REDACTED

Chattanooga-Hamilton County Air Pollution Control Bureau
3511 Rossville Boulevard
Chattanooga, TN 37407-2495

Major Source Operating Permit Application
Index of Air Pollution Permit Application Forms

Please indicate below the number of each form included in this application

Category	*Form Number, Form Name*	*Total Number*
Administration *(One of each form.)*	Form 70-01, Facility Identification	1
	Form 70-02, Operations and Flow Diagrams	1
Emissions Source Description *(One form for each incinerator, printing operation, fuel burning equipment, etc.)*	Form 70-03, Stack Identification	1
	Form 70-04, Fuel Burning Equipment	0
	Form 70-06, Storage Tanks	0
	Form 70-07, Incineration	0
	Form 70-08, Printing Operations	0
	Form 70-09, Painting and Coating	0
	Form 70-10, Miscellaneous Processes	1
Air Pollution Control System *(One form for each control system in use at the facility.)*	Form 70-11, Miscellaneous/General Control Equipment	0
	Form 70-12, Condensers	0
	Form 70-13, Adsorbers	0
	Form 70-14, Catalytic or Thermal Oxidation Equipment	0
	Form 70-15, Cyclones/Settling Chambers	0
	Form 70-16, Electrostatic Precipitators	0
	Form 70-17, Wet Collection Systems	0
	Form 70-18, Baghouse/Fabric Filters	0
Compliance Demonstration *(One form for each incinerator, printing operation, fuel burning equipment, etc.)*	Form 70-19, Compliance Certification - Monitoring and Reporting - Description of Methods for Determining Compliance	1
	Form 70-20, Continuous Emissions Monitoring	0
	Form 70-21, Portable Monitors	0
	Form 70-22, Control System Parameters or Operating Parameters of a Process	1
	Form 70-23, Monitoring Maintenance Procedures	0
	Form 70-24, Stack Testing	0
	Form 70-25, Fuel Sampling and Analysis	0
	Form 70-26, Record Keeping	1
	Form 70-27, Other Methods	0
	Form 70-28, Emissions from Process Emissions Sources/ Fuel Burning Equipment / Incinerators	1
Summary / Certification *(One of each form.)*	Form 70-29, Emissions Summary for the Facility or for the Source Contained in This Application	1
	Form 70-30, Current Emissions Requirements and Status	1
	Form 70-31, Compliance Plan and Compliance Certification	1

(Form 70-Index Continued)

10946580

MWPS004459

Statement of Completeness and Certification of Compliance

I have reviewed this application in its entirety and do make oath that, to the best of my knowledge, and based on information and belief formed after reasonable inquiry, the statements and information contained in this application are true, accurate, and complete. I have provided all the information that is necessary for compliance purposes. This aplication consists of 13 pages and they are numbered from page 01 to 13. The status of this facility's compliance with all applicable air pollution control requirements, including the enhanced monitoring and compliance certification requirements of the Federal Clean Air Act, is reported in this application along with the methods to be used for compliance demonstration.

Name and Title of Responsible Official	Telephone Number with Area Code
Wayne A. Berry, Plant Manager	423-752-3825
Signature of Responsible Official	**Date of Application**
Wayne A. Berry	5-18-99

(See Instructions for Form 70-01 for definition of Responsible official.)

State of Tennessee

County of Hamilton

Sworn to and subscribed before me this 18th day of May, 1999.

Charlene S. Hood
Notary Public

My commission expires: 2-10-2001

(This document must bear the notary's seal.)

Major Source Operating Permit Application
Facility Identification

Form 70-01

1	Facility Name	United States Pipe and Foundry Company, Inc.	For APCB use only	Company No.
	Owner's Name if different from the facility name:	Walter Industries, Inc.		
	Mailing Address	P.O. Box 311		
	City, State, Zip Code	Chattanooga, TN 37401-0311		
2	Facility's Location (St/Rd/Hwy)	2501-2701 Chestnut Street		
	County Name	Hamilton		
	City, State, Zip Code	Chattanooga, TN 37408		
	Telephone # (including area code)	(423)752-3800		
3	Facility's Primary Activity and all Applicable SIC Codes:	Manufacturing and servicing valve and fittings, 3321		
4	Contact Person for this Facility	Dennis Urbaniak		
	Title	Project Engineer		
	Telephone # (including area code)	(423)752-3912		
5	If Facility is located in an area designated as "Nonattainment", indicate the pollutant(s) for the designation.	Not applicable		
6	List all air pollution permits issued to the sources contained in this application[identify all permits with most recent permit numbers and emission source reference numbers listed on the permit(s)]	Installation Permit No. 3321-30400330-621		
7	Permit requested for:	[ ] Initial Application to operate [ ] Relocation to operate [X] Modification [ ] Permit renewal to operate [ ] Revision (Administrative Amendments)		
8	Owner's registered agent's name	CT Corporation Sytem, Supervisor of Process /SP		
	Registered agent's address for service of process	350 Gay Street, Knoxville, TN 37902		
	Telephone # (including area code)	(423) 546-8030		
9	Is this facility subject to the provisions governing prevention of accidental releases of hazardous air contaminants contained in Section 112(r)(7) of the Clean Air Act?	[ ] Yes [X] No		
	If yes, are you in compliance with the provisions of Section 112(r)(7) of the Clean Air Act?	[ ] Yes [X] No		
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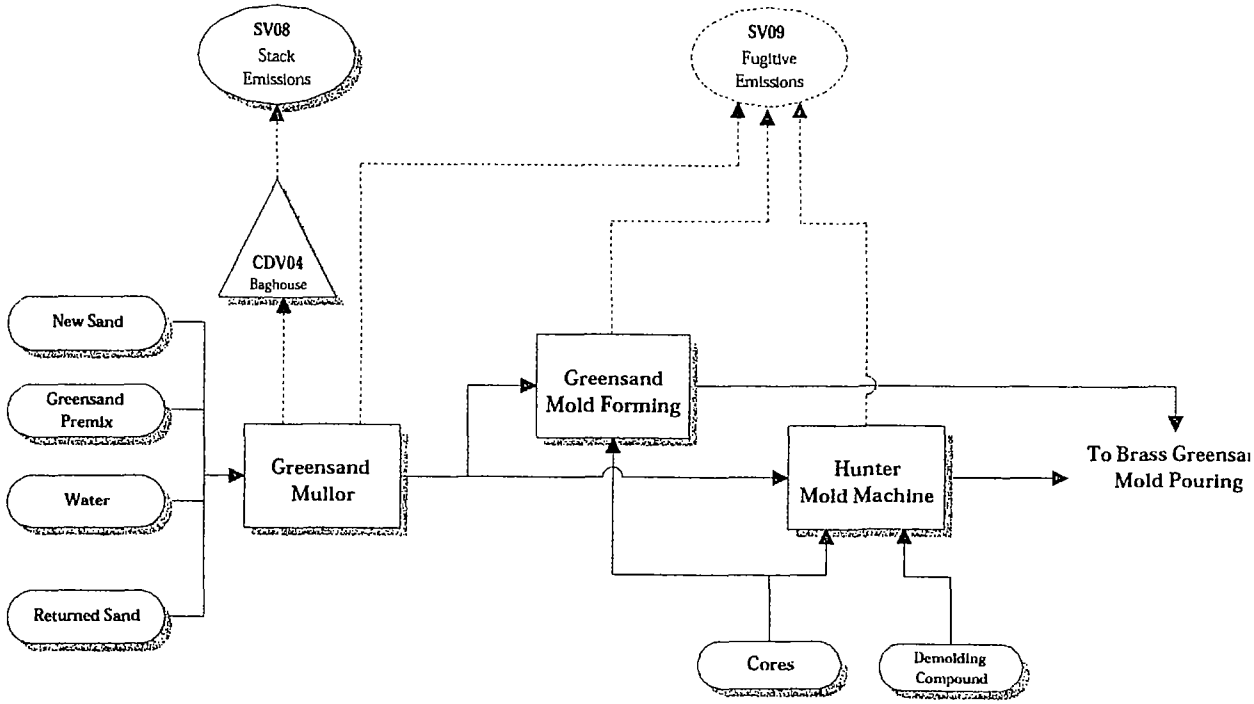
1	List, identify, and describe briefly process emission sources, fuel burning equipment, and incinerators that are contained in this application. Attach a flow diagram for this application. Attach additional pages as needed.	This application is submitted for a Title V permit modification to include the new emission source EV051 Hunter Molding Machine (Permit No. 3321-30400330-62I) into the operating permit for U.S. Pipe and Foundry Company, Inc.'s Chattanooga Valve and Fittings Plant. This emission source is a flaskless automatic greensand molding machine installed at the Emission Unit 204 Valve Plant Mold Making Operations (U.S. Pipe's designation for this area is "Valve & Hydrant Plant - V004 Greensand Mold Making".) A flow diagram for this area is attached. Emissions from this emission source are TSP emissions from greensand handling and VOC emissions from demolding compounds. These emissions are considered fugitive emissions: first released inside the brass foundry building, then emitted to the atmosphere via the building eaves and roof exhaust fans.
2	List all insignificant activities which are exempted because of size or production rate and cite the applicable local regulations.	Not applicable for this emission source.
3	Are there any storage piles?	☐ Yes ☒ No
4	List the states that are within 50 miles of this facility.	Alabama and Georgia
5	Page Number 04	Revision Number / Date of Revision

Valve & Hydrant Plant - Greensand Mold Making Process Flow
V004



LEGEND

V	Process / Em. Unit ID	——▶	Material Flows
CDV	Abatement Device	- - - ▶	Emission Flows
SV	Emission Point	- - - ▶	Insignificant Emissions
SV	Stack Emissions	F	Fugitive Emissions

Unit — Process / Emission Unit

Insignificant / Trivial Sources

(Gray Text) No Emissions or Emissions Accounted Elsewhere

Major Source Operating Permit Application
Stack Identification

Form 70-03

1	Facility Name	U.S. Pipe and Foundry Company, Inc.	For APCB use only	Company No.
2	Stack ID (or flow diagram point identification)	SV09 Fugitive Emissions from Greensand Molding Operations		
3	Give identification number for each process that emits through this stack	EV051 Hunter Molding Machine		
4	Stack height above grade (feet)	Not Applicable		
5	Velocity (data at exit conditions) in actual feet per second	Not Applicable		
6	Inside dimensions at outlet in feet	Not Applicable		
7	Exhaust flow rate at exit conditions (ACFM)	Not Applicable		
8	Flow rate at standard conditions (DSCFM)	Not Applicable		
9	Exhaust temperature (degrees fahrenheit)	Ambient		
10	Moisture content (data at exit conditions)(percent)	Ambient		
11	Stack location (coordinates in meters)	UTM North 3877.376 km	UTM East Zone 16 - 653.395 km	
12	If this stack is equipped with continuous pollutant monitoring equipment required for compliance, what pollutant(s) does this equipment monitor (e.g., opacity, SOx, NOx, etc.)?			

COMPLETE THE APPROPRIATE FORM(S) 70-04, 70-06, 70-07, 70-08, 70-09, OR 70-10 FOR EACH SOURCE EMITTING FROM THIS STACK.

13	Is there a bypass stack?	☐ Yes	☒ No
	If yes, describe the conditions which require its use & complete form 70-03 for the bypass stack. Please identify the stack number(s) or flow diagram point number(s) exhausting through this bypass stack.		

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3511 Rossville Boulevard
Chattanooga, Tennessee 37407-2495

Major Source Operating Permit Application
Miscellaneous Processes

Form 70-10

1	Facility name	U.S. Pipe and Foundry Company, Inc.		
2	Equipment identification #:	EV051 Hunter Molding Machine		
3	Stack ID (or flow diagram point identification)	SV09		
4	**IF THE EMISSIONS ARE CONTROLLED FOR COMPLIANCE, ATTACH THE APPROPRIATE AIR POLLUTION CONTROL SYSTEM FORM.**			
5	Normal operating schedule	20 Hours/Day	5 Days/Week	240 Days/Year
6	Year of construction or last modification	1999		
7	Describe this process (attach a flow diagram for the process) and check one of the following	Greensand molds are continuously produced by the Hunter Molding Machine.	☐ Batch ☒ Continuous	

8 — DESCRIBE THE TYPES AND AMOUNTS OF RAW MATERIALS INPUT TO THIS PROCESS

Material	Storage/material handling process	Average usage (units)	Maximum usage (units)
Activated greensand		5100 tpy	9500 tpy
Demolding Compounds		376 gal/yr	700 gal/yr

9 — LIST THE TYPES AND AMOUNTS OF PRIMARY PRODUCTS PRODUCED BY THIS PROCESS

Material	Storage/material handling process	Average amount produced (units)	Maximum amount produced (units)
Greensand molds		5100 tpy	9500 tpy

10 — PROCESS FUEL USAGE

Type of fuel	Maximum heat input (million BTU/HR)	Average usage (units)	Maximum usage (units)
None			

11	List any solvents, cleaners, etc., associated with this process:	None
12	**IF THE EMISSIONS AND/OR OPERATIONS OF THIS PROCESS ARE MONITORED FOR COMPLIANCE, PLEASE ATTACH THE APPROPRIATE COMPLIANCE DEMONSTRATION FORM.**	
13	Describe any fugitive emissions associated with this process, such as outdoor storage piles, open conveyors, open air sand blasting, material handling operations, etc. (Attach a separate sheet if necessary)	Emissions are considered as fugitive emissions vented through the brass foundry building eaves and exhaust vents. See attached Fact Sheet for Emissions Unit 204, V004-EV051.
14	Location of this equipment in UTM coordinates:	North 3877.376 km — East Zone 16 - 653.395 km
15	Page Number 06	Revision Number — Date of Revision

Major Source Operating Permit Application
Compliance Certification - Monitoring and Reporting
Description of Methods Used for Determining Compliance

Form 70-19

All sources that are subject to the Part 70 Operating Permit Program Ordinance/Regulation are required to certify compliance with all applicable requirements by including a statement within the permit application of the methods used for determining compliance This statement must include a description of the monitoring, recordkeeping, reporting requirements, and test methods. In addition, the application must include a schedule for compliance certification submittals during the permit term. These submittals must be no less frequent than annually and may need to be more frequent if specified by the underlying applicable requirement or the director, Chattanooga-Hamilton County Air Pollution Control Bureau.

1	Facility name	U.S. Pipe and Foundry Company, Inc.		
2	Process emission source, fuel burning equipment, or incinerator (identify and include equipment identification number):	V004 Valve & Hydrant Plant - Greensand Mold Making - Hunter Machine		
3	Stack ID or flow diagram point identification	SV09		
4	This source as described under item # 2 of this application will use the following method(s) for determining compliance with applicable requirements (and special operating conditions for existing permit(s)). Check all that apply and attach the appropriate form(s).		Continuous emissions monitoring (CEM) - Form 70-20 Pollutant(s):	Not Applicable
			Emission monitoring using portable monitors - Form 70-21 Pollutant(s):	Not Applicable
		X	Monitoring control system parameters or operating parameters of a process - Form 70-22 Pollutant(s):	Tons of sand and greensand binder processed.
			Monitoring maintenance procedures - Form 70-23 Pollutant(s):	Not Applicable
			Stack testing - Form 70-24 Pollutant(s):	Not Applicable
			Fuel sampling & analysis (FSA) - Form 70-25 Pollutant(s):	Not Applicable
		X	Recordkeeping - Form 70-26 Pollutant(s):	VOC usages (demolding compounds)
			Other (please describe) - Form 70-27 Pollutant(s):	Not Applicable
5	Compliance certification reports will be submitted to the Bureau according to the following schedule:			
	Start date:	180 days after revision of Part 70 permit		
	and every	365	days thereafter	
6	Compliance monitoring reports will be submitted to the Bureau according to the following schedule:			
	Start date:	180 days after revision of Part 70 permit		
	and every	365	days thereafter	
7	Page Number 07	Revision Number	Date of Revision	

Major Source Operating Permit Application

Compliance demonstration by monitoring control system parameters or operating parameters of a process

Form 70-22

The monitoring of a control system parameter or a process parameter shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value and the emission rate of a particular pollutant is established.

1	Facility name	U.S. Pipe and Foundry Company, Inc.
2	Stack ID (or flow diagram point identification(s))	SV09
3	Emission source (identify and include equipment identification number)	EV051 Hunter Molding Machine.
4	Pollutant(s) being monitored	TSP and VOC
5	Description of the method of monitoring and correlation between the parameter value and the emission rate of a particular pollutant	The method of monitoring for Hunter Molding Machine is based on the tons of greensand processed. The "tons of greensand" parameter is the emission factor basis for both the TSP and VOC emissions (i.e., 0.05 lb of TSP per ton of greensand and 0.304 lb of VOC per ton of greensand, respectively.) Maximum hourly TSP emissions: (0.05 lb/ton of greensand) x (9500 ton/yr) / (2400 hr/yr) x (1-67% settling factor) = 0.065 lb/hr. Maximum annual TSP emissions: (0.05 lb/ton of greensand) x (9500 ton/yr) x (1-67% settling factor) / (2000 lb/ton) = 0.078 TPY. Maximum hourly VOC emissions: (0.304 lb/ton of greensand) x (9500 ton/yr) / (2400 hr/yr) = 1.20 lb/hr. Maximum annual VOC emissions: (0.304 lb/ton of greensand) x (9500 ton/yr) / (2000 lb/ton) = 1.444 TPY.
6	Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated)	Annually.
7	Page Number 08	Revision Number / Date of Revision

Major Source Operating Permit Application
Compliance demonstration by recordkeeping

Form 70-26

1	Facility name	U.S. Pipe and Foundry Company, Inc.
2	Stack ID (or flow diagram point identification(s)	SV09
3	Emission source (identify and include equipment identification number)	EV051 Hunter Molding Machine
4	Pollutant(s) or parameter being monitored	VOC
5	Material or parameter being monitored and recorded	Maintaining a monthly log of the gallons of demolding compounds (mold release agent) used for the Hunter Molding Machine. Also, verifying that the VOC content of the demolding compounds will not exceed 6.75 pounds per gallon as applied.
6	Method of monitoring and recording	Purchasing records of demolding compounds and maintaining up-to-date MSDS record for this material.
7	Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated)	Annually.
8	Page Number 09	Revision Number / Date of Revision

Major Source Operating Permit Application

Emissions from process emission source/fuel burning equipment/incinerator

Form 70-28

1	Facility name	U.S. Pipe and Foundry Company, Inc.
2	Stack ID or flow diagram point identification(s)	SV09
3	Process emission source/fuel burning equipment/incinerator (identify and include equipment identification number)	EV051 Hunter Molding Machine

4 Complete the following emissions summary for regulated air pollutants. Fugitive emissions shall be included. Attach calculations and emissions factor references.

Air Pollutant	Maximum allowable emissions		Actual emissions	
	Tons per year	Pounds per hour	Tons per year	Pounds per hour
Particulates (TSP)				
(Fugitive emissions)	0.078	0.065	0.042	0.032
Sulfur dioxide				
(Fugitive emissions)				
Volatile organic compounds				
(Fugitive emissions)	1.444	1.20	0.775	0.587
Carbon monoxide				
(Fugitive emissions)				
Lead				
(Fugitive emissions)				
Nitrogen oxides				
(Fugitive emissions)				
Total reduced sulfur				
(Fugitive emissions)				
Mercury				
(Fugitive emissions)				
Asbestos				
(Fugitive emissions)				
Beryllium				
(Fugitive emissions)				
Vinyl chloride				
(Fugitive emissions)				
Fluorides				
(Fugitive emissions)				
Gaseous fluorides				
(Fugitive emissions)				

	Complete the following emissions summary for regulated air pollutants that are hazardous air pollutant(s). Fugitive emissions shall be included. Attach calculations and emission factor references.				
	Air Pollutant & CAS	Maximum allowable emissions		Actual emissions	
		Tons per year	Pounds per hour	Tons per year	Pounds per hour
5	None				
6	Page Number 10	Revision Number		Date of Revision	

Major Source Operating Permit Application

Emissions summary for the facility or for the sources contained in this application

Form 70-29

1	Facility name	U.S. Pipe and Foundry Company, Inc.

2

Complete the following emissions summary for regulated air pollutants at this facility or for the sources contained in this application.

Air Pollutant	Summary of maximum allowable emissions		Summary of actual emissions	
	Tons per year	Pounds per hour	Tons per year	Pounds per hour
Particulates (TSP)	0.078	0.065	0.042	0.032
Sulfur dioxide				
Volatile organic compounds	1.444	1.20	0.775	0.587
Carbon monoxide				
Lead				
Nitrogen oxides				
Total reduced sulfur				
Mercury				
Asbestos				
Beryllium				
Vinyl chloride				
Fluorides				
Gaseous fluorides				

3

Complete the following emissions summary for regulated air pollutants that are hazardous air pollutant(s) at this facility or for the sources contained in this application.

Air Pollutant & CAS	Summary of maximum allowable emissions		Summary of actual emissions	
	Tons per year	Pounds per hour	Tons per year	Pounds per hour
None				

4	Page Number	Revision Number	Date of Revision
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Major Source Operating Permit Application

Current emissions requirements and status

Form 70-30

1	Facility name	U.S. Pipe and Foundry Company, Inc.	2	Equipment identification number:	EV051
3	Describe the process emission source/fuel burning equipment/incinerator.	EV051 Hunter Molding Machine is a flaskless greensand molding process that will be installed at the brass foundry's V004 Valve & Hydrant Plant - Greensand Molding Operations.			

4-10

4. Identify if only a part of the source is subject to this requirement.	5. Pollutant	6. Applicable requirement(s): in air pollution control ordinance/regulations, 40 CFR, permit restrictions, air quality based standards	7. Limitation	8. Maximum actual emissions	9. Compliance status (In/Out)
EV051 Hunter Machine	TSP	Rule 10.3, Schl. 2	8.47 lb/hr.	0.065 lb/hr.	In Compliance.

10. Other applicable requirements (new requirements that apply to this source during the term of this permit):

None					

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MWPS004472

Major Source Operating Permit Application
Compliance Plan and Compliance Certification

Form 70-31

1	Facility name	U.S. Pipe and Foundry Company, Inc.
2	List all the process emission source(s) or pieces of fuel burning equipment or incinerator(s) that are part of this application. Attach additional pages as necessary.	EV051 Hunter Molding Machine
3	Indicate those source(s) contained in this application which are presently in compliance with all applicable requirements by checking the following, as they apply.	☐ Attached is a statement of identification of the source(s) currently in compliance. We will continue to operate and maintain the source(s) to assure compliance with all applicable requirements for the duration of the permit.
	Not Applicable.	☐ Form(s) 70-30 includes new requirements that apply or will apply to the source(s) during the term of the permit. We will meet such requirements on a timely basis.

4

INDICATE THOSE SOURCE(S) CONTAINED IN THIS APPLICATION WHICH ARE NOT PRESENTLY IN FULL COMPLANCE BY CHECKING BOTH OF THE FOLLOWING.

☐ A. Attached is a statement of identification of the source(s) not in compliance, non-complying requirement(s), brief description of the problem, and the proposed solution.

☐ B. Compliance will be achieved according to the following schedule:

Action	Deadline

Progress reports will be submitted: Start date: , and at least every 180 days thereafter until compliance is achieved.

5	Indicate the compliance status with any applicable enhanced monitoring and compliance certification requirements that have been promulgated under section 114(a)(3) of the Clean Air Act as of the date of submittal of this form 70-31.	Not Applicable

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UNITED STATES PIPE & FOUNDRY COMPANY

Emission Source Fact Sheet

EMISSION UNIT 204 - VALVE PLANT MOLD MAKING OPERATIONS
V004 - GREENSAND MOLD MAKING
EV051 - HUNTER MACHINE

General Source Information

Facility Abrev:	CV&F
Process Area ID:	V004
Emission Unit ID:	EV051
Source Desc:	HUNTER MACHINE
Building No.:	VALVE PLANT
UTM Location:	East: [Not Available North: [Not Available]
Source POC:	DENNIS URBANIAK
POC Phone:	(423)752-3912
Air Permit No.:	

Equipment Information

Equip. Type:	HUNTER MOLDING MACHINE
Make/Model:	HUNTER
Mfg Date:	
Installed Date:	
Max. Capacity:	MAXIMUM 9,500 TPY OF SAND AND 700 GALLONS OF DEMOLDING COMPOUNDS.

Description of Operation:

EMISSIONS FROM THE HUNTER MOLDING MACHINE ARE RELEASED AS FUGITIVE EMISSIONS, FIRST RELEASED INSIDE THE BUILDING THEN VENTED TO THE ATMOSPHERE VIA THE BUILDING EAVES AND ROOF VENTS (SV09).

THE PROJECTED MINIMUM AND MAXIMUM HOURS OF OPERATION ARE 2,400 HR/YR AND 4,800 HR/YR, RESPECTIVELY. THE MAXIMUM TONNAGES OF SAND PROCESS ARE 9,500 TPY. THE MAXIMUM HOURLY SAND PROCESS RATE = 9,500 TPY / 2,400 HR/YR (MINIMUM ANNUAL HOURS OF OPERATION) = 3.958 TONS/HR.

Emission Point Information

Stack ID	Dischrg % By Stack	Stack Ht. (ft)	Stack Dia./Width (ft)	Stack Area (ft2)	Flowrate (acfm)	Primary Emission Ctrl Device ID	Primary Emission Ctrl Device Description.	Secondary Emission Ctrl Device ID	Secondary Emission Ctrl Device Description.
SV09	100%	[N/A]	[N/A]	[N/A]	[N/A]	EBSF	SETTLING FACTOR	[N/A]	[No Sec. Control]

Comments: BRASS FOUNDRY BUILDING EAVES AND EXHAUST VENTS.

Operational Parameters

Segment ID	Description	SCC Code	Operation Hour (hr/yr) Actual	Operation Hour (hr/yr) Maximum	Process Rate (ton/yr) Actual	Process Rate (ton/yr) Maximum	Process Weight Rate (ton/hr)	Allowable Emissions (lb/hr)
01	VALVE PLANT, HUNTER MOLDING MACHINE GREEN SAND PROCESSING	30400299	2,640	4,800	5,100.00	9,500.00	3.96	8.470

Comments: 9,500 TPY OF SAND IS EQUIVALENT TO 140,740 MOLDS PER YEAR OF THE AVERAGE 135-LB MOLD [FROM 9,500 TPY * 2,000 LB/TON / (135 LB/MOLD)].

MAXIMUM HOUR PROCESS RATE = 9,500 TPY / 2,400 HR/YR = 3.958 TONS/HR OR APPROXIMATELY 7,916 LB/HR. ACTUAL OPERATING PARAMETERS ARE APPROX. 5,100 TPY OF GREENSAND AND 2,640 HR/YR.

02	VALVE PLANT, HUNTER MOLDING MACHINE DEMOLDING COMPOUND	30400299	2,640	4,800	5,100.00	9,500.00	Not Appl.	Not Appl.

Comments: EMISSIONS FACTOR IS BASED ON SAND OR 0.304 LB OF VOC PER TON OF SAND PROCESSED.

Emission Factors

Segment ID	EF Set	Pollutant Name	Value	Units	References
01	0018	PARTICULATE MATTER (TSP)	0.05	lb/ton Handled	JIM MAYSILLES'S REVIEW.
	Comments:	UNCONTROLLED EMISSION RATE FOR MULLING. SOURCE: JIM MAYSILLES, EPA, REVIEW OF FOUNDRY EMISSIONS DATA.			
02	0039	VOLATILE ORGANIC COMPOUND	0.304	lb/ton Handled	MATERIAL BALANCE
	Comments:	UNCONTROLLED EMISSIONS OF 0.304 LB OF VOC PER TON OF SAND HANDLED BY THE HUNTER UNIT. BASIS FOR THE ENGINEERING ESTIMATE: 700 GALLONS OF KLEEN STRYP USED FOR 9,500 TPY OF SAND PROJECTED FOR THE HUNTER MACHINE. EMISSIONS FROM USAGE OF KLEEN STRYP (THE DEMOLDING COMPOUND) ARE BASED ON 40% OVERSPRAY AND 60% OF THE ABSORBED AMOUNT IS EVENTUALLY BURNED OFF DURING THE POURING & COOLING PROCESS. THUS, THE DERIVED VOC EMISSIONS FROM DEMOLDING COMPOUND USAGE IS 4.2199 LB VOC RELEASED PER GALLON (0.814 * 8.345 LB/GAL) OF MATERIAL USED OR 60.8% BY WEIGHT. 700 GAL * (0.814 * 8.345 LB/GAL) * 60.8% / 9500 TON OF SAND = 0.304 LB OF VOC PER TON OF SAND HANDLED. DERIVATION PERFORMED BY T3 CONSULTING, 770-426-7741.			

Calculated Emission Rates

Pollutant	Segment ID	Stack ID	Emission Type	Control Eff. Prim.	Control Eff. Sec.	HAP?	Hourly Emissions (lb/hr) Act.	Hourly Emissions (lb/hr) Max.	Hourly Emissions (lb/hr) Allowable	Annual Emissions (TPY) Actual	Annual Emissions (TPY) Maximum
PARTICULATE MATTER (TSP)	01	SV09	Stack	67%	0%	☐	.032	.065	8.47	.042	.078
Total Emissions of PARTICULATE MATTER (TSP) from HUNTER MACHINE:							**.032**	**.065**	**8.47**	**.042**	**.078**
VOLATILE ORGANIC COMPOUNDS (VOC)	02	SV09	Stack	0%	0%	☐	.587	1.20	Not Appl.	.775	1.444
Total Emissions of VOLATILE ORGANIC COMPOUNDS (VOC) from HUNTER MACHINE:							**.587**	**1.20**	**Not Appl.**	**.775**	**1.444**

Supporting Emission Calculations

Emission Calculations for PARTICULATE MATTER (TSP) (CAS 01791)
Stack ID or Designation: SV09
Segment No: 01, VALVE PLANT, HUNTER MOLDING MACHINE GREEN SAND PROCESSING

Actual Annual:	.05 lb/ton Handled * 5,100 tons * (1 - 67% control eff.) * 1 ton/2,000 lb = .042 TPY.
Maximum Annual:	.05 lb/ton Handled * 9,500 tons * (1 - 67% control eff.) * 1 ton/2,000 lb = .078 TPY.
Average Hourly:	Actual annual emissions of .042 TPY / 2,640. hr/yr act. * 2,000 lb/ton = .032 lb/hr.
Maximum Hourly:	Maximum annual emissions of .078 TPY / 2,400 hr/yr max. * 2,000 lb/ton = .065 lb/hr.
Allowable Emissions:	Allowable TSP emissions are determined (linear extrapolation) from Schedule 2 of Table 2 using a hourly input weight rate of 3.958 ton/hr or 7,916 lb/hr. Calculation : 7.09 lb/hr + (7,916 - 6,000) * (0.72 / 1,000) lb/hr = 8.47 lb/hr.

Emission Calculations for VOLATILE ORGANIC COMPOUNDS (VOC) (CAS 01615)
Stack ID or Designation: SV09
Segment No: 02, VALVE PLANT, HUNTER MOLDING MACHINE DEMOLDING COMPOUND

Actual Annual:	.304 lb/ton Handled * 5,100 tons * 1 ton/2,000 lb = .775 TPY.
Maximum Annual:	.304 lb/ton Handled * 9,500 tons * 1 ton/2,000 lb = 1.444 TPY.
Average Hourly:	Actual annual emissions of .775 TPY / 2,640. hr/yr act. * 2,000 lb/ton = .587 lb/hr.
Maximum Hourly:	Maximum annual emissions of 1.444 TPY / 2,400 hr/yr max. * 2,000 lb/ton = 1.20 lb/hr.
Allowable Emissions:	Not applicable.

End Page Report for HUNTER MACHINE

List of Significant Changes Made to U.S. Pipe's Part 70 Permit

Conditions of General Applicability

1. Changed address where annual compliance certifications are mailed (Condition 3.4).

Conditions Applicable to Entire Facility

1. Added requirement to report deviations in each semi-annual compliance report. (Condition 1.1) Do already
2. Reworded Maintenance Plan requirements (Condition 2.0) ?
3. Added insignificant activities per renewal application (Condition 3.0)
4. Reworded recordkeeping condition to include all required records (Condition 4.0)
5. Added Compliance Assurance Monitoring (Condition 7.0)
6. Added Foundry MACT condition (Condition 8.0).
7. Added sources to VE list to include CAM and Op Flex from renewal application (Condition 9.3)
8. Added sources to baghouse differential pressure list to include CAM and Op Flex from renewal application (Condition 10.0)

Emission Unit Special Conditions

Changed compliance demonstration for particulate matter emissions from daily visual inspection and logs. The condition which follows replaced this requirement on each booth emission unit:

"Inspection and preventative maintenance of the booth and filters shall be conducted in accordance with U.S. Pipe and Foundry Company's maintenance plan described in Condition 2.0, Conditions Applicable to Entire Facility."

Please note: U.S. Pipe will need to modify their Maintenance Plan to include inspections and procedures outlining when filters should be replaced.

Part 70 Permit
No. 47-065-3321

This Permit Shall Remain in Full Force and Effect
From April 9, 2004, through April 8, 2009

Issued to:

UNITED STATES PIPE AND FOUNDRY COMPANY, INC.
2501-2701 CHESTNUT STREET
CHATTANOOGA, TENNESSEE 37408

Designated Representative:
Jim Book
Facilities and Environmental Coordinator
Telephone: (423) 752-3911

Responsible Official:

Agreed to by: _____
David J. Diederich
Plant Manager

An Application for Renewal Must Be Submitted to the Director of the Chattanooga-Hamilton County Air Pollution Control Bureau No Later Than October 9, 2008

CHATTANOOGA-HAMILTON COUNTY
AIR POLLUTION CONTROL BUREAU
Development Resource Center
1250 Market Street, Suite 3020
Chattanooga, Tennessee 37402-4443
Telephone: (423) 668-2567

_____
Robert H. Colby
Director

Prepared by Cynthia C. McDaniel

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Permit Shield 52

The emissions units regulated by this permit are the following:

Emission Unit	Description
101	Charge Handling
102	Melting Facility
103	Hot Metal Transfer
104	Desulfurization & Slagging
105	Induction Holding Furnaces
106	Ductile Treating Process
107	No. 9 Unit Inoculation & Slagging
108	No. 10 Unit Inoculation & Slagging
109	Fitting Plant Pouring & Cooling
110	No.9 Unit Shakeout
111	No.10 Unit Shakeout
112	No. 9 Unit Casting Cleaning
113	No.10 Unit Casting Cleaning

Emission Unit	Description
114	Grinding, Finishing, & Priming Operation
115	Cement Lining Building
116	Special Coating Operation
118	No. 10 Unit Airset Mold System
119	No. 10 Unit Sand Reclamation
120	No.9 Unit Greensand Mold System
121	Shell Cores Process
122	Airset Core System
123	Isocure Core System
124	Pepset Core System
125	Refractory Coating Operation
126	Packaging & Shipping Operation
127	Ancillary Fitting Plant Operations
128	Fusion Bonded Epoxy Process
206	Valve & Hydrant Production
207	Resilient Seat Valve Production
208	Ancillary Valve & Hydrant Plant Operations
301	Solid Waste Landfill

CONDITIONS OF GENERAL APPLICABILITY

This permittee, United States Pipe and Foundry Company, Inc., is subject to each of the conditions expressed below and is required to comply with them throughout the term of this Part 70 permit. By accepting this permit and operating under it, United States Pipe and Foundry Company, Inc. agrees to comply with all terms, provisions, limitations, and requirements herein.

ALL SECTIONS OF THE CHATTANOOGA AIR POLLUTION CONTROL ORDINANCE CITED IN THIS PERMIT ARE INCORPORATED HEREIN BY REFERENCE. Section numbers referred to in this permit which are not otherwise identified refer to sections in the Chattanooga Air Pollution Control Ordinance.

1.0 Definitions. Unless specifically defined within a provision of the Chattanooga Air Pollution Control Ordinance referenced elsewhere in this permit, the definitions in §4-2 and §4-53 shall apply. *§4-2; §4-53*

2.0 Severability. If any provision, part of a provision, sentence, clause, or phrase in this permit is for any reason declared to be unconstitutional or otherwise invalid by any court of competent jurisdiction, such decision shall not affect the validity of any other portion of this permit, and only such invalid portion shall be elided. *§4-57(a)(5)*

3.0 Compliance.

3.1 The permittee must comply with all conditions of this Part 70 permit. Noncompliance with any permit provision constitutes a violation of either the Chattanooga City Code, Part II, Chapter 4, known as "The Chattanooga Air Pollution Control Ordinance"; the Tennessee Air Quality Act, T.C.A. 68-201-101 *et seq.*; and/or the federal Clean Air Act, as amended, Title 42 United States Code (U.S.C.) §7401 *et seq.* and is grounds for joint and several enforcement action; for permit termination, revocation, or modification; or for denial of a permit renewal application. Enforcement by the Chattanooga-Hamilton County Air Pollution Control Board (the Board) or the Director of the Chattanooga-Hamilton County Air Pollution Control Bureau (the Bureau) shall be conducted in accordance with the provisions of §4-4, §4-7, §4-14, §4-15, §4-17, §4-18, §4-20, §4-61, §4-62, §4-63, §4-64, and §4-65, as appropriate to the circumstances. *§4-57(a)(6)(i)*

3.2 It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. *§4-57(a)(6)(ii)*

3.3 This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination; or the filing of a notification of planned changes or anticipated noncompliance does not stay any condition in this permit. *§4-57(a)(6)(iii)*

3.4 Annual compliance certifications shall be submitted by May 8 of each year throughout the term of this permit. Separate compliance certifications shall be submitted to:

Chattanooga-Hamilton County Air Pollution Control Bureau
Development Resource Center
1250 Market Street, Suite 3020
Chattanooga, TN 37402-4443

and to:

U.S. EPA Region 4
Air Enforcement Section
Sam Nunn Atlanta Federal Center
61 Forsyth Street SW
Atlanta, GA 30303-8960

Each such compliance certification shall include the following information (provided that the identification of applicable information may cross-reference the permit or previous reports as applicable):

3.4.1 Identification of each term or condition of the permit that is the basis of the certification;

3.4.2 Compliance status;

3.4.3 Whether compliance was continuous or intermittent;

3.4.4 The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with §4-57(a)(3);

3.4.5 Where any specific test method requires quality assurance audit samples and the audit result does not validate the source's sample within the specified parameters, the source must retest the stack test until such time as the audit result does validate the sample within the specified parameters; except that the Bureau Director may waive retesting if the source's stack test sample is in compliance with this permit even if not validated within the specified quality assurance parameters; *§4-3(d)*

3.4.6 Such other facts as the Board or the Bureau Director may require to determine the compliance status of the Part 70 source; and *§4-57(c)(5)(iii)(E)*

3.4.7 Such additional requirements as may be required for enhanced monitoring compliance certification under Title 42 U.S.C. §7414(a)(3) and §7661c(b)

of the Clean Air Act. *§4-3(d); §4-57(c)(5)*

The annual compliance period that is covered by each compliance certification shall be the previous calendar year from January 1 through December 31.

3.5 The methods set forth in §4-3 shall be applicable for determining compliance with all terms, provisions, limitations, and requirements contained in this permit, except where otherwise specifically provided in this permit.

4.0 Property Rights. This permit does not convey any property rights of any sort or any exclusive privilege. This permit is not assignable except as provided in §4-58(d)(1)(iv). *§4-57(a)(6)(iv)*

5.0 Information to be Furnished. The permittee shall furnish to the Bureau Director, within a reasonable period of time, any information that the Board or the Bureau Director may request in writing to determine whether cause exists for modifying, revoking, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board or the Bureau Director copies of records required to be kept by the permit. For information claimed to be confidential, the permittee may furnish such records directly to the Administrator of the U.S. Environmental Protection Agency (EPA) along with a claim of confidentiality. Eligibility for confidential treatment shall be determined by the Board pursuant to the provisions of §4-19 for information submitted directly to the Bureau Director. An independent determination regarding confidentiality would be made by the Administrator of the U.S. EPA for information submitted directly to the Administrator. *§4-57(a)(6)(v)*

6.0 Fees. The permittee shall pay fees to the Bureau Director consistent with the fee provisions set forth in §4-60. *§4-57(a)(7)*

7.0 Changes Provided for by Permit. No permit revision shall be required under any economic incentives, marketable permits, emissions trading, or similar program or process which is included in the Chattanooga City Code, Part II, Chapter 4, Article III for changes that are provided for in this permit pursuant to such program or process. *§4-57(a)(8)*

8.0 Reasonably Anticipated Operating Scenarios. Contemporaneously with making a change from one operating scenario to another, the permittee must record in a log at the Part 70 source premises a record of the scenarios under which it is operating. *§4-57(a)(9)*

9.0 Acid Precipitation Requirements. Where an applicable requirement of the Clean Air Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Clean Air Act and incorporated by reference at §4-52(d), both provisions are herein incorporated into this permit by reference and shall be legally enforceable. This source does not lawfully hold any allowance under Title IV of the Clean Air Act. *§4-57(a)(1)(ii)*

10.0 Federal Enforceability. All terms and conditions in this Part 70 permit, including any

provisions designed to limit the potential to emit of this Part 70 source, are enforceable by the Administrator of the U.S. EPA and by citizens under the Clean Air Act except for the following, which are locally enforceable only:

10.1 §4-41, Rule 12 (Regulation of Odors in the Ambient Air) and

10.2 §4-41, Rule 14 (Nuisances).

Any terms and conditions included in the permit that are not required under the Clean Air Act or under any of its applicable requirements are specifically designated in this permit as not being federally enforceable under the Clean Air Act. *§4-57(b)(1) and (2)*

11.0 Inspection of Permitted Source(s). Upon presentation of identification and in the performance of their duties, the permittee shall allow the Bureau Director and other Bureau employees to perform the following:

11.1 Enter upon the permittee's premises or buildings where a Part 70 source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;

11.2 Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

11.3 Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and

11.4 Sample or monitor substances or parameters, and collect and preserve evidence for the purpose of assuring compliance with the permit or applicable requirements thereunder at reasonable times and for taking such other actions as are appropriate under the law in accordance with Item 3.1 of these Conditions of General Applicability.

11.5 For the purposes of Items 11.2, 11.3, and 11.4 of these Conditions of General Applicability, "reasonable times" shall be considered to be customary business hours, unless reasonable cause exists to suspect noncompliance with the Chattanooga Air Pollution Control Ordinance or any "applicable requirement," as defined in §4-53, or with any permit issued thereunder, and the Bureau Director specifically authorizes a designee to inspect a facility at any other time.

11.6 In the alternative, the Bureau Director, other Bureau employees, or any other law enforcement officer may obtain a search warrant to obtain, collect, and preserve evidence.

§4-16; §4-57(c)(2)

12.0 Recordkeeping and Reporting.

12.1 Record Retention Requirements. All required monitoring data and related support information shall be retained by the permittee for five (5) years after the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, copies of all reports, and logs required by the permit. *§4-57(a)(3)(ii)(B)*

12.2 Reporting of Deviations. The permittee shall promptly report all emission limitation exceedances and all other deviations from permit requirements (including those attributable to malfunctions), the probable cause of such exceedance or deviation, and any corrective actions or preventive measures taken. "Promptly report" shall mean an initial telephone report to the Bureau Director within twenty-four (24) hours after the onset of the exceedance or other deviation, followed up by a written report submitted to the Bureau Director within seven (7) days after the onset of the exceedance or other deviation. Any excess emissions or other deviation that creates an imminent hazard requiring immediate action to protect health or safety must be reported by telephone immediately to the Bureau Director, to the Hamilton County Local Emergency Planning Committee, to the Tennessee Emergency Management Agency, and to the National Response Center. *§4-12; §4-57(a)(3)(iii)(B)*

13.0 Emergency Provision.

13.1 Definition. An emergency is any situation arising from sudden and reasonably unforeseeable events beyond the control of the permittee, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the permittee to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error. *§4-57(g)*

13.2 An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of Item 13 of these Conditions of General Applicability are met, unless an ambient air violation occurs as a result of the emergency. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence which establishes that:

13.2.1 An emergency occurred and that the permittee can identify the cause(s) of the emergency;

13.2.2 The permitted facility was at the time being properly operated;

13.2.3 During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

13.2.4 The permittee submitted a telephone notice of the emergency to the Bureau Director within one (1) working day of the time when emission limitations were exceeded due to the emergency, and the permittee submitted a follow up written report to the Bureau within seven (7) days after the onset of the exceedance. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

§4-57(g)

13.3 In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof. *§4-12; §4-57(g)*

13.4 The permittee must employ all reasonable measures to keep emissions to a minimum during start-ups, shutdowns, operation, and emergencies. These measures may include installation and use of alternate control systems, changes in operating methods or procedures, cessation of operation until the process equipment or air pollution control equipment is repaired, maintaining sufficient spare parts, use of overtime labor, use of outside consultants and contractors, and other appropriate means. Exceedances of limitations on emissions that are caused by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown shall not be considered emergencies, and shall be considered in violation of the emission standard exceeded. *§4-12*

13.5 A log of any operation or failure to operate, start-up, or shutdown resulting in air pollutant emissions in excess of any applicable requirement must be kept at the Part 70 source. This log must record at least the following:

13.5.1 Stack, air pollution control equipment, or emission point involved;

13.5.2 Time excess emissions, start-up, or shutdown began or when excess emissions were first discovered by the source;

13.5.3 Type of exceedance qualifying as a malfunction, or reason for shutdown;

13.5.4 Time start-up or shutdown was complete or time the air pollutant source returned to normal operation after an emissions exceedance;

13.5.5 Documentation that the source was or was not, at the time of the onset of the exceedance, being properly operated;

13.5.6 Documentation of any preventative maintenance of the air pollution control equipment or process equipment or processes that had been completed prior to the emissions exceedance, start-up, or shutdown;

13.5.7 The steps taken by the source during the period of the emissions exceedance, start-up, or shutdown to minimize levels of emissions that exceeded the applicable requirements; and

13.5.8 The magnitude and identity of the excess emissions, expressed in pounds per hour and the units of the applicable emission limitation, and the operating data and calculations used in determining the magnitude of the excess emissions.

§4-12

13.6 The information required by Items 13.5.1 and 13.5.2 of these Conditions of General Applicability must be entered into the log by the end of the shift during which the exceedance or other deviation began. All required information shall be entered in the log no later than twenty-four (24) hours after the exceedance or other deviation has ceased or has been corrected. Any later discovered corrections may be added in the log as footnotes with the reason given for the change. There shall be no erasures, obliterations, modifications, or revisions of the log entry except by single line-through and identification of corrections. *§4-12*

13.7 If the Bureau Director or the Administrator of the Chattanooga-Hamilton County Health Department finds that a condition of air pollution exists or is likely to exist, and that it creates any emergency requiring immediate action to protect human health or safety, the mayor with the concurrence of the Bureau Director or the Administrator of the Chattanooga-Hamilton County Health Department shall order persons causing or contributing to the air pollution to reduce or discontinue immediately the emission of air pollutants. Upon issuance of any such order, the Bureau Director shall fix a place and time, not later than twenty-four (24) hours thereafter, for a hearing to be held before the Board. Not more than twenty-four (24) hours after commencement of such hearing, and without adjournment thereafter, the Board shall affirm, modify, or recommend to the mayor that the order be affirmed, modified, or set aside. *§4-20*

14.0 Certification. Any application form, report, or compliance certification submitted pursuant to this permit shall contain a certification, as defined in §4-53, by a responsible official, as defined in §4-53, of truth, accuracy, and completeness. Any certification required by this permit shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. *§4-56(d)*

15.0 Modifications.

15.1 Administrative amendments to this permit shall be requested and may be granted in

accordance with §4-58(d), and only for the reasons set forth therein. The permittee is required to submit an application for an administrative amendment within sixty (60) days after a change of the name of the permittee is registered with the Tennessee Secretary of State.

15.2 Minor permit modifications to this permit shall be requested and may be granted in accordance with §4-58(e)(1) and (2).

15.3 Significant permit modifications to this permit shall be requested and may be granted in accordance with §4-58(e)(3).

15.4 Operational flexibility allows changes within this permitted source without requiring a permit revision, if the changes are not modifications under Title I of the Clean Air Act and the changes do not exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions), provided that:

15.4.1 The permittee provides the U.S. EPA and the Bureau Director with written notification at least seven (7) days in advance of the proposed changes; and

15.4.2 For each such change, said written notification shall include a brief description of the change within the permitted source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.

The permit shield described in §4-57(f) shall not apply to any change made pursuant to operational flexibility. *§4-58(i)*

15.5 Installation permit application and issuance requirements in §4-8(a) will apply to this permittee and emission units located at this Part 70 source if modifications to or new construction of a Part 70 source are subject to the following:

15.5.1 §4-41, Rule 18 (Prevention of Significant Air Quality Deterioration);

15.5.2 §4-41, Rule 25.3 (General Provisions and Applicability for Volatile Organic Compounds – Standards for New Sources);

15.5.3 §4-41, Rule 23 (General Provisions and Applicability for Process Gaseous Emissions Standards);

15.5.4 Any standard or other requirement pursuant to regulations promulgated under Title 42 U.S.C. §7411 in Title 40 *Code of Federal Regulations* Part 60;

15.5.5 Case-by-case determinations made pursuant to Title 42 U.S.C. §7412(g) and

(j) as set forth at §4-53 "Applicable requirements (4)"; or

15.5.6 Case-by-case determinations made pursuant to §4-41, Rule 27 (Particulate Matter Controls for New Sources and New Modifications After August 29, 1995).

§4-50

16.0 Off-Permit Changes.

16.1 An off-permit change is one that:

16.1.1 Is not addressed or prohibited by the permit;

16.1.2 Is not a modification under Title I of the Clean Air Act;

16.1.3 Is not subject to any requirements under Title IV of the Clean Air Act;

16.1.4 Meets all applicable requirements, as described in this permit; and

16.1.5 Does not violate, or cause or contribute to a violation of, any existing permit term or condition.

16.2 A contemporaneous notification shall be submitted to the Bureau Director and to the U.S. EPA except for changes that qualify as insignificant under §4-56(c)(11) and (c)(12).

16.3 The permittee shall keep a record describing off-permit changes made at the Part 70 source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those off-permit changes.

16.4 The permit shield described in §4-57(f) shall not apply to any change made pursuant to off-permit changes.

§4-58(j)

17.0 Permit Reopening. This permit shall be reopened and revised under any of the following circumstances, as set forth at §4-58(f)(1):

17.1 Additional applicable requirements become applicable by amendment of the Chattanooga Air Pollution Control Ordinance to this source and the remaining permit term is three (3) or more years. Such reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire;

17.2 Additional requirements (including excess emissions requirements) become applicable to an affected source as defined in §4-53. Upon approval by the Administrator of the U.S. EPA and amendment of the Chattanooga Air Pollution Control Ordinance, excess emissions offset plans shall be incorporated into the permit;

17.3 The Board, the Bureau Director, or the Administrator of the U.S. EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or

17.4 The Board, the Bureau Director, or the Administrator of the U.S. EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

Proceedings to reopen and issue a revised permit shall follow the same procedures as apply to initial permit issuance, described in §4-58, and shall affect only those parts of the permit for which cause to reopen exists. Such reopening shall be made as expeditiously as practicable, but only after notice of such intent is provided to this permittee by the Bureau Director at least thirty (30) days in advance of the date that permit is to be reopened. A shorter time period may be provided in the case of an emergency. *§4-58(f)*

This permit is also subject to reopening for cause by the U.S. EPA, as described in §4-58(g). *§4-58(g)*

18.0 Rules Applicable to All Permittee Activities. The following conditions apply to all activities of this permittee, including insignificant activities:

18.1 Nitrogen Oxides. The permittee shall comply with §4-41, Rules 2.4, 2.5, and 2.7, regarding emissions of nitrogen oxides.

18.2 Visible Emissions. The permittee shall comply with §4-41, Rule 3, which stipulates that the opacity of visible emissions shall not exceed twenty (20) percent for an aggregate of more than five (5) minutes in any one-hour period or more than twenty (20) minutes in any twenty-four-hour period. The permittee shall also comply with §4-41, Rule 9, regarding visible emissions from internal combustion engines. In addition, the permittee shall comply with §4-41, Rule 11, which stipulates that the opacity of visible emissions from the handling, processing, or storage of any material in the open air shall not exceed twenty (20) percent for more than three (3) minutes in any consecutive sixty-minute period or more than twenty (20) minutes in any twenty-four-hour period. *§4-3(c)(9)*

18.3 Certain Fuels. The permittee shall comply with §4-41, Rule 4, regarding importation, sale, transportation, use, or consumption of fuels containing in excess of four (4) percent sulfur by weight.

18.4 Prohibition of Hand-Fired Fuel-Burning Equipment. The permittee shall comply with §4-41, Rule 5, regarding the prohibition of the use of hand-fired fuel-burning equipment with solid fuels.

18.5 Open Burning. The permittee is prohibited from conducting open burning except in accordance with §4-41, Rule 6.

18.6 Fuel-Burning Equipment. The permittee shall comply with §4-41, Rule 8, regarding particulate matter emissions from fuel-burning equipment.

18.7 Process Emissions. The permittee shall comply with §4-41, Rule 10, regarding process particulate matter emissions.

18.8 Odors in Ambient Air. The permittee shall comply with §4-41, Rule 12, regarding emissions of objectionable odors. (local rule only)

18.9 Sulfur Oxides. The permittee shall comply with §4-41, Rule 13, regarding emissions of sulfur oxides.

18.10 Nuisances. The permittee shall comply with §4-41, Rule 14, regarding discharges from any source of air contaminants or other material which shall cause a nuisance. (local rule only)

18.11 Hazardous Air Pollutants. The permittee shall comply with §4-41, Rules 16.1 through 16.4, regarding emission standards for hazardous air pollutants other than asbestos.

18.12 Asbestos – Demolition or Renovation. The permittee shall comply with §4-41, Rules 17.5, 17.10, 17.12, and 17.13, when conducting any demolition or renovation activities at the permitted source.

18.13 Stack Heights. The permittee shall comply with §4-41, Rule 22, regarding good engineering practice stack heights.

18.14 Particulate Matter Controls for New Sources and New Modifications. The permittee shall comply with §4-41, Rule 27, regarding particulate matter controls for any new source or modification for which installation commences after August 29, 1995.

19.0 Stratospheric Ozone and Climate Protection. The permittee is subject to the standards for recycling and emissions reduction promulgated at Title 40 *Code of Federal Regulations* Part 82, Subpart F, including the use of certified technicians only.

20.0 Dismantled Equipment. The permittee shall report the permanent discontinuance or dismantlement of any equipment or activity covered by this permit to the Bureau Director

within thirty (30) days. *§4-11(a)*

21.0 Monitoring. All monitoring and related reporting shall be conducted in compliance with §4-57(a)(3)(ii)(A) and (B).

22.0 Applicable Requirements. In addition to the Conditions of General Applicability, Conditions Applicable to the Entire Facility, and Emission Unit Special Conditions in this permit, "applicable requirements" as defined in §4-53 shall apply.

23.0 Basis of Permit. This permit is being issued based on the statements made and the information provided in the Part 70 permit application submitted under oath by this source.

CONDITIONS APPLICABLE TO THE ENTIRE FACILITY

1.0 Semiannual Compliance Monitoring Reports. In addition to reports that are required by the Conditions of General Applicability, a semiannual compliance monitoring report shall be submitted by May 8 and November 8 of each year throughout the term of this permit. The compliance monitoring reports shall be submitted to:

Chattanooga-Hamilton County Air Pollution Control Bureau
Development Resource Center
1250 Market Street, Suite 3020
Chattanooga, TN 37402-4443

1.1 Each compliance monitoring report shall include a detailed summary report of deviations from permit requirements for the previous six-month period indicating every instance in which an emission unit was operated outside of required parameters or was operated while air pollution control equipment that was required to be used was not in operation, bypassed, or operated outside of required parameters. For each such incident, the nature and cause of the incident, affected equipment, calendar date, beginning time, elapsed time, value of any operating parameter that was not met, and estimated resulting emissions shall be included in the report.

1.2 In addition, each compliance semiannual compliance monitoring report shall include the following information for the previous twelve months:

1.2.1 Total quantity and VOC content of each VOC-containing coating
1.2.2 Total usage and VOC content of each sand core and/or mold resin component
1.2.3 Total quantity and sulfur content of coke used at the melting facility
1.2.4 Total operating hours of the No.9 Unit Sand Screening Drum (E023)
1.2.5 Total quantity of triethylamine
1.2.6 Total quantity and VOC content of each VOC-containing refractory coating
1.2.7 Total quantity of iron poured at the facility
1.2.8 Total quantity of iron poured on No. 10 Unit

§4-57(a)(3)(iii)(B)

2.0 Maintenance Plan.

2.1 United States Pipe and Foundry Company, Inc. shall implement and maintain a preventative maintenance plan for all major air pollution control equipment. At a minimum, the plan shall include the manufacturer's recommendations and recordkeeping of periodic and/or scheduled maintenance activities for the purposes of complying with the plan. The plan shall be updated as necessary, maintained on site, and be available for inspection by Bureau representative upon request during normal

4.13 Ancillary Valve and Hydrant Plant Special Coatings operations log required under Condition 4.0, Emission Unit 208

5.0 Sulfur Concentration in Coke. The maximum allowable sulfur content of the coke used at this facility shall not exceed 0.7 percent. *Part 70 Permit Application Request by Permittee*

6.0 Visible Emissions from Buildings. Visible emissions from buildings, other than those from stacks or flues, shall not exceed an opacity of five percent for an aggregate of more than five minutes in any one hour or more than twenty minutes in any twenty-four-hour period. *§4-41, Rule 26.20; §4-57*

7.0 Compliance Assurance Monitoring. The following emissions sources are Pollutant Specific Emissions Units (PSEU) with potential "pre-control" particulate matter emissions greater than one hundred tons per year and are subject to the provisions of Title 40 *Code of Federal Regulations,* Part 64, "Compliance Assurance Monitoring." Compliance with the provision s shall be demonstrated through compliance with Conditions 1.1, 9.0, and 10.0, Conditions Applicable to Entire Facility.

Source ID	Description	Control Device ID	Stack ID
E002	Cupola	CD002	S002
E014	No. 9 Unit Shakeout	CD003	S007
E017	12 ft. Rotoblast Table	CD005	S018
E019	No. 9 Unit Secondary Shakeout	CD006	S022
E021	No. 9 Unit Casting Monorail and 8 ft. Tableblast	CD008	S024
E133	No. 9 Unit Casting Automatic Cleaner	CD007	S023
E134-E136	FBE Rotoblast Barrels	CD048	S091

8.0 Iron and Steel Foundries MACT. United States Pipe and Foundry Company shall be subject to applicable requirements of the "National Emissions Standards for Hazardous Air Pollutants for Iron and Steel Foundries," Title 40 *Code of Federal Regulations*, Part 63, Subpart EEEEE.

9.0 Visible Emissions Monitoring.

Daily qualitative visible emissions observations shall be conducted of the following designated emission points while the source is in operation. In the event that visible emissions are observed at or above the designated action level for the individual emission point, a formal visible emission reading shall be conducted in accordance with U.S. EPA Test Method 9, Title 40 *Code of Federal Regulations* Part 60, Appendix A, as supplanted by the provisions of Section 4-3(c)(9) of the Chattanooga Air Pollution Control Ordinance. If the opacity of the observed visible emission is determined to be above the designated action level, corrective action shall be initiated.

9.1 Each formal visible emissions reading shall be conducted for a minimum of fifteen consecutive minutes by a certified observer.

9.2 U.S. Pipe shall maintain a log of all qualitative and formal visible emissions observations in accordance with the following:

9.2.1 The qualitative visible emissions observation log shall contain, at a minimum, the date of the observation, the results of the observation, and the initials of the observer.

9.2.2 The formal visible emissions reading log shall contain, at a minimum, the date and time the reading was made, the results of the reading, the name of the observer, and the cause and corrective action taken for the observed emissions.

9.2.3 U.S. Pipe shall maintain the logs and original visible emissions observations forms for a period of five years after the date of entry.

9.3 Visible emissions monitoring shall be conducted on the following emission points:

Stack ID	Description	Action Level	Limit
S001	Charge Handling	10%	20%
S002	Cupola Baghouse	10%	20%
S003	Cupola	10%	20%
S004	Melting Facility Building	5%	5%
S005/S006	Ductile Building Roof Vents and Ventilators	5%	5%
S007	Ductile Treating & No.9 Unit Shakeout Baghouse	10%	20%
S008-S015	Main Foundry Building Roof Monitors over Units Nos.9, 4, & 10 Pouring, Cooling, & Shakeout	5%	5%
S018	12 ft. Rotoblast Table Baghouse?	10%	20%
S019/S060	Cleaning Shed No.2 Roof Eaves	5%	5%
S022	No.9 Unit Secondary Shakeout Baghouse	10%	20%
S023	No. 9 Unit Casting Automatic Cleaner Baghouse	5%	10%
S024	No. 9 Unit Casting Monorail and 8 ft. Tableblast Baghouse	10%	20%
S037	Sand Reclaimer Fines Baghouse	10%	10%
S038	Sand Reclaimer Classifer Baghouse	10%	10%
S053	Shell Core Building Ventilator	5%	5%
S058	GLA Burn-off Oven	5%	10%
S059	Cleaning Shed No.1 Ventilators	5%	5%
S062	Old Heat Treat Building Wall Fan	5%	5%
S078	Pattern Shop Cyclone	10%	20%
S090	No. 9 Casting Cooling Conveyor Baghouse	10%	10%
S091	FBE Rotoblast Barrels Baghouse	5%	10%
S092	No. 10 Unit Shakeout Sand Conveyor Baghouse	10%	20%
S093	No. 10 Unit Shakeout Baghouse	10%	20%

10.0 Differential Pressure Across Baghouses. Daily monitoring of the differential pressure across the designated baghouses shall be conducted while the equipment is in operation. If the differential pressure is observed outside the specified range, an investigation of the cause shall be conducted in accordance with U.S. Pipe and Foundry's written air pollution control

equipment maintenance procedures. Once the cause has been determined, corrective action shall be initiated and completed in a timely manner.

United States Pipe and Foundry Company, Inc. shall maintain a log of all differential pressure readings taken for each device. This log shall contain, at a minimum, the date of the observation, the observed reading, the initials of the observer, and if the baghouse is operating outside the indicated range, the corrective action taken. U.S. Pipe shall maintain the logs for a period of five years after the date of entry.

CONTROL DEVICE	DESCRIPTION	RANGE (IN. OF WATER)
CD002	Cupola Baghouse	2-12
CD003	Ductile Treating & No. 9 Unit Shakeout Baghouse	1-9
CD005	Large Casting Rotoblast Baghouse	1-9
CD006	No.9 Unit Secondary Shakeout Baghouse	1-8
CD007	No. 9 Casting Automatic Cleaner Baghouse	1-9
CD008	Monorail & 8' Tableblast Baghouse	1-9
CD009 Adj	? No. 9 Unit Sand Screening Drum Baghouse ?	1-9
CD016 Adj	No. 10 Unit Airset Mold ~~System Fines Baghouse~~	~~1-9~~
CD017 Adj	No. 10 Unit Sand Reclaimer Classifier Baghouse	1-9
CD047	No.9 Casting Cooling Conveyor Baghouse	1-9
CD048	FBE Rotoblast Barrels Baghouse	1-9
CD050 Adj	No. 10 Unit Shakeout Sand Conveyor Baghouse	1-8
CD051 Adj	No. 10 Unit Shakeout Baghouse	1-9
CDV08	Rotoblast Baghouse	1-9
CDV10	Airblast Baghouse	1-8

Cyclone No B'house

Sand Reclaimer

11.0 Emissions Determination. All estimated emissions for this Part 70 Permit shall be the product of the emission factor for a given process and the applicable control efficiencies (including equivalent control efficiencies for wetted sand processes and settling factors). Verification of compliance with the emission limitations of this Part 70 Permit shall be accomplished using the emission calculation method stated above. *§4-57; §4-60*

12.0 Emissions Testing. Emissions testing for this facility, if required by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau, may consist of particulate matter, sulfur dioxide (SO_2), nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compounds (VOC), and hazardous air pollutants (HAP) testing, and shall be performed in accordance with the U.S. EPA Test Methods contained in Title 40 *Code of Federal Regulations* Part 60, Appendix A and in accordance with the provisions in Section 4-3 of the Chattanooga Air Pollution Control Ordinance. *§4-3; §4-57(c)(1)*

13.0 Replacement of Equipment. The addition of air pollution control equipment to achieve additional emissions reductions and/or the replacement of air pollution control equipment with air pollution control of equal or greater control efficiency for each pollutant controlled by the original equipment are changes that qualify as operational flexibility with the following exception. The exception is that the air pollution control technology required by any regulation promulgated pursuant to Section 112 of the Clean Air Act codified at Title 40

Code of Federal Regulations Part 63, including control measures employed to demonstrate early reductions of hazardous air pollutants, is not eligible for replacement under operational flexibility. Operational flexibility changes are subject to the notification requirements of Paragraph 15.4 in the Conditions of General Applicability.

14.0 Usage of Equivalent Materials. United States Pipe and Foundry Company, Inc. may, at its discretion, employ the use of equivalent raw materials in plant operations. Equivalent raw materials are materials whose emissions of regulated air pollutants from the effected emission unit(s) shall not exceed the emissions allowed under this permit. No later than seven days prior to the change, United States Pipe and Foundry Company, Inc. shall provide the Chattanooga-Hamilton County Air Pollution Control Bureau an analysis of the projected hourly emission rate of all regulated air pollutants, including hazardous air pollutants, based on this change in the raw materials. *Part 70 Permit Application Request by Permittee*

EMISSION UNIT SPECIAL CONDITIONS

EMISSION UNIT 101 – CHARGE HANDLING

Charge Handling Equipment (E001)

1.0 The maximum emissions of particulate matter resulting from charge handling shall be limited to 8.57 pounds per hour and 37.53 tons per year. *§4-2; §4-57; §4-60*

2.0 Visible emissions from material handling shall not exceed an opacity of twenty percent for an aggregate of more than three minutes in any one hour or more than twenty minutes in any twenty-four-hour period. *§4-41, Rule 11.1*

EMISSION UNIT 102 – MELTING FACILITY

Cupola (E002)
Cupola Afterburner (CD001)

1.0 The maximum emissions of particulate matter from the melting facility shall be limited to 4.95 pounds per hour and 21.68 tons per year. Compliance with these emissions limitations shall be demonstrated by venting all captured cupola emissions through the Cupola baghouse (CD002) and by meeting the monitoring requirements of Condition 7.0 and Condition 8.0, Conditions Applicable to Entire Facility. The Cupola baghouse shall be in operation at all times during cupola operation except in accordance with Condition 13.0 of the Conditions of General Applicability. *§4-2; §4-57*

2.0 During startup and shutdown of the cupola, the owner or operator of the melting facility shall make such provisions or modifications as may be necessary so that visible emissions from the startup and shutdown of the cupola shall not exceed an opacity of twenty percent for an aggregate of more than five minutes in any one hour or more than twenty minutes in any twenty-four-hour period and so that mass emissions do not exceed 0.020 grains per dry standard cubic foot. *§4-41, Rule 3.1, Rule 26.12; §4-57*

3.0 The maximum emissions of sulfur dioxide (SO_2) from the melting facility shall be limited to 6.55 pounds per hour and 28.66 tons per year. This emissions limitation shall be met by limiting sulfur content in coke to 0.7 percent by weight. *§4-2; §4-57; Part 70 Permit Application Request by Permittee*

4.0 The maximum allowable emissions of nitrogen oxides (NO_x) from the melting facility shall be 20.02 pounds per hour and 87.69 tons per year. *§4-2; §4-41, Rule 2; §4-57*

5.0 All combustion emissions limitations shall be met by burning only natural gas or No.2 fuel oil as fuel in the cupola afterburner (CD001). *§4-57*

6.0 Operation of the cupola afterburner (CD001) shall be performed according to U.S. Pipe and Foundry Company's maintenance plan described in Condition 2.0, Conditions Applicable to the Entire Facility and the manufacturer's recommendations. The plan shall require adequate residence time and operating temperature for proper control efficiency. *§4-57*

7.0 The cupola afterburner (CD001) shall be operated at a minimum temperature of 1,100°F during melting operations. This temperature shall be logged hourly. Continuous monitoring of the operating temperature by strip or circular chart recorder shall satisfy this monitoring requirement. *§4-57*

EMISSION UNIT 103 – HOT METAL TRANSFER

Hot Metal Transfer from Melting (E003)

1.0 The maximum emissions of particulate matter resulting from hot metal transfer shall be limited to 2.08 pounds per hour and 9.12 tons per year. *§4-2; §4-57; §4-60*

2.0 Visible emissions from material handling shall not exceed an opacity of twenty percent for an aggregate of more than three minutes in any one hour or more than twenty minutes in any twenty-four-hour period. *§4-41, Rule 11.1*

EMISSION UNIT 104 – DESULFURIZATION & SLAGGING
Desulfurization Process (E004)

EMISSION UNIT 105 – INDUCTION HOLDING FURNACES
Hot Metal Transfer to Holding Furnace (E005)
Holding Furnace Preheat (E006)

EMISSION UNIT 106 – DUCTILE TREATING PROCESS
Treating Ladles (E007)

1.0 Emission limitations for particulate matter for these Emission Units shall be:

1.1 The maximum emissions of particulate matter from Emission Unit 104 (Desulfurization and Slagging E004) shall be limited to 12.31 pounds per hour and 53.92 tons per year. *§4-2; §4-57; §4-60*

1.2 The maximum emissions of particulate matter from Emission Unit 105 (Hot Metal Transfer to Holding Furnace E005 and Holding Furnace Preheat E006) shall be limited to 0.67 pounds per hour and 2.93 tons per year. *§4-2; §4-57; §4-60*

1.3 The maximum emissions of particulate matter from Emission Unit 106 (Ductile Treating Process) shall be limited to 0.756 pounds per hour and 3.312 tons per year. Compliance with this emissions limitation shall be demonstrated by the operation of an emissions capturing system. All captured emissions from ductile treating shall be vented through the Ductile Treating and No.9 Unit Shakeout baghouse (CD003). This baghouse shall be in operation at all times during ductile treating except in accordance with Condition 13.0 of the Conditions of General Applicability. *§4-2; §4-57*

1.4 Particulate emissions from the Ductile Treating and No.9 Unit Shakeout baghouse (CD003) stack (S007) shall not exceed 12.86 pounds per hour. These baghouse stack emissions consist of the combined emissions from the Ductile Treating Process (Emission Unit 106) and No.9 Unit Shakeout (Emission Unit 114). *§4-41, Rule 26.12*

Compliance with these limitations shall be demonstrated in accordance with the requirements of Condition 7.0 and Condition 8.0, Conditions Applicable to Entire Facility. *§4-57*

2.0 The maximum emissions of sulfur dioxide (SO_2) from the Induction Holding Furnace Pre-heaters shall be limited to 0.0004 pounds per hour and 0.002 tons per year. Compliance with this emission limitation shall be met by burning only natural gas as fuel in the Induction Holding Furnace Pre-heaters. *§4-2; §4-57*

3.0 The maximum emissions of nitrogen oxides (NO_x) from the Induction Holding Furnace Pre-heaters are 0.067 pounds per hour and 0.295 tons per year. Compliance with this emission

limitation shall be met by burning only natural gas as fuel in the Induction Holding Furnace Pre-heaters. *§4-2; §4-57; §4-60*

EMISSION UNIT 107 – No.9 UNIT INOCULATION & SLAGGING
No.9 Unit Inoculation Process (E008)

EMISSION UNIT 108 – No.10 UNIT INOCULATION & SLAGGING
No.10 Unit Inoculation (E009)

EMISSION UNIT 109 – FITTING PLANT POURING & COOLING OPERATIONS
No.9 Unit Pouring (E010)
No.9 Unit Cooling (E011)
No.10 Unit Pouring & Cooling (E013)

1.0 The maximum emissions of particulate matter from No.9 Unit Inoculation and Slagging shall be limited to 12.06 pounds per hour and 52.82 tons per year. *§4-2; §4-57; §4-60*

2.0 The maximum emissions of particulate matter from No.10 Unit Inoculation & Slagging operations shall be limited to 4.48 pounds per hour and 19.63 tons per year. *§4-2; §4-57; §4-60*

3.0 Combined emissions of particulate matter from Fitting Plant Pouring & Cooling shall not exceed 21.94 pounds per hour and 96.10 tons per year. *§4-2; §4-57; §4-60*

EMISSION UNIT 110 – No.9 UNIT SHAKEOUT

No.9 Unit Shakeout (E014)

1.0 The maximum emissions of particulate matter from No.9 Unit Shakeout operations shall be limited to 7.277 pounds per hour and 31.87 tons per year. At all times during No.9 Unit Shakeout operations, an emissions capturing system shall be in operation to minimize fugitive emissions from this source. All captured emissions from the No.9 Unit Shakeout shall be vented through the Ductile Treating and No.9 Shakeout Baghouse (CD003). This capture system and baghouse shall be in operation at all times during shakeout operations except in accordance with Condition 13.0 of the Conditions of General Applicability.

2.0 Particulate emissions from the Ductile Treating and No.9 Unit Shakeout baghouse (CD003) stack (S007) shall not exceed 12.86 pounds per hour. These emissions consist of combined captured emissions from the Ductile Treating Process (Emission Unit 106) and No.9 Unit Shakeout (E014 of Emission Unit 110). *§4-41, Rule 26.12*

EMISSION UNIT 111 – No.10 UNIT SHAKEOUT

No.10 Unit Shakeout (E015)

1.0 The maximum emissions of particulate matter from No.10 Unit Shakeout operations shall be limited to 21.26 pounds per hour and 93.12 tons per year. *§4-2; §4-57; §4-60*

2.0 Particulate emissions from the No. 10 Shakeout Sand Conveyor baghouse (CD050) stack (S092) shall not exceed 0.02 grains per dry standard cubic foot. *§4-41, Rule 26.12*

3.0 Particulate emissions from the No. 10 Shakeout baghouse (CD051) stack (S093) shall not exceed 0.02 grains per dry standard cubic foot. *§4-41, Rule 26.12*

EMISSION UNIT 112 – No.9 UNIT CASTING CLEANING

No.9 Unit Casting Handling (E018)
No.9 Unit Secondary Shakeout (E019)
No.9 Unit Casting Rotoblast Monorail & Table (E021)
Casting Cooling Conveyor (E132)
No.9 Unit Casting Automatic Cleaner (E133)

1.0 Combined emissions of particulate matter resulting from No.9 Unit Casting Cleaning operations shall not exceed 14.70 pounds per hour and 64.37 tons per year.

2.0 At all times during No.9 Unit Secondary Shakeout operations, an emissions capturing system shall be in operation to minimize fugitive emissions from this source.

3.0 All captured emissions captured from No.9 Unit Secondary Shakeout shall be vented through the No.9 Unit Secondary Shakeout baghouse (CD006). This baghouse shall be in operation at all times during secondary shakeout operations except in accordance with Condition 13.0 of the Conditions of General Applicability. *§4-57*

4.0 The maximum allowable particulate emissions from the No.9 Unit Secondary Shakeout baghouse (CD006) stack (S022) shall be 2.571 pounds per hour as calculated based on a grain loading of 0.02 grains per dry standard cubic foot and the reported exhaust flow rate. *§4-2; §4-41, Rule 26.12; §4-57*

5.0 All captured emissions from the No.9 Casting Automatic Cleaner shall be vented through the No.9 Casting Automatic Cleaner Baghouse (CD007). This baghouse shall be in operation at all times during rotoblast operations except in accordance with Condition 13.0 of the Conditions of General Applicability. *§4-57*

6.0 The maximum allowable particulate emissions from the No.9 Casting Automatic Cleaner baghouse (CD007) stack (S023) shall be 2.5 pounds per hour. This condition has been determined to be Reasonable and Proper Control by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau. *§4-2; §4-41, Rule 27.3; §4-57*

7.0 All captured emissions from the No.9 Unit Rotoblast Monorail and Table shall be vented through the Pangborn Monorail and Rotoblast Table baghouse (CD008). This baghouse shall be in operation at all times during monorail and rotoblast table operations except in accordance with Condition 13.0 of the Conditions of General Applicability. *§4-57*

8.0 The maximum allowable particulate emissions from the No.9 Unit Rotoblast Monorail and Table baghouse (CD008) stack (S024) shall be 2.362 pounds per hour based on a grain loading of 0.02 grains per dry standard cubic foot and the reported exhaust flow rate. *§4-2; §4-41, Rule 26.12; §4-57*

9.0 All captured emissions from the No.9 Casting Cooling Conveyor shall be vented through the No.9 Casting Cooling Conveyor baghouse (CD047). This baghouse shall be in operation at

all times during cooling conveyor operations except in accordance with Condition 13.0 of the Conditions of General Applicability. *§4-57*

10.0 The maximum allowable particulate emissions from the No.9 Casting Cooling Conveyor baghouse (CD047) stack (S090) shall be 0.10 pounds per hour. This condition is Reasonable and Proper control as determined by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau. *§4-41, Rule 27.3; §4-57*

EMISSION UNIT 113 – No. 10 UNIT CASTING CLEANING

12' Rotoblast Table (E017)

1.0 The maximum emissions of particulate matter resulting from No.10 Unit Casting Cleaning operations shall be limited to 0.62 pounds per hour and 2.71 tons per year. *§4-41, Rule 26.12*

2.0 The exhaust from the 12' Rotoblast Table shall be vented through the Pangborn Large Casting Rotoblast baghouse (CD005). This baghouse shall be in operation at all times during operation of the rotoblast table except in accordance with Condition 13.0 of the Conditions of General Applicability. *§4-57*

3.0 The maximum allowable particulate emissions from the Large Casting Rotoblast baghouse (CD005) stack (S018) shall be 1.735 pounds per hour based on a grain loading of 0.02 grains per dry standard cubic foot and the reported exhaust flow rate. *§4-41, Rule 26.12*

EMISSION UNIT 114 – GRINDING, FINISHING, & PRIMING

Casting Finishing Area No.1 (E084)
Casting Finishing Area No.2 (E085)
Casting Finishing Area No.3 (E086)
Casting Finishing Area No.4 (E087)
Primer Dip Coating Operation (E088)

1.0 The maximum emissions of particulate matter from Grinding, Finishing, and Priming operations shall be limited to 1.76 pounds per hour and 7.70 tons per year. Compliance with these emissions limitations shall be demonstrated in accordance with Condition 7.0, Conditions Applicable to Entire Facility. *§4-2; §4-57; §4-60*

2.0 The volatile organic compound (VOC) content in all surface coatings used in the Primer Dip Coating Operation shall not exceed 3.5 pounds per gallon of coating, less water and exempt solvents, as delivered to the applicator. *§4-2; §4-41, Rule 25.21; §4-57; §4-60*

3.0 A log of the Primer Dip Coating Operation shall be maintained and shall reflect the date and quantity of coating delivered. *§4-57*

EMISSION UNIT 115 – CEMENT LINING BUILDING

Cement Mixing and Lining Stations (E089-E095)
Cement Lining Drying Ovens Nos.1, 3, and 4 (E096-E098)
No.1 and No.3 Dip Paint Lines (E099, E102)
Binks Spray Paint Booth (E100)
Large Fittings Paint Booth (E101)
Coating Drying Ovens Nos.1 and 3 (E103-E104)

1.0 The maximum emissions of particulate matter resulting from operations in the Cement Lining Building shall be limited to 1.05 pounds per hour and 4.6 tons per year. Compliance with this emission limitation shall be demonstrated by the following:

1.1 All captured emissions from the Binks Spray Paint Booth and the Large Fittings Paint Booth shall be vented through their respective dry filter systems (CD034 and CD035). These filter systems shall be in place at all times during paint booth operations except in accordance with Condition 13.0 of the Conditions of General Applicability.

1.2 Inspection and preventative maintenance of the booths and filters shall be conducted in accordance with U.S. Pipe and Foundry Company's maintenance plan described in Condition 2.0, Conditions Applicable to Entire Facility.

1.3 The maximum allowable particulate emissions from the Large Fittings Paint Spray Booth exhaust stack (S068) shall be 0.03 pounds per hour. This emissions limitation has been determined to be Best Available Control Technology (BACT) by the Director, the Chattanooga-Hamilton County Air Pollution Control. *§4-8(e)(2)*

1.4 Only natural gas may be burned as fuel in cement lining and coating drying ovens.

§4-2; §4-8; §4-57

2.0 The maximum emissions of sulfur dioxide (SO_2) from the drying ovens shall be limited to 0.002 pounds per hour and 0.009 tons per year. Compliance with this emission limitation shall be demonstrated by burning only natural gas as fuel in the drying ovens. *§4-2; §4-57*

3.0 The maximum emissions of nitrogen oxides (NO_x) from the drying ovens shall be limited to 0.35 pounds per hour and 1.53 tons per year. Compliance with this emission limitation shall be demonstrated by burning only natural gas as fuel in the drying ovens. *§4-2; §4-57*

4.0 The volatile organic compound (VOC) content of all coatings applied in the Cement Lining Building shall not exceed 3.5 pounds per gallon less water and exempt solvents as delivered to the applicator. A log shall be maintained of the data reflecting the date and quantity of coatings and cleaning solvents used during operations in the Cement Lining Building. This condition has been determined to be Best Available Control Technology (BACT) by the

Director, the Chattanooga-Hamilton County Air Pollution Control Bureau. *§4-41, Rule 25.21; §4-57; §4-60*

EMISSION UNIT 116 – SPECIAL COATINGS OPERATION

Special Coating Spray Booth (E105)
Special Coating Drying Oven (E106)

1.0 The maximum emissions of particulate matter resulting from the Special Coatings Operation shall be limited to 0.993 pounds per hour and 4.37 tons per year. Compliance with this emission limitation shall be demonstrated by the following:

1.1 The exhaust from the Special Coating Spray Booth shall be vented through the dry filter system (CD036). This filter system shall be in place at all times during spray booth operations.

1.2 Inspection and preventative maintenance of the booth and filters shall be conducted in accordance with U.S. Pipe and Foundry Company's maintenance plan described in Condition 2.0, Conditions Applicable to Entire Facility.

1.3 Only natural gas may be burned as fuel in the Special Coatings Drying Oven.

§4-2; §4-57

2.0 The maximum emissions of sulfur dioxide (SO_2) resulting from the Special Coating Drying Oven shall be limited to 0.008 pounds per hour and 0.04 tons per year. Compliance with this emission limitation shall be demonstrated by burning only natural gas as fuel in the Special Coating Drying Oven. *§4-2; §4-57*

3.0 The maximum emissions of nitrogen oxides (NO_x) resulting from the Special Coating Drying Oven shall be limited to 0.12 pounds per hour and 0.53 tons per year. Compliance with this emission limitation shall be demonstrated by burning only natural gas as fuel in the Special Coatings Drying. *§4-2; §4-57*

4.0 The volatile organic compounds (VOC) content of all coatings used in the Special Coatings Operation shall not exceed 3.5 pounds per gallon of coating less water and exempt solvents as delivered to the applicator. A log shall be maintained of the data reflecting the amount, date, and type of coatings and solvents used in the Special Coating Operation. This condition has been determined to be Best Available Control Technology (BACT) by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau. *§4-41, Rule 25; §4-57*

EMISSION UNIT 118 – No.10 UNIT AIRSET MOLD SYSTEM

Pneumatic Sand Transporter to Mold Sand Silo (E040)
Sand Heaters (E041)
Sand Mixers (E042)
Mold Forming (E043)

1.0 The maximum emissions of particulate matter resulting from the No.10 Unit Airset Mold System shall be limited to 0.55 pounds per hour and 1.98 tons per year. Compliance with this emission limitation shall be demonstrated by the following:

1.1 The exhaust from silo loading shall be vented through the No.10 Unit Mold Sand Tank baghouse (CD019). This baghouse shall be in operation at all times during the silo loading process except in accordance with Condition 13.0 of the Conditions of General Applicability. *§4-41, Rule 27; §4-57*

1.2 The maximum allowable particulate emissions from the No.10 Unit Mold Sand Tank baghouse (CD019) stack (S041) shall be 0.005 pounds per hour. *§4-41, Rule 27*

1.3 The exhaust from pneumatic transport operations shall be vented through the No.10 Unit Mold Sand Heaters baghouse (CD020). This baghouse shall be in operation at all times during sand transport and sand heater operation except in accordance with Condition 13.0 of the Conditions of General Applicability. *§4-41, Rule 27; §4-57*

1.4 The maximum allowable particulate emissions from the No.10 Mold Sand Heaters baghouse (CD020) stack (S008B) shall be 0.01 pounds per hour. *§4-41, Rule 27*

1.5 The exhaust from the No.10 Unit Mold Sand mixers shall be vented through the No.10 Unit Mold Sand Mixer No.1 baghouse (CD021) and No.10 Unit Mold Sand Mixer No.2 baghouse (CD022). These baghouses shall be in operation at all times during sand transport and sand heater operation except in accordance with Condition 13.0 of the Conditions of General Applicability. *§4-41, Rule 27; §4-57*

2.0 Volatile organic compound emissions from the No. 10 Unit Airset Mold System shall be limited to 37.64 tons per twelve consecutive months. Compliance with this limitation shall be demonstrated through Condition 3.0. *§4-41, Rule 25; §4-57*

3.0 The total iron poured on No. 10 Unit shall not exceed 20,166 tons per consecutive twelve months. A monthly log of iron poured on No. 10 Unit shall be maintained. At a minimum, the log shall contain the date, the amount of iron poured for the month, the amount of iron poured for the previous twelve months, and the initials of the operator. *§4-41, Rule 25, Rule 27; §4-57*

EMISSION UNIT 119 – No.10 UNIT SAND RECLAMATION

Size Reduction Process (E036)
Classifier Process (E037)
MacCawber Pneumatic Sand Transporter to Reclaimed Sand No.1 Bulk Silo (E038)
MacCawber Pneumatic Sand Transporter to New Sand No.2 Bulk Silo (E039)

1.0 The maximum emissions of particulate matter resulting from the No.10 Unit Sand Reclamation process shall be limited to 0.064 pounds per hour and 0.23 tons per year. Compliance with this emission limitation shall be achieved by the following:

1.1 All emissions from the sand reclaimer and size reducer shall be vented through the Fines Baghouse (CD016). This baghouse shall be in operation at all times during sand reclamation and size reduction except in accordance with Condition 13.0 of the Conditions of General Applicability. *§4-57*

1.2 The maximum allowable particulate emissions from the Fines Baghouse (CD016) stack (S037) shall be 0.02 pounds per hour. *§4-41, Rule 27; §4-57*

1.3 All emissions from the classifier shall be vented through the Sand Reclaimer Classifier baghouse (CD017). This baghouse shall be in operation at all times during the clarification process except in accordance with Condition 13.0 of the Conditions of General Applicability. *§4-57*

1.4 The maximum allowable particulate emissions from the Sand Reclaimer Classifier baghouse (CD017) stack (S038) shall be 0.02 pounds per hour. *§4-41, Rule 27; §4-57*

1.5 All emissions from the loading of Reclaimed Sand No.1 and No.2 Bulk Silos shall be vented through the Bulk Sand Silo baghouse (CD018). This baghouse shall be in operation at all times during the loading of these silos except in accordance with Condition 13.0 of the Conditions of General Applicability. *§4-57*

1.6 The maximum allowable particulate emissions the Bulk Sand Silo baghouse (CD018) stack (S040) shall be 0.01 pounds per hour. *§4-41, Rule 27; §4-57*

2.0 The total iron poured on No. 10 Unit shall not exceed 20,166 tons per consecutive twelve months. A monthly log of iron poured on No. 10 Unit shall be maintained. At a minimum, the log shall contain the date, the amount of iron poured for the month, the amount of iron poured for the previous twelve months, and the initials of the operator. *§4-41, Rule 27; §4-57*

EMISSION UNIT 120 – No.9 UNIT GREENSAND MOLD SYSTEM

Sand Conveying (E022)
Sand Screening Drum (E023)
Sand Return to Storage Silo (E024)
Greensand Mullors A and B (E025)
Herman Mold Machine (E026)
Binder Unloading to Storage Silo (E027)
Binder Conveying (E028)

1.0 The maximum emissions of particulate matter resulting from the No.9 Unit Greensand Mold System shall be limited to 12.98 pounds per hour and 54.16 tons per year.

