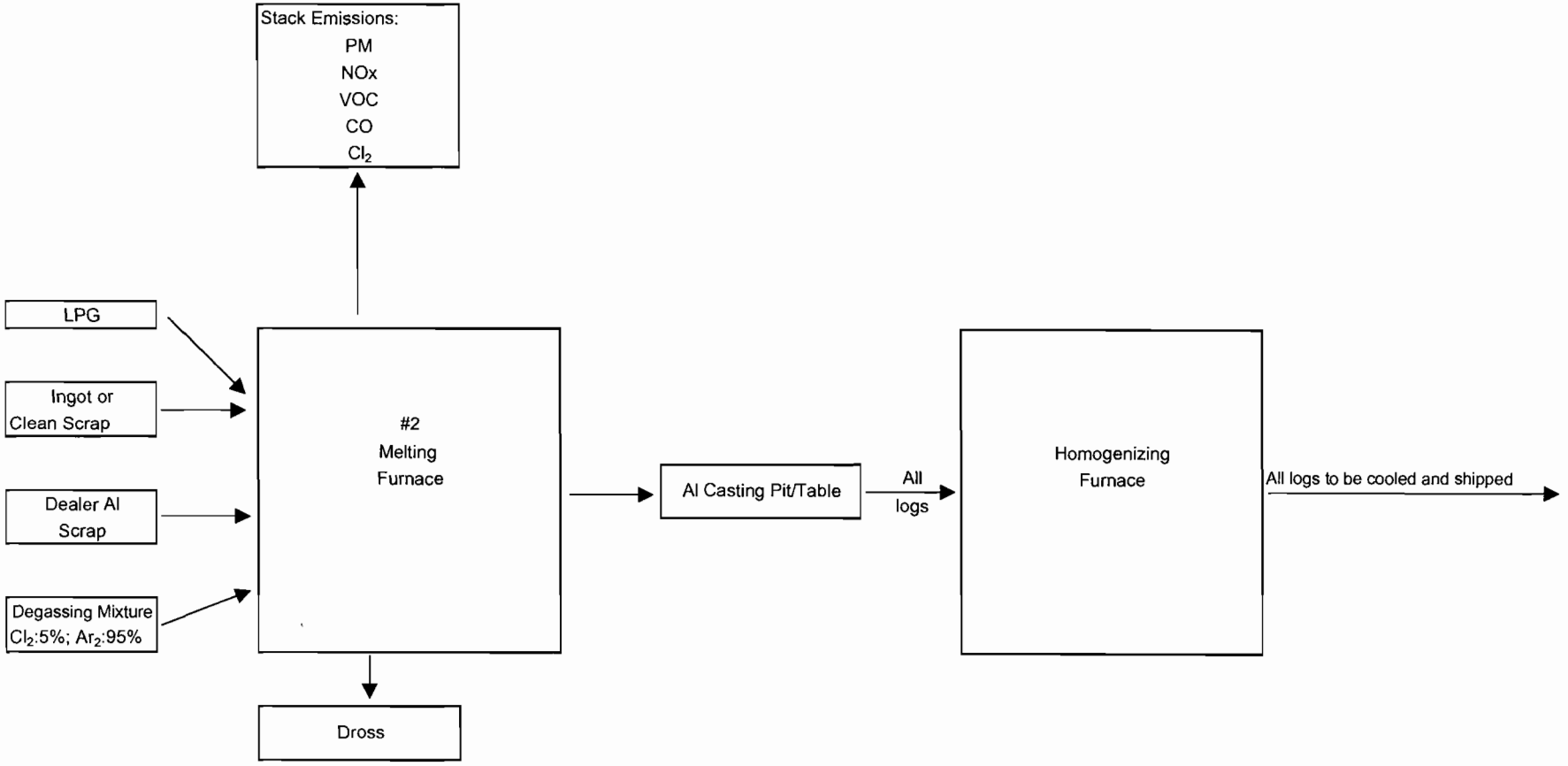


LAN Associates, Inc.
Ref. #2.392.41
March 22, 2001

Diagram G
Process Flow Diagram for
#2 Remelting Furnace Operation

Attachment 4G

Process Flow Diagram for the #2 Remelting Furnace Operation
VAW of America, Inc.



LAN Associates, Inc.
Ref. #2.392.41
March 22, 2001

Attachment 5

Emission Calculations

AIR EMISSION CALCULATION

VAW of America, Inc.
St. Augustine, FL
LAN Ref. #3.392.41

1.0 Solvent Cleaning, Al Painting, and Al baking/Heat Treatment (Emission Unit #4)

1.1 Al Painting

The painting operation include two spray lines:

(a) Horizontal Paint Line
(b) Vertical Paint Line

Xylene, methyl ethyl ketone (MEK), and other volatile organic compounds (VOC) are the formulating chemicals in paints used in the paint lines. The chemicals are also used as solvent to clean Paintline equipment. Many paint products used in the paintline contain a range of xylene, MEK and other VOC contents. The hourly emission rates of xylene, MEK, and VOC will be calculated based on maximum paint use rate and maximum contents of xylene, MEK, and VOC of paint products in order to allow operation flexibility. However, the annual emissions of these chemicals will be the same as the existing permit.

a. Xylene Emissions

Liquid paint application rate	= 3 gals/hr per paint line
Xylene content in paint	= 25%
Paint density	= 8.78 lbs/gal
Xylene spray rate	= 3 gals/hr/paint line x 8.78 lbs/gal x 25% = 6.59 lbs/hr/paint line
Xylene use rate	= 6.59 lbs/hr/paint line x 2 paint lines = 13.2 lbs/hr
Xylene solvent use rate	= 0.5 lbs/hr
Total xylene use rate	= 13.7 lbs/hr
Annual xylene emissions	= 7.7 tons/yr (from existing permit).

b. MEK Emissions

MEK content for liquid paint = 5%

Paint density = 10 lbs/gal

Paint spray rate = 3 gals/hr/booth

MEK use rate in paint = 3 gals/hr/booth x 10 lbs/gal x 5%
= 1.5 lbs/hr/booth

MEK use rate for both booths = 1.5 lbs/hr/booth x 2 booths
= 3 lbs/hr

MEK emission rate = 3 lbs/hr (assuming that all MEK is emitted)

MEK solvent use rate = 7 lbs/hr

Total MEK use rate = 3 lbs/hr + 7 lbs/hr
= 10 lbs/hr.

Annual MEK use rate = annual MEK emissions
= 9.72 tons/yr (existing permit)

c. ***Volatile Organic Compounds (VOCs) Emissions:***

Other VOC content in paint = 69.2%

Paint density = 8.2 lbs/gal

Paint application rate = 3 gals/hr per booth

Maximum VOC use rate = 3 gals/hr x 8.2 lbs/gal x 69.2% x 2 paint line
= 34 lbs/hr

VOC emissions rate = 34 lbs/hr

Annual VOC consumption = Annual VOC emissions
= 31.43 tons/yr (existing permit)

The VOC emissions will include butyl acetate, which is used as substitute for xylene and MEK for paint equipment cleaning.

d. ***Liquid Propane Combustion in the Bake Oven and Pyrolysis Furnace***

LPG input rate for bake oven = 21.7 gals/hr

LPG input rate for pyrolysis = 3.8 gals/hr

Total LPG input rate = 21.7 + 3.8
= 25.5 gals/hr

PM emission rate = 25.5 gals/hr x 0.6 lb/1000 gal
= 0.015 lbs/hr

PM-10 emission rate = 25.5 gals/hr x 0.6 lbs/1000 gal
= 0.015 lbs/hr

NOx emission rate = 25.5 gals/hr x 19 lbs/1000 gal
= 0.485 lbs/hr

VOC emission rate = 25.5 gals/hr x 0.5 lbs/1000 gal
= 0.013 lbs/hr

Pyrolysis VOC emission rate = 0.12 lbs/hr (from existing permit)

CO emission rate = 25.5 gals/hr x 3.2 lb/1000 gal
= 0.082 lbs/hr

Operations schedule: 24 hr/day, 7 day/wk, 52 wk/yr (8760 hr/yr)

Annual LPG use = 25.5 gals/hr x 8760 hrs/yr
= 223,380 gals/yr

Annual PM emissions = 223,380 gals/hr x 0.6 lbs/1000 gal
= 134 lbs/hr/2000 lbs/ton
= 0.067 tons/yr

Annual NO_x emissions = 223,380 gals/hr x 19 lbs/1000 gal
= 4,244 lbs/hr/2000 lb/ton
= 2.12 tons/yr

Annual VOC emissions = 223,380 gals/hr x 0.5 lbs/1000 gal
= 112 lbs/hr/2000 lbs/ton
= 0.056 tons/yr.

Pyrolysis VOC emission = 0.12 lbs/hr x 2400 hours/yr
= 288 lbs/yr/2000lb/ton
= 0.144 ton/yr.

Annual CO emission capacity= 223,380 gals/hr x 3.2 lbs/1000 gal
= 715 lbs/hr/2000 lbs/ton

= 0.36 tons/yr

1.2 OPC Tube Mill

a. LPA Solvent Usage and Emission

Aluminum tube process rate	= 2 tons/hr.
Annual LPA solvent usage	= 58.5 tons/yr
Operation schedule	= 8760 hrs/yr
Average solvent use rate	= 58.5 tons/yr x 2000 lbs/ton/8760 hrs/yr = 13.34 lbs/hr
Maximum solvent use rate	= 4 times of average use rate
Maximum solvent use rate	= 13.34 lbs/hr x 4 = 53.36 lbs/hr (for flexibility)
Annual VOC emissions	= Annual LPA solvent usage = 58.5 tons/yr

b. Emissions from LPG Combustion

Age Oven LPG use rate	= 30 gals/hr
Annual operation time	= 8,760 hrs/yr
Annual LPG use capacity	= 50,000 gals/yr

Emission Factors:

Filterable PM	= 0.6 lbs/1000 gals
PM-10	= 0.6 lbs/1000 gals
Nitrogen oxides	= 19 lbs/1000 gals
Carbon monoxide	= 3.2 lbs/1000 gals
VOC	= 0.5 lb/1000 gals.

Hourly Emissions:

Filterable PM	= 0.6 lbs/1000 gals x 30 gals/hr

= 0.018 lbs/hr

PM-10 = 0.6 lb/1000 gals x 30 gals/hr
= 0.018 lbs/hr

Nitrogen oxides = 19 lbs/1000 gals x 30 gals/hr
= 0.57 lbs/hr

Carbon monoxide = 3.2 lbs/1000 gals x 30 gals/hr
= 0.096 lbs/hr

VOC = 0.5 lb/1000 gallons x 30 gallons/hr
= 0.015 lb/hr

Annual Emissions:

Filterable PM = 0.6 lbs/1000 gals x 50,000 gals/yr
= 30 lbs/yr/2000 lbs/ton
= 0.015 ton/yr

PM-10 = 0.6 lbs/1000 gals x 50,000 gals/yr
= 30 lbs/yr/2000 lbs/ton
= 0.015 tons/yr

Nitrogen oxides = 19 lbs/1000 gals x 50,000 gals/yr
= 950 lbs/yr/2000 lbs/ton
= 0.475 tons/yr

Carbon monoxide = 3.2 lbs/1000 gals x 50,000 gals/yr
= 160 lbs/yr/2000 lbs/ton
= 0.08 tons/yr

VOC = 0.5 lbs/1000 gals x 50,000 gals/yr
= 25 lbs/yr/2000 lbs/ton
= 0.013 tons/yr

1.3 140-Solvent Cleaning and Heat Treatment

Aluminum annual process capacity = 7500 tons/yr

Annual 140-solvent consumption = 150 tons/yr

Annual operation time = 8760 hrs/yr

Aluminum process rate capacity = 5 tons/hr

Annual VOC emission capacity	= Annual 140-solvent consumption = 150 tons/yr
Average VOC emission rate	= 150 tons/yr x 2000 lbs./ton ÷ 8760 hrs/yr = 34 lbs/hr
Solvent maximum use rate	= 40% more than average rate = 34 lbs/hr x 140% = 47.6 lbs/hr
Maximum VOC emission rate	= 50 lbs/hr (for permit purpose only).

1.4 Emission Unit Emission Summary

The sum of emissions for Emission Unit #4 is given in Table 3 (hourly rate) and Table 4 (annual emission capacity), Attachment 5.

2.0 Powder Paint Booth PM Emissions

Aluminum tube throughput rate	= 1500 lbs/hr
Powder paint use rate	= 40 lbs/hr
Paint spray efficiency	= 70% (assumption)
Over-spray paint	= 50% (assumption)
Particulate control equipment:	Cyclone & baghouse
Control efficiency	= 95%
PM emission rate	= 40 lbs/hr x 30% x 50% x 5%
Maximum PM emission rate	= 0.25 lbs/hr
Annual PM emission capacity	= 0.25 lbs/hr x 8760 hrs/yr = 2190 lbs/yr/2000 lbs/ton = 1.1 tons/yr.

Assuming that 50% of PM of potential emission is finer than 10 μm in diameter, so

PM10 emission rate	= 0.25 lbs/hr x 50% = 0.125 lbs/hr.
Annual PM10 emission capacity	= 1.1 tons/yr x 50% = 0.55 ton/yr.

The emissions are summarized in Tables 3 and 4, Attachment 5.

3.0 Incinerator

SCC Code type of operation: 503-00101

Type I waste incineration rate = 400 lbs/hr
= 0.2 tons/hr

Emission Factors:

CO	= 10 lbs/ton
NOx	= 3 lbs/ton
PM	= 7 lbs/ton
PM10	= 4.7 lbs/ton
SOx	= 2.5 lbs/ton
VOC	= 3.0 lbs/ton

Emission Rate:

CO	= 10 lbs/ton x 0.2 tons/hr = 2 lbs/hr
NOx	= 3 lbs/ton x 0.2 tons/hr = 0.6 lb/hr
PM	= 7 lbs/ton x 0.2 tons/hr = 1.4 lbs/hr
PM10	= 4.7 lbs/ton x 0.2 tons/hr = 0.94 lbs/hr
SOx	= 2.5 lbs/ton x 0.2 tons/hr = 0.5 lbs/hr
VOC	= 3.0 lbs/ton x 0.2 tons/hr = 0.6 lb/hr

Annual operation schedule: 10 hours/day, 6 days/week, and 52 weeks/yr (3120 hrs/yr)

Annual Emissions:

CO	= 2 lbs/hr x 3,120 hrs/yr = 6,240 lbs/yr/2,000 lbs/ton = 3.12 tons/yr
NOx	= 0.6 lb/hr x 3,120 hrs/yr =1,872 lbs/yr/2,000 lbs/ton = 0.94 ton/yr
PM	= 1.4 lbs/hr x 3,120 hrs/yr

	= 4,368 lbs/yr/2,000 lbs/ton = 2.18 tons/yr
PM10	= 0.94 lbs/hr x 3,120 hrs/yr = 2933 lbs/yr/2,000 lbs/ton = 1.47 tons/yr
SOx	= 0.5 lbs/hr x 3,120 hrs/yr = 1,560 lbs/yr/2000 lbs/ton = 0.78 tons/yr
VOC	= 0.6 lbs/hr x 3,120 hrs/yr = 1872 lbs/yr/2000 lbs/ton = 0.936 tons/yr.

Both emissions rates and annual emissions are given in Table 3 and 4, Attachment 5.

4. Remelting Furnace #1(Emission Unit #8)

4.1. Equipment

Tilting Melting/Holding Furnace
Capacity: 64,000 lb per load
Maximum BTU input rate: 30 MMBtu/hr/furnace

4.2. Emission Calculation for LPG Combustion in the Two Melting Furnaces

A. BTU Requirement for Al Melting:

Quoted BTU consumption rate	= 1850 Btu/lb Al.
Heating value for LPG	= 90,000 Btu/gal = 0.09 MMBtu/gal.
BTU required per melt	= 1850 Btu/lb x 64,000 lb/melt = 118.4 MMBtu/melt.

Heating rates for the Melting Furnace operation varies in three stages:

Loading:	18 MMBtu/hr for 1.67 hr/melt.
Melting:	30 MMBtu/hr for 2.8 hr/melt.
Holding:	6 MMBtu/hr for 5.53 hr/melt.
Loading BTU consumption	= 18 MMBtu/hr x 1.67 hr/melt = 30.06 MMBtu/melt.
Melting BTU consumption	= 30 MMBtu/hr x 2.8 hr/melt

= 84 MMBtu/melt.

Holding BTU consumption = 6 MMBtu/hr x 5.53 hr/melt
= 33.18 MMBtu/melt.

Total BTU consumption = 30.06 + 84 + 33.18
= 147.24 (MMBtu/melt)
> 118.4 MMBtu/melt.

Operation schedule: 2.4 melts per day (24 hrs/day), 365 days per year.

Annual heat use capacity = 147.24 MMBtu/melt x 2.4 melts/day x 365 days/yr
= 128,980 MMBtu/yr per furnace.

Annual LPG use capacity = 128,980 MMBtu/yr ÷ 0.09 MMBtu/gal
= 1,433,100 gallons/yr per furnace.

The average emission factors for LPG firing are cited from FIRE 6.22 Manual of US EPA:

PM	= 0.6 lb/10^3 gal.
NO_X	= 19 lb/10^3 gal.
CO	= 3.2 lb/10^3 gal.
VOC	= 0.5 lb/10^3 gal.

B Maximum emissions Rates Due to LPG Combustion:

LPG use rate for aluminum melting = 30 MMBtu/hr/0.09 MMBtu/gal/furnace
= 333.3 gal/hr/furnace

Emissions rates due to LPG combustion for aluminum melting operation:

PM = 0.6 lb/10^3 gal x 0.333 x 10^3 gal/hr/furnace
= 0.2 lb/hr/furnace

NOx = 19 lb/10^3 gal x 0.333 x 10^3 gal/hr/furnace
= 6.33 lb/hr/furnace

CO = 3.2 lb/10^3 gal x 0.333 x 10^3 gal/hr/furnace
= 1.07 lb/hr/furnace

VOC = 0.5 lb/10^3 gal x 0.333 x 10^3 gal/hr/furnace
= 0.167 lb/hr/furnace.

C. Annual Emissions for both furnaces due to LPG combustion:

Annual LPG use capacity	= 1,433.1 x 10^3 gallons/yr per furnace
PM	= 0.6 lb/10^3 gal x 1,433.1 x 10^3 gallons/yr per furn. = 860 lb/yr/furn./2000 lbs/ton = 0.43 ton/yr per furnace.
NO_x	= 19 lb/10^3 gal x 1,433.1 x 10^3 gallons/yr per furn. = 27,229 lb/yr/furn./2000 lbs/ton = 13.6 ton/yr per furnace.
CO	= 3.2 lb/10^3 gal x 1,433.1 x 10^3 gallons/yr per furn. = 4,586 lb/yr/furn./2000 lbs/ton = 2.29 ton/yr per furnace.
VOC	= 0.5 lb/10^3 gal x 1,433.1 x 10^3 gallons/yr per furn. = 717 lb/yr/furn./2000 lbs/ton = 0.359 ton/yr per furnace.