2.0 The exhaust from the sand screening drums shall be vented through the Sand Screening Drum Cyclones (CD009). These cyclones shall be in operation at all times during sand screening operation except in accordance with Condition 13.0 of the Conditions of General Applicability. *§4-57*

3.0 The maximum allowable particulate emissions from the Sand Screening Drum cyclones (CD009) stack (S025) shall be 0.75 pounds per hour. This emissions limitation has been determined to be Best Available Control Technology (BACT) by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau. *§4-8(e)(2); §4-57*

4.0 Operation of the No.9 Unit Greensand Mold System shall not exceed 4,000 hours in any 365-consecutive-day period. Monthly hours of operation shall be recorded in a log. At a minimum, the log shall contain the hours of operation for the month, the total hours of operation for the previous twelve months, and the operator's initials. This limitation has been determined to be Best Available Control Technology (BACT) by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau. *§4-8(e)(2); §4-57*

5.0 The exhaust from the loading of the Greensand Binder Storage Silo shall be vented through the No.9 Unit Greensand Binder Storage Silo bin vent filter (CD010). This bin vent filter shall be in operation at all times during silo loading except in accordance with Condition 13.0 of the Conditions of General Applicability. *§4-57*

6.0 The exhaust from Binder Conveyor A shall be vented through the conveyor baghouse (CD012). This baghouse shall be in operation at all times during binder conveying operations except in accordance with Condition 13.0 of the Conditions of General Applicability. *§4-57*

7.0 The exhaust from Binder Conveyor B shall be vented through the conveyor baghouse (CD013). This baghouse shall be in operations at all times during binder conveying operations except in accordance with Condition 13.0 of the Conditions of General Applicability. *§4-57*

8.0 The maximum allowable particulate emissions from each binder conveyor baghouse (CD012-013) shall be 0.457 pounds per hour based on a grain loading of 0.020 grains per dry standard cubic foot and the reported exhaust flow rate. *§4-41, Rule 26.12; §4-57*

EMISSION UNIT 121 – SHELL CORES PROCESS

Shell Core Sand Handling (E082)
Shell Core Heating (E083)

1.0 The maximum emissions of particulate matter from the Shell Cores Process shall be limited to 1.12 pounds per hour and 4.91 tons per year. Compliance with these emissions limitations shall be demonstrated in accordance with Condition 7.0, Conditions Applicable to Entire Facility. *§4-41, Rule 10; §4-57; §4-60*

2.0 The maximum emissions of sulfur dioxide (SO_2) resulting from Shell Core Heating operations shall be limited to 0.001 pounds per hour and 0.005 tons per year. Compliance with this emissions limitation shall be demonstrated by burning only natural gas as fuel in the shell core sand heater. *§4-2; §4-57*

3.0 The maximum emissions of nitrogen oxides (NO_x) resulting from Shell Core Heating operations shall be limited to 0.185 pounds per hour and 0.81 tons per year. Compliance with this emission limitation shall be demonstrated by burning only natural gas as fuel in the shell core sand heater. *§4-41, Rule 2; §4-57*

EMISSION UNIT 122 – AIRSET CORE SYSTEM

Airset Binder Bulk Storage Tank (E046)
Airset Acid Bulk Storage Tank (E048)
Pneumatic Conveying for Airset Core Sand Silo (E050)
Sand Heater (E051)
Sand Mixer (E052)
Core Forming (E053)

1.0 The maximum emissions of particulate matter resulting from the Airset Core System shall be limited to 5.314 pounds per hour and 23.28 tons per year. *§4-41, Rule 26.12*

2.0 The exhaust from loading of the airset sand silo shall be vented through the Airset Core Sand Tank baghouse (CD023). This baghouse shall be in operation at all times during the airset sand silo loading process except in accordance with Condition 13.0 of the Conditions of General Applicability. *§4-57*

3.0 The exhaust from the sand heating process shall be vented through the Airset Core Heater cyclone (CD024) and Airset Core Sand Tank baghouse (CD023). This cyclone and baghouse shall be in operation at all times during the sand heating process except in accordance with Condition 13.0 of the Conditions of General Applicability. *§4-57*

4.0 The maximum allowable particulate emissions from the Airset Core Sand Tank baghouse (CD023) stack (S045) shall be 0.171 pounds per hour based on a grain loading of 0.02 grains per dry standard cubic foot and the reported exhaust flow rate. *§4-41, Rule 26.12*

EMISSION UNIT 123 – ISOCURE CORE SYSTEM

Isocure Part 1 Bulk Storage Tank (E054)
Isocure Part 2 Bulk Storage Tank (E057)
No.3 Bulk Sand Silo (E060)
No.3 and No.4 Isocure Sand Silo (E061)
No.5 Isocure Sand Silo (E062)
No.3, No.4, & No.5 Isocure Sand Heaters (E063-E065)
No.3, No.4, and No.5 Sand Mixers (E066-E068)
Isocure Machines No.3, No.4, & No.5 (E069-E071)
No.6 & No.7 Isocure Sand Silo (E122)
No.6 & No.7 Sand Heaters (E123-E124)
Isocure Machines No.6, No.7, & No.8 (E129-E131)

1.0 The maximum emissions of particulate matter from the Isocure Core System shall be limited to 1.26 pounds per hour and 5.52 tons per year. Compliance with these emission limitations shall be demonstrated by the following:

1.1 The exhaust from the loading of the No.3 Bulk Sand Silo (E060) shall be vented through the Farr Bulk Sand Silo baghouse (CD025). This baghouse shall be in operation at all times during silo loading operations except in accordance with Condition 13.0 of the Conditions of General Applicability.

1.2 The maximum allowable particulate emissions from the Bulk Sand Silo baghouse (CD025) stack (S048) shall be 0.17 pounds per hour based on a grain loading of 0.020 grains per dry standard cubic foot and the reported exhaust flow rate. These stack emissions are combined emissions from Bulk Sand Silo loading (E060 of Emission Unit 123) and Pepset Sand Heater Operation (E077 of Emission Unit 124). *§4-41, Rule 26.12*

1.3 The exhaust from the loading of the No.3 and No.4 Isocure Sand Silo (E061) shall be vented through the No.3 and No.4 Isocure Sand Silo baghouse (CD026). This baghouse shall be in operation at all times during sand loading operations except in accordance with Condition 13.0 of the Conditions of General Applicability.

1.4 The maximum allowable particulate emissions from the No.3 & No.4 Isocure Sand Silo baghouse (CD026) stack (S049) shall be 0.17 pounds per hour based on a grain loading of 0.020 grains per dry standard cubic foot and the reported exhaust flow rate. *§4-41, Rule 26.12*

1.5 The exhaust from the loading of the No.5 Isocure Sand Silo shall be vented through the No.5 Isocure Sand Silo baghouse (CD027). This baghouse shall be in operation at all times during sand loading operations except in accordance with Condition 13.0 of the Conditions of General Applicability.

1.6 All emissions from the sand heaters (E063-E065) shall be vented through the Sand Heaters cyclones (CD028-030) and the Sand Silo baghouses (CD026-027). These cyclones and baghouse shall be in operation at all times during sand heater operation except in accordance with Condition 13.0 of the Conditions of General Applicability.

1.7 The maximum allowable particulate emissions from the No.5 Isocure Sand Silo baghouse (CD027) stack (S050) shall be 0.17 pounds per hour based on a grain loading of 0.020 grains per dry standard cubic foot and the reported exhaust flow rate. *§4-41, Rule 26.12*

1.8 The exhaust from the loading of the No.6 & No.7 Isocure Sand Silo (E122) and the pneumatic transport of sand to the No.6 & No.7 Sand Heaters (E123-E124) shall be vented through the No.6 & No.7 Isocure Sand Silo baghouse (CD043). This baghouse shall be in operation at all times during silo loading operations except in accordance with Condition 13.0 of the Conditions of General Applicability. *§4-41, Rule 27; §4-57*

1.9 The maximum allowable particulate emissions from the No.6 & No.7 Isocure Sand Silo baghouse (CD043) stack (S086) shall be 0.17 pounds per hour. *§4-41; Rule 27; §4-57*

These limitations and conditions have been determined to be reasonable and proper by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau. *§4-41, Rule 27; §4-57*

2.0 The maximum allowable emissions of volatile organic compounds (VOC) resulting from Isocure Core Machine Nos. 3, 4, 5, 6, 7, and 8 shall be 28.67 tons per rolling twelve months. Compliance with this emission limitation shall be demonstrated by the following:

2.1 The total usage of isocure core resins shall not exceed 750,000 pounds in any 365 consecutive-day period.

2.2 The weighted average of volatile organic compounds in unreacted resins shall not exceed 30.5% by weight as determined by U.S. EPA reference Method 24, Title 40 *Code of Federal Regulations* Part 60, Appendix A and in accordance with §4-3 of the Chattanooga Air Pollution Control Ordinance.

2.3 The total usage of triethylamine shall not exceed 45,000 pounds in any 365 consecutive-day period.

2.4 Emissions of triethylamine from the isocure process shall be vented through the packed tower acid scrubbers. An operating pH for the acid scrubbers shall be maintained at or below 5.0 as measured at the scrubber drain. This pH reading shall be recorded daily in a log.

This condition has been determined to be Best Available Control Technology (BACT) by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau. *§4-41, Rule 25.3*

3.0 The owner or operator of this source shall utilize appropriate methods and technology to control onsite gaseous emissions so as to prevent odors from these emissions from being detected beyond the plant property boundary. This condition has been determined to be reasonable and proper by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau. *§4-41, Rule 12 (Local Only)*

EMISSION UNIT 124 – PEPSET CORE MAKING

Pepset Binder Bulk Storage Tank (E073)
Pepset Acid Bulk Storage Tank (E075)
Pepset Sand Heater (E077)
Sand Mixer (E078)
Core Forming (E079)

1.0 The maximum emissions of particulate matter resulting from the pepset core making process shall be limited to 0.41 pounds per hour and 1.81 tons per year.

2.0 The exhaust from the sand heater shall be vented through the Pepset Sand Heater cyclone (CD033) and the No. 3 Bulk Sand Silo baghouse (CD025). This cyclone and baghouse shall be in operation at all times during the pepset core making process except in accordance with Condition 13.0 of the Conditions of General Applicability. *§4-57*

3.0 The maximum allowable particulate emissions from the No.3 Bulk Sand Silo baghouse (CD025) stack (S048) shall be 0.01 pounds per hour. *§4-2; §4-57*

EMISSION UNIT 125 – REFRACTORY COATING OPERATIONS

Refractory Coating (E072)
Flame-off (E081)

1.0 The maximum emissions of particulate matter resulting from Refractory Coating Flame-off operations (E081) shall be limited to 0.0003 pounds per hour and 0.002 tons per year. Compliance with this emissions limitation shall be demonstrated by burning only natural gas as fuel in the flame-off burner. *§4-2; §4-57; §4-60*

2.0 The maximum emissions of sulfur dioxide (SO_2) resulting from Refractory Coating Flame-off operations (E081) shall be limited to 0.0003 pounds per hour and 0.002 tons per year. Compliance with this emissions limitation shall be demonstrated by burning only natural gas as fuel in the flame-off burner. *§4-2; §4-57; §4-60*

3.0 The maximum emissions of nitrogen oxides (NO_x) resulting from Refractory Coating Flame-off operations (E081) shall be limited to 0.057 pounds per hour and 0.248 tons per year. Compliance with this emissions limitation shall be demonstrated by burning only natural gas as fuel in the flame-off burner. *§4-2; §4-57; §4-60*

4.0 The maximum allowable emissions of volatile organic compounds (VOC) resulting from Refractory Coating operations (E072) shall be 24.74 pounds per hour and 49.49 tons per rolling twelve months. Compliance with this emission limitation shall be demonstrated by multiplying the amount of isopropanol used in the Refractory Coating operation by the emission factor of 2,000 pounds of VOC per ton of isopropanol less 50 percent control efficiency for mold cores subject to the flame-off process. *§4-41, Rule 25; §4-57*

EMISSION UNIT 126 – PACKAGING AND SHIPPING AREA

Asphalt Coating Bulk Storage Tank No.1 (E107)
Asphalt Coating Bulk Storage Tank No.2 (E108)
Touchup Coating (E109)

1.0 The maximum allowable emissions of particulate matter resulting from touchup coating operations shall not exceed 0.51 pounds per hour per spray gun. Compliance with this emission limitation shall be met by a zero percent opacity limitation for touchup coating operations. *§4-41, Rule 10; §4-57*

2.0 The volatile organic compound (VOC) content of all coatings used in the packaging and shipping area shall not exceed 3.5 pounds per gallon of coating less water and exempt solvents as delivered to the applicator. This condition has been determined to be Best Available Control Technology (BACT) by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau. *§4-41, Rule 25.2; §4-57*

3.0 A log shall be maintained of the data reflecting the amount, date, and type of coatings and solvents used in the packaging and shipping area. *§4-57*

EMISSION UNIT 127 – ANCILLARY FITTING PLANT OPERATIONS

Cupola Baghouse Dust Solidification (E110)
Cupola Drying (E111)
Pattern Shop (E113)
Ladle Pre-heat (E114)
Bathhouse Boiler (E115)
Asphalt Hot Oil Heater (E116)

1.0 The maximum allowable emissions of particulate matter resulting from Cupola Baghouse Dust Solidification operations shall be 0.003 pounds per hour and 0.009 tons per year. This condition has been determined to be Best Available Control Technology (BACT) by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau. *§4-8(e)(2)*

2.0 The exhaust from the pneumatic conveying of cupola dust in the Cupola Baghouse Dust Solidification process shall be vented through the Cupola Baghouse Dust Solidification baghouse (CD037). This baghouse shall be in operation at all times during Cupola Baghouse Dust Solidification operations. This condition has been determined to be Best Available Control Technology (BACT) by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau. *§4-8(e)(2); §4-57*

3.0 The maximum combined emissions of particulate matter from these combustion sources (E111, E114, E115, & E116) shall be limited to 0.051 pounds per hour and 0.192 tons per year. Compliance with this emission limitation shall be demonstrated by burning only natural gas as fuel in cupola drying operations. *§4-2; §4-41, Rule 8.2; §4-57*

4.0 An emission capture system shall be in operation at all times during Pattern Shop (E113) operation except in accordance with Condition 13.0 of the Conditions of General Applicability. *§4-57*

5.0 All captured emissions from the pattern shop equipment shall be vented through the pattern shop cyclone (CD039). This cyclone shall be in operation at all times during pattern shop operation except in accordance with Condition 13.0 of the Conditions of General Applicability. *§4-57*

6.0 The maximum allowable emissions of particulate matter from the pattern shop cyclone (CD039) stack (S078) shall be 3.86 pounds per hour and 16.9 tons per year based on a grain loading of 0.030 grains per dry standard cubic foot and the reported exhaust flow rate. *§4-41, Rule 26.18; §4-57*

7.0 The maximum combined emissions of sulfur dioxide (SO_2) resulting from these combustion sources (E111, E114, E115, & E116) shall be limited to 0.003 pounds per hour and 0.011 tons per year. Compliance with this emission limitation shall be demonstrated by burning only natural gas as fuel in this equipment. *§4-2; §4-57*

8.0 The maximum combined emissions of nitrogen oxides (NO_x) resulting from these combustion sources (E111, E114, E115, & E116) shall be limited to 0.466 pounds per hour and 1.76 tons per year. Compliance with this emission limitation shall be demonstrated by burning only natural gas as fuel in this equipment. *§4-2; §4-57*

EMISSION UNIT 128 – FUSION BONDED EPOXY PROCESS

GLA Burn-off Oven with Afterburner (E123)
FBE Rotoblast Barrels (E134, E135, E136)

1.0 The maximum emissions of particulate matter from the FBE Rotoblast Barrels (E134, E135, E136) operation shall be limited to 2.45 pounds per hour and 10.73 tons per year. All captured emissions from the FBE Rotoblast Barrels (E134, E135, E136) shall be vented through the FBE Rotoblast Barrels baghouse (CD048). This baghouse shall be in operation at all times during rotoblast table cleaner operation except in accordance with Condition 13.0 of the Conditions of General Applicability. *§4-2; §4-41, Rule 27.3; §4-57; §4-60*

2.0 The maximum emissions of particulate matter from the GLA Burn-off Oven (E123) shall be limited to 0.10 pounds per hour and 0.438 tons per year. Compliance with this emission limitation shall be demonstrated by burning only natural gas as fuel in this equipment. This condition has been determined to be reasonable and proper control by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau. *§4-2; §4-41, Rule 27.3; §4-57*

3.0 The maximum emissions of nitrogen oxides (NO_x) from the GLA Burn-off Oven and afterburner shall be limited to 0.60 pounds per hour and 2.63 tons per year. Compliance with this emission limitation shall be demonstrated by burning only natural gas as fuel in this equipment. *§4-41, Rule 2; §4-57*

4.0 The maximum emissions of sulfur dioxide (SO_2) from the GLA Burn-off Oven and afterburner shall be limited to 0.001 pound per hour and 0.0044 tons per year. Compliance with this emission limitation shall be demonstrated by burning only natural gas as fuel in this equipment. *§4-2; §4-57*

5.0 The maximum emissions of volatile organic compounds (VOC) from the GLA Burn-off Oven and afterburner shall be limited to 0.01 pounds per hour and 0.044 tons per year. Compliance with this emission limitation shall be demonstrated by the following:

5.1 Only natural gas shall be burned as fuel in this equipment. This condition has been determined to be Best Available Control Technology (BACT) by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau. *§4-41, Rule 25.3; §4-57*

5.2 All emissions resulting from the pyrolysis of epoxy coatings shall be vented through the GLA afterburner. This afterburner shall be in operation at all times during GLA oven operations. This condition has been determined to be reasonable and proper control by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau. *§4-41, Rule 23*

EMISSION UNIT 206 – VALVE & HYDRANT PRODUCTION

Small Valve Paint Booth (EV022)
Large Valve Touchup Coating Operation (EV023)
Hydrant Production Paint Booth (EV024)

1.0 The maximum emissions of particulate matter resulting from valve product operations shall be limited to 0.47 pounds per hour and 2.03 tons per year. Compliance with this emissions limitation shall be demonstrated by the following:

1.1 All emissions from the Small Valve Paint Booth shall vented through the dry filter assembly (CDV06). These dry filters shall be in place and the exhaust fan operating at all times during this surface coating operation.

1.2 The maximum hourly stack emissions of particulate matter from the Small Valve Paint Booth stack (SV11) shall be limited to 0.006 pounds per hour.

1.3 All emissions from the Hydrant Production Paint Booth shall be vented through the dry filter assembly (CDV07). These dry filters shall be in place and the exhaust fan shall be operating at all times during this surface coating operation.

1.4 The maximum hourly stack emissions of particulate matter from the Hydrant Production Paint Booth stack (SV13) shall be limited to 0.022 pounds per hour.

§4-2; §4-57; §4-60

2.0 The volatile organic compound (VOC) content for all coatings used in valve and hydrant production shall not exceed 3.5 pounds per gallon of coating, less water and exempt solvents, as delivered to the applicator. A log shall be maintained containing the date and amount of coatings applied in these surface coating operations. *§4-2; §4-41, Rule 25.21; §4-57*

EMISSION UNIT 207 – RESILIENT SEAT VALVE PRODUCTION

Pangborn Rotoblast Cleaner (EV025)
Pangborn Airblast Cleaner (EV026)

1.0 The maximum emissions of particulate matter resulting from Resilient Seat Valve Production shall be limited to 0.99 pounds per hour and 4.34 tons per year. Compliance with this emission limitation shall be demonstrated by the following requirements.

2.0 The exhaust from the Pangborn Rotoblast Cleaner shall be vented through the RS Valve Cleaning baghouse (CDV08). This baghouse shall be in operation at all times during rotoblast cleaner operation except in accordance with Condition 13.0 of the Conditions of General Applicability. *§4-57*

3.0 The maximum allowable particulate emissions from the RS Valve Cleaning baghouse (CDV08) stack (SV14) shall be 0.219 pounds per hour based on a grain loading of 0.053 grains per dry standard cubic foot and the reported exhaust flow rate. This emission limitation has been determined to be Best Available Control Technology (BACT) by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau. *§4-8(e)(2); §4-57*

4.0 The maximum allowable particulate emissions from the Airblast baghouse (CDV10) stack (SV15) shall be 0.771 pounds per hour based on a grain-loading of 0.02 grains per dry standard cubic foot and the reported exhaust flow rate. *§4-41, Rule 26.12; §4-57*

EMISSION UNIT 208 – ANCILLARY VALVE & HYDRANT PLANT OPERATIONS

Lead Melting Kettles (EV031-EV032)
Resilient Seat Valve Burn-off Oven (EV033)
Hot Water Heaters No.1 & No.2 (EV034-EV035)
Special Coatings Paint Booth (EV036)

1.0 The maximum emissions of particulate matter from these ancillary operations shall be limited to 0.52 pounds per hour and 2.28 tons per year. Compliance with this emissions limitation shall be demonstrated by the following:

1.1 The maximum allowable emissions of particulate matter from lead kettle heating shall be 0.17 pounds per hour. Compliance with this emission limitation shall be demonstrated by burning only natural gas as fuel in the kettle burners. *§4-41, Rule 8.1*

1.2 Emissions of particulate matter from the Resilient Seat Valve Burn-off Oven stack (SV21) shall not exceed 0.345 pounds per hour. Compliance with this emission limitation shall be demonstrated by burning only natural gas as fuel in this oven. *§4-41, Rule 8.1*

1.3 Hourly emissions of particulate matter from the Special Coatings Paint Booth stack (SV24) shall not exceed 0.002 pounds per hour. Compliance with this emission limitation shall be met by the following:

1.3.1 All emissions from the Special Coatings Paint Booth shall be vented through the dry filter assembly (CDV12). These dry filters shall be in place and the exhaust fan operating at all times during booth operation.

1.3.2 Inspections and preventative maintenance of the booth and filters shall be conducted in accordance with U.S. Pipe and Foundry Company's maintenance plan described in Condition 2.0, Conditions Applicable to Entire Facility.

§4-2; §4-57; Part 70 Permit Application Request by Permittee

2.0 The maximum emissions of sulfur dioxide (SO_2) shall be limited to 0.001 pounds per hour and 0.004 tons per year. Compliance with this emissions limitation shall be demonstrated by burning only natural gas as fuel in these combustion sources. *§4-2; §4-57*

3.0 The maximum emissions of nitrogen oxides (NO_x) shall be limited to 0.124 pounds per hour and 0.543 tons per year. Compliance with this emissions limitation shall be demonstrated by burning only natural gas as fuel in these combustion sources. *§4-2; §4-57*

4.0 The volatile organic compound (VOC) content for all coatings used in the special coatings paint booth shall not exceed 3.5 pounds per gallon of coating, less water and exempt

solvents, as delivered to the applicator. A log shall be maintained containing the date and amount of coatings applied in these surface coating operations. *§4-41, Rule 25.21; §4-57*

EMISSION UNIT 301 – SOLID WASTE LANDFILL

1.0 Visible emissions from material-handling operations at the solid waste landfill shall not exceed an opacity of ten percent for an aggregate of more than fifteen minutes in any one hour or more than sixty minutes in any twenty-four-hour period. *§4-41, Rule 26.11; §4-57*

2.0 Visible emissions, other than those from material handling operations shall not exceed an opacity of ten percent for an aggregate of more than five minutes in any one hour or more than twenty minutes in any twenty-four-hour period. *§4-41, Rule 3.1; §4-57*

PERMIT SHIELD

At the request of the responsible official who signed and certified to the Part 70 permit application, compliance with the conditions of this permit shall be deemed compliance with any "applicable requirements", as defined in §4-53 of the Chattanooga Air Pollution Control Ordinance, as of the date of permit issuance that are included and specifically identified in this permit. This permit shield does not apply to past applicability determinations made by the facility governing major new source review. No other requirements are identified as applicable as of the date of issuance of this permit to this permittee, but the Director reserves the right to reopen this permit pursuant to Condition 15.0 of the Conditions of General Applicability and to modify this permit pursuant to Condition 17.0 of the Conditions of General Applicability. This permit shield does not alter or affect the following:

(a) The provisions of Title 42 U.S.C. §7603 (emergency orders), including the authority of the Administrator or of the Chattanooga-Hamilton County Air Pollution Control Board or Bureau Director thereunder;

(b) The liability of a permittee of a source for any violation of applicable requirements prior to or at the time of permit issuance;

(c) The applicable requirements of the acid rain program promulgated under Title IV of the Clean Air Act consistent with Title 42 U.S.C. 7651g.(a);

(d) The ability of EPA to obtain information from a source pursuant to Title 42 U.S.C. §7414, or of the Board or Bureau Director to obtain information from a source pursuant to the Chattanooga Air Pollution Control Ordinance or any other provision of local, state or federal law; and *§4-57(f)*

(e) The right of any person to damages or other relief on account of injury to persons or property and to maintain any action or other appropriate proceeding therefor; nor does it abridge, limit, impair, create, enlarge or otherwise affect substantively or procedurally this right. *§4-5(1)*

BAGHOUSES SUBJECT TO CAM

PROCESS CONTROLLED	BAGHOUSE ID	POS/NEG PRESSURE	PRESSURE DROP RANGE	ACTION LEVEL	ALLOWABLE OPACITY	POTENTIAL PRE-CONTOL EMISSIONS (TPY)
Cupola Melting	CD002	Positive	2-12	10	20	1752.4
No. 10 12 ft. Tableblast	CD005	Negative	1-9	10	20	432.0
No. 9 Unit Shakeout	CD003	Positive	1-9	10	20	346.5
No. 9 Unit Secondary Shakeout	CD006	Negative	1-8	10	20	262.5
No. 9 Unit Casting Automatic Cleaner	CD007	Negative	1-9	5	10	2688.0
No. 9 Unit Monorail & 8ft. Tableblast	CD008	Negative	1-9	10	20	3360.0
FBE Rotoblast Barrels	CD048	Negative	1-9	5	10	8830.1

FACILITY WIDE EMISSIONS SUMMARY - TSP

process area ID	source names	actual avg (lb/hr)	potential avg (lb/hr)	actuals (tpy)	potential (tpy)	allowable lb/hr	allowable tpy
F001	Charge handling	6.86	5.96	5.98	26.08	8.57	37.53
F002	Cupola melting	2.76	3.44	3.45	15.07	4.95	21.68
F003	hot metal transfer (hmt)	1.67	1.45	1.45	6.34	2.08	9.12
F004	desulfurization, hmt to holding furnaces, hold furn preheat	10.4	9.02	9.06	39.51	12.98	56.85
F005	treatment ladles	0.56	0.53	0.53	2.30	0.76	3.31
F006	inoculation/slagging 9 & 10	9.815	13.34	10.577	57.45	16.54	72.45
F007	pouring/cooling 9 & 10	15.30	20.68	14.85	42.16	21.94	96.10
F008	shakeouts 9 & 10	7.50	10.38	10.31	25.72	28.54	124.99
F009	casting cleaning 9 & 10	12.00	15.28	10.88	64.66	15.32	67.08
F010	#9 sand system	9.80	12.98	9.09	54.16	12.98	54.16
F012	#10 sand reclamation	0.04	0.06	0.11	0.23	0.06	0.23
F013	#10 mold sand system	0.36	0.55	0.93	1.98	0.55	1.98
F014	airset core room	2.89	5.31	2.78	23.28	5.31	23.28
F015	isocure core making	0.39	1.26	1.15	5.52	1.26	5.52
F016	pepset core making	1.97	0.41	1.81	1.81	0.41	1.81
F017	shell core making	0.01	1.12	0.01	4.91	1.12	4.91
F018	casting finishing	1.66	1.76	1.59	7.70	1.76	7.70
F019	cement lining and asphalt coating	0.23	1.05	0.27	4.60	1.05	4.60
F020	special coating	0.01	0.99	0.01	4.37	0.99	4.37
F021	touch up	2.04	0.51	2.23	2.23	0.51	2.23
F022	Ancillary ops-fittings	3.91	3.91	17.10	17.10	3.91	17.10
F023	FBE barrel blasts	2.02	2.55	4.03	11.17	2.55	11.17
EU125	Refractory coating	0.00	0.00	0.00	0.00	0.00	0.00
V007	small valve paint booth	0.01	0.47	0.01	2.03	0.47	2.03
V008	large valve touch up	0.04	0.04	0.04	0.07		
V009	hydrant paint booth	0.02	0.02	0.02	0.03		
V010	R/S valve production	1.23	0.99	1.50	4.34	0.99	4.34
V011	ancillary v&H plant ops	0.01	0.52	0.01	2.28	0.52	2.28
	totals	93.50	114.56	109.76	427.10	146.13	636.82

Potential emissions for No. 9 Unit pour/cool limited by 4000 hr annual operating limit on #9 Unit sand screen. This limits amount of iron poured on No. 9 to 105,000 tpy (26.25 tph max pour rate per original Title V app times 4000 hour operating limit for Unit 9 sand screen). Unit 9 can't operate without the sand screen running. Also potential emissions for processes associated with #10 Unit limited by 20,166 tpy limit on iron poured on limitation for #10 Unit. Max iron pured in original permit app. For 4, 9 & 10 was 180,050 tpy

180,050/125,166 = 0.695

FACILITY WIDE EMISSIONS SUMMARY - SOx							
		actual avg	potential avg	actuals	potential	allowable	allowable
process area ID	source names	(lb/hr)	(lb/hr)	(tpy)	(tpy)	lb/hr	tpy
F001	Charge handling						
F002	Cupola melting	2.45		3.06	19.92	6.55	28.66
F003	hot metal transfer (hmt)		0.00		0.00		
F004	desulfurization, hmt to holding furnaces, hold furn preheat	0.000404	0.0004	0.0016	0.002	0.0004	0.002
F005	treatment ladles		0.00		0.00		
F006	inoculation/slagging 9 & 10		0.00		0.00		
F007	pouring/cooling 9 & 10		0.00		0.00		
F008	shakeouts 9 & 10		0.00		0.00		
F009	casting cleaning 9 & 10		0.00		0.00		
F010	#9 sand system		0.00		0.00		
F012	#10 sand reclamation		0.00		0.00		
F013	#10 mold sand system		0.00		0.00		
F014	airset core room		0.00		0.00		
F015	isocure core making		0.00		0.00		
F016	pepset core making	0.0003	0.00	0.0003	0.00		
F017	shell core making	0.0011	0.010	0.0010	0.005	0.010	0.005
F018	casting finishing		0.00		0.00		
F019	cement lining and asphalt coating	0.0021	0.002	0.0041	0.01	0.002	0.01
F020	special coating	0.0006	0.008	0.0003	0.04	0.008	0.04
F021	touch up	0.0028	0.00		0.00		
F022	Ancillary ops-fittings		0.003	0.0036	0.011	0.003	0.011
F023	FBE process		0.001		0.004	0.001	0.004
EU125	Refractory coating		0.0003		0.0020	0.0003	0.0020
V007	small valve paint booth		0.00		0.00		
V008	large valve touch up		0.00		0.00		
V009	hydrant paint booth		0.00		0.00		
V010	R/S valve production	0.0023	0.00	0.0022	0.00		
V011	ancillary v&H plant ops	0.0007	0.001	0.0003	0.004	0.001	0.004
	totals	2.46	0.03	3.07	20.00	6.58	28.74

Potential emissions for No. 9 Unit pour/cool limited by 4000 hr annual operating limit on #9 Unit sand screen. This limits amount of iron poured on No. 9 to 105,000 tpy (26.25 tph max pour rate per original Title V app times 4000 hour operating limit for Unit 9 sand screen). Unit 9 can't operate without the sand screen running. Also potential emissions for processes associated with #10 Unit limited by 20,166 tpy limit on iron poured on limitation for #10 Unit. Max iron pured in original permit app. For 4, 9 & 10 was 180,050 tpy

180,050/125,166 = 0.695

FACILITY WIDE EMISSIONS SUMMARY - NOx							
		actual avg	potential avg	actuals	potential	allowable	allowable
process area ID	source names	(lb/hr)	(lb/hr)	(tpy)	(tpy)	lb/hr	tpy
F001	Charge handling						
F002	Cupola melting	11.36	13.91	14.2	60.94	20.02	87.69
F003	hot metal transfer (hmt)						
F004	desulfurization, hmt to holding furnaces, hold furn preheat	0.0673	0.07	0.271	0.30	0.07	0.30
F005	treatment ladles		0.00		0.00		
F006	inoculation/slagging 9 & 10		0.00		0.00		
F007	pouring/cooling 9 & 10		0.00		0.00		
F008	shakeouts 9 & 10		0.00		0.00		
F009	casting cleaning 9 & 10		0.00		0.00		
F010	#9 sand system		0.00		0.00		
F012	#10 sand reclamation		0.00		0.00		
F013	#10 mold sand system		0.00		0.00		
F014	airset core room		0.00		0.00		
F015	isocure core making		0.00		0.00		
F016	pepset core making	0.06	0.00	0.05	0.00		
F017	shell core making	0.19	0.185	0.163	0.810	0.185	0.810
F018	casting finishing		0.00		0.00		
F019	cement lining and asphalt coating	0.35	0.35	0.68	1.53	0.35	1.53
F020	special coating	0.10	0.12	0.05	0.53	0.12	0.53
F021	touch up		0.00		0.00		
F022	Ancillary ops-fittings	0.46	0.47	0.59	1.76	0.47	1.76
F023	FBE process		0.60		2.63	0.60	2.63
EU125	Refractory coating		0.06		0.25	0.06	0.25
V007	small valve paint booth		0.00		0.00		
V008	large valve touch up		0.00		0.00		
V009	hydrant paint booth		0.00		0.00		
V010	R/S valve production	0.38	0.00	0.37	0.00		
V011	ancillary v&H plant ops	0.12	0.12	0.05	0.54	0.12	0.54
	totals	13.09	15.88	16.43	69.29	21.99	96.04

Potential emissions for No. 9 Unit pour/cool limited by 4000 hr annual operating limit on #9 Unit sand screen. This limits amount of iron poured on No. 9 to 105,000 tpy (26.25 tph max pour rate per original Title V app times 4000 hour operating limit for Unit 9 sand screen). Unit 9 can't operate without the sand screen running. Also potential emissions for processes associated with #10 Unit limited by 20,166 tpy limit on iron poured on limitation for #10 Unit. Max iron pured in original permit app. For 4, 9 & 10 was 180,050 tpy

180,050/125,166 = 0.695

FACILITY WIDE EMISSIONS SUMMARY - CO							
		actual avg	potential avg	actuals	potential	allowable	allowable
process area ID	source names	(lb/hr)	(lb/hr)	(tpy)	(tpy)	lb/hr	tpy
F001	Charge handling						
F002	Cupola melting	28.48		35.6	88.65	35.46	88.65
F003	hot metal transfer (hmt)				0.00	0.00	
F004	desulfurization, hmt to holding furnaces, hold furn preheat	0.0141		0.057	0.06	0.01	0.06
F005	treatment ladles				0.00	0.00	
F006	inoculation/slagging 9 & 10				0.00	0.00	
F007	pouring/cooling 9 & 10				0.00	0.00	
F008	shakeouts 9 & 10				0.00	0.00	
F009	casting cleaning 9 & 10				0.00	0.00	
F010	#9 sand system				0.00	0.00	
F012	#10 sand reclamation				0.00	0.00	
F013	#10 mold sand system				0.00	0.00	
F014	airset core room				0.00	0.00	
F015	isocure core making				0.00	0.00	
F016	pepset core making	0.01		0.01	0.05	0.01	0.05
F017	shell core making	0.04		0.03	0.17	0.04	0.17
F018	casting finishing				0.00	0.00	
F019	cement lining and asphalt coating	0.07		0.14	0.00	0.00	
F020	special coating	0.02		0.01	0.00	0.00	
F021	touch up				0.00	0.00	
F022	Ancillary ops-fittings	0.10		0.13	0.43	0.10	0.43
F023	FBE barrel blasts				0.00	0.00	
EU125	Refractory coating				0.00	0.00	
V007	small valve paint booth				0.00	0.00	
V008	large valve touch up				0.00	0.00	
V009	hydrant paint booth				0.00	0.00	
V010	R/S valve production	0.08		0.08	0.00	0.00	
V011	ancillary v&H plant ops	0.03		0.01	0.11	0.03	0.11
	totals	28.84		36.07	89.48	35.65	89.48

Potential emissions for No. 9 Unit pour/cool limited by 4000 hr annual operating limit on #9 Unit sand screen. This limits amount of iron poured on No. 9 to 105,000 tpy (26.25 tph max pour rate per original Title V app times 4000 hour operating limit for Unit 9 sand screen). Unit 9 can't operate without the sand screen running. Also potential emissions for processes associated with #10 Unit limited by 20,166 tpy limit on iron poured on limitation for #10 Unit. Max iron pured in original permit app. For 4, 9 & 10 was 180,050 tpy

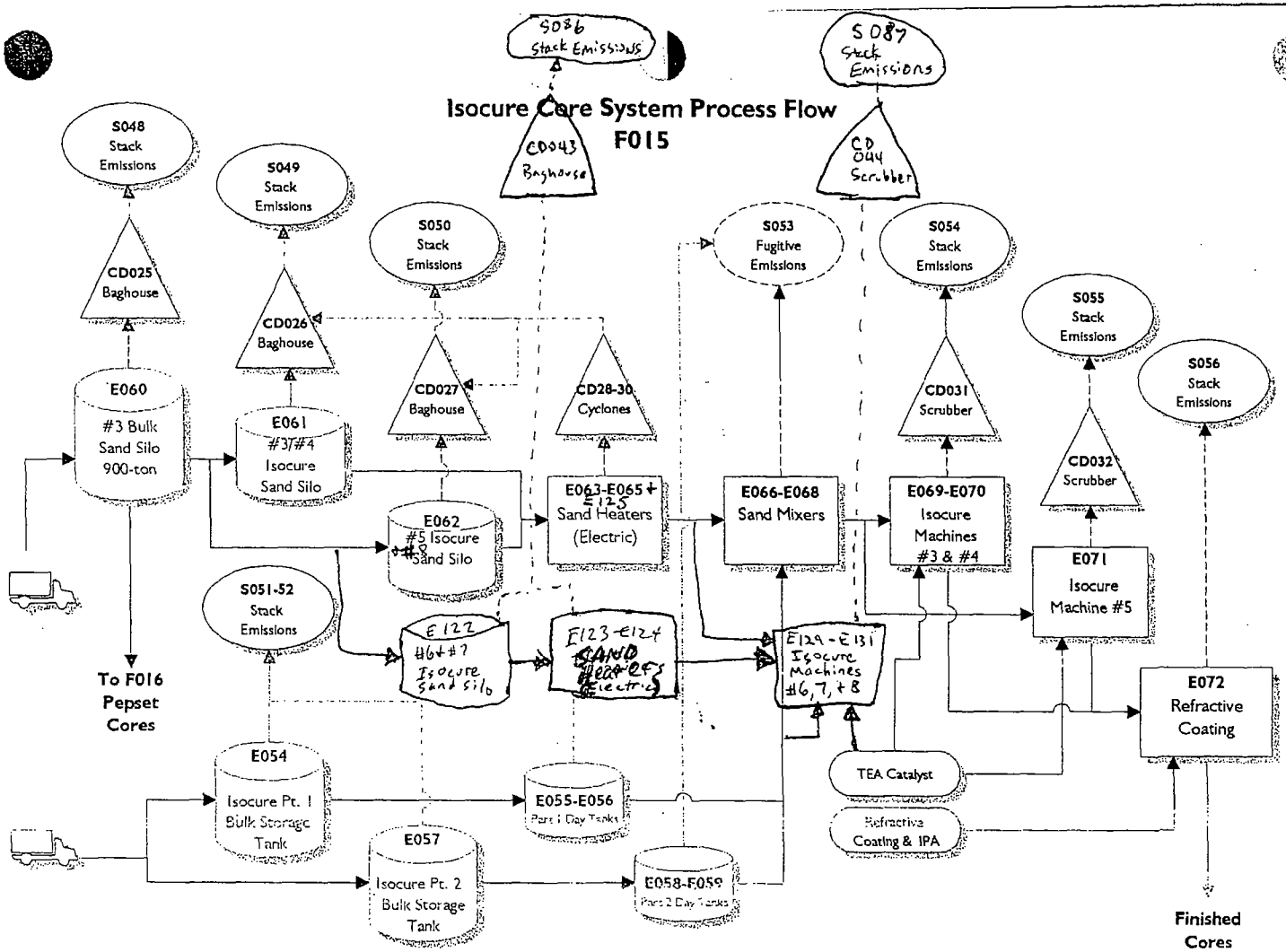
180,050/125,166 = 0.695

FACILITY WIDE EMISSIONS SUMMARY - VOC							
		actual avg	potential avg	actuals	potential	allowable	allowable
process area ID	source names	(lb/hr)	(lb/hr)	(tpy)	(tpy)	lb/hr	tpy
F001	Charge handling		0.00		0.00		
F002	Cupola melting	5.86	7.32	7.33	18.29	7.32	18.29
F003	hot metal transfer (hmt)		0.00		0.00		
F004	desulfurization, hmt to holding furnaces, hold furn preheat	0.00355	0.00	0.0143	0.02	0.0037	0.02
F005	treatment ladles		0.00		0.00		
F006	inoculation/slagging 9 & 10		0.00		0.00		
F007	pouring/cooling 9 & 10	4.51	6.83	4.66	12.88	6.83	12.88
F008	shakeouts 9 & 10	26.21	35.64	28.25	76.85	35.64	76.85
F009	casting cleaning 9 & 10		0.00		0.00		
F010	#9 sand system	36.70	49.46	34.50	98.93	49.46	98.93
F012	#10 sand reclamation		0.00		0.00		
F013	#10 mold sand syste	7.01	8.68	17.55	31.20	10.47	37.64
F014	airset core room	9.90	17.02	9.56	74.56	17.02	74.56
F015	isocure core making	2.93	6.55	8.06	28.67	6.55	28.67
F016	pepset core making	3.97	6.79	3.81	29.76	6.79	29.76
F017	shell core making	0.01	0.01	0.01	0.04	0.01	0.04
F018	casting finishing	1.07	1.07	1.03	4.70	1.07	4.70
F019	cement lining and asphalt coating	29.85	46.57	59.70	203.97	46.57	203.97
F020	special coating	2.66	2.66	2.58	11.63	2.66	11.63
F021	touch up	3.93	3.93	4.92	17.23	3.93	17.23
F022	Ancillary ops-fittings	0.02	0.03	0.03	0.11	0.03	0.11
F023	FBE barrel blasts		0.01		0.04	0.01	0.04
EU128	Refractory coating	14.60	24.74	29.20	49.49	24.74	49.49
V007	small valve paint booth	1.36	1.36	1.63	5.94	1.36	5.94
V008	large valve touch up	0.23	0.23	0.28	1.02	0.23	1.02
V009	hydrant paint booth	5.51	5.51	6.62	24.15	5.51	24.15
V010	R/S valve production		0.00		0.00		
V011	ancillary v&H plant ops	0.47	0.47	0.56	2.04	0.47	2.04
	totals	156.81	224.87	220.29	691.53	226.66	697.97

Potential emissions for No. 9 Unit pour/cool limited by 4000 hr annual operating limit on #9 Unit sand screen. This limits amount of iron poured on No. 9 to 105,000 tpy (26.25 tph max pour rate per original Title V app times 4000 hour operating limit for Unit 9 sand screen). Unit 9 can't operate without the sand screen running. Also potential emissions for processes associated with #10 Unit limited by 20,166 tpy limit on iron poured on limitation for #10 Unit. Max iron pured in original permit app. For 4, 9 & 10 was 180,050 tpy

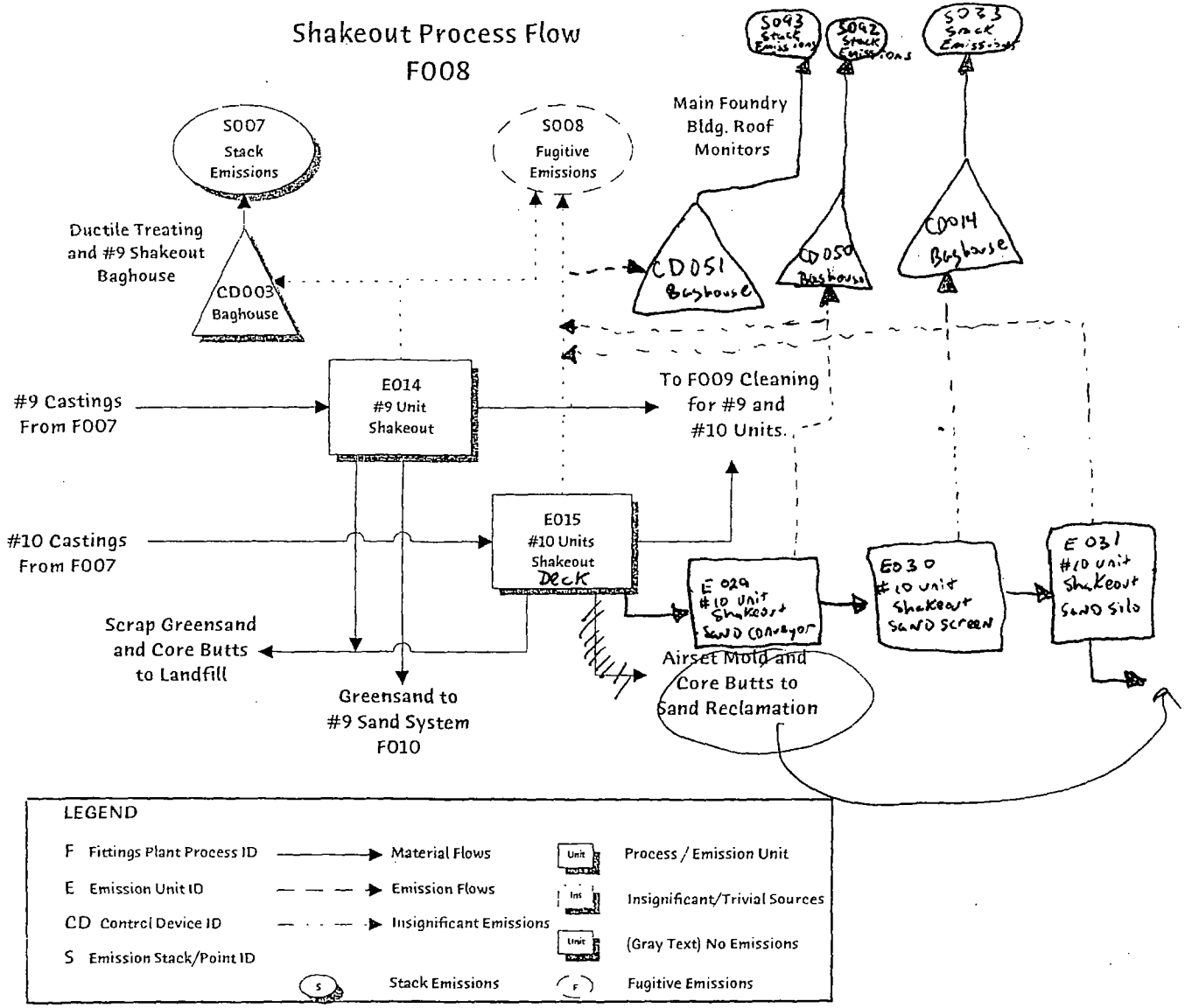
180,050/125,166 = 0.695

Isocure Core System Process Flow
F015



MWPS004541

Shakeout Process Flow
F008



MWPS004542

UNITED STATES PIPE & FOUNDRY COMPANY

Table 2. Plantwide Criteria Pollutant Emissions for CV&F:

Pollutant	Process Area ID	Source Name	Stack ID	Hourly Emissions (lb/hr) Average	Hourly Emissions (lb/hr) Maximum	Annual Emissions (TPY) Actual	Annual Emissions (TPY) Maximum	Annual Emissions (TPY) Potential
PARTICULATE MATTER (TSP)	F007	POURING & COOLING #10	S008	~~2.72E-01~~ 0.31	~~3.66E-01~~ 0.51	~~2.55E-01~~ 0.78	~~9.15E-01~~ 1.83	1.34E+02
		POURING & COOLING #4	S008	~~1.04E+00~~	~~1.41E+00~~	~~9.80E-01~~	~~3.51E+00~~	~~2.13E+02~~
			Subtotal:	~~1.63E+01~~	~~2.19E+01~~	~~1.53E+01~~	~~5.49E+01~~	4.84E+02
PARTICULATE MATTER (TSP)	F008	#10 UNITS SHAKEOUT	S008	~~1.58E+01~~ 2.0967	~~2.13E+01~~ ~~0.3247~~ 3.10	~~1.48E+01~~ 5.2273	~~5.31E+01~~ 11.1662	~~2.23E+02~~
		#9 UNIT SHAKEOUT	S007	1.16E+00	1.56E+00	1.09E+00	3.90E+00	5.63E+01
			S008	4.24E+00	5.72E+00	3.99E+00	1.43E+01	0.00E+00
			Subtotal:	~~2.42E+01~~	~~2.85E+01~~	~~1.99E+01~~	~~7.13E+01~~	~~2.79E+02~~
PARTICULATE MATTER (TSP)	F009	#9 CASTING HANDLING	S020	~~3.94E+00~~ 3.94	~~5.30E+00~~ 5.30	~~3.70E+00~~ 3.7	~~1.33E+01~~ 1.33	~~1.97E+02~~
			S021	3.78E+00	5.09E+00	3.55E+00	1.27E+01	0.00E+00
		Air to cleaner #9 CASTING ~~ROTOBLAST BARRELS~~	S023	~~2.72E-03~~ 1.344	~~2.72E-03~~ 1.344	~~2.72E-03~~ 1.263	~~5.45E-03~~ 3.226	~~2.18E+01~~
		#9 CASTING ROTOBLAST MONORAIL & TABLE	S024	~~9.76E-03~~ 1.34	~~9.76E-03~~ 1.34	~~9.18E-03~~ 1.26	~~2.44E-02~~ 3.36	1.03E+01
		#9 CASTING SECONDARY SHAKEOUT	S022	9.74E-01	1.31E+00	9.16E-01	3.28E+00	1.13E+01
Assume 2,500 hrs actual			casting cool conveyor	0.0464	0.0517	0.058	0.124	
		LARGE CASTING 12-FT ROTOBLAST TABLE	S018	~~2.72E-03~~ 0.576	~~2.72E-03~~ 0.576	~~2.72E-03~~ 0.136	~~5.45E-03~~ 0.29	7.60E+00
		LARGE CASTING BURN-OFF	S016	~~7.66E-02~~	~~1.32E-01~~	~~7.35E-02~~	~~2.63E-01~~	1.13E+01
			S017	~~2.81E-01~~	~~4.83E-01~~	~~2.70E-01~~	~~9.66E-01~~	0.00E+00
			Subtotal:	9.06E+00	1.23E+01	8.53E+00	3.05E+01	2.60E+02
PARTICULATE MATTER (TSP)	F010	BINDER CONVEYING	S031-S032	3.11E-03	4.18E-03	2.92E-03	1.05E-02	2.00E+00
		BINDER UNLOADING TO STORAGE SILO	S029	1.33E-01	1.35E-01	2.92E-03	1.05E-02	7.51E-01
		GREENSAND MULLORS A & B	S027-S028	2.65E+00	3.57E+00	2.49E+00	8.92E+00	2.51E+02
		HERMAN MOLD MACHINE	S008	2.91E+00	3.93E+00	2.74E+00	9.81E+00	2.51E+02
		SAND CONVEYING	S008	1.68E+00	2.26E+00	1.58E+00	5.65E+00	1.74E+02
		SAND RETURNING TO STORAGE SILO	S026	1.68E+00	2.26E+00	1.58E+00	5.65E+00	1.74E+02
		SAND SCREENING DRUM	S025	7.50E-01	7.50E-01	7.05E-01	1.50E+00	1.13E+01
			Subtotal:	9.80E+00	1.29E+01	9.09E+00	3.16E+01	8.64E+02
PARTICULATE MATTER (TSP)	~~F011~~ F023	#4 UNIT MOLD MAKING	S008	~~8.63E-01~~	~~1.16E+00~~	~~8.12E-01~~	~~2.91E+00~~	~~2.10E+02~~
		BINDER CONVEYING	S008	~~5.26E-02~~	~~7.09E-02~~	~~4.94E-02~~	~~1.77E-01~~	~~1.54E+01~~
		BINDER UNLOADING TO STORAGE SILO	S036	~~1.33E-01~~	~~1.34E-01~~	~~1.50E-03~~	~~5.37E-03~~	~~7.51E-01~~
+		FBE Rotoblast Barrels	S091	2.016	2.016	4.032	8.83	

UNITED STATES PIPE & FOUNDRY COMPANY

Table 2. Plantwide Criteria Pollutant Emissions for CV&F:

Pollutant	Process Area ID	Source Name	Stack ID	Hourly Emissions (lb/hr) Average	Hourly Emissions (lb/hr) Maximum	Annual Emissions (TPY) Actual	Annual Emissions (TPY) Maximum	Annual Emissions (TPY) Potential
PARTICULATE MATTER (TSP)	F011	GREENSAND MULLORS EAST & WEST	S034-S035	7.85E-01	1.06E+00	7.38E-01	2.64E+00	2.10E+02
		SAND CONVEYING	S008	4.95E-01	6.67E-01	4.65E-01	1.67E+00	2.09E+02
		SAND SCREENING	S033	5.33E-01	7.18E-01	5.01E-01	1.79E+00	1.13E+01
		SAND STORAGE SILO	S008	4.95E-01	6.67E-01	4.65E-01	1.67E+00	2.09E+02
			Subtotal:	3.36E+00	4.48E+00	3.03E+00	1.09E+01	8.65E+02
PARTICULATE MATTER (TSP)	F012	#1 BULK SILO, RECLAIMED SAND	S040	1.17E-03 0.0015	1.97E-03 0.0022	1.10E-03 0.0037	3.96E-03 0.008	7.51E-01
		#2 BULK SILO, NEW SAND	S040	7.26E-03 0.0037	7.24E-03 0.0054	2.73E-03 0.0092	9.78E-03 0.0196	7.51E-01
		CLASSIFIER PROCESSING	S038	5.79E-03 0.0072	9.78E-03 0.0111	5.44E-03 0.018	1.95E-02 0.039	4.00E-02
		SIZE REDUCTION PROCESSING	S037	5.21E-03 0.0384	8.78E-03 0.0457	4.90E-03 0.076	1.76E-02 0.164	7.60E-01
			S039	4.91E-02	3.22E-02	1.80E-02	6.44E-02	0.00E+00
			Subtotal:	3.86E-02	5.99E-02	3.21E-02	1.15E-01	2.30E+00
PARTICULATE MATTER (TSP)	F013	MOLD FORMING	S008	3.05E+00 0.19	5.14E+00 0.281	2.87E+00 0.1475	1.03E+01 1.013	1.16E+02
		MOLD SAND SILO	S041	2.60E-03 0.0033	4.39E-03 0.005	2.45E-03 0.0082	8.77E-03 0.018	7.51E-01
		SAND HEATER	S008B	5.21E-03 0.0064	8.77E-03 0.01	4.90E-03 0.016	1.75E-02 0.035	4.51E-01
		SAND MIXERS	S042	1.35E-01 0.17	2.27E-01 0.253	1.27E-01 0.43	4.54E-01 0.91	1.12E+02
			Subtotal:	3.19E+00	5.38E+00	3.00E+00	1.08E+01	2.29E+02
PARTICULATE MATTER (TSP)	F014	CORE FORMING	S046	1.23E+00	2.11E+00	1.18E+00	4.22E+00	6.09E+01
		CORE SAND SILO	S045	9.75E-04	1.68E-03	9.36E-04	3.35E-03	7.51E-01
		SAND HEATER	S045	9.75E-04	1.68E-03	9.36E-04	3.35E-03	7.51E-01
		SAND MIXER	S046	1.66E+00	2.86E+00	1.60E+00	5.73E+00	6.09E+01
			Subtotal:	2.89E+00	4.97E+00	2.78E+00	9.95E+00	1.23E+02
PARTICULATE MATTER (TSP)	F015	#3 & #4 ISOCURE SAND SILO	S049	1.63E-03	1.95E-03	1.57E-03	5.61E-03	7.51E-01
		#3 BULK SAND SILO	S048	7.25E-03	7.21E-03	3.26E-03	1.17E-02	7.51E-01
		#5 ISOCURE SAND SILO	S050	1.09E-03	1.30E-03	1.04E-03	3.74E-03	4.94E-01
		ISOCURE MACHINES	S054	2.05E+00	1.86E+00	5.64E+00	8.14E+00	3.31E+01
			S055	1.37E+00	1.24E+00	3.76E+00	5.42E+00	3.31E+01
		ISOCURE SAND HEATERS	S049	1.63E-03	1.95E-03	1.57E-03	5.61E-03	7.51E-01
			S050	1.09E-03	1.30E-03	1.04E-03	3.74E-03	7.51E-01
		REFRACTORY COATING	S053	4.60E-01	4.60E-01	4.42E-01	9.20E-01	2.92E+00
			S056	4.60E-01	4.60E-01	4.42E-01	9.20E-01	2.92E+00
		SAND MIXERS	S053	1.62E+00	1.62E+00	4.45E+00	6.42E+00	3.31E+01
			Subtotal:	5.97E+00 0.39	5.65E+00 0.39	1.47E+01 1.15	2.18E+01 1.101	1.09E+02
PARTICULATE MATTER (TSP)	F016	CORE FORMING	S053	8.12E-01	1.40E+00	7.80E-01	2.79E+00	4.63E+01

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Table 2. Plantwide Criteria Pollutant Emissions for CV&F:

Pollutant	Process Area ID	Source Name	Stack ID	Hourly Emissions (lb/hr) Average	Hourly Emissions (lb/hr) Maximum	Annual Emissions (TPY) Actual	Annual Emissions (TPY) Maximum	Annual Emissions (TPY) Potential
PARTICULATE MATTER (TSP)	F016	FLAME-OFF	S053	2.24E-03	2.24E-03	2.15E-03	4.47E-03	1.48E+00
		PEPSET SAND HEATER	S048	6.79E-04	1.17E-03	6.52E-04	2.34E-03	7.51E-01
		SAND MIXER	S053	1.16E+00	1.99E+00	1.11E+00	3.99E+00	4.63E+01
			Subtotal:	1.97E+00	3.39E+00	1.90E+00	6.79E+00	9.49E+01
PARTICULATE MATTER (TSP)	F017	SHELL CORE HEATING	S053	7.33E-03	7.33E-03	6.45E-03	1.47E-02	4.86E+00
		SHELL CORE SAND HANDLING	S053	1.79E-04	1.79E-04	1.58E-04	3.59E-04	8.51E-01
			Subtotal:	7.51E-03	7.51E-03	6.61E-03	1.50E-02	5.71E+00
PARTICULATE MATTER (TSP)	F018	CASTING FINISHING AREA #1	S059	1.02E+00	1.08E+00	9.79E-01	3.51E+00	6.66E+01
		CASTING FINISHING AREA #2	S060	3.48E-01	3.69E-01	3.34E-01	1.20E+00	3.42E+01
		CASTING FINISHING AREAS #3 AND #4	S061	1.48E-01	1.57E-01	1.42E-01	5.09E-01	3.05E+01
			S062	1.42E-01	1.51E-01	1.36E-01	4.89E-01	0.00E+00
		PRIMER DIP COATING OPERATION	S063	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
			Subtotal:	1.66E+00	1.76E+00	1.59E+00	5.70E+00	1.31E+02
PARTICULATE MATTER (TSP)	F019	#1 DIP PAINT LINE	S063	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		#3 DIP PAINT LINE	S063	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		BINKS SPRAY PAINT BOOTH	S067	2.38E-02	2.38E-02	2.97E-02	1.04E-01	1.04E-01
		CEMENT LINING DRYING OVENS #1, #3 & #4	S064-S066	2.52E-02	2.52E-02	4.88E-02	1.10E-01	5.52E+00
		CEMENT MIXING AND LINING STATIONS	S063	1.55E-01	1.55E-01	1.49E-01	3.09E-01	1.23E+01
		COATING DRYING OVENS #1 AND #3	S069-S070	1.68E-02	1.68E-02	3.26E-02	7.36E-02	3.68E+00
		LARGE FITTINGS PAINT BOOTH	S068	6.80E-03	6.80E-03	8.50E-03	2.98E-02	2.98E-02
			Subtotal:	2.27E-01	2.27E-01	2.68E-01	6.27E-01	2.17E+01
PARTICULATE MATTER (TSP)	F020	SPECIAL COATING DRYING OVEN	S072	1.20E-02	1.20E-02	6.51E-03	5.26E-02	2.63E+00
			Subtotal:	1.20E-02	1.20E-02	6.51E-03	5.26E-02	2.63E+00
PARTICULATE MATTER (TSP)	F021	TOUCHUP COATING	S075	2.04E+00	2.04E+00	2.55E+00	8.93E+00	8.93E+00
			Subtotal:	2.04E+00	2.04E+00	2.55E+00	8.93E+00	8.93E+00
PARTICULATE MATTER (TSP)	F022	ASPHALT TANKS HOT OIL HEATER	S080	1.44E-02	1.44E-02	6.91E-03	6.31E-02	3.15E+00
		CARPENTER SHOP	S077	4.63E+00	4.63E+00	4.44E+00	9.26E+00	2.03E+01
		CUPOLA BAGHOUSE DUST SOLIDIFICATION	S076	1.00E-02	1.00E-02	1.00E-02 0.009	~~2.99E-02~~ 0.009	7.51E-01

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Table 2. Plantwide Criteria Pollutant Emissions for CV&F:

Pollutant	Process Area ID	Source Name	Stack ID	Hourly Emissions (lb/hr) Average	Hourly Emissions (lb/hr) Maximum	Annual Emissions (TPY) Actual	Annual Emissions (TPY) Maximum	Annual Emissions (TPY) Potential
PARTICULATE MATTER (TSP)	F022	CUPOLA DRYING	S004	1.32E-02	1.32E-02	2.28E-02	2.47E-02	2.89E+00
		FITTINGS PLANT BATHHOUSE BOILER	S079	2.16E-02	2.16E-02	1.56E-02	9.46E-02	4.73E+00
		LADLE PREHEAT	S005-S006	2.13E-03	2.13E-03	8.60E-03	8.96E-03	1.41E+00
		PATTERN SHOP	S078	3.86E+00	3.86E+00	3.70E+00	7.71E+00	1.69E+01
			Subtotal:	8.55E+00	8.55E+00	8.21E+00	1.72E+01	5.01E+01
PARTICULATE MATTER (TSP)	V001	HOT METAL TRANSFER	SV02	5.54E-03	9.24E-03	6.65E-03	1.85E-02	1.13E+01
		LADLE PREHEAT	SV02	2.23E-03	2.23E-03	3.21E-03	4.46E-03	1.48E+00
		MELTING FURNACES #1 AND #2	SV01	5.97E-02	9.95E-02	7.16E-02	1.99E-01	1.13E+01
			SV02	9.90E-03	1.65E-02	1.19E-02	3.30E-02	0.00E+00
			Subtotal:	7.74E-02	1.27E-01	9.34E-02	2.55E-01	2.40E+01
PARTICULATE MATTER (TSP)	V002	GREENSAND MOLD POURING	SV04	4.36E-02	7.26E-02	5.23E-02	1.45E-01	3.91E+01
		GREENSAND SHAKEOUT	SV05	4.18E+00	6.97E+00	5.02E+00	1.39E+01	3.91E+01
		SHELLSAND MOLD POURING	SV03	1.68E-02	2.81E-02	2.02E-02	5.61E-02	1.20E+01
			SV04	5.34E-03	8.89E-03	6.40E-03	1.78E-02	0.00E+00
			Subtotal:	4.25E+00	7.08E+00	5.10E+00	1.42E+01	9.03E+01
PARTICULATE MATTER (TSP)	V003	CUT-OFF AND GRINDING	SV07	9.38E-03	1.25E-02	9.00E-03	2.50E-02	3.38E+00
		TUMBLE BLASTS	SV06	9.30E-03	1.55E-02	1.12E-02	3.10E-02	2.42E+00
			Subtotal:	1.87E-02	2.80E-02	2.02E-02	5.60E-02	5.80E+00
PARTICULATE MATTER (TSP)	V004	GREENSAND MULLOR	SV08	2.28E-02	2.28E-02	2.74E-02	4.57E-02	2.63E+00
			SV09	8.37E-02	8.37E-02	1.00E-01	1.67E-01	0.00E+00
		MOLD FORMING	SV09	2.79E-02	2.79E-02	3.35E-02	5.58E-02	2.55E+01
			Subtotal:	1.34E-01	1.34E-01	1.61E-01	2.69E-01	2.81E+01
PARTICULATE MATTER (TSP)	V005	SHELL MOLD CURING	SV02	5.35E-03	5.35E-03	2.06E-03	1.07E-02	4.68E+00
		SHELL SAND HANDLING	SV09	5.74E-04	9.57E-04	6.89E-04	1.91E-03	3.89E+00
			Subtotal:	5.93E-03	6.31E-03	2.74E-03	1.26E-02	8.56E+00
PARTICULATE MATTER (TSP)	V006	AIRSET CORE FORMING	SV02	3.10E-02	3.11E-02	1.79E-02	6.21E-02	3.60E+00
		AIRSET CORE SAND MIXER	SV02	4.51E-02	4.52E-02	2.60E-02	9.03E-02	3.60E+00
		SHELL CORE SAND CURING	SV02	2.67E-03	2.67E-03	5.13E-04	5.34E-03	3.21E+00
		SHELL CORE SAND HANDLING	SV02	1.18E-04	1.18E-04	6.79E-05	2.36E-04	5.37E-01

Table 2. Plantwide Criteria Pollutant Emissions for CV&F:

Pollutant	Process Area ID	Source Name	Stack ID	Hourly Emissions (lb/hr) Average	Hourly Emissions (lb/hr) Maximum	Annual Emissions (TPY) Actual	Annual Emissions (TPY) Maximum	Annual Emissions (TPY) Potential
			Subtotal:	7.89E-02	7.90E-02	4.44E-02	1.58E-01	1.09E+01
PARTICULATE MATTER (TSP)	V007	SMALL VALVE PAINT BOOTH	SV11	6.37E-03	6.37E-03	7.65E-03	1.27E-02	2.79E-02
			Subtotal:	6.37E-03	6.37E-03	7.65E-03	1.27E-02	2.79E-02
PARTICULATE MATTER (TSP)	V008	LARGE VALVE TOUCHUP COATING	SV12	3.50E-02	3.50E-02	4.21E-02	7.01E-02	1.53E-01
			Subtotal:	3.50E-02	3.50E-02	4.21E-02	7.01E-02	1.53E-01
PARTICULATE MATTER (TSP)	V009	HYDRANT PRODUCTION PAINT BOOTH	SV13	1.60E-02	1.60E-02	1.93E-02	3.21E-02	7.03E-02
			Subtotal:	1.60E-02	1.60E-02	1.93E-02	3.21E-02	7.03E-02
PARTICULATE MATTER (TSP)	V010	GLA CONVEYORIZED OVEN	SV16	2.35E-02	2.35E-02	2.26E-02	4.71E-02	5.15E+00
		LINE #1 POWDER COATING	SV16	1.05E-01	1.05E-01	1.01E-01	2.10E-01	4.60E-01
		LINE #2 POWDER COATING	SV19	8.57E-02	8.57E-02	8.23E-02	1.71E-01	3.75E-01
		PANGBORN AIRBLAST CLEANER	SV15	7.71E-01	7.71E-01	9.91E-01	1.54E+00	3.38E+00
		PANGBORN ROTOBLAST CLEANER	SV14	2.19E-01	2.19E-01	2.81E-01	4.37E-01	9.58E-01
		PORBECK OVEN	SV17	2.24E-02	2.24E-02	2.15E-02	4.48E-02	4.91E+00
			Subtotal:	1.23E+00	1.23E+00	1.50E+00	2.45E+00	1.52E+01
PARTICULATE MATTER (TSP)	V011	HOT WATER HEATERS #1 AND #2	SV22-SV23	4.56E-03	4.56E-03	3.28E-03	2.00E-02	9.99E-01
		LEAD KETTLE HEATING	SV20	1.11E-03	1.11E-03	6.42E-04	2.23E-03	7.38E-01
		LEAD KETTLE MELTING	SV20	4.84E-05	4.84E-05	2.79E-05	9.68E-05	2.19E-01
		R/S VALVE BURN-OFF OVEN	SV21	6.90E-03	6.90E-03	1.10E-03	1.38E-02	1.51E+00
		SPECIAL COATING PAINT BOOTH	SV24	1.60E-03	1.60E-03	1.92E-03	3.21E-03	7.02E-03
			Subtotal:	1.42E-02	1.42E-02	6.98E-03	3.93E-02	3.47E+00
Total Plantwide PARTICULATE MATTER (TSP) Emissions:				1.28E+02	1.67E+02	1.30E+02	4.13E+02	4.79E+03
SULFUR DIOXIDE (SO2)	F002	AFTER BURNER	S002	2.82E+00	3.05E+00	6.18E-01	7.61E+00	3.15E+02
		CUPOLA	S002	2.80E+00	3.50E+00	2.44E+00	8.75E+00	8.75E+00
			S004	1.40E-04	1.75E-04	1.22E-04	4.38E-04	0.00E+00
			Subtotal:	5.62E+00	6.55E+00	3.06E+00	1.64E+01	3.24E+02
SULFUR DIOXIDE (SO2)	F004	HOLDING FURNACE PREHEAT	S005-S006	4.04E-04	4.04E-04	1.63E-03	1.70E-03	8.76E+01
			Subtotal:	4.04E-04	4.04E-04	1.63E-03	1.70E-03	8.76E+01

UNITED STATES PIPE & FOUNDRY COMPANY

Table 2. Plantwide Criteria Pollutant Emissions for CV&F:

Pollutant	Process Area ID	Source Name	Stack ID	Hourly Emissions (lb/hr) Average	Hourly Emissions (lb/hr) Maximum	Annual Emissions (TPY) Actual	Annual Emissions (TPY) Maximum	Annual Emissions (TPY) Potential
VOLATILE ORGANIC COMPOUNDS (VOC)	F002	AFTER BURNER	S002	1.20E-02	1.30E-02	5.66E-03	1.89E-02	3.31E-02
		CUPOLA	S002	8.41E+00	1.05E+01	7.33E+00	2.62E+01	2.62E+01
			S004	2.80E-03	3.50E-03	2.44E-03	8.75E-03	8.75E-03
			Subtotal:	8.42E+00	1.05E+01	7.33E+00	2.63E+01	2.63E+01
VOLATILE ORGANIC COMPOUNDS (VOC)	F004	HOLDING FURNACE PREHEAT	S005-S006	3.55E-03	3.55E-03	1.43E-02	1.49E-02	1.56E-02
			Subtotal:	3.55E-03	3.55E-03	1.43E-02	1.49E-02	1.56E-02
VOLATILE ORGANIC COMPOUNDS (VOC)	F007	COOLING #9	S008	6.13E-01	8.26E-01	5.77E-01	2.07E+00	3.62E+00
			S012	1.53E-01	2.07E-01	1.44E-01	5.16E-01	9.05E-01
			S013	2.30E-01	3.10E-01	2.16E-01	7.75E-01	1.36E+00
			S014	3.83E-01	5.16E-01	3.60E-01	1.29E+00	2.26E+00
			S015	1.53E-01	2.07E-01	1.44E-01	5.16E-01	9.05E-01
		POURING #9	S008	1.36E+00	1.84E+00	1.28E+00	4.59E+00	8.05E+00
			S009-S011	1.36E+00	1.84E+00	1.28E+00	4.59E+00	8.05E+00
		POURING & COOLING #10	S008	~~2.10E-01~~ 0.26	2.82E-01	~~1.07E-01~~ 0.66	7.06E-01	1.24E+00
		POURING & COOLING #4	S008	~~8.04E-01~~	~~1.68E+00~~	~~7.56E-01~~	~~2.71E+00~~	~~4.75E+00~~
			Subtotal:	~~5.98E+00~~	7.11E+00	~~4.96E+00~~	1.78E+01	3.11E+01
VOLATILE ORGANIC COMPOUNDS (VOC)	F008	#4 & #10 UNITS SHAKEOUT	S008	~~8.89E+00~~ 2.32	~~1.20E+01~~	~~8.36E+00~~ 5.8	~~3.00E+01~~	~~5.25E+01~~
		#9 UNIT SHAKEOUT	S007	2.15E+01	2.90E+01	2.02E+01	7.25E+01	1.27E+02
			S008	2.39E+00	3.22E+00	2.25E+00	8.06E+00	1.41E+01
			Subtotal:	3.28E+01	4.42E+01	3.09E+01	1.11E+02	1.94E+02
VOLATILE ORGANIC COMPOUNDS (VOC)	F010	HERMAN MOLD MACHINE	S008	3.67E+01	4.95E+01	3.45E+01	1.24E+02	2.17E+02
			Subtotal:	3.67E+01	4.95E+01	3.45E+01	1.24E+02	2.17E+02
VOLATILE ORGANIC COMPOUNDS (VOC)	F011	#4 UNIT MOLD MAKING	S008	~~1.22E+01~~	~~1.65E+01~~	~~1.15E+01~~	~~4.13E+01~~	~~7.24E+01~~
			Subtotal:	~~1.22E+01~~	~~1.65E+01~~	~~1.15E+01~~	~~4.13E+01~~	~~7.24E+01~~
VOLATILE ORGANIC COMPOUNDS (VOC)	F013	MOLD FORMING	S008	~~9.57E-01~~ ~~4.28~~ 1.21 5.8	1.61E+00	~~9.66E-01~~ 14.53	3.22E+00 3.62	7.06E+00
		SAND MIXERS	S042	~~4.58E+00~~	7.73E+00	~~4.31E+00~~	1.55E+01	3.39E+01
			Subtotal:	~~5.54E+00~~	9.34E+00	~~5.24E+00~~	1.87E+01	4.09E+01
VOLATILE ORGANIC COMPOUNDS (VOC)	F014	AIRSET ACID BULK STORAGE TANK	S044	1.60E-02	2.70E-02	7.09E-02	1.20E-01	1.20E-01
		CORE FORMING	S046	1.57E+00	2.70E+00	1.50E+00	5.40E+00	1.18E+01
		SAND MIXER	S046	8.32E+00	1.43E+01	7.99E+00	2.86E+01	6.27E+01
			Subtotal:	9.90E+00	1.70E+01	9.56E+00	3.41E+01	7.46E+01

UNITED STATES PIPE & FOUNDRY COMPANY

Table 2. Plantwide Criteria Pollutant Emissions for CV&F:

Pollutant	Process Area ID	Source Name	Stack ID	Hourly Emissions (lb/hr) Average	Hourly Emissions (lb/hr) Maximum	Annual Emissions (TPY) Actual	Annual Emissions (TPY) Maximum	Annual Emissions (TPY) Potential
VOLATILE ORGANIC COMPOUNDS (VOC)	F015	ISOCURE MACHINES	S054	1.76E+00	1.59E+00	4.84E+00	6.98E+00	6.98E+00
			S055	1.17E+00	1.06E+00	3.22E+00	4.65E+00	4.65E+00
		REFRACTORY COATING	S053	1.60E+01	1.13E+01	1.54E+01	2.25E+01	2.25E+01
			S056	1.44E+01	1.01E+01	1.38E+01	2.03E+01	2.03E+01
			Subtotal:	2.33E+01	2.41E+01	3.73E+01	5.44E+01	5.44E+01
VOLATILE ORGANIC COMPOUNDS (VOC)	F016	CORE FORMING	S053	1.09E+00	1.88E+00	1.05E+00	3.75E+00	8.22E+00
		FLAME-OFF	S053	2.98E-03	2.98E-03	2.86E-03	5.97E-03	1.31E-02
		SAND MIXER	S053	2.87E+00	4.91E+00	2.76E+00	9.83E+00	2.15E+01
			Subtotal:	3.97E+00	6.79E+00	3.81E+00	1.36E+01	2.98E+01
VOLATILE ORGANIC COMPOUNDS (VOC)	F017	SHELL CORE HEATING	S053	9.77E-03	9.77E-03	8.60E-03	1.95E-02	4.28E-02
			Subtotal:	9.77E-03	9.77E-03	8.60E-03	1.95E-02	4.28E-02
VOLATILE ORGANIC COMPOUNDS (VOC)	F018	PRIMER DIP COATING OPERATION	S063	1.07E+00	1.07E+00	1.03E+00	4.70E+00	4.70E+00
			Subtotal:	1.07E+00	1.07E+00	1.03E+00	4.70E+00	4.70E+00
VOLATILE ORGANIC COMPOUNDS (VOC)	F019	#1 DIP PAINT LINE	S063	2.32E+01	2.32E+01	2.90E+01	1.02E+02	1.02E+02
		#3 DIP PAINT LINE	S063	1.79E+01	1.79E+01	2.24E+01	7.84E+01	7.84E+01
		BINKS SPRAY PAINT BOOTH	S067	5.08E+00	5.08E+00	6.35E+00	2.23E+01	2.23E+01
		CEMENT LINING DRYING OVENS #1, #3 & #4	S064-S066	1.11E-02	1.11E-02	2.15E-02	4.86E-02	4.86E-02
		COATING DRYING OVENS #1 AND #3	S069-S070	7.40E-03	7.40E-03	1.43E-02	3.24E-02	3.24E-02
		LARGE FITTINGS PAINT BOOTH	S068	1.51E+00	1.51E+00	1.88E+00	6.60E+00	6.60E+00
			Subtotal:	4.77E+01	4.77E+01	5.97E+01	2.09E+02	2.09E+02
VOLATILE ORGANIC COMPOUNDS (VOC)	F020	SPECIAL COATING DRYING OVEN	S072	5.28E-03	5.28E-03	2.86E-03	2.31E-02	2.31E-02
		SPECIAL COATING SPRAY BOOTH	S071	2.68E+00	2.68E+00	2.57E+00	5.36E+00	1.17E+01
			Subtotal:	2.69E+00	2.69E+00	2.58E+00	5.38E+00	1.18E+01
VOLATILE ORGANIC COMPOUNDS (VOC)	F021	TOUCHUP COATING	S075	3.93E+00	3.93E+00	4.92E+00	1.72E+01	1.72E+01
			Subtotal:	3.93E+00	3.93E+00	4.92E+00	1.72E+01	1.72E+01
VOLATILE ORGANIC COMPOUNDS (VOC)	F022	ASPHALT TANKS HOT OIL HEATER	S080	6.34E-03	6.34E-03	3.04E-03	2.78E-02	2.78E-02
		CUPOLA DRYING	S004	5.81E-03	5.81E-03	1.00E-02	1.09E-02	2.54E-02
		FITTINGS PLANT BATHHOUSE BOILER	S079	9.50E-03	9.50E-03	6.84E-03	4.16E-02	4.16E-02

UNITED STATES PIPE & FOUNDRY COMPANY

Table 2. Plantwide Criteria Pollutant Emissions for CV&F:

Pollutant	Process Area ID	Source Name	Stack ID	Hourly Emissions (lb/hr) Average	Hourly Emissions (lb/hr) Maximum	Annual Emissions (TPY) Actual	Annual Emissions (TPY) Maximum	Annual Emissions (TPY) Potential
VOLATILE ORGANIC COMPOUNDS (VOC)	F022	LADLE PREHEAT	S005-S006	2.84E-03	2.84E-03	1.15E-02	1.19E-02	1.25E-02
			Subtotal:	2.45E-02	2.45E-02	3.14E-02	9.22E-02	1.07E-01
VOLATILE ORGANIC COMPOUNDS (VOC)	U014	AIRSET ACID STORAGE TANK	S044					
		AIRSET BINDER STORAGE TANK	S043					
			Subtotal:					
VOLATILE ORGANIC COMPOUNDS (VOC)	V001	LADLE PREHEAT	SV02	2.97E-03	2.97E-03	4.28E-03	5.95E-03	1.30E-02
			Subtotal:	2.97E-03	2.97E-03	4.28E-03	5.95E-03	1.30E-02
VOLATILE ORGANIC COMPOUNDS (VOC)	V002	GREENSAND MOLD POURING	SV04	3.36E-02	5.60E-02	4.03E-02	1.12E-01	2.45E-01
		GREENSAND SHAKEOUT	SV05	2.36E+00	3.93E+00	2.83E+00	7.86E+00	1.72E+01
		SHELLSAND MOLD POURING	SV03	4.90E-04	8.16E-04	5.88E-04	1.63E-03	3.57E-03
			SV04	4.70E-04	7.84E-04	5.64E-04	1.57E-03	3.43E-03
			Subtotal:	2.39E+00	3.99E+00	2.87E+00	7.97E+00	1.75E+01
VOLATILE ORGANIC COMPOUNDS (VOC)	V005	COOLING & PASTING STATION	SV02	2.55E-05	2.55E-05	9.81E-06	5.11E-05	1.12E-04
			SV10	2.30E-04	2.30E-04	8.83E-05	4.60E-04	1.01E-03
		SHELL MOLD CURING	SV02	7.14E-03	7.14E-03	2.74E-03	1.43E-02	3.13E-02
			Subtotal:	7.39E-03	7.39E-03	2.84E-03	1.48E-02	3.24E-02
VOLATILE ORGANIC COMPOUNDS (VOC)	V006	AIRSET CORE SAND MIXER	SV02	4.98E-03	4.98E-03	2.87E-03	9.95E-03	2.18E-02
		SHELL CORE SAND CURING	SV02	3.56E-03	3.56E-03	6.84E-04	7.12E-03	1.56E-02
			Subtotal:	8.54E-03	8.53E-03	3.55E-03	1.71E-02	3.74E-02
VOLATILE ORGANIC COMPOUNDS (VOC)	V007	SMALL VALVE PAINT BOOTH	SV11	1.36E+00	1.36E+00	1.63E+00	2.71E+00	5.94E+00
	in Clude		Subtotal:	1.36E+00	1.36E+00	1.63E+00	2.71E+00	5.94E+00
VOLATILE ORGANIC COMPOUNDS (VOC)	V008	LARGE VALVE TOUCHUP COATING	SV12	2.31E-01	2.32E-01	2.78E-01	4.64E-01	1.02E+00
			Subtotal:	2.31E-01	2.32E-01	2.78E-01	4.64E-01	1.02E+00
VOLATILE ORGANIC COMPOUNDS (VOC)	V009	HYDRANT PRODUCTION PAINT BOOTH	SV13	5.51E+00	5.51E+00	6.62E+00	1.10E+01	2.41E+01
			Subtotal:	5.51E+00	5.51E+00	6.62E+00	1.10E+01	2.41E+01
VOLATILE ORGANIC COMPOUNDS (VOC)	V010	GLA CONVEYORIZED OVEN	SV16	1.04E-02	1.04E-02	9.94E-03	2.07E-02	4.53E-02
		PORBECK OVEN	SV17	9.86E-03	9.86E-03	9.46E-03	1.97E-02	4.32E-02

UNITED STATES PIPE & FOUNDRY COMPANY

Table 2. Plantwide Criteria Pollutant Emissions for CV&F:

Pollutant	Process Area ID	Source Name	Stack ID	Hourly Emissions (lb/hr) Average	Hourly Emissions (lb/hr) Maximum	Annual Emissions (TPY) Actual	Annual Emissions (TPY) Maximum	Annual Emissions (TPY) Potential
			Subtotal:	2.02E-02	2.02E-02	1.94E-02	4.04E-02	8.85E-02
VOLATILE ORGANIC COMPOUNDS (VOC)	V011	HOT WATER HEATERS #1 AND #2	SV22-SV23	2.01E-03	2.01E-03	1.44E-03	8.79E-03	8.79E-03
		LEAD KETTLE HEATING	SV20	1.49E-03	1.49E-03	8.55E-04	2.97E-03	6.50E-03
		~~PARTS WASHERS~~	SV25	~~1.62E+00~~	7.48E-01	~~1.62E+00~~	3.28E+00	3.28E+00
		R/S VALVE BURN-OFF OVEN	SV21	3.04E-03	3.04E-03	4.86E-04	6.07E-03	1.33E-02
		SPECIAL COATING PAINT BOOTH	SV24	4.66E-01	4.66E-01	5.60E-01	9.33E-01	2.04E+00
			Subtotal:	2.09E+00	1.22E+00	2.18E+00	4.23E+00	5.35E+00
Total Plantwide VOLATILE ORGANIC COMPOUNDS (VOC) Emissions:				2.15E+02	2.53E+02	2.27E+02	7.03E+02	1.04E+03

Notes: lb/hr = pounds per hour
TPY = tons per year

UNITED STATES PIPE & FOUNDRY COMPANY

Table 2. Plantwide Criteria Pollutant Emissions for CV&F:

Pollutant	Process Area ID	Source Name	Stack ID	Hourly Emissions (lb/hr) Average	Hourly Emissions (lb/hr) Maximum	Annual Emissions (TPY) Actual	Annual Emissions (TPY) Maximum	Annual Emissions (TPY) Potential
			Subtotal:	7.89E-02	7.90E-02	4.44E-02	1.58E-01	1.09E+01
PARTICULATE MATTER (TSP)	V007	SMALL VALVE PAINT BOOTH	SV11	6.37E-03	6.37E-03	7.65E-03	1.27E-02	2.79E-02
			Subtotal:	6.37E-03	6.37E-03	7.65E-03	1.27E-02	2.79E-02
PARTICULATE MATTER (TSP)	V008	LARGE VALVE TOUCHUP COATING	SV12	3.50E-02	3.50E-02	4.21E-02	7.01E-02	1.53E-01
			Subtotal:	3.50E-02	3.50E-02	4.21E-02	7.01E-02	1.53E-01
PARTICULATE MATTER (TSP)	V009	HYDRANT PRODUCTION PAINT BOOTH	SV13	1.60E-02	1.60E-02	1.93E-02	3.21E-02	7.03E-02
			Subtotal:	1.60E-02	1.60E-02	1.93E-02	3.21E-02	7.03E-02
PARTICULATE MATTER (TSP)	V010	GLA CONVEYORIZED OVEN	SV16	2.35E-02	2.35E-02	2.26E-02	4.71E-02	5.15E+00
		LINE #1 POWDER COATING	SV16	1.05E-01	1.05E-01	1.01E-01	2.10E-01	4.60E-01
		LINE #2 POWDER COATING	SV19	8.57E-02	8.57E-02	8.23E-02	1.71E-01	3.75E-01
		PANGBORN AIRBLAST CLEANER	SV15	7.71E-01	7.71E-01	9.91E-01	1.54E+00	3.38E+00
		PANGBORN ROTOBLAST CLEANER	SV14	2.19E-01	2.19E-01	2.81E-01	4.37E-01	9.58E-01
		PORBECK OVEN	SV17	2.24E-02	2.24E-02	2.15E-02	4.48E-02	4.91E+00
			Subtotal:	1.23E+00	1.23E+00	1.50E+00	2.45E+00	1.52E+01
PARTICULATE MATTER (TSP)	V011	HOT WATER HEATERS #1 AND #2	SV22-SV23	4.56E-03	4.56E-03	3.28E-03	2.00E-02	9.99E-01
		LEAD KETTLE HEATING	SV20	1.11E-03	1.11E-03	6.42E-04	2.23E-03	7.38E-01
		LEAD KETTLE MELTING	SV20	4.84E-05	4.84E-05	2.79E-05	9.68E-05	2.19E-01
		R/S VALVE BURN-OFF OVEN	SV21	6.90E-03	6.90E-03	1.10E-03	1.38E-02	1.51E+00
		SPECIAL COATING PAINT BOOTH	SV24	1.60E-03	1.60E-03	1.92E-03	3.21E-03	7.02E-03
			Subtotal:	1.42E-02	1.42E-02	6.98E-03	3.93E-02	3.47E+00
Total Plantwide PARTICULATE MATTER (TSP) Emissions:				1.28E+02	1.67E+02	1.30E+02	4.13E+02	4.79E+03
SULFUR DIOXIDE (SO2)	F002	AFTER BURNER	S002	2.82E+00	3.05E+00	6.18E-01	7.61E+00	3.15E+02
		CUPOLA	S002	2.80E+00	3.50E+00	2.44E+00	8.75E+00	8.75E+00
			S004	1.40E-04	1.75E-04	1.22E-04	4.38E-04	0.00E+00
			Subtotal:	5.62E+00	6.55E+00	3.06E+00	1.64E+01	3.24E+02
SULFUR DIOXIDE (SO2)	F004	HOLDING FURNACE PREHEAT	S005-S006	4.04E-04	4.04E-04	1.63E-03	1.70E-03	8.76E+01
			Subtotal:	4.04E-04	4.04E-04	1.63E-03	1.70E-03	8.76E+01