4.3.Emissions for #1 Remelting Furnace (EU #8) Due to Aluminum scrap Melting

A. PM Emissions

Mixed Al Scrap Melting for the Melting Furnace #1 with Scrubber Control:

Dealer scrap will be mixed with clean scrap in equal amount (50/50 mix).

Total mixed aluminum process	= 6,000 tons/yr
Annual Aluminum process	= 23,040 tons/yr
PM emission rate (stack test 9/20/00)	= 0.29 lb/hr.
Factor of variation	= 5 (estimate).
Permit emission rate	= 0.29 lbs/hr x 5. = 1.45 lbs/hr.
Aluminum melting rate	= 11.4 tons/hr.
PM emission factor	= 1.45 lb/hr/11.4 tons/hr. = 0.127 lb/ton.
Scrubber control efficiency	= 90% (estimate).
Uncontrolled PM emission factor	= 0.127 lb/ton/10% = 1.27 lb/ton.
Annual PM emission after control	= 0.127 lbs/ton x 6000/yr/2000 lb/ton = 0.38 tons/yr.

Clean Al Scrap Melting Process for the Melting Furnace #1 without Control:

Annual clean Al scrap processing	= 17,040 tons/yr
PM emission rate (stack test 9/20/00)	= 0.35 lb/hr.
Factor of variation	= 5 (estimate).
Permit emission rate	= 0.35 lbs/hr x 5.
	= 1.75 lbs/hr.

Since the PM emission rate for mixed aluminum scrap melting (with scrubber control) is smaller than that of clean scrap melting, only that of clean scrap melting will be used for annual emission potential calculation, which reflect operation flexibility.

Minimum aluminum melting rate	= 11.4 tons/hr.
PM emission factor	= 1.75 lbs/hr/11.4 tons/hr
	= 0.154 lb/ton.
Annual Al melting PM emission	= 1.75 lb/hr x 8760 hrs/yr/2000 lbs/ton
	= 7.67 tons/yr.

B. PM-10 Emissions

50% of PM emissions due to aluminum melting is assumed as PM-10. Therefore,

PM-10 emission rate	= 1.75 lb/hr x 50%
	= 0.875 lbs/hr.
Annual PM-10 emissions	= 7.67 tons/yr x 50%
	= 3.84 tons/yr.

C. CO Emission Associated with Mixed Scrap Melting:

Published CO emission factor for dealer aluminum scrap melting is not available. The CO emission factor has been obtained through a stack test at the VAW facility on July 27, 1995 by Koogler & Associates. A mixture of 20% clean scrap and 80% painted scrap was loaded into the existing Melting furnace at the average rate of 7.9 ton/hr. The CO emission was monitored during the loading and melting period. The emission rates and emission factors for PM, VOC, and CO are listed in the following table:

Stack test results: Emission rates and factors for dealer Al scrap (80%) melting (without scrubber):

Average Loading rate	Emission rate			Emission factor		
	PM	VOC	CO	PM	VOC	CO
Ton/hr	lb/hr			lb/ton		
7.9	1.44	2.81	19	0.18	0.356	2.41

CO emission factor at 80% painted scrap = 2.41 lb/ton.

CO emission factor at 50% painted scrap = 2.41 lb/ton x 0.5/0.8
= 1.5 lb/ton.

CO emission rate = 1.5 lb/ton x 11.4 ton/hr
= 17.1 lb/hr.

Combined CO emission rate = 1.07 lb/hr + 17.1 lb/hr
= 18.17 lb/hr.

Annual CO emission = 1.5 lb/ton x 6000 ton/yr
= 9000 lb/yr/2000 lb/ton
= 4.5 ton/yr.

Combined CO annual emission = 2.29 ton/yr + 4.5 tons/yr
= 6.79 tons/yr.

D. VOC Emission Associated with Mixed Scrap Melting:

VOC emission factor at 80% painted scrap
= 0.356 lb/ton (see Table in Section 4.3C above).

VOC emission factor for 50% dealer scrap/50% clean scrap mix
= 0.356 lb/ton x 0.5/0.8
= 0.223 lb/ton.

Scrubber control efficiency = 90%.

VOC emission factor after scrubber control
= 0.223 lb/ton x (1-90%)
= 0.0223 lb/ton.

VOC emission rate = 0.0223 lb/ton x 11.4 ton/hr

	= 0.254 lb/hr.
Combined VOC emission rate	= 0.167 lb/hr + 0.254 lb/hr = 0.421 lb/hr.
Annual VOC emission	= 0.0223 lb/ton x 6000 ton/yr = 1338 lb/yr/2000 lb/ton = 0.0669 ton/yr.
Combined VOC annual emission	= 0.359 ton/yr + 0.067 ton/yr = 0.426 ton/yr.

4.4. PM Emission due to Aluminum Fluxing in Melting Furnace #1 (EU #8):

A mixture of 50% Zendox SF and 50% Pyroflux P-1 will be used to remove gas and impurity of the molted aluminum in both Melting furnaces (see Attachment 12 for MSDS). Magnesium chloride is present in Zendox SF and fluorides are present in Pyroflux P-1. Potential emissions associated with Degassing process are PM. No chlorine and fluorine will be emitted resulting from using of these chemicals. There is no published emission factor available for PM due to fluxing with these chemicals. Therefore, the estimated PM emission factor is 200 lb/ton of chemical usage.

Annual use of flux chemicals	= 23 tons/yr (a mixture with equal amount of Zendox SF and Pyroflux P-1).

Schedule of operation: 1.5 hr/load, 2.4 load/day/furn, and 365 days/yr (1314 hr/yr).

Chemical use rate	= 23 tons/yr x 2000 lb/ton/1314 hrs/yr = 25 lbs/hr = 0.0125 ton/hr.
PM emission factor	= 200 lb/ton (estimate)
PM emission rate	= 200 lb/ton x 0.0125 ton/hr/furn = 2.5 hr/furn.
PM-10emission rate	= 50% PM emission rate (assumption) = 1.25 lb/hr.
Annual PM emission	= 2.5 lb/hr/furn x 1314 hr/yr = 3285 lb/yr/2000 lb/ton = 1.64 ton/yr.
Annual PM-10 emission	= 1.64 ton/yr x 50%

= 0.82 ton/yr.

4.5 Combined Emissions

The sums of emission rates for propane combustion, aluminum melting and degassing operation are given in Table 3, Attachment 5 for Emission Unit #8. The annual emission capacities for the three operations of Emission Unit #8 are given in Table 4, Attachment 5.

5. PM Emission due to Aluminum Melting in Melting Furnace #2 (EU #9):

5.1. Equipment

Tilting Melting/Holding Furnace
Capacity: 64,000 lb per load
Maximum BTU input rate: 30 MMBtu/hr/furnace

Only clean aluminum scrap or aluminum T bar will be processed in this furnace. The only potential pollutant associated with aluminum melting is PM.

5.2 Emissions due to Propane Combustion

The same as those for Remelting Furnace #1 (see 4.2).

5.3 Emissions due to Clean Aluminum Melting

Tested PM emission rate	= 0.35 lb/hr (9/20/00).
Variation factor	= 5 (estimate)
Permit PM emission rate	= 0.35 lb/hr x 5
	= 1.75 lbs/hr.

Annual PM emission for clean scrap melting
= 1.75 lbs/hr x 8760 hrs/yr
= 15,330 lb/yr/2000 lb/ton
= 7.67 ton/yr.

5.4. Emission Calculation for Aluminum Degassing Processes

Same as the #1 Remelting Furnace in Section 4.4.

5.5. Emission Data Summary

The sum emission rates and annual capacities due to propane combustion, aluminum melting, and degassing for # 2 Remelting Furnace (Emission Units #9) are summarized in Tables 3 and 4, Attachment 5.

6. Scrubber Information Summary (for Melting Furnace #1)

Temperature of air released: 150 °F.
Moisture saturation: 100%.
Airflow rate: 7900 ACFM.
Pressure drop: 20 to 30 inch H_2O
Water flow rate: 16 to 32 gallons/min
Manufacturer: Turner Envirologic.

392/c/Emissions/950328/HW

Attachment 6

Process and Emission Summary Tables

Table 1
Hourly Process or Use Rates

Table 1
Hourly Process or Use Rates
VAW of America, Inc., St. Augustine, FL

Emission Unit	Source	Aluminum	Liquid Paint	Powder Paint	Solvent					Liquid Propane	Gabbage	Alumabond 2	Alodine 47	Flux Powder	Time
					Xylene	MEK	Paint VOC	LPA Solvent	140-solvent						
		ton/hr	gallons/hr	lbs/hr	lb/hr					gallon/hr	lb/hr	gallons		lb/hr	hours/yr
4	5 Wet Paintbooths	0.75	6		13.7	10	34								8760
	Bake Oven & Pyrolysis									25.5					8760
	OPC Tube Mill	2						53.4							8760
	OPC Tube Mill Age Oven	4								30					8760
	140 Solvent for Al Cleaning	5							50						8760
	Paintline											5	5		8760
	Sum	**11.75**	**6**		**13.7**	**10**		**53.4**	**50**	**55.5**	**0**	**5**	**5**		8760
5	Powder Booth	0.75		40											8760
6	Incinerator									12.5	400				3120
8	New Melt Furnace #1	11.4								333.3				25	8760
9	New Melt Furnace #2	11.4								333.3				25	8760
	Total	**35.3**	**6**	**40**	**13.7**	**10**		**53.4**	**50**	**734.6**	**400**	**5**	**5**	**50**	