UNITED STATES PIPE & FOUNDRY COMPANY

Table 2. Plantwide Criteria Pollutant Emissions for CV&F:

Pollutant	Process Area ID	Source Name	Stack ID	Hourly Emissions (lb/hr) Average	Hourly Emissions (lb/hr) Maximum	Annual Emissions (TPY) Actual	Annual Emissions (TPY) Maximum	Annual Emissions (TPY) Potential
SULFUR DIOXIDE (SO2)	F016	FLAME-OFF	S053	3.39E-04	3.39E-04	3.26E-04	6.78E-04	9.90E+00
			Subtotal:	3.39E-04	3.39E-04	3.26E-04	6.78E-04	9.90E+00
SULFUR DIOXIDE (SO2)	F017	SHELL CORE HEATING	S053	1.11E-03	1.11E-03	9.77E-04	2.22E-03	3.24E+01
			Subtotal:	1.11E-03	1.11E-03	9.77E-04	2.22E-03	3.24E+01
SULFUR DIOXIDE (SO2)	F019	CEMENT LINING DRYING OVENS #1, #3 & #4	S064-S066	1.26E-03	1.26E-03	2.44E-03	5.52E-03	3.68E+01
		COATING DRYING OVENS #1 AND #3	S069-S070	8.40E-04	8.40E-04	1.63E-03	3.68E-03	2.45E+01
			Subtotal:	2.10E-03	2.10E-03	4.07E-03	9.20E-03	6.13E+01
SULFUR DIOXIDE (SO2)	F020	SPECIAL COATING DRYING OVEN	S072	6.00E-04	6.00E-04	3.26E-04	2.63E-03	1.75E+01
			Subtotal:	6.00E-04	6.00E-04	3.26E-04	2.63E-03	1.75E+01
SULFUR DIOXIDE (SO2)	F022	ASPHALT TANKS HOT OIL HEATER	S080	7.20E-04	7.20E-04	3.46E-04	3.15E-03	2.10E+01
		CUPOLA DRYING	S004	6.60E-04	6.60E-04	1.14E-03	1.24E-03	1.93E+01
		FITTINGS PLANT BATHHOUSE BOILER	S079	1.08E-03	1.08E-03	7.78E-04	4.73E-03	3.15E+01
		LADLE PREHEAT	S005-S006	3.23E-04	3.23E-04	1.30E-03	1.36E-03	9.43E+00
			Subtotal:	2.78E-03	2.78E-03	3.57E-03	1.05E-02	8.13E+01
SULFUR DIOXIDE (SO2)	V001	LADLE PREHEAT	SV02	3.38E-04	3.38E-04	4.86E-04	6.76E-04	9.86E+00
			Subtotal:	3.38E-04	3.38E-04	4.86E-04	6.76E-04	9.86E+00
SULFUR DIOXIDE (SO2)	V005	SHELL MOLD CURING	SV02	8.11E-04	8.11E-04	3.11E-04	1.62E-03	3.12E+01
			Subtotal:	8.11E-04	8.11E-04	3.11E-04	1.62E-03	3.12E+01
SULFUR DIOXIDE (SO2)	V006	SHELL CORE SAND CURING	SV02	4.05E-04	4.04E-04	7.77E-05	8.09E-04	2.14E+01
			Subtotal:	4.05E-04	4.04E-04	7.77E-05	8.09E-04	2.14E+01
SULFUR DIOXIDE (SO2)	V010	GLA CONVEYORIZED OVEN	SV16	1.18E-03	1.18E-03	1.13E-03	2.35E-03	3.43E+01
		PORBECK OVEN	SV17	1.12E-03	1.12E-03	1.08E-03	2.24E-03	3.28E+01
			Subtotal:	2.30E-03	2.30E-03	2.20E-03	4.59E-03	6.71E+01
SULFUR DIOXIDE (SO2)	V011	HOT WATER HEATERS #1 AND #2	SV22-SV23	2.28E-04	2.28E-04	1.64E-04	9.99E-04	6.66E+00
		LEAD KETTLE HEATING	SV20	1.69E-04	1.69E-04	9.72E-05	3.38E-04	4.92E+00
		R/S VALVE BURN-OFF OVEN	SV21	3.45E-04	3.45E-04	5.52E-05	6.90E-04	1.01E+01
			Subtotal:	7.42E-04	7.42E-04	3.17E-04	2.03E-03	2.17E+01
Total Plantwide SULFUR DIOXIDE (SO2) Emissions:				5.63E+00	6.57E+00	3.07E+00	1.64E+01	7.65E+02

Table 2. Plantwide Criteria Pollutant Emissions for CV&F:

Pollutant	Process Area ID	Source Name	Stack ID	Hourly Emissions (lb/hr) Average	Hourly Emissions (lb/hr) Maximum	Annual Emissions (TPY) Actual	Annual Emissions (TPY) Maximum	Annual Emissions (TPY) Potential
NITROGEN OXIDES (NOx)	V006	SHELL CORE SAND CURING	SV02	6.74E-02	6.74E-02	1.30E-02	1.35E-01	2.95E-01
			Subtotal:	**6.74E-02**	**6.74E-02**	**1.30E-02**	**1.35E-01**	**2.95E-01**
NITROGEN OXIDES (NOx)	V010	GLA CONVEYORIZED OVEN	SV16	1.96E-01	1.96E-01	1.88E-01	3.92E-01	8.59E-01
		PORBECK OVEN	SV17	1.87E-01	1.87E-01	1.79E-01	3.73E-01	8.18E-01
			Subtotal:	**3.83E-01**	**3.83E-01**	**3.67E-01**	**7.65E-01**	**1.68E+00**
NITROGEN OXIDES (NOx)	V011	HOT WATER HEATERS #1 AND #2	SV22-SV23	3.80E-02	3.80E-02	2.74E-02	1.66E-01	1.66E-01
		LEAD KETTLE HEATING	SV20	2.81E-02	2.81E-02	1.62E-02	5.63E-02	1.23E-01
		R/S VALVE BURN-OFF OVEN	SV21	5.75E-02	5.75E-02	9.20E-03	1.15E-01	2.52E-01
			Subtotal:	**1.24E-01**	**1.24E-01**	**5.28E-02**	**3.38E-01**	**5.41E-01**
Total Plantwide NITROGEN OXIDES (NOx) Emissions:				**2.03E+01**	**2.42E+01**	**1.65E+01**	**5.62E+01**	**6.35E+01**
PARTICULATE MATTER (PM10)	F002	AFTER BURNER	S002	1.16E-03	1.25E-03	5.23E-04	1.69E-03	2.96E-03
		CUPOLA	S002	3.53E+00	4.41E+00	3.08E+00	1.10E+01	1.10E+01
			S004	3.53E-02	4.41E-02	3.08E-02	1.10E-01	1.10E-01
			Subtotal:	**3.57E+00**	**4.46E+00**	**3.11E+00**	**1.11E+01**	**1.11E+01**
PARTICULATE MATTER (PM10)	F003	HMT MELTING	S004	8.34E-01	1.04E+00	7.27E-01	2.60E+00	4.56E+00
			Subtotal:	**8.34E-01**	**1.04E+00**	**7.27E-01**	**2.60E+00**	**4.56E+00**
PARTICULATE MATTER (PM10)	F004	DESULFURIZATION	S005-S006	4.93E+00	6.16E+00	4.29E+00	1.54E+01	2.70E+01
		HMT TO HOLDING FURNACES	S005-S006	2.66E-01	3.33E-01	2.32E-01	8.32E-01	1.46E+00
			Subtotal:	**5.20E+00**	**6.49E+00**	**4.53E+00**	**1.62E+01**	**2.84E+01**
PARTICULATE MATTER (PM10)	F005	TREATING LADLES	S005-S006	2.21E-01	2.97E-01	2.07E-01	7.43E-01	1.30E+00
			S007	6.01E-02	8.10E-02	5.65E-02	2.03E-01	3.55E-01
			Subtotal:	**2.81E-01**	**3.78E-01**	**2.64E-01**	**9.45E-01**	**1.66E+00**
PARTICULATE MATTER (PM10)	F006	#4 & #10 UNITS	S008	1.69E+00	2.28E+00	1.59E+00	5.71E+00	1.00E+01
		#9 UNIT	S008	4.56E+00	6.14E+00	4.29E+00	1.54E+01	2.69E+01
			Subtotal:	**6.25E+00**	**8.43E+00**	**5.88E+00**	**2.11E+01**	**3.69E+01**
PARTICULATE MATTER (PM10)	F007	COOLING #9	S008	1.41E+00	1.91E+00	1.33E+00	4.76E+00	8.35E+00
			S012	1.07E+00	1.44E+00	1.01E+00	3.61E+00	6.32E+00
			S013	1.61E+00	2.17E+00	1.51E+00	5.41E+00	9.49E+00
			S014	2.68E+00	3.61E+00	2.52E+00	9.02E+00	1.58E+01

UNITED STATES PIPE & FOUNDRY COMPANY

Table 2. Plantwide Criteria Pollutant Emissions for CV&F:

Pollutant	Process Area ID	Source Name	Stack ID	Hourly Emissions (lb/hr) Average	Hourly Emissions (lb/hr) Maximum	Annual Emissions (TPY) Actual	Annual Emissions (TPY) Maximum	Annual Emissions (TPY) Potential
			Subtotal:	5.88E-04	7.92E-04	5.53E-04	1.98E-03	3.47E-03
MERCURY	V002	GREENSAND MOLD POURING	SV04	5.28E-06	8.80E-06	6.34E-06	1.76E-05	3.85E-05
			Subtotal:	5.28E-06	8.80E-06	6.34E-06	1.76E-05	3.85E-05
Total Plantwide MERCURY Emissions:				5.93E-04	8.01E-04	5.59E-04	2.00E-03	3.51E-03
NITROGEN OXIDES (NOx)	F002	AFTER BURNER	S002	4.30E+00	4.66E+00	1.95E+00	6.30E+00	1.10E+01
		CUPOLA	S002	1.40E+01	1.75E+01	1.22E+01	4.37E+01	4.37E+01
			S004	7.01E-04	8.75E-04	6.10E-04	2.19E-03	2.19E-03
			Subtotal:	1.83E+01	2.22E+01	1.42E+01	5.01E+01	5.48E+01
NITROGEN OXIDES (NOx)	F004	HOLDING FURNACE PREHEAT	S005-S006	6.73E-02	6.73E-02	2.71E-01	2.83E-01	2.95E-01
			Subtotal:	6.73E-02	6.73E-02	2.71E-01	2.83E-01	2.95E-01
NITROGEN OXIDES (NOx)	F016	FLAME-OFF	S053	5.65E-02	5.65E-02	5.43E-02	1.13E-01	2.47E-01
			Subtotal:	5.65E-02	5.65E-02	5.43E-02	1.13E-01	2.47E-01
NITROGEN OXIDES (NOx)	F017	SHELL CORE HEATING	S053	1.85E-01	1.85E-01	1.63E-01	3.70E-01	8.10E-01
			Subtotal:	1.85E-01	1.85E-01	1.63E-01	3.70E-01	8.10E-01
NITROGEN OXIDES (NOx)	F019	CEMENT LINING DRYING OVENS #1, #3 & #4	S064-S066	2.10E-01	2.10E-01	4.07E-01	9.20E-01	9.20E-01
		COATING DRYING OVENS #1 AND #3	S069-S070	1.40E-01	1.40E-01	2.71E-01	6.14E-01	6.14E-01
			Subtotal:	3.50E-01	3.50E-01	6.78E-01	1.53E+00	1.53E+00
NITROGEN OXIDES (NOx)	F020	SPECIAL COATING DRYING OVEN	S072	1.00E-01	1.00E-01	5.43E-02	4.38E-01	4.38E-01
			Subtotal:	1.00E-01	1.00E-01	5.43E-02	4.38E-01	4.38E-01
NITROGEN OXIDES (NOx)	F022	ASPHALT TANKS HOT OIL HEATER	S080	1.20E-01	1.20E-01	5.76E-02	5.26E-01	5.26E-01
		CUPOLA DRYING	S004	1.10E-01	1.10E-01	1.90E-01	2.06E-01	4.82E-01
		FITTINGS PLANT BATHHOUSE BOILER	S079	1.80E-01	1.80E-01	1.30E-01	7.88E-01	7.88E-01
		LADLE PREHEAT	S005-S006	5.38E-02	5.38E-02	2.17E-01	2.26E-01	2.36E-01
			Subtotal:	4.64E-01	4.64E-01	5.94E-01	1.75E+00	2.03E+00
NITROGEN OXIDES (NOx)	V001	LADLE PREHEAT	SV02	5.63E-02	5.63E-02	8.11E-02	1.13E-01	2.47E-01
			Subtotal:	5.63E-02	5.63E-02	8.11E-02	1.13E-01	2.47E-01
NITROGEN OXIDES (NOx)	V005	SHELL MOLD CURING	SV02	1.35E-01	1.35E-01	5.19E-02	2.70E-01	5.92E-01
			Subtotal:	1.35E-01	1.35E-01	5.19E-02	2.70E-01	5.92E-01

FARR 50 LLS 40 HP

FARR 50 LLS

20 000 cfm

8" total SP 38.3 HP

15000 sq ft Filter

1.33 Air to Filter

50 cart. @ 300 sq ft each

CD 048

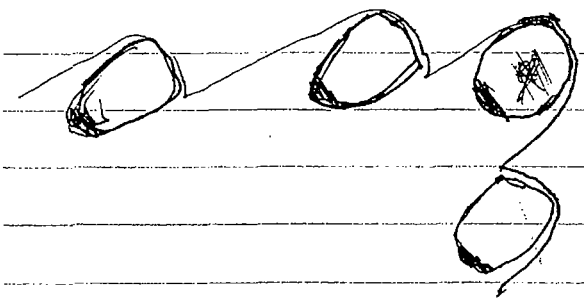
FBE Retoblast

&

~~Continuous~~

Monorail → 4 x 40 hp. - Runs more than #9 unit itself

8 ft Tableblast → 2 x 25 hp - Runs how much?



monorail 1600 x 40 x 4 = 256,000 or 128 ton/hr

Tableblast 1600 x 25 x 2 = 80,000 lb or 40 ton/hr

CHATTANOOGA-HAMILTON COUNTY AIR POLLUTION CONTROL BUREAU

Statement of Basis
Part 70 Permit 47-065-3321

United States Pipe & Foundry Company, Inc.
2501- 2701 Chestnut Street
Chattanooga, TN 37408

Cynthia C. McDaniel
Engineering Department
December 5, 2003

Purpose

United States Pipe & Foundry Company, Inc. (U.S. Pipe) has applied for the renewal of their Part 70 permit, which is due to expire on April 8, 2004. The new Part 70 permit will cover the operating period from April 9, 2004 through April 8, 2009. This statement of basis includes a process description, a summary of applicable regulatory requirements, the observations from the most recent plant inspection, and the status of compliance with the regulatory requirements. This statement has been adapted from the most recent inspection report (November 12, 2003).

Process Description

U.S. Pipe operates a ductile iron manufacturing facility on Chestnut Street in Chattanooga, Tennessee. A cupola provides molten gray iron that is treated, rendering ductile iron. The cupola is equipped with afterburner and baghouse control devices. The plant's largest manufacturing areas consist of mold production and pouring. There are three mold-producing areas in the plant. Baghouses control the mold production areas, including the mullers and sand reclamation equipment. Emissions from the Unit No.9 and Unit No.10 casting lines are uncontrolled. The Unit No.9 line is poured under a large compensating hood. The hood provides fresh air to the line from each end and collects the exhaust in the center. The No.10 line molds are poured in the same general area but on the open shop floor. The mold flasks used on the Unit No.10 line are too large for an automated system, such as the Unit No.9 mold line. The pouring operations also include the cooling, shakeout, and sand and casting removal where the castings and sand are vibrated from the mold. These portions of the Unit No. 9 mold line are controlled. Unit No. 10 shakeout is uncontrolled. Sand shaken from the mold is recovered from the pouring process and recycled. The core sand is reclaimed from the used core pieces and returned to the process. The mold or "green" sand is cleaned and stored in a separate silo for blending with new sand.

From the shakeout area, the cooled, raw castings are sent to various surface-grinding areas. As the castings arrive at the cleaning stations, excess metal, burrs, and other surface imperfections are removed by shotblast, surface grinding, burn-off, or machining. Manual grinding equipment, such as the swing grinders or pedestal grinders are grouped together indoors and, for the most part, uncontrolled. The automatic shotblast stations are controlled by individual baghouses. Emissions from the semi-automated cleaning systems, a process whereby castings are automatically moved through manual grinding stations, are uncontrolled. The cleaned castings are then ready for final assembly and surface coating. Final assembly may include the attachment of bronze fittings, the insertion of the mechanical components, and other

fabrication processes. Surface coating operations at U.S. Pipe include dip tank, paint spray booth lines, and powder coating areas.

Several areas of the plant provide support operations for the main production facility. These include the carpenter and pattern shops, the water and hot oil heaters, and the sand storage silos. The carpenter and pattern shops construct specialty patterns for the production line. The equipment is controlled by cyclones. The sand storage silos are loaded by pneumatic conveyor and are controlled by baghouse equipment during this cycle. The water heaters supply hot water to the employee bathhouses and the oil heaters provide hot oil to the asphalt coating operations. Other ancillary operations include dust solidification and miscellaneous pre-heating and drying.

Emission Units

101 Charge Handling
102 Melting Facility
103 Hot Metal Transfer
104 Desulfurization & Slagging
105 Induction Holding Furnaces
106 Ductile Treating Process
107 No.9 Unit Inoculation/Slagging
108 No.4 & No.10 Inoculation/Slagging
109 Fitting Plant Pouring & Cooling
110 No.9 Unit Shakeout
111 No.4 & No.10 Units Shakeout
112 No.9 Unit Casting Cleaning
113 No.4 & No.10 Casting Cleaning
114 Grinding, Finishing, & Priming
115 Cement Lining Building
116 Special Coating Operation
118 No.10 Unit Airset Mold System
119 No.10 Unit Sand Reclamation
120 No.9 Unit Greensand Mold System
121 Shell Cores Process
122 Airset Core System
123 Isocure Core System
124 Pepset Core System
125 Refractory Coating Operation
126 Packaging & Shipping Operations
127 Ancillary Fitting Operations
128 Fusion Bonded Epoxy Process
206 Valve & Hydrant Production
207 Resilient Seat Valve Production
208 Ancillary Valve Operations
301 Solid Waste Landfill

Emissions Unit Regulatory Basis Summary

U.S. Pipe shall be subject to applicable requirements of the "National Emissions Standards for Hazardous Air Pollutants for Iron and Steel Foundries," Title 40 *Code of Federal Regulations*, Part 63, Subpart EEEEE when the final rule is promulgated. In addition, the following emissions sources have potential "pre-control" particulate matter emissions greater than one hundred tons per year and are subject to the provisions of Title 40 *Code of Federal Regulations*, Part 64, "Compliance Assurance Monitoring."

Source ID	Description	Control Device ID	Stack ID
E002	Cupola	CD002	S002
E014	No. 9 Unit Shakeout	CD003	S007
E017	12 ft. Rotoblast Table	CD005	S018
E019	No. 9 Unit Secondary Shakeout	CD006	S022
E021	No. 9 Unit Casting Monorail and 8 ft. Tableblast	CD008	S024
E133	No. 9 Unit Casting Automatic Cleaner	CD007	S023
E134-E136	FBE Rotoblast Barrels	CD048	S091

Emission Unit 101 Charge Handling

Emission Unit 101 is a material handling operation in which scrap iron is transferred from the storage piles to the charge hopper where coke and other additives are combined to form the cupola charge. The scrap storage piles are included in this emission unit. This operation is subject to Section 4-41, Rule 11.1 (Material Handling in Open Air) of the Ordinance. All emissions from this operation are in the form of particulate matter and are fugitive in nature. Compliance with particulate emission limitations is demonstrated by a twenty-percent opacity limitation as specified in Rule 11. A daily visible emissions check is conducted of the charge handling area to satisfy Part 70 monitoring requirements.

Emission Unit 102 Melting Facility

Emission Unit 102 consists of the cupola and related control devices. After the charge is formed, it is transferred to the cupola where the coke is burned to melt the iron in the charge. The melting facility is subject to Rule 2 (NO_x), Rule 3 (Visible Emissions), Rule 10 (Particulate), Rule 13 (SO_2), Rule 26.12 (RACT – Metal Melting Plants), and Rule 26.20 (RACT – Visible Emissions from Buildings). Emissions from the coke combustion and iron melting in the cupola are controlled by an afterburner and baghouse. Compliance with particulate emission limitations is demonstrated by a twenty-percent opacity limitation and proper operation and maintenance of the emissions control systems. Daily visible emissions checks and differential operating pressure readings for the Cupola Baghouse are conducted to satisfy Part 70 monitoring requirements. Compliance with SO_2 limitations is demonstrated by a maximum allowable sulfur content of 0.7 percent in the coke used at the facility. This sulfur content limitation was requested by the source. Allowable NO_x emissions were determined based on the concentrations specified in Rule 2. There are no applicable limitations for volatile organic compounds (VOC) because the source has been in operation and has not been modified since the applicable VOC rules were adopted.

Emission Unit 103 Hot Metal Transfer

Emission Unit 103 is a material-handling source subject to the twenty percent opacity limitations specified in Rule 11.1. This operation is the transfer of molten iron from the cupola to the transfer bottle. Emissions from this source are calculated based on the amount of iron melted.

Emission Unit 104 Desulfurization & Slagging
Emission Unit 105 Induction Holding Furnaces
Emission Unit 106 Ductile Treating Process

Emission Units 104, 105, & 106 are contained in the Ductile Treating Building. Emissions from desulfurization and slagging are fugitive and exit the building through exhaust vents. Emissions from the induction holding furnaces are fugitive until ductile treating occurs. Ductile treating emissions are captured and vented through the Ductile Treating and No.9 Unit Shakeout Baghouse. These sources are subject to Rule 2 (NO_x), Rule 3 (Visible Emissions), Rule 13 (SO_2), Rule 26.12 (RACT – Metal Melting Plants), and Rule 26.20 (RACT – Visible

Emissions from Buildings). Compliance is demonstrated by the five percent opacity limitation in Rule 26.20 and proper operation of emissions capture and control equipment. Compliance with SO_2 and NO_x emissions limitations is demonstrated by burning only natural gas in the induction holding furnace pre-heaters. Daily visible emissions checks of the Ductile Treating Building and recording of the differential operating pressure of the Ductile Treating and No.9 Unit Shakeout Baghouse are conducted to satisfy Part 70 monitoring requirements.

Emission Unit 107 No.9 Unit Inoculation & Slagging

Emission Unit 107 is subject to Rule 3 (Visible Emissions), Rule 10 (Particulate), Rule 26.12 (RACT – Metal Melting Plants), and Rule 26.20 (RACT – Visible Emissions from Buildings). Particulate emissions from this operation are fugitive and uncontrolled. Compliance is demonstrated by the visible emissions limitations under Rule 26.20. Daily visible emissions checks of the Main Foundry Building are conducted to satisfy Part 70 monitoring requirements.

Emission Unit 108 No.4 & No.10 Units Inoculation & Slagging

Emission Unit 108 is subject to Rule 3 (Visible Emissions), Rule 10 (Particulate), Rule 26.12 (RACT – Metal Melting Plants), and Rule 26.20 (RACT – Visible Emissions from Buildings). Particulate emissions from this operation are fugitive and uncontrolled. Compliance is demonstrated by the visible emissions limitations under Rule 26.20. Daily visible emissions checks of the Main Foundry Building are conducted to satisfy Part 70 monitoring requirements.

Emission Unit 109 Fitting Plant Pouring & Cooling Operations

Emission Unit 109 consists of all pouring and cooling operations for No.9, No.4, & No.10 Units and is subject to Rule 3 (Visible Emissions), Rule 10 (Particulate), Rule 26.12 (RACT – Metal Melting Plants), and Rule 26.20 (RACT – Visible Emissions from Buildings). Emissions from pouring and cooling operations are uncontrolled. Compliance with the emissions limitations is demonstrated by the visible emissions limitations under Rule 26.20. Daily visible emissions checks of the Main Foundry Building are conducted to satisfy Part 70 monitoring requirements.

Emission Unit 110 No.9 Unit Shakeout

Emission Unit 110 is subject to Rule 3 (Visible Emissions), Rule 10 (Particulate), Rule 26.12 (RACT – Metal Melting Plants), and Rule 26.20 (RACT – Visible Emissions from Buildings). Particulate emissions from No.9 Unit Shakeout are captured and vented through the Ductile Treating & No.9 Unit Shakeout Baghouse. Daily visible emissions checks of the Main Foundry Building and the baghouse stack and differential operating pressure reading of the baghouse are conducted to satisfy Part 70 monitoring requirements. Proper operation and maintenance of the emissions capture and control devices are used to determine compliance.

Emission Unit 111 No.4 & No.10 Units Shakeout

Emission Unit 111 is subject to Rule 3 (Visible Emissions), Rule 10 (Particulate), Rule 26.12 (RACT – Metal Melting Plants), and Rule 26.20 (RACT – Visible Emissions from Buildings). Particulate emissions are uncontrolled. Compliance is determined using the visible emissions limitation under Rule 26.20. Daily visible emissions checks are conducted to satisfy Part 70 monitoring requirements.

Emission Unit 112 No.9 Unit Casting Cleaning

Emission Unit 112 is subject to Rule 3 (Visible Emissions), Rule 10 (Particulate), Rule 26.12 (RACT – Metal Melting Plants), and Rule 26.20 (RACT – Visible Emissions from Buildings). Particulate emissions result from secondary shakeout operations from No.9 Unit, material handling, and shot blasting operations. Emissions from material handling are fugitive while those from secondary shakeout and shot blasting are controlled by various baghouses. Compliance is demonstrated by opacity limitation under Rules 3 and 26.20, by proper operation of the emissions capture, and control systems. Daily visible emissions checks of the Main Foundry Building and the No.9 Unit Secondary Shakeout Baghouse stack and daily differential operating pressure readings for all baghouses in this emission unit are conducted to satisfy Part 70 monitoring requirements.

Emission Unit 113 No.10 Unit Casting Cleaning

Emission Unit 113 is subject to Rule 3 (Visible Emissions), Rule 10 (Particulate), Rule 26.12 (RACT – Metal Melting Plants), and Rule 26.20 (RACT – Visible Emissions from Buildings). Particulate emissions resulting from burn-off and shot blasting operations are controlled by baghouses. Daily differential operating pressure readings of these baghouses are conducted to satisfy Part 70 monitoring requirements. Proper operation and maintenance of emissions capture and control systems are used to verify compliance.

Emission Unit 114 Grinding, Finishing, & Priming Operations

Emission Unit 114 is subject to Rule 3 (Visible Emissions), Rule 10 (Particulate), Rule 25 (BACT – Volatile Organic Compounds), and Rule 26.20 (RACT – Visible Emissions from Buildings). Particulate emissions result from grinding operations in Cleaning Sheds No.1, No.2, & No.3, the Old Bond Storage Building, and Old Heat Treat Building and are uncontrolled. Daily visible emissions checks of these buildings are conducted to satisfy Part 70 monitoring requirements for particulate. Volatile organic compound (VOC) emissions result from the priming operation. VOC emissions are uncontrolled; however, a facility-wide 3.5 pounds of VOC per gallon of coating governs all surface-coating operations. VOC emissions are determined based on material usage.

Emission Unit 115 Cement Lining Building

Particulate emissions from sources in the Cement Lining Building are subject to BACT limitations under Section 4-8(e)(2) of the Ordinance. Stack emissions from the Large Fittings

Paint Booth are limited to 0.3 pounds per hour and a five-percent opacity limitation for all booth exhaust stacks at the Cement Lining Building are limited by BACT. Daily visible emissions checks of the paint booth stacks and daily filter inspections are conducted to satisfy Part 70 monitoring requirements for particulate. VOC emissions from the surface coating operations are limited to 3.5 pounds of VOC per gallon of coating limitation (Rule 25.21 – Miscellaneous Metal Coaters) and by logging material usage. Compliance with combustion emissions (SO_2 and NO_x) limitations is demonstrated by burning only natural gas as fuel in the fuel-burning sources.

Emission Unit 116 Special Coating Operation

Particulate emissions from Emission Unit 116 are controlled by dry filters. Daily filter inspections are conducted to satisfy Part 70 monitoring requirements. VOC emissions from the surface coating operations are limited to 3.5 pounds of VOC per gallon of coating (Rule 25.21 – Miscellaneous Metal Coaters) and by logging material usage. Compliance with combustion emissions (SO_2 and NO_x) limitations is demonstrated by burning only natural gas as fuel.

Emission Unit 118 No.10 Unit Airset Mold System

Particulate emissions from Emission Unit 118 are subject to Rule 3 (Visible Emissions), Rule 10 (Particulate), Rule 26.12 (RACT – Metal Melting Plants), and Rule 26.20 (RACT – Visible Emissions from Buildings). Particulate emissions result mostly from the sand handling. Compliance with particulate limitations is demonstrated by proper operation and maintenance of emissions control systems and by the opacity limitation of Rule 26.20. Daily visible emissions checks of the Main Foundry Building are conducted to satisfy Part 70 monitoring requirements.

Emission Unit 119 No.10 Unit Sand Reclamation

Particulate emissions from Emission Unit 119 are subject to Rule 3 (Visible Emissions), Rule 10 (Particulate), Rule 26.12 (RACT – Metal Melting Plants), Rule 26.20 (RACT – Visible Emissions from Buildings), and BACT under Section 4-8(e)(2) of the Ordinance. Particulate emissions result from the sand handling. Emissions from the Fines & Classifier Baghouses are subject to BACT limitations. The Bulk Sand Silo Baghouse is limited by Rule 26.12. Compliance with particulate limitations is demonstrated by proper operation and maintenance of emissions control systems and by the opacity limitation of Rule 26.20. Daily visible emissions checks of the Main Foundry Building and the stacks for the Fines & Classifier Baghouses are conducted to satisfy Part 70 monitoring requirements. Daily pressure readings are also recorded.

Emission Unit 120 No.9 Unit Greensand Mold System

Particulate emissions from Emission Unit 120 are subject to Rule 3 (Visible Emissions), Rule 10 (Particulate), Rule 26.12 (RACT – Metal Melting Plants), Rule 26.20 (RACT – Visible Emissions from Buildings), and BACT under Section 4-8(e)(2) of the Ordinance. Particulate emissions result from sand handling. Sand screening operations are controlled by a cyclone. Emissions from the screening drum cyclone are subject BACT limitations on emissions and hours of operation. The Greensand Storage Silo is limited by a Rule 26.12 limitation. Compliance with particulate limitations is demonstrated by proper operation and maintenance of

emissions control systems and by the opacity limitation of Rule 26.20. Daily visible emissions checks of the Main Foundry Building are conducted to satisfy Part 70 monitoring requirements.

Emission Unit 121 Shell Cores Process

Emission Unit 121 is subject to Rule 2 (NO_x), Rule 3 (Visible Emissions), Rule 10 (Particulate), and Rule 26.20 (RACT – Visible Emissions from Buildings). Particulate emissions result from material handling and fuel burning operations. Particulate emissions are limited by Rule 10. Daily visible emissions checks are conducted to satisfy Part 70 monitoring requirements. Combustion emissions (SO_2 and NO_x) limitations are met by burning only natural gas as fuel in the sand heaters.

Emission Unit 122 Airset Core System

Particulate emissions from Emission Unit 122 are subject to Rule 3 (Visible Emissions), Rule 10 (Particulate), Rule 26.12 (RACT – Metal Melting Plants), and Rule 26.20 (RACT – Visible Emissions from Buildings). Emissions from core sand handling are controlled. Proper operation and maintenance of the emissions capture and control systems demonstrate compliance. Daily visible emissions checks of the Airset Core Building are conducted to satisfy Part 70 monitoring requirements.

Emission Unit 123 Isocure Core System

Emission Unit 123 is subject to Rule 3 (Visible Emissions), Rule 10 (Particulate), Rule 12 (Odors), Rule 23(Process Gaseous Emissions), Rule 26.12 (RACT – Metal Melting Plants), Rule 26.20 (RACT – Visible Emissions from Buildings), and Rule 25.3 (BACT – Volatile Organic Compounds). Particulate emissions resulting from sand handling operations are controlled. Compliance with particulate emission limitations is demonstrated by proper operation and maintenance of an emissions' capture and control system. Daily visible emissions checks of the Shell Core Building are conducted to satisfy Part 70 monitoring requirements for particulate. VOC emissions result from the core sand mixing operation where triethylamine is used as a catalyst for the core resins. Triethylamine emissions are controlled by packed acid scrubbers. Compliance with the VOC limitations is demonstrated by operation of the scrubbers below a specified pH, usage limitations for core resins and triethylamine, and VOC content limitations for core resins.

Emission Unit 124 Pepset Core System

Emission Unit 124 is subject to Rule 3 (Visible Emissions), Rule 10 (Particulate), Rule 23 (Process Gaseous Emissions), Rule 26.12 (RACT – Metal Melting Plants), and Rule 26.20 (RACT – Visible Emissions from Buildings). Compliance with particulate limitations is met by proper operation and maintenance of emissions capture and control systems and by opacity limitations specified in Rule 26.20. Daily visible emissions checks of the Shell Cores Building are conducted to satisfy Part 70 monitoring requirements.

Emission Unit 125 Refractory Coating Operations

Emission Unit 125 is subject to Rule 2 (NO_x), Rule 3 (Visible Emissions), Rule 10 (Particulate), Rule 13 (SO_2), and Rule 25.3 (BACT – Volatile Organic Compounds). Particulate, SO_2, and NO_x emissions result from the flame-off operation. Compliance with these emissions limitations is demonstrated by burning only natural gas as fuel in the flame-off burner. Compliance with the VOC emissions limitations is demonstrated by tracking isopropanol usage.

Emission Unit 126 Packaging & Shipping Operations

Emission Unit 126 consists of a touch-up coating operation and the associated equipment and is subject to Rule 3 (Visible Emissions), Rule 10 (Particulate), Rule 25.3 (BACT – Volatile Organic Compounds), and Rule 25.21 (Miscellaneous Metal Coaters). Compliance with particulate emissions limitations is met by the use of best work practice and visible emissions observations. High pressure - low volume spray guns are impractical for this operation because the asphalt paint is too viscous and clogs the guns. VOC emissions limitations are met by the 3.5 pounds per gallon of coating and material logging.

Emission Unit 127 Ancillary Fitting Plant Operations

Emission Unit 127 consists of miscellaneous fitting plant support functions. These sources include Cupola Baghouse Dust Solidification, Cupola Drying, Pattern Shop, Ladle Pre-heat, the Bathhouse Boiler, and the Asphalt Hot Oil Heater. The Cupola Baghouse Dust Solidification operation is subject to a BACT limitation under Section 4-8(e)(2) of the Ordinance. The Pattern Shop is subject to a Rule 26.18 (RACT – Woodworking Operations) limitation for particulate emissions. The remaining sources are fuel-burning equipment subject to Rule 8.2 (Particulate – Fuel Burning), Rule 2 (NO_x), and Rule 13 (SO_2). Compliance with all applicable requirements is demonstrated by burning only natural gas as fuel in the combustion source, and proper operation and maintenance of emissions capture and control systems. Additionally, daily visible emissions checks are conducted of these sources shall be conducted to satisfy Part 70 monitoring requirements.

Emission Unit 128 Fusion Bonded Epoxy Coating Process

Emission Unit 128 consists of blast cleaning apparatus with baghouse controls, a natural gas-fired burn-off oven with an afterburner, and two powder-coating operations. The powder coating operations are insignificant activities by definition. The blast cleaning equipment is subject to reasonable and proper limitations for visible emissions and particulate under Rule 27.3 (Particulate) of the Ordinance. The burn-off oven and afterburner are subject to reasonable and proper limitations under Rule 23 (Process Gaseous Emissions) and Rule 27.3 (Particulate). Use of the afterburner during oven operations was determined to be reasonable and proper control for the gases emitted from the burn-off process. The oven and afterburner are also subject to Best Available Control Technology (BACT) requirements for VOC under Rule 25.3. A natural gas-only fuel limitation for the oven and afterburner satisfies this requirement. The oven and afterburner are also subject to Rules 2 and 13 for nitrogen oxides (NO_x) and sulfur dioxide (SO_2). The fuel restriction also satisfies these rules.

Emission Unit 206 Valve and Hydrant Production

Emission Unit 206 consists of surface coating operations for assembled fire hydrants and resilient seat valves. Emissions from this equipment are in the form of particulate and VOC. Particulate emissions are controlled by paint booth filters. Daily filter inspections are conducted to ensure proper paint booth operation. All coatings comply with the 3.5-pounds per gallon limitation on VOC.

Emission Unit 207 Resilient Seat Valve Production

Emission Unit 207 consists of shot blasting operations for the production of resilient seat valves and is subject to Rule 3 (Visible Emissions), Rule 10 (Particulate), Rule 26.12 (RACT – Metal Melting Plants), and Rule 26.20 (RACT – Visible Emissions from Buildings). Particulate emissions from this equipment are controlled by baghouses. The RS Valve Cleaning Baghouse is also subject to a BACT limitation under Section 4-8(e)(2) of the Ordinance. Compliance with the particulate emissions limitation is demonstrated by proper operation and maintenance of emissions control systems.

Emission Unit 208 Ancillary Valve & Hydrant Plant Operations

Emission Unit 208 consists of support operations for the Valve & Hydrant Plant Operations. These sources include the lead melting kettles, RS Valve Burn-off Oven, Hot Water Heaters Nos.1 and 2, and the Special Coatings Paint Booth, and are subject to Rule 2 (NO_x), Rule 3 (Visible Emissions), Rule 8 (Particulate – Fuel Burning Equipment), Rule 10 (Particulate), Rule 13 (SO_2), Rule 25.21 (BACT – Misc. Metal Coaters), Rule 26.12 (RACT – Metal Melting Plants), and Rule 26.20 (RACT – Visible Emissions from Buildings). Emissions from lead melting are uncontrolled. Particulate emissions from the paint booth are controlled by dry filters. Daily filter inspections are required to ensure proper booth operation. Compliance with all combustion emissions limitations from the lead kettles, burn-off oven, and hot water heaters are met by burning only natural gas as fuel. Compliance with VOC limitations is demonstrated by the 3.5-pounds per gallon maximum VOC content for coatings used at the facility.

Emission Unit 301 Solid Waste Landfill

The U.S. Pipe landfill is subject to Rule 3 (Visible Emissions) and Rule 26.11 (RACT – Visible Emissions from Material Handling).

Observations from 2003 Plant Inspection

All emissions units were operating normally during the inspection, which was conducted on November 11, 2003. Specific observations follow.

Air Pollution Control Equipment Operation and Monitoring

All air pollution control devices appeared to be in good condition and were operating normally. The maintenance procedures and the maintenance log required by Condition 2.0, "Conditions Applicable to the Entire Facility," were reviewed and were in order. Based on log entries, regular maintenance appears to have been conducted on the equipment.

Condition 11.0, Emission Unit 102, requires the cupola afterburner be operated above 1,100°F. In addition, the temperature must be continuously monitored to demonstrate compliance with this requirement. During the inspection, the afterburner was operating at 1,700°F. The temperature log was reviewed, and records have been adequately maintained.

Condition 7.2, "Conditions Applicable to the Entire Facility," requires daily monitoring and logging of the baghouse operating pressures. If a baghouse is observed operating outside the specified range, U.S. Pipe must investigate the cause and take corrective action. In addition, the company is required to record and report the occurrence in accordance with Condition 12.2 of the "Conditions of General Applicability." The log of daily operating pressure readings was reviewed and found complete for the reporting period. Condition 7.2.2 provides a list of operating pressure range limitations for baghouses. During the inspection, the baghouses were observed to be operating at the differential pressures listed below.

ID No.	Baghouse Equipment Description	Allowable Range (inches of water)	Observed Range (inches of water)
CD002	Cupola	2-12	11
CD003	Ductile Treating & No.9 Shakeout	1-9	5
CD005	Large Casting Rotoblast	1-9	8.1
CD006	No.9 Unit Secondary Shakeout	1-8	2
CD007	No. 9 Casting Automatic Cleaner	1-9	3.2
CD008	Monorail & 8' Tableblast	1-9	1.2
CD047	No.9 Casting Cooling Conveyor	1-9	6
CD048	FBE Rotoblast Barrels	1-9	3
CDV10	Airblast Baghouse	1-8	1.5

Condition 4.5, Emission Unit 123, requires that the operating pH for the acid scrubbers be maintained at or below five as measured at the scrubber drain. During the inspection, the scrubber gauges indicated scrubbers were operating at 0.55, 0.36, and 1.16. The pH is logged continuously. The logs were reviewed and found in order.

Based on inspection observations, U.S. Pipe complied with all permit requirements for air pollution control equipment operation and monitoring during the previous twelve months.

Visible Emissions

Condition 6.0, "Conditions Applicable to Entire Facility," limits the opacity of emissions from buildings to five percent for an aggregate of five minutes in a one-hour period. During the inspection, no visible emissions were observed from the roof vents.

Condition 7.0, "Condition Applicable to Entire Facility," provides opacity limits for visible emissions from stacks. The condition also provides the opacity performance level above which action will be taken if visible emissions are observed. No visible emissions from stacks were observed during the inspection.

During the inspection, some visible emissions from vehicle traffic and from material handling were observed. However, the emissions were within the opacity limits provided in Conditions 2.0 and 3.0, Emission Unit 101, and Conditions 1.0 and 2.0, Emission Unit 301 of the permit.

Condition 7.0 also requires daily observations of specific emission points. The required logs were reviewed. According to the information contained in the logs, visible emissions were observed above the action levels on four days during the previous twelve months. In their Part 70 semi-annual compliance report, U. S. Pipe reported they had failed to conduct a formal Method 9 visible emissions reading on these four occasions. Formal Method 9 readings are required by Condition 7.0 if the actions levels are exceeded. In each case, the emissions exceeded the action thresholds for less than three minutes but did not exceed the allowable visible emissions limitation at any time. There were no recorded violations of allowable visible emissions opacity limitations.

Based on inspection observations, U.S. Pipe complied with all permit requirements for visible emissions during the previous twelve months except that on four occasions, formal Method 9 readings were not conducted when opacity action levels were exceeded. During the four incidents, the allowable mass emissions limitations were not exceeded.

Miscellaneous Usage & Recordkeeping Requirements

Condition 13.5, "Conditions of General Applicability," requires that all occurrences of emissions in excess of any applicable requirement in the Part 70 permit be logged. The log was reviewed and found to be complete.

Condition 1.0, "Conditions Applicable to Entire Facility," of U.S. Pipe's Part 70 permit provides a list of data to be included in the semiannual monitoring reports. All required data was included in the reports submitted during the previous twelve months.

Condition 1.0 and 4.0, "Conditions Applicable to Entire Facility," require U.S. Pipe to maintain specific usage and VOC content records. All reports were reviewed and found in order.

Condition 5.0, "Conditions Applicable to Entire Facility," limits the sulfur content in the coke to 0.7 percent. According to company records, the sulfur content in the coke has not exceeded 0.7 percent during the reporting period.

Fuel burning emissions are limited in Emission Units 102, 106, 115, 116, 121, 125, 127, and 208 by limiting the fuel burned in these processes to natural gas. According to the company contact, natural gas was the only fuel used in these processes during the reporting period.

During the most recent significant modification to U.S. Pipe's Part 70 permit (July 2003), the company requested a limit of 20,166 tons of iron poured on Unit No. 10 line to avoid the netting process of Rule 18 (PSD). The limitation was included in Condition 3.0, Emission Unit 118 and Condition 2.0, Emission Unit 119. Based on company records, 2,285 tons of iron has been poured since the significant permit modification was issued.

Prior to the most recent significant modification to U.S. Pipe's Part 70 permit (July 2003), Condition 1.7, Emission Unit 119, limited the No. 10 Unit Sand Reclamation equipment to 4,000 hours of operation per year. In April 2003, the company submitted a request to remove the hours of operation restriction from the permit. The request was processed along with a number of other changes to the permit. In the time between the initial request in April and the issuance of the modified permit in July, the company exceeded the allowable hours of operation. The company reported the excess hours in a letter dated June 13, 2003. Actual emissions were from the excess hours were insignificant. Condition 1.3, Emission Unit 120, limits the No. 9 Unit Greensand Mold System to 4,000 hours per year. According to the company report, this system operated 1,857 hours during the past twelve months.

Condition 4.0, Emission Unit 123, limits isocure core resin usage to 750,000 pounds per year and triethylamine usage to 45,000 pounds per year. According to the company records, Approximately 288,033pounds of resin and 18,850 pounds of triethylamine were used during the previous twelve months. The weighted average of volatile organic compounds in the resins is limited to 30.5% by weight in the un-reacted resins. The weighted average content of the volatile organic compounds was 28.3% for the previous twelve months.

Conditions in Emission Units 115, 116, 206, and 208 require daily visual inspections of filters on all paint booths. The results of the inspections are to be logged. During the inspection, the filter logs were reviewed and found in order.

Based on inspection observations, U.S. Pipe complied with all usage, recordkeeping and reporting requirements during the previous twelve months. While the company did exceed the operating hours limitation specified in Emission Unit 119, they had requested a permit modification prior to the exceedance and were awaiting approval by the Bureau. U.S. Pipe notified the Bureau of the exceedance as required in the permit. The mass rate emissions limit was not exceeded during this incident.

Summary of 2003 Plant Inspection Observations

Based on the observations made during the inspection, U.S. Pipe and Foundry complied with the conditions of Part 70 Permit No. 47-065-3321 during the previous twelve months except that on four occasions, the company did not perform a formal Method 9 emissions reading when an opacity action level was exceeded ("Conditions Applicable to Entire Facility," Condition 7.1). During these incidents, the allowable opacity limitation was not exceeded only the opacity level at which certain actions must be taken. While the formal Method 9 readings were not conducted, other actions were taken and documented which insured that the allowable opacity limitations were not exceeded. The company also exceeded the allowable hours of operation for the No. 10

Unit Sand Reclamation Equipment (Emission Unit 119, Condition 1.7). The additional hours of operation did not result in an exceedance of the allowable mass emissions rate stated in the permit. The exceedance of operating hours occurred after the company had requested that the permit be modified to drop the operating hours limit. The company requested the modification April 16, 2003 and notified the Bureau of the exceedance on June 13, 2003. The modified permit was issued on July 18, 2003. No further action was recommended for these compliance exceptions.

Compliance Status

Annual plant inspection observations, semi-annual monitoring reports, and annual compliance certifications demonstrate that United States Pipe and Foundry Company, Inc. is operating in compliance with applicable requirements of the Chattanooga Air Pollution Control Ordinance and with the requirements of Part 70 Permit 47-065-3321 which shall expire on April 8, 2004.

DAILY STATISTICS

MO. April YR. 2005

	NO. 9					NO. 10				
Date	OPER. TIME	DOWN TIME	FLSKS SOZD	FLSKS PRD	LADLES	OPER. TIME	DOWN TIME	FLSKS SOZD	FLSKS PRD	SHAKE OUT
04/01/05	6.00		240	202		16	79	27	27	28
TOTAL	6:00					16:00				
04/04/05	6.50		186	149		16	133	15	15	36
04/05/05	7.50		394	349		16	302	32	32	31
04/06/05	7.50		393	332		16	74	18	18	25
04/07/05	7.50		415	341		13.5	54	16	16	31
04/08/05	7.50		377	319		15	179	30	27	28
04/09/05 - SAT.	0.00	0	0	0	0	0	0	0	0	0
TOTAL	36:50					76.5				
04/11/05	6.00	123	313	295	39	16	112	29.5	21	31
04/12/05	6.50		331	293		16	187	31	39	27
04/13/05	7.00		363	319		16	111	33	26	35
04/14/05	6.50		415	381		16	120	32	33	31
04/15/05	4.00		207	173		14	163	31.5	33	32
04/16/05	0.00		0	0		0	0	0	0	0
TOTAL	30:00					78				
04/18/05	7.00		334	302		13	55	30.5	34	32
04/19/05	7.00		344	314		16	150	32	14	234
04/20/05	6.50		403	363		16	136	32.5	32	33
04/21/05	7.00		353	299		16	144	31	28	40
04/22/05	0.00		0	0		15	186	25	31	24
04/23/05	0.00		0	0		0	0	0	0	0
TOTAL	27:50					76				
04/25/05	5.5		301	273		16	155	31.5	22	29
04/26/05	6.8		402	382		16	153	30	33	34
04/27/05	5.5		345	330		16	110	33.5	19	30
04/28/05	3.5		198	192		16	202	27.5	29	28
04/29/05	0.0		0	0		13	122	25	21	24
04/30/05	0.0		0	0		0	0	0	0	0
WEEKLY TOTAL	21:25					77				

Daily Statistics
April 2005
sjp

TOTALS	1213					324					

Daily Statistics
April 2005
sjp

PRODUCTION HOURS 2005

#9	121.0
#10	324

UICVPLMF VALVE AND HYDRANT MANUFACTURE - IRON AND BRASS WEIGHTS PAGE 1

DATE	IRON LBS.	BRASS LBS.	TOTAL LBS		
20000327	146,131.50	8,378.20	154,509.700		
20000328	96,669.50	5,383.50	102,053.000		
20000329	114,376.30	5,487.80	119,864.100		
20000330	122,049.40	6,957.55	129,006.950		
20000331	98,147.50	5,831.70	103,979.200		
20000401					
20000403	130,125.50	7,620.40	137,745.900		
20000404	93,767.80	5,666.90	99,434.700		
20000405	103,514.40	5,940.00	109,454.400		
20000406	104,798.60	6,835.50	111,634.100		
20000407	88,235.00	5,346.70	93,581.700		
20000408					
20000410	148,192.60	9,305.70	157,498.300		
20000411	122,290.60	6,986.10	129,276.700		
20000412	115,898.40	6,819.60	122,718.000		
20000413	113,672.50	6,018.50	119,691.000		
20000414	120,514.20	6,318.25	126,832.450		
20000415					
20000417	166,109.80	9,752.05	175,861.850		
20000418	100,703.00	5,370.40	106,073.400		
20000419	99,903.50	6,094.40	105,997.900		
20000420	95,917.40	5,967.10	101,884.500		
20000424	92,505.80	5,513.90	98,019.700		
20000425	105,743.40	6,001.10	111,744.500		
TOTALS==>	2,379,266.70 **	137,595.35 **	2,516,862.050 **	1,258.431	<---- TOTAL TONS
	1189.6	68.8			

MWPS004573

	BRASS TYPE B62-85-5-5-5				OTHER THAN BRASS TYPE B62-85-5-5-5			
DATE	CAST PIECES	CAST WEIGHT	CLEAN PIECES	CLEAN WEIGHT	CAST PIECES	CAST WEIGHT	CLEAN PIECES	CLEAN WEIGHT
20000426	1,200	1,320.000	697	1,142.700	512	3,008.400	370	1,474.400
20000427			224	246.400	1,176	7,660.800	558	4,128.700
20000428			637	3,567.200	1,256	7,377.200	536	3,869.600
20000429								
20000501	1,609	4,295.240			72	768.000	891	8,488.700
20000502	1,026	4,261.800	1,403	4,225.300	68	816.000		
20000503	1,072	5,587.880	387	1,331.200	65	1,575.000	189	2,074.000
20000504	20	330.000	737	3,883.990	560	1,960.000	301	1,363.500
20000505	84	394.800	207	1,054.500	1,164	7,784.800	260	910.000
20000506								
20000508	84	630.800	20	330.000	1,160	7,236.000	1,466	9,019.700
20000509	1,772	6,423.800	629	1,841.900			465	3,340.300
20000510	356	1,193.200	412	1,821.200	1,094	5,262.000	33	732.600
20000511					624	3,128.000	935	4,026.000
20000512	937	5,850.200	910	3,863.100	60	720.000	412	1,952.000
20000513								
20000515	1,023	5,266.380	654	3,382.050			64	1,318.000
20000516	418	1,212.200	502	2,577.710	1,129	5,668.000	425	2,500.000
20000517	1,650	3,840.000	236	1,321.600	32	710.400	646	4,632.000
20000518	2,390	6,633.480	1,354	3,291.000	29	766.600		
20000519	37	207.200	1,357	3,305.740	1,214	8,733.000	611	5,416.500
20000520								
20000522	638	3,551.000	549	2,667.900	560	1,960.000	872	5,550.500
20000523	1,465	3,205.300	500	300.000	572	2,574.000	428	1,613.000
20000524	185	1,645.000	467	1,551.500	1,193	6,469.600	462	3,069.400

MWPS004574

UICVPLBR BRASS FOUNDRY PRODUCTION RECAP - PIECES AND WEIGHTS PAGE 2

	BRASS TYPE B62 85-5-5-5				OTHER THAN BRASS TYPE B62 85-5-5-5			
DATE	CAST PIECES	CAST WEIGHT	CLEAN PIECES	CLEAN WEIGHT	CAST PIECES	CAST WEIGHT	CLEAN PIECES	CLEAN WEIGHT
20000525	1,078	5,683.060	242	1,491.750	80	960.000	776	4,165.500
20000526	700	4,819.200	662	3,754.110	84	1,008.000	51	612.000
20000527	175	738.200	863	4,333.400	460	1,610.000	157	549.500
20000530					1,053	5,954.000	459	2,112.500
20000531	1,580	3,398.600	456	2,018.000	101	1,732.000	737	4,801.000
		85 441.8						
TOTAL==>	19,499 *	70,487.340	*14,105 *	53,302.250 *	14,318 *	85,441.800	*12,104 *	77,719.400 *

TOTAL CLEANED PIECES 26,209 TOTAL CLEANED POUNDS 131,021.650 TOTAL CLEANED TONS 65.510

155929.140 $\boxed{779}$

MWPS004575

UICVPLMF VALVE AND HYDRANT MANUFACTURE - IRON AND BRASS WEIGHTS

DATE	IRON LBS.	BRASS LBS.	TOTAL LBS
20000426	95,015.50	6,081.65	101,097.150
20000427	104,083.10	6,367.05	110,450.150
20000428	107,605.80	6,493.90	114,099.700
20000429			
20000501	161,638.00	9,582.95	171,220.950
20000502	110,749.70	6,927.80	117,677.500
20000503	96,407.90	6,063.90	102,471.800
20000504	102,958.30	6,087.80	109,046.100
20000505	104,298.80	5,891.60	110,190.400
20000506			
20000508	140,928.10	7,224.40	148,152.500
20000509	125,000.90	6,472.00	131,472.900
20000510	99,339.10	5,678.10	105,017.200
20000511	108,969.00	5,865.25	114,834.250
20000512	121,146.90	6,440.40	127,587.300
20000513			
20000515	162,093.40	7,960.10	170,053.500
20000516	118,580.80	6,016.90	124,597.700
20000517	109,989.10	5,755.40	115,744.500
20000518	108,085.90	5,932.10	114,018.000
20000519	93,718.40	5,587.60	99,306.000
20000520			
20000522	148,281.60	7,934.90	156,216.500
20000523	102,771.10	5,940.35	108,711.450
20000524	95,274.90	5,485.00	100,759.900
20000525	125,937.40	5,794.40	131,731.800
20000526	85,036.70	5,184.95	90,221.650

MWPS004576

DATE	IRON LBS.	BRASS LBS.	TOTAL LBS	
20000527	66,996.50	4,161.70	71,158.200	
20000530	85,313.90	5,309.80	90,623.700	
20000531	110,244.80	5,895.00	116,139.800	
TOTALS==>	2,890,465.60 **	162,135.00 **	3,052,600.600 **	1,526.300 <---- TOTAL TONS

MWPS004577

BRASS FOUNDRY PRODUCTION DAILY ACTIVITY REPORT

August 2000

Date	HUNTER Cycle (Min)	HUNTER Molds	HUNTER Lbs Cast	HUNTER Scrap %	HUNTER Downtime & Reason	SPO Molds	SPO Lbs Cast	SPO Scrap %	Floor Molds	Floor Lbs Cast	Floor Scrap %	Total Molds	Total Cast
1		191	4,368			67	500	2%	10	800	4%	268	5668
2	0.550	185	3,300		Furnace Cooling fan belt broke (no stock) 3hrs	54	648	3%	2	400		241	4348
3	0.583	238	5,000		Metal waiting on furnace	60	700	2%	12	500	2	310	6200
4	0.667	206	1,700		Metal waiting on furnace	60	600	2%	15	300	1	281	2600
5	0.750	205	5,000		Metal waiting on furnace	60	1500	2%	6	600	2	271	7100
6													
7	0.667	243	5,832		Metal waiting on furnace				7	700	1	250	6532
8	0.750	190	3,200		Replace valve on Hunter & 1 furnace down	120	2900	2%	10	700	2	320	6800
9	0.750	200	3,600		1 furnace down waiting on electrician	60	700	2%	8	800	1	268	5100
10	0.750	200	3,600		Metal waiting on furnace	60	700	2%	8	800	1	268	5100
11	0.750	200	4,600		Metal & Electrictrian	60	740	2%				260	5340
12	0.750	210	4,000		Metal waiting on furnace	74	1950	2%				284	5950
13													
14	0.750	219	3,500		Metal waiting on furnace	83	1200	2%	7	1000	2	309	5700
15	0.750	220	3,000		Metal waiting on furnace	100	1600	2%	10	1500	2	330	6100
16	0.750	268	7,000		Metal waiting on furnace	100	1000	2%	8	1000	2	7108	9000
17	0.750	270	4,000		Metal waiting on furnace	35	500	1%	7	700	2	4042	5200
18													
19													
20													
21													
22	0.750	187	6,000		Metal waiting on furnace	100	1000	2%	8	1000	2	6108	8000
23	0.750	175	4,200		Metal & Muller(elec)	91	1500	3%				4291	5700
24	0.750	115	3,500		Metal waiting on furnace	100	1000	2%	12	900	2	3612	5400
25													
26	0.750	160	3,000		Metal waiting on furnace	80	700	2%				3080	3700
27													
28	0.750	278	2,500		Metal waiting on furnace	86	2000	2%	2	500		2588	5000
29	0.750	259	3,000		Metal waiting on furnace	100	900	2%	4	300	1	3104	4200
30	0.750	215	4,900		Metal waiting on furnace	90	1000	2%	14	1400	2	5004	7300
31	0.750	200	3,000		Metal waiting on furnace	100	1500	2%	6	1200	2	3106	5700
	MTD Totals	4,834	91,800			1,740	24,838		156	15,100			131,738

MWPS004578

BRASS FOUNDRY PRODUCTION DAILY ACTIVITY REPORT

Month Sep-00

Date	HUNTER Cycle (Min)	Lbs Cast	Downtime & Reason	Molds Prod.	SPO Molds	Lbs Cast	FLOOR Molds	Lbs Cast
9/1	45 sec	1,800	Maint./Brass	110	100	1000		
5								
9/6	45 sec	5,760	Maint./Brass	320	100	1200	2	400
7								
8								
9/11	40 sec	3,000	Brass	270	84	900	11	1,500
12								
13								
14								
15								
16								
18								
19								
20								
21								
22								
23								
25								
8/26	45 sec.	3,000	Brass	160	80	700	2	
8/28	45 sec.	2,500	Brass	278	86	2000	2	500
8/29	45 Sec.	3,000	Brass	259	100	900	4	300
8/30	45 sec.	4,900	Maint./Brass	215	90	1000	14	1400
8/31	45 sec.	3,000	Maint./Brass	200	100	1500	6	1200
	MTD CAST		Total Molds					
	AVG/DAY		Average Day					
	MTD PACE							
		26,960				9200		5300

41,460

MWPS004579

126 #/mold

.063 tons/mold

BRASS FOUNDRY PRODUCTION DAILY ACTIVITY REPORT

Month Oct-00

Date	HUNTER Cycle (Min)	HUNTER Lbs Cast	HUNTER Downtime & Reason	HUNTER Molds Prod.	SPO Molds	SPO Lbs Cast	FLOOR Molds	FLOOR Lbs Cast
9/26	45 sec	4200	1-1/2 hrs. Main/electrcl	300	64	900	14	600
9/27	45 sec	2500	Brass 1 hr, 40 min	335	100	900	10	1500
9/28	45 sec	7100	2 hrs40 min, Maint/elec	280	70	1,000	14	1288
9/29	45 sec	8550		375	100	800	14	1400
9/30	45 sec	6680	1 hr brass	221	85	1,100		
10/2	45 sec	4480	55 min Maint.	280	125	2400		
10/3	45 sec	4200	Brass & Maint.	280	100	1400	25	800
10/4	45 sec	7600	Brass & Maint.	218	100	800		
10/5	45 sec	3000	Brass & Maint.	102	100	900	10	800
10/6	45 sec	1000	Maint.	76	100	500	17	700
10/7	45 sec	3500	Brass & Maint.	146	89	900	14	1100
10/9	45 sec	6624	Brass & Maint.	276	100	1400	14	1624
10/10	45 sec	6500	Brass & Maint.	292	100	1600	2	300
10/12	0.700	3890	Sand, Maint.	246	100	2093	16	1684
10/13	0.700	7302	Sand, Bottom Boards	482	114	2508		
10/16	45 sec	9471	Brass & Maint.	451	81	700	14	1568
	MTD CAST		Total Molds					
	AVG/DAY		Average Day					
	MTD PACE							

MWPS004580

Dennis Urbanczik

BRASS FOUNDRY
DAILY ACTIVITY REPORT

Date: Mar. 2001

			MELTING			MOLDING						CLEANING												
Date	Oper Day	Hours Worked	Heats	Total Melt (lbs)	lbs/kWh	Molds	Hunter Lbs.	Cycle (sec.)	Side Floor Molds	Side Floor Lbs.	Total Lbs.	Trans. (lbs)	Hunter Scrap (lbs)	Scrap %	Trans. (lbs)	Side floor Scrap (lbs)	Scrap %	Total (Lbs) Transferred	Total Scrap	Scrap %	Hunter Down T. Minutes	Casting Yield	Total Final Yield
1	1	8.5	25	12000	3.10	480	7700	28	62	1388	9088	6864	384	5%	1547	0	0%	8411	384	4%	30	75.73%	70.09%
2	2	10.5	19	8100	1.84	400	5497	28	0	0	5497	9307	186	3%	1088	0	0%	10395	186	3%	30	67.86%	128.33%
3																							
4																							
5	3	9.5	27	9000	2.02	421	2684	28	10	888	3572	2825	262	10%	0	0	0%	2825	262	7%	0	39.69%	31.39%
6	4	9.25	26	9250	2.13	450	6100	28	61	1736	7836	5176	210	3%	888	49	3%	6064	259	3%	0	84.71%	65.58%
7	5	9	20	8550	2.02	390	5312	29	26	1015	6327	1795	333	6%	1106	178	18%	2901	511	8%	0	74.00%	33.93%
8	6	6.75	30	16250	3.86	401	7616	28	44	1776	9392	4687	443	6%	1014	0	0%	5701	443	6%	10	57.80%	35.08%
9	7	9.25	20	11000	2.53	425	4602	28	59	781	5383	12100	0	0%	1198	121	15%	13298	121	2%		48.94%	120.69%
10																							
11																							
12	8	9	32	17500	4.14	400	774	28	34	83	857	1916	410	53%	569	0	0%	2485	410	47%	0	4.95%	14.20%
13	9	8.4	33	17600	4.51	400	18692	28	61	1683	21375	18713	384	2%	1248	0	0%	19961	384	2%	0	120.08%	112.14%
14	10	9	28	16000	3.78	400	8939	28	54	1071	10010	7232	512	6%	1272	11	1%	8504	523	5%	80	62.56%	53.15%
15	11	9.25	28	16000	3.58	400	8200	28	55	806	9006	4080	438	5%	181	0	0%	4261	438	5%	0	56.29%	26.63%
16	12	9	28	12000	2.84	400	4875	28	44	1054	5929	6882	477	10%	854	0	0%	7736	477	8%	0	49.41%	64.47%
17																							
18																							
19	13	9	22	12000	2.84	400	6565	28	19	703	7268	7772	80	1%	105	0	0%	7877	80	1%	0	60.57%	65.64%
20	14	7.5	19	10000	2.84	400	5016	28	34	1202	6218	5077	402	8%	555	0	0%	5632	402	6%	0	62.18%	56.32%
21	15	7.5	20	11000	3.12	406	4580	28	67	136	3742	7590	402	9%	638	0	0%	8228	402	11%	0	34.02%	74.80%
22	16	7.5	30	16000	4.54	400	10240	28	13	780	11020	3721	102	1%	720	0	0%	4441	102	1%	0	68.86%	27.76%
23	17	7.5	27	15560	4.40	400	6700	28	96	2031	8731	2563	335	5%	4488	1270	63%	7041	1605	18%	50	56.33%	45.43%
24																							
25																							
26	18	9	34	18250	4.85	405	10368	28	83	2195	12563	10506	495	5%	0	0	0%	10506	495	4%	25	68.84%	59.21%
27	19	8.5	33	17500	4.38	407	8554	28	10	1238	10192	8540	71	1%	3697	0	0%	12237	71	1%	75	58.24%	58.93%
28	20	8.5	28	15400	3.85	400	8935	28	10	902	9837	7596	335	4%	1756	0	0%	9352	335	3%	75	63.88%	60.73%
29	21	9.5	23	11750	2.63	400	8268	28	20	740	9008	8557	110	1%	1255	0	0%	9812	110	1%	0	76.66%	84.36%
30	22	8.5	25	13500	3.38	311	7961	28	12	1066	9027	6864	542	7%	333	0	0%	7197	542	6%	150	66.87%	53.31%
31																						#DIV/0!	#VALUE!
MTD		191	577	284350		5896	158576		845	22284	182862	150753	6893	0	24512	1629	7%	175265	8522	5%	525	62.12%	59.54%
AVERAGE		9	26	13380	3.3	404	7254	28	38	1058		6852	313	0	1114	74	0%	7967	387				

BRASS FOUNDRY
DAILY ACTIVITY REPORT **Date:** May-01

			MELTING			MOLDING						CLEANING											
Date	Oper Day	Hours Worked	Heats	Total Melt (lbs)	lbs/kWh	Molds	Hunter Lbs.	Cycle (sec.)	Side floor Molds	Side floor Lbs.	Total Lbs.	Trans. (lbs)	Hunter Scrap (lbs)	Scrap %	Trans. (lbs)	Side floor Scrap (lbs)	Scrap %	Total (Lbs) Transferred	Total Scrap	Scrap %	Hunter Down T. Minutes	Casting Yield	Total Final Yield
1	1	9.5	17	9500	2.13	400	4720	28	23	921	5641	4659	69	1%	1227	155	17%	5886	224	4%	25	59.38%	81.96%
2	2	8.4	12	7000	1.77	400	4720	28	0	0	4720	3537	450	10%	11	0		3548	450	10%	0	67.43%	50.69%
3	3	9	24	14000	3.31	400	6324	28	14	1243	7567	6932	507	8%	216	0	0%	7148	507	7%	40	54.05%	51.06%
4	4	9.5	24	13500	3.02	400	7103	29	15	1512	8615	3765	100	1%	2382	0	0%	6147	100	1%	0	63.81%	45.53%
5																							
6																							
7	5	9.5	35	19500	4.37	410	11972	28	16	1380	13352	7219	0	0%	2158	595	43%	9377	595	4%	0	68.47%	48.09%
8	6	9.5	25	13400	3.00	400	7460	28	41	2583	10043	9714	590	8%	1532	396	15%	11246	986	10%	0	74.95%	83.93%
9	7	9	23	11550	2.73	400	6938	28	99	964	7902	15218	1620	23%	481	0	0%	15699	1620	21%	0	68.42%	135.92%
10	8	8.5	29	16000	4.01	414	9108	28	48	1790	10898	5547	927	10%	0	0	0%	5547	927	9%	0	68.11%	34.67%
11	9	8.5	31	17500	4.38	425	9350	28	20	661	10011	7198	276	3%	1226	0	0%	8424	276	3%	0	57.21%	48.14%
12																							
13																							
14	10	8.5	23	12500	3.13	330	7280	28	0	0	7280	4154	100	1%	0	0	0%	4154	100	1%	85	58.08%	33.23%
15	11	8	28	9000	2.39	424	5003	28	2	472	5475	15165	121	2%	373	69	15%	15538	190	3%	0	60.83%	172.64%
16	12	8.4	17	9750	2.47	415	4897	29	9	1644	6541	1858	120	2%	697	0	0%	2555	120	2%	95	67.09%	26.21%
17	13	8	20	11500	3.06	400	7173	26	10	1032	8205	1144	350	5%	13153	0	0%	14297	350	4%	20	71.35%	124.32%
18	14	7.5	18	10000	2.84	403	6770	28	50	615	7385	7198	607	9%	0	0	0%	7198	607	8%	0	73.85%	71.98%
19																							
20																							
21	15	9	16	7850	1.86	400	0	28	8	6680	6680	4015	450		621	0	0%	4636	450	7%	90	85.10%	59.06%
22	16	9	21	12300	2.91	344	9990	28	8	918	10908	-349	758	8%	236	88	10%	-113	844	8%	90	88.08%	-0.92%
23	17	9	19	11000	2.60	348	5792	28	24	1863	7655	2607	154	3%	-389	100	5%	2218	254	3%	0	69.59%	20.16%
24	18	9	24	14000	3.31	364	9167	29	45	860	10027	6148	745	8%	1290	0	0%	7438	745	7%	115	71.62%	53.13%
25	19	8.5	11	6500	1.63	173	3808	28	37	600	4408	5289	1488	39%	319	0	0%	5608	1488	34%	300	67.78%	86.28%
26																							
27																							
28																							
29	20	8	24	13500	3.59	407	8954	28	37	600	9554	5947	0	0%	1661	37	6%	7608	37	0%	0	70.77%	56.36%
30	21	8.4	27	13500	3.42	400	8800	28	34	648	9448	5097	70	1%	3654	0	0%	8751	70	1%	55	69.99%	64.82%
31	22	7.5	30	16500	4.68	403	10316	28	39	602	10918	10584	132	1%	1182	0	0%	11766	132	1%	0	68.17%	71.31%
MTD		190	498	269850		8450	155823		577	27588	183211	132846	9830	0	32030	1440	5%	164876	11070	6%	915	67.89%	61.03%
AVERAGE		9	23	12288	3.0	385	7074	28	26	1254		6029	438	0	1456	65		7485	503		1805	0.00%	61.03%

MWPS004582

BRASS FOUNDRY
DAILY ACTIVITY REPORT

Date: Jun-01

			MELTING			MOLDING						CLEANING											
Date	Oper Day	Hours Worked	Heats	Total Melt (lbs)	lbs/kWh	Molds	Hunter Lbs.	Cycle (sec.)	Side floor Molds	Lbs.	Total Lbs.	Trans. (lbs)	Hunter Scrap (lbs)	Scrap %	Trans. (lbs)	Side floor Scrap (lbs)	Scrap %	Total (Lbs) Transferred	Total Scrap	Scrap %	Hunter Down T. Minutes	Casting Yield	Total Final Yield
6/1/01	1	8	17	9550	2.54	400	2800	28	39	602	3402	8504	349	12%	594	0	0%	9098	349	10%	0	35.62%	95.27%
2																							
3																							
4	2	8.5	17	10250	2.57	400	5255	28	0	111	5366	13801	300	6%	111	0	0%	13912	300	6%	0	52.35%	135.73%
5	3	9	28	15000	3.55	376	10526	28	10	740	11266	3290	310	3%	0	0	0%	3290	310	3%	0	75.11%	21.93%
6	4	8	20	11000	2.93	400	6720	28	44	541	7261	3762	120	2%	0	0	0%	3762	120	2%	0	66.01%	34.20%
7	5	9	18	10000	2.36	331	6875	28	11	90	6774	10716	668	10%	0	0	0%	10716	668	10%	80	67.74%	107.16%
8	6	6.75	18	10000	2.43	386	8607	28	11	269	9076	12078	170	2%	5	0	0%	12083	170	2%	15	90.76%	120.83%
9																							
10																							
11	7	8.75	24	13500	3.26	405	7942	29	9	928	8870	6166	0	0%	740	0	0%	6906	0		0	85.70%	51.16%
12	8	8	14	8400	2.23	400	4720	29	7	722	5442	3420	421	9%	451	82	11%	3871	503	9%	0	64.70%	49.08%
13	9	7.1	16	6000	2.40	404	9852	28	8	704	10556	6902	160	2%	651	0	0%	7553	160	2%	0	131.95%	94.41%
14	10	7	22	13000	3.95	293	14608	28	8	896	15504	10330	0	0%	1173	382	43%	11503	382	2%	50	119.28%	88.48%
15	11	8.5	22	12500	3.13	390	6035	29	2	860	6895	5878	0	0%	2551	252	29%	8429	252	4%	0	55.16%	67.43%
16																							
17																							
18	12	7	19	10500	3.19	291	5936	29	0	1063	6999	4423	210	4%	-117		0%	4306	210	3%	0	66.66%	41.01%
19	13	7.5	19	10500	2.98	301	6983	29	2	632	7615	6146	175	3%	362	0	0%	6508	175	2%	0	72.52%	61.95%
20	14	7.5	17	9500	2.70	289	4734	28	7	590	5324	4909	130	3%	-376	0	0%	4533	130	2%	0	56.04%	47.72%
21	15	8	22	12000	3.19	373	6616	29	2	290	7106	6712	329	5%	590	0	0%	7302	329	5%	0	59.23%	60.85%
22	16	7.4	18	10000	2.86	275	7570	29	0	280	7850	2456	350	5%	570	0	0%	3026	350	4%	0	78.50%	30.26%
23																							
24																							
25	17	7.5	24	13000	3.69	353	9037	29	44	454	9491	2888	0	0%	-1628	0	0%	1240	0		0	73.01%	9.54%
26	18	7	12	5600	1.70	300	3418	29	35	380	3798	3204	425	12%	1338	0	0%	4542	425	11%	55	67.82%	81.11%
27	19	7.5	24	12000	3.40	341	8016	29	18	1186	9202	15388	105	1%	736	0	0%	16124	105	1%	0	76.68%	134.37%
28	20	7.5	27	15000	4.28	389	14877	29	36	1382	16259	392	120	1%	1650	0	0%	2042	120	1%	0	108.39%	13.61%
29	21	7.5	28	15500	4.40	389	8558	29	18	814	9372	12799	80	1%	0	0	0%	12799	80	1%	0	60.46%	82.57%
30																							
31																							
MTD		185	426	234800		7448	159887		311	13543	173430	144144	4422	0	9401	718	5%	153545	5138	3%	200	73.80%	85.39%
AVERAGE		8	20	11181	3.0	355	7614	29	15	645		6864	211	0	448	36		7312	245		400	0.00%	85.39%

MWPS004583

BRASS FOUNDRY
DAILY ACTIVITY REPORT **Date:** Jul-01

			MELTING			MOLDING						CLEANING											
Date	Oper Day	Hours Worked	Heats	Total Melt (lbs)	lbs/kWh	Molds	Hunter Lbs.	Cycle (sec.)	Side floor Molds	Lbs.	Total Lbs.	Trans. (lbs)	Hunter Scrap (lbs)	Scrap %	Trans. (lbs)	Side floor Scrap (lbs)	Scrap %	Total (Lbs) Transferred	Total Scrap	Scrap %	Hunter Down T. Minutes	Casting Yield	Total Final Yield
1																							
2	1	6	17	9500	2.53	385	7848	28	0	0	7848	9700	87	1%	720	0		10420	87	1%	0	82.61%	109.68%
3	2	5	10	6000	2.55	155	2578	28	18	940	3518	7462	80	3%	0	0	0%	7462	80	2%	180	58.63%	124.37%
4																							
5	3	7	20	11000	3.34	314	6908	29	5	444	7352	4724	322	5%	0	0	0%	4724	322	4%	53	66.84%	42.95%
6	4	8	22	12000	3.19	301	6885	29	0	0	6885	6115	292	4%	0	0		6115	292	4%	0	57.38%	50.96%
7																							
8																							
9	5	7	16	9500	2.69	253	5566	29	1	236	5802	3919	165	3%	609	143	61%	4528	308	5%	130	61.07%	47.66%
10	6	7	13	5750	1.75	300	5040	29	0	456	5496	1435	369	7%	723	0	0%	2158	369	7%	60	95.58%	37.53%
11	7	7.15	15	7500	2.23	357	5997	29	0	440	6437	10437	288	5%	-117	0	0%	10320	288	4%	0	85.63%	137.60%
12	8	7.45	13	8000	2.28	305	4025	29	10	1060	5085	7637	451	11%	0	0	0%	7637	451	9%	0	63.58%	95.46%
13	9	7.45	14	8500	2.43	300	3090	29	8	1000	4090	2708	50	2%	8012	100	10%	10720	150	4%	0	48.12%	128.12%
14																							
15																							
16	10	7.5	25	13500	3.83	335	4960	29	12	1352	6312	3108	636	13%	3461	0	0%	6569	636	10%	0	40.76%	48.66%
17	11	7.5	15	5900	1.67	386	4554	29	39	545	5099	5835	165	4%	689	77	14%	6524	242	5%	0	86.42%	110.58%
18	12	7.45	15	5900	1.68	364	4295	29	41	412	4707	5065	407	9%	1513	443	108%	6578	850	18%	0	79.78%	111.49%
19	13	7.22	17	9500	2.80	250	6700	29	0	0	6700	1679	175	3%	-190	0		1489	175	3%	87	70.53%	15.67%
20	14	7.4	18	4500	1.29	280	2298	29	0	0	2298	3097	350	15%	5	0		3102	350	15%	25	51.02%	88.93%
21																							
22																							
23	15	8	21	12000	3.10	288	7366	29	15	858	8224	2413	155	2%	0		0%	2413	155	2%	115	68.53%	20.11%
24	16	7.18	22	11000	3.26	310	8538	29	13	1282	9818	3327	198	2%	629	74	6%	3956	270	3%	45	89.26%	35.96%
25	17	7.22	22	11000	3.24	277	5757	29	14	1583	7340	12277	900	16%	0	0	0%	12277	900	12%	30	66.73%	111.61%
26	18	8	17	6150	1.64	334	5407	29	38	770	6177	3781	0	0%	2008	350	45%	5787	350	6%	30	100.44%	94.10%
27	19	7.45	12	7000	2.00	255	3693	29	37	821	4514	292	178	5%	1028	309	38%	1320	485	11%	50	64.48%	18.86%
28																							
29																							
30	20	7.5	16	9000	2.55	362	6081	29	45	870	6951	4346	0	0%	571	275	32%	4917	275	4%	0	77.23%	54.83%
31	21	7.5	13	8000	2.27	289	3410	29	70	1737	5147	6786	260	8%	242	0	0%	7028	260	5%	80	64.34%	87.85%
MTD		154	353	181200		6400	110992		366	14806	125798	108143	5524	0	19901	1771	12%	126044	7295	6%	665	69.42%	69.56%
AVERAGE		7	17	8629	2.5	305	5285	29	17	705		5054	263	0	948	89		6002	347		1730	0.00%	69.56%

MWPS004584

BRASS FOUNDRY
DAILY ACTIVITY REPORT **Date:** Aug-01

			MELTING			MOLDING						CLEANING											
Date	Oper Day	Hours Worked	Heats	Total Melt (lbs)	lbs/kWh	Molds	Hunter Lbs.	Cycle (sec.)	Side floor Molds	Lbs.	Total Lbs.	Trans. (lbs)	Hunter Scrap (lbs)	Scrap %	Trans. (lbs)	Side floor Scrap (lbs)	Scrap %	Total (Lbs) Transferred	Total Scrap	Scrap %	Hunter Down T. Minutes	Casting Yield	Total Final Yield
1	1	7.5	15	8850	2.45	240	3552	29	39	1323	4875	417	375	11%	2242	0	0%	2659	375	8%	35	56.36%	30.74%
2	2	7.5	19	6500	1.84	395	4661	29	39	532	5193	1192	177	4%	461	133	25%	1653	310	8%	0		25.43%
3	3	7	16	6750	2.05	400	4720	29	12	720	5440	1607	150	3%	375	0	0%	1982	150	3%	30	80.59%	29.36%
4																							
5																							
6	4	7.5	23	12750	3.82	400	7036	29	51	1119	8155	6258	175	2%	0	0	0%	6258	175	2%	0	63.86%	40.08%
7	5	7.5	16	6500	1.84	284	3010	29	20	1262	4272	2974	81	3%	-1319	0	0%	1655	81	2%	40	65.72%	25.46%
8	6	7.5	23	13000	3.69	321	7062	29	21	1295	8357	2199	228	3%	1710	85	5%	3909	282	3%	25	84.28%	30.07%
9	7	7.5	23	12500	3.55	350	7700	29	9	592	8292	1600	330	4%	0	0	0%	1600	330	4%	0	68.34%	12.80%
10	8	7.5	15	9500	2.70	217	4774	29	17	1055	5829	300	242	5%	1835	0	0%	2135	242	4%	0	61.36%	22.47%
11																							
12																							
13	9	7.5	26	14500	4.11	354	7788	29	24	1329	9117	12439	1150	15%	1198	0	0%	13637	1150	13%	0	62.88%	94.05%
14	10	7.45	17	10000	2.86	336	4786	29	8	623	5409	5379	490	10%	1776	0	0%	7155	490	9%	0	54.08%	71.55%
15	11	7.5	20	10250	2.91	298	6679	29	50	1090	7969	10969	956	14%	2309	0	0%	13278	956	12%	0	77.75%	129.54%
16	12	7	14	8000	2.43	250	4773	29	30	315	5088	0	175		1913	0	0%	1913	175	3%	30	63.60%	23.91%
17	13	8	14	8000	2.13	363	4791	29	30	315	5106	3916	460	10%	0	0	0%	3916	460	9%	70	63.83%	48.95%
18																							
19																							
20	14	7.5	16	8000	2.27	241	7230	29	40	462	7692	2580	515	7%	0	0	0%	2580	515	7%	0	96.15%	32.00%
21	15	7.5	12	7000	1.99	285	5485	29	35	380	5865	1355	295	5%	278	0	0%	1633	295	5%	20	83.79%	23.33%
22	16	7.5	19	11000	3.12	336	6316	29	31	704	7020	8924	247	4%	713	0	0%	9637	247	4%	0	63.82%	87.61%
23	17	7.5	20	11500	3.26	295	6490	29	10	1002	7492	3427	75	1%	474	125	12%	3901	200	3%	0	65.15%	33.02%
24	18	7	20	11500	3.50	240	6144	29	11	1089	7233	3251	0	0%	1218	0	0%	4469	0	0%	0	62.90%	38.86%
25																							
26																							
27	19	7.5	15	9000	2.55	230	4761	29	11	956	5717	7292	0	0%	98	0	0%	7390	0	0%	25	63.52%	82.11%
28	20	8	0	0		0	0	0	0	0	0	8739	450		1010	0		9749	450	#DIV/0!	0	#DIV/0!	#DIV/0!
29	21	7.5	17	10000	2.84	306	6662	29	0	0	6662	10907	900	13%	738	0		11645	900	13%	10	68.62%	116.45%
30	22	8	17	10000	2.66	270	8965	29	10	770	9735	2115	341	4%	385	0	0%	2500	341	4%	0	97.35%	25.00%
31	23	7.5	19	10500	2.98	0	0	0	2	290	290	755	0		1342		0%	2097			0	2.76%	19.97%
MTD		172	398	215400		8391	123605		500	17223	140828	98575	7810	0	18756	324	2%	117331	8134	6%	285	65.38%	54.47%
AVERAGE		7	17	9365	2.6	278	5374	28	22	749		4286	340	0	815	15		5101	370		535	0.00%	54.47%

6850 Reported in September
124,181

MWPS004585

BRASS FOUNDRY
DAILY ACTIVITY REPORT **Date:** Sept. 01

			MELTING			MOLDING						CLEANING											
Date	Oper Day	Hours Worked	Heats	Total Melt (lbs)	lbs/kWh	Molds	Hunter Lbs.	Cycle (sec.)	Side floor Molds	Lbs.	Total Lbs.	Trans. (lbs)	Hunter Scrap (lbs)	Scrap %	Trans. (lbs)	Side floor Scrap (lbs)	Scrap %	Total (Lbs) Transferred	Total Scrap	Scrap %	Hunter Down T. Minutes	Casting Yield	Total Final Yield
1																							
2																							
3																							
4	1	7.5	22	12500	3.55	303	6666	29	11	830	7496	23573	797	12%	1290	0	0%	24863	797	11%	0	59.97%	198.90%
5	2	7.5	15	8900	2.52	261	4026	29	19	1130	5156	10375	803	20%	317	0	0%	10692	803	16%	0	57.93%	120.13%
6	3	7.1	15	9000	2.70	271	4284	29	18	965	5249	3204	650	15%	1160	0	0%	4364	650	12%	0	58.32%	48.49%
7	4	7.15	14	8500	2.53	260	4110	29	38	880	4990	5588	1013	25%	-21905	0	0%	-16317	1013	20%	75	58.71%	-191.96%
8																							
9																							
10	5	7.5	14	6650	1.89	229	3804	29	80	296	4100	7193	710	19%	1327	0	0%	8520	710	17%	0	61.65%	128.12%
11	6	7.5	17	9500	2.70	227	6668	29	40	419	7087	0	0	0%	7087	0	0%	7087	0		0	74.60%	74.60%
12	7	7.15	13	7400	2.20	202	3254	29	12	744	3998	2910	300	9%	648	0	0%	3558	300	8%	0	54.03%	48.08%
13	8	7.45	16	9000	2.57	313	5095	29	33	621	5716	900	500	10%	-870		0%	30	500	9%	0	63.51%	0.33%
14	9	7.15	17	8400	2.50	328	3870	28	22	1177	5047	4331	52	1%	752	98	8%	5083	150	3%	0	60.08%	60.51%
15																							
16																							
17	10	7.5	15	9000	2.55	336	5795	29	23	991	6786	2648	90	2%	0	0	0%	2648	90	1%	0	75.40%	29.42%
18	11	7.5	13	7500	2.13	310	3658	29	62	597	4255	0	0	0%	559	51	9%	559	51	1%	80	56.73%	7.45%
19	12	7.5	14	8000	2.27	340	4012	29	29	452	4464	6974	525	13%	1240	198	44%	8214	723	16%	50	55.80%	102.68%
20	13	7.5	21	11500	3.26	310	6820	29	12	1178	7998	-6232	348	5%	221	0	0%	-6011	348	4%	0	69.55%	-52.27%
21	14	7.5	21	11500	3.26	321	7062	29	2	290	7352	2680	500	7%	572	0	0%	3252	500	7%	0	63.93%	28.28%
22																							
23																							
24	15	7.5	17	9500	2.70	321	5136	29	31	196	5332	2959	570	11%	354	0	0%	3313	570	11%	50	56.13%	34.87%
25	16	7	14	8500	2.58	303	2475	29	10	1032	3507	2513	698	28%	579	0	0%	3092	698	20%	58	41.26%	36.38%
26	17	2	4	3000	3.19	100	700	29	46	1039	1739	4957	627	90%	358	35	3%	5315	662	38%	0	57.97%	177.17%
27	18	2	0	0	0.00	0	0	0	0	0	0	0	0		627	0		627			0		
28	19	6.15	13	8250	2.85	251	3668	29	59	1699	5367	3904	584	16%	-30	0	0%	3874	584	11%	0	65.05%	46.96%
29																							
30																							
31																							
MTD		128	275	156600		4986	81103		547	14536	95639	78477	8767	0	-5714	382	3%	72763	9149	10%	313	61.07%	46.46%
AVERAGE		7	14	8242	2.5	262	4269	27	29	765	5034	4130	461	0	-301	21		3830	508		626	61.07%	46.46%