LAN Associates, Inc.
Ref. #2.392.41
3/8/2001

Table 2
Annual Process or Use Rates

Table 2
Annual Process or Use Rates
VAW of America, Inc., St. Augustine, FL

Emission Unit	Source	Aluminum	Paint	Powder Paint	Solvent					Liquid Propane	Gabbage	Alumabond 2	Alodine 47	Flux Powder	Time
					Xylene	MEK	Paint VOC	LPA Solvent	140-solvent						
		ton/yr	gallons/yr	tons/yr	ton/yr					gallon/yr	tons/yr	Gallons/yr		ton/yr	hours/yr
4	5 Wet Paintbooths	1920	8375		7.7	9.72	31.43								8760
	Bake Oven & Pyrolysis									224,000					8760
	OPC Tube Mill	3000						58.5							8760
	OPC Tube Mill Age Oven									50,000					8760
	140 Solvent for Al Cleaning	7500							148.62						8760
	Paintline Pretreatment											1000	500		8760
	Sum	**12420**	**8375**	**0**	**7.7**	**9.72**	**31.43**	**58.5**	**148.62**	**274000**	**0**	**1000**	**500**	**0**	8760
5	Powder Booth	1920		96											8760
6	Incinerator									39,000	624				3120
8	New Melt Furnace #1	23040								1,433,100				23	8760
9	New Melt Furnace #2	23040								1,433,100				23	8760
	Total	**60420**	**8375**	**96**	**7.7**	**9.72**	**31.43**	**58.5**	**148.62**	**3179200**	**624**	**1000**	**500**	**46**	

LAN Associates, Inc.
Ref. #2.392.41
Emission Summary
3/8/2001

Table 3
Hourly Emission Rates Summary

Table 3

Hourly Emission Rates Summary

Air Contruction Permit Application
VAW of America, Inc.
St. Augustine, FL

Emission Unit	Source	PM	PM10	NOx	VOC	MEK	Xylene	CO	SO_2
		Emission Rates							
		lbs/hr							
4	5 Wet Paintbooths				34	10	13.7		
	Bake Oven & Pyrolysis	0.015	0.015	0.485	0.12			0.082	
	OPC Tube Mill				53.36				
	OPC Tube Mill Age Oven	0.018	0.018	0.57	0.015			0.096	
	140 Solvent Cleaning				50				
	Sum	0.033	0.033	1.055	137.495	10	13.7	0.178	
5	Powder Booth	0.25	0.125						
6	Incinerator	1.4	0.94	0.6	0.6			2	0.5
8	#1 Remelter LPG use	0.2	0.2	6.33	0.167	0	0	1.07	0
	#1 Remelter Al melting	1.75	0.875	0	0.421	0	0	17.1	0
	#1 Remelter Degassing	2.5	1.25	0	0	0	0	0	0
	Sum	**4.45**	**2.325**	**6.33**	**0.588**	**0**	**0**	**18.17**	**0**
9	#2 Remelter LPG use	0.2	0.2	6.33	0.167	0	0	1.07	0
	$2 Remelter Al melting	1.75	0.875	0	0	0	0	0	0
	#2 Remelter Degassing	2.50	1.25	0	0	0	0	0	0
	Sum	**4.45**	**2.325**	**6.33**	**0.167**	**0**	**0**	**1.07**	**0**
	Total	**10.6**	**5.7**	**14.3**	**138.9**	**10.0**	**13.7**	**21.4**	**0.5**

Table 4
Annual Emission Summary

Table 4
Annual Emission Summary
Air Construction Permit Application
VAW of America, Inc.
St. Augustine, FL

Emission Unit	Source	PM	PM10	NOx	VOC	MEK	Xylene	CO	SO_2
		Annual Emissions							
		tons/yr							
4	5 Wet Paint booths				31.43	9.72	7.7		
	Bake Oven & Pyrolysis	0.067	0.067	2.12	0.056			0.36	
	OPC Tube Mill				58.5				
	OPC Tube Mill Age Oven	0.015	0.015	0.475	0.013			0.08	
	140 Solvent Cleaning				148.62				
	Pretreatment								0
	SUM	**0.1**	**0.1**	**2.6**	**238.6**	**9.72**	**7.7**	**0.44**	**0**
5	Powder Booth	1.1	0.55			0	0	0	0
6	Incinerator	2.18	1.47	0.94	0.936	0	0	3.12	0.78
8	Remelter #1 LPG use	0.43	0.43	13.6	0.359	0	0	2.29	0
	Remelter #1 Al melting	7.67	3.84	0	0.067	0	0	4.50	0
	Remelter #1 Degassing	1.64	0.82	0	0	0	0	0	0
	Sum	**9.74**	**5.09**	**13.6**	**0.426**	**0**	**0**	**6.79**	**0**
9	Remelter #2 LPG use	0.43	0.43	13.6	0.359	0	0	2.29	0
	Remelter #2 Al melting	7.67	3.84	0	0	0	0	0	0
	Remelter #2 Degassing	1.64	0.82	0	0	0	0	0	0
	Sum	**9.74**	**5.09**	**13.6**	**0.359**	**0**	**0**	**2.29**	**0**
	Total	**22.8**	**12.3**	**30.7**	**240.3**	**9.7**	**7.7**	**12.6**	**0.78**

Attachment 7

Stack Data for Additional Sources in

Emission Unit (EU) 4

STACK DIMENSIONS, AIR FLOW, AND EMISSION CONTROL INFORMATION FOR THE PAINTLINE OPERATIONS

VAW of America, Inc.
St. Augustine, FL

EP	Flow Rate	Stack Diameter	Stack Height	Moisture Content	Standard Flow Rate	Exited Temp.	Control	Control Efficiency
	ACFM		*Ft.*	*%*	*DSCFM*	*°F*		
Booth #1	6000	23" x 23"	30	2	5749	80	Fabric filter	99%
Booth #2	6500	23" x 23"	30	2	6228	80	Fabric filter	99%
Booth #3	5000	23" x 23"	30	2	4790	80	Fabric filter	99%
Booth #4	6000	23" x 23"	30	2	5749	80	Fabric filter	99%
Booth #5	5600	23" x 23"	30	2	5366	80	Fabric filter	99%
OPC Age Oven	4800	1.4'	35	2	2850	300	N/A	N/A
Bake Oven	2500	19" x 14"	30	10	1947	150	N/A	N/A
Pyrolysis	190	0.67'	22	15	58	1000	After Burner	99.85%

Attachment 8

Material Safety Data Sheet of

Solvents for (EU) 4

VISTA

Vista Chemical Company
P.O. Box 19029
Houston, TX 77224

MATERIAL SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

MANUFACTURER'S NAME	VISTA Chemical Company
ADDRESS	P.O. Box 727, Westlake, LA 70669
TRADE NAME	LPA Solvent
SYNONYMS	Paraffinic, Naphthenic Solvent
CAS NUMBER	64742-47-8
REGULAR TELEPHONE NO. (318) 494-5403	EMERGENCY TELEPHONE NO. (318) 494-5142

2. HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	%	HAZARD DATA
This product is a mixture of branched and cyclic aliphatic hydrocarbons.		

3. PHYSICAL DATA

BOILING POINT (°F)	370-518	SPECIFIC GRAVITY (H_2O = 1)	0.806 @ 25°C.
VAPOR PRESSURE (mm Hg.)	0.13 @ 70°F.	MELTING POINT	-73°F.
SOLUBILITY IN WATER	Negligible	VAPOR DENSITY	6.3
APPEARANCE AND ODOR	Water white, oily liquid; hydrocarbon odor.		

4. FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)	144-150°F (PM)		AUTOIGNITION TEMPERATURE		
FLAMMABLE LIMITS IN AIR, % BY VOL.		LOWER	1.2	UPPER	6.0
EXTINGUISHING MEDIA	Foam; carbon dioxide, water spray, dry chemical.				
SPECIAL FIRE FIGHTING PROCEDURES	Stop source of fuel. Keep exposed equipment cool with water spray.				
UNUSUAL FIRE AND EXPLOSION HAZARD	None expected.				

5. HEALTH HAZARD INFORMATION

FIRST AID

EYES:	Flush with large amounts of water for at least 15 minutes. If irritation persists, seek medical aid.
SKIN:	Flush affected areas with water. Remove contaminated clothing, including shoes, then affected area may be washed with mild soap. If irritation occurs, seek medical aid.
INHALATION:	Remove to fresh air. If breathing has stopped, administer artificial respiration or oxygen. If indicated, administer cardiopulmonary resuscitation.
INGESTION:	**Do not induce vomiting.** Seek medical aid.

NATURE OF HAZARD

EYES:	Slight irritation may occur.
SKIN:	Repeated or prolonged skin contact may result in irritation, reddening of skin, progressing to dermatitis.
INHALATION:	Exposure to high concentration of vapors may result in headache and stupor.
INGESTION:	Causes irritation of the stomach and intestines, resulting in nausea and vomiting.

EFFECTS OF OVEREXPOSURE:

ACUTE OVEREXPOSURE:	Irritation, headache, stupor, nausea, vomiting.
CHRONIC OVEREXPOSURE:	Unknown.

THRESHOLD LIMIT VALUE (TLV)

NIOSH recommended TWA of 350 mg/m^3
(Source: Criteria Document—Refined Petroleum Solvents, July 1977)

TOXICITY DATA

SKIN CONTACT:	Acute Dermal LD_{50} in Rabbits: 2.0–4.0 gms/kg Skin Irritation Index (Rabbits): 5.2 (max. score 8.0)
EYE CONTACT:	Eye Irritation Index—Rabbits: 5.0 after one hour (max. score 110)
INHALATION:	No toxicity was observed in rats exposed for one hour to 24.1 mg/l.
INGESTION:	Acute Oral LD_0 in Rats: 39.9 gms/kg

SPECIAL PRECAUTIONS:

6. REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY

High temperatures.

INCOMPATIBILITY

Strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS

None.

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

Stable.

7. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Eliminate all ignition sources. Contain the spill.

NEUTRALIZING CHEMICALS

WASTE DISPOSAL METHOD

Material may be picked up with solid sorbent and landfilled or incinerated according to local, state, and federal regulations.

8. SPECIAL PROTECTION INFORMATION

VENTILATION REQUIREMENTS

Mechanical ventilation should be used when handling material in enclosed spaces.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY (SPECIFY IN DETAIL):

NIOSH-approved organic vapor respirator or air-supplied equipment.

EYE: Chemical goggles and/or face shield.

GLOVES: Rubber gloves.

OTHER CLOTHING AND EQUIPMENT:

Other impervious clothing as necessary to avoid prolonged or repeated skin contact.

9. SPECIAL PRECAUTIONS

HAZARD CLASSIFICATION INFORMATION

IMO HAZARD CLASS AND NUMBER	US DOT HAZARD CLASS
Nonhazardous	Combustible Liquid
UN NUMBER	**US DOT IDENTIFICATION NUMBER**
1270	

TRANSPORTATION AND STORAGE

USUAL SHIPPING CONTAINERS	ELECTROSTATIC ACCUMULATION HAZARD
Tank Cars Tank Trucks	Yes—Ground all equipment.
	STORAGE/TRANSPORT PRESSURE Ambient
STORAGE TRANSPORT TEMPERATURE Ambient	LOADING/UNLOADING TEMPERATURE Ambient
	VISCOSITY AT LOADING/ UNLOADING TEMPERATURE

HANDLING AND STORAGE MATERIALS AND COATINGS

SUITABLE	UNSUITABLE
Carbon Steel	

72-62-7920-01

10070 SOLVENT 140-66 Page: 1

THIS MSDS COMPLIES WITH 29 CFR 1910.1200 (THE HAZARD COMMUNICATION STANDARD)

Product Name: SOLVENT 140-66
CAS NUMBER: 64742-88-7

VWR AMERICA
249 S. 51ST AVE.
PHOENIX, AZ 85005

05 90 041 1102410-182

PRODUCT:
INVOICE: REQST
INVOICE DATE: 04/11/90
TO:

Data Sheet No: 001407-006
Prepared: 08/24/89
Supersedes: 12/08/86

SECTION I GENERAL INFORMATION

General or Generic ID: ALIPHATIC HYDROCARBON

DOT Hazard Classification: COMBUSTIBLE (173.115)

SECTION II HAZARDOUS INGREDIENTS

IF PRESENT, IARC, NTP AND OSHA CARCINOGENS AND CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III SECTION 313 ARE IDENTIFIED IN THIS SECTION. SEE DEFINITION PAGE FOR CLARIFICATION

INGREDIENT	% (by WT)	PEL	TLV	Note
ALIPHATIC PETROLEUM DISTILLATES CAS #: 64742-88-7	100	100 PPM	100 PPM	(1)

Notes:

(1) NIOSH RECOMMENDS A LIMIT OF 350 MG/CUM - 8 HOUR TIME WEIGHTED AVERAGE, 1800 MG/CUM AS DETERMINED BY A 15 MINUTE SAMPLE.

SECTION III PHYSICAL DATA

Boiling Point	for PRODUCT	355.00 Deg F (179.44 Deg C) @ 760.00 mm Hg
Vapor Pressure	for PRODUCT	0.50 mm Hg @ 68.00 Deg F (20.00 Deg C)
Specific Vapor Density	AIR = 1	5.4
Specific Gravity		.770 @ 60.00 Deg F (15.55 Deg C)
Percent Volatiles		100.00%
Evaporation Rate	(ETHER = 1)	151.00

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT 140.0 Deg F (60.0 Deg C)

EXPLOSIVE LIMIT (PRODUCT) LOWER - 1.0% UPPER - 6.0%

EXTINGUISHING MEDIA: REGULAR FOAM OR CARBON DIOXIDE OR DRY CHEMICAL

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

FIREFIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN THE POSITIVE PRESSURE DEMAND MODE WHEN FIGHTING FIRES.

SPECIAL FIRE & EXPLOSION HAZARDS: VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND OR BE MOVED BY VENTILATION AND IGNITED BY HEAT, PILOT LIGHTS, OTHER FLAMES AND IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT.

NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

ALL FIVE GALLON PAILS AND LARGER METAL CONTAINERS INCLUDING TANK CARS AND TANK TRUCKS SHOULD BE GROUNDED AND/OR BONDED WHEN MATERIAL IS TRANSFERRED.

NFPA CODES: HEALTH- 0 FLAMMABILITY- 2 REACTIVITY- 0

SECTION V HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LEVEL 100 PPM

THRESHOLD LIMIT VALUE 100 PPM

EFFECTS OF ACUTE OVEREXPOSURE: FOR PRODUCT

EYES - CAN CAUSE IRRITATION.
SKIN - PROLONGED OR REPEATED CONTACT CAN CAUSE MODERATE IRRITATION, DEFATTING, DERMATITIS.
BREATHING - EXCESSIVE INHALATION OF VAPORS CAN CAUSE NASAL AND RESPIRATORY IRRITATION, CENTRAL NERVOUS SYSTEM EFFECTS INCLUDING DIZZINESS, WEAKNESS, FATIGUE, NAUSEA, HEADACHE AND POSSIBLE UNCONSCIOUSNESS, AND EVEN DEATH.

CONTINUED ON PAGE: 2

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SWALLOWING - CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND DIARRHEA. ASPIRATION OF MATERIAL INTO THE LUNGS CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.

FIRST AID:

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

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

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

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

PRIMARY ROUTE(S) OF ENTRY:

INHALATION, SKIN CONTACT

HAZARDOUS POLYMERIZATION: CANNOT OCCUR

STABILITY: STABLE

INCOMPATIBILITY: AVOID CONTACT WITH:, STRONG OXIDIZING AGENTS.

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

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

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

PREVENT RUN-OFF TO SEWERS, STREAMS OR OTHER BODIES OF WATER. IF RUN-OFF OCCURS, NOTIFY PROPER AUTHORITIES AS REQUIRED, THAT A SPILL HAS OCCURED.

WASTE DISPOSAL METHOD:

SMALL SPILL: DISPOSE OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.

LARGE SPILL: DISPOSE OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.

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

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

PROTECTIVE GLOVES: WEAR RESISTANT GLOVES SUCH AS:, NITRILE RUBBER

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

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

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

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

DEFINITIONS

This definition page is intended for use with Material Safety Data Sheets supplied by the Ashland Chemical Company. Recipients of these data sheets should consult the OSHA Safety and Health Standards (29 CFR 1910), particularly subpart G - Occupational Health and Environmental Control, and subpart I - Personal Protective Equipment, for general guidance on control of potential Occupational Health and Safety Hazards.

SECTION I
PRODUCT IDENTIFICATION

GENERAL OR GENERIC ID: Chemical family or product description.

DOT HAZARD CLASSIFICATION: Product meets DOT criteria for hazards listed.

SECTION II
COMPONENTS

Components are listed in this section if they present a physical or health hazard and are present at or above 1% in the mixture. If a component is identified as a CARCINOGEN by NTP, IARC or OSHA as of the date on the MSDS, it will be listed and footnoted in this section when present at or above 0.1% in the product. Negative conclusions concerning carcinogenicity are not reported. Additional health information may be found in Section V. Components subject to the reporting requirements of Section 313 of SARA Title III are identified in the footnotes in this section, along with typical percentages. Other components may be listed if deemed appropriate.

Exposure recommendations are for components. OSHA Permissible Exposure Limits (PELs) and American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs) appear on the line with the component identification. Other recommendations appear as footnotes.

SECTION III
PHYSICAL DATA

BOILING POINT: Of product if known. The lowest value of the components is listed for mixtures.

VAPOR PRESSURE: Of product if known. The highest value of the components is listed for mixtures.

SPECIFIC VAPOR DENSITY: Compared to AIR = 1. If Specific Vapor Density of product is not known, the value is expressed as lighter or heavier than air.

SPECIFIC GRAVITY: Compared to WATER = 1. If Specific Gravity of product is not known, the value is expressed as less than or greater than water.

pH: If applicable.

PERCENT VOLATILES: Percentage of material with initial boiling point below 425 degrees Fahrenheit and vapor pressure above 0.1mm Hg at 68 F.

EVAPORATION RATE: Indicated as faster or slower than ETHYL ETHER, unless otherwise stated.

SECTION IV
FIRE AND EXPLOSION DATA

FLASH POINT: Method identified.

EXPLOSION LIMITS: For product if known. The lowest value of the components is listed for mixtures.

HAZARDOUS DECOMPOSITION PRODUCTS: Known or expected hazardous products resulting from heating, burning or other reactions.

SECTION IV (cont.)

EXTINGUISHING MEDIA: Following National Fire Protection Association criteria.

FIREFIGHTING PROCEDURES: Minimum equipment to protect firefighters from toxic products of vaporization, combustion or decomposition in fire situations. Other firefighting hazards may also be indicated.

SPECIAL FIRE AND EXPLOSION HAZARDS: States hazards not covered by other sections.

NFPA CODES: Hazard ratings assigned by the National Fire Protection Association.

SECTION V
HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LIMIT: For product.

THRESHOLD LIMIT VALUE: For product.

EFFECTS OF ACUTE OVEREXPOSURE: Potential local and systemic effects due to single or short term overexposure to the eyes and skin or through inhalation or ingestion.