-6850 August
65913 September

783
Total
from
poured

MWPS004586

BRASS FOUNDRY
DAILY ACTIVITY REPORT

Date: Oct-01

			MELTING			MOLDING						CLEANING												
Date	Oper Day	Hours Worked	Heats	Total Melt (lbs)	lbs/kWh	Molds	Hunter Lbs.	Cycle (sec.)	Side floor Molds	Lbs.	Total Lbs.	Trans. (lbs)	Hunter Scrap (lbs)	Scrap %	Trans. (lbs)	Side floor Scrap (lbs)	Scrap %	Total (Lbs) Transferred	Total Scrap	Scrap %	Hunter Down T. Minutes	Casting Yield	Total Final Yield
1	1	7.5	11	6750	1.91	250	1750	29	40	768	2518	5980	0	0%	0	0	0%	5980	0		35	37.30%	88.59%
2	2	7	17	10000	3.04	350	5075	29	40	930	6005	2712	797	16%	0		0%	2712	797	13%	0	60.05%	27.12%
3	3	7	17	10000	3.04	227	6810	29	36	804	7614	4599	333	5%	3157	294	37%	7756	627	8%	75	76.14%	77.56%
4	4	5	12	7750	3.30	225	2655	29	32	627	3282	6677	0	0%	0	0	0%	6677	0		180	42.35%	86.15%
5	5	7.1	19	11000	3.30	298	6079	29	40	759	6838	5248	0	0%	0	0	0%	5248	0		0	62.16%	47.71%
6																							
7																							
8	6	7.5	14	8000	2.27	308	4499	29	40	976	5475	3153	0	0%	6	0	0%	3159	0		25	68.44%	39.49%
9	7	7.5	17	6850	1.88	303	3694	29	37	783	4477	712	0	0%	4019	0	0%	4731		%	55	67.32%	71.14%
10	8	7.5	15	9000	2.55	259	4094	29	6	910	5004	812	0	0%	1898	0	0%	2710			85	56.60%	30.11%
11	9	7.5	15	8900	2.52	290	4584	29	30	696	5280	4828	465	10%	0	0	0%	4828	465	9%	30	59.33%	54.25%
12	10	7.5	15	8900	2.52	275	5610	29	12	895	6505	3535	669	12%	0	0	0%	3535	669	10%	60	73.09%	39.72%
13																							
14																							
15	11	7.25	23	12750	3.74	380	6080	29	14	831	6911	5870	0	0%	421	46	6%	6291	46	1%	0	54.20%	49.34%
16	12	7	24	13250	4.03	345	5520	29	35	816	6336	3127	1149	21%	596	0	0%	3723	1149	18%	30	47.82%	28.10%
17	13	7	14	8000	2.43	230	5022	29	41	1039	6061	5520	669	14%	1164	728	70%	6684	1417	23%	90	75.78%	83.55%
18	14	7.5	13	6250	1.77	285	3774	29	8	365	4139	8701	768	20%	0	0	0%	8701	768	19%	30	66.22%	139.22%
19	15	7	9	5500	1.67	220	1540	29	14	518	2058	610	0	0%	2591	122	24%	3201	122	6%	120	37.42%	58.20%
20																							
21																							
22	16	7.5	11	6750	1.91	250	1750	29	0	0	1750	724	0	0%	1343	0		2067			45	25.93%	30.62%
23	17	7.5	17	8600	2.44	362	4271	29	0	475	4746	1939	0	0%	0	0	0%	1939			0	55.19%	22.55%
24	18	7	20	11000	3.34	262	6078	29	14	434	6512	3106	174	3%	0	0	0%	3106	174	3%	0	59.20%	28.24%
25	19	0	2	1000		0	0		10	586	586	2219	83		1051	290	49%	3270	373	64%	0	58.60%	327.00%
26	20	0	2	1000		0	0		8	512	512	1881	111		2560	0	0%	4441	111	22%	0	51.20%	444.10%
27																							
28																							
29	21	6	9	5000	1.77	125	2742	29	16	808	3550	11015	12	0%	28	0	0%	11043	12	0%	120	71.00%	220.86%
30	22	6.5	19	10700	4.14	282	6949	29	10	482	7431	668	0	0%	1516	493	102%	2184	493	7%	15	69.45%	20.41%
31	23	0	2	1020		0	0		9	363	363	5514	18		0	0	0%	5514	18	5%		35.59%	540.59%
MTD		140	317	177770		5506	88576		492	15377	103953	89150	5258	0	20350	1973	13%	109500	7241	7%	995	58.48%	61.80%
AVERAGE		6	14	7729	2.7	239	3851	29	21	669	4520	3876	229	0	885	90		4761	351		1955	58.48%	61.80%

12

MWPS004587

BRASS FOUNDRY
DAILY ACTIVITY REPORT

Date: Nov-01

			MELTING			MOLDING						CLEANING											
Date	Oper Day	Hours Worked	Heats	Total Melt (lbs)	lbs/kWh	Molds	Hunter Lbs.	Cycle (sec.)	Side floor Molds	Side floor Lbs.	Total Lbs.	Trans. (lbs)	Hunter Scrap (lbs)	Scrap %	Trans. (lbs)	Side floor Scrap (lbs)	Scrap %	Total (Lbs) Transferred	Total Scrap	Scrap %	Hunter Down T. Minutes	Casting Yield	Total Final Yield
1																							
2																							
3																							
4																							
5	1	7.1	20	12000	3.60	275	5689	29	45	2658	8347	13045	2081	37%	3627	739	28%	16672	2820	34%	40	69.56%	138.93%
6	2	5	11	6750	2.87	169	4326	29	12	854	5180	5395	768	18%	318	0	0%	5713	768	15%	240	76.74%	84.64%
7	3	3	7	4650	3.30	115	1288	29	8	657	1945	5248	704	55%	1346	0	0%	6594	704	36%	465	41.83%	141.81%
8	4	2	5	3600	3.83	125	1475	29	11	830	2305	0	0	0%	1206	0	0%	1206	252		345	84.03%	33.50%
9	5	7.25	14	7700	2.26	364	4076	29	12	804	4880	1534	218	5%	1089	0	0%	2623	218		0	63.38%	34.06%
10																							
11																							
12	6	7.5	16	9500	2.70	294	4537	29	35	875	5412	3209	300	7%	730	280	32%	3939	580	11%	0	56.97%	41.46%
13	7	7	17	10000	3.04	320	6426	29	56	942	7368	5053	689	11%	0	0	0%	5053	689	9%	15	73.68%	50.53%
14	8	7.15	19	10750	3.20	368	7507	29	52	876	8383	3648	451	6%	0	0	0%	3648	451	5%	0	77.98%	33.93%
15	9	7	13	7900	2.40	205	4244	29	50	1288	5532	1542	139	3%	317	0	0%	1859	139	3%	185	70.03%	23.53%
16	10	7.5	18	7250	2.06	225	4657	29	63	417	5074	2186	129	3%	333	111	27%	2519	240	5%	80	69.99%	34.74%
17																							
18																							
19	11	7.1	10	6000	1.80	185	4008	29	52	464	4472	6037	1007	25%	0	0	0%	6037	1007	23%	135	74.53%	100.62%
20	12	7.5	15	8500	2.41	275	5933	29	30	138	6071	2743	216	4%	781	0	0%	3524	216	4%	0	71.42%	41.46%
21	13	7.5	15	8300	2.35	254	1778	29	14	1008	2786	4368	120	7%	575	0	0%	4943	120	4%	0	33.57%	59.55%
22																							
23																							
24																							
25																							
26	14	7.5	16	9000	2.55	276	3836	29	0	0	3836	1825	801	21%	221	0		2046	801	21%	0	42.62%	22.73%
27	15	7.15	15	9500	2.83	253	4756	29	13	1232	5988	2397	288	6%	0	0	0%	2397	288	5%	0	63.03%	25.23%
28	16	7.5	13	7750	2.20	255	4768	29	55	1211	5979	4785	71	1%	2341	200	17%	7126	271	5%	25	77.15%	91.95%
29	17	7.25	19	7250	2.13	285	2916	29	42	417	3333	7542	482	17%	0	0	0%	7542	482	14%	55	45.97%	104.03%
30	18	0.5	4	2000	8.51	10	72	29	48	1084	1156	1692	110	153%	908	0	0%	2600	110	10%	450	57.80%	130.00%
31																							
MTD		113	247	138400		4253	72292		598	15755	88047	72249	8574	0	13792	1330	8%	86041	9904	11%	2035	63.62%	62.17%
AVERAGE		6	14	7689	3.0	236	4016	29	33	875	4892	4014	476	0	766	74		4780	564		4070	63.62%	62.17%

123.88

68.2

MWPS004588

BRASS FOUNDRY
DAILY ACTIVITY REPORT

Date: Dec-01

			MELTING			MOLDING						CLEANING											
Date	Oper Day	Hours Worked	Heats	Total Melt (lbs)	lbs/kWh	Molds	Hunter Lbs.	Cycle (sec.)	Side floor Molds	Lbs.	Total Lbs.	Trans. (lbs)	Hunter Scrap (lbs)	Scrap %	Trans. (lbs)	Side floor Scrap (lbs)	Scrap %	Total (Lbs) Transferred	Total Scrap	Scrap %	Hunter Down T. Minutes	Casting Yield	Total Final Yield
1																							
2																							
3	1	7.15	17	10500	3.12	247	3702	29	19	836	4538	0	0	0%	1157	15	2%	1157	15	0%	10	43.22%	11.02%
4	2	7.25	18	10500	3.08	242	3514	29	21	1420	4934	800	380	11%	82	0	0%	882	380	8%	20	46.99%	8.40%
5	3	7.5	18	10500	2.98	330	4980	29	20	2312	7292	972	234	5%	1640	136	6%	2612	370	5%	0	69.45%	24.88%
6	4	7.25	17	8250	2.42	263	3231	29	69	1854	5085	1952	885	27%	1512	0	0%	3464	885	17%	20	61.64%	41.99%
7	5	0	7	3500		0	0	0	65	2272	2272	0	0		2552	0	0%	2552	0			64.91%	72.91%
8																							
9																							
10	6	7.2	21	6450	1.91	294	3469	29	55	2422	5891	18	0	0%	3135	55	2%	3153	55	1%	0	91.33%	48.88%
11	7	7.5	20	10500	2.98	260	4620	29	49	4519	9139	1350	0	0%	6388	270	6%	7738	270	3%	40	87.04%	73.70%
12	8	7	17	11500	3.50	182	4592	29	61	895	5487	4953	1207	26%	-424	0	0%	4529	1207	22%	0	47.71%	39.38%
13	9	0	9	3750		0	0	0	36	2049	2049	8161	550		1814	0	0%	9975	550	27%		54.64%	266.00%
14	10	0	0	0		0	0	0	0	424	424	0	0		2627	0	0%	2627	0			#DIV/0!	#DIV/0!
15																							
16																							
17	11	0	5	2500		0	0	0	66	1132	1132	0	0		2407	27	2%	2407	27	2%		45.28%	96.28%
18	12	0	5	3500		0	0	0	67	1981	1981	0	0		2830	225	11%	2830	225	11%		56.60%	80.86%
19	13	0	3	2250		0	0	0	47	994	994	0	0		2369	166	17%	2369	166	17%		44.18%	105.29%
20	14	0	3	1750		0	0	0	49	1074	1074	0	0 %		2594	16	1%	2594	16	1%		61.37%	148.23%
21	15	0	2	1750		0	0	0	41	852	852	0			1242	37	4%	1242	37	4%		48.69%	70.97%
22																							
23																							
24																							
25																							
26																							
27																							
28																							
29																							
30																							
31																							
MTD		51	162	87200		1818	28108		665	25036	53144	18206	3256	0	31925	947	4%	50131	4203	8%	90	60.94%	57.49%
AVERAGE		3	11	5813	2.9	121	1874	14	44	1669	3543	1214	233	0	2128	63		3342	280		180	60.94%	57.49%

43.6

125.9%

MWPS004589

BRASS FOUNDRY
DAILY ACTIVITY REPORT

Date: Jan-02

			MELTING			MOLDING						CLEANING											
Date	Oper Day	Hours Worked	Heats	Total Melt (lbs)	lbs/kWh	Molds	Hunter Lbs.	Cycle (sec.)	Side floor Molds	Side floor Lbs.	Total Lbs.	Trans. (lbs)	Hunter Scrap (lbs)	Scrap %	Trans. (lbs)	Side floor Scrap (lbs)	Scrap %	Total (Lbs) Transferred	Total Scrap	Scrap %	Hunter Down T. Minutes	Casting Yield	Total Final Yield
1																							
2	1	7.5	14	8250	2.34	223	4357	29	51	1638	5995	0	0	0%	1601	160	10%	1601	160	3%	0	72.67%	19.41%
3	2	7.5	22	13000	3.69	287	7347	29	56	2227	9574	528	0	0%	6255	75	3%	6783	75	1%	0	73.65%	52.18%
4	3	7.5	20	12500	3.55	236	5878	29	47	1702	7580	2909	110	2%	0	0	0%	2909	110	1%	0	60.64%	23.27%
5																							
6																							
7	4	7.5	11	5500	1.56	177	3610	29	54	820	4430	750	0	0%	1120	100	12%	1870	100	2%	0	80.55%	34.00%
8	5	7.5	10	5250	1.49	155	1829	29	58	1580	3409	382	90	5%	337	60	4%	719	150	4%	0	64.93%	13.70%
9	6	7.5	11	6000	1.70	240	2832	29	0	0	2832	2062	127	4%	672	127		2734	254	9%	0	47.20%	45.57%
10	7	7	14	7000	2.13	201	3242	29	42	2234	5476	3782	39	1%	3872	191	9%	7654	230	4%	0	78.23%	109.34%
11	8	7.5	14	8500	2.41	253	3165	29	60	1043	4208	2231	220	7%	232	12	1%	2463	232	6%	15	49.51%	28.98%
12																							
13																							
14	9	7	14	7750	2.36	221	1792	29	16	1258	3050	2490	105	6%	637	0	0%	3127	105	3%	40	39.35%	40.35%
15	10	7	13	8000	2.43	297	2608	29	15	760	3368	2702	21	1%	2234	129	17%	4936	150	4%	0	42.10%	61.70%
16	11	0	6	2750		0	0	0	36	1382	1382	941	0		1462	130	9%	2403	130	9%		50.25%	87.38%
17	12	0	4	2750		0	0	0	17	1080	1080	2528	180		728	0	0%	3256	180	17%		39.27%	118.40%
18	13	0	0	2250		0	0	0	17	2058	2058	0	0		1876	130	6%	1876	130	6%		91.47%	83.38%
19																							
20																							
21	14	7.5	12	5850	1.66	275	3175	29	27	393	3568	12983	170	5%	1619	0	0%	14602	170	5%	45	60.99%	249.61%
22	15	7.5	13	6800	1.93	235	2773	29	15	1110	3883	3634	160	6%	74	0	0%	3708	160	4%	105	57.10%	54.53%
23	16	7.5	12	7400	2.10	225	4182	29	14	1371	5553	2145	74	2%	964	5	0%	3109	79	1%	60	75.04%	42.01%
24	17	7.5	19	11000	3.12	340	6936	29	14	1626	8562	2524	175	3%	1397	0	0%	3921	175	2%	0	77.84%	35.65%
25	18	7.5	14	6900	1.96	220	0	29	12	458	458	1768	22		1271	266	58%	3039	288	63%	0	6.64%	44.04%
26																							
27																							
28	19	7	13	8400	2.55	219	6275	29	4	636	6911	1567	89	1%	1004	493	78%	2571	582	8%	0	82.27%	30.61%
29	20	7	15	8500	2.58	251	4212	29	1	758	4970	1360	1140	27%	1381	82	11%	2741	1222	25%	0	58.47%	32.25%
30	21	7	20	11500	3.50	270	6264	29	17	1027	7291	8098	920	15%	503	0	0%	8601	920	13%	35	63.40%	74.79%
31	22	6.5	18	10000	3.27	250	6604	29	0	0	6604	5239	750	11%	0	0		5239	750	11%	0	66.04%	52.39%
MTD		139	289	165850		4575	77081		573	####	102242	60623	4392	0	29239	1960	8%	89862	6352	6%	300	61.65%	54.18%
AVERAGE		6	13	7539	2.4	208	3504	25	26	1144	4647	2756	200	0	1329	89		4085	289		600	61.65%	54.18%

82.9 125.98

MWPS004590

BRASS FOUNDRY
DAILY ACTIVITY REPORT

Date: Feb. 2002

			MELTING			MOLDING						CLEANING											
Date	Oper Day	Hours Worked	Heats	Total Melt (lbs)	lbs/kWh	Molds	Hunter Lbs.	Cycle (sec.)	Side floor Molds	Lbs.	Total Lbs.	Trans. (lbs)	Hunter Scrap (lbs)	Scrap %	Side floor Trans. (lbs)	Scrap (lbs)	Scrap %	Total (Lbs Transferred	Total Scrap	Scrap %	Hunter Down T. Minutes	Casting Yield	Total Final Yield
1	1	2.5	10	6500	5.53	98	1176	29	20	2148	3324	4822	0	0%	290	37	2%	5112	37	1%	0	51.14%	78.65%
2																							
3																							
4	2	7.5	15	10000	2.84	331	3556	29	34	611	4167	1125	126	4%	1388	211	35%	2513	337	8%	0	41.67%	25.13%
5	3	7	23	12500	3.80	275	6050	29	29	972	7022	1816	165	3%	671	0	0%	2487	165	2%	85	56.18%	19.90%
6	4	7.5	19	10500	2.98	301	6175	29	8	612	6787	1598	450	7%	856	0	0%	2454	450	7%	0	64.64%	23.37%
7	5	7.5	14	7800	2.21	363	4743	29	7	341	5084	1123	809	17%	1056	0	0%	2179	809	16%	0	65.18%	27.94%
8	6	6.5	15	8500	2.78	245	3059	29	66	891	3950	2137	910	30%	493	0	0%	2630	910	23%	120	46.47%	30.94%
9																							
10																							
11	7	7.5	26	14500	4.11	330	8448	29	18	1823	10271	4606	562	7%	741	0	0%	5347	562	5%	0	70.83%	36.88%
12	8	7	18	8200	2.49	335	4746	29	50	737	5483	1507	97	2%	1645	178	24%	3152	275	5%	15	66.87%	38.44%
13	9	7.5	16	9750	2.77	246	5082	29	7	1024	6106	4339	100	2%	509	0	0%	4848	100	2%	0	62.63%	49.72%
14	10	7	23	12500	3.80	368	8096	29	1	164	8260	12899	700	9%	1109	0	0%	14008	700	8%	0	66.08%	112.06%
15	11	7	23	13000	3.95	283	6226	29	12	1056	7282	3190	60	1%	48	0	0%	3238	60	1%		56.02%	24.91%
16																							
17																							
18																							
19	12	7.15	17	9500	2.83	294	6468	29	29	305	6773	5858	212	3%	1412	88	29%	7070	300	4%	110	71.29%	74.42%
20	13	7.5	14	8000	2.27	250	4000	29	45	949	4949	16890	484	12%	1034	0	0%	17924	484	10%	120	61.66%	224.05%
21	14	7.5	12	8000	2.27	259	2416	29	45	870	3286	4990	350	14%	158	0	0%	5148	350	11%	90	41.08%	64.35%
22	15	7	16	9250	2.81	208	3288	29	18	2388	5676	7971	340	10%	0	0	0%	7971	340	6%	60	61.36%	88.17%
23																							
24																							
25	16	7	21	10750	3.27	315	4567	29	17	2400	6967	1056	112	2%	2052	288	12%	3108	400	6%	0	64.81%	28.91%
26	17	7.25	18	9800	2.88	344	3540	29	38	2794	6334	0	11	0%	4108	479	17%	4108	490	6%		64.63%	41.92%
27	18	7	19	10500	3.19	292	7923	29	25	600	8523	6508	188	2%	1232	336	56%	7740	524	6%	10	81.17%	73.71%
28	19	7.5	20	10800	3.06	323	3713	29	79	1610	5323	1547	100	3%	1865	0	0%	3412	100	2%	0	49.29%	31.59%
29																							
30																							
31																							
MTD		132	339	190350		5460	93272		548	22295	115567	83782	5776	0	20687	1617	7%	104449	7393	8%	610	60.71%	54.87%
AVERAGE		7	18	10018	3.1	287	4909	29	29	1173	6082	4410	304	0	1088	85		5497	389		1220	60.71%	54.87%

95.2 126 Halmark

MWPS004591

BRASS FOUNDRY
DAILY ACTIVITY REPORT

Date: Mar-02

			MELTING			MOLDING						CLEANING											
Date	Oper Day	Hours Worked	Heats	Total Melt (lbs)	lbs/kWh	Molds	Hunter Lbs.	Cycle (sec.)	Side floor Molds	Lbs.	Total Lbs.	Trans. (lbs)	Hunter Scrap (lbs)	Scrap %	Trans. (lbs)	Side floor Scrap (lbs)	Scrap %	Total (Lbs) Transferred	Total Scrap	Scrap %	Hunter Down T. Minutes	Casting Yield	Total Final Yield
1	1	7	19	10500	3.19	253	6869	29	6	1012	7881	1260	120	2%	826	0	0%	2086	120	2%	30	75.06%	19.87%
2																							
3																							
4	2	7	13	8500	2.58	200	1400	29	14	1368	2768	0	0	0%	878	475	35%	878	475	17%	195	32.56%	10.33%
5	3	7.5	14	9000	2.55	350	3305	29	0	175	3480	5447	914	28%	1225	236	135%	6672	1150	33%	0	38.67%	74.13%
6	4	7	15	12800	3.89	350	5300	29	15	1080	6380	7103	465	9%	2213	0	0%	9316	465	7%	25	49.84%	72.78%
7	5	7	15	8000	2.43	297	4241	29	14	1008	5249	3309	658	16%	1452	90	9%	4761	748	14%	0	65.61%	59.51%
8	6	7	11	4900	1.49	300	2700	29	4	288	2988	3078	0	0%	0	0	0%	3078			145	60.98%	62.82%
9																							
10																							
11	7	7.5	24	13500	3.83	400	8800	29	59	489	9289	4037	80	1%	1180	0	0%	5217	80	1%	0	68.81%	38.64%
12	8	7.5	25	13750	3.90	371	9497	29	50	59	9556	1186	155	2%	269	0	0%	1455	155	2%	0	69.50%	10.58%
13	9	7.5	9	5800	1.65	299	2392	29	9	573	2965	0	0	0%	574	150	26%	574	150	5%	0	51.12%	9.90%
14	10	6.5	13	6000	1.96	200	3345	29	9	1138	4483	20440	640	19%	346	0	0%	20786	640	14%		74.72%	346.43%
15	11	7.5	20	11000	3.12	331	7282	29	3	368	7650	0	0	0%	0	0	0%				0	69.55%	#VALUE!
16																							
17																							
18	12	7.5	20	10000	2.84	250	5800	29	13	1195	6995	2400	550	9%	778	0	0%	3178	550	8%	0	69.95%	31.78%
19	13	6	17	9750	3.46	337	3242	29	29	1371	4613	4904	185	6%	1900	0	0%	6804	185	4%	0	47.31%	69.78%
20	14	6	15	8800	3.12	223	4910	29	14	1180	6090	2373	90	2%	1023	60	5%	3396	150	2%	0	69.20%	38.59%
21	15	6	21	11500	4.08	300	7680	29	13	780	8460	1072	450	6%	1721	60	8%	2793	510	6%	0	73.57%	24.29%
22	16	6	10	6300	2.23	212	4324	29	10	600	4924	2801	140	3%	720	40	7%	3521	180	4%	100	78.16%	55.89%
23																							
24																							
25	17	0	0	0		0	0	0	0	0		6516	230		711	0		7227	230	#VALUE!			
26	18	0	0	0		0	0	0	0	0		23398	1200		1452	0		24850	1200	#VALUE!			
27	19	7	19	6500	1.98	322	4624	29	0	0	4624	0	0	0%	0	0		0				71.14%	0.00%
28	20	7	17	7750	2.36	276	3090	29	37	594	3684	2652	405	13%	0	0	0%	2652	405	11%	0	47.54%	34.22%
29																							
30																							
31																							
MTD		125	297	164350		5271	88801		299	13278	102079	91976	6282	0	17268	1111	8%	109244	7393	7%	495	62.11%	66.47%
AVERAGE		6	15	8218	2.8	264	4440	26	15	664	5671	4599	314	0	863	56		5750	435		960	69.01%	69.97%

82.2

Assume 126 lb Sinter/ht on Hunter Dly.
332 tons

MWPS004592

BRASS FOUNDRY
DAILY ACTIVITY REPORT

Date: Apr-02

			MELTING			MOLDING						CLEANING											
Date	Oper Day	Hours Worked	Heats	Total Melt (lbs)	lbs/kWh	Molds	Hunter Lbs.	Cycle (sec.)	Side floor Molds	Side floor Lbs.	Total Lbs.	Trans. (lbs)	Hunter Scrap (lbs)	Scrap %	Side floor Trans. (lbs)	Side floor Scrap (lbs)	Side floor Scrap %	Total (Lbs) Transferred	Total Scrap	Scrap %	Hunter Down T. Minutes	Casting Yield	Total Final Yield
1	1	7.5	15	8500	2.41	256	4262	29	12	1100	5362	2403	627	15%	111	0	0%	2514	627	12%	0	63.08%	29.58%
2	2	7	15	9000	2.74	295	6442	29	16	916	7358	1931	750	12%	38	0	0%	1969	750	10%	0	81.76%	21.88%
3	3	7.5	10	6000	1.70	300	3045	29	47	382	3427	2522	245	8%	792	0	0%	3314	245	7%	150	57.12%	55.23%
4	4	7.5	17	10500	2.98	325	5050	29	67	764	5814	3197	170	3%	49	0	0%	3246	170	3%	30	55.37%	30.91%
5	5	7	19	10500	3.19	218	4796	29	50	800	5596	2747	112	2%	370	48	6%	3117	160	3%	25	53.30%	29.69%
6																							
7																							
8	6	7.5	24	13500	3.83	411	8160	29	24	1350	9510	8424	450	6%	-30	0	0%	8394	450	5%	20	70.44%	62.18%
9	7	7.5	22	12400	3.52	400	8160	29	19	2583	10743	1479	403	5%	2297	72	3%	3776	475	4%	20	86.64%	30.45%
10	8	7.5	22	12400	3.52	353	6493	29	19	944	7437	7013	125	2%	0	0	0%	7013	125	2%	0	59.98%	56.56%
11	9	7.5	21	12000	3.40	320	5059	29	14	3259	8318	6143	172	3%	3996	168	5%	10139	340	4%	50	69.32%	84.49%
12	10	6.5	18	10000	3.27	280	7168	29	0	0	7168	4634	96	1%	1243	89		5877	185	3%	0	71.68%	58.77%
13																							
14																							
15	11	7.5	26	14000	3.97	400	6400	29	15	1332	7732	5533	150	2%	0	0	0%	5533	150	2%	0	55.23%	39.52%
16	12	7.5	20	11500	3.26	322	3782	29	30	1967	5749	8915	650	17%	2059	0	0%	10974	650	11%	0	49.99%	95.43%
17	13	7	25	14000	4.26	304	7680	29	12	1669	9349	5342	168	2%	2081	233	14%	7423	401	4%	0	66.78%	53.02%
18	14	7.5	25	13500	3.83	360	9216	29	12	864	10080	5704	120	1%	1107	0	0%	6811	120	1%	30	74.67%	50.45%
19	15	7	8	5000	1.52	241	2227	29	0	0	2227	5261	270	12%	0	0		5261	270	12%	30	44.54%	105.22%
20																							
21																							
22	16	7.5	16	9000	2.55	270	4268	29	8	133	4401	5713	364	9%	2647	66	50%	8360	430	10%	0	48.90%	92.89%
23	17	7.25	18	10500	3.08	300	4680	29	16	1326	6006	4511	196	4%	0		0%	4511	196	3%	0	57.20%	42.96%
24	18	7.5	23	13300	3.77	307	6754	29	17	1690	8444	6561	545	8%	1520	75	4%	8081	620	7%	0	63.49%	60.76%
25	19	2.75	7	5000	3.87	100	2200	29	13	962	3162	2563	315	14%	194	0	0%	2757	315	10%	430	63.24%	55.14%
26	20	6	20	11000	3.90		2688				2688			0%								24.44%	#VALUE!
27																							
28																							
29																							
30																							
31																							
MTD		141	371	211600		5762	108530		391	22041	130571	90596	5928	0	18474	751	3%	109070	6679	5%	785	61.71%	51.55%
AVERAGE		7	19	10580	3.2	303	5427	29	21	1160	6529	4768	312	0	972	42		5741	352		1570	61.71%	54.26%

105.8

5762 x 126 lb/mold = 726,012

363 tons

MWPS004593

BRASS FOUNDRY
DAILY ACTIVITY REPORT

Date: May-02

			MELTING			MOLDING						CLEANING												
									Side floor						Side floor						Hunter			
Date	Oper Day	Hours Worked	Heats	Total Melt (lbs)	lbs/kWh	Molds	Hunter Lbs.	Cyclo (sec.)	Molds	Lbs.	Total Lbs.	Trans. (lbs)	Scrap (lbs)	Scrap %	Trans. (lbs)	Scrap (lbs)	Scrap %	Total (Lbs) Transferred	Total Scrap	Scrap %	Down T. Minutes	Casting Yield	Total Final Yield
1	1	7.5	19	11000	3.12	296	6038	29	15	1936	7974	4735	236	4%	1228	54	3%	5963	290	4%	0	72.49%	54.21%
2	2	7.5	18	10700	3.04	262	5345	28	17	1423	6768	3520	240	4%	925	0	0%	4445	240	4%	60	63.25%	41.54%
3	3	7.5	22	12000	3.40	270	6660	29	3	0	6660	4964	125	2%	580	0		5544	125	2%	10	55.50%	46.20%
4																								
5																								
6	4	7.5	19	11000	3.12	305	4822	29	71	1456	6278	5881	324	7%	2608	201	14%	8489	525	8%	0	57.07%	77.17%
7	5	7.5	21	12000	3.40	327	5169	29	45	1361	6530	1319	203	4%	1736	22	2%	3055	225	3%	0	54.42%	25.46%
8	6	7.5	15	8500	2.41	224	3478	29	58	768	4246	4601	792	23%	426	0	0%	5027	792	19%	45	49.95%	59.14%
9	7	7.5	19	10500	2.98	294	7798	29	13	1035	8833	3958	470	6%	0	0	0%	3958	470	5%	0	84.12%	37.70%
10	8	7	15	8800	2.67	211	3911	29	13	1308	5219	3478	550	14%	0	0	0%	3478	550	11%	0	59.31%	39.52%
11																								
12																								
13	9	7.5	26	15000	4.26	326	7040	29	17	1548	8588	3197	460	7%	0	0	0%	3197	460	5%	0	57.25%	21.31%
14	10	7.5	22	12000	3.40	367	6908	29	10	326	7234	3852	75	1%	0	0	0%	3852	75	1%	15	60.28%	32.10%
15	11	7.5	20	11500	3.26	267	6078	29	18	1788	7866	5190	460	8%	2544	80	4%	7734	540	7%	30	60.40%	67.25%
16	12	7.5	13	7900	2.24	284	3748	29	40	659	4407	2520	305	8%	4438	290	44%	6958	595	14%	125	55.78%	88.08%
17	13	7.5	22	12500	3.55	322	7040	29	6	544	7584	995	400	6%	896	0	0%	1891	400	5%	0	60.67%	15.13%
18																								
19																								
20	14	7.5	19	11000	3.12	340	5440	29	3	708	6148	6604	130	2%	0	0	0%	6604	130	2%	0	55.89%	60.04%
21	15	7.5	11	6500	1.84	200	2800	29	22	984	3784	8270	650	23%	998	0	0%	9268	650	17%	130	58.22%	142.58%
22	16	6	12	6250	2.22	225	2380	29	21	1212	3592	4735	370	16%	2054	0	0%	6789	370	10%	60	57.47%	108.62%
23	17	6	23	13000	4.61	316	6417	29	15	1773	8190	6702	280	4%	780	0	0%	7482	280	3%	0	63.00%	57.55%
24	18	0	0	0	0.00	0	0	0	0	0	0	10171	179		2714	91		12885	270	#DIV/0!		#DIV/0!	#DIV/0!
25																								
26																								
27																								
28	19	7	20	11000	3.34	233	5399	29	15	1332	6731	2331	400	9%	0	0	0%	2331	460	7%	30	61.19%	21.19%
29	20	7	23	13000	3.95	284	6160	29	17	1951	8111	6475	1218	20%	105	0	0%	6580	1218	15%	20	62.39%	50.62%
30	21	6.5	16	11000	3.60	183			13												90			
31	22	7	17	10000	3.04	250	4026	29	19	3725	7751	4791	347	8%	5721	254	7%	10512	601	8%	45	77.51%	105.12%
MTD		152	394	225150		5786	106657		451	25837	132494	98289	8274	0	27753	992	4%	126042	9266	7%	660	58.65%	55.98%
AVERAGE		7	18	10234	3.0	263	5079	28	21	1230	6309	4680	394	0	1322	47	4%	6002	441	7%	1320	61.65%	58.65%

112.6

5,786 x 126 lbs sand/mold = 729,036 = 364.5

MWPS004594

BRASS FOUNDRY
DAILY ACTIVITY REPORT

Date: Jun-02

			MELTING			MOLDING						CLEANING											
Date	Oper Day	Hours Worked	Heats	Total Melt (lbs)	lbs/kWh	Molds	Hunter Lbs.	Cycle (sec.)	Side floor Molds	Lbs.	Total Lbs.	Trans. (lbs)	Hunter Scrap (lbs)	Scrap %	Trans. (lbs)	Side floor Scrap (lbs)	Scrap %	Total (Lbs) Transferred	Total Scrap	Scrap %	Hunter Down T. Minutes	Casting Yield	Total Final Yield
1																							
2																							
3	1	7.5	26	14000	3.97	245	6195	29	14	1824	8019	7322	970	16%	710	0	0%	8032	970	12%	40	57.28%	57.37%
4	2	7.5	24	13500	3.83	260	5270	29	14	1528	6798	5261	575	11%	0	0	0%	5261	575	8%	0	50.36%	38.97%
5	3	7.5	15	8500	2.41	322	3710	29	70	2974	6684	4136	258	7%	4504	362	12%	8640	620	9%	15	78.64%	101.65%
6	4	7.5	19	19750	5.60	348	7038	29	13	853	7891	2055	150	2%	0	0	0%	2055	150	2%	20	39.95%	10.41%
7	5	7.5	16	10500	2.98	273	5508	29	52	1602	7110	870	75	1%	324	50	3%	1194	125	2%	0	67.71%	11.37%
8																							
9																							
10	6	7.5	13	6500	1.84	250	2020	29	15	1332	3352	4554	75	4%	61	0	0%	4615	75	2%	60	51.57%	71.00%
11	7	7.5	15	9250	2.62	285	3920	29	12	1436	5356	3811	271	7%	1077	79	6%	4888	350	7%	155	57.90%	52.84%
12	8	7.5	17	10000	2.84	293	2489	29	15	4370	6859	1841	293	12%	2784	132	3%	4625	425	6%	0	68.59%	46.25%
13	9	7.5	19	11000	3.12	194	4152	29	15	1332	5484	2300	0	0%	1690	0	0%	3990			50	49.85%	36.27%
14	10	7.5	20	11500	3.26	281	6160	29	15	1332	7492	2655	448	7%	0	0	0%	2655	448	6%	10	65.15%	23.09%
15																							
16																							
17	11	6	17	10000	3.55	220	5632	29	15	1332	6964	3130	60	1%	1233	0	0%	4363	60	1%	60	69.64%	43.63%
18	12	7	19	11500	3.50	260	6656	29	15	1332	7988	7319	138	2%	1332	0	0%	8651	138	2%	15	69.46%	75.23%
19	13	7.5	11	6500	1.84	147	3234	29	12	1066	4300	1766	102	3%	2575	0	0%	4341	102	2%	25	66.15%	66.78%
20	14	7.5	19	11000	3.12	272	6188	29	15	977	7165	5457	30	0%	3109	0	0%	8566	30	0%	0	65.14%	77.87%
21	15	6.5	14	8400	2.75	252	7743	29	0	0	7743	1543	120	2%	976	0		2519	120	2%	0	92.18%	29.99%
22																							
23																							
24	16	7.5	23	12500	3.55	400	6400	29	12	720	7120	0	0	0%	1408	105	15%	1408	105	1%	0	56.95%	11.26%
25	17	7.5	27	14500	4.11	324	7130	29	15	900	8030	5273	103	1%	0	0	0%	5273	103	1%	30	55.39%	36.37%
26	18	7.5	22	12000	3.40	361	7876	29	0	0	7876	5408	1100	14%	0	0		5408	1100	14%	0	65.63%	45.07%
27	19	7	16	10000	3.04	286	7322	29	0	0	7322	7310	410	6%	0	0		7310	410	6%	0	73.22%	73.10%
28	20	0	0	0		0	0	0	0	0		18510	707		0	0		18510	707	#VALUE!			
29																							
30																							
31																							
MTD		139	354	210900		5273	104643		319	24910	129553	90521	5885	0	21783	728	3%	112304	6613	5%	480	61.43%	53.25%
AVERAGE		7	18	10545	3.2	264	5232	28	16	1246	6819	4526	294	0	1089	36		5615	348		960	64.66%	53.25%

10545

5273 molds @ 126 lb/mold = 664,398 lbs

MWPS004595

BRASS FOUNDRY
DAILY ACTIVITY REPORT

Date: Jul-02

			MELTING			MOLDING						CLEANING											
Date	Oper Day	Hours Worked	Heats	Total Melt (lbs)	lbs/kWh	Molds	Hunter Lbs.	Cycle (sec.)	Side floor Molds	Side floor Lbs.	Total Lbs.	Trans. (lbs)	Hunter Scrap (lbs)	Scrap %	Trans. (lbs)	Side floor Scrap (lbs)	Scrap %	Total (Lbs) Transferred	Total Scrap	Scrap %	Hunter Down T. Minutes	Casting Yield	Total Final Yield
1																							
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9	2								34	3092	3092	7920	234		2434	0	0%	10354	234	8%		#DIV/0!	#DIV/0!
10	3								28	1532	1532	0	0		1380	0	0%	1380				#DIV/0!	#DIV/0!
11	4								12	720	720	0	0		1338	0	0%	1338				#DIV/0!	#DIV/0!
12	5								14	840	840	0	0		570	0	0%	570				#DIV/0!	#DIV/0!
13																							
14																							
15	6								37	1275	1275	0	0		1140	0	0%	1140				#DIV/0!	#DIV/0!
16	7								14	1008	1008	0	0		1120	0	0%	1120				#DIV/0!	#DIV/0!
17	8								14	1008	1008	0	0		936	0	0%	936				#DIV/0!	#DIV/0!
18	9								36	1085	1085	0	0		0	0	0%	0				#DIV/0!	#DIV/0!
19	10								14	908	908	0	0	0%	0	0	0%	0				#DIV/0!	#DIV/0!
20																							
21																							
22	11								14	1243	1243	0	0	0%	2647	0	0%	2647				#DIV/0!	#DIV/0!
23	12								12	1066	1066	0	0	0%	1177	0	0%	1177				#DIV/0!	#DIV/0!
24	13								14	1243	1243	0	0	0%	1243	0	0%	1243				#DIV/0!	#DIV/0!
25	14								0	0	0	0	0		0	0						#DIV/0!	#VALUE!
26	15								10	560	560	0	0		1701	0	0%	1701				#DIV/0!	#DIV/0!
27																							
28																							
29	16					164	4198	29	0	0	4198	0	0	0%	0	0	0%	0	0			#DIV/0!	#DIV/0!
30	17					192	4915	29	0	0	4915	0	0	0%	0	0	0%	0	0			#DIV/0!	#DIV/0!
31	18								4	284	284	0	0		4124	0	0%	4124				#DIV/0!	#DIV/0!
MTD		0	0	0		356	9113		257	15864	24977	7920	234	0	19810	0	0%	27730	234	1%	0	#DIV/0!	#DIV/0!
AVERAGE		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	178	4557	29	15	933	1469	466	14	0	1165	0		1733	78		0	#DIV/0!	#DIV/0!

356 molds x 126 lb/mold = 44856 lbs or 22.4 tons

Brass poured = 24,977 lbs poured / 2,000 = 12.5 tons

MWPS004596

BRASS FOUNDRY
DAILY ACTIVITY REPORT

Date: Aug-02

			MELTING			MOLDING						CLEANING											
Date	Oper Day	Hours Worked	Heats	Total Melt (lbs)	lbs/kWh	Molds	Hunter Lbs.	Cycle (sec.)	Side floor Molds	Lbs.	Total Lbs.	Trans. (lbs)	Hunter Scrap (lbs)	Scrap %	Trans. (lbs)	Side floor Scrap (lbs)	Scrap %	Total (Lbs) Transferred	Total Scrap	Scrap %	Hunter Down T. Minutes	Casting Yield	Total Final Yield
1	1					217	5555	29	0	0	5555	0	0	0%	0	0						#DIV/0!	#VALUE!
2	2					0	0	0	14	840	840	0	0	0%	0	0	0%					#DIV/0!	#VALUE!
3																							
4																							
5	3					0	0	0	0	0	0	0	0		0	0						#DIV/0!	#VALUE!
6	4					130	3328	29	0	0	3328	4934	0	0%	0	0		4934				#DIV/0!	#DIV/0!
7	5								1	9	9				9	0	0%	9				#DIV/0!	#DIV/0!
8	6					0	0	0	0	0	0	0	0		0	0						#DIV/0!	#VALUE!
9	7					0	0	0	0	0	0	0	0		0	0						#DIV/0!	#VALUE!
10																						#DIV/0!	#DIV/0!
11																						#DIV/0!	#DIV/0!
12	8					0	0	0	14	840	840	0	0	0%	0	0	0%	0				#DIV/0!	#DIV/0!
13	9					0	0	0	14	840	840	0	0	0%	820	0	0%	820				#DIV/0!	#DIV/0!
14	10					244	6246	29	0	0	6246	0	0	0%	0	0	0%	0				#DIV/0!	#DIV/0!
15	11					0	0	0	65	611	611	0	0	0%	5636	0	0%	5636				#DIV/0!	#DIV/0!
16	12					173	4435	0	0	0	4435	2869	0	0%	0	0	0%	2869				#DIV/0!	#DIV/0!
17																						#DIV/0!	#DIV/0!
18																						#DIV/0!	#DIV/0!
19	13								9	792	792	3200	0					3200				#DIV/0!	#DIV/0!
20	14					105	2688		5	440	3128	0	0	0%	0	0	0%	0				#DIV/0!	#DIV/0!
21	15					178	4557		0	0	4557	4636	0	0%	0	0	0%	4636				#DIV/0!	#DIV/0!
22	16					0	0		0	0	0	2355	0	0%	1144	0	0%	3499				#DIV/0!	#DIV/0!
23	17					0	0		0	0	0	3507	0	0%	0	0	0%	3507				#DIV/0!	#DIV/0!
24																						#DIV/0!	#DIV/0!
25																						#DIV/0!	#DIV/0!
26	18					0	0		0	0	0	0	0		0	0	0%	0				#DIV/0!	#DIV/0!
27	19					218	6451		0	0	6451	2040	0		0	0	0%	2040				#DIV/0!	#DIV/0!
28	20					162	5131		0	0	5131	3140	0	0%	0	0	0%	3140				#DIV/0!	#DIV/0!
29	21					217	5555		0	0	5555	0	0	0%	0	0	0%	0				#DIV/0!	#DIV/0!
30	22					2	142		0	0	142	5090	0	0%	0	0	0%	5090				#DIV/0!	#DIV/0!
31																						#DIV/0!	#DIV/0!
MTD		0	0	0		1646	44088		122	4372	48460	31771	0	0	7609	0	0%	39380			0	#DIV/0!	#DIV/0!
AVERAGE		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	82	2204	8	6	199	2203	1513	0	0	362	0		2316	#DIV/0!		0	#DIV/0!	#DIV/0!

Hunter Mold Sand = 1646 Molds x 126 lbs/mold = 207356 lbs or 103.7 tons

Brass Poured = $\frac{48,460 \text{ lb poured}}{2000 \text{ lb/ton}}$ = 24.2 tons

MWPS004597

BRASS FOUNDRY
DAILY ACTIVITY REPORT

Date: Sept. 02

			MELTING			MOLDING						CLEANING								
Date	Oper Day	Hours Worked	Heats	Total Melt (lbs)	lbs/kWh	Molds	Hunter Lbs.	Cycle (sec.)	Side floor Molds	Lbs.	Total Lbs.	Trans. (lbs)	Hunter Scrap (lbs)	Scrap %	Trans. (lbs)	Side floor Scrap (lbs)	Scrap %	Total (Lbs) Transferred	Total Scrap	Scrap %
1																				
2																				
3	1					0	0	0	0	0		6746	0		0	0		6746		
4	2					0	0	0	0	0		0	0		0	0				
5	3					0	0	0	0	0			0		0	0				
6	4					0	0	0	0	0		0	0		0	0				
7																				
8																				
9	5					0	0	0	0	0		0	0		0	0				
10	6					0	0	0	0	0		0	0		0	0				
11	7					0	0	0	14	1344	1344	0	0		0	0	0%			
12	8					148	3788		12	151	3939	2432	0	0%	75	0	0%	2507		
13	9					0	0	0	0	0		0	0		0	0				
14																				
15																				
16	10					118	3021		6	624	3645	3072	0	0%	0		0%			
17	11					0	0	0	0	0		0	0		0			#REF!		
18	12					0	0	0	0	0		0	0		0	0				
19	13					150	3840		0	0	3840	0		0%	2044	0		2044		
20	14					0	0	0				3840	0		0			3840		
21																				
22																				
23	15					0	0		0			0			0					
24	16					190	4864		0		4864	0		0%	0			0		
25	17					210	5376		0		5376	0		0%	0					
26	18					0	0					5312	0					5312		
27	19					0	0					4480	0					4480		
28																				
29																				
30	20					190	2560				2560	0	0	0%						
31																				
MTD		0	0	0		1006	23449		32	2119	25568	25882	0	0	2119	0	0%	#REF!		
AVERAGE		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	50	1172	0	2	163	3653	1362	0	0	125	0		#REF!	#DIV/0!	

Hunter Mold Sand = 1006 mold x 126 lb/mold = 126,756 lbs or 63.4 tons

Brass Poured = $\frac{25,568 \text{ lbs poured}}{2000 \text{ lb/ton}}$ = 12.8 tons

MWPS004598

DAILY STATISTICS

MONTH MAY YR. 2004

	NO. 9					NO. 10				
DATE	OPER TIME	DOWN TIME MINUTES	FLSKS SQZD	FLSKS PRD	LADLES	OPER TIME	DOWN TIME MINUTES	FLSKS SQZD	FLSKS PRD	SHAKE OUT
5/1/04										
5/3/04	2.5	39	135	126	20	20	600	29.5	41	44
5/4/04	8	85	488	453	39	20	36	49	43	44
5/5/04	8.5	68	567	534	48	20	560	33	41	40
5/6/04	8	107	488	463	52	20	0	48.5	48	48
5/7/04	8	177	323	289	35	20	80	43	53	42
5/8/04						16		19	29	
WEEKLY TOTAL	35					116				
5/10/04	6	49	382	353	37	20	145	39	57	57
5/11/04	6	44	353	330	35	20	56	49	26	44
5/12/04	6.5	47	413	390	41	20	72	47	49	45
5/13/04	6.5	54	385	362	39	20	86	47.5	40	40
5/14/04	6.5	92	388	337		20	389	32.5	42	34
5/15/04										
WEEKLY TOTAL	31.5					100				
5/17/04	0	0	0	0	0	20	270	37.5	37	43
5/18/04	0	0	0	0	0	20	60	45.5	51	43
5/19/04	0	0	0	0	0	20	90	43	54	38
5/20/04	0	0	0	0	0	20	300	39	41	43
5/21/04	0	0	0	0	0	20	315	41.5	41	43
5/22/04	0	0	0	0	0	16	180	21.5	20	20
WEEKLY TOTAL	0					116				
5/24/04	7	120	353	328	35	20	120	43	33	43
5/25/04	8	98	399	367	37	20	300	34	38	37
5/26/04	8	171	386	374	49	20	238	40.5	41	36
5/27/04	8	112	433	412	40	20	144	44	45	33
5/28/04	8	84	478	465	46	17	420	23	28	31
5/29/04										
	39					97				
WEEKLY TOTAL										

#9 1055

#10 429.00

DAILY STATISTICS

MO. April YR. 2004

	NO. 4				NO. 9					NO. 10						
DATE	OPER TIME	DOWN TIME	FLSKS RMD	FLSKS PRD	OPER TIME	DOWN TIME	FLSKS SQZD	FLSKS PRD	%	OPER TIME	FLSKS PRD	FLSKS RMD	OPER TIME	DOWN TIME	NO. 4	TOTAL PCS
4/1					8.5	59 min	562	561	55	20	42.5	36	0	41		
4/2					8.5	151 min	450	442	51	20	39	44	208 min	41		
4/3 SAT.					0	0	0	0		20	285	28	194 min	34		
					17					60						
4/5					8.0	102 min	412	396	44	20	40.5	38	180	46		
4/6					8.5	89 min	555	547	47	20	36.5	26	138	36		
4/7					8.0	139 min	378	345	41	20	31	29	360	33		
4/8					7.75	38 mins	449	489	54	16	19	23	480	21		
4/9 Holiday					32.25					76						
					14											
4/12					7.75	73 mins	466	430	50	20	38.5	38	290	39		
4/13					7.0	83 mins	408	388	43	20	35	36	346	40		
4/14					8.5	30 min	612	600	55	20	41.5	29	270	41		
4/15					6.5	124	329	323	34	20	41.5	45	139	41		
4/16					8	93	461	435	47	20	36	44	439	40		
4/17				27.75	0	0	0	0	0	100	0	0	0	0		
4/19					8	69	473	455	54	20	44.5	40	150	46		
4/20					7	65	436	427	48	20	46.5	59	43	40		
4/21					7	56	472	445	53	20	39	40	273	42		
4/22					5	60	326	284	44	20	37	45	150	42		
4/23					8	160	396	374	45	20	39.5	43	100	44		
4/24					0	0	0	0	0	0	22	18	75	32		
					35					100						
4/26					7.5	153	351	298	43	20	51	54	0	42		
4/27					8	34	520	504	51	20	43.5	53	150	44		
4/28					7	116	385	359	48	20	35	41	51	30		
4/29					8	61	519	484	53	20	50	61	80	50		
4/30					8	65	511	485	54	18	38.5	46	150	36		

MWPS004600

DAILY STATISTICS

MO. March YR. 2004

DATE	NO. 4 OPER TIME	NO. 4 DOWN TIME	NO. 4 FLSKS RMD	NO. 4 FLSKS PRD	NO. 9 OPER TIME	NO. 9 DOWN TIME	NO. 9 FLSKS SQZD	NO. 9 FLSKS PRD		NO. 10 OPER TIME	NO. 10 FLSKS PRD		CEMENT LINING OPERATING TIME/RUN NO. 1	NO. 2	NO. 3	NO. 4	TO
3/1					9.0	3 20	389	354	37	20	36			Casting 48		S.O. 42	
3/2					9.0	3 12	421	408	41	20	44.5			45		43	
3/3					9.0	4 36	319	308	28	20	17 / 22 / 39	45.5		22 / 17 / 39		24 / 25 / 45	
3/4					9.0	3 2	479	449	39	20	24 / 17 / 44	37.5		27 / 17 / 44	46	23 / 23 / 46	44
3/5					8.0	1 1	512	482	40	20	31.5			30		35	
3/6						Sat				16	27.5			27		23	
					44					116							
3/8					7.5	1 31	426	409	45	20	25.5			24		33	
3/9					9.5	1 19	519	505	44	20	31			23		32	
3/10					8.0	2 43	357	348	39	20	41			34		40	
3/11					8.5	3 38	345	321	37	20	20			30		31	
3/12					8.0	4 15	299	279	30	20	38			26		32	
					41.5					100							
3/15					6.0	40	393	375	39	20	32			42		32	
3/16					8.0	1 26	348	325	41	20	46.5			36		49	
3/17					8.0	1 49	408	389	44	20	31.5			29		41	
3/18					7.5	2 5	364	339	48	20	37.5			33		31	
3/19					8.0	1 9	438	416	43	20	24.5			24		29	
					37.5			Sat		8 / 8	29			22		23	
3/22					7.0	1 49	404	376	31	20	32.5			24		37	
3/23					8.0	2 8	436	425	41	20	40			43		41	
3/24					8.5	37	594	575	46	20	39			26		39	
3/25					6.5	1 22	380	372	35	20	45			34		38	
3/26		(Sat)								20	39			38		40	
					30					100							
3/29 3/30					8.0	1 52	397	371	36	20	39			45		42	
3/31					8.5 / 8.5	1 14 / 2 13	529 / 482	485 / 463	45 / 39	20 / 20	45.5 / 41.5			43 / 36		47 / 47	
		mo:		178	25					40	(464)						

MWPS004601

DAILY STATISTICS

MO. Feb. YR. 2004

DATE	NO. 4 OPER TIME	NO. 4 DOWN TIME	NO. 4 FLSKS RMD	NO. 4 FLSKS PRD	NO. 9 OPER TIME	NO. 9 DOWN TIME	NO. 9 FLSKS SQZD	NO. 9 FLSKS PRD		NO. 10 OPER TIME	NO. 10 FLSKS PRD	CEMENT LINING OPERATING TIME/RUN NO. 1	NO. 2	NO. 3	NO. 4	TO
2/2					8.0	2 31	382	369	39	20	38	Poured Footing 41			40	
2/3					10.0	2 56	514	500	53	20	36	34			36	
2/4					11.0	4 34	486	468	49	20	31	50			43	
2/5					9.5	1 31	601	590	50	20	40	28			32	
2/6					9.0	2 39	479	458	40	20	23.5	31			29	
2/7	Sat									16	23	26			32	
					47.5					116						
2/9					8.0	3 52	288	285	30	20	45.5	45			43	
2/10					5.2	1 1	323	312	21	20	39	38			36	
2/11					8.5	1 39	447	445	43	20	39.5	48			42	
2/12					9.5	1 13	528	508	53	20	24.5 ~~44~~	45 24			31 ~~42~~	
2/13					7.0	43	455	453	41	20	41	27			42	
					38.2					100						
2/16	Hol				Holiday											
2/17					9.0	3 8	422	397	39	20	29.5	33			31	
2/18					8.0	2 39	393	382	28	20	39.5	43			35	
2/19					9.0	4 23	324	306	36	20	30	28			35	
2/20					10.0	2 42	539	512	44	20	25.5	26			31	
2/21	Sat									16	21	26			17	
					36					96						
2/23					8.0	2 48	360	350	40	20	41.5	32			33	
2/24					8.5	3 25	373	363	37	20	38.5	40			32	
2/25					9.0	2 27	469	443	39	20	33	35			36	
2/26					8.5	1 38	455	428	54	20	40	37			45	
2/27					8.0	54	340	324	35	20	41.5	37			45	
					42					100						
				Mo.	163.7					412						

MWPS004602

DAILY STATISTICS

MO. Jan. YR. 04

	NO. 4					NO. 9					NO. 10			CEMENT LINING				
	OPER TIME	DOWN TIME	FLSKS RMD	FLSKS PRD		OPER TIME	DOWN TIME	FLSKS SQZD	FLSKS PRD		OPER TIME	FLSKS PRD		OPERATING TIME/RUN NO. 1	NO. 2	NO. 3	NO. 4	TOT PC
1/1											Hrs.	Molds			Pound			S.O.
1/2						7.0	27	407	404	50	16	31.5			23			30
	1/3	Sat.				7.0					16							
1/5						7.5	153	387	378	62	20	42			55			46
1/6						7.5	128	453	429	55	20	39			43			41
1/7						4.0	34	269	266	26	20	38			36			42
1/8						4.5	28	285	282	26	20	39			46			37
1/9						5.0	59	333	322	36	20	40			28			39
1/10	Sat.					28.5					16	28			37			32
											116							
1/12						8.0	141	468	461	47	20	44			39			31
1/13						8.0	157	487	453	54	20	29.5			45			30
[illegible]						8.0	426	264	246	36	20	44.5			51			48
1/15						8.0	115	506	497	41	20	43.5			40			46
1/16						8.0	233	396	392	33	20	34			42			29
						40.0					100							
1/19						7.5	39	486	481	48	20	35			31			45
1/20						8.0	228	363	348	40	20	37.5			43			41
1/21						8.0	423	295	291	26	20	41			41			44
1/22						7.5	116	421	416	34	20	20.5			32			[illegible]
1/23						4.5	42	269	260	27	20	42.5			31			42
1/24	Sat.					35.5					16	28			27			30
											116							
1/26						8.5	523	265	254	29	20	31.5			37			36
1/27						8.0	113	435	422	39	20	36			31			29
1/28						8.0	454	223	218	24	20	36			29			45
1/29						8.5	238	467	451	46	20	35.5			47			42
1/30						33.0					20	32.5			24			34
			Mo.				/144				100	/	448					

MWPS004603

DAILY STATISTICS

MO. Dec. YR. 2003

DATE	NO. 4 OPER TIME	NO. 4 DOWN TIME	NO. 4 FLSKS RMD	NO. 4 FLSKS PRD	NO. 9 OPER TIME	NO. 9 DOWN TIME	NO. 9 FLSKS SQZD	NO. 9 FLSKS PRD		NO. 10 OPER TIME	NO. 10 FLSKS ~~PRD~~	CEMENT LINING OPERATING TIME/RUN NO. 1	NO. 2	NO. 3	NO. 4	TOTAL PCS
12/1					6.0	24	273	273	37	20	made 34.5		Poured 35			S.O. 41
12/2					.75	10	42	42	6	20	39		28			37
12/3					6.0	39	210	210	22	20	28		20			34
12/4					8.0	4 58	219	216	31	20	40.5		43			34
12/5					8.0	3 32	335	305	42	16	18.5		30			18
					28.75					96						
12/8					9.0	2 51	410	400	57	20	40		47			45
12/9					8.5	22	406	404	40	20	44.5		56			41
12/10					8.0	19	485	476	40	24	37		50			40
12/11					10.0	21	555	552	51	24	42.5 33.5	11th 12th	36 46			42 40
12/12					9.5	29	521	505	60	16	16.5	13th	20			20
					45.0					104						
12					9.5	3 54	376	359	53	20	24		16			25
12/16					8.0	2 46	389	375	40	20	36.5		12			39
12/17					8.5	1 13	503	492	56	20	38.5		20			54
12/18					8.5	2 19	470	461	56	20	24.5		46 (casting)			29
12/19					8.0	1 16	473	488	50	20	31		22			35
12/20					51.0				116	16	14		20			16
12/22 12/23									36	20 16	15 19.5		25 16			35 16
12/29					4.0	21	236	216	26	20	40		49			35
12/30					8.0	1 34	465	455	45	20	38		51			40
12/31					8.0	1 40	465	460	47	16	23.5		27			24
					20.0					56						
					144.25					408						

MWPS004604

DAILY STATISTICS

MO. Nov. YR. 2003

	NO. 4				NO. 9					NO. 10			CEMENT LINING			
													OPERATING TIME/RUN			
DATE	OPER TIME	DOWN TIME	FLSKS RMD	FLSKS PRD	OPER TIME	DOWN TIME	FLSKS SQZD	FLSKS PRD		OPER TIME	FLSKS ~~PRD~~		NO. 1	NO. 2	NO. 3	NO. 4
13					4.0	127	189	151	18	20	39			38	5.0	38
11/4					6.5	149	315	309	31	20	27			36		40
11/5					8.5	145	442	435	43	20	34.5			38		29
11/6					9.0	142	485	478	47	20	32			35		35
11/7			WK		28.0					16	17.5			21		17
										96						
11/10					7.75	22	398	396	38	20	44.5			46		42
11/11					5.75	38	348	340	39	20	33.5			36		39
11/12					6.5	130	388	377	34	20	44.5			39		40
11/13					7.0	229	354	341	35	20	45			29		43
11/14										20	32			31		37
11/15	Salt				27											
										100						
11/17					7.0	116	465	405	44	20	43			45		40
11/18					7.0	56	451	451	43	20	38.5			42		40
11/19					7.0	32	472	472	44	20	42			47		45
11/20					8.0	128	469	469	41	20	34.5			47		40
11/21										20	29.5			35		26
11/22										16	19.5			20		22
					29					116						
11/24										20	30			28		31
11/25										20	34.5			33		36
11/26										20	21			13		21
										60						
				Month	84.0					372.0						

MWPS004605

DAILY STATISTICS

MO. Oct. YR. 03

DATE	NO. 4 OPER TIME	NO. 4 DOWN TIME	NO. 4 FLSKS RMD	NO. 4 FLSKS PRD	NO. 9 OPER TIME	NO. 9 DOWN TIME	NO. 9 FLSKS SQZD	NO. 9 FLSKS PRD		NO. 10 OPER TIME	NO. 10 FLSKS ~~PRD~~	CEMENT LINING OPERATING TIME/RUN NO. 1	NO. 2	NO. 3	NO. 4	TO
10/1					8.0	3 39	338	333	27	20	Pred 43.5	Poured 35		Shook out 45		
10/2					8.0	3 12	386	382	30	20	40	37		44		
10/3					4.0	20	288	286	25	20	44.5	34		37		
10/4	Sat.									16	8.5	18		26		
					20					76						
10/6					4.0	50	251	246	25	20	44	38		49		
10/7					4.0	1 11	247	246	24	20	37.5	38		40		
10/8					8.0	58	528	526	46	20	36	29		57		
10/9					8.0	2 9	472	460	36	20	38.5	26		42		
10/10					8.0	2 13	503	495	48	20	38.5	32		39		
10/11	Sat.				32					100						
10/13					9.0	2 4	450	438	55	20	41.5	40		40		
10/14					8.0	1 58	461	460	43	20	39.5	40		43		
10/15					8.0	1 18	487	68	48	20	32.5	31		36		
10/16					5.5	1 20	297	296	30	20	22	42		22		
10/17					6.5	55	384	370	40	20	22.5	22		40		
10/18	Sat				37.0					20	23	15		24		
										120						
10/20					8.0	1 59	420	414	50	20	36.5	31		21		
10/21					8.25	2 36	401	372	37	20	32.5	28		44		
10/22					7.0	1 6	433	446	46	20	34	36		37		
10/23					23.75					20	37.5	36		33		
10/24										20	25.5	26		26		
										100						
7	Inventory +									20	36.5	27		35		
10/28	Shut down									20	37.5	34		33		
										20	39	39		36		
10/29								30th		20	43	28		39		
10/30								31st		20	24	24		27		
10/31					112.75					100	401.0					

MWPS004606

DAILY STATISTICS

MONTH JUNE YR. 2004

	NO. 9					NO. 10				
DATE	OPER TIME	DOWN TIME MINUTES	FLSKS SQZD	FLSKS PRD	LADLES	OPER TIME	DOWN TIME MINUTES	FLSKS SQZD	FLSKS PRD	SHAKE OUT
6-1-04	8	42	457	448	50	20	150	42.5	25	40
6-2-04	8	73	462	453	37	20	240	39	35	35
6-3-04	8	42	513	493	44	20	227	40	35	35
6-4-04	8	101	421	394	50	20	75	46	39	37
6-5-04						16	231	26	30	33
WEEKLY TOTAL	320					960				
6-7-04	8	147	374	358	42	20	79	46.5	47	49
6-8-04	11	128	592	577	53	20	302	37.5	45	38
6-9-04	10	156	515	483	65	20	210	41.5	39	39
6-10-04	10	150	525	508	65	20	350	36	50	34
6-11-04	8	91	456	449	48	20	560	29	35	35
6-12-04	—	—	—	—	—	16	178	28	33	28
								825		
WEEKLY TOTAL	470					1160				
6-14-04	9.5	96	546	510	56	20	300	39.5	44	43
6-15-04	9.5	129	517	476	62	20	340	39	33	43
6-16-04	9	218	392	351	52	20	471	32	41	33
6-17-04	10.5	225	404	364	51	20	620	24.5	23	20
6-18-04	10	266	317	287	34	20	260	39	37	35
6-19-04	—	—	—	—	—	16	302	28.5	29	29
WEEKLY TOTAL	48.50					1160				
6-21-04	9.5	106	504	485	52	20	210	42.5	51	47
6-22-04	10.5	161	501	472	56	20	130	46	50	41
6-23-04	10	130	533	527	55	20	570	29	26	26
6-24-04	8	152	365	357	41	20	144	43	50	40
6-25-04	4.5	28	320	327	25	20	600	25.5	35	41
6-26-04	—	—	—	—	—	—	—	—	—	—
	4									
WEEKLY TOTAL	42.50					1000				
Monthly Total	0					0				

#9 170

#10 422

MORE THAN JUST PIPE

US PIPE

Valve Hydrant Production

Total | Hydrants | Met Small | Met Large | Permafuse | RS Small | RS Large | Sleeves |

Date	Qty	PCode	Description	SAP#	SAPOrder#	Tons
04/06/2004	8	977000	5.25"M03 OL 04-0B 2H1P-NST 07P 6MJR1R1R1	7000042076	1090100	1.84
04/06/2004	12	977001	5.25"M03 OL 03-6B 2H1P-NST 07P 6MJR1R1R1	7000038023	1087715	2.05
04/06/2004	9	970107	4.50"M94 OL 03-6B 2H-NST 07P 4MJR1R1R1	7000008323	1090001	1.37
04/06/2004	15	950862	4.25"S2P OL 04-6B 1P 20T PWD>POPOPO	7000041714	1089662	3.80
04/06/2004	15	971024	5.25"M94 OR 05-6B 2H1P 10P 6MJ-CD>B1EYB1	7000043910	1089517	3.12
04/06/2004	3	971794	5.25"M94 OR 05-6B 2H1PNST 07P 6MJ>R1R1R1	7000008449	1089526	0.58
04/06/2004	3	971591	5.25"M94 OR 06-0B 2H1P 07P 6MJ>LGRFLC	7000041895	1089998	0.65
04/06/2004	4	971542	5.25"M94 OL 04-0B 2H1P-NST 07P 6TJEOEOB1	7000043024	1092067	0.72
04/06/2004	4	971542	5.25"M94 OL 04-0B 2H1P-NST 07P 6TJEOB1B1	7000041891	1092037	0.72
04/06/2004	2	971087	5.25"M94 OL 08-0B 2H1P-NST 07P 6TJEOEOB1	7000043766	1092060	0.48
04/06/2004	3	971794	5.25"M94 OR 05-6B 2H1PNST 07P 6MJ>R1R1R1	7000008449	1092035	0.58
04/06/2004	33	971393	5.25"M94C502 OR 04-6B 2H1P-NST 6MJ-CD>	4000019402	1092079	6.20
04/06/2004	5	970026	4.50"M94C502 OL 03-6B 2H-NST 07P 6MJ	4000019259	1092076	0.82
04/06/2004	3	971085	5.25"M94C502 OL 07-0B 2H1P-NST 07P 6MJ	4000019474	1092034	0.71
04/06/2004	15	972003	5.25"M94C502 OR 05-6B 2H1P 10P 6MJ-CD>	4000024501	1092875	3.13
04/06/2004	3	971591	5.25"M94C502 OR 06-0B 2H1P 07P 6MJ>	4000019434	1092936	0.65

Date	Qty	Tons
04/30/2004	70	12.78
04/29/2004	43	7.50
04/28/2004	79	15.43
04/27/2004	85	16.15
04/26/2004	44	9.92
04/24/2004	72	13.64
04/23/2004	111	22.26
04/22/2004	85	15.46
04/21/2004	85	16.12
04/20/2004	93	17.49
04/19/2004	69	13.89
04/16/2004	68	13.06
04/15/2004	50	10.92
04/14/2004	85	15.87
04/13/2004	93	17.67
04/12/2004	97	18.85
04/08/2004	80	15.37
04/07/2004	106	22.92

MWPS004608

MORE THAN JUST PIPE

Valve Hydrant Production

Total | Hydrants | Met Small | Met Large | Permafuse | RS Small | RS Large | Sleeves |

Date	Qty	PCode	Description	SAP#	SAPOrder#	Tons
04/07/2004	3	971591	5.25"M94 OR 06-0B 2H1P 07P 6MJ>LGRFLC	7000041895	1089998	0.65
04/07/2004	15	971024	5.25"M94 OR 05-6B 2H1P 10P 6MJ-CD>B1EYB1	7000043910	1092874	3.12
04/07/2004	3	971085	5.25"M94 OL 07-0B 2H1P-NST 07P 6MJA1R1R1	7000043863	1092033	0.71
04/07/2004	5	970026	4.50"M94 OL 03-6B 2H-NST 07P 6MJR1R1R1	7000008308	1092075	0.79
04/07/2004	33	971393	5.25"M94 OR 04-6B 2H1P-NST 6MJ-CD>A1A1A1	7000014143	1092077	6.37
04/07/2004	47	977000	5.25"M03 OL 05-0B 2H1P-NST 07P 6MJEYEYEY	7000043565	1093508	11.28
04/07/2004	21	971393	5.25"M94C502 OR 04-6B 2H1P-NST 6MJ-CD>	4000019402	1092079	3.94
04/07/2004	4	971323	5.25"M94C502 OL 10-0B 2H1P-NST 07P 6TJ	4000024416	1092064	1.14
04/07/2004	54	970028	4.50"M94C502 OL 04-0B 2H1P-NST 07P 6MJ	4000019260	1092932	9.86
04/07/2004	1	972181	5.25"M94C502 OL 10-0B 2H1P 07P 6MJ>	4000024455	1089522	0.32

Date	Qty	Tons
04/30/2004	70	12.78
04/29/2004	43	7.50
04/28/2004	79	15.43
04/27/2004	85	16.15
04/26/2004	44	9.92
04/24/2004	72	13.64
04/23/2004	111	22.26
04/22/2004	85	15.46
04/21/2004	85	16.12
04/20/2004	93	17.49
04/19/2004	69	13.89
04/16/2004	68	13.06
04/15/2004	50	10.92
04/14/2004	85	15.87
04/13/2004	93	17.67
04/12/2004	97	18.85
04/08/2004	80	15.37
04/07/2004	106	22.92
04/06/2004	78	15.89
04/05/2004	40	9.74
04/02/2004	3	0.66
04/01/2004	173	33.00

Month	Qty	Tons

MWPS004609

MORE THAN JUST PIPE.

Valve Hydrant Production

Total | Hydrants | Met Small | Met Large | Permafuse | RS Small | RS Large | Sleeves |

Date	Qty	PCode	Description	SAP#	SAPOrder#	Tons
01/05/2004	6	972155	5.25"M94 OL 06-0B 2H1P-NST 31S 6MJFYFYFY	7000042073	1068906	1.32
01/05/2004	9	972168	5.25"M94 OL 04-0B 2H1P 07P PAMORN>R1R1R1	7000042848	1067061	1.67
01/05/2004	1	971683	5.25"M94 OR 04-0B 2H1P-NST 5P 6MJA1R1R1	7000041913	1069442	0.18
01/05/2004	6	972155	5.25"M94 OL 06-0B 2H1P-NST 31S 6MJFYFYFY	7000042073	1068906	1.32
01/05/2004	1	972177	5.25"M94 OL 04-0B 2H1P-NST 01P 6MJEYEYEY	7000043068	1069446	0.18
01/05/2004	10	971589	5.25"M94 OR 05-0B 2H1P 7P 6MJ>LGLGLG	7000008413	1067074	1.99
01/05/2004	18	971439	5.25"M94 OR 04-6B 2H1P 50S 6MJ>FYFYFY	7000008393	1069441	3.83
01/05/2004	10	971589	5.25"M94 OR 05-0B 2H1P 7P 6MJ>LGLGLG	7000008413	1067074	1.99
01/05/2004	10	971589	5.25"M94 OR 05-0B 2H1P 7P 6MJ>LGLGLG	7000008413	1067074	1.99
01/05/2004	15	977000	5.25"M03C502 OL 04-0B 2H1P-NST 07P 6MJ	4000019296	1070774	3.32

Date	Qty	Tons
01/31/2004	24	4.31
01/30/2004	50	9.00
01/29/2004	52	9.73
01/28/2004	50	8.38
01/27/2004	37	6.45
01/26/2004	50	8.77
01/23/2004	73	13.66
01/22/2004	61	11.44
01/21/2004	99	18.04
01/20/2004	50	9.13
01/19/2004	62	10.95
01/16/2004	74	14.03
01/15/2004	80	14.96
01/14/2004	55	10.84
01/13/2004	366	70.36
01/12/2004	53	9.24
01/10/2004	38	7.50
01/09/2004	75	14.04
01/08/2004	78	14.50
01/07/2004	52	10.37
01/06/2004	50	9.31
01/05/2004	71	14.46

Month	Qty	Tons

MORE THAN JUST PIPE.

Valve Hydrant Production

Total | Hydrants | Met Small | Met Large | Permafuse | RS Small | RS Large | Sleeves |

Date	Qty	PCode	Description	SAP#	SAPOrder#	Tons
01/16/2004	14	970028	4.50"M94C502 OL 04-0B 2H1P-NST 07P 6MJ	4000019260	1072788	2.56
01/16/2004	14	970028	4.50"M94 OL 04-0B 2H1P-NST 07P 6MJA1A1A1	7000041742	1072787	2.56
01/16/2004	18	971399	5.25"M94C502 OL 04-0B 2H1P-NST 6MJ-CD>	4000019405	1070478	3.24
01/16/2004	18	971399	5.25"M94 OL 04-0B 2H1P-NST 6MJ-CD>EYEYEY	7000037993	1070477	3.38
01/16/2004	18	971393	5.25"M94C502 OR 04-6B 2H1P-NST 6MJ-CD>	4000019402	1072850	3.38
01/16/2004	18	971393	5.25"M94 OR 04-6B 2H1P-NST 6MJ-CD>A1A1A1	7000014143	1072849	3.47
01/16/2004	3	970188	4.50"M94C502 OR 06-6B 2H1P 6MJ (VAHENC)>	4000023940	1073377	0.69
01/16/2004	3	970188	4.50"M94 OR 06-6B 2H1P 6MJ VAHENC>A1A1A1	7000043261	1073376	0.69
01/16/2004	14	971589	5.25"M94C502 OR 05-0B 2H1P 07P 6MJ>	4000019432	1073375	2.79
01/16/2004	14	971589	5.25"M94 OR 05-0B 2H1P 7P 6MJ>LGLGLG	7000008413	1073374	2.78
01/16/2004	4	970071	4.50"M94C502 OL 03-6B 2H1P-NST 07P 6MJ	4000019266	1072790	0.69
01/16/2004	4	970071	4.50"M94 OL 03-6B 2H1P-NST 07P 6MJR1R1R1	7000008319	1072789	0.67
01/16/2004	3	970065	4.50"M94C502 OL 03-0B 2H1P-NST 07P 6MJ	4000019265	1071135	0.49
01/16/2004	3	970065	4.50"M94 OL 03-0B 2H1P-NST 07P 6MJR1R1R1	7000008317	1071134	0.48

Date	Qty	Tons
01/31/2004	24	4.31
01/30/2004	50	9.00
01/29/2004	52	9.73
01/28/2004	50	8.38
01/27/2004	37	6.45
01/26/2004	50	8.77
01/23/2004	73	13.66
01/22/2004	61	11.44
01/21/2004	99	18.04
01/20/2004	50	9.13
01/19/2004	62	10.95
01/16/2004	74	14.03
01/15/2004	80	14.96
01/14/2004	55	10.84
01/13/2004	366	70.36
01/12/2004	53	9.24
01/10/2004	38	7.50
01/09/2004	75	14.04
01/08/2004	78	14.50
01/07/2004	52	10.37

MWPS004611

MORE THAN JUST PIPE.