EFFECTS OF CHRONIC OVEREXPOSURE: Potential local and systemic effects due to repeated or long term overexposure to the eyes and skin or through inhalation or ingestion.

FIRST AID: Procedures to be followed when dealing with accidental overexposure.

PRIMARY ROUTE OF ENTRY: Based on properties and expected use.

SECTION VI
REACTIVITY DATA

HAZARDOUS POLYMERIZATION: Conditions to avoid to prevent hazardous polymerization resulting in a large release of energy.

STABILITY: Conditions to avoid to prevent hazardous or violent decomposition.

INCOMPATIBILITY: Materials and conditions to avoid to prevent hazardous reactions.

SECTION VII
SPILL OR LEAK PROCEDURES

Reasonable precautions to be taken and methods of containment, clean-up and disposal. Consult federal, state and local regulations for accepted procedures and any reporting or notification requirements.

SECTION VIII
PROTECTIVE EQUIPMENT TO BE USED

Protective equipment which may be needed when handling the product.

SECTION IX
SPECIAL PRECAUTIONS OR OTHER COMMENTS

Covers any relevant points not previously mentioned.

ADDITIONAL COMMENTS

Containers should be either reconditioned by CERTIFIED firms or properly disposed of by APPROVED firms. Disposal of containers should be in accordance with applicable laws and regulations. "EMPTY" drums should not be given to individuals. Serious accidents have resulted from the misuse of "EMPTIED" containers (drums, pails, etc.). Refer to Sections IV and IX.

Attachment 9

Operating and Maintenance of Scrubber

For #1 Remelting Furnace

OPERATING & MAINTENANCE MANUAL

VAW OF AMERICA

ST. AUGUSTINE, FL

ALUMINUM REMELT SCRUBBER

TURNER ENVIROLOGIC PROJECT NO. 2755

CONTRACT 09315

DECEMBER, 1996

TURNER ENVIROLOGIC, INC.
3439 S.W. 11th Street
Deerfield Beach, FL 33442

II. SYSTEM DESCRIPTION

The system covered by this manual is a wet scrubber system for control of emissions from an aluminum re-melt furnace. The system is designed to quench hot gases from the aluminum furnace, and scrub particulate matter from the airstream.

Gases from the melting operation are drawn from the furnace and delivered to a stack. These gases enter the scrubber system at the stack connection. The hot gas enters the quencher section, where the temperature is reduced by water sprays. Spray lances are staged, with sections being operated as required based on inlet temperatures. The quencher is stainless construction, with spray assemblies, thermocouples, and heat shielding.

After leaving the quencher, the gases enter the venturi for scrubbing. A variable throat maintains pressure drops in spite of varying air flows to maximize scrubbing efficiency. Following the venturi, a cyclonic separator removes the scrubbing water, and allows the cleaned gas to discharge through the system fan to the stack.

A recirculating water system is provided to deliver scrubbing solution to the venturi scrubber. Water is withdrawn from the sump tank at the base of the scrubber by a centrifugal pump and

delivered to the distribution header for distribution to the nozzles. The scrubbing solution travels vertically downward through the venturi, wetting the walls and mixing with the airstream in the throat. The solution drains from the separator back into the recirculating sump. A portion of the recirculated solution is bled away via a bleed-off line at the pump discharge to control solids buildup in the scrubbing solution.

A level control system monitors the level of solution in the scrubber sump. This monitor consists of a "bubbler" utilizing compressed air to bubble a small amount of air into the sump tank. The resultant back pressure, caused by the level of liquid in the sump, is displayed on the level controller, and compared to the setpoint. Additional water is added at the inlet of the venturi to bring the sump level to the required point.

III. SYSTEM PARAMETERS

The following parameters are provided to help define the overall system:

INLET PARAMETERS

Inlet Air Volume	11,391 - 28,477 acfm
Inlet Gas Temperature	1400°F (max.)
Inlet Gas Pressure	- 4.5 " w.c.
Electrical Service	480 VAC 60 Hz, 3ph

QUENCHER DATA

Inlet Temperature	1400°F
Water Evaporated:	
Average	20.4 GPM
Maximum	2.4 GPM
Outlet Temperature	170 - 600°F

SCRUBBER DATA

Venturi Pressure Drop	18" w.c.
Separator Diameter	5'-6"
Sump Capacity	2250 gallons
Material	A-36
Stack Diameter	2'-3"
Stack Height	55' A.G.

FAN DATA

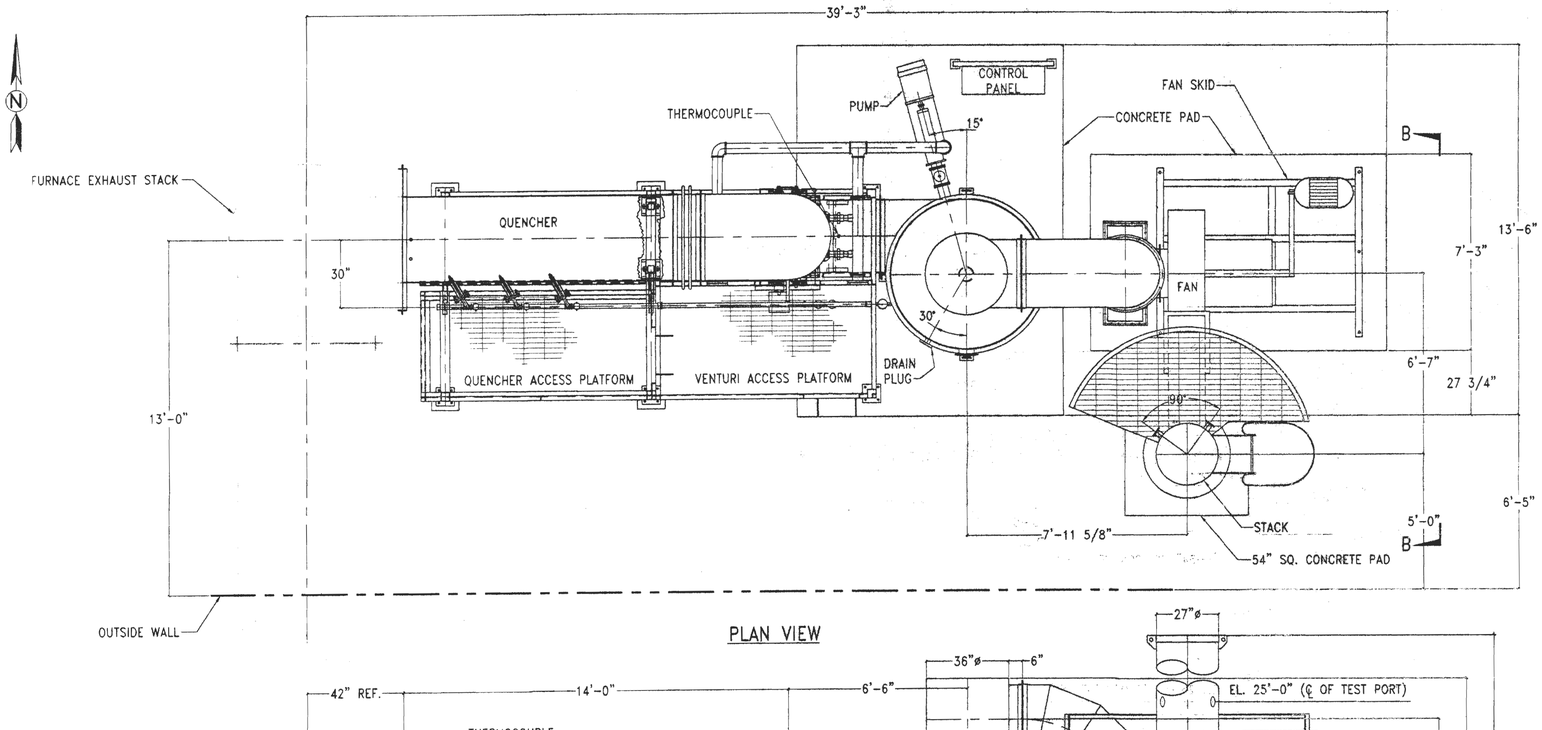
Manufacturer	Air-Tech
Model	365-80
RPM	2150
Horsepower	76.5
Motor HP	100
Motor type	TEFC

PUMP DATA

Manufacturer	Deming
Model	DE1-4011-3S
Construction	Cast iron
RPM	1750
BHP	3.3
Motor HP	5 HP
Motor Type	TEFC-184T
Flow	225 GPM
Head	50' TDH

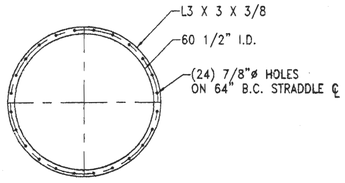
Attachment 10

Drawing of Scrubber Design

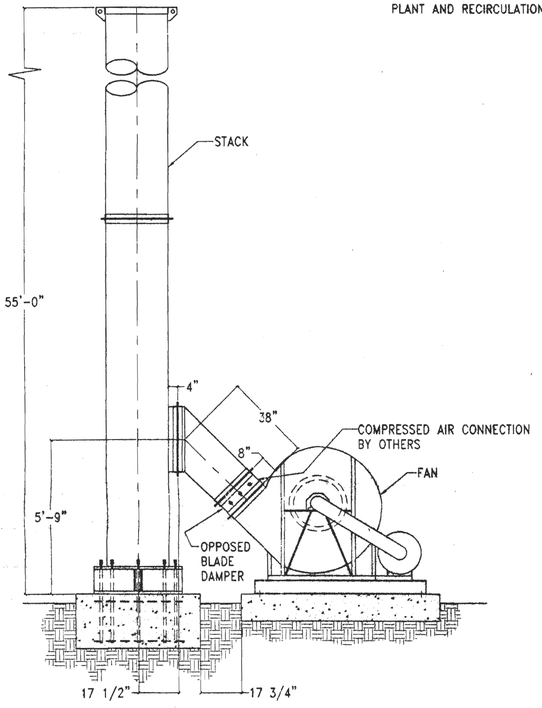


PLAN VIEW

ELEVATION VIEW



VIEW A-A



VIEW B-B

PLATFORM AND LADDER NOT SHOWN

SPECIFICATIONS

QUENCHER – 304 STAINLESS STEEL. INCLUDES THERMOCOUPLES, AND SPRAY NOZZLE ASSEMBLIES.

VENTURI – 304 STAINLESS STEEL SHELL, FLANGES, NOZZLES, AND INTERNAL WATER DISTRIBUTION.
VARIABLE THROAT FOR ±20% FLOW
DIRECT MOUNTED ELECTRIC OPERATOR FOR THROAT ACTUATION.

SEPARATOR – 304 STAINLESS STEEL SHELL, INLET BAFFLE, AND CREEP RING. FLANGES = 2 X 2 X 1/4" ANGLE. STIFFENERS = 2 X 2 X 1/4" ANGLE. CONICAL BOTTOM. A-36 SUPPORT LEGS.

SUMP TANK – A-36 CONSTRUCTION. CAPACITY = 1,000 GALLONS.

DUCTWORK – 304 STAINLESS STEEL. FLANGES = 2 X 2 X 1/4
304 STAINLESS STEEL.

FAN – AIR TECH 365-80 IRT. ARRANGEMENT 1X; CLASS 50;
14000 cfm @ 23" W.C.; 2150 RPM, 76.5 BHP. INCLUDES
100 HP TEFC 1770 RPM MOTOR.

PUMP – DEMING 3S-DE1-4011 CENTRIFUGAL. 4" INLET, 3" OUTLET;
225 GPM @ 50' TDH; 5 HP TEFC MOTOR.
PUMP, ALL IRON W/STAINLESS STEEL SHAFT, DOUBLE MECHANICAL SEAL, BASE PLATE MOUNTED.

CONTROL PANEL – NEMA 4, WITH MOTOR CONTROLS, STARTERS, DISCONNECT, AND ALLEN BRADLEY SLC504 PLC. 480 VOLT/3PH/60 Hz INPUT.

STACK – A-36 MILD STEEL, INCLUDING (2) 4"ø TEST PORTS, 120° PLATFORM AND CAGED LADDER.

PLANT AND RECIRCULATION WATER PIPING – GALVANIZED.

NOTES

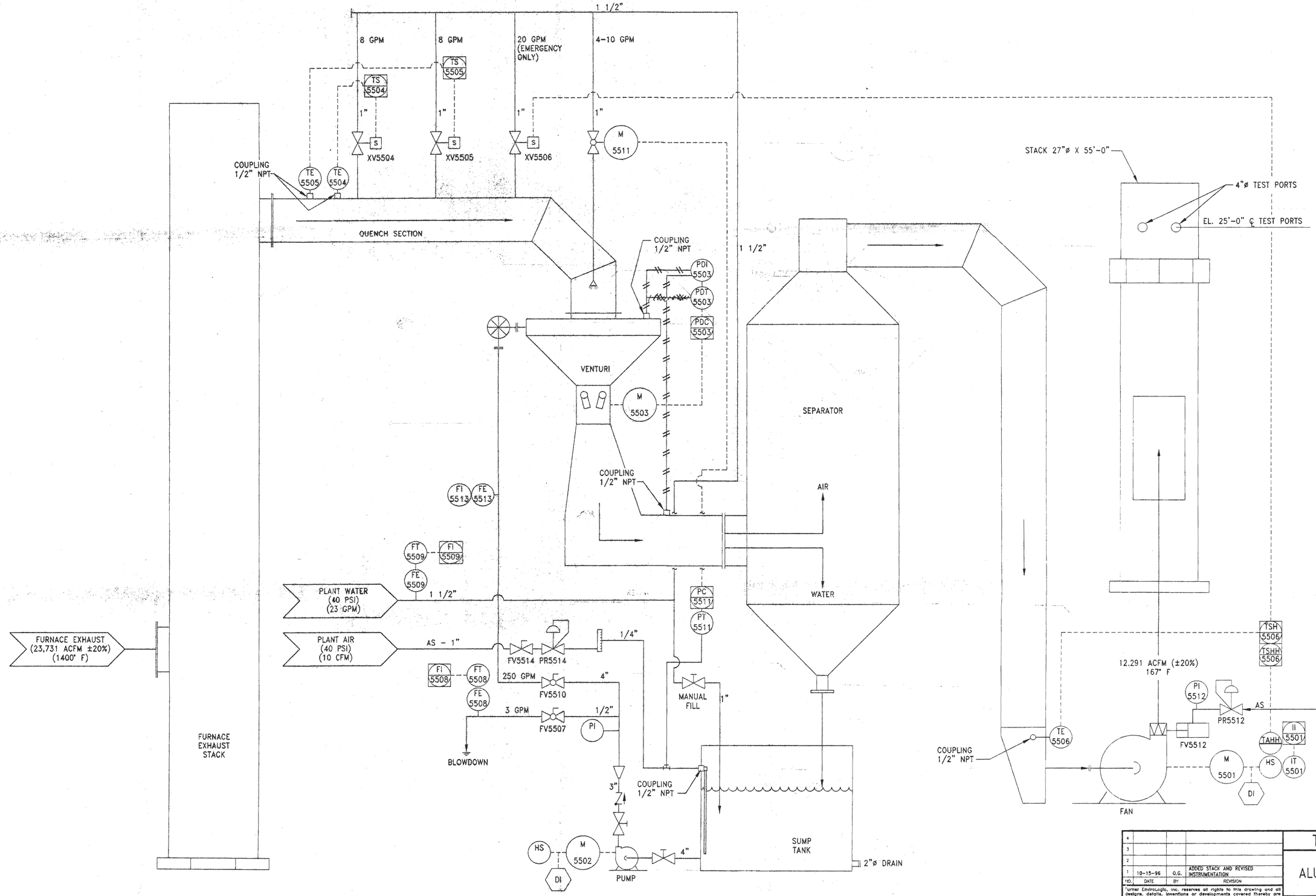
1. ALL WELDED CONSTRUCTION PER AWS D1.1.
2. SEPARATOR AND VENTURI TO BE WELDED FOR WATER TIGHT OPERATION.
3. ALL EXTERNAL CARBON STEEL (A-36) SURFACES SHALL BE PAINTED WITH ZINC CHROMATE PRIMER AND EPOXY TOP COAT.
4. ALL CONCRETE FOUNDATIONS SHALL BE DESIGNED AND PROVIDED BY VAW OF AMERICA. SEE DWG 2820 FOR FOUNDATION DATA.

NO.	DATE	BY	REVISION
4			
3			
2			
1	10-10-96	O.G.	CHANGED ELEVATIONS ADDED STACK INFORMATION

TURNER ENVIROLOGIC, INC.

VAW
ALUMINUM REMELT SCRUBBER
GENERAL ARRANGEMENT

DRAWN BY O.G.	SCALE 3/8"=1'	PG# 0	
CHECKED	DATE 07-17-96	DRAWING NO. 2763	REV 1
APPROVED	PROJECT 2755		



NO.	DATE	BY	REVISION
4			
3			
2			
1	10-15-96	O.G.	ADDED STACK AND REVISED INSTRUMENTATION

TURNER ENVIROLOGIC, INC.

VAW OF AMERICA
ALUMINUM REMELT SCRUBBER
P&ID

DRAWN BY	O.G.	SCALE	NONE
CHECKED		DATE	06-24-96
APPROVED		PROJECT	2755
		PO#	0
		DRAWING NO.	2753
		REV	1

Attachment 11

Remelting Furnace Stack Data (September 20, 2000)

2.392.41

TSI

Volumetric Flow and Emission Output - Table I

FACILITY: VAW Aluminum
LOCATION: St. Augustine, Fl.

SOURCE: Remelt Furnace No. 1 (EU008)

Date	Run Number	Particulate Emissions GR/SCF	LB/HR	Vol. Flow Rate ACFM	SCFMD	Percent O2	Stack Temp 'F	Percent H20	Percent Isokinetic
9/20/00	1	0.0033	0.26	13168.0	9076.0	9.2	145.8	20.9	95.7
9/20/00	2	0.0040	0.31	13419.0	9096.0	9.0	145.1	22.3	93.5
9/20/00	3	0.0038	0.29	13196.0	9041.0	9.5	149.9	20.8	96.2
	Mean	0.0037	0.29	13261.0	9071.0	9.2	146.9	21.3	95.1

Mean determined as arithmetic average of the results for each of the three runs.

REMARKS: Alowable Emissions = 12.74 lbs/hr

T S I

Volumetric Flow and Emission Output - Table II

FACILITY: VAW Aluminum
LOCATION: St. Augustine, Fl.

SOURCE: No. 2 Remelt Furnace (EU009)

Date	Run Number	Particulate Emissions GR/SCF	Particulate Emissions LB/HR	Vol. Flow Rate ACFM	Vol. Flow Rate SCFMD	Percent O2	Stack Temp 'F	Percent H20	Percent Isokinetic
9/20/00	**1**	0.0050	0.44	25111.0	10257.0	11.8	696.3	10.6	98.7
9/20/00	**2**	0.0026	0.22	26150.0	9730.0	11.7	809.4	10.6	95.3
9/20/00	**3**	0.0047	0.38	27207.0	9534.0	12.0	872.8	11.6	92.4
	Mean	0.0041	0.35	26156.0	9840.3	11.8	792.8	10.9	95.5

Mean determined as arithmetic average of the results for each of the three runs.