Valve Hydrant Production

Total | Hydrants | Met Small | Met Large | Permafuse | RS Small | RS Large | Sleeves |

Date	Qty	PCode	Description	SAP#	SAPOrder#	Tons
02/26/2004	4	971105	5.25"M94C502 OL 03-6B 2H1P-NST 07P 6MJ>	4000019476	1081960	0.69
02/26/2004	4	971105	5.25"M94 OL 03-6B 2H1PNST 07P 6MJ>EYEYEY	7000041839	1081939	0.69
02/26/2004	6	971692	5.25"M94C502 OL 04-6B 2H1P 12P 6MJ-CD>	4000019355	1082438	1.14
02/26/2004	6	971692	5.25"M94 OL 04-6B 2H1P 12P 6MJ-CD>SYSYSY	7000043716	1082436	1.12
02/26/2004	25	971589	5.25"M94C502 OR 05-0B 2H1P 07P 6MJ>	4000019432	1081976	4.99
02/26/2004	25	971589	5.25"M94 OR 05-0B 2H1P 7P 6MJ>LGLGLG	7000008413	1081975	4.96
02/26/2004	18	971292	5.25"M94C502 OL 05-6B 2H1P-NST 07P 6MJ>	4000019397	1081964	3.57
02/26/2004	18	971292	5.25"M94 OL 05-6B 2H1PNST 07P 6MJ>A1A1A1	7000041862	1081963	3.57
02/26/2004	18	971440	5.25"M94C502 OL 04-6B 2H1P-NST 07P 6MJ>	4000019416	1081966	3.28
02/26/2004	18	971440	5.25"M94 OL 04-6B 2H1PNST 07P 6MJ>A1A1A1	7000041873	1081965	3.28
02/26/2004	6	971789	5.25"M94C502 OR 01-6B 2H1P-NST 01P 6MJ	4000024201	1082431	0.79
02/26/2004	6	971789	5.25"M94 OR 01-6B 2H1P-NST 01P 6MJEYA1A1	7000043609	1082430	0.79
02/26/2004	2	972065	5.25"M94C502 OL 04-6B 2H1P-NST 01P 6MJ	4000019310	1082425	0.46
02/26/2004	2	972065	5.25"M94 OL 04-6B 2H1P-NST 01P 6MJEYEYEY	7000041978	1082424	0.46
02/26/2004	3	972065	5.25"M94C502 OL 04-6B 2H1P-NST 01P 6MJ	4000019310	1082428	0.69
02/26/2004	3	972065	5.25"M94 OL 04-6B 2H1P-NST 01P 6MJEYEYEY	7000041978	1082426	0.69
02/26/2004	3	958893	5.25"M94C502 OL 04-0B 2H1P-NST 03P 6MJ	4000024221	1082453	0.55
02/26/2004	3	958893	5.25"M94 OL 04-0B 2H1P-NST 03P 6MJR9R9R9	7000043612	1082450	0.55

Date	Qty	Tons
02/28/2004	52	9.69
02/27/2004	48	9.39
02/26/2004	85	16.12
02/25/2004	85	15.35
02/24/2004	84	16.82
02/23/2004	94	18.04
02/21/2004	42	8.13
02/20/2004	91	17.14
02/19/2004	95	16.35
02/18/2004	74	13.79
02/17/2004	87	15.70
02/14/2004	68	12.25
02/13/2004	86	15.70
02/12/2004	85	15.38
02/11/2004	85	15.55
02/10/2004	87	16.27

MONTH END

Engr file

MWPS004613

8.1905										#10 UNIT		SAND	INFO							JULY '03 MONTH END	
DAY/MO.	JAN '02	FEB '02	MAR. '03	APRIL '02	MAY '02	JUNE '02	JULY '02	Aug. '02	Sept. 02	Oct. '02	Nov. '02	Dec. '02	Jan. '03	Feb. '03	March '03	April '03	May '03	June '03	July '03		
1	3.5	6.5	8.5	7	10.5	9	3.5	20.5	25.5	23	27	16	20	22	33.5	38	39	30	39.5		
2	6	13	8	10.5	9.5	8.5	5.5	17.5	38	30.5	27	21	25.5	34	23.5	37.5	38.5	39.5	51		
3	6	3	9	10	11	7	7	27.5	23	31.5	29.5	22	31	31	28	33.5	39	45	42.5		
4	5	7.5	8.5	9	10.5	10	8	30	27.5	49	31.5	26	15	35.5	26.5	37.5	35	38.5	38		
5	6	7.5	9.5	10	8	9.5	6	24.5	33.5	20.5	32	49.5	20	22.5	20.5	18.5	37	28	34.5		
6	6	6.5	9	8.5	6.5	10.5	12.5	31.5	23.5	32.5	20	25.5	26.5	34.5	32.5	39.5	33	40	32.5		
7	5	12	6	7.5	9	9.5	10.5	30.5	27	10	29.5	25.5	47.5	30.5	32.5	35	30.5	38	40		
8	5	5	11.5	6	10.5	9.5	9	24.5	21.5	32.5	23.5	23	32.5	37.5	33.5	30	12.5	21	31.5		
9	5	6	9	6.5	8.5	9.5	9.5	16	22.5	19	31.5	18	39.5	21	29	32	34.5	25.5	43		
10	6	4	11	5.5	7.5	10	10.5	31	22.5	24	30.5	49.5	25	26.5	32.5	31.5	27.5	31	39.5		
11	11.5	4	10.5	9.5	8.5	5.5	12	30	18	30.5	16	28	22	25.5	25	15.5	25	18	46.5		
12	7	7	9	6	7	8	6.5	20.5	35	29	25.5	26.5	16.5	26	33.5	32	27.5	26.5	43		
13	6.5	6	10	5	10.5	9	9	13.5	19.5	27	34	19	21	20	29	46.5	37.5	35	41.5		
14	5.5	10.5	5.5	6	7	9.5	10	26	19.5	26	33	22	36	38	32.5	32	16.5	35.5	44.5		
15	6	9	5.5	4.5	8	9	8.5	32.5	22	33.5	35	25	39	25	26	21.5	35	25	40		
16	3.5	9	5.5	10	10.5	11	16	23	27.5	29	30		17.5	20.5	33.5	31	42	29	40		
17	5	9.5	7	7.5	9	9	16.5	12	23.5	25.5			15	16.5	37	34	35	15	27		
18	7.5	5	6	4.5	8.5	9	20.5	13.5	20	17.5			10	22	38.5	33.5	43	35	41.5		
19	8.5	5	12.5	7	9	9		24.5	28.5	25			17	21	25	35	39.5	32	42.5		
20	6	5.5	14	3	10.5	10		25.5	43.5	32.5			30		14	32	42	35	33		
21			7.5	7	10.5			32.5		33.5			24.5		47	31	37.5	39.5	36		
22				12	11.5			13		25			40		35	40	40	34			
23					11					30			22.5		32	40.5	30.5				
24															47.5	33	17				
25															35						
26															30						
TOTALS:	129.5	149.5	192	171.5	215	182	184	529	520.5	635.5	457.5	392.5	599.5	511.5	623.5	790.5	787.5	697	828.5	5607.5	PCS.
Tons:	1080.7	1224.5	1572.5	1404.7	1761.0	1480.7	1507.1	4332.5	4263.2	5229.6	3747.2	3214.8	4910.2	4189.4	5744.9	6474.6	6531.9	5705.5	6789.4	72137.5	
Avg/Hrs.	88.4	102.0	131.0	117.1	146.7	124.2	125.6	361.1	355.3	435.8	312.3	267.9	409.2	349.1	562.1	539.5	544.3	475.7	564.1	6011.5	
								Mold Sand	=	15,313											
								Core Sand	=	2,888											
								Total	=	18,201	x	90%	=	16,381#	Sand/Molds					8.1905 tons	

MONTH END
JUNE 2003

→ Engr File

MWPS004614

8.1906										#10 UNIT		SAND	INFO							JULY '03	
DAY/MO.	JAN '02	FEB '02	MAR. '03	APRIL '02	MAY '02	JUNE '02	JULY '02	Aug. '02	Sept. 02	Oct. '02	Nov. '02	Dec. '02	Jan. '03	Feb. '03	March '03	April '03	May '03	June '03	July '03		
1	3.5	6.5	8.5	7	10.5	9	3.5	20.5	23.5	23	27	15	20	22	33.5	36	39	30			
2	6	13	6	10.5	8.5	8.5	8.5	17.5	38	30.5	27	21	25.5	34	23.5	37.5	38.5	39.5			
3	8	3	9	10	11	7	7	27.5	23	31.5	29.5	22	31	31	28	33.5	39	45			
4	5	7.5	8.5	9	10.5	10	5	30	27.5	49	31.5	25	15	36.5	26.5	37.5	35	38.5			
5	9	7.5	9.5	10	5	9.5	9	24.5	33.5	20.5	32	49.5	26	22.5	20.5	18.5	37	29			
6	6	6.5	9	8.5	6.5	10.5	12.5	31.5	23.5	32.5	20	25.5	26.5	34.5	32.5	39.5	33	40			
7	5	12	6	7.5	9	9.5	10.5	30.5	27	10	29.5	25.5	47.5	30.5	32.5	36	30.5	36			
8	5	5	11.5	8	10.5	9.5	9	24.5	21.5	32.5	23.5	23	32.5	37.5	33.5	30	12.5	21			
9	8	8	9	8.5	6.5	9.5	9.5	16	22.5	19	31.5	18	39.5	21	29	32	34.5	25.5			
10	8	4	11	8.5	7.5	10	10.5	31	22.5	24	30.5	49.5	25	29.5	32.5	31.5	27.5	31			
11	11.5	4	10.5	9.5	8.5	8.5	12	30	16	30.5	18	26	22	28.5	28	16.5	25	18			
12	7	7	8	9	7	8	8.5	20.5	35	29	25.5	28.5	16.5	29	33.5	32	27.5	26.5			
13	8.5	6	10	6	10.5	9	9	19.5	19.5	27	34	19	21	20	29	46.5	37.5	36			
14	5.5	10.5	8.5	6	7	8.5	10	28	19.5	26	33	22	39	39	32.5	32	16.5	35.5			
15	9	9	8.5	4.5	8	9	9.5	32.5	22	33.5	35	25	39	25	25	21.5	35	25			
16	3.5	9	6.5	10	10.5	11	19	23	27.5	29	30		17.5	20.5	33.5	31	42	29			
17	8	9.5	7	7.5	9	9	16.5	12	23.5	28.5			15	16.5	37	34	35	15			
18	7.5	8	6	4.5	8.5	9	20.5	13.5	20	17.5			10	22	35.5	33.5	43	36			
19	5.5	8	12.5	7	9	9		24.5	29.5	26			17	21	25	35	39.5	32			
20	6	5.5	14	3	10.5	10		26.5	43.5	32.5			30		14	32	42	36			
21			7.5	7	10.5			32.5		33.5			24.5		47	31	37.5	35.5			
22				12	11.5			13		25			40		38	40	40	34			
23					11					30			22.5		32	40.5	30.5				
24															47.5	33	17				
25															38						
26															30						
TOTALS:	129.5	149.5	152	171.5	216	152	184	629	520.5	635.5	467.5	392.5	599.5	511.5	823.5	790.5	797.5	697		7961	PCS.
Tons:	1060.7	1224.5	1572.8	1404.7	1761.0	1490.7	1507.1	4332.5	4263.2	5229.5	3747.2	3214.5	4910.2	4189.4	6744.9	6474.8	6531.9	5708.8		65365.4	
Avg/Hrs.	88.4	102.0	131.0	117.1	146.7	124.2	125.6	361.1	355.3	435.8	312.3	267.9	409.2	349.1	562.1	539.5	544.3	475.7		5447.4	
								Mold Sand	=	15,313											
								Core Sand	=	2,888											
								Total	=	18,201	x	90%	=	16,381	Sand/Molds					8.1906 tons	

Charlene
Engr file

MWPS004615

8.1905										#10 UNIT		SAND	INFO					5/31/03	
																	MONTH END		
DAY/MO.	JAN '02	FEB '02	MAR. '03	APRIL '02	MAY '02	JUNE '02	JULY '02	Aug. '02	Sept. 02	Oct. '02	Nov. '02	Dec. '02	Jan. '03	Feb. '03	March '03	April '03	May '03		
1	3.5	6.5	8.5	7	10.5	9	3.5	20.5	23.5	23	27	15	20	22	33.5	38	39		
2	6	13	8	10.5	9.5	8.5	8.5	17.5	38	30.5	27	21	25.5	34	23.5	37.5	38.5		
3	6	3	9	10	11	7	7	27.5	23	31.5	29.5	22	31	31	28	33.5	39		
4	5	7.5	8.5	9	10.5	10	8	30	27.5	49	31.5	25	15	36.5	26.5	37.5	35		
5	6	7.5	9.5	10	8	9.5	6	24.5	33.5	20.5	32	49.5	26	22.5	20.5	18.5	37		
6	6	6.5	9	8.5	8.5	10.5	12.5	31.5	23.5	32.5	20	25.5	26.5	34.5	32.5	39.5	33		
7	5	12	6	7.5	9	9.5	10.5	30.5	27	10	29.5	25.5	47.5	30.5	32.5	38	30.5		
8	5	5	11.5	8	10.5	9.5	9	24.5	21.5	32.5	23.5	23	32.5	37.5	33.5	30	12.5		
9	8	8	9	8.5	8.5	9.5	9.5	16	22.5	19	31.5	18	39.5	21	29	32	34.5		
10	6	4	11	8.5	7.5	10	10.5	31	22.5	24	30.5	49.5	25	26.5	32.5	31.5	27.5		
11	11.5	4	10.5	9.5	8.5	8.5	12	30	18	30.5	15	26	22	25.5	28	15.5	25		
12	7	7	9	6	7	8	6.5	20.5	36	29	25.5	26.5	16.5	28	33.5	32	27.5		
13	6.5	6	10	8	10.5	9	9	19.5	19.5	27	34	19	21	20	29	46.5	37.5		
14	8.5	10.5	8.5	5	7	6.5	10	28	19.5	25	33	22	36	39	32.5	32	16.5		
15	6	9	8.5	4.5	8	9	6.5	32.5	22	33.5	35	25	38	25	28	21.5	38		
16	3.5	9	8.5	10	10.5	11	16	23	27.5	29	30		17.5	20.5	33.5	31	42		
17	8	9.5	7	7.5	9	9	18.5	12	23.5	28.5			15	16.5	37	34	35		
18	7.5	8	6	4.5	8.5	9	20.5	13.5	20	17.5			10	22	38.5	33.5	43		
19	8.5	8	12.5	7	9	9		24.5	29.5	26			17	21	26	35	39.5		
20	6	5.5	14	3	10.5	10		26.5	43.5	32.5			30		14	32	42		
21			7.5	7	10.5			32.5		33.5			24.5		47	31	37.5		
22				12	11.5			13		25			40		38	40	40		
23					11					30			22.5		32	40.5	30.5		
															47.5	33	17		
															38				
															30				
TOTALS:	129.5	149.5	192	171.5	215	182	184	529	520.5	638.5	457.5	392.5	589.5	511.5	823.5	790.5	797.5	7284	PCS.
Tons:	1060.7	1224.5	1572.6	1404.7	1761.0	1490.7	1507.1	4332.5	4263.2	5229.6	3747.2	3214.8	4510.2	4189.4	6744.9	6474.6	6531.9	59659.6	
Avg/Hrs.	88.4	102.0	131.0	117.1	146.7	124.2	125.6	361.1	355.3	435.8	312.3	267.9	409.2	349.1	562.1	539.5	544.3	4971.6	
								Mold Sand	=	15,313									
								Core Sand	=	2,888									
								Total	=	18,201	x		90%	=	16,381#	Sand/Molds		8.1905 tons	

8.1905										#10 UNIT		SAND	INFO		5-1-03		
DAY/MO.	JAN '02	FEB '02	MAR. '03	APRIL '02	MAY '02	JUNE '02	JULY '02	Aug. '02	Sept. 02	Oct. '02	Nov. '02	Dec. '02	Jan. '03	Feb. '03	March '03	April '03	
1	3.5	6.5	8.5	7	10.5	9	3.5	20.5	23.5	23	27	16	20	22	33.5	38	
2	6	13	8	10.5	9.5	8.5	8.5	17.5	38	30.5	27	21	26.5	34	23.5	37.5	
3	6	3	9	10	11	7	7	27.5	23	31.5	29.5	22	31	31	26	33.5	
4	5	7.5	8.5	9	10.5	10	8	30	27.5	49	31.5	25	15	36.5	26.5	37.5	
5	6	7.5	9.5	10	8	9.5	8	24.5	33.5	20.5	32	49.5	25	22.5	20.5	18.5	
6	6	6.5	9	8.5	8.5	10.5	12.5	31.5	23.5	32.5	20	25.5	26.5	34.5	32.5	39.5	
7	5	12	6	7.5	9	9.5	10.5	30.5	27	10	29.5	25.5	47.5	30.5	32.5	35	
8	5	5	11.5	8	10.5	9.5	9	24.5	21.5	32.5	23.5	23	32.5	37.5	33.5	30	
9	8	8	9	8.5	8.5	9.5	9.5	16	22.5	19	31.5	18	39.5	21	29	32	
10	6	4	11	8.5	7.5	10	10.5	31	22.5	24	30.5	49.5	25	26.5	32.5	31.5	
11	11.5	4	10.5	9.5	8.5	8.5	12	30	18	30.5	18	26	22	25.5	28	15.5	
12	7	7	9	6	7	8	6.5	20.5	35	29	25.5	25.5	16.5	26	33.5	32	
13	6.5	6	10	8	10.5	9	9	19.5	19.5	27	34	19	21	20	29	46.5	
14	8.5	10.5	8.5	5	7	6.5	10	28	19.5	25	33	22	36	39	32.5	32	
15	6	9	8.5	4.5	8	9	6.5	32.5	22	33.5	35	25	39	25	28	21.5	
16	3.5	9	8.5	10	10.5	11	18	23	27.5	29	30		17.5	20.5	33.5	31	
17	8	9.5	7	7.5	9	9	18.5	12	23.5	28.5			15	16.5	37	34	
18	7.5	8	6	4.5	8.5	9	20.5	13.5	20	17.5			10	22	38.5	33.5	
19	8.5	8	12.5	7	9	9		24.5	28.5	25			17	21	25	35	
20	6	5.5	14	3	10.5	10		26.5	43.5	32.5			30		14	32	
21			7.5	7	10.5			32.5		33.5			24.5		47	31	
22				12	11.5			13		25			40		38	40	
23					11					30			22.5		32	40.5	
24															47.5	33	
25															38		
															30		
TOTALS:	129.5	149.5	192	171.5	215	182	184	529	520.5	638.5	457.5	392.5	599.5	511.5	823.5	790.5	6486.5
Tons:	1050.7	1224.5	1572.6	1404.7	1761.0	1490.7	1507.1	4332.8	4263.2	5229.8	3747.2	3214.8	4910.2	4189.4	6744.9	6474.6	53127.7
Avg/Hrs.	88.4	102.0	131.0	117.1	146.7	124.2	125.6	361.1	355.3	435.8	312.3	267.9	409.2	349.1	562.1	539.5	4427.3
								Mold Sand	=	15,313							
								Core Sand	=	2,888							
								Total	=	18,201	x	90%	=	16,381#	Sand/Molds		8.1905 tons

MWPS004616

Empl. File

MWPS004617

AUGUST 2003

SAND MOLD INFORMATION

8.1905										#10 UNIT		SAND	INFO							August-03	
DAY/MO.	JAN '02	FEB '02	MAR. '03	APRIL '02	MAY '02	JUNE '02	JULY '02	Aug. '02	Sept. 02	Oct. '02	Nov. '02	Dec. '02	Jan. '03	Feb. '03	March '03	April '03	May '03	June '03	July '03	Aug. '03	
1	3.5	6.5	8.5	7	10.5	9	3.5	20.5	23.5	23	27	15	20	22	33.5	38	39	30	39.5	20	
2	6	13	8	10.5	9.5	8.5	8.5	17.5	38	30.5	27	21	25.5	34	23.5	37.5	38.5	39.5	51	43	
3	6	3	9	10	11	7	7	27.5	23	31.5	29.5	22	31	31	28	33.5	39	45	42.5	40.5	
4	5	7.5	8.5	9	10.5	10	8	30	27.5	49	31.5	25	15	36.5	26.5	37.5	35	38.5	38	44.5	
5	6	7.5	9.5	10	8	9.5	6	24.5	33.5	20.5	32	49.5	26	22.5	20.5	18.5	37	28	34.5	34	
6	6	6.5	9	8.5	8.5	10.5	12.5	31.5	23.5	32.5	20	25.5	26.5	34.5	32.5	39.5	33	40	32.5	29	
7	5	12	6	7.5	9	8.5	10.5	30.5	27	10	29.5	25.5	47.5	30.5	32.5	35	30.5	36	40	24.5	
8	5	5	11.5	8	10.5	9.5	9	24.5	21.5	32.5	23.5	23	32.5	37.5	33.5	30	12.5	21	31.5	39	
9	8	8	9	8.5	8.5	9.5	9.5	16	22.5	19	31.5	18	39.5	21	29	32	34.5	25.5	43	36	
10	6	4	11	8.5	7.5	10	10.5	31	22.5	24	30.5	49.5	25	26.5	32.5	31.5	27.5	31	39.5	43.5	
11	11.5	4	10.5	9.5	8.5	8.5	12	30	18	30.5	18	26	22	25.5	28	15.5	25	18	45.5	40	
12	7	7	9	6	7	6	6.5	20.5	35	29	25.5	26.5	16.5	26	33.5	32	27.5	26.5	43	34	
13	6.5	6	10	8	10.5	9	9	19.5	19.5	27	34	19	21	20	29	46.5	37.5	35	41.5	38.5	
14	8.5	10.5	8.5	5	7	6.5	10	28	19.5	25	33	22	36	39	32.5	32	16.5	35.5	44.5	32.5	
15	6	9	8.5	4.5	8	9	6.5	32.5	22	33.5	35	25	39	25	28	21.5	38	25	40	43.5	
16	3.5	9	8.5	10	10.5	11	16	23	27.5	29	30		17.5	20.5	33.5	31	42	29	40	42.5	
17	8	9.5	7	7.5	9	9	18.5	12	23.5	28.5			15	16.5	37	34	35	15	27	18	
18	7.5	8	6	4.5	8.5	9	20.5	13.5	20	17.5			10	22	38.5	33.5	43	38	41.5	39	
19	8.5	8	12.5	7	9	9		24.5	29.5	25			17	21	25	35	39.5	32	42.5	43.5	
20	6	5.5	14	3	10.5	10		26.5	43.5	32.5			30		14	32	42	35	33	41.5	
21			7.5	7	10.5			32.5		33.5			24.5		47	31	37.5	39.5	36	39	
22				12	11.5			13		25			40		38	40	40	34		32.5	
23					11					30			22.5		32	40.5	30.5				
24															47.5	33	17				
25															38						
26															30						
TOTALS:	129.5	149.5	192	171.5	215	182	184	529	520.5	638.5	457.5	392.5	599.5	511.5	823.5	790.5	797.5	697	826.5	798.5	PCS.
Tons:	1060.7	1224.5	1572.6	1404.7	1761.0	1490.7	1507.1	4332.8	4263.2	5229.6	3747.2	3214.8	4910.2	4189.4	6744.9	6474.6	6531.9	5708.8	6769.4	6540.1	77617.3
Avg/Hrs.	88.4	102.0	131.0	117.1	146.7	124.2	125.6	361.1	355.3	435.8	312.3	267.9	409.2	349.1	562.1	539.5	544.3	475.7	564.1	545.0	
								Mold Sand	=	15,313											
								Core Sand	=	2,888											
								Total	=	18,201	x	90%	=	16,381#	Sand/Molds					8.1905 tons	

UICVPLBR BRASS FOUNDRY PRODUCTION RECAP - PIECES AND WEIGHTS PAGE 1

	!-------- BRASS TYPE B62 85-5-5-5 --------!				!---OTHER THAN BRASS TYPE B62 85-5-5-5 ---!			
DATE	CAST PIECES	CAST WEIGHT	CLEAN PIECES	CLEAN WEIGHT	CAST PIECES	CAST WEIGHT	CLEAN PIECES	CLEAN WEIGHT
19990927	64	300.800	935	1,221.500	528	1,848.000	446	2,439.700
19990928	140	658.000			558	2,874.000	552	1,934.000
19990929			173	831.400	996	5,604.000	853	5,877.500
19990930	1,314	4,139.400	119	593.900			351	2,001.900
19991001			500	1,917.200	1,056	6,016.000	226	1,243.000
19991002								
19991004	1,389	4,660.000	144	129.600	324	1,936.000	917	5,084.600
19991005	1,220	5,050.200	1,312	4,339.200	244	1,520.000	211	1,240.800
19991006	1,102	1,925.000	923	3,638.800	820	5,808.000		
19991007	1,155	5,116.800	647	1,331.600	48	576.000	607	4,013.600
19991008			606	2,097.300	1,128	5,598.000	366	5,062.500
19991009								
19991011	754	4,137.920	211	1,005.800	270	1,711.600	983	5,025.200
19991012	737	4,186.240	749	4,125.430	232	1,618.000	102	652.800
19991013	1,393	4,177.350	773	4,029.240	96	1,764.000	90	1,080.000
19991014			718	1,829.300	960	6,396.000	150	952.400
19991015	1,186	1,904.600	2	46.000	393	3,112.100	816	4,787.200
19991016								
19991018	230	574.000	1,114	3,021.400	720	3,394.400	160	2,287.200
19991019	796	4,194.920	208	1,096.160	365	2,597.100	634	3,342.500
19991020			461	2,429.470	611	3,048.500	300	1,825.500
19991021					1,107	6,558.500	550	2,999.700
19991022	873	2,559.000	237	714.600	695	3,839.000	773	6,981.500
19991023								
19991025			360	1,044.000	1,302	7,362.000	671	3,297.500
TOTAL==>	12,353 *	43,584.230 *	10,192 *	35,441.900 *	12,453 *	73,181.200 *	9,758 *	62,129.100 *

TOTAL CLEANED PIECES 19,950 TOTAL CLEANED POUNDS 97,571.000 TOTAL CLEANED TONS 48.785 TONS

116,765.43 58.4 tons

MWPS004618

F/S NOV 10-26 x 11-25

UICVPLBR

BRASS FOUNDRY PRODUCTION RECAP - PIECES AND WEIGHTS

	BRASS TYPE B62 85-5-5-5				OTHER THAN BRASS TYPE B62 85-5-5-5			
	CAST	CAST	CLEAN	CLEAN	CAST	CAST	CLEAN	CLEAN
DATE	PIECES	WEIGHT	PIECES	WEIGHT	PIECES	WEIGHT	PIECES	WEIGHT
19991026					1,164	7,732.000	504	2,268.000
19991027	2,060	4,870.000	607	1,396.100	7	827.000	919	5,054.500
19991028	320	2,731.000	1,416	3,554.400	264	1,596.000	69	1,548.000
19991029	243	676.300	200	1,577.850	1,098	7,850.000	551	3,317.600
19991030								
19991101	738	3,654.800	363	1,500.400	254	1,832.600	760	4,793.200
19991102	775	4,063.960	592	2,206.700	324	1,936.800	300	4,492.800
19991103	1,030	5,459.200	983	5,020.950			3	36.000
19991104	1,265	4,705.320	396	2,348.870	1	245.000		
19991105	148	594.800	1,060	3,930.290	784	3,946.000	300-	1,050.000-
19991106								
19991108	15	247.500			582	2,275.000	707	3,598.000
19991109	18	413.000	14	227.000	534	2,005.000	400	1,400.000
19991110	584	2,219.500	89	432.800	282	1,430.000	293	1,025.500
19991111			208	1,385.600	1,137	6,487.900	587	3,223.500
19991112	787	4,306.880					948	5,200.700
19991113								
19991115	857	4,607.000	849	4,292.280	64	768.000		
19991116	889	3,154.480	1,474	5,486.980	48	1,065.600	83	834.500
19991117	1,720	4,336.000	1,204	3,487.730	24	532.800	11	594.000
19991118			527	1,477.400	998	6,008.000	512	3,358.400
19991119					1,232	8,430.000	901	5,348.500
19991120								
19991122	1,124	7,519.000	364	2,451.250	48	1,065.600	443	3,150.800
19991123	1,788	7,227.880	877	5,491.780			5	494.000

MWPS004619

UICVPLBR BRASS FOUNDRY PRODUCTION RECAP - PIECES AND WEIGHTS

	BRASS TYPE B62 85-5-5-5				OTHER THAN BRASS TYPE B62 85-5-5-5			
DATE	CAST PIECES	CAST WEIGHT	CLEAN PIECES	CLEAN WEIGHT	CAST PIECES	CAST WEIGHT	CLEAN PIECES	CLEAN WEIGHT
19991124	184	1,510.800	1,281	4,601.600	940	5,656.000	362	2,140.400
TOTAL==>	14,545 *	62,297.420 *	12,504 *	50,869.980 *	9,785 *	61,689.300 *	8,058 *	50,828.400 *

TOTAL CLEANED PIECES 20,562 TOTAL CLEANED POUNDS 101,698.380 TOTAL CLEANED TONS 5(

62297.42
61689.3
123,986.72 lbs = 62.0 tons

MWPS004620

FIS Dec 11-26 * 12-25

UICVPLBR

BRASS FOUNDRY PRODUCTION RECAP - PIECES AND WEIGHTS

	BRASS TYPE B62 85-5-5-5				OTHER THAN BRASS TYPE B62 85-5-5-5			
	CAST	CAST	CLEAN	CLEAN	CAST	CAST	CLEAN	CLEAN
DATE	PIECES	WEIGHT	PIECES	WEIGHT	PIECES	WEIGHT	PIECES	WEIGHT
19991129	1,114	5,749.000	523	2,177.700			439	2,670.100
19991130	1,208	5,931.300	1,097	6,936.800				
19991201	196	1,240.800	707	3,066.700	1,150	5,605.000	425	2,059.500
19991202	224	806.400	1,348-	6,920.800-	1,032	7,123.800	873	4,718.900
19991203	431	3,268.600	371	1,932.400			540	2,746.800
19991204								
19991206	24	55.200	174	1,379.400	566	2,363.400	161	559.900
19991207	1,740	4,344.000	375	1,200.000	68	816.000	250	875.000
19991208	723	4,372.800	1,418	4,836.500	212	2,217.600	170	1,866.600
19991209	72	413.400	236	1,498.000	1,217	7,536.000	603	3,934.000
19991210	8	298.000	4	104.000	788	4,751.600	988	6,080.200
19991211								
19991213	103	133.900	190	577.800	1,241	7,374.500	906	5,871.800
19991214	2,012	5,547.600	265	1,828.500	22	1,274.000	537	2,418.900
19991215	66	191.400	1,310	2,583.200	592	2,344.000	230	1,179.000
19991216	1,121	5,903.900	614	3,232.010	32	724.000	255	4,468.000
19991217			525	2,515.530	290	2,116.600	236	979.000
19991218								
19991220	878	4,930.200	13	403.000	408	1,836.000	248	1,242.000
19991221	1,772	5,016.600	347	2,173.400	36	432.000		
19991222	1,146	3,027.000	123	1,783.500	120	1,440.000	103	1,746.000
TOTAL==>	12,838 *	51,230.100 *	6,944 *	31,307.640 *	7,774 *	47,954.500 *	6,964 *	43,415.700 *

TOTAL CLEANED PIECES 13,908 TOTAL CLEANED POUNDS 74,723.340 TOTAL CLEANED TONS 37

51 230.1
47 954.5
98,184.6 lbs = 49.1 tons

MWPS004621

UICVPLBR

BRASS FOUNDRY PRODUCTION RECAP - PIECES AND WEIGHTS

	BRASS TYPE B62 85-5-5-5				OTHER THAN BRASS TYPE B62 85-5-5-5			
DATE	CAST PIECES	CAST WEIGHT	CLEAN PIECES	CLEAN WEIGHT	CAST PIECES	CAST WEIGHT	CLEAN PIECES	CLEAN WEIGHT
19991228								
19991229								
19991230							1,089	6,272.600
20000103	187	645.200	260	768.100	713	3,646.400	87	1,044.000
20000104	510	2,541.000	999	3,539.100			653	3,439.000
20000105	556	3,435.800	1,883	4,773.100	56	1,000.000		
20000106	1	9.700	285	1,720.800	573	3,595.200	157	868.000
20000107					1,126	7,670.400	596	2,816.600
20000108								
20000110	10	320.000			1,313	8,389.500	1,027	6,374.100
20000111	568	1,498.200	147	453.400	1,152	7,110.400	728	7,043.600
20000112	942	5,086.560	217	1,265.810	26	1,354.000	1,022	6,175.700
20000113	1,919	4,721.800	1,429	5,889.500	232	2,396.000	100	200.000
20000114			880	1,656.500	968	5,620.000	74	888.000
20000115								
20000117	384	1,113.600	384	1,113.600	1,172	6,844.000	1,081	6,017.000
20000118	2,106	4,634.200	348	1,990.700	167	1,831.500	862	6,093.900
20000119	920	6,002.000	797	2,456.100	128	1,800.000	114	1,368.000
20000120	1,538	6,250.200	760	5,205.900	60	1,080.000	217	4,580.400
20000121	51	58.000	791	2,972.700	700	4,227.000	317	1,646.000
20000122								
20000124	245	650.500	26	35.500	670	3,721.700	517	2,964.500
20000125	242	1,416.700	10	263.000	1,010	3,271.600	514	3,780.200
TOTAL==>	10,179 *	38,383.460 *	9,216 *	34,103.810 *	10,066 *	63,557.700 *	9,155 *	61,571.600 *

TOTAL CLEANED PIECES 18,371 TOTAL CLEANED POUNDS 95,675.410 TOTAL CLEANED TONS 47.837 4

38 383.46
63 557.70
101,941.16

51.0 tons

MWPS004622

UICVPLBR BRASS FOUNDRY PRODUCTION RECAP - PIECES AND WEIGHTS PAGE 1

	BRASS TYPE B62-85-5-5-5				OTHER THAN BRASS TYPE B62-85-5-5-5			
DATE	CAST PIECES	CAST WEIGHT	CLEAN PIECES	CLEAN WEIGHT	CAST PIECES	CAST WEIGHT	CLEAN PIECES	CLEAN WEIGHT
20000126	1,722	6,931.600	788	3,831.670	92	909.600	733	1,987.600
20000127	50	15.000	829	2,965.480	632	2,824.000	70	840.000
20000128					1,048	5,920.000	757	3,915.000
20000131					1,104	5,766.000	936	5,077.200
20000201	1,049	5,628.960	443	2,334.610	104	1,656.000	709	3,571.900
20000202	962	4,020.320	1,195	4,520.950	52	1,154.400		
20000203	1,402	3,592.600	1,263	4,610.150	94	1,699.200	102	1,224.000
20000204	347	1,066.100	1,003	2,057.900	938	5,540.000	790	5,114.300
20000205								
20000207	859	4,425.800	72	1,351.500	8	36.000	160	1,024.000
20000208	1,571	3,801.690	1,292	4,848.560	93	1,687.200	185	3,729.600
20000209	54	146.400	1,617	2,923.300	220	2,451.200	116	1,404.000
20000210					1,424	8,546.000	623	3,706.000
20000211	1,500	4,248.000	236	1,321.600	84	2,184.000	716	3,650.500
20000212								
20000214	111	568.800	825	1,947.000	968	6,488.000	330	2,392.000
20000215	172	1,284.000	75	145.050	726	3,217.000	632	3,418.000
20000216			71	809.400	628	2,898.400	766	3,331.500
20000217			17	27.200	794	5,300.000	757	4,064.500
20000218	4	628.000	2	390.000	1,008	6,076.800	673	3,819.500
20000222	9	283.000	9	491.000	1,130	6,272.000	1,006	5,569.300
20000223	1,929	5,422.520	830	1,912.480	93	972.000	484	3,169.000
20000224	1,099	5,927.200	853	3,223.060	112	1,120.000	72-	720.000-
20000225	1,888	5,664.400	655	3,564.100				
TOTAL==>	14,728 *	53,654.390 *	12,075 *	43,275.010 *	11,352 *	72,717.800 *	10,473 *	60,287.900 *

TOTAL CLEANED PIECES 22,548 TOTAL CLEANED POUNDS 103,562.910 TOTAL CLEANED TONS 51.781

53,654.39
72,717.80
126,372.19

63.2 tons

MWPS004623

UICVPLBR BRASS FOUNDRY PRODUCTION RECAP - PIECES AND WEIGHTS PAGE 1

	BRASS TYPE B62 85-5-5-5				OTHER THAN BRASS TYPE B62 85-5-5-5			
DATE	CAST PIECES	CAST WEIGHT	CLEAN PIECES	CLEAN WEIGHT	CAST PIECES	CAST WEIGHT	CLEAN PIECES	CLEAN WEIGHT
20000226								
20000228			819	2,132.500	1,196	6,360.000	239	1,188.400
20000229	780	3,111.000	352	1,307.300	198	2,014.000	834	4,052.000
20000301	848	5,364.800	813	3,632.000	40	480.000	294	5,333.600
20000302	825	4,493.800	1,091	6,403.500	16	592.000	164	1,968.000
20000303	1,769	7,404.200	343	2,674.400	210	2,630.000	210	2,368.000
20000304								
20000306	46	113.000	809	2,840.800	1,101	6,999.500	383	2,243.200
20000307	781	3,510.050	692	3,457.400	72	864.000	536	2,655.500
20000308	1,425	4,844.500	1,330	4,830.900			54	648.000
20000309	1,140	6,428.400	1,202	4,591.030	92	1,104.000	91	596.100
20000310	639	3,175.120	353	1,563.240	56	672.000	53	636.000
20000311								
20000313	8	296.000	505	3,486.660	819	4,837.900	82	3,433.200
20000314					904	5,700.000	1,202	6,445.000
20000315			3	26.400	1,154	6,623.000	768	5,674.800
20000316					1,084	6,896.000	849	5,178.800
20000317	500	3,216.000			268	1,516.000	613	3,546.700
20000318								
20000320			350	2,230.400	504	2,138.000	224	1,251.500
20000321					644	2,968.000	513	1,795.500
20000322	64	216.000	4	6.000	920	5,632.000	704	4,212.000
20000323	1,891	5,629.200	669	1,677.300	116	2,004.000	155	852.500
20000324	1,415	3,139.000	1,331	2,568.400	40	480.000	122	1,464.000
20000325								
TOTAL==>	12,131	50,941.070	10,666	43,428.230	9,434	60,510.400	8,090	55,542.800

TOTAL CLEANED PIECES 18,756 TOTAL CLEANED POUNDS 98,971.030 TOTAL CLEANED TONS 49.485

50,941.07
60,510.4 = 111,451.5 # = 55.7 tons

MWPS004624

UICVPLBR BRASS FOUNDRY PRODUCTION RECAP - PIECES AND WEIGHTS PAGE 1

DATE	BRASS TYPE B62 85-5-5-5 CAST PIECES	CAST WEIGHT	CLEAN PIECES	CLEAN WEIGHT	OTHER THAN BRASS TYPE B62 85-5-5-5 CAST PIECES	CAST WEIGHT	CLEAN PIECES	CLEAN WEIGHT
20000327			272	1,612.000	1,184	7,576.000	498	3,036.000
20000328	121	1,561.250	1	1.250			556	4,707.400
20000329	1,650	8,882.280	1,140	6,924.490	64	768.000	58	696.000
20000330			383	2,018.410	1,148	6,488.000	514	3,597.600
20000331	138	2,001.000	106	1,537.000	372	1,776.000	475	2,260.000
20000401								
20000403	447	2,994.000	117	187.200	92	920.000	281	1,389.500
20000404	721	4,256.400	500	4,522.410	105	1,804.700	118	1,180.000
20000405			110	579.700	598	2,875.000		
20000406					860	4,730.000	610	2,868.000
20000407					552	4,498.400	964	5,542.500
20000408								
20000410					1,248	7,176.000	410	2,255.000
20000411	2,950	2,610.000			76	1,360.000	534	4,591.600
20000412	1,664	4,476.000	2,241	3,910.400	40	480.000	76	912.000
20000413	1	462.000	146	1,409.700	860	4,639.400	285	1,539.800
20000414	1,574	4,332.600	189	1,304.100	40	480.000	420	1,641.500
20000415								
20000417	635	3,305.300	1,083	2,448.700	564	1,974.000	652	3,336.000
20000418	908	6,154.000	115	143.750	68	816.000	282	987.000
20000419	17	629.000	727	5,421.350	1,120	6,160.000	736	5,433.500
20000420			17	629.000	576	3,652.000	589	2,838.500
20000424					1,165	7,657.500	496	2,990.300
20000425	704	3,970.650	335	1,512.250	72	1,061.600	656	3,583.900
TOTAL==>	11,530 *	45,634.480 *	7,482 *	34,161.710 *	10,804 *	66,892.600 *	9,210 *	55,386.100 *
		66 892.6						

TOTAL CLEANED PIECES 16,692 TOTAL CLEANED POUNDS 89,547.810 TOTAL CLEANED TONS 44.773

112,527.1 → 56.3

MWPS004625

Eng File

U.S. PIPE & FOUNDRY - CHATTANOOGA VALVE & FITTINGS PLANT

DAILY ACTIVITY REPORT

MONTH END (11/30/03) DATE: NOV. 25-30 2003

		#9 Unit					#10 Unit							TOTALS		
			GOOD		TONS	AVG.#		MOLDS		GOOD		TONS	AVG.#			
		MOLDS	TONS	SCRAP %	GROUND	HR.	Produced	Poured	Shook Out	TONS	SCRAP %	GROUND	HR.	MOLDS	TONS	SCRAP %
	11/03/03	184	12.8	0	38.7	889.3	39.0	38.0	38.0	17.7	0	34.4	698.3	223.0	30.5	
	11/04/03	315	68.9	0.0	24.8	458.3	27	38	40	42.2	0	30.1	528.6	342.0	111.1	
	11/05/03	442	61.55	3.7	40.2	879.7	34.5	38	29	21.45	5.9	33	528.4	476.5	83	
	11/06/03	485	89.2	0.0	33.6	655.3	40.5	40	42	31.3	0	28.9	467.8	525.5	120.5	
	11/07/03		1.56	82.8	33.4	657.7	32	35	35	33.53	6.6	30.5	581.5	32.0	35.09	
Sat	11/08/03		0.55	0.0	33.0	580.0	17.5	21	17	7.07	0	19.3	400	17.5	7.62	
	SUB-TOTAL	1426.0	234.6		203.7		190.5	208.0	201.0	153.3		176.2	3204.6	1616.5	387.81	
	11/10/03	398	65.9	2.8	43.1	687.0	44.5	46	42	44.9	5.87	28.8	516.9	442.5	110.8	
	11/11/03	348	49.8	7.0	44.9	701.7	33.5	36	39	29	16.43	31.2	546.6	381.5	78.8	
	11/12/03	388	52.8	0.3	46.6	653.7	44.5	39	40	27.1	0	32.2	502.1	432.5	79.9	
	11/13/03	354	76.5	0.8	50.6	710.8	45	29	43	33.55	6.55	26.7	439	399.0	110.05	
	11/14/03	0	-1.32		41.0	616.9	32	31	37	33.45	5.78	5.78	528.4	32	32.13	
Sat.	11/15/03	0	0	0.0	36.6	662.0	0	0	0	11.98	0	25.8	534	0	11.98	
		1488.0	243.7		262.8		199.5	181.0	201.0	180.0		148.5		1687.5	423.7	
	11/17/03	405	65.7	0.6	41.2	692.3	43	40	40	12.2	0	27	519.6	448	77.9	
	11/18/03	451	74.9	9.7	35.0	783.7	38.5	42	40	31.9	14.0	24.8	498.1	489.5	106.8	
	11/19/03	472	68.4	0.0	45.0	779.8	42	47	45	37.7	0	25.4	461.9	514	106.1	
	11/20/03	469	51.5	13.7	35.8	709.0	34.5	47	40	43.5	6.56	35.2	630.7	503.5	95.0	
	11/21/03	0	1.8	0.0	52.6	851.5	29.5	35	26	19.1	0	29.2	517.4	29.5	20.9	
Sat.	11/22/03	0	0	0.0	39.0	616.6	19.5	20	22	12.1	0	13.7	436.1	19.5	12.1	
		1797.0	262.3		248.4		207.0	231.0	213.0	156.5		155.1		2010.0	418.8	
	11/24/03	0	10.3	18.2	30.8	463.8	30.0	28.0	31.0	-1.2		27.3	460.5	30	9.1	
	11/25/03	0	5.5	44.4	30.6	639.0	34.5	33.0	36.0	63.9	6.1	25.3	410.3	34.5	69.4	
	11/26/03	0	6.3	0.0	26.9	592.3	21.0	13.0	21.0	18.4	18.5	18.4	384	21	24.7	
Holiday	11/27/03													0	0.0	
Holiday	11/28/03													0	0.0	
														0.0	0.0	
		0.0	22.1		88.3		85.5	74.0	88.0	81.1		71.0		85.5	103.2	
														0.0	0.0	
														0.0	0.0	
														0.0	0.0	
	SUB-TOTAL	0.0	0.0		0.0		0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
	MTD	4,711.0	762.6	4.4	803.2		682.5	694.0	703.0	570.8	7.0	550.8		5,399.5	1,333.5	5.5
	AVG/DAY	392.6	63.6		44.6		37.9	38.6	39.1	31.7		30.6		300.0	74.1	
	MTD PACE	7,066.5	1144		803		683	694	703	571		551		5,400	1333	

	BOOKINGS			ASSEMBLIES/PROD.				SHIPMENTS					BACKLOG	TOTAL	BACKLOG
	Daily	MTD	MTD PACE	Daily	MTD	MTD PACE	BUDGET	Daily	MTD	MTD PACE	BUDGET	BACKLOG	ON HAND	ON HAND	OUT
3 -8" RSGV			-				6,124			-	6,865				
10-36" RSGV			-				916			-	1,027				
MET Valves			-				333			-	333				
Hydrants			-				1,461			-	1,728				
Tap. Sleeves			-				197			-	236				
FIELD LOK	0		-							-		0	0	19,135	
FTGS. TONS	0		-			-	571			-	1,476				0

cc: Bruce Clements; Tom Brakefield; Harry Crossfield; D. Diederich; S. Box; J. Swafford; G. Johnston; G. Casey ; Bill Collier

/csh

MWPS004626

Eng File

U.S. PIPE & FOUNDRY - CHATTANOOGA VALVE & FITTINGS PLANT

DAILY ACTIVITY REPORT

MONTH END — DATE: OCT. 30-31 2003

		#9 Unit					#10 Unit							TOTALS		
					TONS	AVG.#	MOLDS					TONS	AVG.#			
		MOLDS	TONS	SCRAP %	GROUND	HR.	Produced	Poured	Shook Out	TONS	SCRAP %	GROUND	HR.	MOLDS	TONS	SCRAP %
	10/01/03	338	27.6	21.3	40.4	725.5	43.5	35.0	45.0	17.2	21.9	34	554	381.5	44.8	21.5
	10/02/03	312	35.2	6.6	34.2	599.2	40	37	44	24.7	21.5	20.3	428.1	352.0	59.9	13.4
	10/03/03	288	32.1	3.9	36.9	620.8	44.5	34	37	29.2	9.3	26	548.5	332.5	61.3	6.5
Sat.	10/04/03	0	0	0.0	34.3	763.3	8.5	18	26	27.5	0	14.2	379.3	8.5	27.5	0.0
														0.0	0	
														0.0	0	
	SUB-TOTAL	938.0	94.9	10.6	145.8		136.5	124.0	152.0	98.6	12.9	94.5	1909.9	1074.5	193.5	11.8
	10/06/03	251	29	4.6	35.6	605.6	44	38	49	22.6	26.3	28.1	426.2	295.0	51.6	15.5
	10/07/03	247	27.5	2.9	32.5	492.9	37.5	38	40	25	15.5	30.6	409.7	284.5	52.5	9.4
	10/08/03	528	51.6	2.9	45.0	822.3	36	29	57	25	8.9	36.5	463.1	564.0	76.6	4.9
	10/09/03	472	47.2	3.8	39.6	713.3	38.5	26	42	26.5	6.6	34.4	460.5	510.5	73.7	4.9
	10/10/03	503	68.9	1.7	28.4	669.1	38.5	32	39	22.9	8.4	32.3	512.2	541.5	91.8	3.4
Sat.	10/11/03	0	0	0.0	26.7	695.2	0	0	0	0	0	22.6	548.5	0	0	
		2001.0	224.2	2.9	207.8		194.5	163.0	227.0	122.0	13.5	184.5		2195.5	346.2	6.9
	10/13/03	450	80	0.4	36.6	816.8	41.5	40	40	26.3	5.8	34.9	506	491.5	106.3	1.7
	10/14/03	461	54.3	1.1	36.9	574.3	39.5	43	43	32.9	12.9	35.8	483.4	500.5	87.2	5.9
	10/15/03	487	75.3	2.1	35.1	587.6	32.5	31	36	21.7	22.6	33.7	480.3	519.5	97.0	7.6
	10/16/03	297	37.9	14.8	41.3	677.0	22	42	22	27.9	20.7	33	441.9	319	65.8	17.4
	10/17/03	384	53.8	1.8	27.3	641.3	22.5	22	40	31.8	11.9	25	438.5	406.5	85.6	5.9
Sat.	10/18/03	0	0	0.0	33.9	646.7	23	15	24	20.2	0	21.6	462.3	23	20.2	0.0
		2079.0	301.3	3.3	211.1		181.0	193.0	205.0	160.8	13.2	184.0		2284.0	462.1	7.0
	10/20/03	420	65.3	1.6	52.4	873.7	36.5	31.0	21.0	10.6	34.1	22.5	379.7	456.5	75.9	7.9
	10/21/03	401	49.8	2.9	57.1	756.9	32.5	28.0	44.0	15	41.3	28.3	448.4	433.5	64.8	15.6
	10/22/03	433	61.6	1.2	62.8	759.6	34.0	36.0	37.0	26.8	16.3	28.1	413.3	467	88.2	6.3
	10/23/03	0.0	-1.8		59.6	597.0	37.5	36.0	33.0	27.4	15.3	28.7	472	37.5	25.6	20.6
	10/24/03	0.0	-0.8		26.8	645.4	25.5	26.0	26.0	22.7	22.5	20.5	411.6	25.5	21.9	25.1
Sat.	10/25/03									8.5	0			0.0	8.5	0.0
		1254.0	174.1	3.2	258.5		166.0	157.0	161.0	110.8	22.8	128.1		1420.0	284.9	11.9
	10/27/03						36.5	27	35	13.6				36.5	13.6	0.0
#10 Unit only	10/28/03		-0.9				37	34	33	-4.5				37.0	-5.4	
cast this week.	10/29/03				37.2	503.1	39	39	36	54				39.0	54.0	0.0
	10/30/03		-0.1		82.9	755.5	43	28	39	21.1	10.7	11.8	313.3	43.0	21.0	11.0
	10/31/03		-1		55.4	890.7	24	24	27	4.5	43	27.9	347.77	24.0	3.5	55.9
	SUB-TOTAL	0.0	-2.0		175.5		179.5	152.0	170.0	88.7	10.6	39.7		179.5	86.7	12.7
	MTD	6,272.0	792.5	4.4	958.6		857.5	789.0	915.0	580.9	14.9	630.8		7,153.5	1,373.4	9.1
	AVG/DAY	348.4	44.0		55.5		47.6	43.8	50.8	32.3		35.0		397.4	76.3	
	MTD PACE	6,272.0	793		999		858	789	915	581		631		7,154	1373	

	BOOKINGS			ASSEMBLIES/PROD.				SHIPMENTS					BACKLOG	TOTAL	BACKLOG
	Daily	MTD	MTD PACE	Daily	MTD	MTD PACE	BUDGET	Daily	MTD	MTD PACE	BUDGET	BACKLOG	ON HAND	ON HAND	OUT
3 -8" RSGV		3,729	3,729		3,401	3,401	7,901		3742	3,742	7,549	1,504	844	9,893	3
10-36" RSGV		869	869		504	504	1,182		846	846	1,129	540	210	1,614	11
MET Valves		360	360		310	310	333		435	435	333	900	115	316	53
Hydrants		770	770		873	873	1,865		936	936	1,895	762	45	1,508	15
Tap. Sleeves		83	83		78	78	259		124	124	260	256	16	677	45
FIELD LOK		1533	1,533			-			2465	2,465		0	0	19,135	
FTGS. TONS		590.5	591	16.4	867.8	868	647	9.7	1271	1,271	1,617				0

Unavailable

cc: Bruce Clements; Tom Brakefield; Harry Crossfield; D. Diederich; S. Box; J. Swafford; G. Johnston; G. Casey ; Bill Collier

/csh

MWPS004627

Engr. file

U.S. PIPE & FOUNDRY - CHATTANOOGA VALVE & FITTINGS PLANT

DAILY ACTIVITY REPORT

MONTH END — DATE: Sept. 30 2003

	#9 Unit					#10 Unit							TOTALS		
						MOLDS									
	MOLDS	TONS	SCRAP %	TONS GROUND	AVG.# HR.	Produced	Poured	Shook Out	TONS	SCRAP %	TONS GROUND	AVG.# HR.	MOLDS	TONS	SCRAP %
09/01/03	Holiday														
09/02/03	341	35.4	9.3	38.2	675.7	42.5	36	36	11.9	25.9	25.4	534.4	383.5	47.3	14.1
09/03/03	434	43.5	18.6	56.6	967.8	37	26	43	18.8	21.1	24.9	462.2	471.0	62.3	19.4
09/04/03	489	64.6	0.0	45.0	728.8	33.5	30	28	25.6	0	26.7	573.3	522.5	90.2	0.0
09/05/03	425	31.4	16.1	46.6	956.0	26.5	32	23	22.8	31.1	24.8	550.7	451.5	54.2	23.1
Sat. 09/06/03	0	0	0.0	18.2	686.8	22.5	22	31	21.2	0	14.9	473.6	22.5	21.2	0.0
SUB-TOTAL	1689.0	174.9	10.0	204.6		162.0	146.0	161.0	100.3	16.3	116.7	2594.2	1851.0	275.2	12.4
09/08/03	444	44	3.9	23.9	1084.0	32.5	25	34	10	56	21.6	532.2	476.5	54	21.1
09/09/03	493	61	3.5	50.1	964.0	31.5	41	39	20.8	34.7	28.6	635.9	524.5	81.6	13.9
09/10/03	530	68.3	1.3	45.3	974.7	27	29	21	27.9	9.4	24.4	603	557.0	96.2	3.8
09/11/03	473	50.8	0.9	44.2	965.0	39	28	36	14.4	16.5	23.2	574.5	512.0	65.2	4.9
09/12/03	0	-3.5	0.0	37.7	834.0	28.5	24	28	28.2	8.3	19	421	28.5	24.7	19.7
Sat. 09/13/03	0	0	0.0	21.2	606.0	0	0	0	0	0	16.7	476	0	0	0.0
	1940.0	220.6	3.9	222.4		158.5	147.0	158.0	101.3	24.0	133.5		2098.5	321.9	11.3
09/15/03	441	65.3	0.0	27.0	654.1	35.5	42	50	24	0	18.8	416.9	476.5	89.3	0.0
09/16/03	413	35.2	13.7	26.0	613.1	33.5	25	36	27.3	9.5	22.8	563.2	446.5	62.5	11.9
09/17/03	411	54.2	2.4	31.5	666.1	26.5	29	26	14.9	24.6	28.9	642.7	437.5	69.1	8.3
09/18/03	504	54.5	3.9	33.5	736.8	37.5	29	25	32.1	4.3	28.7	709.4	541.5	86.6	4.0
09/19/03	0	-1.2	0.0	31.9	701.3	38	34	28	21.1	3	20.5	455.5	38	19.9	8.8
Sat. 09/20/03	0	0	0.0	30.0	628.9	15	16	22	16	0	15	417.6	15	16.0	0.0
	1769.0	208.0	4.8	179.9		186.0	175.0	187.0	135.4	6.8	134.7		1956.0	343.4	5.5
09/22/03	447	42.7	7.7	31.2	693.2	41.0	27.0	39.0	13.8	12.1	19	468.8	488	56.5	8.9
09/23/03	394	64.8	1.6	27.9	689.9	38.0	34.0	36.0	27.1	16.2	24.1	596.8	432	91.9	6.4
09/24/03	476	60.6	2.7	36.6	759.4	44.0	36.0	46.0	28.6	1.7	23.1	608.5	520	89.2	2.4
09/25/03	496.0	78	0.8	38.2	803.6	37.0	35.0	44.0	25.6	19.5	23.2	559.7	533	103.6	6.2
09/26/03	0.0	-1	0.0	40.0	865.7	30.0	36.0	39.0	19	27.4	23.9	531	30	18.0	31.3
Sat. 09/27/03	0.0	0	0.0	29.9	808.8	20.0	29.0	15.0	29.6	0	16.4	467.9	20.0	29.6	0.0
	1813.0	245.1	3.2	203.8		210.0	197.0	219.0	143.7	12.8	129.7		2023.0	388.8	7.5
09/29/03	472	70	3.1	47.9	863.6	39	29	37	17.3	19	20.7	502.8	511.0	87.3	6.7
09/30/03	452	45.5	5.3	35.0	928.1	38.5	39	38	41.2	5.4	20.4	565.9	490.5	86.7	5.4
													0.0	0.0	
SUB-TOTAL	924.0	115.5	3.9	82.9		77.5	68.0	75.0	58.5	9.9	41.1		1001.5	174.0	6.0
MTD	8,135.0	964.1	5.0	893.6		794.0	733.0	800.0	539.2	14.1	555.7		8,930.0	1,503.3	8.5
AVG/DAY	387.4	45.9		42.6		37.8	34.9	38.1	25.7		26.5		425.2	71.6	
MTD PACE	8,135.0	964		894		794	733	800	539		556		8,930	1503	

	BOOKINGS			ASSEMBLIES/PROD.				SHIPMENTS					BACKLOG	TOTAL	BACKLOG
	Daily	MTD	MTD PACE	Daily	MTD	MTD PACE	BUDGET	Daily	MTD	MTD PACE	BUDGET	BACKLOG	ON HAND	ON HAND	OUT
3 -8" RSGV	610	5,147	5,147	250	4,288	4,288	7,190	444	5506	5,506	7,609	1,517	920	10,271	3
10-36" RSGV	176	1,167	1,167	38	678	678	1,076	15	773	773	1,138	592	234	1,968	11
MET Valves	0	231	231	12	354	354	333	25	352	352	333	1,136	198	420	59
Hydrants	18	1187	1,187	50	1,045	1,045	1,705	45	1298	1,298	1,909	918	85	1,395	17
Tap. Sleeves	0	248	248	24	169	169	238	33	222	222	262	308	53	713	33
FIELD LOK	0	1734	1,734					92	929	929		879	879	21,600	
FTGS. TONS	29.8	1126.0	1,126	67.2	1004.7	1,005	651	131	1251	1,251	1,629	1,944	546		43

cc: Bruce Clements; Tom Brakefield; Harry Crossfield; D. Diederich; S. Box; J. Swafford; G. Johnston; G. Casey ; Bill Collier

/csh

MWPS004628

Eng file

U.S. PIPE & FOUNDRY - CHATTANOOGA VALVE & FITTINGS PLANT

DAILY ACTIVITY REPORT

MONTH END - DATE: Aug. 29 2003

		#9 Unit					#10 Unit							TOTALS			
					TONS	AVG.#	MOLDS					TONS	AVG.#				
		MOLDS	TONS	SCRAP %	GROUND	HR.	Produced	Poured	Shook Out	TONS	SCRAP %	GROUND	HR.	MOLDS	TONS	SCRAP %	
#9 Did not	08/01/03	0	-9.6		77.8	983.9	20.0	30.0	32.0	18.2	18.6	22.5	416.8	20.0	8.6	46.4	
Cast	08/02/03	0	0	0.0	48.3	858.9	0	0	0	0		13.9	422.5	0.0	0	0.0	
	SUB-TOTAL	0.0	-9.6		126.1		20.0	30.0	32.0	18.2		36.4	839.3	20.0	8.6		
	08/04/03	432	48.1	3.7	57.7	801.3	43	39	39	18.3	24.2	19.6	358.7	475.0	66.4	9.8	
	08/05/03	472	55.9	3.8	65.8	913.9	40.5	33	32	26.8	20.3	28	457.4	512.5	82.7	9.9	
	08/06/03	358	47.3	3.1	59.6	920.2	44.5	31	42	30.2	19.9	23.7	447.4	402.5	77.5	10.5	
	08/07/03	443	61.3	0.9	75.1	1012.0	34	33	34	25.8	12.2	23.9	619.7	477.0	87.1	4.6	
#9 Did not	08/08/03	0	-3.9	0.0	59.2	749.9	29	35	40	23.3	14.9	25.2	520	29	19.4	17.3	
Cast	08/09/03	0	0	0.0	35.9	655.3	24.5	19	21	34.4	0	18.9	598.5	24.5	34.4	0.0	Sat
		1705.0	208.7	2.8	353.3		215.5	190.0	208.0	156.8	14.1	137.3		1920.5	365.5	8.0	
	08/11/03	426	65.8	8.1	44.4	998.0	39	38	39	14.7	36	35.4	535.8	465	80.5	14.9	
	08/12/03	418	92.9	1.9	51.4	942.9	38	33	38	21.8	20.8	30.5	484.5	454	114.7	6.2	
	08/13/03	398	51.8	2.7	60.0	975.3	43.5	38	41	26	16.9	30	498.7	441.5	77.8	6.3	
	08/14/03	486	94.8	1.2	52.6	855.3	40	30	39	27	13.4	27	500	526	121.8	4.2	
#9 Did not	08/15/03	0	-5.8		56.4	874.6	32.5	27	32	24.3	13.7	25.4	513.4	32.5	18.5	23.5	
Cast	08/16/03	0	0	0.0	53.1	745.6	0	0	0	0	0	18.7	433.8	0	0.0	0.0	Sat.
		1728.0	299.5	3.8	4.1		191.0	166.0	189.0	113.8	22.3	165.0		1917.0	413.3	9.6	
	08/18/03	483	67.4	4.5	64.0	1186.6	34.0	18.0	37.0	24	11.7	21.6	428.9	517	91.4	6.5	
	08/19/03	459	73.9	0.0	51.2	794.3	38.5	29.0	41.0	17	22.6	23.4	520.2	497.5	90.9	5.2	
	08/20/03	414	65	5.7	58.0	1008.5	32.5	28.0	34.0	18.3	21.3	18.1	354.5	446.5	83.3	9.6	
	08/21/03	527.0	58.1	7.7	59.2	890.7	43.5	40.0	28.0	19.7	15.1	23.5	474	570.5	77.8	9.7	
#9 Did not	08/22/03	0.0	-2.4	0.0	57.5	930.4	42.5	37.0	42.0	33.4	0.9	18.9	487.2	42.5	31.0	8.1	
Cast	08/23/03	0.0	0	0.0	29.3	561.0	18.0	32.0	19.0	20.7	0	16.7	529.9	18.0	20.7	0.0	
		1883.0	262.0	5.2	319.2		209.0	184.0	201.0	133.1	11.3	120.2		2092.0	395.1	7.3	
	08/25/03	509	65	4.2	61.9	930.4	39	30	38	10.3	41.4	23.8	501.9	548.0	75.3	11.8	
	08/26/03	436	38.7	6.3	57.7	935.3	43.5	38	43	31.9	1.9	28.8	464.8	479.5	68.6	4.3	
	08/27/03	478	52.7	3.8	53.6	806.2	41.5	34	42	19	28	25.5	471.4	519.5	71.7	11.7	
	08/28/03	347	38.7	8.5	52.9	729.0	38	39	43	12.7	38	21.4	432.2	385.0	55.2	18.9	
#9 Did not	08/29/03	0	0	0.0	52.8	889.2	32.5	29	35	48.9	0	19.3	612.8	32.5	48.9	0.0	
Cast																	
	SUB-TOTAL	1770.0	193.1	5.3	278.9		194.5	170.0	201.0	122.8	15.3	116.6		1964.5	315.9	9.6	
	MTD	7,086.0	953.7	4.6	1081.6		830.0	740.0	831.0	544.7	15.7	575.5		7,914.0	1,498.4	9.0	
	AVG/DAY	337.4	45.4		51.5		39.5	35.2	39.6	25.9		27.4		376.9	71.4		
	MTD PACE	7,086.0	954		1,082		830	740	831	545		576		7,914	1498		

	BOOKINGS			ASSEMBLIES/PROD.				SHIPMENTS					BACKLOG	TOTAL	BACKLOG
	Daily	MTD	MTD PACE	Daily	MTD	MTD PACE	BUDGET	Daily	MTD	MTD PACE	BUDGET	BACKLOG	ON HAND	ON HAND	OUT
3 -8" RSGV	23	5,355	5,355	272	4,556	4,556	7,190	248	6000	6,000	7,652	1,604	1,309	11,508	1
10-36" RSGV	14	879	879	25	457	457	1,076	15	802	802	1,145	303	188	2,070	5
MET Valves	0	493	493	15	263	263	333	4	152	152	333	1,284	217	420	77
Hydrants	34	1454	1,454	51	927	927	1,705	104	1407	1,407	1,926	1,057	296	1,557	15
Tap. Sleeves	0	165	165	13	138	138	238	0	91	91	267	279	53	767	33
FIELD LOK	12	1562	1,562					4	2780	2,780		12	12	14,145	
FTGS. TONS	93	987.3	987	42	925	925	651	108.3	1376.1	1,376	1,637	2,007	551		43

cc: Bruce Clements; Tom Brakefield; Harry Crossfield; D. Diederich; S. Box; J. Swafford; G. Johnston; G. Casey ; Bill Collier

/csh

MWPS004629

U.S. PIPE & FOUNDRY - CHATTANOOGA VALVE & FITTINGS PLANT

DAILY ACTIVITY REPORT

MONTH END. DATE: July 31 2003

	#9 Unit					#10 Unit							TOTALS			
				TONS	AVG.#	MOLDS					TONS	AVG.#				
	MOLDS	TONS	SCRAP %	GROUND	HR.	Produced	Poured	Shook Out	TONS	SCRAP %	GROUND	HR.	MOLDS	TONS	SCRAP %	
07/01/03				54.4	866.3						15.9	648.6				SHUTDOWN 7/1-7/6/03
07/02/03				50.0	784.8						12.1	495.2				
07/03/03				N/A							11.5	469				
07/04/03																
SUB-TOTAL	0.0	0.0		104.4		0.0			0.0		39.5		0.0	0		
07/07/03	254	42.6	6.6	59.9	799.0	39.5	26	44	11.2	0	19.8	527.5	293.5	53.8	5.3	
07/08/03	353	38.4	7.4	84.5	906.5	51	34	43.5	21.5	26.8	31.5	599	404.0	59.9	15.5	
07/09/03	334	42.7	2.2	61.4	784.8	42.5	28	41	19.9	11.5	27.6	510.3	376.5	62.6	5.3	
07/10/03	333	68.5	2.5	50.2	707.1	38	33	31.5	13.6	10.2	27	573.8	371	82.1	10.2	
07/11/03	258	35.7	9.3	59.0	828.6	34.5	32	37.5	30.5	0	22.1	447.3	292.5	66.2	9.3	
07/12/03	0	0	0.0	51.5	920.4	32.5	25	27	26	0	15.4	440.9	32.5	26	0.0	Sat.
	1532.0	227.9	5.2	366.5		238.0	178.0	224.5	122.7	16.9	143.4		1770.0	350.6	9.6	
07/14/03	284	38.5	2.5	58.2	833.7	40	36	41	3	79.6	20.2	448	324	41.5	23.4	
07/15/03	301	57.8	9.9	51.0	794.0	31.5	33	33	25.8	5.3	27.8	556.0	332.5	83.6	8.6	
07/16/03	519	77.4	2.9	54.5	820.0	43	43	38	40.4	4.7	25.4	488.7	562	117.8	3.5	
07/17/03	456	63.9	5.7	59.4	831.4	39.5	37	35	31.4	23.8	23.3	577.5	495.5	95.3	12.5	
07/18/03		-11.6		68.8	965.9	45.5	31	36	37.1	10.4	32	614.7	45.5	25.5	23.7	#9 Did not Cast
07/19/03				38.5	732.7				15.3	0	16	458.4	0	15.3	0.0	Sat.
	1560.0	226.0	7.1	330.4		199.5	180.0	178.0	153.0	16.1	144.7		1759.5	379.0	10.9	
07/21/03	323	39.7	20.6	51.6	859.3	43.0	41.0	47.0	16.6	27.1	25.2	567.3	366	56.3	22.6	
07/22/03	397	75.2	0.0	49.9	750.0	41.5	50.0	42.0	34.5	10.1	24	540.7	438.5	109.7	1.5	
07/23/03	533	76.1	1.8	55.0	806.9	44.5	44.0	37.0	29.3	16.8	30.5	641	577.5	105.4	6.5	
07/24/03	389.0	61.5	3.4	45.2	792.2	40.0	34.0	39.0	28.8	5.1	26	577.7	429	90.3	3.9	
07/25/03	469.0	62.5	5.4	55.0	706.2	40.0	32.0	40.0	22.9	24.5	13.1	375.3	509.0	85.4	14.0	
07/26/03	0.0	0	0.0	37.0	828.0	27.0	24.0	27.0	8.2	0	23.7	551.2	27.0	8.2	0.0	Sat.
	2111.0	315.0	4.6	293.7		236.0	225.0	232.0	140.3	15.2	142.5		2347.0	455.3	8.1	
07/28/03	512	78.7	3.0	58.8	887.3	41.5	31	30	25.4	11.8	18.4	454.5	553.5	104.1	5.3	
07/29/03	522	73.9	1.5	46.9	826.6	42.5	34	44	29.4	8.3	28.2	543	564.5	103.3	3.5	
07/30/03	521	75.8	1.8	55.7	860.5	33	28	28	21.2	17.6	24.6	497.5	554.0	97.0	5.7	
07/31/03	476	61.9	3.3	56.1	985.0	36	30	31	18.2	0	22.2	448.6	512.0	80.1	3.3	
									*286.9							
SUB-TOTAL	2031.0	290.3	2.4	217.5		153.0	123.0	133.0	94.2	14.0	93.4		2184.0	384.5	5.5	
MTD	7,234.0	1059.2	4.7	1312.5		826.5	706.0	767.5	510.2	15.6	563.5		8,060.5	1,569.4	8.5	
AVG/DAY	380.7	55.7		69.1		43.5	37.2	40.4	26.9		29.7		424.2	82.6		
MTD PACE	7,234.0	1059		1,313		827	706	768	510		564		8,061	1569		

	BOOKINGS			ASSEMBLIES/PROD.				SHIPMENTS					BACKLOG	TOTAL	BACKLOG
	Daily	MTD	MTD PACE	Daily	MTD	MTD PACE	BUDGET	Daily	MTD	MTD PACE	BUDGET	BACKLOG	ON HAND	BACKLOG	OUT
3 -8" RSGV	142	5,163	5,163	483	6,705	6,705	6,480	87	5406	5,406	7,231	2,549	2,307	12,985	1
10-36" RSGV	9	638	638	23	370	370	959	76	883	883	1,082	268	123	2,419	7
MET Valves	0	341	341	15	180	180	333	13	209	209	333	952	111	302	89
Hydrants	78	1015	1,015	90	1,248	1,248	1,539	48	1335	1,335	1,823	1,121	364	1,985	11
Tap. Sleeves	7	210	210	0	73	73	218	0	133	133	181	228	20	742	57
FIELD LOK	30	3871	3,871					205	4263	4,263		225	225	15,916	
FTGS. TONS	-32.8	939.7	940	37.5	671.8	672	600	129	1429.4	1,429	1,550	2,314	562		60

cc: Bruce Clements; Tom Brakefield; Harry Crossfield; D. Diederich; S. Box; J. Swafford; G. Johnston; G. Casey

* Permit mod requiring the logging of iron poured on Unit 10 came into effect on 7/18/03.

/csh DG.

MWPS004630

Corp File

U.S. PIPE & FOUNDRY - CHATTANOOGA VALVE & FITTINGS PLANT

DAILY ACTIVITY REPORT

END OF MONTH — DATE: June 30 2003

		HAYES - LEMMERZ		#9 UNIT					#10 UNIT					TOTAL		
		TONS	LADLES	MOLDS	TONS	SCRAP %	TONS GROUND	AVG.# HR.	MOLDS	TONS	SCRAP %	TONS GROUND	AVG.# HR.	MOLDS	TONS	SCRAP %
	06/02/03		N/A	339	52	12.5	75.2	911	30.0	18.5	10.7	26.1	474.4	369	70.5	12.1
	06/03/03		N/A	446	71	0.0	69.2	809.0	39.5	29	0	28.7	526.2	485.5	100.0	0.0
	06/04/03		N/A	514	81.1	10.4	66.7	668.8	45	20.2	9.9	26.2	433.3	559	101.3	10.3
	06/05/03		N/A	378	54	12.4	66.2	840.9	38.5	18.8	19	28.6	530.5	416.5	72.8	14.2
	06/06/03		N/A	0	1.4	0.0	64.3	718.5	28	17.8	10.7	21.3	430.6	28	19.2	3.6
Sat.	06/07/03		N/A				46.8	656.0	26.5	15.7	11.6	15.7	499.5	26.5	15.7	11.6
	SUB-TOTAL	0.0	0.0	1677.0	259.5	8.2	388.4		207.5	120.0	9.8	146.6		1884.5	379.5	8.7
	06/09/03		N/A	410	53.8	0.8	62.3	726.4	40	11.4	16.8	22.6	410.4	450	75.2	3.6
	06/10/03		N/A	394	80.1	1.7	66.7	730.9	36	22.1	12.5	22.8	413.6	430	102.2	4.3
	06/11/03		N/A	351	59.6	8.3	62.9	722.9	21	25.3	21	26.2	450.8	372	84.9	12.5
	06/12/03		N/A	331	70.7	4.7	64.0	595.1	25.5	9.1	19.3	26.6	470.2	356.5	79.8	6.7
	06/13/03		N/A	387	54.7	0.0	82.6	822.0	31	15	5.5	26.1	450.1	418	69.7	1.1
Sat.	06/14/03		N/A				69.0	919.7	18	30.7	0	18	468.9	18	30.7	0.0
		0.0	0.0	1873.0	328.9	3.2	407.5		171.5	113.6	11.8	142.3		2044.5	442.5	5.5
	06/16/03		N/A	264	55.3	0.0	56.2	669.0	26.5	20.1	0	25	453.7	290.5	75.4	0.0
	06/17/03		N/A	306	63.1	7.8	87.8	798.0	35	11.8	60.9	25.5	464.5	341	74.9	24.0
	06/18/03		N/A	567	66.4	5.8	87.0	791.1	35.5	26.5	10.8	27.7	503.6	602.5	92.9	7.3
	06/19/03		N/A	530	69	5.4	84.7	763.4	25	19.4	15.1	27.6	558	555	88.4	7.7
	06/20/03		N/A	0	-4.6	0.0	75.9	807.1	29	28.7	12.5	22.5	554.7	29.0	24.1	26.3
Sat.	06/21/03		N/A	0	0.5	0.0	53.6	793.5	15	21.6	0	14.2	505.4	15.0	22.1	0.0
		0.0	0.0	1667.0	249.7	6.6	445.2		166.0	128.1	18.6	142.5		1833.0	377.8	11.0
	06/23/03		N/A	506	68.2	3.7	114.3	1039.4	38.0	13.2	40.9	23.1	525.2	544.0	81.4	12.6
	06/24/03		N/A	518	74	1.5	78.6	748.6	32.0	28.9	11.1	20.1	447.3	550.0	102.9	4.4
	06/25/03		N/A	580	77.5	1.0	75.4	721.4	35.0	21.4	34.8	21.8	479.6	615.0	98.9	11.0
	06/26/03		N/A	466.0	49.4	0.1	71.5	693.7	39.5	21.1	29.1	31.9	644.3	505.5	70.5	11.0
	06/27/03		N/A	521.0	78.2	3.6	71.0	747.8	34.0	16.4	37.4	25.6	538	555.0	94.6	11.9
Sat.	06/28/03		N/A	0.0	0	0.0	45.5	686.7	0.0	14	0	13.8	509.4	0.0	14.0	0.0
		0.0	0.0	2591.0	347.3	2.1	456.3		178.5	115.0	27.0	136.3		2769.5	462.3	9.8
	06/30/03		N/A	0	-2.4	0.0	51.1	824.0	0	-2.9	0	10.7	498.6	0.0	-5.3	0.0
														0.0	0.0	
	SUB-TOTAL	0.0	0.0	0.0	-2.4		51.1		0.0	-2.9		10.7		0.0	-5.3	0.0
	MTD	-	0.0	7,808.0	1183.0	4.9	1748.5		723.5	473.8	17.9	578.4		8,531.5	1,656.8	9.0
	AVG/DAY	0.0		371.8	56.3		83.3		34.5	22.6		27.5		406.3	78.9	
	MTD PACE	-		7,808.0	1183		1,749		724	474		578		8,532	1657	

	BOOKINGS			ASSEMBLIES/PROD.				SHIPMENTS			BUDGET	BACKLOG	BACKLOG	TOTAL	DAYS
	Daily	MTD	MTD PACE	Daily	MTD	MTD PACE	BUDGET	Daily	MTD	MTD PACE	NO.		ON HAND	ON HAND	OUT
3 -8" RSGV	284	5,558	5,558	0	5,952	5,952	6,835	476	6128	6,128	7,362	3,192	2,236	11,193	3
10-36" RSGV	89	867	867	0	747	747	1,022	39	718	718	1,101	497	205	2,886	8
MET Valves	22	171	171	0	499	499	333	0	358	358	333	902	160	336	30
Hydrants	22	1443	1,443	0	1,401	1,401	1,622	72	1477	1,477	1,017	1,539	198	1,892	19
Tap. Sleeves	7	121	121	0	61	61	228	0	112	112	254	163	46	813	34
FIELD LOK	0	2115	2,115					55	1540	1,540		376	376	19,378	
FTGS. TONS	33.6	1242.0	1,242	-4.3	931.5	932	616	37	1595.8	1,596	1,578	2,627	608		58

cc: C. Edwards; Tom Brakefield; Harry Crossfield; D. Diederich; S. Box; J. Swafford; G. Johnston; L.Jones; G. Casey

/csh

MWPS004631

U.S. PIPE & FOUNDRY - CHATTANOOGA VALVE & FITTINGS PLANT
DAILY ACTIVITY REPORT

MONTH END

DATE: May 30-31 2003

	HAYES - LEMMERZ		#9 UNIT					#10 UNIT					TOTAL		
	TONS	LADLES	MOLDS	TONS	SCRAP %	TONS GROUND	AVG.# HR.	MOLDS	TONS	SCRAP %	TONS GROUND	AVG.# HR.	MOLDS	TONS	SCRAP %
05/01/03	15.8	4.0	454	56.9	7.6	56.9	744	39.0	23	9	19.6	545.5	493	79.9	8.0
05/02/03	N/A		605	86.2	1.0	45.4	720.3	38.5	12.9	30.4	19.4	538.6	643.5	99.1	6.2
Sat.											18.5	754.9			
SUB-TOTAL	15.8	4.0	1059.0	143.1	3.7	102.3		77.5	35.9		57.5		1136.5	179.0	7.0
05/05/03	23	6.0	205	39.5	4.7	56.6	794.4	39	1.8	42.2	25.1	523	244	41.3	7.2
05/06/03	23.1	6.0	430	64.2	3.5	66.2	802.8	35	44.4	7.4	22.9	521.5	465	106.6	5.0
05/07/03	10	3.0	444	70.8	2.1	59.5	794.4	37	33.9	2.2	26.6	606.1	481	104.7	2.2
05/08/03	7.8	2.0	467	58.6	2.8	59.4	799.9	33	21	14.5	22.7	668.9	500	79.6	6.2
05/09/03		N/A	287	58.4	4.6	48.9	687.0	30.5	21.5	0	21.9	608	317.5	79.9	3.4
05/10/03	Sat.					39.8	625.3	12.5			9.3	440.9	12.5		
	63.9	17.0	1833.0	291.5	3.4	330.4		187.0	122.6	7.0	128.5		2020.0	414.1	4.5
05/12/03		N/A	353	56.1	14.5	56.4	778.0	34.5	33.5	21.9	19	495.4	387.5	89.6	17.4
Furnace Problem 05/13/03		N/A	40	1.9	46.0	66.6	740.4	27.5	18.6	0.0	27.3	496.0	76.5	20.5	7.5
05/14/03		N/A	558	65.2	5.1	64.9	779.7	25	13.2	4.6	18.6	433.7	583	78.4	5.0
05/15/03		N/A	580	76.4	8.6	59.0	688.0	27.5	12.5	22.8	20.6	458.9	607.5	88.9	10.9
05/16/03		N/A	350	89.8	1.2	57.4	698.0	37.5	14.5	18.9	22.6	627.2	387.5	104.3	4.1
05/17/03	Sat.					43.3	680.0	16.5			13.7	489.6	16.5		
	0.0	0.0	1890.0	289.4	7.4	347.6		168.5	92.3	15.6	121.8		2058.5	381.7	9.5
05/19/03	74.7	20.0	421	76.3	7.4	66.9	731.7	38.0	31.5	17.9	30.3	550.6	459.0	107.8	10.8
05/20/03	68.6	18.0	528	77.7	5.6	78.4	886.2	42.0	23.3	0.6	27	492.1	570.0	101.0	4.5
05/21/03	59.7	16.0	506	65.8	5.2	76.1	890.2	35.0	26.3	4.1	34.3	628.9	541.0	92.1	4.9
05/22/03	61.3	16.0	436.0	62.7	0.5	69.2	713.6	43.0	27.1	0	28.6	577.3	479.0	89.8	0.4
05/23/03		N/A	409.0	84.5	0.0	56.9	687.7	39.5	23.8	3.8	26.1	550.8	448.5	108.3	0.3
05/24/03	Sat.	N/A				66.9	939.9				21	561.6			
	264.3	70.0	2300.0	367.0	3.7	414.4		197.5	132.0	6.5	167.3		2497.5	499.0	4.5
05/26/03	Holiday												0.0	0.0	
05/27/03		N/A	475	86.5	5.9	61.0	731.3	42	35.5	6.3	27.3	450.9	517.0	122.0	6.1
05/28/03		N/A	511	68.3	4.3	54.9	597.9	37.5	28.2	3.9	26.7	441.3	548.5	96.5	4.2
05/29/03		N/A	392	61.6	3.8	53.6	747.0	40	22.5	9	27.1	603.5	432.0	84.1	5.3
05/30/03		N/A	538	113.6	0.9	54.7	687.7	30.5	30.1	6.4	14.6	380	568.5	143.7	2.1
Sat. 05/31/03				-2.3		41.3	729.6	17	11.2	0	23.9	484.1	17.0	8.9	0.0
SUB-TOTAL	0.0	0.0	1916.0	327.7	3.6	266.5		167.0	127.5	5.5	119.6		2083.0	455.2	4.2
MTD	344.0	91.0	8,998.0	1418.7	4.4	1460.2		797.5	510.3	9.0	594.7		9,795.5	1,929.0	5.7
AVG/DAY	38.2		428.5	67.6		69.5		38.0	24.3		28.3		466.5	91.9	
MTD PACE	803		8,998.0	1419		1,460		798	610		595		9,796	1929	

	BOOKINGS			ASSEMBLIES/PROD.				SHIPMENTS			BUDGET	BACKLOG	BACKLOG	TOTAL	DAYS
	Daily	MTD	MTD PACE	Daily	MTD	MTD PACE	BUDGET	Daily	MTD	MTD PACE	NO.		ON HAND	ON HAND	OUT
3 -8" RSGV	342	5,152	5,152	190	5,895	5,895	7,190	410	6097	6,097	6,697	3,783	2,834	11,874	3
10-36" RSGV	70	998	998	34	878	878	1,076	95	947	947	1,002	398	204	2,930	5
MET Valves	0	456	456	21	307	307	333	46	299	299	333	1,106	55	205	71
Hydrants	24	1836	1,836	70	1,395	1,395	1,705	56	1329	1,329	1,700	1,993	732	2,114	19
Tap. Sleeves	15	115	115	0	68	68	238	13	101	101	239	161	60	866	33
FIELD LOK	-2342	3122	3,122					0	3855	3,855		58	58	20,306	
FTGS. TONS	122.3	1221.6	1,222	38.6	642.3	642	533	179.7	1651.9	1,652	1,439	2,866	539		90

cc: C. Edwards; Tom Brakefield; Harry Crossfield; D. Diederich; S. Box; J. Swafford; G. Johnston; L.Jones; G. Casey

/csh

MWPS004632

Emp file

U.S. PIPE & FOUNDRY - CHATTANOOGA VALVE & FITTINGS PLANT
DAILY ACTIVITY REPORT

MONTH END DATE: APRIL 30 2003

		HAYES - LEMMERZ		#9 UNIT					#10 UNIT					TOTAL		
		TONS	LADLES	MOLDS	TONS	SCRAP %	TONS GROUND	AVG.# HR.	MOLDS	TONS	SCRAP %	TONS GROUND	AVG.# HR.	MOLDS	TONS	SCRAP %
	04/01/03	63.0	17.0	465	59.2	15.1	66.5	782	38.0	19.7	12.3	27.8	561.9	503	78.9	14.4
	04/02/03	64.9	18.0	280	38.9	21.3	62.9	708.6	37.5	8.5	15.6	28.1	509.2	317.5	47.4	20.3
	04/03/03	46.7	13.0	175	28.3	9.9	49.4	679.2	33.5	27.8	7.2	20.6	490.4	208.5	56.1	8.6
	04/04/03	43.2	12.0	358	62.3	8.4	60.0	938.9	37.5	33.9	10.4	14.1	478.3	395.5	96.2	9.1
Sat.	04/05/03	N/A					43.7	556.6	18.5			6.1	349.8	18.5	0.0	
	SUB-TOTAL	217.8	60.0	1278.0	188.7	13.6	282.5		165.0	89.9	9.6	96.7		1443	278.6	12.4
	04/07/03	50.5	14.0	487	81	0.0	64.0	729.0	39.5	36.9	1.4	23.2	420.8	526.5	117.9	0.4
	04/08/03	53.8	15.0	365	65.2	19.4	73.2	820.4	35	7.7	51.4	30.4	553.5	400.0	72.9	24.6
	04/09/03	48	13.0	351	72.2	4.5	70.9	723.8	30	25.8	16.8	24.6	446.7	381.0	98	8.1
	04/10/03	25.8	7.0	426	53.7	10.4	71.2	881.2	32	10.5	7	19	471.7	458.0	64.2	9.9
	04/11/03		N/A	458	62.9	8.7	55.7	782.0	31.5	43.4	2.9	16.8	466.4	489.5	106.3	6.5
Sat.							49.4	731.5	16.5			13.5	434.8			
		178.1	49.0	2087.0	335.0	8.6	384.4		184.5	124.3	11.4	127.5		2255.0	459.3	9.3
	04/14/03	77.5	21.0	417	65.1	9.9	50.3	606.6	32	46.2	5.8	25.3	510.8	449.0	111.3	8.2
	04/15/03	66.5	18.0	414	95.2	0.1	72.2	761.7	46.5	24.3	1.2	25.2	416.7	460.5	119.5	0.3
	04/16/03	71.4	20.0	325	52.8	12.3	69.9	874.3	32	24	17.5	27.5	496.7	357.0	76.8	14.0
	04/17/03	58.6	16.0	395	85.9	2.6	45.0	634.6	21.5	28.6	4.1	17.5	389.2	416.5	114.5	3.0
	Holiday															
		274.0	75.0	1561.0	299.0	5.4	237.4		132.0	123.1	7.1	95.5		1683.0	422.1	5.9
	04/21/03	45.6	12.0	421	76.5	5.6	66.2	754.0	31.0	18.3	4.5	30.4	503.9	452.0	94.8	5.4
	04/22/03	37.9	10.0	422	70.4	4.2	63.9	836.2	34.0	35.6	4.3	27.9	507.6	456.0	106.0	4.2
	04/23/03	37.3	10.0	430	70.5	7.3	63.2	766.4	33.5	30.9	0	22.9	416.8	463.5	101.4	5.2
	04/24/03	34.3	9.0	455.0	56.6	5.1	53.2	799.8	35.0	29	7.3	28.5	634	490.0	85.6	5.9
	04/25/03		N/A	425.0	68.2	3.9	45.3	652.2	32.0	27.1	6.5	18.7	427	457.0	95.3	4.6
Sat.	04/26/03						36.6	574.7	31.0			16.5	470.5			
		155.1	41.0	2153.0	342.2	5.2	328.4		196.5	140.9	4.5	144.9		2318.5	483.1	5.0
	04/28/03	37.8	10.0	358	78.8	5.0	62.3	757.5	40	38.8	15.6	21	347.4	398.0	117.6	8.8
	04/29/03	34.5	9.0	383	59.3	2.8	62.5	824.0	40.5	32.3	10.8	23.6	537	423.5	91.6	5.8
	04/30/03	18.4	5.0	447	71.6	7.0	58.9	729.4	33	26.5	4.6	32.3	653.9	480.0	98.1	6.3
	SUB-TOTAL	90.7	24.0	1188.0	209.7	5.1			113.5	97.6	11.2			1301.5	307.3	7.1
	MTD	915.7	249.0	8,257.0	1374.6	7.3	1232.7		791.5	575.8	8.6	464.6		9,001.0	1,950.4	7.7
	AVG/DAY	48.2		393.2	65.5		58.7		37.7	27.4		22.1		428.6	92.9	
	MTD PACE	916		8,257.0	1375		1,233		792	576		465		9,001	1950	

	BOOKINGS			ASSEMBLIES/PROD.				SHIPMENTS			BUDGET	BACKLOG	BACKLOG	TOTAL	DAYS
	Daily	MTD	MTD PACE	Daily	MTD	MTD PACE	BUDGET	Daily	MTD	MTD PACE	NO.		ON HAND	ON HAND	OUT
3 - 8" RSGV	175	5,523	5,523	327	5,958	5,958	7,190	1208	7021	7,021	6,394	4,209	3,359	12,075	3
10-36" RSGV	3	886	886	20	1,128	1,128	1,076	151	963	963	956	465	322	2,952	3
MET Valves	0	636	636	16	278	278	333	0	204	204	333	987	60	179	67
Hydrants	70	1,525	1,525	34	1,210	1,210	1,705	150	1256	1,256	1,621	1,570	632	2,000	16
Tap. Sleeves	1	233	233	10	171	171	238	0	187	187	187	147	56	899	11
FIELD LOK	0	1,273	1,273					0	1050	1,050		91	91	23,655	
FTGS. TONS	29	1618.0	1,618	41.5	764.2	764	490	100.2	1417	1,417	1,377	3,207	669		89

cc: C. Edwards; Tom Brakefield; Harry Crossfield; D. Diederich; S. Box; J. Swafford; G. Johnston; L.Jones; G. Casey

/csh

MWPS004633

U.S. PIPE & FOUNDRY - CHATTANOOGA VALVE & FITTINGS PLANT
DAILY ACTIVITY REPORT

MONTH END — DATE: March 31 2003

	HAYES - LEMMERZ		#9 UNIT					#10 UNIT					TOTAL		
	TONS	LADLES	MOLDS	TONS	SCRAP %	TONS GROUND	AVG.# HR.	MOLDS	TONS	SCRAP %	TONS GROUND	AVG.# HR.	MOLDS	TONS	SCRAP %
03/03/03	75.5	20.0	360	49.6	12.2	84.1	735.9	33.5	17.5	14.2	24.9	587	393.5	67.1	12.7
03/04/03	73.3	21.0	435	61.9	6.8	84.5	742.8	23.5	30.5	0	26.5	536.4	458.5	92.4	4.7
03/05/03	67.4	19.0	476	71.9	4.2	55.8	488.5	28	22.4	13.6	25.1	457.1	504	94.3	6.6
03/06/03	73.6	21.0	459	67.6	6.6	48.5	557.2	26.5	17.7	2.9	28	570.8	485.5	85.3	5.9
03/07/03			365	45.4	6.9	61.6	703.9	20.5	16.3	27.6	22.4	451.8	385.5	61.7	13.5
03/08/03						48.9	724.6				11.9	308.8			
SUB-TOTAL	289.8	81.0	2095.0	296.4	7.1	383.4		132.0	104.4	11.2	138.8		2227	400.8	8.2
03/10/03	74.2	21.0	296	59.4	4.2	51.5	584.7	32.5	22.8	5.9	19.9	389.7	328.5	82.2	4.6
03/11/03	73.9	21.0	392	73.5	0.7	58.5	569.7	32.5	26.7	10.4	18.9	385.3	424.5	100.2	3.5
03/12/03	64.9	18.0	482	68.4	4.1	58.9	598.5	33.5	19.3	19.6	15.2	346.2	515.5	87.7	8.0
03/13/03	57.8	16.0	472	76.4	2.7	49.9	655.5	29	17.3	15.4	25.6	568.6	501.0	93.7	5.3
03/14/03			441	74.4	6.8	59.1	828.5	32.5	22.9	6.1	22.4	497.2	473.5	97.3	6.6
03/15/03						71.4	1002.2				13.7	396.1			
	270.8	76.0	2083.0	352.1	3.7	349.3		160.0	109.0	11.1	116.7		2243.0	461.1	6.6
*Cupola down on 3/17/03 — 03/17/03	2.1	1.0	72	10.6	28.2	88.6	875.2	28	12.8	11.2	21	382.2	100.0	23.4	19.8
03/18/03	43.2	12.0	508	78.2	3.8	94.4	903.2	33.5	31.9	0.0	27.3	496.2	541.5	110.1	2.7
03/19/03	70.1	19.0	472	80.1	0.0	90.7	898.1	37	23.7	15.7	24.1	486.8	509.0	103.8	3.9
03/20/03	43.5	12.0	450	69.3	5.1	77.3	954.8	38.5	18.3	29.8	23.5	547.5	488.5	87.6	11.6
03/21/03	53.6	15.0	424	68.6	3.4	66.2	871.4	39	33.5	10.3	21.4	475.4	463.0	102.1	5.8
03/22/03						36.0	600.8				14.4	456.1			
	212.5	59.0	1926.0	306.8	4.1	463.2		176.0	120.2	12.8	131.7		2102.0	427.0	6.8
03/24/03	77.3	21.0	382	80.6	10.4	69.2	808.9	47.0	33.1	0	18.9	591.5	429.0	113.7	7.6
03/25/03	72.6	20.0	442	89.2	8.7	71.7	801.0	38.0	26.7	0	19.7	448.2	480.0	115.9	6.8
03/26/03	67.9	19.0	373	46.1	16.1	79.3	901.2	32.0	37.8	5.5	26	473.6	405.0	83.9	11.6
03/27/03	54.0	15.0	412.0	56.9	13.8	59.7	897.0	47.5	28.8	12.8	21	518.9	459.5	85.7	13.4
03/28/03	72.4	20.0	461.0	72.1	6.7	52.4	734.7	38.0	27.6	0	23.4	527.3	499.0	99.7	2.6
03/29/03						35.5	572.3				16.6	622.7			
	344.2	95.0	2070.0	344.9	10.6	367.8		202.5	164.0	2.5	125.6		2272.5	498.9	8.3
03/31/03	72.9	20.0	406	61.4	1.2	63.5	686.4	30	28.6	6.6	26.8	486.4	436.0	90.0	3.0
SUB-TOTAL	72.9	20.0	406.0	61.4				30.0	28.6				436.0	90.0	
MTD	1,190.2	331.0	8,580.0	1361.6	6.3	1,553.7		700.5	516.2	9.0	511.8		9,280.5	1,877.8	7.0
AVG/DAY	62.6		408.6	64.8		74.0		33.4	24.6		24.4		441.9	89.4	
MTD PACE	1,315		8,580.0	1362		1,554		701	516		512		9,281	1878	

	BOOKINGS			ASSEMBLIES/PROD.				SHIPMENTS			BUDGET	BACKLOG	BACKLOG	TOTAL	DAYS
	Daily	MTD	MTD PACE	Daily	MTD	MTD PACE	BUDGET	Daily	MTD	MTD PACE	NO.		ON HAND	ON HAND	OUT
3 - 8" RSGV	424	8,295	6,296	259	5,438	5,438	7,190	234	4,486	4,486	6,079	6,086	4,563	13,086	6
10-36" RSGV	36	891	891	37	1,229	1,229	1,076	13	822	822	909	608	421	2,782	3
MET Valves	1	196	196	7	193	193	333	289	401	401	333	639	51	120	65
Hydrants	0	1,218	1,218	81	1,911	1,911	1,705	227	1,416	1,416	1,638	1,303	488	2,044	9
Tap. Sleeves	11	122	122	6	168	168	238	0	163	163	210	114	31	933	11
FIELD LOK	0	973	973					100	1,020	1,020		115	115	24,705	
FTGS. TONS	79.6	1,596	1,596	39.8	831.8	832	865	50.8	1194.8	1,195	1,313	2,986	664		77

cc: C. Edwards; Tom Brakefield; Harry Crossfield; D. Diederich; S. Box; J. Swafford; G. Johnston; L.Jones; G. Casey

/csh

MWPS004634

U.S. PIPE & FOUNDRY - CHATTANOOGA VALVE & FITTINGS PLANT
DAILY ACTIVITY REPORT

MONTH END

DATE: March 31 2003

	HAYES - LEMMERZ		#9 UNIT					#10 UNIT					TOTAL		
	TONS	LADLES	MOLDS	TONS	SCRAP %	TONS GROUND	AVG.# HR.	MOLDS	TONS	SCRAP %	TONS GROUND	AVG.# HR.	MOLDS	TONS	SCRAP %
03/03/03	75.5	20.0	360	49.6	12.2	84.1	735.9	33.5	17.5	14.2	24.9	587	393.5	67.1	12.7
03/04/03	73.3	21.0	435	61.9	6.8	84.5	742.8	23.5	30.5	0	26.5	536.4	458.5	92.4	4.7
03/05/03	67.4	19.0	476	71.9	4.2	55.8	488.5	28	22.4	13.6	25.1	457.1	504	94.3	6.6
03/06/03	73.6	21.0	459	67.6	6.6	48.5	557.2	26.5	17.7	2.9	28	570.8	485.5	85.3	5.9
03/07/03			365	45.4	6.9	61.6	703.9	20.5	16.3	27.6	22.4	451.8	385.5	61.7	13.5
03/08/03						48.9	724.6				11.9	308.8			
SUB-TOTAL	289.8	81.0	2095.0	296.4	7.1	383.4		132.0	104.4	11.2	138.8		2227	400.8	8.2
03/10/03	74.2	21.0	298	59.4	4.2	51.5	584.7	32.5	22.8	5.9	19.9	389.7	328.5	82.2	4.6
03/11/03	73.9	21.0	392	73.5	0.7	58.5	569.7	32.5	26.7	10.4	18.9	385.3	424.5	100.2	3.5
03/12/03	64.9	18.0	482	68.4	4.1	58.9	598.5	33.5	19.3	19.6	15.2	346.2	515.5	87.7	8.0
03/13/03	57.8	16.0	472	76.4	2.7	49.9	655.5	29	17.3	15.4	25.6	568.6	501.0	93.7	5.3
03/14/03			441	74.4	6.8	59.1	826.5	32.5	22.9	6.1	22.4	497.2	473.5	97.3	6.6
03/15/03						71.4	1002.2				13.7	396.1			
	270.8	76.0	2083.0	352.1	3.7	349.3		160.0	109.0	11.1	115.7		2243.0	461.1	5.6
*Cupola down on 3/17/03 03/17/03	2.1	1.0	72	10.6	28.2	88.6	875.2	28	12.8	11.2	21	382.2	100.0	23.4	19.8
03/18/03	43.2	12.0	508	78.2	3.8	94.4	903.2	33.5	31.9	0.0	27.3	496.2	541.5	110.1	2.7
03/19/03	70.1	19.0	472	80.1	0.0	90.7	898.1	37	23.7	15.7	24.1	486.8	509.0	103.8	3.9
03/20/03	43.5	12.0	450	69.3	5.1	77.3	954.8	38.5	18.3	29.8	23.5	547.5	488.5	87.6	11.6
03/21/03	53.6	15.0	424	68.6	3.4	66.2	871.4	39	33.5	10.3	21.4	475.4	463.0	102.1	5.8
03/22/03						36.0	600.8				14.4	456.1			
	212.5	59.0	1926.0	308.8	4.1	453.2		176.0	120.2	12.8	131.7		2102.0	427.0	6.8
03/24/03	77.3	21.0	382	80.6	10.4	69.2	808.9	47.0	33.1	0	18.9	591.5	429.0	113.7	7.6
03/25/03	72.6	20.0	442	89.2	8.7	71.7	801.0	38.0	26.7	0	19.7	448.2	480.0	115.9	6.8
03/26/03	67.9	19.0	373	46.1	16.1	79.3	901.2	32.0	37.8	5.5	26	473.6	405.0	83.9	11.6
03/27/03	54.0	15.0	412.0	56.9	13.8	59.7	897.0	47.5	28.8	12.9	21	518.9	459.5	85.7	13.4
03/28/03	72.4	20.0	461.0	72.1	6.7	52.4	734.7	38.0	27.6	0	23.4	527.3	499.0	99.7	2.6
03/29/03						35.5	572.3				16.6	622.7			
	344.2	95.0	2070.0	344.9	10.6	367.8		202.5	154.0	2.5	125.6		2272.5	498.9	8.3
03/31/03	72.9	20.0	408	61.4	1.2	63.5	688.4	30	28.6	6.6	26.8	486.4	436.0	90.0	3.0
SUB-TOTAL	72.9	20.0	408.0	61.4				30.0	28.6				436.0	90.0	
MTD	1,190.2	331.0	8,580.0	1361.6	6.3	1,553.7		700.5	516.2	9.0	511.8		9,280.5	1,877.8	7.0
AVG/DAY	62.6		408.8	64.8		74.0		33.4	24.6		24.4		441.9	89.4	
MTD PACE	1,315		8,580.0	1362		1,554		701	516		512		9,281	1878	

	BOOKINGS			ASSEMBLIES/PROD.				SHIPMENTS			BUDGET NO.	BACKLOG	BACKLOG ON HAND	TOTAL ON HAND	DAYS OUT
	Daily	MTD	MTD PACE	Daily	MTD	MTD PACE	BUDGET	Daily	MTD	MTD PACE					
3 - 8" RSGV	424	6,295	6,295	269	5,438	5,438	7,190	234	4,485	4,485	6,079	6,086	4,663	13,086	6
10-36" RSGV	36	891	891	37	1,229	1,229	1,076	13	822	822	909	608	421	2,782	3
MET Valves	1	196	196	7	193	193	333	289	401	401	333	639	61	120	65
Hydrants	0	1,218	1,218	81	1,911	1,911	1,705	227	1,416	1,416	1,638	1,303	488	2,044	9
Tap. Sleeves	11	122	122	6	158	158	238	0	163	163	210	114	31	933	11
FIELD LOK	0	973	973					100	1,020	1,020		116	116	24,706	
FTGS. TONS	79.6	1,596	1,596	39.8	831.8	832	865	60.8	1194.8	1,195	1,313	2,986	654		77

cc: C. Edwards; Tom Brakefield; Harry Crossfield; D. Diederich; S. Box; J. Swafford; G. Johnston; L.Jones; G. Casey

Provided by D. Lo per G. Creekan

/csh

MWPS004635

19 days

U.S. PIPE & FOUNDRY - CHATTANOOGA VALVE & FITTINGS PLANT
DAILY ACTIVITY REPORT

MONTH END DATE: Feb. 28 2003

	HAYES - LEMMERZ			#9 UNIT			#10 UNIT			TOTAL			
	TONS	LADLES	NOTES	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %	
02/03/03	63.8	17.0		470	64.8	2.7	22.0	10.7	29.4	492	75.5	7.7	
02/04/03	67.9	18.0		476	63.8	2.6	34	24	5.7	510	87.8	3.4	
02/05/03	58.2	15.0		502	51.8	5.3	31	21	6.3	533	72.8	5.6	
02/06/03	68.2	18.0		462	73	0.9	36.5	30.3	10.7	498.5	103.3	4.0	
02/07/03			N/A	522	54.3	1.0	22.5	36.7	1.2	544.5	91.0	1.0	
SUB-TOTAL	258.1	68.0		2432.0	307.7	2.4	146.0	122.7	8.4	2578	430.4	4.2	
02/10/03	63.3	16.0		289	61.3	0.4	34.5	17.6	15.6	323.5	78.9	4.3	
02/11/03	63.3	16.0		412	62.5	3.4	30.5	23.4	0	442.5	85.9	2.5	
02/12/03	62.3	16.0		502	66.5	5.8	37.5	10.9	24.8	539.5	77.4	9.0	
02/13/03	65.7	17.0		390	60.5	6.5	21	20.9	14.8	411.0	81.4	8.9	
02/14/03	62.3	16.0		420	66	0.0	26.5	25.2	0	446.5	91.2	0.0	
SUB-TOTAL	316.9	81.0		2013.0	316.8	3.3	150.0	98.0	9.6	2163.0	414.8	4.9	
02/17/03		HOLIDAY								0.0	0.0		HOLIDAY
02/18/03	78.8	21.0		312	47.8	11.1	25.5	7.5	37	337.5	55.3	15.8	
02/19/03	81.8	22.0		432	74.9	3.4	26	18.7	7.5	458.0	93.6	4.2	
02/20/03	88.6	24.0		466	76.4	5.3	20	11.8	42	486.0	88.2	12.7	
02/21/03	76.9	20.0		580	58.6	8.5	39	21.6	16.2	619.0	80.2	10.7	
SUB-TOTAL	326.1	87.0		1790.0	257.7	6.6	110.5	59.6	23.9	1900.5	317.3	10.7	
02/24/03	69.7	18.0		491	86.1	4.9	25.0	26.7	8.7	516.0	112.8	5.9	
02/25/03	74.2	20.0		426	67.7	3.5	20.5	17.2	0	446.5	84.9	2.9	
02/26/03	65.5	18.0		427.0	81.8	7.7	16.5	29	3.6	443.5	110.8	6.7	
02/27/03	74.3	19.0		466.0	94.2	5.9	22.0	25.3	0	488.0	119.5	5.4	
02/28/03	71.5	18.0		425.0	61.9	5.4	21.0	16.1	5.9	446.0	78.0	5.5	
SUB-TOTAL	355.2	93.0		2235.0	391.7	5.6	105.0	114.3	4.2	2340.0	506.0	5.3	
										0.0	0.0		
SUB-TOTAL	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
MTD	1256.3	329.0		8470.0	1273.9	4.5	511.5	394.6	11.2	8981.5	1668.5	6.2	
AVG/DAY	69.8			445.8	67.0		26.9	20.8		472.7	87.8		
MTD PACE	1326			8470	1274		512	395		8982	1669		

	BOOKINGS			ASSEMBLIES/PROD.				SHIPMENTS			BUDGET	BACKLOG	BACKLOG	TOTAL	DAYS
	Daily	MTD	MTD PACE	Daily	MTD	MTD PACE	BUDGET	Daily	MTD	MTD PACE	NO.		ON HAND	ON HAND	OUT
3 - 8" RSGV	153	5784	5784	362	5331	5331	6480	308	5789	5789	3875	3,506	2786	11,642	3
10-36" RSGV	41	851	851	89	1066	1066	969	29	790	790	690	517	280	2388	4
MET Valves	0	248	248	0	150	150	333	0	27	27	333	751	11	349	99
Hydrants	75	1480	1480	70	1431	1431	1639	3	1367	1367	1012	1474	238	1556	17
Tap. Sleeves	5	168	168	9	270	270	218	0	99	99	141	173	81	940	7
FIELD LOK	0	1881	1881					0	1491	1491		664	664	26285	
FTGS. TONS	0.5	1494.8	1495	60.9	918.4	918	600	108.5	1142.6	1143	858	2475	521		53

cc: C. Edwards; Tom Brakefield; Harry Crossfield; D. Diederich; S. Box; J. Swafford; G. Johnston; L.Jones; G. Casey

/csh

MWPS004636

U.S. PIPE & FOUNDRY - CHATTANOOGA VALVE & FITTINGS PLANT
DAILY ACTIVITY REPORT

END OF MONTH

DATE: JAN. 31 2003

	HAYES - LEMMERZ			#9 UNIT			#10 UNIT			TOTAL		
DATE	TONS	LADLES	NOTES	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %
01/01/03	HOLIDAY									0	0.0	
01/02/03			DOWN			DOWN	20	12.3	0	20	12.3	0.0
01/03/03			DOWN			DOWN	25.5	12.4	0	25.5	12.4	0.0
										0	0.0	
										0	0.0	
										0	0.0	
SUB-TOTAL	0.0	0.0		0.0	0.0		45.5	24.7	0	45.5	24.7	0.0
01/06/03	77	20.0		343	36.1	0.0	31	32.3	0	374	68.4	0.0
01/07/03	69.2	18.0		374	35.8	11.9	15	9.4	44.6	389.0	45.2	21.5
01/08/03	66.2	17.0		387	48.8	8.8	26	12.2	15.2	413.0	61.0	10.1
01/09/03	68.3	18.0		349	38.4	4.4	26.5	9.7	13.8	375.5	48.1	6.4
01/10/03			N/A	407	59.9	3.9	47.5	21.5	0	454.5	81.4	2.9
SUB-TOTAL	280.7	73.0		1860.0	219.0	5.9	146.0	85.1	11.7	2006.0	304.1	7.6
01/13/03	50.8	13.0		370	59.7	2.5	32.5	41.8	7.7	402.5	101.5	4.7
01/14/03	68.1	18.0		379	58.3	3.4	39.5	12.9	30.7	418.5	71.2	9.8
01/15/03	61.9	16.0		401	62.2	8.8	25	15.7	7.2	426.0	77.9	8.5
01/16/03	58.2	15.0		431	45.6	5.1	22	18.3	12.6	453.0	63.9	7.4
01/17/03			N/A	371	77.9	1.1	16.5	21.5	2.3	387.5	99.4	1.4
SUB-TOTAL	239.0	62.0		1952.0	303.7	4.1	135.5	110.2	10.9	2087.5	413.9	6.0
01/20/03	73.6	19.0		445	86.5	0.8	21.0	12.2	6.1	466.0	98.7	1.5
01/21/03	51.9	14.0		331	59.8	4.8	36.0	22.9	2.8	367.0	82.7	4.3
01/22/03	60.0	16.0		463.0	84.3	2.7	39.0	19.4	0	502.0	103.7	2.2
01/23/03	59.9	16.0		442.0	84.8	1.4	17.5	28.1	0	459.5	112.9	1.0
01/24/03			N/A	482.0	84.4	1.9	15.0	-0.8	100	497.0	83.6	5.1
01/25/03			N/A	409.0	66.2	0.0	10.0	7	10	419.0	73.2	0.0
SUB-TOTAL	245.4	65.0		2572.0	466.0	1.9	138.5	88.8	4.6	2710.5	554.8	2.3
01/27/03	61.6	16.0		445	84.8	1.2	17	24.4	1.2	462.0	109.2	1.2
01/28/03	down		N/A	328	75.8	2.4	30	3.8	29.9	358.0	79.6	4.2
01/29/03	50.5	14.0		407	85	3.7	24.5	6.8	54	431.5	91.8	10.9
01/30/03	43.5	12.0		486	81.9	2.2	40	32	2.3	526.0	93.9	2.3
01/31/03			N/A	379	77.2	3.1	22.5	6.7	31.4	401.5	83.9	6.2
SUB-TOTAL	155.6	42.0		2045.0	384.7	2.5	134.0	73.7	15.6	2179.0	458.4	4.9
MTD	920.7	242.0		8429.0	1373.4	3.2	599.5	382.5	10.0	9028.5	1755.9	4.8
AVG/DAY	61.4			421.5	68.7		30.0	19.1		451.4	87.8	
MTD PACE	1228			8429	1373		600	383		9029	1756	

	BOOKINGS			ASSEMBLIES/PROD.				SHIPMENTS			BUDGET	BACKLOG	BACKLOG	TOTAL	DAYS
	Daily	MTD	MTD PACE	Daily	MTD	MTD PACE	BUDGET	Daily	MTD	MTD PACE	NO.		ON HAND	ON HAND	OUT
3 - 8" RSGV	50	5601	5601	263	5270	5270	6835	302	5619	5619	4480	1,281	692	10,886	3
10-36" RSGV	10	681	681	79	1288	1288	1022	103	904	904	670	226	141	2091	1
MET Valves	2	124	124	9	159	159	333	0	31	31	333	532	0	246	77
Hydrants	9	1504	1504	69	1596	1596	1622	15	1508	1508	1162	1167	122	1402	14
Tap. Sleeves	0	138	138	20	257	257	228	10	248	248	167	89	25	770	6
FIELD LOK	0	1723	1723					0	1501	1501		244	244	26428	
FTGS. TONS	35	1448.7	1449	28.1	805.8	806	675	144	1101.2	1101	986	1881	661		49

cc: C. Edwards; Tom Brakefield; Harry Crossfield; D. Diederich; S. Box; J. Swafford; G. Johnston; L.Jones; G. Casey

/csh

MWPS004637

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U.S. PIPE & FOUNDRY - CHATTANOOGA VALVE & FITTINGS PLANT
DAILY ACTIVITY REPORT

END OF MONTH DATE: DEC. 23-31 2002

	HAYES - LEMMERZ			#9 UNIT			#10 UNIT			TOTAL		
DATE	TONS	LADLES	NOTES	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %
12/02/02	76.0	22.0		318	48.5	1.4	15.0	7.4	0	333	55.9	1.2
12/03/02	72.4	19.0		256	39.8	3.0	21	8.7	26.2	277	48.5	8.2
12/04/02	64.1	17.0		100	18.9	5.5	22	15.7	1.4	122	34.6	3.7
12/05/02	61.4	17.0			-0.6	Down	25	11.4	0	25	10.8	5.2
12/06/02			N/A	443	92.2	0.5	49.5	18.9	2.5	492.5	111.1	0.8
										0	0.0	
SUB-TOTAL	**273.9**	**75.0**		**1117.0**	**198.8**	**2.0**	**132.5**	**62.1**	**5.7**	**1249.5**	**260.9**	**2.9**
12/09/02	76.5	20.0		258	51.9	5.1	25.5	38.8	17.7	283.5	90.7	10.9
12/10/02	65.7	18.0		372	57.4	3.5	25.5	14.4	0	397.5	71.8	2.8
12/11/02	59.2	16.0		351	63.6	0.5	23	16.6	23.2	374.0	80.2	6.2
12/12/02	34.5	9.0		271	53.8	2.5	18	13.9	25.2	289.0	67.7	8.3
12/13/02			N/A	300	44.5	7.5	49.5	19.2	2.3	349.5	63.7	6.0
SUB-TOTAL	**235.9**	**63.0**		**1552.0**	**271.2**	**3.6**	**141.5**	**102.9**	**16.2**	**1693.5**	**374.1**	**7.1**
12/16/02	73	19.0		427	53.6	0.6	26	36	10.5	453.0	89.6	4.8
12/17/02	65	17.0		429	48.8	22.6	26.5	12.6	12.4	455.5	61.4	20.7
12/18/02	64.9	17.0		367	44.6	9.4	19	22.8	0	386.0	67.4	6.5
12/19/02	59.3	16.0		415	63.4	1.6	22	18	0	437.0	81.4	1.2
12/20/02			N/A	330	61.9	2.7	25	32.8	0	355.0	94.7	2.1
SUB-TOTAL	**262.2**	**69.0**		**1968.0**	**272.3**	**7.5**	**118.5**	**122.2**	**4.8**	**2086.5**	**394.5**	**6.6**
SUB-TOTAL	**0.0**	**0.0**		**0.0**	**0.0**		**0.0**	**0.0**		**0.0**	**0.0**	
SUB-TOTAL	**0.0**	**0.0**		**0.0**	**0.0**		**0.0**	**0.0**		**0.0**	**0.0**	
MTD	772.0	207.0		4637.0	742.3	4.6	392.5	287.2	8.9	5029.5	1029.5	5.8
AVG/DAY	64.3			309.1	49.5		26.2	19.1		335.3	68.6	
MTD PACE	965			4637	742		393	287		5030	1030	

	BOOKINGS			ASSEMBLIES/PROD.				SHIPMENTS			BUDGET	BACKLOG	BACKLOG	TOTAL	DAYS
	Daily	MTD	MTD PACE	Daily	MTD	MTD PACE	BUDGET	Daily	MTD	MTD PACE	NO.		ON HAND	ON HAND	OUT
3 - 8" RSGV	427	2700	2700	733	4277	4277	6195	760	3604	3604	6323	1,214	448	10,826	3
RETEST 3-12"				76	385	385						24,204	23,595		
10-36" RSGV	69	942	942	106	603	603	885	148	878	878	903	396	292	1400	3
MET Valves	0	199	199	9	160	160	250	2	85	85	202	506	77	186	67
Hydrants	184	706	706	201	1282	1282	1234	209	1112	1112	1231	1226	222	1242	15
Tap. Sleeves	28	99	99	21	279	279	302	35	154	154	301	208	92	752	8
FIELD LOK	208	2136	2136					208	1716	1715		120	120	27331	
Fittings (tons)44	142.4	880.3	880	0	530.1	530		194.1	1146.8	1147	1160.6	1178	339		32

cc: C. Edwards; Tom Brakefield; Harry Crossfield; D. Diederich; S. Box; J. Swafford; G. Johnston; L.Jones; G. Casey

40.2 295.8 76.5

/csh

MWPS004638

U.S. PIPE & FOUNDRY - CHATTANOOGA VALVE & FITTINGS PLANT
DAILY ACTIVITY REPORT

MONTH END DATE: NOV. 23-30 2002

	HAYES - LEMMERZ			#9 UNIT			#10 UNIT			TOTAL		
DATE	TONS	LADLES	NOTES	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %
11/01/02			N/A	397	52.1	0	27	24.3	0	424	76.4	0.0
										0	0.0	
										0	0.0	
										0	0.0	
										0	0.0	
										0	0.0	
SUB-TOTAL	0.0	0.0		397.0	52.1		27.0	24.3		424	76.4	
11/04/02			N/A	455	67.4	6.1	27	12.3	38.6	482.0	79.7	13.2
11/05/02	60	16.0		531	65.1	0.1	29.5	24	13	560.5	89.1	3.9
11/06/02	59.9	16.0		370	54.8	6.9	31.5	28.3	4.4	401.5	83.1	6.1
11/07/02	60	16.0		309	38.8	4.0	32	20.8	12.2	341.0	59.6	7.0
11/08/02	59.1	16.0		429	63.1	0.3	20	37.8	0	449.0	100.9	0.2
SUB-TOTAL	239.0	64.0		2094.0	289.2	3.5	140.0	123.2	11.2	2234.0	412.4	5.9
11/11/02	57.7	16.0		326	34.9	12.9	29.5	16.2	30.5	355.5	51.1	19.4
11/12/02	70.8	19.0		427	55.2	3.6	23.5	6.3	43.9	450.5	61.5	10.3
11/13/02	61.8	16.0		468	63.1	0.0	31.5	15	35.5	499.5	78.1	9.5
11/14/02	65.0	17.0		379	52.5	2.2	30.5	19.6	2.1	409.5	72.1	2.2
11/15/02			N/A	426	59.9	0.0	18	25.8	5.2	444.0	85.7	1.6
SUB-TOTAL	255.3	68.0		2026.0	265.6	3.1	133.0	82.9	21.1	2159.0	348.5	8.1
11/18/02	69.4	19.0		311	23.1	5.3	25.5	14.2	21.5	336.5	37.3	12.2
11/19/02	66.0	18.0		420	72	0.0	34.0	25	0	454.0	97.0	0.0
11/20/02	77.9	21.0		435.0	70.9	2.9	33.0	24	8.7	468.0	94.9	4.5
11/21/02	62.5	17.0		383.0	41.6	7.4	35.0	21.8	8.4	418.0	63.4	7.7
11/22/02			N/A	203.0	50.1	5.9	30.0	23.3	22.7	233.0	73.4	12.0
SUB-TOTAL	275.8	75.0		1752.0	257.7	3.7	157.5	108.3	12.1	1909.5	366.0	8.4
11/23/02			Inventory	and	Holidays					0.0	0.0	
thru										0.0	0.0	
11/30/02										0.0	0.0	
										0.0	0.0	
SUB-TOTAL	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
MTD	770.1	207.0		6269.0	864.6	3.2	457.5	338.7	13.5	6726.5	1203.3	6.3
AVG/DAY	64.2			391.8	54.0		28.6	21.2		420.4	75.2	
MTD PACE	1027			6269	866		458	339		6727	1203	

	BOOKINGS			ASSEMBLIES/PROD.				SHIPMENTS			BUDGET	BACKLOG	BACKLOG	TOTAL	DAYS
	Daily	MTD	MTD PACE	Daily	MTD	MTD PACE	BUDGET	Daily	MTD	MTD PACE	NO.		ON HAND	ON HAND	OUT
3-8" RSGV	281	4807	4807	180	3679	3679	8732	233	3890	3890	9270	1,864	395	11,380	6
RETEST 3-12"				0	137	137						24,204	23,238		
10-36" RSGV	21	487	487	78	1307	1307	179	64	793	793	190	288	133	1613	2
Hydrants	121	1108	1108	73	1041	1041	1537	198	1260	1260	1629	1785	101	1310	26
Tap. Sleeves	1	313	313	24	296	296	380	61	297	297	401	268	38	605	13
Met Valves	0	89	89	-5	173	173	250	0	150	150	264	568	23	110	60
FIELD LOK	272	2106	2106					27	2334	2334		532	632	24937	
Fittings (tons)	148.3	976.3	976	33.3	786.7	786		130.4	1172.6	1173	1627.4	1549	624		31

cc: C. Edwards; Tom Brakefield; Harry Crossfield; D. Diederich; S. Box; J. Swafford; G. Johnston; L.Jones; G. Casey

/csh

13.3

MWPS004639

U.S. PIPE & FOUNDRY - CHATTANOOGA VALVE & FITTINGS PLANT
DAILY ACTIVITY REPORT

END OF MONTH (COMPLETE) DATE: Oct. 31 2002

	HAYES - LEMMERZ			#9 UNIT			#10 UNIT			TOTAL		
DATE	TONS	LADLES	NOTES	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %
10/01/02	59.5	16.0		490	57.1	9.0	23	-1.2	112	513	55.9	22.2
10/02/02	60.3	16.0		363	70	0.9	30.5	29.4	9.5	393.5	99.4	3.6
10/03/02	64.9	17.0		383	62.3	12.6	31.5	21.1	10.3	414.5	83.4	12.0
10/04/02			N/A	362	49.4	2.7	49	29.9	0	411	79.3	1.6
										0	0.0	
										0	0.0	
SUB-TOTAL	**184.7**	**49.0**		**1598.0**	**238.8**	**6.6**	**134.0**	**79.2**	**16.6**	**1732**	**318.0**	**9.3**
10/07/02	65.2	18.0		292	19.2	34.5	20.5	24.7	26.6	312.5	43.9	30.2
10/08/02	60.7	17.0		365	40.6	2.3	32.5	20	23.8	397.5	60.6	10.6
10/09/02	62.1	17.0		342	32	17.8	10	10.3	37.9	352.0	42.3	23.8
10/10/02	60.4	16.0		393	46.3	0.9	32.5	18.7	6.8	425.5	65.0	2.7
10/11/02			N/A	449	56.9	5.2	19	22.7	2.6	468.0	79.6	4.5
SUB-TOTAL	**248.4**	**68.0**		**1841.0**	**195.0**	**9.9**	**114.5**	**96.4**	**19.6**	**1955.5**	**291.4**	**13.4**
10/14/02			N/A	549	52.6	1.6	24	13.5	34.9	573.0	66.1	10.9
10/15/02	62.3	17.0		507	69.3	3.0	30.5	13.5	6.9	537.5	82.8	3.7
10/16/02	58.4	16.0		494	69.6	1.3	29	22.9	8.3	523.0	92.5	3.2
10/17/02	61.4	17.0		304	33.6	8.2	27	28.8	3.4	331.0	62.4	6.0
10/18/02			N/A	328	63.5	4.8	25	23.2	4.3	353.0	86.7	4.7
SUB-TOTAL	**182.1**	**50.0**		**2182.0**	**288.6**	**3.4**	**135.5**	**101.9**	**10.8**	**2317.5**	**390.5**	**5.4**
10/21/02			N/A	461	73.8	0.4	33.5	10.3	13.5	494.5	84.1	2.2
10/22/02	64.8	17.0		451	58.6	0.0	29.0	23.9	0	480.0	82.5	0.0
10/23/02	57.7	15.0		523.0	61.1	6.7	28.5	16.4	13.1	551.5	77.5	8.2
10/24/02	61.8	16.0		639.0	93.2	3.5	17.5	12.4	9	656.5	105.6	4.2
10/25/02			N/A	394.0	68.3	2.2	25.0	19.5	3.5	419.0	87.8	2.5
SUB-TOTAL	**184.3**	**48.0**		**2468.0**	**355.0**	**2.6**	**133.5**	**82.5**	**6.8**	**2601.5**	**437.5**	**3.6**
10/28/02			Down	568	84.8	2.3	32.5	21.9	7.5	600.5	106.7	3.4
10/29/02			this	357	6.1	10.9	33.5	14.1	20	390.5	20.2	17.4
10/30/02			week	584	86.8	0.0	25	20.1	6.2	609.0	106.9	1.2
10/31/02				422	73.3	8.7	30	26.3	10.1	452.0	99.6	9.1
SUB-TOTAL	**0.0**	**0.0**		**1931.0**	**251.0**		**121.0**	**82.4**		**2052.0**	**333.4**	
MTD	**799.5**	**215.0**		**10020.0**	**1328.4**	**4.8**	**638.5**	**442.4**	**13.2**	**10658.5**	**1770.8**	**7.0**
AVG/DAY	**61.5**			**435.7**	**57.8**		**27.8**	**19.2**		**463.4**	**77.0**	
MTD PACE	**1415**			**10020**	**1328**		**639**	**442**		**10659**	**1771**	

	BOOKINGS			ASSEMBLIES/PROD.				SHIPMENTS			BUDGET	BACKLOG	BACKLOG	TOTAL	DAYS
	Daily	MTD	MTD PACE	Daily	MTD	MTD PACE	BUDGET	Daily	MTD	MTD PACE	NO.		ON HAND	ON HAND	OUT
3-8" RSGV	64	4707	4707	297	7812	7812	10090	506	7097	7097	9978	1,183	932	11,562	1
RETEST 3-12"				0	276	276						24,204	23,101		
10-36" RSGV	18	829	829	63	1254	1254	207	12	1326	1326	204	694	176	1149	9
Hydrants	9	1503	1503	61	1377	1377	1770	148	1405	1405	1764	2066	148	1468	31
Tap. Sleeves	0	49	49	7	156	156	429	6	194	194	436	246	86	627	23
Met Valves	0	41	41	4	127	127	260	3	176	176	284	741	122	198	103
FIELD LOK	50	5395	5395					0	4846	4846		820	820	8522	
Fittings (tons)	63.8	1692.3	1692	47.9	1076.6	1077		178.4	1932.0	1932	1781.1	1988	920		42

cc: C. Edwards; Tom Brakefield; Harry Crossfield; D. Diederich; S. Box; J. Swafford; G. Johnston; L.Jones; G. Casey

/csh

MWPS004640

U.S. PIPE & FOUNDRY - CHATTANOOGA VALVE & FITTINGS PLANT
DAILY ACTIVITY REPORT

END OF MONTH DATE: Sept. 30 2002

	HAYES - LEMMERZ			#9 UNIT			#10 UNIT			TOTAL		
DATE	TONS	LADLES	NOTES	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %
09/02/02	Holiday									0	0.0	
09/03/02	74.5	19.0		366	50.1	6.4	23.5	-4.1	100	389.5	46.0	20.4
09/04/02	53.4	14.0		535	80.9	6.4	38	4.1	62.6	573.0	85.0	12.8
09/05/02	66.7	18.0		229	41.8	8.3	23	16.5	3.9	252.0	58.3	7.2
09/06/02			N/A	390	55.2	5.2	27.5	6.5	41.6	417.5	61.7	11.1
										0.0	0.0	
SUB-TOTAL	**194.6**	**51.0**		**1520.0**	**228.0**	**6.5**	**112.0**	**23.0**	**46.9**	**1632.0**	**251.0**	**12.7**
09/09/02	62.2	17.0		305	34.7	11.3	33.5	4.8	72.6	338.5	39.5	30.2
09/10/02	61.3	18.0		265	50.8	6.9	23.5	18.5	4.2	288.5	69.3	6.2
09/11/02	56.3	15.0		337	40.9	2.6	27	9.8	40.6	364.0	50.7	13.4
09/12/02	67.5	18.0		340	57.5	1.5	21.5	18.3	14.1	361.5	75.8	4.8
09/13/02			N/A	365	68.6	0.5	22.5	7.2	0	387.5	75.8	0.5
SUB-TOTAL	**247.3**	**68.0**		**1612.0**	**252.5**	**4.0**	**128.0**	**58.6**	**28.3**	**1740.0**	**311.1**	**9.7**
09/16/02	67.8	18.0		314	45.5	3.2	22.5	17.8	30.7	336.5	63.1	12.8
09/17/00	65.4	18.0		243	28	8.4	18	11.7	0	261.0	39.7	8.4
09/18/02	56.8	16.0		405	68.4	4.1	35	22.9	5.9	440.0	91.3	4.6
09/19/02	48	13.0		510	77.1	0.0	19.5	11.2	7.2	529.5	88.3	0.9
09/20/02			N/A	426	70.8	2.7	19.5	12.7	6.4	445.5	83.5	3.3
SUB-TOTAL	**238.0**	**65.0**		**1898.0**	**289.8**	**3.0**	**114.5**	**76.1**	**9.4**	**2012.5**	**365.9**	**4.4**
09/23/02	down	this	week	451	64.7	0.4	22.0	5.6	37.1	473.0	70.3	4.8
09/24/02				485.0	57.8	0.4	27.5	15	24.8	512.5	72.8	6.6
09/25/02				507.0	67.6	17.5	23.5	26.9	10.9	530.5	94.5	15.7
09/26/02				462.0	82.6	4.4	20.0	36.2	0	482.0	118.8	3.1
09/27/02				482.0	83.3	6.1	29.5	27.7	2.5	511.5	111.0	5.3
SUB-TOTAL	**0.0**	**0.0**		**2387.0**	**356.0**	**6.4**	**122.5**	**111.4**	**9.9**	**2609.5**	**467.4**	**7.2**
09/30/02	53.2	16.0		522	84.8	7.8	43.5	28.3	22.9	565.5	113.1	11.9
SUB-TOTAL	**53.2**	**16.0**		**522.0**	**84.8**			**28.3**		**565.5**	**113.1**	
MTD	733.1	200.0		7939.0	1211.1	5.1	477.0	297.4	19.5	8459.5	1508.5	8.3
AVG/DAY	61.1			397.0	60.6		23.9	14.9		423.0	75.4	
MTD PACE	1222			7939	1211		477	297		8460	1509	

	BOOKINGS			ASSEMBLIES/PROD.				SHIPMENTS			BUDGET	BACKLOG	BACKLOG	TOTAL	DAYS
	Daily	MTD	MTD PACE	Daily	MTD	MTD PACE	BUDGET	Daily	MTD	MTD PACE	NO.		ON HAND	ON HAND	OUT
3-8" RSGV	173	3881	3881	631	9292	9292	8744	386	9107	9107	10066	3,605	2446	11,471	3
RETEST 3-12"				0	294	294				0		124,204	22,767		
10-36" RSGV	36	197	197	99	612	612	178	56	542	542	205	154	35	238	5
Hydrants	164	1715	1715	31	1359	1359	1637	168	1483	1483	1789	2224	306	1476	7
Tapping Slvs.	3	140	140	0	81	81	371	0	146	146	440	311	87	684	56
Met Valves	0	236	236	18	161	161	260	0	70	70	287	883	97	290	98
FIELD LOK	620							0	6651	6651		1748	1748	10872	
Fittings (tons)	17.3	1068.7	1069	49.2	704.5	705		106	1464.5	1465	1801.9	2046	727		56

cc: C. Edwards; Tom Brakefield; Harry Crossfield; D. Diederich; S. Box; J. Swafford; G. Johnston; L.Jones; G. Casey

/csh

MWPS004641

U.S. PIPE & FOUNDRY - CHATTANOOGA VALVE & FITTINGS PLANT

DAILY ACTIVITY REPORT

END OF MONTH

DATE: August 30-31 2002

	#4 Unit			#9 Unit			#10 Unit			TOTAL			HAYES-LEMMERZ IRON	
DATE	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %	TONS	LADLES
08/01/02	0	-0.3	0	468	54	6.4	20.5	17.2	0	488.5	70.9	5.3	62.9	18
08/02/02	0	0.0		423	54	3.8	17.5	13.6	5.3	440.5	67.6	4.1	N/A	N/A
SUB-TOTAL	0.0	-0.3	0	891.0	108.0	0.0	38.0	30.8	0	929	138.5	0.0	62.9	18
08/05/02	0	0.0	0	506	65.5	6.1	27.5	11.6	3.2	533.5	77.1	5.7	55.4	15
08/06/02	0	0.0	0	501	81.7	0.0	30	12.4	21.8	531	94.1	1.9	64.6	18
08/07/02	0	0.0	0	349	69.6	0.6	24.5	19.8	9.1	373.5	89.4	2.6	69.2	19
08/08/02	0	0.0	0	501	80.4	0.0	31.5	17.8	1.2	532.5	98.2	0.2	71.1	19
08/09/02	0	0.0	0	519	71.3	0.9	30.5	9.9	40.9	549.5	81.2	8.4	N/A	N/A
SUB-TOTAL	0.0	0.0	0	2376.0	368.5	1.0	144.0	71.5	15.3	2520	440.0	3.6	260.3	71
08/12/02	0	-0.7	0	457	92.4	2.6	24.5	11.7	23.9	481.5	103.4	6.2	58.2	16
08/13/02	0	0.0	0	258	39.9	3.0	16	13.8	19.8	274	53.7	7.9	67.4	18
08/14/02	0	-0.7	0	416	51.9	0.1	31	16.4	12.1	447	67.6	4.3	65.0	18
08/15/02	0	0.0	0	420	63.4	0.0	30	18.9	0	450	82.3	0.0	65.6	18
08/16/02	0	0.0	0	369	55.8	4.4	20.5	11.8	23.3	389.5	67.6	8.3	N/A	N/A
SUB-TOTAL	0.0	-1.4	0	1920.0	303.4	2.0	122.0	72.6	15.1	2042	374.6	5.2	256.2	70
08/19/02	0.0	0.0	0	411	64.5	2.0	19.5	10.5	31	430.5	75.0	7.4	67.6	18
08/20/02	0.0	0.0	0.0	481.0	68.1	4.2	28.0	6.2	27.7	509	74.3	6.7	68.0	18
08/21/02	0.0	0.0	0	409.0	48.2	5.4	32.5	15.5	7	441.5	63.7	5.8	68.9	18
08/22/02	0.0	0.0	0	501.0	82.5	3.0	23.0	-5.7		524	76.8	9.0	66.0	17
08/23/02	0.0	0.0	0	393.0	68.1	8.3	12.0	25.1	8.1	405	93.2	8.2	n/a	n/a
SUB-TOTAL	0.0	0.0	0	2195.0	331.4	4.5	115.0	51.6	23.1	2310.0	383.0	7.5	270.5	71
08/26/02	0	0.0	0	436	83	0.3	13.5	-2.3		449.5	80.7	1.3	down this	
08/27/02	0	-0.2		527	40.7	30.6	24.5	5.8	35.8	551.5	46.3	31.6	week	
08/28/02	0	0.0	0	546	43.9	32.4	26.5	9.6	10.4	572.5	53.5	29.3		
08/29/02	0	-0.3		488	69.5	0.0	32.5	20.1	0	520.5	89.3	0.3		
08/30/02	0	0.0	0	349	74.3	0.0	13	21.5	0	362	95.8	0.0		
SUB-TOTAL	0.0	-0.5		2346.0	311.4	11.2	110.0	54.7	8.8	2456.0	365.6	10.9	0.0	0
MTD	0.0	-2.2		9728.0	1422.7	4.7	529.0	281.2	14.4	10257.0	1701.7	6.6	849.9	230.0
AVG/DAY	0.0			442.2	64.7		24.0	12.8		466.2	77.4			
MTD PACE	0			9728	1423		529	281		10257	1702			

	BOOKINGS			ASSEMBLIES/PROD.				SHIPMENTS			BUDGET	BACKLOG	BACKLOG	TOTAL	DAYS
	Daily	MTD	MTD PACE	Daily	MTD	MTD PACE	BUDGET	Daily	MTD	MTD PACE	NO.		ON HAND	ON HAND	OUT
3"-12" RSGV	196	8968	8968	606	10040	10040	9850	527	10596	10596	10120	6,977	2660	11,163	9
RETEST 3-12"				0	80	80						25,204	22,469		
14-36" RS	3	273	273	10	232	232	197	2	292	292	206	190	45	295	13
Hydrants	16	1471	1471	75	1779	1779	1694	132	1789	1789	1802	1878	170	1519	21
Tapping Slvs.	3	326	326	33	208	208	410	26	226	226	440	315	119	758	20
Met Valves	0	124	124	6	226	226	250	50	212	212	287	672	30	195	64
[illegible]	1417		0					1367	5746	5746		2018	2018	9817	
Fittings (tons)	110	1985.0	1985	32.9	878.6	879		160.2	1711.5	1712	1822.7	2472	982		60

cc: C. Edwards; Tom Brakefield; Harry Crossfield; D. Diederich; S. Box; J. Swafford; G. Johnston; L.Jones

/csh

MWPS004642

U.S. PIPE & FOUNDRY - CHATTANOOGA VALVE & FITTINGS PLANT

DAILY ACTIVITY REPORT

END OF MONTH — DATE: JULY 31 2002

	#4 Unit			#9 Unit			#10 Unit			TOTAL			HAYES-LEMMERZ IRON	
DATE	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %	TONS	LADLES
07/01/02	SHUT	DOWN	THRU	JULY	7TH	2002							n/a	n/a
07/02/02														
07/03/02														
07/04/02	HOLIDAY													
07/05/02														
SUB-TOTAL	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0
07/08/02	36.5	8.3	0	466	50	0.0	3.5	0	0	506	58.3	0.0	34.0	10
07/09/02	29	12.4	0	360	34.8	22.2	8.5	3.8	0	397.5	51.0	16.3	72.9	20
07/10/02	22.5	4.9	46.7	421	35.9	23.2	7	3.3	0	450.5	44.1	25.6	70.5	19
07/11/02	20.5	10.2	18.3	411	54.3	1.5	8	11.8	0	439.5	76.3	3.9	69.9	19
07/12/02	17.5	4.7	13.6	615	81.6	0.0	6	2.5	0	638.5	88.8	0.8	71.1	19
SUB-TOTAL	126.0	38.5	16	2273.0	256.6	7.8	33.0	21.4	0	2432	316.5	8.4	318.4	87
07/15/02	28.5	8.4	7.9	472	67.7	4.7	12.5	8.5	0	513	84.6	4.6	74.3	20
07/16/02	32.5	9.6	10.1	548	68.2	2.0	10.5	11.0	9.9	591	88.8	3.9	66.3	18
07/17/02	32	14.4	8.6	483	59.1	0.0	9	14.1	0	524	87.6	0.2	66.2	19
07/18/02	12.5	5.0	32.6	417	58.6	3.7	9.5	10.9	0	439	74.5	5.9	70.1	19
07/19/02	32.5	10.8	10.3	461	71.3	2.6	10.5	12.6	16.4	504	94.7	5.8	67.3	18
SUB-TOTAL	138.0	48.2	12.4	2381.0	324.9	2.6	52.0	57.1	4.1	2571	430.2	4.0	344.2	84
07/22/02	33.0	19.7	0	378	50.2	0.0	12.0	1.3	0	423	71.2	0.0	61.7	17
07/23/02	28.5	8.6	5.6	464.0	62.1	4.9	6.5	13.7	0	499	84.4	4.2	69.3	19
07/24/02	15.5	18.9	6.2	483.0	58.2	5.7	9.0	8.4	0	507.5	85.5	5.3	66.9	19
07/25/02	19.0	10.6	0	481.0	53.1	6.8	10.0	12.8	0	510	76.5	4.8	61.3	17
07/26/02	15.5	10.9	4.2	511.0	83.7	0.0	6.5	2.5	18.7	533	97.1	1.1	n/a	n/a
SUB-TOTAL	111.5	68.7	3.2	2317.0	307.3	3.3	44.0	38.7	1.6	2472.5	414.7	3.1	259.2	72
07/29/02	0	4.6	0	449	63.1	0.0	16	8.3	0	465	76.0	0.0	70.0	20
07/30/02	0	-0.8	0	480	78.1	0.0	18.5	18.4	0	498.5	95.7	0.0	69.1	19
07/31/02	0	-3.3	0	523	79.7	5.5	20.5	9.8	29.8	543.5	86.2	12.3	62.1	17
SUB-TOTAL	0.0	0.5	0	1452.0	220.9	2.1	55.0	36.5	10.2	1507.0	257.9	4.6	201.2	56
MTD	375.5	155.9	11.2	8423.0	1109.7	3.9	184.0	153.7	4.4	8982.5	1419.3	4.9	1123.0	309.0 E.O.M.
AVG/DAY	20.9	8.7		467.9	61.7		10.2	8.5		499.0	78.9			
MTD PACE	376	155.9		8423	1110		184	154		8983	1419			

	BOOKINGS			ASSEMBLIES/PROD.				SHIPMENTS			BUDGET	BACKLOG	BACKLOG	TOTAL	DAYS
	Daily	MTD	MTD PACE	Daily	MTD	MTD PACE	BUDGET	Daily	MTD	MTD PACE	NO.		ON HAND	ON HAND	OUT
3"-12" RSGV	16	7569	7569	378	6238	6238	8086	953	8661	8661	9678	7,990	2736	11,691	16
RETEST 3-12"				1	884	884						[redacted]	[redacted]		
14-36" RS	7	197	197	14	230	230	165	16	262	262	192	192	60	367	10
Hydrants	60	1938	1938	99	1629	1629	1386	59	1518	1518	1724	2374	593	1497	20
Tapping Slvs.	3	174	174	5	148	148	332	2	312	312	426	161	75	760	11
Met Valves	0	81	81	0	68	68	250	0	159	159	276	666	49	195	205
Fittings (tons)	102.6	1392.2	1392	11.1	934.7	935		85.2	1444.8	1445	1721.5	2042	759		39

cc: C. Edwards; Tom Brakefield; Harry Crossfield; D. Diederich; S. Box; J. Swafford; G. Johnston; L.Jones

/csh

MWPS004643

U.S. PIPE & FOUNDRY - CHATTANOOGA VALVE & FITTINGS PLANT
DAILY ACTIVITY REPORT

END OF MONTH — DATE: June 28-29 2002

	#4 Unit			#9 Unit			#10 Unit			TOTAL			HAYES-LEMMERZ IRON	
DATE	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %	TONS	LADLES
06/03/02	16.5	0.8	61.5	322	52.2	0.9	9	2.1	83.4	347.5	55.1	17.9	78.0	21
06/04/02	31.5	15.6	6.6	481	44.9	6.4	8.5	11.5	0	521	72.0	5.5	83.1	22
06/05/02	31.5	11.5	4.4	413	60.1	0.2	7	17.2	0	451.5	88.8	0.7	67.6	18
06/06/02	35.5	17.3	0	440	82	0.0	10	7.9	0	485.5	107.2	0.0	63.5	17
06/07/02	22	10.8	10	461	53.9	16.2	9.5	7.4	26.4	492.5	72.1	16.7	68.4	18
SUB-TOTAL	137.0	56.0	6.8	2117.0	293.1	4.6	44.0	46.1	21.9	2298	395.2	7.3	360.6	96
06/10/02	37.5	10.5	28.4	516	85.3	6.4	10.5	4.1	33.7	564	99.9	10.8	78.5	21
06/11/02	31.5	18.3	1.3	498	72.5	0.1	9.5	6.8	0	539	97.6	0.3	77.5	21
06/12/02	21.5	13.2	0	478	55.7	0.0	9.5	15.7	0	509	84.6	0.0	63.5	17
06/13/02	25	6.3	37.8	370	68.2	20.6	9.5	8	0	404.5	82.5	20.7	60.9	16
06/14/02	21.5	9.5	0	431	60.3	6.7	10	5.4	0	462.5	75.2	5.4	63.5	17
SUB-TOTAL	137.0	57.8	12.6	2293.0	342.0	7.5	49.0	40.0	4.9	2479	439.8	8.0	343.9	92
06/17/02	30	10.0	11.6	503	69.4	14.4	8.5	11.6	0	541.5	91.0	12.5	64.1	17
06/18/02	30	11.7	26.3	566	72.7	2.8	8	14.4	3.4	604	98.8	6.4	68.1	18
06/19/02	30	15.1	10.2	333	41.5	12.1	9	6.1	0	372	62.7	10.6	58.2	16
06/20/02	27.5	11.6	20	578	71.4	4.5	6.5	2.7	0	612	85.7	6.9	57.9	16
06/21/02	24.5	8.8	19.5	600	74	8.2	9	11.5	0	633.5	94.5	8.5	70.7	19
SUB-TOTAL	142.0	57.2	17.6	2580.0	329	8.2	41.0	49.0	1	2763	435.2	8.8	319.0	86
06/24/02	29.5	10.2	14.3	602	59.3	7.5	11.0	13.8	6.3	642.5	83.3	8.2	66.1	18
06/25/02	23.5	8.3	14.6	661.0	74.1	2.4	9.0	9.9	0	693.5	92.3	3.4	32.5	9
06/26/02	30.0	12.5	0	437.0	44.6	7.5	9.0	11.9	12	476	69.0	6.8	14.0	4
06/27/02	27.0	10.6	30.2	623.0	80.8	1.8	9.0	17.6	9.4	659	109.0	6.7	29.4	8
06/28/02	16.0	12.4	0	587.0	84.1	1.0	10.0	12.1	4	613	108.6	1.2	N/A	
SUB-TOTAL	128.0	54.0	12.2	2910.0	342.9	3.5	48.0	65.3	7	3084.0	462.2	5.1	142.0	39
SUB-TOTAL	0.0	0.0		0.0	0.0		0.0	0.0	0	0.0	0.0		0.0	0
MTD	542.0	225.0	12.5	9900.0	1307.0	6.0	182.0	200.4	9.3	10624.0	1732.4	7.3	1165.5	313.0 E.O.M.
AVG/DAY	27.1	11.3		495.0	65.4		9.1	10.0		531.2	86.6			
MTD PACE	542	225.0		9900	1307		182	200		10624	1732			

	BOOKINGS			ASSEMBLIES/PROD.				SHIPMENTS			BUDGET	BACKLOG	BACKLOG	TOTAL	DAYS
	Daily	MTD	MTD PACE	Daily	MTD	MTD PACE	BUDGET	Daily	MTD	MTD PACE	NO.		ON HAND	ON HAND	OUT
3"-12" RSGV	125	4612	4612	331	5744	5744	8744	769	8682	8682	9756	7,629	3624	14,741	14
RETEST 3-12"				0	521	521						24,204	21,488		
14-36" RS	3	171	171	8	208	208	178	5	135	135	199	215	60	390	16
Hydrants	105	1371	1371	45	1303	1303	1637	135	1307	1307	1735	1947	216	1381	26
Tapping Slvs.	6	76	76	2	307	307	290	2	208	208	425	293	240	863	4
Met Valves	195	137	137	0	160	160	250	3	93	93	278	650	129	301	65
Fittings (Tons)	102.6	1349.9	1350	71.3	1217.8	1218		177	1465.8	1466	1729.5	1983	797		32

cc: C. Edwards; Tom Brakefield; D. Diederich; J. Swafford; G. Johnston; S. Box; L. Jones

/csh

MWPS004644

U.S. PIPE & FOUNDRY - CHATTANOOGA VALVE & FITTINGS PLANT
DAILY ACTIVITY REPORT

END OF MONTH — DATE: May 31, 2002

	#4 Unit			#9 Unit			#10 Unit			TOTAL			HAYES-LEMMERZ IRON	
DATE	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %	TONS	LADLES
05/01/02	34.5	12.0	29.6	634	80.9	7.5	10.5	15.5	0	679	108.4	9.7	57.6	16
05/02/02	37.5	16.8	16.2	650	74.6	11.0	9.5	20	0	697	111.4	10.1	59.5	17
05/03/02	40	14.5	22.7	677	94.5	0.9	11	13.2	0	728	122.2	4.1	56.3	16
SUB-TOTAL	112.0	43.3	22.4	1961.0	250.0	6.3	31.0	48.7	0	2104.0	342.0	7.8	173.4	49
05/06/02	33.5	12.0	15	800	91.9	4.9	10.5	15.6	0	844	119.5	5.4	65.8	18
05/07/02	28	13.6	5.7	659	63.8	12.1	8	10.5	13.6	695	87.9	11.3	74.8	21
05/08/02	32	16.2	2.4	648	81.5	4.8	8.5	19	5.6	688.5	116.7	4.6	59.0	17
05/09/02	40	13.2	2.8	645	109.7	0.9	9	7.8	30.3	694	130.7	3.5	69.6	19
05/10/02	22.5	14.2	15.7	625	61.6	12.2	10.5	12.8	13.8	658	88.6	13.0	69.8	19
SUB-TOTAL	156.0	69.2	8.4	3377.0	408.5	6.2	46.5	65.7	11.1	3579.5	543.4	7.1	339.0	94
05/13/02	42.5	11.0	6.9	661	93.4	0.5	8.5	11.2	0	712	115.6	0.2	70.0	19
05/14/02	38.5	16.2	16.1	572	65.1	20.8	7.5	10.7	30	618	92.0	21.2	67.9	18
05/15/02	34	18.2	1.8	637	77.5	6.9	8.5	6.1	35.8	679.5	101.8	8.5	73.6	20
05/16/02	22.5	14.0	0	517	90	0.0	7	17.9	4.5	546.5	121.9	0.7	69.0	18
05/17/02	23	5.5	37	510	57	5.0	10.5	1.8	83.4	543.5	64.2	19.2	72.6	19
05/18/02	24	13.1	2.7	446	53.5	3.2	7	10.3	0	446	76.9	2.7	56.8	15
SUB-TOTAL	184.5	78.0	9.2	3343.0	436.5	6.0	49.0	58.0	22.4	3545.5	572.4	8.4	409.9	109
05/20/02	31.5	6.0	10.3	637.0	49.1	2.3	8.0	2	67.5	676.5	57.1	9.5	84.0	22
05/21/02	35.0	5.0	32.3	733.0	85.7	2.6	10.5	16	0	778.5	106.7	4.2	85.1	22
05/22/02	25.5	11.8	16.4	768.0	85.5	4.2	9.0	7.5	25.2	802.5	104.8	7.6	82.7	21
05/23/02	37.5	14.4	2.6	823.0	85.2	0.5	8.5	15	9.8	869	114.6	2.1	70.9	18
05/24/02	25.0	12.9	0	520.0	74.2	0.0	9.0	5.3	0	554.0	92.4	0.0	65.4	17
SUB-TOTAL	154.5	50.1	10.3	3481.0	379.7	2.0	45.0	45.8	15.3	3680.5	475.6	4.4	388.1	100
05/27/02	Holiday													
05/28/02	29	7.8	0	542	44.1	0.0	10.5	16	0	581.5	67.9	0.0	73.6	20
05/29/02	29	12.8	0	467	71.6	0.0	10.5	14.9	0	506.5	99.3	0.0	78.3	21
05/30/02	31	9.7	0	510	27.5	0.0	11.5	9.5	0	552.5	46.7	0.0	65.9	17
05/31/02	18.5	4.4	53.1	497	79.8	11.6	11	9.6	0	526.5	93.8	14.1	72.6	19
SUB-TOTAL	107.5	34.7	11.8	2016.0	223.0	4.3	43.5	60.0	0	2167.0	307.7	4.6	290.4	77
MTD	714.5	275.3	10.7	14178.0	1697.7	4.5	215.0	268.2	11.4	15076.5	2241.1	6.3	1600.8	429.0
AVG/DAY	31.1	12.0		616.4	73.8		9.3	11.7		655.5	97.4			
MTD PACE	715	275.3		14178	1698		215	268		15077	2241			

Carr per 72.2

29012

	BOOKINGS			ASSEMBLIES/PROD.				SHIPMENTS			BUDGET	BACKLOG	BACKLOG	TOTAL	DAYS
	Daily	MTD	MTD PACE	Daily	MTD	MTD PACE	BUDGET	Daily	MTD	MTD PACE	NO.		ON HAND	ON HAND	OUT
3"-12" RSGV	88	5111	5111	408	8519	8519	9650	335	8949	8949	9180	9,781	3014	16,845	17
RETEST 3-12"				0	3519	3519						24,204	20968		
14-36" RS	3	124	124	4	207	207	191	38	144	144	187	133	47	312	9
Hydrants	1	1135	1135	0	1354	1354	1694	117	1152	1152	1621	2061	219	1402	29
Tapping Slvs.	2	71	71	0	369	369	410	4	141	141	408	344	150	814	11
Met Valves	0	43	43	13	195	195	250	47	278	278	261	630	91	263	48
Fittings (Tons)	66.4	1542.1	1542	89.8	1386.7	1387		83.1	1266.0	1266	1618	1898	799		31

cc: C. Edwards; Tom Brakefield; D. Diederich; J. Swafford; G. Johnston; S. Box; L. Jones

/csh

MWPS004645

U.S. PIPE & FOUNDRY - CHATTANOOGA VALVE & FITTINGS PLANT
DAILY ACTIVITY REPORT

END OF MONTH DATE: 4/30/02

	#4 Unit			#9 Unit			#10 Unit			TOTAL			HAYES-LEMMERZ IRON	
DATE	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %	TONS	LADLES
04/01/02	34.5	19.9	14.9	590	78	8.4	7	9.8	0	631.5	107.7	9.0	25.5	8
04/02/02	48	9.0	23.9	541	63	3.0	10.5	10.9	0	599.5	82.9	5.5	60.1	20
04/03/02	40.5	9.3	30.6	722	100.4	6.4	10	13.9	11.2	772.5	123.6	9.3	56.5	17
04/04/02	44	13.6	5.9	718	97.6	1.5	9	10.9	0	771	122.1	1.9	53.2	15
04/05/02	18	25.9	8.9	519	64.4	2.9	10	13.5	0	547	103.8	4.1	n/a	n/a
SUB-TOTAL	185.0	77.7	15.1	3090.0	403.4	4.6	46.5	59.0	2.9	3321.5	540.1	6.1	195.3	60
04/08/02	32.5	7.6	27.3	610	64.2	5.6	8.5	9.5	14.8	651	81.3	9.3	65.3	17
04/09/02	31.5	15.6	13.9	643	101	3.9	7.5	4.5	24	682	121.1	6.2	58.2	16
04/10/02	38.5	12.1	4.1	784	86	7.3	8	13.8	0	830.5	111.9	6.1	56.0	15
04/11/02	38.5	17.8	0	694	83	4.8	8.5	10.7	24.6	741	111.5	6.4	50.6	14
04/12/02	31	10.6	30.4	650	122.8	7.2	8.5	8.9	10.7	689.5	142.3	9.7	57.6	16
SUB-TOTAL	172.0	63.7	14.2	3381.0	457.0	5.8	41.0	47.4	13.9	3594.0	568.1	7.7	287.7	78
04/15/02	30.5	11.7	19.7	430	88.6	0.9	9.5	11.3	11.8	470	111.6	4.4	47.8	13
04/16/02	33.5	15.1	10.9	662	62.9	7.1	6	6.8	30.8	701.5	84.8	10.3	50.4	14
04/17/02	21.5	14.9	5	419	82.63	1.8	8	14.02	21.3	448.5	111.5	5.2	49.7	14
04/18/02	34	16.4	23.4	456	85.1	5.3	5	18.6	0	495	120	7.5	50.2	15
04/19/02	30	16.2	6.9	492	71.5	7.2	4.5	10.1	0	526.5	97.8	6.4	n/a	n/a
SUB-TOTAL	149.5	74.3	13.6	2459.0	390.73	4.3	33.0	60.8	12	2641.5	525.7	6.7	198.1	66
04/22/02	39.5	8.0	31.7	526.0	66.1	2.1	10.0	1.3	77.3	575.5	75.4	11.2	58.6	18
04/23/02	41.0	16.7	22.6	758.0	87	2.0	7.5	13	2.4	806.5	116.7	5.6	64.4	18
04/24/02	12.0	13.8	21.7	650.0	78.5	8.9	4.5	7.8	16.3	666.6	100	11.5	65.9	19
04/25/02	34.0	3.8	46.6	850.0	87.2	2.6	7.0	6.2	45.5	891.0	97.2	10.0	63.9	19
04/26/02	40.5	18.2	0	599.0	87.7	0.0	3.0	11.5	0.4	642.5	117.4	0.10	61.6	17
SUB-TOTAL	167.0	60.5	20.6	3383.0	406.5	3.1	32.0	39.8	22.4	3582.1	506.7	7.4	314.4	91
04/29/02	32.5	9.3	51.6	705	91.5	15.5	7	-3.4	168.5	744.5	97.4	26.4	62.5	16
04/30/02	40	16.2	4	734	109.9	0.9	12	10.7	0	786	136.8	1.2	59.9	16
SUB-TOTAL	72.5	25.5		1439.0	201.4		19.0	7.3		1530.5	234.2		122.4	32
MTD	746.0	301.7	17.2	13762.0	1859.0	4.9	171.5	214.3	14.9	14669.6	2374.8	7.6	1117.9	317.0
AVG/DAY	33.9	13.7		626.1	84.5		7.8	9.7		666.8	107.9			
MTD PACE	746	301.7		13762	1859		172	214		14670	2375			

	BOOKINGS			ASSEMBLIES/PROD.				SHIPMENTS			BUDGET	BACKLOG	BACKLOG	TOTAL	DAYS
	Daily	MTD	MTD PACE	Daily	MTD	MTD PACE	BUDGET	Daily	MTD	MTD PACE	NO.		ON HAND	ON HAND	OUT
3"-12" RSGV	178	9332	9332	456	9941	9941	9644	1110	9889	9889	8797	7,366	3925	17,670	7
RETEST 3-12"				151	4404	4404						25,767	17489		
14-36" RS	0	300	300	11	173	173	197	33	252	252	180	130	29	265	9
Hydrants	447	1772	1772	84	1709	1709	1694	84	2027	2027	1562	1553	203	1312	17
Tapping Slvs.	0	492	492	19	445	445	410	0	455	455	383	290	70	595	10
Met Valves	0	10	10	19	379	379	250	0	168	168	250	864	172	363	32
Fittings (Tons)	27.7	1214.1	1214	35.9	1252.2	1252		403.9	1966.6	1967	1528.2	1304	527		22

cc: Mr. Edwards
Mr. Diederich; Mr. Johnston;
Mr. Swafford; Mr. Box
Mr. Brakefield

/csh

MWPS004646

U.S. PIPE & FOUNDRY - CHATTANOOGA VALVE & FITTINGS PLANT
DAILY ACTIVITY REPORT

END OF MONTH DATE: 3/28/02

	#4			#9			#10			TOTAL			IRON HAYES-LEMMERZ		
DATE	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %	MOLDS	TONS	SCRAP %	TONS	LADLES	
03/01/02	43.5	15.0	6.5	600	54.3	8.0	8.5	6.3	22.4	652	75.6	9.1			
03/04/02	42.5	10.7	4.9	676	97.2	5.8	8	2.7	35.3	726.5	110.6	6.5			
03/05/02	48.5	12.5	10.4	680	81.5	2.5	9	10.1	32.9	737.5	104	7.5			
03/06/02	43	16.7	2.4	525	119.2	1.7	8.5	5.3	0	576.5	141.1	1.8			
03/07/02	40.5	13.8	11.7	732	95.2	1.8	9.5	11.2	11.9	782	120.2	4.1			
03/08/02	37	15.2	2.5	669	74.2	3.7	9	7.6	31.1	715	97	6.4			
03/09/02	22	21.1	0	447	110.5	0.0	6	8.5	0	475	140.2	0.0			
03/11/02	49	7.3	10.9	637	65.4	4.9	11.5	-1.2	117.3	697.5	71.4	14.8	56.7	17	
03/12/02	34.5	11.1	43.5	750	96.6	6.2	9	18.9	0	793.5	126.6	9.4	54.7	17	
03/13/02	49	16.1	22.4	662	113.7	2.3	11	5.1	0	722	134.9	5.1	56.4	18	
03/14/02	47	15.3	18.8	752	89.6	3.0	10.5	12.7	19.7	809.5	117.6	7.4	58.2	19	
03/15/02	33.5	10.4	20.7	530	96.8	3.7	9	8.9	22.9	572.5	116.1	7.2	n/a		
03/18/02	46.5	13.2	9.9	622	80.9	3.3	10	7.4	17.1	678.5	101.5	5.4	66.6	19	
03/19/02	45.5	13.0	3.9	675	92	2.5	8.5	0.7	92.9	729	105.8	10.9	61.5	18	
03/20/02	47.0	14.4	12.9	653	73.5	5.1	8.5	9.5	13.9	708.5	97.4	7.2	64.9	19	
03/21/02	49.5	19.8	2.6	648	81.8	1.4	8.5	7.9	16.2	706	109.5	2.8	59.0	17	
03/22/02	36.0	20.9	5.1	647	95.9	0.3	7	9.6	13.8	690	126.4	2.3	n/a		
03/23/02	20.5	19.6	0	417	92.8	0.0	6	10.2	0	443.5	122.6	0.0	n/a		
03/25/02	36.5	3.6	47.9	640	62.7	11.2	8.5	-5.8	186.3	685	60.5	28.0	71.5	20	
03/26/02	40	18.4	3.5	754	98.7	3.0	12.5	13	0	806.5	130.1	2.5	64.4	19	
03/27/02	26	10.3	18.6	739	101.9	1.7	14	16.4	0	779	128.6	3.1	67.5	20	
03/28/02	39	19.0	0	678	114.9	0.0	7.5	17.2	0	724.5	151.1	0.0	6.5	2	
MTD	876.5	317.4	10.6	14133	1989.3	3.0	200.5	182.2	22.7	15210	2488.8	5.8	687.9	205	EOM
AVG/DAY	39.8	14.4		642.4	90.4		9.1	8.3		691.4	113.1				
MTD PACE	877	317.4		14133	1989		201	182		15210	2489				

	BOOKINGS			ASSEMBLIES/PROD.				SHIPMENTS			BUDGET	BACKLOG	BACKLOG	TOTAL	DAYS
	Daily	MTD	MTD PACE	Daily	MTD	MTD PACE	BUDGET	Daily	MTD	MTD PACE	NO.		ON HAND	ON HAND	OUT
3"-12" RSGV	1378	5610	5610	500	7767	7767	8744	623	10292	10292	8410	8,426	3290	17,146	13
RETEST 3-12"				80	3878	3878						24,245	TTD:13087		
14-36" RS	1	120	120	1	143	143	178	14	168	168	172	158	45	339	16
Hydrants	81	1682	1682	56	1592	1592	1537	38	1876	1876	1833	1767	625	1394	14
Tapping Slvs.	6	257	257	3	113	113	371	39	232	232	394	370	189	607	30
Met Valves	0	85	85	13	351	351	250	128	439	439	239	695	48	282	35
Fittings (Tons)	40.5	1065.2	1065	61.3	1436.1	1436		359.7	1421.1	1421	1429.5	2113	1132		31

cc: Mr. Edwards;
Mr. Diederich; Mr. Johnston;
Mr. Swafford; Mr. Box

/csh

MWPS004647

pc: S. Diederich
J. Tang

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

copy to Clyde Edwards

FEB 2 8 2002

4APT-AEEB

Mr. Dennis Urbaniak
Project Engineer
U.S. Pipe & Foundry Company
P.O. Box 311
2701 Chestnut St.
Chattanooga, TN 37401-0311

RECEIVED
MAR 0 4 2002
Plant Engineering

Note Dennis & Gregg we need to discuss pls schedule a set down

SUBJ: EPA's CAA Inspection Results

Dear Mr. Urbaniak:

The Environmental Protection Agency (EPA) and the Chattanooga-Hamilton County Air Pollution Control Bureau conducted a joint Clean Air Act (CAA) compliance inspection on January 31, 2002. At the conclusion of the inspection, EPA informed U.S. Pipe & Foundry Company that a copy of the completed inspection report could be made available if the report was requested. At that time, U.S. Pipe & Foundry Company requested a copy of the completed inspection report. Enclosed is a copy of EPA's CAA compliance inspection report.

Please contact me at (404) 562-9194 if you have any questions regarding this report.

Sincerely,

Todd A. Russo
Environmental Scientist
Air Enforcement Section

Enclosure

cc: Errol Reksten, Chattanooga-Hamilton County Air Pollution Control Bureau

U.S. ENVIRONMENTAL PROTECTION AGENCY
Region 4
Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303-8909

Air Inspection of
U.S. Pipe and Foundry Company, Chattanooga, TN
EPA AFS ID Number: 470653321

A. GENERAL INFORMATION

Inspectors:	Todd Russo, EPA Susan Park, EPA Errol Reksten, Chattanooga-Hamilton County Air Pollution Control Bureau Cynthia McDaniel, Chattanooga-Hamilton County Air Pollution Control Bureau
Inspection Date:	January 31, 2002
Purpose of Inspection:	To evaluate compliance with the requirements of the Clean Air Act.
Facility Personnel/Title: **Telephone:**	Dennis Urbaniak, Project Engineer (423) 752-3912 Gregg A. Creehan, Plant Engineer (423) 752-3910
Report Prepared by:	Todd Russo TR 2/26/01

B. TYPE OF FACILITY

U.S. Pipe and Foundry Company (U.S. Pipe) produces ductile iron fittings, valves, and hydrants for the transmission and distribution of water. U.S. Pipe operates the main iron foundry and a brass foundry at the Chattanooga facility. The Environmental Protection Agency (EPA) was accompanied by the Chattanooga-Hamilton County Air Pollution Control Bureau to determine U.S. Pipe's compliance status with the Clean Air Act.

The plant is located at 2501 Chestnut Street in Hamilton County Chattanooga, Tennessee. U.S. Pipe has approximately 650 employees and has just celebrated its 100 year anniversary in 1999. The major process operations include: scrap handling, melting (cupola), electric induction furnaces, pouring, desulfurization, shakeout, casting, and coating operations.

C. REGULATION REVIEW

U.S. Pipe was issued a Part 70 major source operating permit on February 16, 2001. U.S. Pipe was constructed before Prevention of Significant Deterioration (PSD) regulations became effective.

D. PROCESS DESCRIPTION

Main Foundry

Raw materials such as metallic scrap, coke, lime, stampings (steel scrap), and returns are charged into the 35 ton per hour melt capacity cupola located at the melting facility. Once melted, the molten gray iron and slag are tapped from the cupola. The gray iron flows through the cupola runners to 15 ton holding ladles. The slag flows to the slag pit located beside the cupola. Once full, the ladle of molten iron is transported to the treating building via a lift truck for the desulfurization process.

The desulfurization process is performed in the ladle using calcium carbide. A stirrer attached to the ladle cover is used to mix the carbide into the hot metal. Once desulfurization is complete, slagging is performed at the ladle before the ladle of hot metal is transferred to the induction holding furnace.

The hot metal from the ladle is poured into the treating ladle containing magnesium alloys to produce ductile iron. The capacity of the treating ladle containing the magnesium alloys is approximately 5 tons.

The ductile iron is inoculated with ferrosilicon as it is poured from the treating ladle to a 20 ton pouring ladle. An overhead crane transports the pouring ladle to a rest station where slags are removed from the surface of the iron. The ladle is then positioned to pour the ductile iron into one (1) of three (3) casting units: No. 9 unit and two (2) large casting units.

No. 9 casting unit shakeout is performed by the Herman Molding Apparatus located in the main foundry building. The large castings are processed through the burn-off operation to remove risers, runners, and excess iron. The molds/castings returned to the Herman Molding Machine from the cooling loop are shaken loose from the mold flask and the casting, core, and greensand are dumped onto a conveyor system. Recovered greensand is sent to the greensand mold system. The castings and core butts are sent to the casting handling area. Castings are then cleaned, machined, and coated.

Brass Foundry

Melting is performed in two (2) 1,000 pound electric induction furnaces. Raw materials include brass ingot, brass scrap (recovered risers), alloys, and flux. The molten brass is transferred into a pouring ladle and then poured into set-up molds. The brass casting is

transferred to the tumble blast machines in which shot blasts are used to polish the castings. Castings are then machined and coated.

E. INSPECTION NARRATIVE

The inspection team arrived at U.S. Pipe at approximately 9:00 a.m. on January 31, 2002, for the unannounced inspection. We were met by Mr. Dennis Urbaniak, Project Engineer and Gregg A. Creehan, Plant Engineer. Credentials were presented to Mr. Urbaniak during the opening conference. The purpose of the inspection and logistical details were then discussed, followed by company personnel providing an overview of plant operations. After the overview discussion, the team was taken on a tour of the facility. The inspection concluded at about 4:00 on January 31, 2002. Mr. Jim Swafford, Production Superintendent and Mr. Stuart Box, General Foundry Superintendent also attended the closeout meeting.

F. SITE TOUR

1. Melting Facility

The cupola (E002) has a 78 inch diameter and has approximately a 35 ton per hour melt capacity. Raw materials include metallic scrap, coke, lime, stampings (steel scrap), and returns. Particulate emissions from the cupola are controlled by a baghouse (CD002). Carbon monoxide (CO), volatile organic compounds (VOC), and volatile organic hazardous air pollutants (VOHAPs) emissions from the cupola are controlled by an afterburner (CD001) which is located upstream from the baghouse. A canopy hood over the cupola captures and sends emissions to the baghouse. The canopy hood does not extend to the holding ladle.

The cupola is located at the melting building which is partially enclosed under a roof. Once a charge is melted, the molten gray iron flows from the cupola through runners to a 15 ton holding ladle. As the molten iron flowed from the runners to the ladle, a significant amount of black visible emissions were observed escaping from under the roof to the atmosphere. The visible emissions appeared to be greater than 30 percent opacity and lasted several minutes. Conditions were not favorable for a Method 9 reading. The visible emissions were observed on two (2) separate occasions during the day, once in the morning and once in the afternoon. To keep a ladle hot, the ladle will undergo a process called "blackening." Blackening is where carbon is added to the ladle prior to receiving molten iron. Once the ladle is full, it is transported to the treating building via a lift truck for the desulfurization process.

2. Cupola Baghouse (CD002)

The cupola baghouse is a positive pressure shaker type baghouse and is located beside the melting facility. The baghouse was constructed in 1977 and consists of 1,260 bags. The bags were replaced last month and approximately two (2) years before that. At the time of the inspection, the magnehelic pressure drop reading was 6.0 inches of water. The pressure drop range established in the permit is 2 to12 inches of water.

The duct from the cupola to the baghouse in a joint just prior to the baghouse was observed to be leaking during the inspection. Also, compartments 10, 11, and 12 of the baghouse were observed to be leaking in the morning. U.S. Pipe personnel were notified so that corrective action could be taken. In the afternoon, compartment 11 was still leaking and compartment 3 had begun to leak.

3. Sand Screening Drum (Included with Emission Point 120)

The sand screening drum is controlled by the sand screening drum cyclones (CD009). However, a significant amount of emissions were observed escaping from a large window located on the side of the building housing the sand screening drum. The opacity during the inspection appeared to be approximately 20 percent, however, conditions were not favorable for a Method 9 reading. The inside of the building contained a significant amount of visible emissions. The permit limits emissions from buildings to five (5) percent opacity for an aggregate of five (5) minutes in one hour.

4. Isocure Core System (Emission Point 123)

Triethylamine emissions from the isocure process are vented to the packed bed tower acid scrubbers. The operating pH for the scrubbers established in the permit is 5.0 or less. At the time of the inspection, the pH was 4.28.

A street sweeper was being cleaned with an air blower outside the isocure core room. A significant amount of fugitive dust was being generated.

5. Cut-off and Pedestal Grinders Baghouse (CDV03)

The cut-off and pedestal grinders baghouse pressure drop range established in the permit is 0.2 to 5 inches of water. The magnehelic pressure drop reading at the time of the inspection was 1.0 inches of water.

6. Brass Tumble Blast Baghouse (CDV02)

The brass tumble blast baghouse pressure drop range established in the permit is 1.5 to 5 inches of water. The magnehelic pressure drop reading at the time of the inspection was 0.5 inches of water. It appeared that the pressure gauge was not operating since there was no effect when U.S. Pipe personnel removed the tubing to the gauge. The gauge was not operating in September 2001, during the Air Pollution Control Bureau inspection. U.S. Pipe personnel later reported that the pressure drop gauge had been replaced and the pressure drop reading was now 3.0 inches of water.

7. Brass Furnace Baghouse (CDV01)

The brass furnace baghouse pressure drop range established in the permit is 2 to 5 inches of water. The magnehelic pressure drop reading at the time of the inspection was 4.3 inches of water.

8. Rotoblast Baghouse (CDV08)

The rotoblast baghouse pressure drop range established in the permit is 2 to 9 inches of water. The magnehelic pressure drop reading at the time of the inspection was 8.0 inches of water.

9. Airblast Baghouse (CDV10)

The airblast baghouse pressure drop range established in the permit is 2 to 5 inches of water. The magnehelic pressure drop reading at the time of the inspection was 6.0 inches of water. However, the airblast operation was not operating at the time of the inspection. Also, the sleeve that drops the contents from the baghouse to the hopper (barrel) does not reach the hopper.

10. Greensand Preparation Baghouse (CDV04)

The greensand preparation baghouse pressure drop range established in the permit is 0.2 to 5 inches of water. The magnehelic pressure drop gauge was not operating at the time of the first observation. The tubing to the gauge appeared to be split and so U.S. Pipe personnel cutoff the split end of the tubing. After the tubing was replaced on the gauge, the pressure drop reading was 0.6 inches of water.

11. FBE Rotoblast Barrels Baghouse (CD048)

The FBE rotoblast barrels baghouse pressure drop range established in the permit is 1.5 to 5 inches of water. The magnehelic pressure drop reading at the time of the inspection was 2.2 inches of water.

12. FBE Airblast Cleaner Baghouse (CD049)

The FBE airblast cleaner baghouse pressure drop range established in the permit is 2 to 9 inches of water. The magnehelic pressure drop gauge could not be located on the baghouse.

13. No. 9 Casting Automatic Cleaner Baghouse (CD007)

The number 9 casting automatic cleaner baghouse pressure drop range established in the permit is 2 to 8 inches of water. The magnehelic pressure drop reading at the time of the inspection was 2.4 inches of water.

14. No. 9 Casting Cooler Conveyor Baghouse (CD047)

The number 9 casting cooler conveyor baghouse pressure drop range established in the permit is 2 to 5 inches of water. The magnehelic pressure drop reading at the time of the inspection was 6.0 inches of water.

15. Monorail & 8" Tableblast Baghouse (CD008)

The monorail and tableblast baghouse pressure drop range established in the permit is 2 to 7 inches of water. The magnehelic pressure drop reading at the time of the inspection was 6.0 inches of water. Also, the sleeve that drops the contents from the baghouse to the hopper does not reach the hopper. The contents were observed blowing up into the air.

16. Ductile Treating & No. 9 Unit Shakeout Baghouse (CD003)

The monorail and tableblast baghouse pressure drop range established in the permit is 2 to 7 inches of water. The magnehelic pressure drop reading at the time of the inspection was 3.5 inches of water.

17. Sand Transfer Baghouse

The sand transfer baghouse is not identified in the permit. There was no magnehelic pressure drop gauge on the baghouse.

18. Large Casting Rotoblast Baghouse (CD005)

The large casting rotoblast baghouse pressure drop range established in the permit is 2 to 8 inches of water. The magnehelic pressure drop reading at the time of the inspection was 5.0 inches of water.

19. Induction Holding Furnaces (Emission Unit 105)

A significant amount of visible emissions were observed to be exiting through vent fans on each end of the building that houses the induction holding furnaces. Visible emissions were observed exiting through the fans in the morning and the afternoon. The visible emissions appeared to be approximately 20 percent, but ceased after several minutes in the afternoon. Condition 6.0, Conditions Applicable to the Entire Facility, of the permit limits visible emissions from buildings to five (5) percent opacity for an aggregate of five (5) minutes in one hour.

Records Review

Condition 7.3, Conditions Applicable to the Entire Facility, of the permit requires that a daily log be kept for each baghouse differential pressure reading. These records were incomplete since September 2001.

Condition 10.0, Emission Unit 102, of the permit requires the cupola afterburner to maintain a temperature between 1,100 and 1,600 degrees Fahrenheit during melting operations. Strip chart records indicate that the temperature fluctuates outside of the established range.

G. INSPECTION RESULTS

1. The cupola is located at the melting building which is partially enclosed under a roof. Once a charge is melted, the molten gray iron flows from the cupola through runners to a 15 ton holding bottle (ladle). As the molten iron flowed from the runners to the ladle, a significant amount of black visible emissions were observed escaping from under the roof into the atmosphere. The visible emissions appeared to be greater than 30 percent opacity and lasted several minutes. The visible emissions were observed on two (2) separate occasions during the day, once in the morning and once in the afternoon.

2. The duct from the cupola to the baghouse in a joint just prior to the baghouse was observed to be leaking. Also, compartments 10, 11, and 12 of the baghouse were also

observed to be leaking in the morning. In the afternoon, compartment 11 was still leaking and compartment 3 had begun to leak.

3. The sand screening drum is controlled by the sand screening drum cyclones (CD009). However, a significant amount of visible emissions were observed escaping from a large window located on the side of the building housing the sand screening drum. The opacity during the inspection appeared to be approximately 20 percent, however, conditions were not favorable for a Method 9 reading. The permit limits emissions from buildings to five (5) percent opacity for an aggregate of five (5) minutes in one hour.

4. A street sweeper was being cleaned with an air blower outside the isocure core room. A significant amount of fugitive dust was being generated during the cleaning.

5. The brass tumble blast baghouse pressure drop range established in the permit is 1.5 to 5 inches of water. The magnehelic pressure drop reading at the time of the inspection was 0.5 inches of water. It appeared that the pressure gauge was not operating since there was no effect when U.S. Pipe personnel removed the tubing to the gauge. The gauge was not operating in September 2001, during the Air Pollution Control Bureau inspection. U.S. Pipe personnel later reported that the pressure drop gauge had been replaced and the pressure drop reading was now 3.0 inches of water.

6. The airblast baghouse pressure drop range established in the permit is 2 to 5 inches of water. The magnehelic pressure drop reading at the time of the inspection was 6.0 inches of water. However, the airblast operation was not operating at the time of the inspection. Also, the sleeve that drops the contents from the baghouse to the hopper (barrel) does not reach the hopper.

7. The FBE airblast cleaner baghouse pressure drop range established in the permit is 2 to 9 inches of water. The magnehelic pressure drop gauge could not be located on the baghouse.

8. The number 9 casting cooler conveyor baghouse pressure drop range established in the permit is 2 to 5 inches of water. The magnehelic pressure drop reading at the time of the inspection was 6.0 inches of water.

9. The sleeve that drops the contents from the monorail and tableblast baghouse to the hopper does not reach the hopper. The contents were observed blowing up into the air.

10. The sand transfer baghouse pressure drop range is not identified in the permit. There was no magnehelic pressure drop gauge on the baghouse.

11. A significant amount of visible emissions were observed to be exiting through vent fans on each end of the building that houses the induction holding furnaces. Visible emissions

were observed exiting through the fans in the morning and the afternoon. The visible emissions appeared to be approximately 20 percent, but ceased after several minutes in the afternoon. Condition 6.0, Conditions Applicable to the Entire Facility, of the permit limits visible emissions from buildings to five (5) percent opacity for an aggregate of five (5) minutes in one hour.

12. Condition 7.3, Conditions Applicable to the Entire Facility, of the permit requires that a daily log be kept for each baghouse differential pressure reading. These records were incomplete since September 2001.

13. Condition 10.0, Emission Unit 102, of the requires the cupola afterburner to maintain a temperature between 1,100 and 1,600 degrees Fahrenheit during melting operations. Strip chart records indicate that the temperature fluctuates outside of the established range.

cc: Errol Reksten, Chattanooga-Hamilton County Air Pollution Control Bureau

UNITED STATES PIPE & FOUNDRY COMPANY, INC.
Chattanooga Valve & Fittings Plant
2501-2701 Chestnut Street
Chattanooga, TN 37408-2803
Phone: 423-752-3912

August 11, 2004

Certified Mail 7003 2260 0001 2252 7348

Mr. R. Douglas Neely
Air Toxics and Monitoring Branch Chief
U.S. Environmental Protection Agency
Sam Nunn Federal Building
61 Forsyth Street SW
Atlanta, Georgia 30303

Re: Iron & Steel Foundry MACT – Initial Notification Report

Dear Mr. Neely:

Please find enclosed a copy of U.S. Pipe & Foundry's initial notification report form to meet compliance with 40 CFR 63 Subpart A, §63.9(b). The original form has been mailed to the Chattanooga-Hamilton County Air Pollution Control Bureau..

If you have any questions regarding this matter, please contact me at the telephone number listed above.

Sincerely,

Danny Jennings
Facility Environmental Coordinator

enclosure

Initial Notification Report

NOTIFICATION FORM TO MEET COMPLIANCE WITH 40 CFR 63 Subpart A, §63.9(b)

Applicable Rule: 40 CFR Part 63, Subpart A — National Emission Standards for Hazardous Air Pollutants for Source Categories, Subpart A — General Provisions. Initial notification is being made in accordance with §63.9(b).

SECTION I
GENERAL INFORMATION

A. Print or type the following information for each facility for which you are making initial notification: (§63.9(b)(2)(i)-(ii))

Operating Permit Number (OPTIONAL)		Facility I.D. Number (OPTIONAL)
47-065-3321		
Responsible Official's Name/Title		
David J. Diederich/Operations Manager		
Street Address		
2501-2701 Chestnut St.		
City	State	ZIP Code
Chattanooga	TN	37408
Facility Name (if different from Responsible Official's Name)		
U.S. Pipe and Foundry Company, Inc.		
Facility Street Address (If different than Responsible Official's Street Address)		
2701 Chestnut St.		
Facility Local Contact Name	Title	Phone (OPTIONAL)
Danny Jennings	Facility Environmental Coordinator	423-752-3912
City	State	ZIP Code
Chattanooga	TN	37408

B. Indicate the relevant standard or other requirement that is the basis for this notification and the source's compliance date: (§63.9(b)(2)(iii))

Basis for this notification (relevant standard or other requirement)	Anticipated Compliance Date (mm/dd/yy)
40 C.F.R. part 63, subpart EEEEE – NESHAP for Iron and Steel Foundries	April 22, 2007

MWPS004658

SECTION II
SOURCE DESCRIPTION

A. Briefly describe the nature, size, design, and method of operation of the source. (§63.9(b)(2)(iv))

This facility produces ductile iron pipe fittings, valves and hydrants for the transmission and distribution of water and currently employees approximately 550 people. The ductile iron pipe fittings are produced at the foundry operation onsite, while the valves and hydrants are assembled from parts both manufactured onsite at the foundry operation and outsourced from outside suppliers. The foundry operation utilizes a cupola furnace to provide molten gray iron for its casting operations. Molten iron is transported from the cupola to the furnace building where it is desulfurized, slagged, then stored in induction holding furnaces for use in the foundry's fittings production operations. Prior to use on either line, the iron is converted to ductile iron, inoculated, and slagged once again. Large fittings are produced on Unit No. 10 while smaller fittings are produced on Unit No. 9. Both Units have sand mixing and mold forming systems, pouring, cooling, shakeout, and supporting core making operations. Unit No. 10 mold and core sands are chemically bonded (airset) while No. 9 Unit utilizes green sand molding making and predominantly cold box (isocure) cores. Once the casting mold is formed and the core is placed, molten ductile iron is poured into the mold. Following a predetermined time for mold cooling, the mold is dumped onto a shakeout operation to separate the mold and core sands from the casting. From shakeout, the castings are sent to various casting cleaning areas that include shot blasting and surface grinding. The fittings are then sent for, surface coating, machining, and either final assembly or shipment to another U.S. Pipe sister facility for further assembly. Several areas of the plant provide support operations for the foundry operation. These include carpenter and pattern shops to construct specialty patterns for the production lines, sand storage silos that store both new and used sands used in the production processes, hot water heaters to supply hot water to employee bathouses, hot oil heaters to heat asphalt coatings that are applied to certain castings, cupola dust treatment, a Class II industrial landfill, and miscellaneous pre-heating and drying operations.