REMARKS: Allowable Emissions = 12.74 lbs/hr

Attachment 12

MSDS for Fluxing Agents

Material Safety Data Sheet

Pyroflux P-1 Cover P Flux

9503 E. Montgomery Ave • Spokane WA 99206 USA • Ph: (509) 926-6212 • Fax: (509) 927-2408

Section I — Product Identity

Identity: Pyroflux P-1 Cover P Flux
Synonyms: P-1 Cover P Flux
MSDS Date: 01/01/2000
Verified as Current:
Description: Advanced Cover flux with Mild Cleaning Action. Intended for scrap recovery operations seeing high levels of hydrocarbon based paint and other tramp materials.

Section II — Hazardous Ingredients and Exposure Limits

Hazardous Components	CAS	% [1]	Exposure Limits
Sodium Cryolite (K_2AlF_6 Fluorides	15096-52-3	<10	PEL/TLV: 2.5 mg/m^3 for

Formula: Proprietary mixture

[1] Optional. May not be listed if component composition is proprietary.

Section III — Physical/Chemical Characteristics

Boiling Point: N/A
Vapor Pressure: N/A
Vapor Density: N/A
Solubility in Water: Soluble
Specific Gravity: 70-80 lb/cu. ft. (Bulk Density)
Melting Point: N/A
Evaporation Rate: N/A
Chemical Family: N/A
Appearance and Odor: White powder; odorless.

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used): None
Flammable Limits: Non-flammable LEL: N/A UEL: N/A
Extinguishing Media: Use agent appropriate for surrounding fire.
Special Fire Fighting Procedures: Wear self-contained breathing apparatus and protective clothing.
Unusual Fire and Explosion Hazards: Fire may produce hazardous decomposition products such as hydrogen fluoride (HF).

Section V — Reactivity Data

Stability: Stable
Conditions to Avoid: None
Incompatibility (Materials to Avoid): Reducing agents, acids.
Hazardous Decomposition or Byproducts: Hydrogen Fluoride (HF)
Hazardous Polymerization: Will Not Occur
Conditions to Avoid: None

Section VI — Health Hazard Data

Primary Route(s) of Entry: Inhalation? Unknown Skin? Unknown Ingestion? Unknown Eyes? Unknown
Target Organs: Unknown.

TOXICOLOGY TEST DATA: Sodium Cryolite (Na2A1F6)
Threshold Limit Value (TLV) for Fluorides as F-: 2.5 mg/m3
OSHA Permissible Exposure Limit (PEL): 2.5 mg/m3
Toxicity (oral-Rat) LD50: 180 mg/kg

Health Hazards (Acute and Chronic): ACUTE: This product causes irritation of the skin, eyes and mucous membranes. Inhalation of fluorides can cause pulmonary edema. Ingestion of fluorides can cause weakness, tremors, convulsions, and collapse.

CHRONIC: Can cause irritation of the skin, eyes and mucous membranes. Ingestion or inhalation of fluorides can cause fluorosis, kidney and liver damage, and bone damage.

Carcinogenicity: NTP? Unknown IARC Monographs? Unknown OSHA Regulated? Unknown

Signs and Symptoms of Exposure —

Eyes: Irritation

Skin: Irritation

Ingestion: Ingestion of fluorides can cause weakness, tremors, convulsions, and collapse. May also cause fluorosis, kidney and liver damage, and bone damage.

Inhalation: Inhalation of fluorides can cause pulmonary edema. Prolonged inhalation of fluorides can cause fluorosis, kidney and liver damage, and bone damage.

Conditions Aggravated by Exposure: People with pre-existing lung, eye or skin disorders may be more susceptible to fluoride exposure.

Emergency and First Aid Procedures —

Eyes: Immediately rinse eyes with running water for 15 minutes. If irritation develops, seek medical attention.

Skin: Wash affected area with soap and water. Remove and launder contaminated clothing before reuse. If irritation develops, seek medical attention.

Ingestion: If person is conscious, give large amounts of water and induce vomiting. NEVER give liquids to, or induce vomiting in, an unconscious person. Seek immediate medical attention.

Inhalation: Move affected person to fresh air. Perform artificial respiration, if necessary. Seek immediate medical attention.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled: Contain spilled material. Place spilled material in suitable containers. Recovered material may be used if not contaminated.

Waste Disposal Method: Disposal must be made in accordance with federal, state and local laws.

Precautions to Be Taken in Handling and Storing: No special handling procedures required. Use normal good housekeeping procedures. Keep containers closed. Store in a dry location.

Other Precautions: None

Section VIII — Control Measures

Respiratory Protection (Specify Type): Wear NIOSH approved dust respirator.

Ventilation —

Local Exhaust: Use local exhaust/dust collector to control dust.

Mechanical (General): N/A

Special: N/A

Other: N/A

Skin Protection: Wear gloves, coveralls, apron, and boots as needed to prevent contact.

Eye Protection: Wear goggles, safety glasses and/or face shield.

Other Protective Clothing or Equipment: Eyewash fountains and safety showers should be easily accessible. Wash hands after handling.

Work/Hygienic Practices: N/A

Section IX — Additional Information

Additional Information: The information contained in this document is provided without warranty, express or implied, except that it is true to the best of Pyrotek's knowledge. The information on this sheet relates only to the specific material designated herein and Pyrotek, Inc. assumes no legal liability for the use or reliance upon the data by any other party .

Section X — Regulatory Information

Regulatory Information: No regulatory information.

Material Safety Data Sheet

ZENDOX SF

9503 E. Montgomery Ave • Spokane WA 99206 USA • Ph: (509) 926-6212 • Fax: (509) 927-2408

Section I — Product Identity

Identity: ZENDOX SF
Synonyms: ZENDOX SF
MSDS Date: 08/06/99
Verified as Current:
Description: Flux to remove sodium, calcium and lithium from wrought aluminum alloys.

Section II — Hazardous Ingredients and Exposure Limits

Hazardous Components	CAS	% [1]	Exposure Limits
Magnesium Chloride	7786-30-3	<70	OSHA PEL: 15 mg/M^3 ACGIH TLV: 10 mg/M^3

All components of this product are included on the EPA TSCA Chemical Substance Inventory.

[1] Optional. May not be listed if component composition is proprietary.

Section III — Physical/Chemical Characteristics

Boiling Point: N/A
Specific Gravity: 1.0 g/cc
Vapor Pressure: N/A
Melting Point: N/A
Vapor Density: N/A
Evaporation Rate: N/A
Solubility in Water: Appreciable
Chemical Family: N/A
Appearance and Odor: White flaky mixture; no odor.

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used): None
Flammable Limits: N/A LEL: N/A UEL: N/A
Extinguishing Media: Product will not burn. Use extinguishing media suitable for surrounding fire.
Special Fire Fighting Procedures: N/A
Unusual Fire and Explosion Hazards: N/A

Section V — Reactivity Data

Stability: Stable
Conditions to Avoid: None
Incompatibility (Materials to Avoid): Acid and acid fume
Hazardous Decomposition or Byproducts: Small quantities of chlorides
Hazardous Polymerization: Unknown
Conditions to Avoid: None

Section VI — Health Hazard Data

Primary Route(s) of Entry: Inhalation? Yes Skin? Yes Ingestion? Unknown Eyes? Yes
Target Organs: Unknown.
Health Hazards (Acute and Chronic): ACUTE: May cause skin and eye irritation.
CHRONIC: None expected.
Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No
Signs and Symptoms of Exposure —
Eyes: Irritation
Skin: Irritation

Ingestion: Not a likely route of entry.
Inhalation: Irritation to respiratory system.
Conditions Aggravated by Exposure: Pre-existing skin ailments.
Emergency and First Aid Procedures —
Eyes: Immediately flush eyes with water for at least 15 minutes.
Skin: Immediately wash affected areas with cold water.
Ingestion: N/A
Inhalation: Remove affected person to fresh air.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled: Sweep up or pick up with vacuum cleaner. Minimize dust levels.
Waste Disposal Method: Disposal must be made in accordance with federal, state and local laws.
Precautions to Be Taken in Handling and Storing: Store in dry place below 150° F. Minimize skin contact. Product is hygroscopic. Keep in original packaging.
Other Precautions: None

Section VIII — Control Measures

Respiratory Protection (Specify Type): If PEL/TLV is exceeded use NIOSH approved mask.
Ventilation —
Local Exhaust: As needed to maintain dust levels at or below recommended levels.
Mechanical (General): Recommended sufficient to maintain below PEL/TLV.
Special: N/A
Other: N/A
Skin Protection: PVC gloves
Eye Protection: Safety glasses
Other Protective Clothing or Equipment: None
Work/Hygienic Practices: Please ensure that all persons coming into contact with this product are aware of the information contained in this MSDS Sheet. Information presented herein has been compiled from sources considered to be reliable and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. It is the user's responsibility to determine for himself the suitability of any material for a specific use and to adopt such safety precautions as may be necessary. If you need any further information from us to make the determinations which you must make to use this material safely, please contact your Pyrotek Sales Engineer.

Section IX — Additional Information

Additional Information: The information contained in this document is provided without warranty, express or implied, except that it is true to the best of Pyrotek's knowledge. The information on this sheet relates only to the specific material designated herein and Pyrotek, Inc. assumes no legal liability for the use or reliance upon the data by any other party.

Section X — Regulatory Information

Regulatory Information: All components of this product are included on the EPA TSCA Chemical Substance Inventory.

The above listed product contains no toxic chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CR Part 372, based upon our knowledge of the raw materials comprising this product.