B. Briefly describe the types of emission points within the affected source and the types of hazardous air pollutants emitted. (§63.9(b)(2)(iv))

Types of Emission Points

Emission points at this facility include both controlled and fugitive emission sources. Control devices utilized include baghouses, cartridge collectors, bin vents, cyclones, afterburners, acid scrubbers, and flame-off. Fugitive emission sources include cupola charge handling, desulfurization & slagging, induction holding furnaces, inoculation & slagging, pouring & cooling, some sand handling, and many ancillary support operations. Emissions from cupola melting are controlled by a baghouse and afterburner. Other processes controlled by baghouses, cartridge collectors, bin vents or cyclones include ductile iron conversion, shakeout, shot blasting, sand handling, sand reclamation, and the carpenter & pattern shops. VOC emissions from refractory coating operations are controlled by flame-off. Triethylamine emissions from cold box (isocure) core making are controlled by acid scrubbers.

Types of HAPs Emitted

Sample Response:

HAPs emitted at this facility include triethylamine, benzene, phenol, formaldehyde, manganese compounds, and lead compounds.

C. *Check the box that applies: (§63.9(b)(2)(v))*

x My facility is a major source of Hazardous Air Pollutants (HAPs)
☐ My facility is an area source of HAPs

SECTION III
CERTIFICATION *(Note: you may edit the text in this section as deemed appropriate)*

Based on information and belief formed after a reasonable inquiry, the statements and information in this document are true, accurate, and complete.

Name of Responsible Official (Print or Type)	Title	Date (mm/dd/yy)
David J. Diederich	Operations Manager	8/11/04

Signature of Responsible Official

SENDER: COMPLETE THIS SECTION

- ☒ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- ☒ Print your name and address on the reverse so that we can return the card to you.
- ☒ Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. R. Douglas Neely
Air Toxics and
Monitoring Branch Chief
U.S. Environmental
Protection Agency
Sam Nunn Federal Building
61 Forsyth Street SW
Atlanta, Georgia 30303

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☐ Agent ☐ Addressee

B. Received by (Printed Name) | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☒ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7003 2260 0001 2252 7348

PS Form 3811, August 2001 Domestic Return Receipt 102595-02-M-1540

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

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Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

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Sent To
Mr. R. Douglas Neely-Air Toxics & Monito
Street, Apt. No.; or PO Box No. Branch Chief, US Env. Prot. Agncy
Sam Nunn Fed. Bldg., 61 Forsyth
City, State, ZIP+4 Street SW
Atlanta, Georgia 30303

PS Form 3800, June 2002 See Reverse for Instructions

MWPS004661

UNITED STATES PIPE & FOUNDRY COMPANY, INC.
Chattanooga Valve & Fittings Plant
2501-2701 Chestnut Street
Chattanooga, TN 37408-2803
Phone: 423-752-3912

July 14, 2004

Ms. Cynthia McDaniel
Chattanooga-Hamilton County
Air Pollution Control Bureau
Development resource Center
1250 Market Street, Suite 3020
Chattanooga. TN 37402-4443

Dear Ms. McDaniel:

On 7/9/04 from 9:56 am – 10:11 am, a representative from your office performed a Method 9 visible emissions reading on our slag handling/storage area for our desulfurization process. It is our understanding that he read opacity levels above 20% for 9 minutes and 45 seconds during this time. We believe a significant contributing factor to this incident was excess combustible materials present in the waste foundry sands used to construct slag dams for the ladle slagging pit. This material is collected and mixed with hot slag and iron when the ladle slagging pit gets full and has to be cleaned out.

We are no longer using waste foundry sands to build slag dams for this process. We are going to use new sand for this purpose, at least temporarily. Long term, we will look at the costs associated with redesigning the slag holding pit so that no sand dams are required to keep the slag and iron from running out.

If you have any questions regarding this matter, please contact me at 752-3912.

Sincerely,

Danny Jennings
Facility Environmental Coordinator

****
*** TX REPORT ***
****

TRANSMISSION OK

JOB NO.	0196
DESTINATION ADDRESS	96682556
PSWD/SUBADDRESS	
DESTINATION ID	
ST. TIME	07/14 11:55
USAGE T	00'26
PGS.	2
RESULT	OK

CT-263 REV 02-99

UNITED STATES PIPE AND FOUNDRY COMPANY
2501 CHESTNUT STREET, 37408
CHATTANOOGA, TENNESSEE 37401

FACSIMILE TRANSMISSION

Firm Name: Chatt-Hamilton County APCB

Attention: Cynthia McDaniel

Fax Number: (423) 668-2556

From: Danny Jennings

Special Instructions:

Number Of Pages To Follow: 1

Date: 7/14/04

Our Telephone Number: 423-752-3912
Our Fax Number: 423-752-3950

MESSAGE: Follow up letter for 7/9/06 incident at desulfurization slag storage area. Original to follow in mail.

CHATTANOOGA-HAMILTON COUNTY
AIR POLLUTION CONTROL BUREAU
Development Resource Center, Suite 3020
1250 Market Street, Chattanooga, TN 37402-4443
(423) 668-2567

NOTICE OF VIOLATION

NO. 6766

NAME UNITED STATES PIPE AND FOUNDRY COMPANY, INC.

ADDRESS 2701 Chestnut Street, Chattanooga TN 37408

LOCATION OF VIOLATION 2701 Chestnut Street, Chattanooga TN 37408 (slag material handling/storage area)

DATE OF VIOLATION 7/09/04 TIME 9:56–10:11 AM/[redacted]

BE ADVISED THAT THE FOLLOWING VIOLATION OF THE CHATTANOOGA AIR POLLUTION CONTROL ORDINANCE HAS BEEN OBSERVED

- ☐ Failing to obtain installation permit
- ☐ Operating without certificate of operation
- ☐ Excessive visible emissions, Rule 3
- ☐ Asbestos emission standard, Rule 17
  - ☐ Inadequate notice
  - ☐ Improper removal
  - ☐ Failure to obtain permit
  - ☐ Improper disposal
- ☐ Open burning, Rule 6
- ■ Permit conditions — Condition 18.2, "Conditions of General Applicability" Part 70 Permit No. 47-065-3321 Failure to maintain less than 20% opacity.
- ☐ Other

- ☐ Legal action may be taken by the Bureau if this violation occurs again.
- ☐ Further action will be taken by the Bureau; you will be notified.
- ■ You are required to appear before the director. Please call within ten days for an appointment.
- ☐ You are summoned to appear before the Judge of City Court of _____ at _____ AM/PM upon the _____ day of _____ to answer the charge of violating the code/regulation as indicated above.

YOU HAVE THE RIGHT TO BE REPRESENTED BY AN ATTORNEY AT ANY CONFERENCE OR HEARING CONCERNING THE ABOVE VIOLATION

This violation was detected as a result of Incident #: 04-00198

- ■ PATROL
- ☐ COMPLAINT
- ☐ INSPECTION
- ☐ OTHER _____

Issued by: Robert H. [signature] Time: 1:09 PM Date: 8-27-04

Served by: [signature] Time: 9:00 Am Date: 9/2/04

FORM 31-34 REV 1 CASE P.

Copy to: Danny Jennings

CERTIFIED MAIL 7002 3150 0004 3231 [redacted]606
RETURN RECEIPT REQUESTED
SERVE: C T Corporation System, 530 Gay Street, Knoxville, TN 37902le, TN 37219

MWPS004664

UNITED STATES PIPE & FOUNDRY COMPANY, INC.
Chattanooga Valve and Fittings Plant
2701 Chestnut Street, Chattanooga, TN 37408

February 23, 2005

HAZARDOUS WASTE MINIMIZATION PROGRAM

United States Pipe and Foundry Company, Inc. (U.S. Pipe) has developed this program pursuant to the Tennessee Department of Environment & Conservation (TDEC) T.C.A. 68-212-304(a)(1)

I. Top Management Support

A. The procedures outlined in the following sections of this document constitutes the required program stipulated in conditions of the Tennessee Hazardous Waste Management and Minimization Act (THWMMA) T.C.A. 68-212-304(a)(1). This program is intended to: (i) reduce the volume and toxicity of hazardous waste to the degree determined by U.S. Pipe to be economically practicable; and (ii) ensure that the method of treatment, storage or disposal is the most practicable method available to U.S. Pipe which minimized the present and future threat to human health and the environment.

Bruce Clements
Vice President-Operations
And Pipe Related Foundry Products

B. Applicable employees will continue to receive training in accordance with the Tennessee Department of Environment and Conservation (TDEC) Division of Solid Waste Management (DSWM) Tennessee Hazardous Waste Management regulation rule 1200-1-11-.05 (2)(g).

II. Characterization of Hazardous Waste Generation

The *Notification of Regulated Waste Activity* United States Environmental Protection Agency (USEPA) Form (WM) filed in 1989 and the most recent *Annual Report* (per TDEC Rule 1200-1-11-.03(5)(b)(1) are hereby incorporated by reference.

III. Periodic Hazardous Waste Minimization Assessments

The hazardous waste stream that is generated by the Chattanooga Valve & Fittings plant is a waste stream generated by many foundries that recycle steel with a Cupola. The air pollution control equipment (APCE) generates dust (D006, D008).

A. Identify Processes where materials can be prevented from becoming a waste, or can be recycled.

i. Due to the nature of the process that generates this waste, preventing the waste being generated is not practicable. Note, however, that APCE dust discussed herein is not hazardous when it exits the process stream. Some States and the United States Environmental Protection Agency Region IV considers our type of treatment process as totally enclosed which minimized the toxicity characteristics of this by up to 95%. A beneficial reuse of the APCE device dust has not yet been identified.

B. Identification of potential waste reduction and recycling techniques applicable to this waste stream, with a cost estimate for capital investment and implementation.

i. APCE device dust:

a. Waste reduction technique: refer to III.A.i above.
b. Recycling technique: no practicable beneficial reuse has been identified for this waste.
c. Cost estimate for capital investment and implementation: not applicable.

C. Description of technically and economically practical waste reduction/recycling options to be implemented, and a planned schedule of implementation.

i. Appropriate techniques which are technically and economically practical waste reduction/recycling options have previously been implemented (refer to III.B.i above).

D. Specific performance goals for source reduction by stream.

i. APCE device dust: Not applicable (refer to III.C.i. above)

IV. Cost Allocation System

A. Identification of waste management cost.

i. APCE device dust: $234 per ton.

B. Description of department accountability: not applicable.

C. Comparison of waste management cost with potential reduction and recycling techniques: not applicable (refer to III.C.i. above)

V. Technology Transfer

The following organizations are, or have been, utilized by U.S. Pipe to exchange technical information on waste minimization:

- Waste Reduction and Technology Transfer Foundation
- Air and Waste Management Association
- American Foundry Society
- Ductile Iron Research Association

VI. Program Evaluation

A. Description of types and amounts of hazardous waste reduced or recycled:
   i. As reported on the Annual Hazardous Waste Report the type and amounts of waste reported each year is linked directly to the annual production.

B. Analysis and quantification of progress made relative to performance goals: not applicable (refer to III.D.i. above).

C. Amendments to waste minimization plan and explanation: reserved.

D. Explanation and documentation of efforts completed: refer to III.B.i.a. above.

E. Explanation and documentation regarding impediments to hazardous waste reduction: reserved.

Documents incorporated by reference:
Notification of Regulated Waste Activity (TDEC Hazardous Waste Stream Report)
Waste Stream No. 1 2003 Annual Report
Waste Stream No. 1 2004 Annual Report

WASTE MINIMIZATION PROGRESS REPORT

APPENDIX I

Waste Strm Number	Waste Stream Name	Hazardous Waste Ratios 2004	2005	2006	2007	2008	Goal Ratio	Goal Year	Std. Production Units
1	Cupola baghouse dust	29.0	41.2				24.0	2008	tons iron melted
14	Lab Packs	0.80	0				0	2008	operating days
16	Scrubber water	12.0	0				0	2008	operating days
20	Asphalt Cut-back/water	0.102	0.045				0.075	2008	tons iron melted
22	Alcohol Core Dip	0.13	0				0	2008	tons iron melted
25	Cupola Baghouse Filters	0.34	0.12				0.26	2008	tons iron melted
27, 28, 31	Valve Plant Paint Wastes	0.32	0.28				0.24	2008	tons produced @ VP

1/31/2006

Goal for waste stream #1 was based on 2003 generation & production numbers (2003 ratio x 0.9)

MWPS004668

UNITED STATES PIPE & FOUNDRY COMPANY, INC.
Chattanooga Valve and Fittings Plant
2701 Chestnut Street, Chattanooga, TN 37408

May 21, 2004

HAZARDOUS WASTE MINIMIZATION PROGRAM

United States Pipe and Foundry Company, Inc. (U.S. Pipe) has developed this program pursuant to the Tennessee Department of Environmental Management (TDEM) T.C.A. 68-212-304(a)(1)

I. Top Management Support

A. The procedures outlined in the following sections of this document constitutes the required program stipulated in conditions of the Tennessee Hazardous Waste Management and Minimization Act (THWMMA) T.C.A. 68-212-304(a)(1). This program is intended to: (i) reduce the volume and toxicity of hazardous waste to the degree determined by U.S. Pipe to be economically practicable; and (ii) ensure that the method of treatment, storage or disposal is the most practicable method available to U.S. Pipe which minimized the present and future threat to human health and the environment.

_____
Date

Bruce Clements
Vice President- Operations
Pipe Related Foundry Products

B. Applicable employees will continue to receive training in accordance with the Tennessee Department of Environment and Conservation (TDEC) Division of Solid Waste Management (DSWM) Tennessee Hazardous Waste Management regulation rule 1200-1-11-.05 (2)(g).

II. Characterization of Hazardous Waste Generation

The *Notification of Regulated Waste Activity* United States Environmental Protection Agency (USEPA) Form (WM) filed in 1989 and the most recent *Annual Report* (per TDEC Rule 1200-1-11-.03(5)(b)(1) are hereby incorporated by reference.

III. Periodic Hazardous Waste Minimization Assessments

The hazardous waste stream that is generated by the Chattanooga Valve & Fittings plant is a waste stream generated by all foundries that recycles steel with a Cupola. The air pollution control equipment (APCE) generates dust (D006, D008).

A. Identify Processes where materials can be prevented from becoming a waste, or can be recycled.

i. Due to the nature of the process that generates this waste, preventing the waste being generated is not practicable. Note, however, that APCE dust discussed herein is not hazardous when it exits the process stream. Some States and the United States Environmental Protection Agency Region IV considers our type of treatment process as totally enclosed which minimized the toxicity characteristics of this by up to 95%. A beneficial reuse of the APCE device dust has not yet been identified.

B. Identification of potential waste reduction and recycling techniques applicable to this waste stream, with a cost estimate for capital investment and implementation.

i. APCE device dust:

a. Waste reduction technique: refer to III.A.i above.
b. Recycling technique: no practicable beneficial reuse has been identified for this waste.
c. Cost estimate for capital investment and implementation: not applicable.

C. Description of technically and economically practical waste reduction/recycling options to be implemented, and a planned schedule of implementation.

i. Appropriate techniques which are technically and economically practical waste reduction/recycling options have previously been implemented (refer to III.B.i above).

D. Specific performance goals for source reduction by stream.

i. APCE device dust: Not applicable (refer to III.C.i. above)

IV. Cost Allocation System

A. Identification of waste management cost.

i. APCE device dust: $180.00 per ton.

B. Description of department accountability: not applicable.

C. Comparison of waste management cost with potential reduction and recycling techniques: not applicable (refer to III.C.i. above)

V. Technology Transfer

The following organizations are, or have been, utilized by U.S. Pipe to exchange technical information on waste minimization:

- Waste Reduction and Technology Transfer Foundation
- Air and Waste Management Association
- American Foundry Society
- Ductile Iron Research Association

VI. Program Evaluation

A. Description of types and amounts of hazardous waste reduced or recycled:
   i. As reported on the Annual Hazardous Waste Report the type and amounts of waste reported each year is linked directly to the annual production.

B. Analysis and quantification of progress made relative to performance goals: not applicable (refer to III.D.i. above).

C. Amendments to waste minimization plan and explanation: reserved.

D. Explanation and documentation of efforts completed: refer to III.B.i.a. above.

E. Explanation and documentation regarding impediments to hazardous waste reduction: reserved.

Documents incorporated by reference:
Notification of Regulated Waste Activity (TDEC Hazardous Waste Stream Report)
Waste Stream No. 1 2002 Annual Report
Waste Stream No. 1 2003 Annual Report

UNITED STATES PIPE & FOUNDRY COMPANY, INC.
Chattanooga Valve and Fittings Plant
2701 Chestnut Street, Chattanooga, TN 37408

May 9, 2003

HAZARDOUS WASTE MINIMIZATION PROGRAM

United States Pipe and Foundry Company, Inc. (U.S. Pipe) has developed this program pursuant to the Tennessee Department of Environmental Management (TDEM) T.C.A. 68-212-304(a)(1)

I. Top Management Support

A. The procedures outlined in the following sections of this document constitutes the required program stipulated in conditions of the Tennessee Hazardous Waste Management and Minimization Act (THWMMA) T.C.A. 68-212-304(a)(1). This program is intended to: (i) reduce the volume and toxicity of hazardous waste to the degree determined by U.S. Pipe to be economically practicable; and (ii) ensure that the method of treatment, storage or disposal is the most practicable method available to U.S. Pipe which minimized the present and future threat to human health and the environment.

May 9, 2003
Date

Clyde Edwards
Clyde Edwards
Vice President- Operations
Pipe Related Foundry Products

B. Applicable employees will continue to receive training in accordance with the Tennessee Department of Environment and Conservation (TDEC) Division of Solid Waste Management (DSWM) Tennessee Hazardous Waste Management regulation rule 1200-1-11-.05 (2)(g).

C. Implementation of this Waste Management Program is incorporated into management practices, product design, capital planning, production operations, and maintenance by means of *Section 4 – Safety, Environmental, Social Responsibilities* of the U.S. Pipe Strategic Plan (here by incorporated by reference).

1 of 10

Cleaning Building Exhaust
[illegible]

Assumptions for calculating air changes:

1. All rooftop or thru wall ventilators operate all the time.
2. No derating factors have been applied to ventilators for build up, building winterizing (sealing), etc.
3. All ventilators exert uniform flow influence throughout the entire contained building volume.
4. All controlled air flows (baghouse exhaust, etc.) have been neglected in calculating air changes.
5. TUSRA breathing zone dust concentrations are representative of the entire building enclosed volume.
6. All building down draft influences, meteorological effects, natural draft and infiltration have been neglected.

Cleaning Sheds #1, 3, 9

Building volume (cu. ft.)

#1 = 1,036,881
#3 = 564,750
#9 = 185,583
1,787,214 cu. ft. volume

Exhaust volume (cu. ft./min.)

	No. fan	Model #	CFM	SP	Volume (Total)
#1 =	2	[illegible]	[illegible]	0"	
			26,400	½"	52,800
#3 =	6	426228	27,850	0"	
			26,400	½"	158,400
#9 =	17	36R524	20,710	0"	
			18,960	½"	322,300
					533,520 CFM

Time required for 1 volume change of buildings 1,3,9:

1,787,214 cu. ft. ÷ 533,520 cu.ft./min. = 3.34 mins.

Air changes per hour:

60 mins./hr. ÷ 3.34 min./change = 17.96 ≈ 18

Building Exhaust Volume (Air) CFM/hr:

1,787,214 cu. ft. x 18/hr. = 32.2 MM cu. ft./hr.

or 32.2 MM cu. ft./hr. x 0.02832 = 911.9 M m³/hr.

Cleaning Shed #2

Building Volume (cu. ft.)

#2 - 400,000 cu. ft.

Exhaust Volume (cu. ft./min. powered)

Prop. fan #1 & #2	CFM	SP	Volume (Total)
	58,600	0"	
	50,500	½"	50,500
			x 2
			101,000 cu. ft./min.

Time required for 1 volume change of building #2:

400,000 cu. ft. ÷ 101,000 cu. ft./min. = 3.96 mins.

Air changes per hour:

60 min./hr. ÷ 3.96 min./change = 15.2 changes/hr.

Building Exhaust Volume (Air) CFM/hr:

400,000 cu. ft./change x 15.2 changes/hr. = 6.08 MM cu. ft./hr.

or 6.08 MM cu. ft./hr. x 0.02832 = 172.2 M m^3/hr.

Calculate potential mass of emissions if all breathing zone grinding dust exits the building through roof top ventilators. This also assumes that the larger particles segregated by the clone settle out in the bulding, but also assumes uniform dust concentration throughout the cleaning sheds.

Cleaning Sheds #1, 3, 9 -

$$911.9 \text{ M } m^3/\text{hr exhaust} \times 1.25 \text{ mg}/m^3 \times \frac{\text{lb.}}{453.6\text{gm}} \times \frac{\text{gm}}{1000\text{mg}} =$$

2.5 lb/hr. dust

Cleaning Shed #2 -

$$172.2 \text{ M } m^3/\text{hr. exhaust} \times 1.25 \text{ mg}/m^3 \times \frac{\text{lb.}}{453.6\text{gm}} \times \frac{\text{gm}}{1000\text{mg}} =$$

0.47 lb./hr dust

Employee Breathing Zone Dust Concentrations

Dust concentrations have been measured in the breathing zones of employees grinding castings in the grinding/finishing areas. The following table shows concentrations of respirable dust (<2.5 microns dia.) as measured by standard OSHA testing methods for respirable dust.

Date	Location	Job Category	Rotoclone On	Rotoclone Off	Dust Exposure	% Free Silica
1982	#3	Hand Grind	X		1.2	8.7
10/93	#3	Hand Grind		X	0.474 *	3.0
	#3	Blast		X	0.713	4.3
	#1, #3	Foreman		X	0.786	3.4
	#1	Belt #2		X	0.478	4.8
12/93	#3	Inspector		X	0.585	7.0
	#3	Hand Grind		X	4.02 *	10.4
	#1	Hand Grind		X	1.60	4.9
	#3	Inspector		X	0.6	5.7
	#3	Hand Grind		X	2.98	5.4
	#1	Hand Grind		X	2.22	8.2

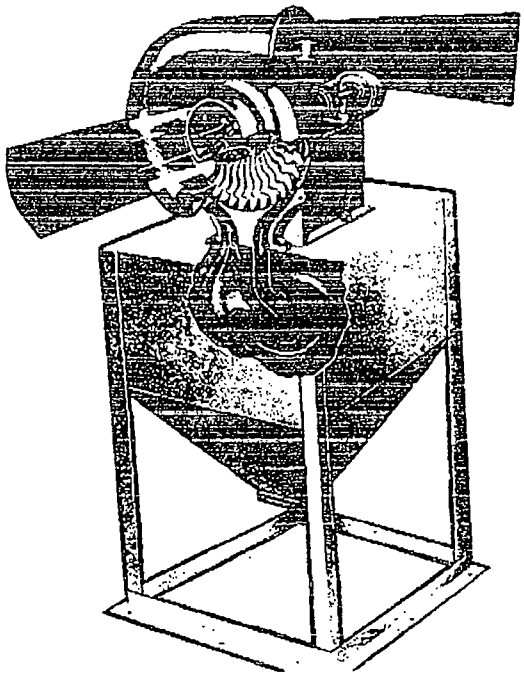
Breathing zone dust concentrations

Rotoclones on	1.2 mg/m³
Rotoclones off (all data)	1.45 mg/m³
(deleting high/low)	1.25 mg/m³

EXHIBIT VII-3

DRY DYNAMIC PRECIPITATOR COLLECTOR

Rotoclone -



Source: American Air Filter.

See copies of AFS "Foundry Air Pollution Control Manual" 1956

Casting Finishing/Grinding Operations Summary

Permit #	Area	Type		#	Process Weight (lbs/hr)	Potential Uncontolled (tons/year)	Potential Controlled (tons/year)	Allowable Emmissions (tons/year)		Comments
		SF	HG					Rule 10.2	Rule 26.12	
17	#2		x	4	6,650	54.75	2.74	40.14	40.12	
18	#2		x	2	3,325	11.83	0.24	7.92	25.2	
19	#2	x		2	3,325	11.39	0.57	22.43	25.2	
25 "A"	#3		x	14	3,000	10.51	0.53	46.6	23.56	
27 "C"	#3	x	x	16	3,750	13.14	0.657	33.64	27.33	
28 "B"	#3	x	x	9	3,000	13.14	0.53	33.64	23.56	
29 "D"	#1	x	x	14	3,750	13.14	0.657	33.64	27.33	
Totals				61	26,800	127.90	5.924	218.01	192.3	

COLLECTION EFFICIENCY OF EMISSION CONTROL EQUIPMENT SYSTEMS

Foundry Application	Particle Size	Typical Inlet Loading Gr/SCF	Typical Outlet Loading Gr/SCF					
			Wet Cap	Wet Scrubber 6"-30"	Wet Scrubber 30"-70"	Low Efficiency Cyclone	Fabric Filter	Electrostatic Precipitator
Melting								
Gray Iron Cupola	Coarse to Fine	1/2-10	0.4	0.3	0.05	0.4	0.01	0.036
Electric Arc	Fine	1/2-2	X	0.2	0.02	X	0.01	X
Screens and Transfer Points	Medium	1/2-3	X	0.005-0.01	X	X	0.01	X
Dry Sand Reclaimer	Coarse to Fine	10-40	X	0.1	0.02-0.05	X	0.01	X
Sand Cooler	Medium	1-20	X	0.01-0.05	X	X	X	X
Abrasive Cleaning	Fine to Coarse	1/2-5	X	0.01-0.05	X	X	0.01	X
Grinding	Coarse to Medium	1/2-2	X	0.01	X	0.1	0.01	X
Shakeout	Fine to Medium	1/2-1	X	0.01	X	X	X	X

Note: Particle Size

Coarse +20 Microns
Medium 2-20 Microns
Fine -2 Microns

X = Not applicable or rarely used.

Underlined outlet loading is lowest for that application.

Sources: Foundry Air Pollution Control Manual, American Foundrymen's Society;
Air Pollution Engineering Manual, U.S. Department of Health, Education and Welfare, #999-AP-40.

EXHIBIT VII-21

MWPS004678

J. Pleasant

Table 2.. Preliminary List of Emission Units at the Chattanooga Plant

The grouping is abitrary and based on the order of the tour conducted on 6/13/96

Group 1 (22 Emission Units)
Charge Material Handling
Cupola Melting
HMT - Melting
Plant Vehicular Traffic (includes transporting of 15-ton bottles)
Cupola Baghouse Dust Solidification Process
Diesel Fuel Tanks - two 1000-gallon underground tanks

Core Room -- Misc. Fuel Burning (i.e., lazy flame for core drying)
Core Wash
Isocure Machine #1
Isocure Machine #2
Isocure Machine #3
Shell Core Machines (4 Units)
Pepset Core Making (Whole Line, Half Line, and Sand Systems)
Refractory Coating for Molds and Cores
Isocure Part #1 Resin Tank, 6000-gallon
Isocure Part #2 Resin Tank, 6000-gallon
Isocure TEA Tank
Pepset Acid Tank, 2500-gallon (trivial source)
Pepset Binder Tank, 1850-gallon (trivial source)
Airset Core Making
Isocure Sand Transporter
Airset Sand Transporter

Group 2 (13 Emission Units)
Induction holding Furnaces (three 30-ton furnaces, 2 active, 1 standby)
Desulfurization, Slagging, and HMT to holding furnace
Ductile Treating and HMT (2-ton bottle)
Post Innoculation, 3500-lb casting ladles
#9 Unit Casting and Cooling

#9 Green Sand System (includes 2 mullers that are wet processing)
#9 Core Sand Separator
#9 Unit Shake Out
#9 Secondary Shake Out Unit/Line
#9 Mold Sand Reclamation Equipment (includes Screening Drum Cyclone)

Grinding Booths in #2 Cleaning Shed (North)
Swing Frame Grinders in #2 Cleaning Shed
3 Pangborn 34GN Rotoblast Barrels

Group 3 (5 Emission Units)
#1 Cleaning Shed Paint Dipping Operation (Observed Gray Coating for Fire Hydrant Body)
New Machine Shop Area (Welding, Grinding, Repair, Patching
Used Oil Tanks (2 tanks) Adjacent to Truck Wash Pad (Trival Sources)
Cleaning Area (Old Heat Treat Building)
Casting Burn-Off Oven for #4 Unit

Group 4 (12 Emission Units)
Part Washers and Degreasers
- Maint Shop in Pattern Storage Area - PW
- #1 Cleaning Shed Paint Dipping Operation - PW
- Auto Maint Area - PW
- Auto Maint Area - Degreaser (Heated)
- Truck Maint Shop - PW
- Machine Maint Shop - PW
- #4 Machine Shop - PW
- Metal Pattern Shop - PW
- West Machine Shop - Degreaser (Heated)
- West Maint Shop - PW
- North Machine Shop - PW
- South Machine Shop - PW
- South Machine Shop Annex - PW

Group 5 (8 Emission Units)
#4 Unit Sand Systems
#4 Unit Shot Blast in #2 Cleaing Bldg
#4 Unit Sand Reclaim
#4 Casting and Cooling

#10 Unit Airset Sand Systems (2 Sand Mixers)
#10 Casting and Cooling

Carpenter Shop Equipment / Cyclone
Pattern Shop Equipment

Group 6 (11 Emission Units)
Cement Lining Systems (includes Cement Mixer and Lining Process)
Binks Paint Spray Booth - Cement Lining East Run
Cement Lining Curing Ovens (3 Ovens)
#1 Dip Painting Line - Cement Coating West Run
#2 Dip Painting Line - Cement Coating Small Run
Cement Lining Large Fittings Paint Booth

Paint Storage Tanks (2 verticle tanks)
1.2-MMBtu Gas-Fired Hot Oil Heater for the Paint Tanks

Special Coating Building Spray Booth (Series 37H Red Protective Coating)
Dryer Oven

Shipping Area - Outdoor Touch-Up Coating

Group 7 (10 Emission Units) Valve Plant
Epoxy Coating Spray Booth - R/S Valves
Pangborn Grit Blast Cleaner - R/S Valve Cleaning
Pangborn Monorail Blast & 8' Table Blast
Pangborn 12' Rotoblast Table

R/S Coating Process Oven
R/S Valve Fluidized Bed Coating System (Small Parts)
R/S Valve Burn-Off Oven
R/S Valve Ovens (3 Ovens for Large Parts)
R/S Valve Large Body Fluidized Bed Coating System

Binks Spray Booth (Small Valves)

Group 8 (15 Emission Units)
Green Sand Preparation Systems
Pangborn Pnematic Abrasive Blast Cleaners (2 Units)
Green Sand Mold Pouring Line
Shake Out Hood
Shell Sand Mold Pouring Bed
Small Furnances (2 Units)

Shell Molding Machines (5 Units and only 3 Active)
Shell Nolding Cooling Exhaust

Pedestal Grinders (4 Units)
Pangborn 6GN Rotoblast Barrels (2 Units)

Lead Furnace

Hydrant Assemby Spray Booth

1000-gallon diesel tank (above ground and adjacent to fense line)

Gas-fired hot water heater #1 near guard house, trivia source
Gas-fired hot water heater #2 (same area), trivia source

Unit		Equipment		Reference	Control Device		Reference	Emission Point		Reference
U001	Charge Handling	E001	Charge material unloading/handling	U001	CD001	Afterburner		P001	Fugitives from charge handling	
U002	Melting	E002	Cupola		CD002	Cupola baghouse		P002	Melting building roof/eaves	
U003	De-Sulfurizing	E003	Transfer ladle/bottle		CD003	Ductile treating/#9 shakeout baghouse		P003	Cupola baghouse roof monitor	
U004	Holding Furnaces	E004	De-sulfurizing station		CD004	Casting burn-off baghouse		P004	Treating building north gable fan	
U005	Ductile Treating	E005	Holding furnace #1		CD005	12' table blast baghouse		P005	Treating building south gable fan	
U006	Innoculation	E006	Holding furnace #2		CD006	34GN baghouse		P006	Ductile treating baghouse roof monitor	
U007	Pouring & Cooling	E007	Holding furnace #3		CD007	Baghouse on cabinet blast & 8' table blast		P007	Roof monitor (main foundry building)	
U008	Pouring & Cooling	E008	5 -ton treating ladle		CD008	Secondary shakeout baghouse		P008	#9 Unit pouring vent (south)	
U009	Shakeout	E009	3500 lb pouring ladle		CD009	#4 & #10 Units sand screen baghouse		P009	#9 Unit pouring vent (center)	
U010	Shakeout	E010	10-ton pouring ladle		CD010	#4 Unit binder storage baghouse		P010	#9 Unit pouring vent (north)	
U011	Cleaning	E011	#9 pouring line		CD011	#9 Unit screening drum cyclone		P011	#9 Unit cooling loop vent #1	
U012	Cleaning	E012	#9 cooling loop		CD012	Airset sand conveying baghouse		P012	#9 Unit cooling loop vent #2	
U013	Sand Preparation (#4)	E013	#9 mold squeeze		CD013	#10 Unit sand conveying baghouse		P013	#9 Unit cooling loop vent #3	
U014	Sand Preparation (#9)	E014	#4/#10 shakeout		CD014	#10 Unit sand heater baghouse		P014	#9 Unit cooling loop vent #4	
U015	Mold-Making (Green) (#9)	E015	#9 shakeout		CD015	#10 Unit east mixer baghouse		P015	Casting burn-off baghouse stack	
U016	Isocure Cores	E016	Burn-off of gates & risers		CD016	#10 Unit west mixer baghouse		P016	Casting burn-off building eaves	
U017	Shell Cores	E017	12' blast cleaner		CD017	#4 Unit binder storage baghouse		P017	#2 Cleaning Shed roof/eaves	
U018	Pepset Cores	E018	#9 Unit casting handling		CD018	#9 Unit binder storage baghouse		P018	12' table blast baghouse stack	
U019	Mold-Making (Green) (#4)	E019	34GN-1		CD019	#9 Unit binder storage baghouse		P019	Powered ventilators in pick-off building (A-N)	
U020	Airset Cores	E020	34GN-2		CD020	#9 Unit binder conveyor baghouse		P020	Roof monitor over casting cooling	
U021	Mold-Making (Airset) (#10)	E021	34GN-3		CD021	#9 Unit binder conveyor baghouse		P021	34GN baghouse stack	
U022	Sand Reclamation	E022	Cabinet blast		CD022	Airset sand heater cyclone	U020	P022	Secondary shakeout baghouse stack	
U023	Grinding & Repair	E023	8' table blast		CD023	#10 Unit sand heater cyclone	U021	P023	Cabinet blast & 8' table blast baghouse stack	
U024	Cement Lining	E024	#4 & #10 Units return sand		CD024	#10 Unit sand mixer baghouse	U021	P024	Powered ventilators in #3 Cleaning Shed (A-O)	
U025	Machining	E025	#4 Unit mullors		CD025	#10 Unit sand mixer baghouse	U021	P025	Powered ventilators over cabinet blast (A-B)	
U026	Special Coating	E026	Binder storage		CD026	Sand reclaimer fines baghouse	U022	P026	#4/#10 Units sand handling fugitives (in penthouse)	
U027	Valve Product Coating	E027	#4 Unit mold-making		CD027	Sand reclaimer classifier baghouse	U022	P027	#4/#10 Units sand screen baghouse	
U028	Coating	E028	#9 Unit return sand		CD028	Airset sand silo baghouse	U051	P028	#4 Unit mullor fugitives (east)	
U029	Packaging/Shipping	E029	#9 Unit Mullor "A"		CD029	Airset sand tank baghouse	U051	P029	#4 Unit mullor fugitives (west)	
U030	Machining (Met Valves)	E030	#9 Unit Mullor "B"		CD030	#10 Unit sand tank baghouse	U051	P030	Binder storage baghouse stack	
U031	Assembly & Coating (Met Valves)	E031	#9 Unit mold-making		CD031	#3 &#4 Isocure sand tank baghouse	U051	P031	#9 Unit sand handling fugitives	
U032	Machining (Large Valves)	E032	Airset sand storage		CD032	#5 Isocure sand tank baghouse	U051	P032	Screening drum cyclone	
U033	Assembly & Coating (Large Valves)	E033	Airset mold-making					P033	#9 Unit mullor "A" vent	
U034	Machining (Hydrants)	E034	Airset core finishing					P034	#9 Unit mullor "B" vent	
U035	Assembly & Coating (Hydrants)	E035	#10 Unit sand storage					P035	Powered ventilators in Airset building (A-H)	
U036	Abrasive Blasting (RS Valves)	E036	#10 Unit sand heater					P036	Airset sand conveying baghouse stack	
U037	Repair & Machining (RS Valves)	E037	#10 Unit east mixer					P037	#10 Unit sand conveying baghouse stack	
U038	Coating (RS Valves)	E038	#10 Unit west mixer					P038	Cupola cap	
U039	Assembly & Testing (RS Valves)	E039	#9 Unit secondary shakeout					P039	#4 Unit binder storage baghouse	
U040	Airset Cores	E040	#4 Unit magnetic separator					P040	#9 Unit penthouse over mullors	
U041	Shell Cores	E041	#4 Unit sand screen					P041	#9 Unit binder storage baghouse	
U042	Sand Preparation	E042	#4 Unit sand storage					P042	#9 Unit binder storage baghouse	
U043	Mold-Making (Green)	E043	#4 Unit binder storage					P043	#9 Unit binder conveyor baghouse	
U044	Brass Melting	E044	#4 Unit binder conveyor					P044	#9 Unit binder conveyor baghouse	
U045	Pouring & Cooling	E045	#9 Unit magnetic separator					P045	Airset chemical storage tank vents	U020
U046	Shakeout	E046	#9 Unit screening/blending drum					P046		
U047	Cleaning	E047	#9 Unit sand storage					P047		
U048	Grinding	E048	#9 Unit binder storage					P048		
U049	Brass Machining	E049	#9 Unit binder conveyor					P049		
U050	Shell Molds	E050	Airset sand heater	U020				P050		

Pouring–Cooling–Shakeout Binder System Green Sand Index: Seacoal	Pounds of Chemical Released to Air per Pound of Index	Pouring–Cooling–Shakeout Binder System Core Oil Index: Core Oil	Pounds of Chemical Released to Air per Pound of Index	Pouring–Cooling–Shakeout Binder System Shell Index: Resin [6]	Pounds of Chemical Released to Air per Pound of Index
Ammonia	0.000065	Ammonia	0.000038	Ammonia	0.003860
Hydrogen Sulfide	0.000832	Hydrogen Sulfide	0.000057	Hydrogen Sulfide	0.000094
Nitrogen Oxides	0.000562	Nitrogen Oxides	0.000081	Nitrogen Oxides	0.000994
Sulfur Dioxide	0.000253	Sulfur Dioxide	0.000115	Sulfur Dioxide	0.003509
Total Hydrocarbons [4]	0.011941	Total Hydrocarbons [4]	0.028737	Total Hydrocarbons [4]	0.022421
Acrolein	0.000002	Acrolein	0.000077	Acrolein	0.000047
Benzene	0.000611	Benzene	0.002344	Benzene	0.006667
Formaldehyde	0.000004	Formaldehyde	0.000096	Formaldehyde	0.000035
Hydrogen Cyanide	0.000118	Hydrogen Cyanide	0.000086	Hydrogen Cyanide [2]	0.010526
M–Xylene [1]	0.000021	M–Xylene	0.000239	M–Xylene	0.000585
Naphthalene [1]	0.000021	Naphthalene [1]	0.000048	Naphthalene [3]	0.000058
O–Xylene [1]	0.000021	O–Xylene	0.000287	O–Xylene [1]	0.000117
Phenol	0.000131	Phenol [2]	0.000057	Phenol	0.002456
Toluene	0.000063	Toluene	0.000478	Toluene	0.002807
Total Aromatic Amines	0.000021	Total Aromatic Amines	0.000096	Total Aromatic Amines	0.002339
Total C2 to C5 Aldehydes	0.000063	Total C2 to C5 Aldehydes [1]	0.000766	Total C2 to C5 Aldehydes [1]	0.000585
Total HAP's [5]	0.001076	Total HAP's [5]	0.004574	Total HAP's [5]	0.026222

[1] SRI reported the concentration of this chemical as a less than value (< "X"). The concentration used for this calculation was the "X" value.
[2] SRI only reported the highest time–average concentration for this chemical. That value was used for the calculation.
[3] SRI reported the concentration as a much less than value(<< "Z"). The Concentration used for this calculation was one–half of the "Z" value.
[4] SRI reported this as a 30 minute average concentration. For this calculation it was assumed that the 60 minute average concentration was the same.
[5] Total HAP's is the sum of Acrolein, Benzene, Formaldehyde, Hydrogen Cyanide, M – Xylene, Naphthalene, O – Xylene, Phenol, Toluene, Total Aromatic Amines, and Total C2 to C5 Aldehydes.
[6] This is the amount of resin on the sand, not the combined weight of resin and sand.

CV½F #9 unit 8:1 Sand/metal FY 93 } green Sand
7.8:1
#4 unit 10:1

10 all no-bake > 10:1

MVPS004683

UNITED STATES PIPE AND FOUNDRY COMPANY

June 24, 1971

TO: Mr. R. Bates Wilson ADDRESS: General Office

FROM: J. D. Simmons ADDRESS: Chattanooga General Foundry

SUBJECT: CORPS OF ENGINEERS PERMITS - Hazardous Substances

COPIES TO: Messrs: C. A. Johnson, W. C. Bentley

The attached list of materials is submitted as requested in your letter of June 2, 1971. We have inventoried all raw materials used in this plant and listed only those that may possibly be considered hazardous or potentially hazardous.

Cupola Flux or Super Flux and Ferro-Manganese are parts of the cupola charge materials and possibly enter to some degree, the discharge water used for slag granulation. All other listed materials have no direct contact with the discharge water, to my knowledge.

If any other information or action is required, please advise.

RECEIVED
JUN 25 1971
ENGINEERING DEPT.

Wilson

Jerry D. Simmons

Jerry D. Simmons

JDS:KMY

CHATTANOOGA GENERAL FOUNDRY

Hazardous Materials

ITEM	TYPE MATERIAL	EST. AMOUNT USED	WHERE USED	VENDOR
Durez Resin #23076	Phenol Formaldehyde	15,000 Lb./Week	Shell Core Department	L. C. Morris Company, Inc.
Flake Resin G.P.-216	Phenol Formaldehyde Polymer	333 Lb./Month	Shell Core Department	Georgia - Pacific
Chem Rez 208	High Furan Urea Concentrate	1,320 Gal./Week	Airset Core Department	Porter Warner, Inc.
*Alternate-Resin Martin #1	High Furan Urea Concentrate		Airset Core Department	J. C. Busby Company
Chem Rez 2005	Concentrated Phosphoric Acid	440 Gal./Week	Airset Core Department	Porter Warner, Inc.
*Alternate-Catalyst #660	Concentrated Phosphoric Acid		Airset Core Department	J. C. Busby Company
Durez Hexamethylenetitramine		1,800 Lb./Week	Shell Core Department	L. C. Morris Company, Inc.
Mag. Coke 3X5 Size	Contains Magnesium	2,800 Lb./Week	Melting Department	American Coke Company
Calcium Carbide 16MDX		2,500 Lb./Week	Melting Department	Union Carbide Company
Chromtemp 6B	Contains Chromium	(Not used (11,700 Lb. on hand)	Melting Department	Union Carbide Company
Ferro-Molybdenum		400 Lb./Week	Melting Department	Climax Molybdenum Company
Calcium Sterate		320 Lb./Week	Shell Core Department	L. C. Morris Company, Inc.
Babbitt	Contains Antimony & Copper	5 Lb./Month	Maintenance Department	Rogers-Bailey Supply Company
Cupola Flux	Contains Fluoride	20,000 Lb./Week	Melting Department	Cleveland Flux Company
*Alternate Super Flux	Contains Fluoride		Melting Department	Tecmet, Inc.
Foundry V-5 Alloy	40% Chromium	2,200 Lb./Month	Melting Department	Foote Mineral Company
75% Std. Ferro-Manganese		2,500 Lb./Month	Melting Department	Tennessee Alloy Corporation

MWPS004685

Table 3. Net Annual VOC Emission Increase.

Equipment ID	Source Name	Emission Segment Number	Emission Segment Description	Annual Usages (CY'99)	Annual Usages (CY'00)	Baseline Annual Usages from CY'99 & CY'00	Modification Increase	Post Modification	Annual Usages (Unit)	Emission Factor (Value)	Emission Factor (Unit)	Emission Factor Reference	Stack or Discharge ID	Capture Eff (%)	Control Device ID	Control Eff. (%)	SPEC. GRAV.	PCT WT	Baseline Annual Emissions from CY'99 & CY'00 (TPY)	Post Modification Emissions [TPY]	Net Emission Increase (TPY)
CD001	AFTER BURNER	01	NATURAL GAS FIRING	34.036	33.761	33.899	52.502	86.400	MMcf/yr	2.8	lb/MMcf	AP 42 Table 1.4-3 (JAN 95)	S002	100	CD001	85			0.0071	0.0181	0.0110
		02	NO. 2 FUEL OIL (BACK-UP FUEL)	67.532	66.986	67.259	104.170	171.429	1000 gal/yr	0.34	lb/1000 Gal	AP 42 Table 1.3-4	S002	100	CD001	85					
E002	CUPOLA	01	CUPOLA MELTING	50,310	61,953	56,131	38,932	95,063	tons/yr	2	lb/ton	DIPRA EF REPORT	S002	99.995	CD001	85			8.419	14.259	5.840
				50,310	61,953	56,131	38,932	95,063	tons/yr	2	lb/ton	DIPRA EF	S004	0.005					0.0028	0.0046	0.0019
E006	HOLDING FURNACE PREHEAT	01	NATURAL GAS FIRING	9.454	9.378	9.416	14.584	24.000	MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-3 (JAN 95).	S005-S006 (Fugitive)	100	EBSF				0.0249	0.0634	0.0385
E010	POURING #9	01	GREENSAND POURING, #9 UNIT	39,691	50,367	45,029	39,793	84,822	tons/yr	0.14	lb/ton	EPA-600/2-90-044	S008 (Fugitive)	50	EBSF				1.576	2.969	1.393
				39,691	50,367	45,029	39,793	84,822	tons/yr	0.14	lb/ton	EPA-600/2-90-044	S009-S011	50					1.576	2.969	1.293
E011	COOLING #9	01	GREENSAND COOLING, #9 UNIT	39,691	50,367	45,029	39,793	84,822	tons/yr	0.0787	lb/ton	WISCONSI	S008	40	EBSF				0.709	1.335	0.626
				39,691	50,367	45,029	39,793	84,822	tons/yr	0.0787	lb/ton	WISCONSI	S012	10					0.177	0.334	0.157
				39,691	50,367	45,029	39,793	84,822	tons/yr	0.0787	lb/ton	WISCONSI	S013	15					0.266	0.501	0.235
				39,691	50,367	45,029	39,793	84,822	tons/yr	0.0787	lb/ton	WISCONSI	S014	25					0.443	0.834	0.391
				39,691	50,367	45,029	39,793	84,822	tons/yr	0.0787	lb/ton	WISCONSI	S015	10					0.177	0.334	0.157
E014	#9 UNIT SHAKEOUT	01	SHAKEOUT, #9 UNIT	39,691	50,367	45,029	39,793	84,822	tons/yr	1.228	lb/ton	MAYSILLES'S REVIEW	S007	90	CD003				24.883	46.373	21.500
				39,691	50,367	45,029	39,793	84,822	tons/yr	1.228	lb/ton	MAYSILLES'S REVIEW	S008 (Fugitive)	10	EBSF				2.765	5.208	2.443
E026	HERMAN MOLD MACHINE	02	PARTING OIL FOR MOLD FORMING, LP-500	6,071	8,888	7,479	SEE BELOW	SEE BELOW	gal/yr	N/A	N/A	MATERIAL BALANCE	S008 (Fugitive)	100	EBSF	0	0.866	93	25.134	0.000	-25.134
E026	HERMAN MOLD MACHINE	02	PARTING OIL FOR MOLD FORMING, LP-500			748	661	1,409	gal/yr	N/A	N/A	MATERIAL BALANCE	S008 (Fugitive)	100	EBSF	0	0.886	93	2.513	4.735	2.221
E026	HERMAN MOLD MACHINE	02	PARTING OIL FOR MOLD FORMING, CALSLIP					3,522.30	gal/yr	N/A	N/A	MATERIAL BALANCE	S008 (Fugitive)	100	EBSF	0	0.8876	85	0.000	11.087	11.087
E069-E071 E129-E131	ISOCURE MACHINES #3/#4/#5 #6/#7/#8 (Curent Production)	01	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]											
		02	SIGMA CURE 7110 RESIN, PART 1	148.59	167.94	158.22	SEE BELOW	158.22	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	S054, OTHERS & [illegible]	100	--				4.905	4.905	0.000
		03	SIGMA CURE 7610 RESIN, PART 2	129.46	173.83	151.65	SEE BELOW	151.65	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	S054, OTHERS & [illegible]	100	--				4.701	4.701	0.000
E069-E071 E129-E131	ISOCURE MACHINES #3/#4/#5 #6/#7/#8 (Next 5 Years based on net increase)	01	[illegible]	[illegible]	[illegible]	[illegible]	24,261	[illegible]	[illegible]	[illegible]											
		02	SIGMA CURE 7110 RESIN, PART 1	SEE ABOVE	SEE ABOVE	SEE ABOVE	161.73	161.73	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	S087, OTHER & FUGITIV	100	--				0.000	5.013	5.013
		03	SIGMA CURE 7610 RESIN, PART 2	SEE ABOVE	SEE ABOVE	SEE ABOVE	155.01	155.01	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	S087, OTHER & FUGITIV	100	--				0.000	4.805	4.805
E072	REFRACTORY COATING	01	PROLITE-AB	2.74	3.06	2.90	0.00	2.90	tons/yr	480	lb/ton Handle	MATERIAL BALANCE	S009A (Fugitive)	100	RC117				0.696	0.696	0.000
				1.37	1.49	1.43	0.00	1.43	tons/yr	480	lb/ton	MATERIAL	S009C	100	FLAME	50			0.172	0.172	0.000
				5.48	6.07	5.78	0.00	5.78	tons/yr	480	lb/ton Handle	MATERIAL BALANCE	S046A - Area1	100	FLAMEO FF	50			0.693	0.693	0.000

MWPS004686

Table 3. Net Annual VOC Emission Increase.

Equipment ID	Source Name	Emission Segment Number	Emission Segment Description	Annual Usages (CY'99)	Annual Usages (CY'00)	Baseline Annual Usages from CY'99 & CY'00	Modification Increase	Post Modification	Annual Usages (Unit)	Emission Factor (Value)	Emission Factor (Unit)	Emission Factor Reference	Stack or Discharge ID	Capture Eff. (%)	Control Device ID	Control Eff. (%)	SPEC. GRAV.	PCT WT	Baseline Annual Emissions from CY'99 & CY'00 (TPY)	Post Modification Emissions (TPY)	Net Emission Increase (TPY)
				1.37	19.50	10.43	10.49	20.93	tons/yr	480	lb/ton	MATERIAL	S053A	100	RC118				2.504	5.022	2.518
				2.74	39.58	21.16	21.28	42.44	tons/yr	480	lb/ton	MATERIAL	S053B -	100	FLAMEO	50			2.530	5.093	2.564
		02	PROLITE-TSBC	6.30	7.03	6.67	0.00	6.67	tons/yr	480	lb/ton	MATERIAL	S008A	100	RC117				1.600	1.600	0.000
				3.15	3.43	3.29	0.00	3.29	tons/yr	480	lb/ton	MATERIAL	S008C	100	RC118	50			0.395	0.395	0.000
				12.60	13.96	13.28	0.00	13.28	tons/yr	480	lb/ton	MATERIAL	S046A	100	FLAMEO	50			1.593	1.593	0.000
				3.15	10.36	6.75	6.79	13.55	tons/yr	480	lb/ton	MATERIAL	S053A	100	RC123				1.621	3.251	1.630
				6.30	21.02	13.66	13.74	27.41	tons/yr	480	lb/ton	MATERIAL	S053B	100	FLAMEO	50			1.640	3.289	1.649
		03	ISOPROPANOL	430	480	454.93	0.00	454.93	gal/yr	N/A	N/A	MATERIAL	S008A	100	RC117		0.79	100	1.497	1.497	0.000
				215	234	224.48	0.00	224.48	gal/yr	N/A	N/A	MATERIAL	S008C	100	RC118	50	0.79	100	0.369	0.369	0.000
				860	953	906.32	0.00	906.32	gal/yr	N/A	N/A	MATERIAL	S046A	100	FLAMEO	50	0.79	100	1.491	1.491	0.000
				215	1,592	903	908.52	1,812	gal/yr	N/A	N/A	MATERIAL	S053A	100	RC123		0.79	100	2.972	5.961	2.989
				430	3,232	1,831	1,841.30	3,672	gal/yr	N/A	N/A	MATERIAL	S053B	100	FLAMEO	50	0.79	100	3.012	6.041	3.029
E078	PEPSET SAND MIXER (PEPSET CORE FOR #9 UNIT)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	8,160													
		02	VOLATILES FROM PEPSET BINDER SUPER SET #324	50.20	34.90	42.55	37.60	80.15	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	S053 (Fugitive)	100	WET PRO2				1.319	2.485	1.166
		03	VOLATILES FROM NO-BAKE ACID CATALYST (SUPER SET BC61)	26.1	18.1	22.39	19.79	42.19	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	S053 (Fugitive)	100	WET PRO2				0.694	1.308	0.614
			BINDER/RESIN RATIO	1.9	1.9	1.9	1.9														
E079	PEPSET CORE FORMING	01	SAND & BINDERS	3,329.50	[illegible]	3,130.63	3,330.62	6,661.25	tons/yr												
		02-03	PARTING COMPOUNDS NIX STIX 32 & 93	2.10	1.46	1.78	1.78	3.57	tons/yr	1,520	lb/ton Handled	MATERIAL BALANCE	S053 (Fugitive)	100	WET PRO2				1.352	2.712	1.360
E088	PRIMER DIP COATING OPERATION	01	GREY VOC-COMPLIANCE AIR DRY COATING	1,310	1,973	1,642	704	2,345	gal/yr	N/A	N/A	MATERIAL BALANCE	S059	100	EBSF		1.30	29.86	2.659	3.798	1.139
		02	VM&P NAPHTHA	250	80	165	71	235									0.766	##	0.526	0.751	0.225
		03	SURE SOL 150	0	89	45	19	64	gal/yr	N/A	N/A	MATERIAL BALANCE	S059	100	EBSF		0.895	100	0.166	0.238	0.071
E099	#1 DIP PAINT LINE	01	B-523 CUTBACK ASPHALT	9,197	6,877	8,037			gal/yr	N/A	N/A	MATERIAL BALANCE	S063	100			0.893	43	12.877	SEE PLANT WIDE	-12.877
		02	VM&P NAPHTHA	8,953	2,653	5,905											0.766	##	18.875		-18.875
		03	SURE SOL 150	0	3,195	1,598			gal/yr	N/A	N/A	MATERIAL BALANCE	S063	100			0.895	100	3.966	0	-3.966
E100	#4 & #10 BINKS SPRAY PAINT BOOTH	01	B-523 CUTBACK ASPHALT	2,926	2,188	2,557			gal/yr	N/A	N/A	MATERIAL BALANCE	S067	100	CD034		0.893	43	4.097	SEE PLANT WIDE	-4.097
		02	VM&P NAPHTHA	587	187	387											0.766	##	1.239		-1.239
		03	SURE SOL 150	0	210	105			gal/yr	N/A	N/A	MATERIAL BALANCE	S067	100	CD034		0.895	100	0.391	0	-0.391

MWPS004687

Table 3. Net Annual VOC Emission Increase.

Equipment ID	Source Name	Emission Segment Number	Emission Segment Description	Annual Usages (CY'99)	Annual Usages (CY'00)	Baseline Annual Usages from CY'99 & CY'00	Modification Increase	Post Modification	Annual Usages (Unit)	Emission Factor (Value)	Emission Factor (Unit)	Emission Factor Reference	Stack or Discharge ID	Capture Eff. (%)	Control Device ID	Control Eff. (%)	SPEC. GRAV.	PCT WT	Baseline Annual Emissions from CY'99 & CY'00 (TPY)	Post Modification Emissions (TPY)	Net Emission Increase (TPY)
E101	#4 & #10 LARGE FITTINGS PAINT BOOTH	01	B-523 CUTBACK ASPHALT	836	625	731			gal/yr	N/A	N/A	MATERIAL BALANCE	S068	100	CD035		0.893	43	1.171	SEE PLANT WIDE	-1.171
		02	VM&P NAPHTHA	220	70	145											0.766	##	0.464		-0.464
		03	SURE SOL 150	0	79	39			gal/yr	N/A	N/A	MATERIAL BALANCE	S068	100	CD035		0.895	100	0.147	0	-0.147
E102	#3 DIP PAINT LINE	01	B-523 CUTBACK ASPHALT	7,247	5,419	6,333			gal/yr	N/A	N/A	MATERIAL BALANCE	S063	100			0.893	43	10.147	SEE PLANT WIDE	-10.147
		02	VM&P NAPHTHA	6,667	2,123	4,395											0.766	##	14.048		-14.048
		03	SURE SOL 150	0	2,378	1,189			gal/yr	N/A	N/A	MATERIAL BALANCE	S063	100			0.895	100	4.446	0	-4.446
E103-E104	COATING DRYING OVENS #1 AND #3	01	NATURAL GAS FIRING	5.564	6.854	6.209	0	6.209	MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-3 (JAN 95).	S069-S070	100					0.0164	0.0164	0.0000
E105	SPECIAL COATING SPRAY BOOTH (SHIPPING)	01	TNEMEC F020 (2 COMPONENTS)						gal/yr	N/A	N/A	MATERIAL BALANCE	S071	100	CD036		1.501	## ##	0.000	0.000	0.000
		02	TNEMEC F037H-0077 (SINGLE						gal/yr	N/A	N/A	MATERIAL BALANCE	S071	100	CD036		1.544	## ##	0.000	0.000	0.000
		03	TNEMEC F066 (2 COMPONENTS)						gal/yr	N/A	N/A	MATERIAL BALANCE	S071	100	CD036		1.499	## ##	0.000	0.000	0.000
		04	TNEMEC F069 (2 COMPONENTS)						gal/yr	N/A	N/A	MATERIAL BALANCE	S071	100	CD036		1.633	## ##	0.000	0.000	0.000
		05	TNEMEC F140 (2 COMPONENTS)						gal/yr	N/A	N/A	MATERIAL BALANCE	S071	100	CD036		1.513	## ##	0.000	0.000	0.000
		06	TNEMEC F041-0004 THINNER (CVF0899-						gal/yr	N/A	N/A	MATERIAL BALANCE	S071	100	CD036		0.827	## ##	0.000	0.000	0.000
E109	TOUCHUP COATING	01	B-523 CUTBACK ASPHALT	2,508	1,875	2,192			gal/yr	N/A	N/A	MATERIAL BALANCE	S075	100			0.893	43	3.512	SEE PLANT WIDE	-3.512
		02	VM&P NAPHTHA	83	28	58											0.766	##	0.186		-0.186
		03	SURE SOL 150	0	31	16			gal/yr	N/A	N/A	MATERIAL BALANCE	S075	100			0.895	100	0.059	0	-0.059
EV022	SMALL VALVE PAINT BOOTH	01	B-523 CUTBACK ASPHALT	752	563	658			gal/yr	N/A	N/A	MATERIAL BALANCE	SV11	100	CDV06		0.893	43	1.054	SEE PLANT WIDE	-1.054
		02	VM&P NAPHTHA	147	47	97											0.766	##	0.309		-0.309
		03	SURE SOL 150	0	52	26			gal/yr	N/A	N/A	MATERIAL BALANCE	SV11	100	CDV06		0.895	100	0.098	SEE PLANT WIDE	-0.098
EV023	LARGE VALVE TOUCHUP COATING	01	B-523 CUTBACK ASPHALT	125	94	110			gal/yr	N/A	N/A	MATERIAL BALANCE	SV12	100	EBSF		0.893	43	0.176	SEE PLANT WIDE	-0.176
		02	VM&P NAPHTHA	29	9	19											0.766	##	0.062		-0.062
		03	SURE SOL 150	0	10	5			gal/yr	N/A	N/A	MATERIAL BALANCE	SV12	100	EBSF		0.895	100	0.020	0	-0.020
EV024	HYDRANT PRODUCTION PAINT BOOTH	01	B-523 CUTBACK ASPHALT	1,338	1,000	1,169	501	1,670	gal/yr	N/A	N/A	MATERIAL BALANCE	SV13	100	CDV07		0.893	43	1.873	2.676	0.803
		02	VM&P NAPHTHA	294	94	154											0.766	##	0.619		-0.619

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Base

Baseline Permitted Production	Annual Usages (CY00)	Annual Usages (CY00)	Baseline Annual Usages from CY99 & CY00	Modification Increase	Post Modification	Annual Usages (CY01)	Baseline Usages	Baseline Usages
TOTAL GOOD TONS TO R/S	21,190	19,208	21,441	18,999	40,439			
#9	19,359	23,481	21,440	18,999	40,439			
#4	4,072	4,335	4,204	0	4,204			
#10	1,718	1,783	1,751	0	1,751			
TOTAL GOOD TONS TO R/S VALVE AND HYDRANT, TPY	9,800	11,151	10,476	10,667	21,142			
from #9	7,350	8,365	7,857	8,000				
from #4 & #10	2,450	2,786	2,619	2,667				
TOTAL GOOD TONS LESS R/S VALVE AND HYDRANT, TPY	15,369	18,447	16,918	8,332	25,250			
% OF #9 >12"			0.06		0.06			
12" PLUS			7,240		8,380			
12" & LESS			9,678		16,870			
PERCENTAGE 12" & LESS POWDERCOAT AT FDE		0.20			0.72	0.73		
TOTAL GOOD TONS OF 12" & LESS POWDER COAT AT FDE FITTINGS, TPY		3,710			12,148	12,236		
TOTAL GOOD TONS PAINTED		14,737			13,104	12,552		
5.329 OUTBACK ASPHALT TOTAL GALLON	20,904	16,231	21,140		16,604	16,471		
5.329 OUTBACK ASPHALT NO REMOVER GAL								
GAL OF PAINT PER GOOD TON, GAL/TON		1.372	1.272		1.272	1.372		
WT OF PAINT VOC PER GOOD TON, #/TON		1.164	1.164		1.181			
[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	16,869		
[illegible]	[illegible]	[illegible]	[illegible]		0			
SOLVENT/ASPHALT VOLUME RATIO	[illegible]	[illegible]	[illegible]		[illegible]			

PARAMETERS	BASELINE (TPY)	POST-MODIFICATION (TPY)	NET VOC EMISSIONS (TPY)	
NET OUT VOC EMISSION INCREASE (PLANT WIDE)	229.392	269.208	39.816	100%
TOTAL OF MAJOR-CHANGE-IN-VOC-EMISSIONS AREAS (ITEMIZED BELOW)			39.817	100%
ALL GAS-FIRED SOURCES			0.071	
CUPOLA			5.841	
POURING #9			2.788	
COOLING #9			1.568	
#9 UNIT SHAKEOUT			24.433	
HERMAN MOLD MACHINE			-11.826	
ISOCURE MACHINES #3/#4/#5 #6/#7/#8 (Curent Production)			9.819	
REFRACTORY COATING			14.369	
PEPSET CORE			3.139	
PRIMER DIP COATING OPERATION			1.139	
CREDIT FROM ALL 3.29-LB-PER-GAL ASPHALT PAINT			-32.416	
CREDIT FROM VM&P NAPHTHA USAGES			-35.637	
CREDIT FROM SURESOL 150 USAGES			-11.264	
NEW VOC FROM ASPHALT USAGES			28.699	
NEW SOLVENT USAGES			41.099	

DETERMINING FACTORS	VALUES IN THIS ESTIMATE	USIPHE'S PROJECTED VALUES
ISOCURE SAND INCREASE, TPY	24.504	
RESIN/SAND RATIO	1.5	
RESIN PART I (PM)*	639,880	
RESIN PART II (PM)*	613,309	
RESIN TOTAL (PM)*	1,253,189	
TONS PAINTED	13,104	16.370
# OF VOC, ASPHALT	53,398	38.032
# OF VOC, SOLVENT	82,197	49.546
# OF VOC, TOTAL	135,595	97.578
ASPHALT VOC, %	39.4%	39.2%
SOLVENT VOC, %	60.6%	50.8%
ASPHALT VOC/TON PAINTED, LB/TON	4.075	3.125
SOLVENT VOC/TON PAINTED, LB/TON	6.273	3.224

** PM = POST MODIFICATION TOTAL*

This is a guide from previous work.

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Table 3. Net Annual VOC Emission Increase

Equipment ID	Source Name	Emission Segment Number	Emission Segment Description	Annual Usages (CY99)	Annual Usages (CY00)	Baseline Annual Usages from 01/99 & CY 00	Modification Increase	Post Mod Emissions	Annual Usages (CY01)	Emission Factor Value	Emission Factor Units	Emission Factor Reference	Stack Or Discharge ID	Control Eff (%)	Control Device ID	Control Eff (%)	SPEC 2SAV	FAC 27	Baseline Annual Emissions from CY99 & CY00 (tpy)	Post Mod. Max Emissions (tpy)	Net Emission Increase (tpy)
E0001	AFTER BURNER	01	NATURAL GAS FIRING	34 935	33 791	[illegible]	57 502	[illegible]	[illegible]	2.8	[illegible]	AP 42 Table 1 4-1 (CAN 99)	S002	100	CD001	85			[illegible]	[illegible]	[illegible]
		02	NO. 2 FUEL OIL (BACK-UP FUEL)	87 532	88.588	[illegible]	104,170	[illegible]	1000 gal/yr	0 34	lb/1000 Gal	AP 42 Table 1 3-4	S002	100	CD001	85					
E002	CUPOLA	01	CUPOLA MELTING	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	tons/yr	2	lb/ton	DIPRA EF REPORT	S002	99 995	CD001	85			[illegible]	[illegible]	[illegible]
				[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	tons/yr	2	lb/ton	DIPRA EF	S004	0.005					[illegible]	[illegible]	[illegible]
E090	HOLDING FURNACE PREHEAT	01	NATURAL GAS FIRING	9 454	9 378	[illegible]	14 584	[illegible]	[illegible]	5.28	[illegible]	AP-42 Table 1 4-2 (CAN 99)	S005-S009 (Fugitive)	100	EBSF				[illegible]	[illegible]	[illegible]
E010	POURING #9	01	GREENSAND POURING, #9 UNIT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	tons/yr	0 14	lb/ton	EPA-600/2-90-044	S008 (Fugitive)	50	EBSF				[illegible]	[illegible]	[illegible]
				[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	tons/yr	0.14	lb/ton	EPA-600/2-90-044	S009-S011	50					[illegible]	[illegible]	[illegible]
E011	COOLING #9	01	GREENSAND COOLING, #9 UNIT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	tons/yr	0.0787	lb/ton	WISCONSINS	S008	40	EBSF				[illegible]	[illegible]	[illegible]
				[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	tons/yr	0.0787	lb/ton	WISCONSINS	S012	10					[illegible]	[illegible]	[illegible]
				[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	tons/yr	0.0787	lb/ton	WISCONSINS	S013	15					[illegible]	[illegible]	[illegible]
				[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	tons/yr	0.0787	lb/ton	WISCONSINS	S014	25					[illegible]	[illegible]	[illegible]
				[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	tons/yr	0.0787	lb/ton	WISCONSINS	S015	10					[illegible]	[illegible]	[illegible]
E014	#9 UNIT SHAKEOUT	01	SHAKEOUT, #9 UNIT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	tons/yr	1.228	lb/ton	MAYSILLES'S REVIEW	S007	90	CD003				[illegible]	[illegible]	[illegible]
				[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	tons/yr	1.228	lb/ton	MAYSILLES'S REVIEW	S008 (Fugitive)	10	EBSF				[illegible]	[illegible]	[illegible]
E026	HERMAN MOLD MACHINE	02	PARTING OIL FOR MOLD FORMING, LP-500	0.071	0 066	7 470	SEE BELOW	SEE BELOW	gal/yr	N/A	N/A	MATERIAL BALANCE	S008 (Fugitive)	100	EBSF	0	0.866	93	[illegible]	[illegible]	[illegible]
E026	HERMAN MOLD MACHINE	02	PARTING OIL FOR MOLD FORMING, LP-500			748	[illegible]	[illegible]	gal/yr	N/A	N/A	MATERIAL BALANCE	S008 (Fugitive)	100	EBSF	0	0 866	93	[illegible]	[illegible]	[illegible]
E026	HERMAN MOLD MACHINE	02	PARTING OIL FOR MOLD FORMING, CALSLIP					[illegible]	gal/yr	N/A	N/A	MATERIAL BALANCE	S008 (Fugitive)	100	EBSF	0	0.8875	85	[illegible]	[illegible]	[illegible]
	AIRSET SAND FOR 1) E042 #10 AIRSET MOLD AND 2) E053		*558+ SAND FOR #10 AIRSET MOLD (8:1 SAND/METAL RATIO)*	*21,084*	*22,944*	*22,014*	*0.00*	*22,014*													

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Table 3. Net Annual VOC Emission Increase.

Equipment ID	Source Name	Emission Segment Number	Emission Segment Description	Actual Usages (CY00)	Annual Usages (CY00)	Baseline Annual Usages (CY99 & CY00)	Modification Increase	Post Modification	Added Usages (this)	Emission Factor (lb/ton)	Emission Factor (other)	Emission Factor Reference	Source of Emission Factor IC	Control Eff (%)	Control Device ID	Control Eff (%) BACT	HCT VOI	Baseline Annual Emissions (CY99 & CY00) (TPY)	Post Modification Emissions (TPY)	Net Emission Increase (TPY)
	AND 2) E052 AIRSET CORES (FOR #4 & #10)		55B+ SAND FOR AIRSET CORES	5,888	6,134	5,911	0.00	5,911												
			55B+ SAND, TOTAL	20,772	23,078	27,925	0.00	27,925												
			55B SAND, PURCHASED	16,585	17,885	17,235	0.00	17,235												
			55B+ SAND, RECYCLED	10,187	11,193	10,690	0.00	10,690												
	AIRSET BINDER SUPER SET #975 FOR 1)E042 #10 AIRSET MOLD AND 2)E052 AIRSET CORES (FOR #4 AND #10 UNITS)		NO-BAKE BINDER SUPER SET #975 FOR #10 AIRSET MOLD	213.5	232.4	223	0.00	223.0												
			NO-BAKE BINDER SUPER SET #975 FOR AIRSET CORE	396.5	431.5	414	0.00	414.0												
			TOTAL	610.0	663.8	637	0.00	636.9												
			PURCHASED	403.8	399.2	401.5	0.00	401.5												
			TOTAL/PURCHASED RATIO	1.5	1.7	1.6														
	NO BAKE ACID SUPER SET BC61		NO-BAKE ACID SUPER SET BC-61 FROM #10 AIRSET MOLD (ABOVE)	103.8	111.7	107.2														
			NO-BAKE ACID SUPER SET BC-61 FROM AIRSET CORE (ABOVE)	190.1	206.9	198.4														
			NO-BAKE ACID SUPER SET BC-61 FROM PEPSET CORE (BELOW)	28.1	18.1	22.1														
			TOTAL	318.8	336.7	327.7														
			PURCHASED	201.9	164.4	184.7														
			TOTAL/PURCHASED RATIO	1.6	2.0															
E069-E071 E129-E131	ISOCURE MACHINES #3/#4/#5 #6/#7/#8 (Current Production)	02	SIGMA CURE 7110 RESIN, PART 1	142.50	197.84	169.27	SEE BELOW	169.27	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	S054, OTHERS & FUGITIVES	100	--			10.05	10.05	0.00
		03	SIGMA CURE 7610 RESIN, PART 2	129.28	173.63	151.45	SEE BELOW	151.45	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	S054, OTHERS & FUGITIVES	100	--			9.00	9.00	0.00
E069-E071 E129-E131	ISOCURE MACHINES #3/#4/#5 #6/#7/#8 (Next 5 Years based on net increase)	02	SIGMA CURE 7110 RESIN, PART 1	SEE ABOVE	SEE ABOVE	SEE ABOVE	101.73	101.73	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	S087, OTHER & FUGITIVES	100	--			10.05	10.05	0.00
		03	SIGMA CURE 7610 RESIN, PART 2	SEE ABOVE	SEE ABOVE	SEE ABOVE	155.01	155.01	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	S087, OTHER & FUGITIVES	100	--			9.29	9.29	0.00
E072	REFRACTORY COATING	01	PROLITE-AB	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	tons/yr	180	lb/ton Handled	MATERIAL BALANCE	S053A Fugitives	100	RC117			[illegible]	[illegible]	[illegible]
				[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		180		MATERIAL	S053C	100	FLAMEOFF	50		[illegible]	[illegible]	[illegible]
				[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		180		MATERIAL	S053A	100	FLAMEOFF	50		[illegible]	[illegible]	[illegible]
				[illegible]	10.59	10.46	10.46	[illegible]	tons/yr	480	lb/ton	MATERIAL	S053A	100	RC118			[illegible]	[illegible]	[illegible]
				[illegible]	19.50	21.16	21.26	[illegible]	tons/yr	480	lb/ton Handled	MATERIAL BALANCE	S053B - Fugitives	100	FLAMEOFF, RC123	50		[illegible]	[illegible]	[illegible]
		02	PROLITE-TSBC	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	tons/yr	180	lb/ton	MATERIAL	S053A	100	RC117			[illegible]	[illegible]	[illegible]
				[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	tons/yr	480	lb/ton	MATERIAL	S053C	100	RC118	50		[illegible]	[illegible]	[illegible]
				[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	tons/yr	180	lb/ton	MATERIAL	S053A	100	FLAMEOFF	50		[illegible]	[illegible]	[illegible]
				[illegible]	10.36	9.75	9.75	13.55	tons/yr	480	lb/ton	MATERIAL	S053A	100	RC123			[illegible]	[illegible]	[illegible]
				[illegible]	21.03	13.00	13.74	27.41	tons/yr	480	lb/ton	MATERIAL	S053B	100	FLAMEOFF	50		[illegible]	[illegible]	[illegible]
		03	ISOPROPANOL	450	465	[illegible]	[illegible]	[illegible]	gal/yr	N/A	N/A	MATERIAL	S032A	100	RC117		0.79	[illegible]	[illegible]	[illegible]
				210	230	[illegible]	[illegible]	[illegible]	gal/yr	N/A	N/A	MATERIAL	S032C	100	RC118	50	0.79	[illegible]	[illegible]	[illegible]
				600	570	906.32	[illegible]	[illegible]	gal/yr	N/A	N/A	MATERIAL	S016A	100	FLAMEOFF	50	0.79	[illegible]	[illegible]	[illegible]
				216	1,662	[illegible]	906.52	1,811	gal/yr	N/A	N/A	MATERIAL	S053A	100	RC123		0.79	100	[illegible]	[illegible]
				230	3,232	1,631	1,811.04	3,672	gal/yr	N/A	N/A	MATERIAL	S053B	100	FLAMEOFF	50	0.79	100	[illegible]	[illegible]
E076	PEPSET SAND [illegible]							0.160												

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Table 3. Net Annual VOC Emission Increase

Equipment ID	Source Name	Emission Segment Number	Emission Segment Description	Actual Usage (CY00)	Annual Usage (CY 99)	Baseline Annual Usage from CY 00 & CY 99	Maximum Increase	Post Modification	Units	Emission Factor	Units	Emission Factor Reference	Control Equipment	Capture Efficiency	Control Efficiency	Actual Emissions	Baseline Annual Emissions (tons/yr)	Post Modification Emissions (tons/yr)	Net Emission Increase (tons/yr)
	MIXER (PEPSET CORE FOR #9 UNIT)	02	VOLATILES FROM PEPSET BINDER SUPER SET #324	50.20	34.90	42.55	37.60	80.15	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	S053 (Fugitive)	100	WET PRO2		1.319	2.485	1.166
		03	VOLATILES FROM NO-BAKE ACID CATALYST (SUPER SET BC81)	28.1	18.1	22.39	19.79	42.19	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	S053 (Fugitive)	100	WET PRO2		0.694	1.308	0.614
			BINDER/RESIN RATIO	1.9	1.9	1.9	1.9												
	510 SAND FOR 1) ISOCURE CORES AND 2) PEPSET CORE (FOR #9 MOLDING LINE)		*540 SAND FROM ISOCURE CORES*	*19,226*	*29,227*	*24,226*	*31,409*	*45,636*											
			540 SAND FROM #9 PEPSET CORES	*3,853*	*2,679*	*3,266*	*2,888*	*6,152*											
			540 SAND, TOTAL	*23,079*	*31,906*	*27,493*	*34,296*	*51,788*											
			540 SAND, PURCHASED	*23,079*	*31,906*	*27,493*													
			540 SAND FOR PEPSET CORES, %	*17%*	*8%*	*12%*													
E079	PEPSET CORE FORMING		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]											
		02-03	PARTING COMPOUNDS NIX STIX 32 & 93	2.10	1.46	1.78	1.79	3.57	tons/yr	1,520	lb/ton Handled	MATERIAL BALANCE	S053 (Fugitive)	100	WET PRO2		1.352	2.712	1.360
E081	CORE FORMING FLAME-OFF (LAZY FLAME)	01	LAZY FLAME TORCH - NATURAL GAS FIRING					[illegible]	MMBtu/hr	0.23	lb/MMBtu	AP-42 Table 1.4-3 (JAN 95)	S053	100	WET PRO2				
E083	SHELL CORE HEATING	01	NATURAL GAS FIRING	2,996	2,592	2,475	0	2,475	MMBtu/hr	0.28	lb/MMBtu	AP-42 Table 1.4-3 (JAN 95)	S053	100	WET PRO2		0.0066	0.0055	[illegible]
E088	PRIMER DIP COATING OPERATION	01	GREY VOC-COMPLIANCE AIR DRY COATING	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	gal/yr	N/A	N/A	MATERIAL BALANCE	S059	100	EBSF	1.30	29.88	[illegible]	[illegible]
		02	VM&P NAPHTHA	290	80	185	71	256								0.766	100	0.526	0.731
		03	SURE SOL 150	0	80	40	19	59	gal/yr	N/A	N/A	MATERIAL BALANCE	S059	100	EBSF	0.895	100	0.105	0.250
E090 (E078)	CEMENT LINING DRYING OVENS #1 #3 & #4	01	NATURAL GAS FIRING	8,345	19,201	9,773	0	9,773	MMBtu/yr	5.28	lb/MMBtu	AP-42 Table 1.4-3 (JAN 95)	S064-S066	100			0.0240	0.0246	[illegible]
E099	#1 DIP PAINT LINE	01	B-523 CUTBACK ASPHALT	9,167	9,877	9,537			gal/yr	N/A	N/A	MATERIAL BALANCE	S063	100		0.893	43	12,857	SEE PLANT WIDE
		02	VM&P NAPHTHA	6,958	2,253	5,005										0.766	100	16,075	
		03	SURE SOL 150	0	3,195	1,598			gal/yr	N/A	N/A	MATERIAL BALANCE	S063	100		0.895	100	[illegible]	0
E100	#4 & #10 BINKS SPRAY PAINT BOOTH	01	B-523 CUTBACK ASPHALT	2,916	2,158	2,537			gal/yr	N/A	N/A	MATERIAL BALANCE	S067	100	CD034	0.893	43	[illegible]	SEE PLANT WIDE
		02	VM&P NAPHTHA	597	197	397										0.766	100	[illegible]	
		03	SURE SOL 150	0	210	105			gal/yr	N/A	N/A	MATERIAL BALANCE	S067	100	CD034	0.895	100	0.201	0
E101	#4 & #10 LARGE FITTINGS PAINT BOOTH	01	B-523 CUTBACK ASPHALT	0.0	[illegible]	[illegible]			gal/yr	N/A	N/A	MATERIAL BALANCE	S068	100	CD035	0.893	43	[illegible]	SEE PLANT WIDE
		02	VM&P NAPHTHA	229	70	145										0.766	100	[illegible]	
		03	SURE SOL 150	0	70	35			gal/yr	N/A	N/A	MATERIAL BALANCE	S068	100	CD035	0.895	100	0.147	0
E102	#3 DIP PAINT LINE	01	B-523 CUTBACK ASPHALT	[illegible]	[illegible]	[illegible]			gal/yr	N/A	N/A	MATERIAL BALANCE	S063	100		0.893	43	[illegible]	SEE PLANT WIDE
		02	VM&P NAPHTHA	[illegible]	2,122	[illegible]										0.766	100	[illegible]	
		03	SURE SOL 150	0	2,375	1,188			gal/yr	N/A	N/A	MATERIAL BALANCE	S063	100		0.895	100	[illegible]	0

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Table 3. Net Annual VOC Emission Increase.

Equipment ID	Source Name	Emission Segment Number	Emission Segment Description	Annual Usages (CY99)	Annual Usages (CY 00)	Baseline Annual Usages from CY 92 & CY 02	Modification Increase	Post Modification	Annual Usages Units	Emission Factor Value	Emission Factor Units	Emission Factor Reference	Emission Control Device	Control Efficiency (%)	Control Device	Control Efficiency (%)	SPSC STAW	RCWMT	Baseline Annual Emissions from CY99 & CY00 (TPY)	Post Modification Emissions (TPY)	Net Emission Increase (TPY)
E103-E104	COATING DRYING OVENS #1 AND #2	01	NATURAL GAS FIRING	5.581	6.864	6.200	0	0.200	MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-2 (JAN 95)	S070-S076	100					0.0164	0.0164	0.0000
E105	SPECIAL COATING SPRAY BOOTH (SHIPPING)	01	TNEMEC F020 (2 COMPONENTS)						gal/yr	N/A	N/A	MATERIAL BALANCE	S071	100	CD036		1.501	24.28	0.000	0.000	0.000
		02	TNEMEC F037H-0077 (SINGLE COMPONENT) (CVF0899-744)						gal/yr	N/A	N/A	MATERIAL BALANCE	S071	100	CD036		1.544	22.56	0.000	0.000	0.000
		03	TNEMEC F068 (2 COMPONENTS)						gal/yr	N/A	N/A	MATERIAL BALANCE	S071	100	CD036		1.499	24.39	0.000	0.000	0.000
		04	TNEMEC F069 (2 COMPONENTS)						gal/yr	N/A	N/A	MATERIAL BALANCE	S071	100	CD036		1.633	18.35	0.000	0.000	0.000
		05	TNEMEC F140 (2 COMPONENTS)						gal/yr	N/A	N/A	MATERIAL BALANCE	S071	100	CD036		1.513	17.60	0.000	0.000	0.000
		06	TNEMEC F041-0004 THINNER (CVF0899-743)						gal/yr	N/A	N/A	MATERIAL BALANCE	S071	100	CD036		0.827	100.00	0.000	0.000	0.000
																			0.000	0.000	0.000
																			0.000	0.000	0.000
																			0.000	0.000	0.000
E108	MATERIAL COATING DRYING OVEN	01	NATURAL GAS FIRING	1.119	1.571	1.342	0	1.342	MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-2 (JAN 95)	S072	100					0.0033	0.0033	0.0000
E109	TOUCHUP COATING	01	B-523 CUTBACK ASPHALT	2.005	1.675	2.102			gal/yr	N/A	N/A	MATERIAL BALANCE	S075	100			0.893	43	0.012	SEE PLANT WIDE	0.012
		02	VM&P NAPHTHA	75	28	58											0.765	100	0.160		0.160
		03	SURE SOL 150	0	31	16			gal/yr	N/A	N/A	MATERIAL BALANCE	S075	100			0.895	100	0.000	0	0.000
E111	CUPOLA DRYING	01	NATURAL GAS FIRING	13.428	16.992	15.020	0	15.030	MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-2 (JAN 95)	S077 (Fugitive)	100					0.0397	0.0397	0.0000
E112	LADLE PREHEAT	01	NATURAL GAS FIRING	3.449	3.491	4.005	0.050	4.041	MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-2 (JAN 95)	S078 (Fugitive)	100	EBSF				0.0141	0.0140	0.0010
E115	FITTINGS PLANT FARNHOUSE BOILER	01	NATURAL GAS FIRING	2.502	2.510	2.502	0	2.502	MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-2 (JAN 95)	S079	100					0.0066	0.0066	0.0000
E116	ASPHALT TANKS HOT OIL HEATER	01	NATURAL GAS FIRING	1.152	1.152	1.152	0	1.152	MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-2 (JAN 95)	S080	100					0.0030	0.0030	0.0000
E119	RF MOTE FITTINGS PREHEAT OVEN	01	NATURAL GAS FIRING	7.2	7.2	7.000	1.8	9.000	MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-2 (JAN 95)	S081	100					0.0190	0.0238	0.0048
E120	LANEY FITTINGS PREHEAT OVEN	01	NATURAL GAS FIRING	8	8	8.000	2	10.000	MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-2 (JAN 95)	S082	100					0.0211	0.0264	0.0053
E123	DEA FITTINGS BURNOFF OVEN	01	NATURAL GAS FIRING	0.48	0.48	0.480	0.48	0.960	MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-2 (JAN 95)	S083	100					0.0013	0.0025	0.0013
EV002	LADLE PREHEAT	01	NATURAL GAS FIRING	2.376	2.417	2.472	2.517	5.000	MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-2 (JAN 95)	SV02	100	EBSF				0.0065	0.0132	0.0067
EV005	SHELLSAND MOLD POURING	01	VALVE PLANT, BRASS POURING INTO SHELL MOLD						tons/yr	0.016	lb/ton	WISCONSINS DNR PUB, AUG 1996	SV03	51							
									tons/yr	0.016	lb/ton	WISCONSINS DNR PUB, AUG. 1996	SV04 (Fugitive)	49	EBSF						
EV006	GREENSAND MOLD POURING	01	VALVE PLANT, BRASS POURING INTO GREENSAND MOLD						tons/yr	0.14	lb/ton	EPA-600/2-90-044	SV04 (Fugitive)	100	EBSF						
EV007	GREENSAND SHAKEOUT	01	BRASS PLANT, GREENSAND SHAKEOUT						tons/yr	1.228	lb/ton	MAYSILLES'S REVIEW	SV05 (Fugitive)	100	EBSF						
EV010	SHELL MOLD CURING	01	NATURAL GAS FIRING	1.191	1.076	1.593	0	1.593	MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-2 (JAN 95)	SV02 (Fugitive)	100	EBSF				0.0042	0.0042	0.0000

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Table 3 Net Annual VOC Emission Increase.

Equipment ID	Source Name	Emission Segment Number	Emission Segment Description	Annual Usages (CY 00)	Annual Usages (CY 01)	Baseline Annual Usages (avg. CY 01 & CY 02)	Modification Increase	Post Modification	Annual Usages Unit	Emission Factor Value	Emission Factor Unit	Emission Factor Reference	Stack or Vent Group ID	Capture Efficiency (%)	Control Device ID	Control Efficiency (%)	HAP Wt %	Baseline Annual Emissions (tons/year)	Post Modification Emissions (TPY)	Net Emission Increase (TPY)
EV017	COOLING & PASTING STATION	01	SHELL CORE PASTING						tons/yr	0.872	lb/ton Handled	MATERIAL BALANCE	SV02 (Fugitive)	10	FBSF					
									tons/yr	0.872	lb/ton Handled	MATERIAL BALANCE	SV10	90	CDV05					
EV018	SHELL CORE SAND CURING	01	NATURAL GAS FIRING	0.372	0.316	0.35	0	0.35	MMCF/yr	5.25	lb/MMCF	AP-42 TABLE 1.4-1 (JAN 95)	SV02 (Fugitive)	100	FBSF			0.0010	0.0010	0.0000
EV022	SMALL VALVE PAINT BOOTH	01	B-523 CUTBACK ASPHALT	752	593	656			gal/yr	N/A	N/A	MATERIAL BALANCE	SV11	100	CDV06		0.893	43	1.094	SEE PLANT WIDE	-1.094
		02	VM&P NAPHTHA	147	47	97											0.766	100	0.305		0.305
		03	SURE SOL 150	0	52	26			gal/yr	N/A	N/A	MATERIAL BALANCE	SV11	100	CDV06		0.895	100	1.093	SEE PLANT WIDE	-0.093
EV023	LARGE VALVE TOUCHUP COATING	01	B-523 CUTBACK ASPHALT	159	93	126			gal/yr	N/A	N/A	MATERIAL BALANCE	SV12	100	EBSF		0.893	43	0.136	SEE PLANT WIDE	0.136
		02	VM&P NAPHTHA	29	9	19											0.766	100	0.062		-0.062
		03	SURE SOL 150	0	10	5			gal/yr	N/A	N/A	MATERIAL BALANCE	SV12	100	EBSF		0.895	100	0.020	0	-0.020
EV024	HYDRANT PRODUCTION PAINT BOOTH	01	B-523 CUTBACK ASPHALT	1,369	1,999	1,684	501	2,185	gal/yr	N/A	N/A	MATERIAL BALANCE	SV13	100	CDV07		0.893	43	1.675	2.344	0.669
		02	VM&P NAPHTHA	294	99	196											0.766	100	0.610		-0.610
		03	SURE SOL 150	0	105	52			gal/yr	N/A	N/A	MATERIAL BALANCE	SV13	100	CDV07		0.895	100	0.199	SEE PLANT WIDE	-0.199
		04	RUSTOLEUM 7625 SAFETY BLUE	10.40	10.60	10.50		10.50	gal/yr	N/A	N/A	MATERIAL BALANCE	SV13	100	CDV07		0.971	42.70	0.016	0.016	0.000
		05	RUSTOLEUM 7638 FORREST GREEN	19.80	18.20	19.00		19.00	gal/yr	N/A	N/A	MATERIAL BALANCE	SV13	100	CDV07		0.983	40.20	0.031	0.031	0.000
		06	RUSTOLEUM 7644 SAFETY YELLOW	66.70	69.30	68.25		68.25	gal/yr	N/A	N/A	MATERIAL BALANCE	SV13	100	CDV07		1.234	32.23	0.105	0.105	0.000
		07	RUSTOLEUM 7645 EQUIPMENT YELLOW	187.70	326.00	256.85		256.85	gal/yr	N/A	N/A	MATERIAL BALANCE	SV13	100	CDV07		0.990	41.66	0.360	0.360	0.000
		08	RUSTOLEUM 7655 SAFETY ORANGE	9.20	12.70	9.45		9.45	gal/yr	N/A	N/A	MATERIAL BALANCE	SV13	100	CDV07		1.093	37.14	0.016	0.016	0.000
		09	RUSTOLEUM 7656 EQUIPMENT ORANGE	120.00	159.00	141.75		141.75	gal/yr	N/A	N/A	MATERIAL BALANCE	SV13	100	CDV07		0.983	41.35	0.240	0.240	0.000
		10	RUSTOLEUM 7665 REGAL RED	319.90	365.40	342.65		342.65	gal/yr	N/A	N/A	MATERIAL BALANCE	SV13	100	CDV07		0.935	44.07	0.568	0.568	0.000
		11	RUSTOLEUM 7679 BLACK	70.70	81.30	76.00		76.00	gal/yr	N/A	N/A	MATERIAL BALANCE	SV13	100	CDV07		0.925	44.76	0.151	0.151	0.000
		12	RUSTOLEUM 7692 WHITE	16.00	21.50	18.75		18.75	gal/yr	N/A	N/A	MATERIAL BALANCE	SV13	100	CDV07		1.094	37.50	0.025	0.025	0.000
		13	BRUNING SILATHANE YELLOW PAINT	16.70	34.80	25.75		25.75	gal/yr	N/A	N/A	MATERIAL BALANCE	SV13	100	CDV07		1.114	33.43	0.052	0.052	0.000
		14	INDURALL J-1021 ALUMINUM PRIMER	213.50	251.60	232.55		232.55	gal/yr	N/A	N/A	MATERIAL BALANCE	SV13	100	CDV07		1.040	39.175	0.305	0.305	0.000
		15	ENAMEL	9.30	15.90	12.60		12.60												
		16	RUSTOLEUM 333 THINNER (mek?)	90.0	141.0	115.50		115.50	gal/yr	N/A	N/A	MATERIAL BALANCE	SV13	100	CDV07		0.802	100	0.926	1.156	0.230
			OTHER SOLVENTS	1,732	2,000	1,866		1,866.00	gal/yr	N/A	N/A	MATERIAL BALANCE	SV13	100	CDV07		0.815	100	0.758	0.946	0.189

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Table 3 Net Annual VOC Emission Increase.

Emission Point ID	Source Name	Emission Segment Number	Emission Segment Description	Annual Usages (CY 95)	Annual Usages (CY 00)	Baseline Annual Usages for CY 00 & CY 95	Modification Increase	Post Modification	Units	Emission Factor Value	Emission Factor Units	Emission Factor Reference	Capture Efficiency	Control Efficiency	Control Device ID	Control Efficiency	HCT Fraction	Baseline Annual Emissions	Post Modification Emissions	Net Emission Increase
EV027	GLA CONVEYORIZED OVEN	01	NATURAL GAS FIRING	[illegible]	[illegible]	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	AP-42 Table 1.4-2 (JAN 95)	[illegible]	100				[illegible]	[illegible]	[illegible]
EV028	FORGE LK OVEN	01	NATURAL GAS FIRING	[illegible]	[illegible]	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	AP-42 Table 1.4-2 (JAN 95)	[illegible]	100				[illegible]	[illegible]	[illegible]
EV032	LLAD AC TILE HEATING	01	NATURAL GAS FIRING	[illegible]	[illegible]	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	AP-42 Table 1.4-2 (JAN 95)	[illegible]	100	EBSF			[illegible]	[illegible]	[illegible]
EV033	HT VALVE BONNET OVEN	01	NATURAL GAS FIRING	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AP-42 Table 1.4-2 (JAN 95)	[illegible]	100				[illegible]	[illegible]	[illegible]
EV034-EV035	HOT WATER HEATERS #1 AND #2	01	NATURAL GAS FIRING	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AP-42 Table 1.4-2 (JAN 95)	[illegible]	100				[illegible]	[illegible]	[illegible]
EV036	SPECIAL COATING PAINT BOOTH	01																		
		02																		
		03																		
		04	B-523 CUTBACK ASPHALT	132	132	132			gal/yr	N/A	N/A	MATERIAL BALANCE	SV24	100	CDV12	0.893	43	[illegible]	SEE PLANT WIDE	[illegible]
		05	VM&P NAPHTHA	22	1	12										0.768	100	[illegible]		[illegible]
		06	SURE SOL 150	0	13	5			gal/yr	N/A	N/A	MATERIAL BALANCE	SV24	100	CDV12	0.895	100	[illegible]	[illegible]	[illegible]
		07																		
EV037-EV048	PARTS WASHERS	01							gal/yr				SV25	100		0.785	100			
EV051	HUNTER MACHINE	02	VALVE PLANT, HUNTER MOLDING			3 208.8			tons/yr	0.304	lb/ton Handled	ENGINEERING ESTIMATES	SV09 (Fugitive)	100	EBSF					
PLANT WIDE	ALL EMISSION SOURCES USED ASPHALT COATING	01	B-523 CUTBACK ASPHALT	–	–	–	–	[illegible]	gal/yr	N/A	N/A	MATERIAL BALANCE	EXISTING STACKS			0.893	43	[illegible]	[illegible]	[illegible]
PLANT WIDE	ALL EMISSION SOURCES USED SOLVENT	01	SURESOL 150 (BASELINE & POST MODIFICATION CALCULATIONS)	–	–	–	–	[illegible]	gal/yr	N/A	N/A	MATERIAL BALANCE	EXISTING STACKS			0.895	100	[illegible]	[illegible]	[illegible]
																		223 592	263 408	39 816

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Jerry Knoll coordinator of Stop CU4, E 3853

Ken Bullington Stop B Team

ARTISAND/LAEMPE CORE PRODUCTION REPORT-CHATTANOOGA

Week Beginning JANUARY 22, 2001

DATE	DESCRIPTION	SHIFT	MACHINE NUMBER	GOOD	SCRAP	CYCLE MINUTES	CORES REQUIRED	DOWN HOURS	CORES REQUIRED ADJUSTED	MACHINE UTILIZATION	MACHINE UTILIZATION ADJUSTED	
01/22/01	4 MJ 90	3	3	95	10	1.67	108	0.25	99	97.42%	106.27%	
01/22/01	12X4 TYTON TEE	3	4	9	11	3.33	54	1.17	33	37.00%	60.66%	
01/22/01	12 MJ TT 45	3	5	41	5	2.50	72	0.92	50	63.89%	92.15%	
01/22/01	8 DMJ RS BDY	1	1	80	6	2.75	175	1.70	137	49.27%	62.57%	L
01/22/01	6 DMJ RS BDY	1	2	33	72	2.00	720	6.25	158	14.58%	66.67%	L
01/22/01	4 MJ 90	1	3	227	0	2.00	240	0.50	225	94.58%	100.89%	
01/22/01	12X4 TYTON TEE	1	4	33	18	5.00	96	3.80	50	53.13%	101.19%	
01/22/01	12 MJ TT 45	1	5	87	5	2.50	192	4.20	91	47.92%	100.88%	
01/22/01	8X6 MJ TT TEE	1	6	59	17	2.50	192	5.00	72	39.58%	105.56%	L
01/22/01	8 DMJ RS BDY	2	1	95	4	3.00	120	1.05	99	82.50%	100.00%	L
01/22/01	6 DMJ RS BDY	2	2	141	18	2.00	540	0.70	477	29.44%	33.33%	L
01/22/01	4 MJ 90	2	3	20	0	2.00	60	1.17	25	33.33%	80.32%	
01/22/01	6 MJ 90	2	3	89	3	2.00	180	2.93	92	51.11%	99.89%	
01/22/01	12X4 TYTON TEE	2	4	8	2	4.50	27	1.25	10	37.50%	100.00%	
01/22/01	8X4 T-28 HUB	2	4	14	8	4.00	60	2.53	22	36.67%	99.77%	
01/22/01	12 MJ TT 45	2	5	120	2	3.17	151	1.55	122	80.57%	99.93%	
01/22/01	4 MJ LP SLEEVE	2	6	57	21	2.00	150	2.40	78	52.00%	100.00%	L
01/23/01	6 MJ 90	3	3	172	10	2.00	240	1.83	185	75.83%	98.33%	
01/23/01	8X4 T-28 HUB	3	4	86	5	4.00	105	1.03	90	86.67%	101.62%	
01/23/01	12 TYTON 11-1/4	3	4	5	2	3.00	20	0.67	7	35.00%	106.06%	
01/23/01	12 MJ TT 45	3	5	55	5	3.00	95	1.75	60	63.16%	100.00%	
01/23/01	16 MJ TT LP SLEEVE	3	5	26	4	5.00	39	0.75	30	76.92%	100.00%	
01/23/01	8 DMJ RS BDY	1	1	149	1	2.50	192	1.80	149	78.13%	100.81%	L
01/23/01	6 DMJ RS BDY	1	2	45	30	2.00	105	0.33	75	71.43%	99.49%	L
01/23/01	12 MJ TT TEE	1	2	2	1	3.00	130	6.32	4	2.31%	83.33%	
01/23/01	6 MJ 90	1	3	39	0	1.50	320	3.50	180	12.19%	21.67%	
01/23/01	12 TYTON 11-1/4	1	4	108	1	3.00	160	0	160	68.13%	68.13%	
01/23/01	16X15 MJ SLEEVE	1	5	10	10	4	63	2.9	19	32.00%	105.07%	
01/23/01	12 DMJ RS BDY	1	5	30	1	3.5	66	2	31	47.17%	98.73%	
01/23/01	4 MJ LP SLEEVE	1	6	143	0	1.5	960	7	120	14.90%	119.17%	L

Machines # 1,2, 6 - Laempe
Machines # 3,4,5 - Artisand

MWPS004696

Ken Bullington at SAP Core Master File

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ARTISAND/LAEMPE CORE PRODUCTION REPORT-CHATTANOOGA

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Week Beginning JANUARY 22, 2001

DATE	DESCRIPTION	SHIFT	MACHINE NUMBER	GOOD	SCRAP	CYCLE MINUTES	CORES REQUIRED	DOWN HOURS	CORES REQUIRED ADJUSTED	MACHINE UTILIZATION	MACHINE UTILIZATION ADJUSTED
01/23/01	8 DMJ RS BDY	2	1	83	4	3	120	1.65	87	72.50%	100.00%
01/23/01	12 MJ TT TEE	2	2	7	0	3	120	5.65	7	5.83%	100.00%
01/23/01	4 MJ 45	2	3	285	1	1.5	320	0.85	286	89.38%	100.00%
01/23/01	12X4 MJ/F TEE	2	4	10	0	3	30	0.6	18	33.33%	55.56%
01/23/01	8X4 MJ WYE	2	4	50	1	3	90	1.95	51	56.67%	100.00%
01/23/01	10 DMJ RS BDY	2	4	8	3	4	30	1.27	11	36.67%	100.46%
01/23/01	12 DMJ RS BDY	2	5	39	9	4	120	4.8	48	40.00%	100.00%
01/23/01	6 MJ TT CROSS	2	6	5	7	2.5	144	5	24	8.33%	50.00%
01/24/01	4 MJ 45	3	3	115	5	1.5	140	0.75	110	85.71%	109.09%
01/24/01	3 MJ 45	3	3	141	4	1.5	180	0.75	150	80.56%	96.67%
01/24/01	10 DMJ RS BDY	3	4	70	8	4	120	2.8	78	65.00%	100.00%
01/24/01	12 DMJ RS BDY	3	5	75	10	4	120	2.4	84	70.83%	101.19%
01/24/01	8 DMJ RS BDY	1	1	119	0	2	240	4	120	49.58%	99.17%
01/24/01	12 MJ TT TEE	1	2	62	6	3	160	4.6	68	42.50%	100.00%
01/24/01	3 MJ 45	1	3	59	0	1.25	168	1.97	73	35.12%	80.34%
01/24/01	6 MJ/PE 22-1/2	1	3	100	5	2	135	1.5	90	77.78%	116.67%
01/24/01	10 DMJ RS BDY	1	4	60	10	2.5	192	5	72	36.46%	97.22%
01/24/01	12 DMJ RS BDY	1	5	125	1	3	160	1.7	126	78.75%	100.00%
01/24/01	6 MJ TT CROSS	1	6	71	23	2.33	206	4.4	93	45.63%	101.40%
01/24/01	8 DMJ RS BDY	2	1	52	24	3	120	2.2	76	63.33%	100.00%
01/24/01	12 MJ TT TEE	2	2	74	3	3	120	2.15	77	64.17%	100.00%
01/24/01	M94 UPR 661270	2	3	140	0	2.25	213	2.75	140	65.63%	100.00%
01/24/01	12 MJ 90	2	4	16	23	3.5	103	3.72	39	37.92%	99.78%
01/24/01	12X6 MJ TEE	2	4	18	1	3	40	1.05	19	47.50%	100.00%
01/24/01	12 DMJ RS BDY	2	5	86	4	3.5	137	2.75	90	65.63%	100.00%
01/24/01	6 MJ TT CROSS	2	6	24	8	2	60	0.93	32	53.33%	99.69%
01/25/01	M94 UPR 661270	3	3	154	2	2.25	213	2.2	155	73.13%	100.86%
01/25/01	12 DMJ RS BDY	3	5	78	6	3.5	137	3	86	61.25%	98.00%
01/25/01	12 MJ TT TEE	3	4	86	8	3	160	3.2	96	58.75%	97.92%
01/25/01	8 DMJ RS BDY	1	1	97	4	2.5	192	3.8	101	52.60%	100.20%
01/25/01	12 MJ TT TEE	1	2	97	1	3	160	3	100	61.25%	98.00%

Machines # 1,2, 6 - Laempe
Machines # 3,4,5 - Artisand

3·10·99 Rev.

UNITED STATES PIPE & FOUNDRY COMPANY

Annual VOC Emissions for CV&F:

Pollutant	Equipment ID	Source Name	Stack ID Type	Total Ann. Em. (TPY) FY'96 Part 70 Actual Emissions [25,833 TPY]	Total Ann. Em. (TPY) Option 5 4,800 hr/yr 20x5x48 35-TPH [168,000 TPY]	Net Em. Increase (TPY) Option 3 2 Shifts 20x5x48 [15,723 TPY Net Increase]	Net Em. Increase (TPY) Option 4 3 Shifts 24x5x48 [20,784 TPY Net Increase]
VOLATILE ORGANIC COMPOUNDS (VOC)	CD001	AFTER BURNER	S002	0.006	0.018	0.004	0.005
	E002	CUPOLA	S002	7.325	25.199	4.475	5.907
			S004 (Fug)	0.000	0.001	0.000	0.000
			Subtotal:	7.331	25.218	4.479	5.912
VOLATILE ORGANIC COMPOUNDS (VOC)	E006	HOLDING FURNACE PREHEAT	S005-S006 (Fug)	0.014		0.008	0.011
			Subtotal:	0.014		0.008	0.011
VOLATILE ORGANIC COMPOUNDS (VOC)	E011	COOLING #9	S008 (Fug)	0.577	3.533	0.859	1.136
			S012	0.144	0.883	0.215	0.284
			S013	0.216	1.325	0.322	0.426
			S014	0.360	2.208	0.537	0.710
			S015	0.144	0.883	0.215	0.284
	E010	POURING #9	S008 (Fug)	1.282	4.417	1.074	1.420
			S009-S011	1.282	4.417	1.074	1.420
	E013	POURING & COOLING #10	S008 (Fug)	0.197	0.659		
	E012	POURING & COOLING #4	S008 (Fug)	0.756	2.528		
			Subtotal:	4.959	20.853	4.297	6.681
VOLATILE ORGANIC COMPOUNDS (VOC)	E015	#4 & #10 UNITS SHAKEOUT	S008 (Fug)	8.361	27.788		
	E014	#9 UNIT SHAKEOUT	S007	20.242	69.732	16.963	22.423
			S008 (Fug)	2.249	7.748	1.885	2.491
			Subtotal:	30.852	105.268	18.847	24.914
VOLATILE ORGANIC COMPOUNDS (VOC)	E026	HERMAN MOLD MACHINE	S008 (Fug)	34.512	115.385	28.923	38.223
			Subtotal:	34.512	115.385	28.923	38.223
VOLATILE ORGANIC COMPOUNDS (VOC)	E033	#4 UNIT MOLD MAKING	S008 (Fug)	11.504			
			Subtotal:	11.504			
VOLATILE ORGANIC COMPOUNDS (VOC)	E043	MOLD FORMING	S008	0.900			
	E042	SAND MIXERS	S042 (Fug)	4.309			
			Subtotal:	5.210			
VOLATILE ORGANIC COMPOUNDS (VOC)	E053	CORE FORMING	S046	1.505			
	E052	SAND MIXER	S046	7.988			
			Subtotal:	9.493			
VOLATILE ORGANIC COMPOUNDS (VOC)	E069-E071	ISOCURE MACHINES #3/#4/#5	S054	4.835			
			S055	3.224			
	E131-133	ISOCURE MACHINES #6, #7 & #8	S055		9.846	9.846	9.846

UNITED STATES PIPE & FOUNDRY COMPANY

Annual VOC Emissions for CV&F:

Pollutant	Equipment ID	Source Name	Stack ID Type	Total Ann. Em. (TPY) FY'96 Part 70 Actual Emissions [25,833 TPY]	Total Ann. Em. (TPY) Option 5 4,800 hr/yr 20x5x48 35-TPH [168,000 TPY]	Net Em. Increase (TPY) Option 3 2 Shifts 20x5x48 [15,723 TPY Net Increase]	Net Em. Increase (TPY) Option 4 3 Shifts 24x5x48 [20,784 TPY Net Increase]
VOLATILE ORGANIC COMPOUNDS (VOC)	E131-133	ISOCURE MACHINES #6, #7 & #8	S089		19.991	19.991	19.991
	E072	REFRACTORY COATING	S008A (Fug)	10.541		7.408	12.760
			S008C (Fug)	5.270		3.704	6.380
			S046A	10.541		7.408	12.760
			S053A	5.270		3.704	6.380
			S053B	5.270		3.704	6.380
			Subtotal:	44.952	29.837	55.765	74.498
VOLATILE ORGANIC COMPOUNDS (VOC)	E081	FLAME-OFF	S053	0.003		0.006	
	E079	PEPSET CORE FORMING	S053 (Fug)	1.049			
	E078	PEPSET SAND MIXER	S053 (Fug)	2.760			
			Subtotal:	3.812		0.006	
VOLATILE ORGANIC COMPOUNDS (VOC)	E083	SHELL CORE HEATING	S053	0.009			
			Subtotal:	0.009			
VOLATILE ORGANIC COMPOUNDS (VOC)	E088	PRIMER DIP COATING OPERATION	S059	1.030		0.862	1.139
			Subtotal:	1.030		0.862	1.139
VOLATILE ORGANIC COMPOUNDS (VOC)	E099	#1 DIP PAINT LINE	S063	29.014		24.277	32.094
	E102	#3 DIP PAINT LINE	S063	22.365		18.712	24.739
	E100	BINKS SPRAY PAINT BOOTH	S067	6.355		5.318	7.029
	E096-E098	CEMENT LINING DRYING OVENS #1, #3 & #4	S064-S066	0.021			
	E103-E104	COATING DRYING OVENS #1 AND #3	S069-S070	0.014		0.012	0.016
	E101	LARGE FITTINGS PAINT BOOTH	S068	1.882		1.575	2.082
			Subtotal:	59.652		49.895	65.959
VOLATILE ORGANIC COMPOUNDS (VOC)	E106	SPECIAL COATING DRYING OVEN	S072	0.003			
	E105	SPECIAL COATING SPRAY BOOTH	S071	2.573			
			Subtotal:	2.576			
VOLATILE ORGANIC COMPOUNDS (VOC)	E109	TOUCHUP COATING	S075	4.919		4.115	5.440
			Subtotal:	4.919		4.115	5.440
VOLATILE ORGANIC COMPOUNDS (VOC)	E116	ASPHALT TANKS HOT OIL HEATER	S080	0.003			
	E111	CUPOLA DRYING	S004 (Fug)	0.002			
	E115	FITTINGS PLANT BATHHOUSE BOILER	S079	0.007			
	E114	LADLE PREHEAT	S005-S006 (Fug)	0.011		0.006	

UNITED STATES PIPE & FOUNDRY COMPANY

Annual VOC Emissions for CV&F:

Pollutant	Equipment ID	Source Name	Stack ID Type	Total Ann. Em. (TPY) FY'96 Part 70 Actual Emissions [25,833 TPY]	Total Ann. Em. (TPY) Option 5 4,800 hr/yr 20x5x48 35-TPH [168,000 TPY]	Net Em. Increase (TPY) Option 3 2 Shifts 20x5x48 [15,723 TPY Net Increase]	Net Em. Increase (TPY) Option 4 3 Shifts 24x5x48 [20,784 TPY Net Increase]
			Subtotal:	0.023		0.006	
VOLATILE ORGANIC COMPOUNDS (VOC)	E123	GLA FITTINGS BURN-OFF OVEN	S085	0.001		0.016	
	E120	LANLY FITTINGS PREHEAT OVEN	S084	0.021		0.048	
	E119	RF MOTE FITTINGS PREHEAT OVEN	S083	0.019		0.042	
			Subtotal:	0.041		0.106	
VOLATILE ORGANIC COMPOUNDS (VOC)	EV004	LADLE PREHEAT	SV02	0.004			
			Subtotal:	0.004			
VOLATILE ORGANIC COMPOUNDS (VOC)	EV006	GREENSAND MOLD POURING	SV04 (Fug)	0.040			
	EV007	GREENSAND SHAKEOUT	SV05 (Fug)	2.829			
	EV005	SHELLSAND MOLD POURING	SV03	0.001			
			SV04 (Fug)	0.001			
			Subtotal:	2.871			
VOLATILE ORGANIC COMPOUNDS (VOC)	EV051	HUNTER MACHINE	SV09	0.000			
			Subtotal:	0.000			
VOLATILE ORGANIC COMPOUNDS (VOC)	EV017	COOLING & PASTING STATION	SV02 (Fug)	0.000			
			SV10	0.000			
	EV016	SHELL MOLD CURING	SV02 (Fug)	0.003			
			Subtotal:	0.003			
VOLATILE ORGANIC COMPOUNDS (VOC)	EV020	AIRSET CORE SAND MIXER	SV02 (Fug)	0.003			
	EV019	SHELL CORE SAND CURING	SV02 (Fug)	0.001			
			Subtotal:	0.004			
VOLATILE ORGANIC COMPOUNDS (VOC)	EV022	SMALL VALVE PAINT BOOTH	SV11	1.629			
			Subtotal:	1.629			
VOLATILE ORGANIC COMPOUNDS (VOC)	EV023	LARGE VALVE TOUCHUP COATING	SV12	0.278			
			Subtotal:	0.278			
VOLATILE ORGANIC COMPOUNDS (VOC)	EV024	HYDRANT PRODUCTION PAINT BOOTH	SV13	6.615			
			Subtotal:	6.615			
VOLATILE ORGANIC COMPOUNDS (VOC)	EV027	GLA CONVEYORIZED OVEN	SV16	0.010			

UNITED STATES PIPE & FOUNDRY COMPANY

Annual VOC Emissions for CV&F:

Pollutant	Equipment ID	Source Name	Stack ID Type	Total Ann. Em. (TPY) FY'96 Part 70 Actual Emissions [25,833 TPY]	Total Ann. Em. (TPY) Option 5 4,800 hr/yr 20x5x48 35-TPH [168,000 TPY]	Net Em. Increase (TPY) Option 3 2 Shifts 20x5x48 [15,723 TPY Net Increase]	Net Em. Increase (TPY) Option 4 3 Shifts 24x5x48 [20,784 TPY Net Increase]
VOLATILE ORGANIC COMPOUNDS (VOC)	EV028	PORBECK OVEN	SV17	0.009			
			Subtotal:	0.019			
VOLATILE ORGANIC COMPOUNDS (VOC)	EV034-EV035	HOT WATER HEATERS #1 AND #2	SV22-SV23	0.001			
	EV032	LEAD KETTLE HEATING	SV20	0.001			
	EV037-EV048	PARTS WASHERS	SV25	1.621			
	EV033	R/S VALVE BURN-OFF OVEN	SV21	0.000			
	EV036	SPECIAL COATING PAINT BOOTH	SV24	0.560			
			Subtotal:	2.184			
Total Plantwide VOLATILE ORGANIC COMPOUNDS (VOC) Emissions:				234.494	296.563	167.308	221.777

Notes: lb/hr = pounds per hour
TPY = tons per year

USPIPE.MDB/rptCombinedEmissions-Crit 3/10/99

UNITED STATES PIPE & FOUNDRY COMPANY

Annual PM-10 Emissions for CV&F:

Pollutant	Equipment ID	Source Name	Stack ID Type	Total Ann. Em. (TPY) FY'96 Part 70 Actual Emissions [26,833 TPY]	Total Ann. Em. (TPY) Option 5 4,800 hr/yr 20x5x48 35-TPH [168,000 TPY]	Net Em. Increase (TPY) Option 3 2 Shifts 20x5x48 [15,723 TPY Net Increase]	Net Em. Increase (TPY) Option 4 3 Shifts 24x5x48 [20,784 TPY Net Increase]
PARTICULATE MATTER (PM10)	CD001	AFTER BURNER	S002	0.001	0.002	0.000	0.000
	E002	CUPOLA	S002	3.077	10.583	1.879	2.481
			S004 (Fug)	0.031	0.106	0.019	0.025
			Subtotal:	3.108	10.691	1.899	2.506
PARTICULATE MATTER (PM10)	E003	HMT MELTING	S004 (Fug)	0.727	1.825	0.444	0.587
			Subtotal:	0.727	1.825	0.444	0.587
PARTICULATE MATTER (PM10)	E004	DESULFURIZATION	S005-S006 (Fug)	4.295	10.785	2.624	3.468
	E005	HMT TO HOLDING FURNACES	S005-S006 (Fug)	0.232	0.583	0.142	0.187
			Subtotal:	4.527	11.368	2.765	3.656
PARTICULATE MATTER (PM10)	E007	TREATING LADLES	S005-S006 (Fug)	0.207	0.521	0.127	0.167
			S007	0.057	0.142	0.035	0.046
			Subtotal:	0.264	0.662	0.161	0.213
PARTICULATE MATTER (PM10)	E009	#4 & #10 UNITS	S008 (Fug)	1.593	5.296		
	E008	#9 UNIT	S008 (Fug)	4.285	14.762	3.591	4.747
			Subtotal:	5.878	20.058	3.591	4.747
PARTICULATE MATTER (PM10)	E011	COOLING #9	S008 (Fug)	1.330	4.581	1.114	1.473
			S012	1.007	3.470	0.844	1.116
			S013	1.511	5.205	1.266	1.674
			S014	2.518	8.675	2.110	2.790
			S015	1.007	3.470	0.844	1.116
	E010	POURING #9	S008 (Fug)	1.662	5.726	1.393	1.841
			S009-S011	5.037	17.351	4.221	5.579
	E013	POURING & COOLING #10	S008 (Fug)	0.255	0.854		
	E012	POURING & COOLING #4	S008 (Fug)	0.980	3.278		
			Subtotal:	15.308	52.610	11.793	15.589
PARTICULATE MATTER (PM10)	E015	#4 & #10 UNITS SHAKEOUT	S008 (Fug)	10.380	34.500		
	E014	#9 UNIT SHAKEOUT	S007	0.762	2.623	0.638	0.844
			S008 (Fug)	2.792	9.619	2.340	3.093
			Subtotal:	13.934	46.743	2.978	3.937
PARTICULATE MATTER (PM10)	E020	#9 CASTING ROTOBLAST BARRELS	S023	2.081	5.071	1.183	1.565
	E021	#9 CASTING ROTOBLAST MONORAIL & TABLE	S024	1.004	2.447	0.571	0.755
	E019	#9 CASTING SECONDARY SHAKEOUT	S022	0.641	2.208	0.537	0.710

UNITED STATES PIPE & FOUNDRY COMPANY

Annual PM-10 Emissions for CV&F:

Pollutant	Equipment ID	Source Name	Stack ID Type	Total Ann. Em. (TPY) FY'96 Part 70 Actual Emissions [25,833 TPY]	Total Ann. Em. (TPY) Option 5 4,800 hr/yr 20x5x48 35-TPH [168,000 TPY]	Net Em. Increase (TPY) Option 3 2 Shifts 20x5x48 [15,723 TPY Net Increase]	Net Em. Increase (TPY) Option 4 3 Shifts 24x5x48 [20,784 TPY Net Increase]
PARTICULATE MATTER (PM10)	E017	LARGE CASTING 12-FT ROTOBLAST TABLE	S018	2.477	8.281		
			Subtotal:	6.202	18.008	2.291	3.030
PARTICULATE MATTER (PM10)	E105	SPECIAL COATING SPRAY BOOTH	S071	1.946			
			Subtotal:	1.946			
PARTICULATE MATTER (PM10)	E117	BCP CABINET BLAST CLEANER	S081				
	E118	GOFF ROTOBLAST TABLE CLEANER	S082				
			Subtotal:				
PARTICULATE MATTER (PM10)	EV003	HOT METAL TRANSFER	SV02 (Fug)	0.003			
	EV001-EV002-	MELTING FURNACES #1 AND #2	SV01	0.084			
			SV02 (Fug)	0.014			
			Subtotal:	0.101			
PARTICULATE MATTER (PM10)	EV006	GREENSAND MOLD POURING	SV04 (Fug)	0.052			
	EV007	GREENSAND SHAKEOUT	SV05 (Fug)	3.513			
	EV005	SHELLSAND MOLD POURING	SV03	0.020			
			SV04 (Fug)	0.006			
			Subtotal:	3.592			
PARTICULATE MATTER (PM10)	EV024	HYDRANT PRODUCTION PAINT BOOTH	SV13	0.026			
			Subtotal:	0.026			
PARTICULATE MATTER (PM10)	EV036	SPECIAL COATING PAINT BOOTH	SV24	0.002			
			Subtotal:	0.002			
Total Plantwide PARTICULATE MATTER (PM10) Emissions:				55.615	161.966	25.922	34.264

Notes: lb/hr = pounds per hour
TPY = tons per year

UNITED STATES PIPE & FOUNDRY COMPANY

Annual PM-10 Emissions for CV&F(Order By Stack):

Pollutant	Stack ID Type	Equipment ID	Source Name	Total Ann. Em. (TPY) FY'96 Part 70 Actual Emissions [25,833 TPY]	Total Ann. Em. (TPY) Option 5 4,800 hr/yr 20x5x48 35-TPH [168,000 TPY]	Net Em. Increase (TPY) Option 3 2 Shifts 20x5x48 [15,723 TPY Net Increase]	Net Em. Increase (TPY) Option 4 3 Shifts 24x5x48 [20,784 TPY Net Increase]
PARTICULATE MATTER (PM10)	S002	CD001	AFTER BURNER	0.001	0.002	0.000	0.000
		E002	CUPOLA	3.077	10.583	1.879	2.481
			Subtotal:	3.077	10.585	1.880	2.481
PARTICULATE MATTER (PM10)	S004 (Fug)	E002	CUPOLA	0.031	0.106	0.019	0.025
		E003	HMT MELTING	0.727	1.825	0.444	0.587
			Subtotal:	0.757	1.931	0.463	0.612
PARTICULATE MATTER (PM10)	S005-S006 (Fug)	E004	DESULFURIZATION	4.295	10.785	2.624	3.468
		E005	HMT TO HOLDING FURNACES	0.232	0.583	0.142	0.187
		E007	TREATING LADLES	0.207	0.521	0.127	0.167
			Subtotal:	4.734	11.889	2.892	3.823
PARTICULATE MATTER (PM10)	S007	E014	#9 UNIT SHAKEOUT	0.762	2.623	0.638	0.844
		E007	TREATING LADLES	0.057	0.142	0.035	0.046
			Subtotal:	0.818	2.765	0.673	0.889
PARTICULATE MATTER (PM10)	S008 (Fug)	E009	#4 & #10 UNITS	1.593	5.296		
		E015	#4 & #10 UNITS SHAKEOUT	10.380	34.500		
		E008	#9 UNIT	4.285	14.762	3.591	4.747
		E014	#9 UNIT SHAKEOUT	2.792	9.619	2.340	3.093
		E011	COOLING #9	1.330	4.581	1.114	1.473
		E010	POURING #9	1.662	5.726	1.393	1.841
		E013	POURING & COOLING #10	0.255	0.854		
		E012	POURING & COOLING #4	0.980	3.278		
			Subtotal:	23.278	78.616	8.438	11.154
PARTICULATE MATTER (PM10)	S009-S011	E010	POURING #9	5.037	17.351	4.221	5.579
			Subtotal:	5.037	17.351	4.221	5.579
PARTICULATE MATTER (PM10)	S012	E011	COOLING #9	1.007	3.470	0.844	1.116
			Subtotal:	1.007	3.470	0.844	1.116
PARTICULATE MATTER (PM10)	S013	E011	COOLING #9	1.511	5.205	1.266	1.674

UNITED STATES PIPE & FOUNDRY COMPANY

Annual PM-10 Emissions for CV&F(Order By Stack):

Pollutant	Stack ID Type	Equipment ID	Source Name	Total Ann. Em. (TPY) FY'96 Part 70 Actual Emissions [26,833 TPY]	Total Ann. Em. (TPY) Option 5 4,800 hr/yr 20x5x48 35-TPH [168,000 TPY]	Net Em. Increase (TPY) Option 3 2 Shifts 20x5x48 [15,723 TPY Net Increase]	Net Em. Increase (TPY) Option 4 3 Shifts 24x5x48 [20,784 TPY Net Increase]
			Subtotal:	1.511	5.205	1.266	1.674
PARTICULATE MATTER (PM10)	S014	E011	COOLING #9	2.518	8.675	2.110	2.790
			Subtotal:	2.518	8.675	2.110	2.790
PARTICULATE MATTER (PM10)	S015	E011	COOLING #9	1.007	3.470	0.844	1.116
			Subtotal:	1.007	3.470	0.844	1.116
PARTICULATE MATTER (PM10)	S018	E017	LARGE CASTING 12-FT ROTOBLAST TABLE	2.477	8.281		
			Subtotal:	2.477	8.281		
PARTICULATE MATTER (PM10)	S022	E019	#9 CASTING SECONDARY SHAKEOUT	0.641	2.208	0.537	0.710
			Subtotal:	0.641	2.208	0.537	0.710
PARTICULATE MATTER (PM10)	S023	E020	#9 CASTING ROTOBLAST BARRELS	2.081	5.071	1.183	1.565
			Subtotal:	2.081	5.071	1.183	1.565
PARTICULATE MATTER (PM10)	S024	E021	#9 CASTING ROTOBLAST MONORAIL & TABLE	1.004	2.447	0.571	0.755
			Subtotal:	1.004	2.447	0.571	0.755
PARTICULATE MATTER (PM10)	S071	E105	SPECIAL COATING SPRAY BOOTH	1.946			
			Subtotal:	1.946			
PARTICULATE MATTER (PM10)	S081	E117	BCP CABINET BLAST CLEANER				
			Subtotal:				
PARTICULATE MATTER (PM10)	S082	E118	GOFF ROTOBLAST TABLE CLEANER				
			Subtotal:				
PARTICULATE MATTER (PM10)	SV01	EV001-EV002-	MELTING FURNACES #1 AND #2	0.084			
			Subtotal:	0.084			

UNITED STATES PIPE & FOUNDRY COMPANY

Annual PM-10 Emissions for CV&F(Order By Stack):

	Stack ID Type	Equipment ID	Source Name	Total Ann. Em. (TPY) FY'96 Part 70 Actual Emissions [25,833 TPY]	Total Ann. Em. (TPY) Option 5 4,800 hr/yr 20x5x48 35-TPH [168,000 TPY]	Net Em. Increase (TPY) Option 3 2 Shifts 20x5x48 [15,723 TPY Net Increase]	Net Em. Increase (TPY) Option 4 3 Shifts 24x5x48 [20,784 TPY Net Increase]
PARTICULATE MATTER (PM10)	SV02 (Fug)	EV003	HOT METAL TRANSFER	0.003			
		EV001-EV002-	MELTING FURNACES #1 AND #2	0.014			
			Subtotal:	0.017			
PARTICULATE MATTER (PM10)	SV03	EV005	SHELLSAND MOLD POURING	0.020			
			Subtotal:	0.020			
PARTICULATE MATTER (PM10)	SV04 (Fug)	EV006	GREENSAND MOLD POURING	0.052			
		EV005	SHELLSAND MOLD POURING	0.006			
			Subtotal:	0.059			
PARTICULATE MATTER (PM10)	SV05 (Fug)	EV007	GREENSAND SHAKEOUT	3.513			
			Subtotal:	3.513			
PARTICULATE MATTER (PM10)	SV13	EV024	HYDRANT PRODUCTION PAINT BOOTH	0.026			
			Subtotal:	0.026			
PARTICULATE MATTER (PM10)	SV24	EV036	SPECIAL COATING PAINT BOOTH	0.002			
			Subtotal:	0.002			
Total Plantwide PARTICULATE MATTER (PM10) Emissions:				55.615	161.966	25.922	34.264

Notes: lb/hr = pounds per hour
TPY = tons per year

UNITED STATES PIPE & FOUNDRY COMPANY

Annual TSP Emissions for CV&F:

Pollutant	Equipment ID	Source Name	Stack ID Type	Total Ann. Em. (TPY) FY'96 Part 70 Actual Emissions [25,833 TPY]	Total Ann. Em. (TPY) Option 5 4,800 hr/yr 20x5x48 35-TPH [168,000 TPY]	Net Em. Increase (TPY) Option 3 2 Shifts 20x5x48 [15,723 TPY Net Increase]	Net Em. Increase (TPY) 3 Shifts 24x5x48 Net Increase]
(TSP)	E001		S001 (Fug)	5.976			4.819
			Subtotal:	5.976	20.557		4.819
PARTICULATE MATTER (TSP)	CD001	AFTER BURNER	S002	0.001	0.003	0.001	0.001
	E002	CUPOLA	S002	3.418	11.759	2.088	2.757
			S004 (Fug)	0.034	0.118	0.021	0.028
			Subtotal:	3.453	11.880	2.110	2.785
PARTICULATE MATTER (TSP)	E003	HMT MELTING	S004 (Fug)	1.453	3.650	0.888	1.174
			Subtotal:	1.463	3.650	0.888	1.174
PARTICULATE MATTER (TSP)	E004	DESULFURIZATION	S005-S006 (Fug)	8.589	21.571	5.247	6.936
	E005	HMT TO HOLDING FURNACES	S005-S006 (Fug)	0.464	1.166	0.284	0.375
	E006	HOLDING FURNACE PREHEAT	S005-S006 (Fug)	0.011		0.006	0.008
			Subtotal:	9.064	22.737	5.537	7.319
PARTICULATE MATTER (TSP)	E007	TREATING LADLES	S005-S006 (Fug)	0.415	1.041	0.253	0.335
			S007	0.113	0.284	0.069	0.091
			Subtotal:	0.528	1.325	0.322	0.426
PARTICULATE MATTER (TSP)	E009	#4 & #10 UNITS	S008 (Fug)	3.128	10.397		
	E008	#9 UNIT	S008 (Fug)	8.413	28.983	7.050	9.320
			Subtotal:	11.541	39.380	7.050	9.320
PARTICULATE MATTER (TSP)	E011	COOLING #9	S008 (Fug)	1.330	4.581	1.114	1.473
			S012	1.007	3.470	0.844	1.116
			S013	1.511	5.205	1.266	1.674
			S014	2.518	8.675	2.110	2.790
			S015	1.007	3.470	0.844	1.116
	E010	POURING #9	S008 (Fug)	1.662	5.726	1.393	1.841
			S009-S011	5.037	17.351	4.221	5.579
	E013	POURING & COOLING #10	S008 (Fug)	0.255	0.854		
	E012	POURING & COOLING #4	S008 (Fug)	0.980	3.278		
			Subtotal:	15.308	52.610	11.793	15.589
PARTICULATE MATTER (TSP)	E015	#4 & #10 UNITS SHAKEOUT	S008 (Fug)	14.829	49.286		
	E014	#9 UNIT SHAKEOUT	S007	1.088	3.748	0.912	1.205
			S008 (Fug)	3.989	13.742	3.343	4.419

UNITED STATES PIPE & FOUNDRY COMPANY

Annual TSP Emissions for CV&F:

Pollutant	Equipment ID	Source Name	Stack ID Type	Total Ann. Em. (TPY) FY'96 Part 70 Actual Emissions [25,833 TPY]	Total Ann. Em. (TPY) Option 5 4,800 hr/yr 20x5x48 35-TPH [168,000 TPY]	Net Em. Increase (TPY) Option 3 2 Shifts 20x5x48 [15,723 TPY Net Increase]	Net Em. Increase (TPY) Option 4 3 Shifts 24x5x48 [20,784 TPY Net Increase]
			Subtotal:	19.906	66.776	4.254	5.624
PARTICULATE MATTER (TSP)	E018	#9 CASTING HANDLING	S020 (Fug)	3.699	12.743	3.100	4.097
			S021 (Fug)	3.554	12.243	2.978	3.937
	E020	#9 CASTING ROTOBLAST BARRELS	S023	2.419	5.897	1.376	1.819
	E021	#9 CASTING ROTOBLAST MONORAIL & TABLE	S024	1.167	2.845	0.664	0.878
	E019	#9 CASTING SECONDARY SHAKEOUT	S022	0.916	3.155	0.767	1.014
	E017	LARGE CASTING 12-FT ROTOBLAST TABLE	S018	2.880	9.629		
	E016	LARGE CASTING BURN-OFF	S016	0.074	0.246		
			S017 (Fug)	0.270	0.901		
			Subtotal:	14.978	47.669	8.885	11.746
PARTICULATE MATTER (TSP)	E028	BINDER CONVEYING	S031-S032	0.003	0.010	0.002	0.003
	E027	BINDER UNLOADING TO STORAGE SILO	S029	0.003	0.010	0.002	0.003
	E025	GREENSAND MULLORS A & B	S027-S028	2.489	8.321	2.086	2.757
	E026	HERMAN MOLD MACHINE	S008 (Fug)	2.739	9.156	2.295	3.033
	E022	SAND CONVEYING	S008 (Fug)	1.578	5.274	1.322	1.747
	E024	SAND RETURNING TO STORAGE SILO	S026	1.578	5.274	0.843	1.747
	E023	SAND SCREENING DRUM	S025	0.014	0.047	0.012	0.015
			Subtotal:	8.402	28.092	6.562	9.306
PARTICULATE MATTER (TSP)	E033	#4 UNIT MOLD MAKING	S008 (Fug)	0.812			
	E035	BINDER CONVEYING	S008 (Fug)	0.049			
	E034	BINDER UNLOADING TO STORAGE SILO	S036	0.001			
	E032	GREENSAND MULLORS EAST & WEST	S034-S035	0.738			
	E029	SAND CONVEYING	S008	0.465			
	E030	SAND SCREENING	S033	0.501			
	E031	SAND STORAGE SILO	S008	0.465			
			Subtotal:	3.031			
PARTICULATE MATTER (TSP)	E038	#1 BULK SILO, RECLAIMED SAND	S040	0.001			
	E039	#2 BULK SILO, NEW SAND	S040	0.003			
	E037	CLASSIFIER PROCESSING	S038	0.006			

UNITED STATES PIPE & FOUNDRY COMPANY

Annual TSP Emissions for CV&F:

Pollutant	Equipment ID	Source Name	Stack ID Type	Total Ann. Em. (TPY) FY'96 Part 70 Actual Emissions [25,833 TPY]	Total Ann. Em. (TPY) Option 5 4,800 hr/yr 20x5x48 35-TPH [168,000 TPY]	Net Em. Increase (TPY) Option 3 2 Shifts 20x5x48 [15,723 TPY Net Increase]	Net Em. Increase (TPY) 3 Shifts 24x5x48 Net Increase]
PARTICULATE MATTER	E036	PROCESSING	S037				
			S039 (Fug)				
			Subtotal:	0.575			
PARTICULATE MATTER (TSP)	E043	MOLD FORMING	S008	2.869			
	E040	MOLD SAND SILO	S041	0.002			
	E041	SAND HEATER	S008B (Fug)	0.005			
	E042	SAND MIXERS	S042 (Fug)	0.127			
			Subtotal:	3.003			
PARTICULATE MATTER (TSP)	E053	CORE FORMING	S046	1.177			
	E050	CORE SAND SILO	S045	0.001			
	E051	SAND HEATER	S045	0.001			
	E052	SAND MIXER	S046	1.598			
			Subtotal:	2.777			
PARTICULATE MATTER (TSP)	E061	#3 & #4 ISOCURE SAND SILO	S049	0.002			
	E060	#3 BULK SAND SILO	S048	0.003	0.009	0.009	0.009
	E062	#5 ISOCURE SAND SILO	S050	0.001			
	E069-E071	ISOCURE MACHINES #3/#4/#5	S054	0.282			
			S055	0.188			
	E131-133	ISOCURE MACHINES #6, #7 & #8	S055	0.184	0.553	0.553	0.553
			S089	0.374	1.124	1.124	1.124
	E063-E065	ISOCURE SAND HEATERS #3/#4/#5	S049	0.002			
			S050	0.001			
	E125-127	ISOCURE SAND HEATERS #6, #7 & #8	S086	0.000	0.009	0.009	0.009
	E122-124	ISOCURE SAND SILO #6, #7 & #8	S086	0.000	0.009	0.009	0.009
	E072	REFRACTORY COATING	S008A (Fug)	0.378		0.228	0.385
			S008C (Fug)	0.000		0.000	0.000
			S046A	0.000		0.000	0.000
			S053A	0.189		0.114	0.193
			S053B	0.000		0.000	0.000
	E066-E068	SAND MIXERS #3/#4/#5	S053 (Fug)	0.675			
	E128-E130	SAND MIXERS #6, #7 & #8	S053 (Fug)	0.000	2.442	2.442	2.442
			Subtotal:	2.279	4.147	4.489	4.725
PARTICULATE MATTER (TSP)	E081	FLAME-OFF	S053	0.000		0.001	
	E079	PEPSET CORE FORMING	S053 (Fug)	0.118			
	E077	PEPSET SAND HEATER	S048	0.001			
	E078	PEPSET SAND MIXER	S053 (Fug)	0.169			

UNITED STATES PIPE & FOUNDRY COMPANY

Annual TSP Emissions for CV&F:

Pollutant	Equipment ID	Source Name	Stack ID Type	Total Ann. Em. (TPY) FY'96 Part 70 Actual Emissions [25,833 TPY]	Total Ann. Em. (TPY) Option 5 4,800 hr/yr 20x5x48 35-TPH [168,000 TPY]	Net Em. Increase (TPY) Option 3 2 Shifts 20x5x48 [15,723 TPY Net Increase]	Net Em. Increase (TPY) Option 4 3 Shifts 24x5x48 [20,784 TPY Net Increase]
			Subtotal:	0.288		0.001	
PARTICULATE MATTER (TSP)	E083	SHELL CORE HEATING	S053	0.001			
	E082	SHELL CORE SAND HANDLING	S053 (Fug)	0.000			
			Subtotal:	0.001			
PARTICULATE MATTER (TSP)	E084	CASTING FINISHING AREA #1	S059 (Fug)	0.979		0.819	1.083
	E085	CASTING FINISHING AREA #2	S060 (Fug)	0.334			
	E086-E087	CASTING FINISHING AREAS #3 AND #4	S061 (Fug)	0.142		0.119	0.157
			S062 (Fug)	0.136		0.114	0.151
	E088	PRIMER DIP COATING OPERATION	S059	0.000		0.000	0.000
			Subtotal:	1.592		1.052	1.391
PARTICULATE MATTER (TSP)	E099	#1 DIP PAINT LINE	S063	0.000		0.000	0.000
	E102	#3 DIP PAINT LINE	S063	0.000		0.000	0.000
	E100	BINKS SPRAY PAINT BOOTH	S067	0.030		0.000	0.000
	E096-E098	CEMENT LINING DRYING OVENS #1, #3 & #4	S064-S066	0.049			
	E089-E095	CEMENT MIXING AND LINING STATIONS	S063 (Fug)	0.148		0.124	0.228
	E103-E104	COATING DRYING OVENS #1 AND #3	S069-S070	0.033		0.027	0.036
	E101	LARGE FITTINGS PAINT BOOTH	S068	0.008		0.000	0.000
			Subtotal:	0.268		0.151	0.264
PARTICULATE MATTER (TSP)	E106	SPECIAL COATING DRYING OVEN	S072	0.007			
			Subtotal:	0.007			
PARTICULATE MATTER (TSP)	E109	TOUCHUP COATING	S075	2.549		0.000	0.000
			Subtotal:	2.549		0.000	0.000
PARTICULATE MATTER (TSP)	E116	ASPHALT TANKS HOT OIL HEATER	S080	0.007			
	E112	CARPENTER SHOP	S077	0.000			
	E110	CUPOLA BAGHOUSE DUST SOLIDIFICATION	S076	0.001		0.001	0.002
	E111	CUPOLA DRYING	S004 (Fug)	0.023			
	E115	FITTINGS PLANT BATHHOUSE BOILER	S079	0.016			
	E114	LADLE PREHEAT	S005-S006 (Fug)	0.009		0.004	

UNITED STATES PIPE & FOUNDRY COMPANY

Annual TSP Emissions for CV&F:

Pollutant	Equipment ID	Source Name	Stack ID Type	Total Ann. Em. (TPY) FY'96 Part 70 Actual Emissions [25,833 TPY]	Total Ann. Em. (TPY) Option 6 4,800 hr/yr 20x5x48 35-TPH [168,000 TPY]	Net Em. Increase (TPY) Option 3 2 Shifts 20x5x48 [15,723 TPY Net Increase]	Net Em. Increase (TPY) Option 4 3 Shifts 24x5x48 [20,784 TPY Net Increase]
PARTICULATE MATTER (TSP)	E113	PATTERN SHOP	S078	0.000			
			Subtotal:	0.055		0.006	0.002
PARTICULATE MATTER (TSP)	E117	BCP CABINET BLAST CLEANER	S081				
	E123	GLA FITTINGS BURN-OFF OVEN	S085			0.036	
	E118	GOFF ROTOBLAST TABLE CLEANER	S082				
	E120	LANLY FITTINGS PREHEAT OVEN	S084			0.108	
	E119	RF MOTE FITTINGS PREHEAT OVEN	S083			0.095	
			Subtotal:			0.239	
PARTICULATE MATTER (TSP)	EV003	HOT METAL TRANSFER	SV02 (Fug)	0.007			
	EV004	LADLE PREHEAT	SV02	0.003			
	EV001-EV002-	MELTING FURNACES #1 AND #2	SV01	0.084			
			SV02 (Fug)	0.014			
			Subtotal:	0.107			
PARTICULATE MATTER (TSP)	EV006	GREENSAND MOLD POURING	SV04 (Fug)	0.052			
	EV007	GREENSAND SHAKEOUT	SV05 (Fug)	5.018			
	EV005	SHELLSAND MOLD POURING	SV03	0.020			
			SV04 (Fug)	0.006			
			Subtotal:	5.097			
PARTICULATE MATTER (TSP)	EV010-EV012	CUT-OFF AND GRINDING	SV07	0.009			
	EV008-EV009	TUMBLE BLASTS	SV06	0.011			
			Subtotal:	0.020			
PARTICULATE MATTER (TSP)	EV013	GREENSAND MULLOR	SV08	0.027			
			SV09 (Fug)	0.100			
	EV051	HUNTER MACHINE	SV09	0.000			
	EV014	MOLD FORMING	SV09 (Fug)	0.033			
			Subtotal:	0.161			
PARTICULATE MATTER (TSP)	EV016	SHELL MOLD CURING	SV02 (Fug)	0.002			
	EV015	SHELL SAND HANDLING	SV09 (Fug)	0.001			
			Subtotal:	0.003			

UNITED STATES PIPE & FOUNDRY COMPANY

Annual TSP Emissions for CV&F:

Pollutant	Equipment ID	Source Name	Stack ID Type	Total Ann. Em. (TPY) FY'96 Part 70 Actual Emissions [25,833 TPY]	Total Ann. Em. (TPY) Option 5 4,800 hr/yr 20x5x48 35-TPH [168,000 TPY]	Net Em. Increase (TPY) Option 3 2 Shifts 20x5x48 [15,723 TPY Net Increase]	Net Em. Increase (TPY) Option 4 3 Shifts 24x5x48 [20,784 TPY Net Increase]
PARTICULATE MATTER (TSP)	EV021	AIRSET CORE FORMING	SV02 (Fug)	0.018			
	EV020	AIRSET CORE SAND MIXER	SV02 (Fug)	0.026			
	EV019	SHELL CORE SAND CURING	SV02 (Fug)	0.001			
	EV018	SHELL CORE SAND HANDLING	SV02 (Fug)	0.000			
			Subtotal:	0.044			
PARTICULATE MATTER (TSP)	EV022	SMALL VALVE PAINT BOOTH	SV11	0.008			
			Subtotal:	0.008			
PARTICULATE MATTER (TSP)	EV023	LARGE VALVE TOUCHUP COATING	SV12	0.042			
			Subtotal:	0.042			
PARTICULATE MATTER (TSP)	EV024	HYDRANT PRODUCTION PAINT BOOTH	SV13	0.019			
			Subtotal:	0.019			
PARTICULATE MATTER (TSP)	EV027	GLA CONVEYORIZED OVEN	SV16	0.023			
	EV029	LINE #1 POWDER COATING	SV18	0.000			
	EV030	LINE #2 POWDER COATING	SV19	0.000			
	EV026	PANGBORN AIRBLAST CLEANER	SV15	0.000			
	EV025	PANGBORN ROTOBLAST CLEANER	SV14	0.000			
	EV028	PORBECK OVEN	SV17	0.022			
			Subtotal:	0.044			
PARTICULATE MATTER (TSP)	EV034-EV035	HOT WATER HEATERS #1 AND #2	SV22-SV23	0.003			
	EV032	LEAD KETTLE HEATING	SV20	0.001			
	EV031	LEAD KETTLE MELTING	SV20 (Fug)	0.000			
	EV033	R/S VALVE BURN-OFF OVEN	SV21	0.001			
	EV036	SPECIAL COATING PAINT BOOTH	SV24	0.002			
			Subtotal:	0.007			
Total Plantwide PARTICULATE MATTER (TSP) Emissions:				112.589	298.814	56.990	74.489

UNITED STATES PIPE & FOUNDRY COMPANY

Annual TSP Emissions for CV&F:

Pollutant	Equipment ID	Source Name	Stack ID	Stack Type	Total Ann. Em. (TPY) FY'96 Part 70 Actual Emissions [25,833 TPY]	Total Ann. Em. (TPY) Option 5 4,800 hr/yr 20x5x48 35-TPH [168,000 TPY]	Net Em. Increase (TPY) Option 3 2 Shifts 20x5x48 [15,723 TPY Net Increase]	Net Em. Increase (TPY) Option 4 3 Shifts 24x5x48 [20,784 TPY Net Increase]

Notes: lb/hr = pounds per hour
TPY = tons per year

USPIPE.MDB/rptCombinedEmissions-Crit 3/9/99

Scenario #1

Machine Model	L40	L120
Core Size	124 lb/piece	370 lb/piece
Cycle Time *	90 sec/piece	180 sec/piece
No. of Pieces/hr	40	20
Max. Hourly Rate	124 lb/piece x 40 pieces/hr = 4,960 lb/hr	370 lb/piece x 20 pieces/hr = 7,400 lb/hr

Total Sand for Scenario #1= (4,960 lb/hr * 2 L40) + (7,400 lb/hr * 1 L120) / 2000 = 8.66 TPH of sand

Scenario #2

Machine Model	L40	L120
Core Size	124 lb/piece	370 lb/piece
Cycle Time **	60 sec/piece	180 sec/piece
No. of Pieces/hr	60	20
Max. Hourly Rate	124 lb/piece x 60 pieces/hr = 7,440 lb/hr	370 lb/piece x 20 pieces/hr = 7,400 lb/hr

Total Sand for Scenario #2 = (7,440 lb/hr * 2 L40) + (7,400 lb/hr * 1 L120) / 2000 = 11.14 TPH of sand

Note 1: Information on both scenarios were obtained from Jim Smallwood
* Cycle time for both models were based on scrubber designer
** Jim said that the L40 machine will likely be run faster at 60 sec per piece (instead of 90 sec/piece)

Note 2: The 11.14 TPH of sand for Scenario #2 will be used for calculations of the Isocure Core Machines.

Table 3 Net Annual VOC Emission Increase.

Equipment ID	Source Name	Emission Segment Number	Emission Segment Description	Annual Usages (FY95)	Annual Usages (FY96)	Modification Increase	Post Modification ([Avg]95 & 96)) + Mod Increase)	Annual Usages (Unit)	Emission Factor (Value)	Emission Factor (Unit)	Emission Factor Reference	Stack or Discharge ID	Capture Eff (%)	Control Device ID	Control Eff (%)	New Capture Eff (%)	New Control Device ID	New Control Device - Ctrl Eff. (%)	FY95 Emissions (TPY)	FY96 Emissions (TPY)	Avg Ann Emissions (TPY)	Post Modification Emissions (TPY)	Net Emission Increase (TPY)
C0001	AFTER BURNER	01	NATURAL GAS FIRING	21,561	21,710	62.874	84.510	MMcf/yr	2.8	lb/MMcf	AP 42 Table 1.4-3 (JAN 95)	S002	100	CD001	85				0.0045	0.0048	0.005	0.0177	0.013
		02	NO 2 FUEL OIL (BACK-UP FUEL)	42 779	43.075	170.714	213.642	1000 gal/yr	0.34	lb/1000 Gal	AP 42 Table 1 3-4	S002	100	CD001	85				0.0011	0.0011	0.001	0.0054	0.004
E002	CUPOLA	01	CUPOLA MELTING	48 103	48,839	29 667	78 138	tons/yr	2	lb/ton	DIPRA EF REPORT	S002	99.995	CD001	85				7 2151	7 3255	7.270	11 7201	4 450
				48 103	48,839	29,667	78,138	tons/yr	2	lb/ton	DIPRA EF REPORT	S004 (Fugitive)	0 005	CD001	85				0.0004	0 0004	0.0004	0.00659	0.00022
E006	HOLDING FURNACE PREHEAT	01	NATURAL GAS FIRING	5 428	5 428	5 896	11.324	MMcf/yr	5.28	lb/MMcf	AP-42 Table 1 4-3 (JAN 95)	S005-S006 (Fugitive)	100	EBSF					0 0143	0 0143	0.014	0.0299	0.016
E010	POURING #9	01	GREENSAND POURING, #9 UNIT	36,143	38 631	30 529	66 916	tons/yr	0 14	lb/ton	EPA 600/2-90-044	S008 (Fugitive)	50	EBSF					1.2650	1.2821	1.274	2 3421	1.069
				36,143	38,631	30,529	66,916	tons/yr	0 14	lb/ton	EPA-600/2-90-044	S003-S011	50						1 2650	1 2821	1.274	2 3421	1 069
E011	COOLING #9	01	GREENSAND COOLING #9 UNIT	36,143	38 631	30 529	66 916	tons/yr	0 0787	lb/ton	WISCONSINS DNR PUB AUG 1996	S008 (Fugitive)	40	EBSF					0 5689	0 5766	0.573	1 0533	0.481
				36 143	36 631	30,529	66,916	tons/yr	0 0787	lb/ton	WISCONSINS DNR PUB AUG 1996	S012	10						0 1422	0 1441	0 143	0 2633	0.120
				36 143	36,631	30,529	66,916	tons/yr	0 0787	lb/ton	WISCONSINS DNR PUB AUG 1996	S013	15						0 2133	0 2162	0.215	0 3950	0 180
				36,143	36,631	30,529	66,916	tons/yr	0 0787	lb/ton	WISCONSINS DNR PUB, AUG 1996	S014	25						0 3556	0 3604	0.358	0 6583	0 300
				36,143	36,631	30 529	66,916	tons/yr	0 0787	lb/ton	WISCONSINS DNR PUB, AUG 1996	S015	10						0 1422	0.1441	0 143	0 2633	0 120
E012	POURING & COOLING #4	01	POURING AND COOLING, #4 UNIT	11 140	10 803	0	10 972	tons/yr	0 14	lb/ton	EPA 600/2-90-044	S008 (Fugitive)	100	EBSF					0 7798	0.7582	0.768	0 7680	0
E013	POURING & COOLING #10	01	POURING AND COOLING #10 LARGE CASTING	2,228	2,814	0	2,521	tons/yr	0 14	lb/ton	EPA-600/2-90-044	S008 (Fugitive)	100	EBSF					0 1560	0 1970	0.176	0 1765	0
E014	#9 UNIT SHAKEOUT	01	SHAKEOUT, #9 UNIT	36 143	36,631	30 529	66 916	tons/yr	1 228	lb/ton	MAYSILLESS REVIEW	S007	90	CD003					19 9728	20 2423	20 107	36 9778	18 870
		01		36 143	36 631	30 529	66,916	tons/yr	1 228	lb/ton	MAYSILLESS REVIEW	S008 (Fugitive)	10	EBSF					2 2192	2 2491	2 234	4 1066	1 874
E015	#4 & #10 UNITS SHAKEOUT	01	LARGE CASTING UNITS SHAKEOUT #4 AND #10 UNITS	13 368	13 617	0	13 493	tons/yr	1 228	lb/ton	MAYSILLESS REVIEW	S008 (Fugitive)	100	EBSF					8 2060	8 3608	8 284	8 2844	0 000
E026	HERMAN MOLD MACHINE	02	PARTING OIL FOR MOLD FORMING	27 49	37 11	27	59 40	tons/yr	1,860	lb/ton Handled	MATERIAL BALANCE	S008 (Fugitive)	100	EBSF					25 5657	34 5173	30 039	55 2420	25 203
E033	#4 UNIT MOLD MAKING	02	LIQUID PARTING OIL	12.76	12 37	0	12 56	tons/yr	1 860	lb/ton Handled	MATERIAL BALANCE	S008 (Fugitive)	100	EBSF					11 8630	11 5041	11 684	11 6835	0
E042	#10 UNIT SAND MIXERS	02	VOLATILES FROM NO-BAKE PHENOLIC BINDER	135	171	0	153 20	tons/yr	20 60	lb/ton Handled	MATERIAL BALANCE	S042 (Fugitive)	100	CD021-22					1.3945	1.7613	1 578	1 5779	0
		03	VOLATILES FROM NO BAKE ACID CATALYST	65	82 2	0	73 64	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	S042 (Fugitive)	100	CD021 22					2 0178	2 5482	2 283	2 2829	0
E043	#10 UNIT MOLD FORMING	02	VOLATILES FROM MOLD RELEASE AGENT	1 0	1 0	0	1 0	tons/yr	1 800	lb/ton Handled	MATERIAL BALANCE	S008	100	EBSF					0 9000	0 9000	0 900	0 9000	0
E052	AIRSET CORE - SAND MIXER	02	VOLATILES FROM NO BAKE PHENOLIC BINDER	281 3	317 5	0	299 4	tons/yr	20 60	lb/ton Handled	MATERIAL BALANCE	S046	100	EBSF					2 8974	3 2703	3 084	3 0838	0
		03	VOLATILES FROM NO-BAKE ACID CATALYST (SUPER SET BC61)	154 8	152 2	0	143 5	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	S046	100	EBSF					4.1803	4 7182	4 449	4 4493	0
E053	AIRSET CORE - CORE FORMING	02	PARTING COMPOUND NIX STIX 32	1 8	1 98	0	1 87	tons/yr	1,520	lb/ton Handled	MATERIAL BALANCE	S046	100	EBSF					1 3332	1 5048	1 419	1 4190	0
E069-E071	ISOCURE MACHINES #3&4/5	02	SIGMA CURE 7110 RESIN PART 1	143 92	140 03	0	141 98	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	S054	6	--					0 2677	0 2605	0 264	0 2641	0
				143 92	140 03	0	141 98	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	S055	4	--					0 1785	0 1736	0 176	0 1760	0
				143 92	140 03	0	141.98	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	S056B (Fugitive)	90						4 0134	3 9068	3 951	3 9611	0
		03	SIGMA CURE 7610 RESIN PART 2	109 28	119 94	0	114 61	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	S054	6	--					0 2033	0 2231	0 213	0 2132	0
				109 28	119 94	0	114 61	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	S055	4	-					0 1355	0 1487	0 142	0 1421	0
				109 28	119 94	0	114 61	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	S056B (Fugitive)	90						3 0489	3 3483	3 198	3 1976	0
E131-E133	ISOCURE MACHINES #6/7/8	02	SIGMA CURE 7110 RESIN PART 1	--	--	270 68	270 68	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	New Stacks	10	--					0	0	0	0 8391	0 839
				--	--	270 68	270 68	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	S056B (Fugitive)	90						0	0	0	7 5520	7 552
		03	SIGMA CURE 7610 RESIN PART 2	--	--	231 82	231 82	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	New Stacks	10	-					0	0	0	0 7186	0 719
				-	--	231 82	231 82	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	S056B (Fugitive)	90						0	0	0	6.4678	6 468
E072	REFRACTORY COATING	01	PROLITE AB	69 543	70 735	29 50	99 64	tons/yr	480	lb/ton Handled	MATERIAL BALANCE	S008A (Fugitive)	20	RC117					3 3381	3 3953	3 367	4 7827	1 416
				69 543	70 735	29 50	99 64	tons/yr	480	lb/ton Handled	MATERIAL BALANCE	S008C (Fugitive)	10	RC118					1 6690	1 6976	1 683	2 3913	0 708
				69 543	70 735	29 50	99 64	tons/yr	480	lb/ton Handled	MATERIAL BALANCE	S046A	40	FLAMEOFF	50				3 3381	3 3953	3 367	4 7827	1 416
				69 543	70 735	29 50	99 64	tons/yr	480	lb/ton Handled	MATERIAL BALANCE	S053A	10	RC123					1 6690	1 6976	1 683	2 3913	0 708
				69 543	70 735	29 50	99 64	tons/yr	480	lb/ton Handled	MATERIAL BALANCE	S053B	20	FLAMEOFF	50				1 6690	1 6976	1 683	2 3913	0 708
		02	PROLITE-TS9C	46 362	47 157	19 67	66 43	tons/yr	480	lb/ton Handled	MATERIAL BALANCE	S008A (Fugitive)	20	RC117					2 2254	2 2635	2 244	3 1886	0 944
				46 362	47 157	19 67	66 43	tons/yr	480	lb/ton Handled	MATERIAL BALANCE	S008C (Fugitive)	10	RC118					1.1127	1 1318	1 122	1 5943	0 472
				46 362	47 157	19 67	66 43	tons/yr	480	lb/ton Handled	MATERIAL BALANCE	S046A	40	FLAMEOFF	50				2 2254	2 2635	2 244	3 1886	0 944
				46 362	47 157	19 67	66 43	tons/yr	480	lb/ton Handled	MATERIAL BALANCE	S053A	10	RC123					1 1127	1 1318	1 122	1 5943	0 472
				46 362	47 157	19 67	66 43	tons/yr	480	lb/ton Handled	MATERIAL BALANCE	S053B	20	FLAMEOFF	50				1 1127	1 1318	1 122	1 5943	0 472
		03	ISOPROPANOL	23 999	24 41	10 18	34 38	tons/yr	2,000	lb/ton Handled	MATERIAL BALANCE	S008A (Fugitive)	20	RC117					4 7997	4 8820	4 841	6 8759	2 036
				23 999	24 41	10 18	34 38	tons/yr	2,000	lb/ton Handled	MATERIAL BALANCE	S008C (Fugitive)	10	RC118					2.3999	2 4410	2 420	3 4384	1 018
				23 999	24 41	10 18	34 38	tons/yr	2,000	lb/ton Handled	MATERIAL BALANCE	S046A	40	FLAMEOFF	50				4.7997	4 8820	4 841	6 8759	2 036

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																	FY95	FY96	AVG ANN.	POST mod	NET
				23.999	24.41	10.18	34.38	tons/yr	2.000	lb/ton Handled	MATERIAL BALANCE	S053A	10	RC173			2.3999	2.4410	2.420	3.4384	1.018
				23.999	24.41	10.18	34.38	tons/yr	2.000	lb/ton Handled	MATERIAL BALANCE	S053B	20	FLAMEOFF	50		2.3999	2.4410	2.420	3.4384	1.018
E078	PEPSET SAND MIXER	02	VOLATILES FROM PEPSET BINDER RESIN	57.5	58.6	0	58.04	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	S053 (Fugitive)	100	WET PRO2							
		03	VOLATILES FROM PEPSET NO-BAKE ACID	29.8	30.43	0	30.14	tons/yr	62	lb/ton Handled	MATERIAL BALANCE	S053 (Fugitive)	100	WET PRO2							
E079	PEPSET CORE FORMING	02-03	PARTING COMPOUNDS MIX STIX 32 & 93	2.45	2.45	0	2.45	tons/yr	1.520	lb/ton Handled	MATERIAL BALANCE	S053 (Fugitive)	100	WET PRO2							
E081	CORE FORMING FLAME-OFF (LAZY FLAMES)	01	LAZY FLAME TORCH - NATURAL GAS FIRING	1.085	1.085	2.170	3.26	MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-3 (JAN 95)	S053	100	WET PRO2							
E083	SHELL CORE HEATING	01	NATURAL GAS FIRING	3.257	3.257	0	3.257	MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-3 (JAN 95)	S053	100	WET PRO2							
E088	PRIMER DIP COATING OPERATION	01	GREY VOC-COMPLIANCE AIR DRY COATING	780	440	0	610	gal/yr				S059	100	EBSF			1.264	0.713	0.988	0.988	0
		02	SURE SOL 150	151	85	0	118	gal/yr				S059	100	EBSF			0.363	0.317	0.440	0.440	0
E095-E098	CEMENT LINING DRYING OVENS #1, #3 & #4	01	NATURAL GAS FIRING		8.141			MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-3 (JAN 95)	S064 S066	100								
E099	#1 DIP PAINT LINE	01	B-523 CUTBACK ASPHALT	11,067	11,000	0	0	gal/yr				S063	100				17.731	17.624	17.678	0	-17.678
		02	SURE SOL 150	5,409	3.050	0	0	gal/yr				S063	100				20.201	11.390	15.795	0	-15.795
E100	#4 & #10 BINKS SPRAY PAINT BOOTH	01	B-523 CUTBACK ASPHALT	3.521	3,500	0	0	gal/yr				S067	100	CD034			5.642	5.608	5.625	0	-5.625
		02	SURE SOL 150	355	200	0	0	gal/yr				S067	100	CD034			1.325	0.747	1.036	0	-1.036
E101	#4 & #10 LARGE FITTINGS PAINT BOOTH	01	B-523 CUTBACK ASPHALT	1.006	1.000	0	0	gal/yr				S068	100	CD035			1.612	1.602	1.607	0	-1.607
		02	SURE SOL 150	133	75	0	0	gal/yr				S068	100	CD035			0.497	0.280	0.388	0	-0.388
E102	*#3 DIP PAINT LINE*	*01*	*B-523 CUTBACK ASPHALT*	*8,721*	*8,668*	*0*	*0*	*gal/yr*				*S063*	*100*				*13.972*	*13.888*	*13.930*	*0*	*-13.930*
		02	SURE SOL 150	4.028	2.270	0	0	gal/yr				S063	100				15.035	8.477	11.756	0	-11.756
E103-E104	COATING DRYING OVENS #1 AND #3	01	NATURAL GAS FIRING		5.428			MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-3 (JAN 95)	S069-S070	100								
E105	SPECIAL COATING SPRAY BOOTH	01			15			gal/yr				S071	100	CD036							
		02			15			gal/yr				S071	100	CD036							
		03			250			gal/yr				S071	100	CD036							
		04			27			gal/yr				S071	100	CD036							
		05			31			gal/yr				S071	100	CD036							
		06			51			gal/yr				S071	100	CD036							
		07			40			gal/yr				S071	100	CD036							
		08			458			gal/yr				S071	100	CD036							
		09			458			gal/yr				S071	100	CD036							
E106	SPECIAL COATING DRYING OVEN	01	NATURAL GAS FIRING		1.085			MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-3 (JAN 95)	S072	100								
E109	TOUCHUP COATING	01	B-523 CUTBACK ASPHALT	3.018	3.000	0	0	gal/yr				S075	100				4.836	4.807	4.821	0	-4.821
		02	SURE SOL 150	53	30	0	0	gal/yr				S075	100				0.199	0.112	0.155	0	-0.155
E111	CUPOLA DRYING	01	NATURAL GAS FIRING		3.8			MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-3 (JAN 95)	S004 (Fugitive)	100	CD001	85						
E114	LADLE PREHEAT	01	NATURAL GAS FIRING		4.342			MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-3 (JAN 95)	S005-S006 (Fugitive)	100	EBSF							
E115	FITTINGS PLANT BATHHOUSE BOILER	01	NATURAL GAS FIRING		2.592			MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-3 (JAN 95)	S079	100								
E116	ASPHALT TANKS HOT OIL HEATER	01	NATURAL GAS FIRING		1.152			MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-3 (JAN 95)	S080	100								
E119	RF MOTE FITTINGS PREHEAT OVEN	01	NATURAL GAS FIRING	0	0	7.2	7.2	MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-3 (JAN 95)	S083	100				0	0	0	0.0190	0.0190
E120	LANLY FITTINGS PREHEAT OVEN	01	NATURAL GAS FIRING	0	0	8	8	MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-3 (JAN 95)	S084	100				0	0	0	0.0211	0.0211
E123	GLA FITTINGS BURN-OFF OVEN	01	NATURAL GAS FIRING	0	0	0.48	0.48	MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-3 (JAN 95)	S085	100				0	0	0	0.0013	0.0013
EV004	LADLE PREHEAT	01	NATURAL GAS FIRING	1.367	1.621	3.438	4.932	MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-3 (JAN 95)	SV02	100	EBSF			0.0036	0.0043	0.0039	0.0130	0.0091
EV005	SHELLSAND MOLD POURING	01	VALVE PLANT, BRASS POURING INTO SHELL MOLD	121.5	144	0	0	tons/yr	0.016	lb/ton	WISCONSINS DNR PUB, AUG 1996	SV03	51				0.0010	0.0012	0.0011	0.0000	-0.0011
				121.5	144	0	0	tons/yr	0.016	lb/ton	WISCONSINS DNR PUB, AUG 1996	SV04 (Fugitive)	49	EBSF			0.0010	0.0012	0.0011	0.0000	-0.0011
EV006	GREENSAND MOLD POURING	01	VALVE PLANT, BRASS POURING INTO GREENSAND MOLD	485.9	576	2,021.725	2,552.66	tons/yr	0.14	lb/ton	EPA-600/2-90-044	SV04 (Fugitive)	100	EBSF			0.0340	0.0403	0.0372	0.1787	0.1415
EV007	GREENSAND SHAKEOUT	01	BRASS PLANT, GREENSAND SHAKEOUT	485.9	576	2,021.725	2,552.66	tons/yr	1.228	lb/ton	MAYSILLESS REVIEW	SV05 (Fugitive)	100	EBSF			0.2983	0.3537	0.3260	1.5673	1.2413
EV016	SHELL MOLD CURING	01	NATURAL GAS FIRING	0.876	1.039	0	0	MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-3 (JAN 95)	SV02 (Fugitive)	100	EBSF			0.0023	0.0027	0.0025	0	-0.0025
EV017	COOLING & PASTING STATION	01	SHELL CORE PASTING		0.225			tons/yr	0.872	lb/ton Handled	MATERIAL BALANCE	SV02 (Fugitive)	10	EBSF							
					0.225			tons/yr	0.872	lb/ton Handled	MATERIAL BALANCE	SV10	90	CDV05							
EV019	SHELL CORE SAND CURING	01	NATURAL GAS FIRING		0.259			MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-3 (JAN 95)	SV02 (Fugitive)	100	EBSF							
EV020	AIRSET CORE SAND MIXER	02	VOLATILES FROM FURAN BINDER		0.0925			tons/yr	62	lb/ton Handled	MATERIAL BALANCE	SV02 (Fugitive)	100	EBSF							
EV022	SMALL VALVE PAINT BOOTH	01	B-523 CUTBACK ASPHALT	905	900	0	0	gal/yr				SV11	100	CDV06			1.451	1.442	1.446	0	-1.446
		02	SURE SOL 150	69	50	0	0	gal/yr				SV11	100	CDV06			0.331	0.187	0.259	0	-0.259

EV023	LARGE VALVE TOUCHUP COATING	01	B 523 CUTBACK ASPHALT	151	150	0	0	gal/yr				SV12	100	EBSF		0.242	0.240	0.241	0	-0.241			
		02	SURE SOL 150	18	10	0	0	gal/yr				SV12	100	EBSF		0.066	0.037	0.052	0	-0.052			
EV024	HYDRANT PRODUCTION PAINT BOOTH	01			1,600			gal/yr				SV13	100	CDV07									
		02			100			gal/yr				SV13	100	CDV07									
		03			648			gal/yr				SV13	100	CDV07									
		04			105			gal/yr				SV13	100	CDV07									
		05			300			gal/yr				SV13	100	CDV07									
		06			21			gal/yr				SV13	100	CDV07									
		07			300			gal/yr				SV13	100	CDV07									
EV027	GLA CONVEYORIZED OVEN	01	NATURAL GAS FIRING	0	3.764	0		MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-3 (JAN 95)	SV16	100										
EV028	PORBECK OVEN	01	NATURAL GAS FIRING	0	3.584	0		MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-3 (JAN 95)	SV17	100										
EV032	LEAD KETTLE HEATING	01	NATURAL GAS FIRING		0.324			MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-3 (JAN 95)	SV20	100	EBSF									
EV033	R/S VALVE BURN-OFF OVEN	01	NATURAL GAS FIRING		0.184			MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-3 (JAN 95)	SV21	100										
EV034-EV035	HOT WATER HEATERS #1 AND #2	01	NATURAL GAS FIRING		0.547			MMcf/yr	5.28	lb/MMcf	AP-42 Table 1.4-3 (JAN 95)	SV22 SV23	100										
EV036	SPECIAL COATING PAINT BOOTH	01			2			gal/yr				SV24	100	CDV12									
		02			10			gal/yr				SV24	100	CDV12									
		03			65			gal/yr				SV24	100	CDV12									
		04	B-523 CUTBACK ASPHALT	161	160	0	0 -	gal/yr				SV24	100	CDV12		0.258	0.256	0.257	0	-0.257			
		05	SURE SOL 150	18	10	0	0	gal/yr				SV24	100	CDV12		0.066	0.037	0.052	0	-0.052			
		06			30			gal/yr				SV24	100	CDV12									
EV037-EV048	PARTS WASHERS	01			495			gal/yr				SV25	100										
E & EV	ALL EMISSION SOURCES USED ASPHALT COATING	01	LOW-VOC ASPHALT COATING	–	–	45.320	45.320	gal/yr				EXISTING STACKS				0	0	0	22.660	22.660			
EV051	HUNTER MACHINE	02	VALVE PLANT, HUNTER MOLDING	0	0	9.500	9.500	tons/yr	0.304	lb/ton Handled	ENGINEERING ESTIMATES	SV09 (Fugitive)	100	EBSF		0	0	0	1.444	1.444			
																223.43	217.00	219.71	252.88	33.17			
			B-523 CUTBACK ASPHALT - FY, GAL	28,551	28.378											222.4254	216.9959	219.7109	252.8779	- 33.1673	28.454	GAL/YR	
																45.744	45.467	45.605					
			B-523 CUTBACK ASPHALT - GO REPORT, GAL	30.452	30,268																30,360		
			B-523 CUTBACK ASPHALT - NET, GAL	1,901	1,890																		
			TOTAL GOOD TONS, TPY	25.601	25,776	15,723	41431.5														25.689	TPY	
			TOTAL GOOD TONS POWDER COAT AT R/S VALVE, TPY	5,969	6.010	10.723	20.115														5.990		
			TOTAL GOOD TONS PAINTED TPY	19.632	19,765	5.000	21.297														19.699		
			GAL OF PAINT PER TON, GAL/TON	1.454	1.436		1.445														1.445	GAL/TON TPY PAINT	
			NEW LOW-VOC PAINT, GALLONS	–	–		30,773												30.773				
			SUM OF COLUMNS	10,251	5.780											38.282	21.585	29.934		-29.493			
			SURE SOL 150 - FY, GAL	10,251	5.780	0	8,016						100			38.282	21.585	29.934	0	-29.934			
			SURE SOL - GO REPORT GAL	10,340	5.830													75.081	24.089	-50.992			
																		75.539	30.773	-44.766			

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Table 1. Net Annual PM10 Emission Increase

Equipment ID	Source Name	Emission Segment Number	Emission Segment Description	Annual Usages (FY95)	Annual Usages (FY96)	Modification Increase	Post Modification [(Avg(95 & 96)] + Mod Increase]	Annual Usages (Unit)	Emission Factor (Value)	Emission Factor (Unit)	Emission Factor Reference	Stack or Discharge ID	Capture Eff (%)	Control Device ID	Control Eff (%)	New Capture Eff (%)	New Control Device ID	New Control Device - Cntl Eff (%)	FY95 Emissions (TPY)	FY96 Emissions (TPY)	Avg Ann Emissions (TPY)	Post Modification Emissions (TPY)	Net Emission Increase (TPY)
C0001	AFTER BURNER	01	NATURAL GAS FIRING	21,561	21,710	62,874	84,510	MMcf/yr	7.5	lb/MMcf	AP-42 TABLE 1.4-1 (JAN 95)	S002	100	CD002	99.5				0.0004	0.0004	0.0004	0.0016	0.0012
		02	NO. 2 FUEL OIL (BACK-UP FUEL)	42,779	43,075	170,714	213,642	000 gal/yr	1.08	lb/1000 Gal	EPA 450/4-90-003	S002	100	CD002	99.5				0.0001	0.0001	0.0001	0.0008	0.0005
E002	CUPOLA	01	CUPOLA MELTING	48,103	48,836	29,933	78,303	tons/yr	25.2	lb/ton	DIPRA EF REPORT	S002	99.995	CD002	99.5				3.030	3.077	3.053	4.933	1.879
												S004 (Fugitive)	0.005	–					0.030	0.031	0.031	0.049	0.019
E003	HMT MELTING	01	HOT METAL TRANSFER - MELTING, TAPPING	49,511	50,248	30,529	80,409	tons/yr	0.028	lb/ton	DIPRA REF. 19	S004 (Fugitive)	100	–					0.693	0.703	0.698	1.126	0.427
		02	HOT METAL TRANSFER - MELTING, SLAGGING	1631	1,656	1,006	2,650	tons/yr	0.028	lb/ton	DIPRA REF. 19	S004 (Fugitive)	100	–					0.023	0.023	0.023	0.037	0.014
E004	DESULFURIZATION	01	DESULFURIZATION	49,511	50,248	30,529	80,406	tons/yr	0.42	lb/ton	DIPRA REF 5,12,19	S005-S006 (Fugitiv	100	EBSF	67				4.003	4.063	4.033	6.501	2.468
		02	SLAGGING	49,511	50,248	30,529	80,409	tons/yr	0.028	lb/ton	DIPRA REF. 19	S005-S006 (Fugitiv	100	EBSF	67				0.229	0.232	0.230	0.371	0.141
E005	HMT TO HOLDING FURNACES	01	HOT METAL TRANSFER TO THE HOLDING FURNACES	49,511	50,248	30,529	80,409	tons/yr	0.028	lb/ton	DIPRA REF. 19	S005-S006 (Fugitiv	100	EBSF	67				0.229	0.232	0.230	0.371	0.141
E007	TREATING LADLES	01	DUCTILE TREATING	49,511	50,248	30,529	80,409	tons/yr	0.250	lb/ton	DIPRA REF. 21	S005-S006 (Fugitiv	10	EBSF	67				0.204	0.207	0.206	0.332	0.126
												S007	50	CD003	99				0.056	0.057	0.056	0.090	0.034
E008	#9 UNIT INOCULATION	01	INOCULATION, #9 UNIT	36,143	36,631	30,529	66,916	tons/yr	0.681	lb/ton	ENGINEERING ESTIMATES	S008 (Fugitive)	100	EBSF	67				4.061	4.118	4.089	7.519	3.430
		02	SLAGGING #9 UNIT	36,143	36,631	30,529	66,916	tons/yr	0.028	lb/ton	DIPRA REF. 19	S008 (Fugitive)	100	EBSF	67				0.167	0.169	0.168	0.309	0.141
E009	#4 & #10 UNITS INOCULATION	01	INOCULATION, #4 AND #10 UNITS	13,368	13,617	0	13,493	tons/yr	0.681	lb/ton	ENGINEERING ESTIMATES	S008 (Fugitive)	100	EBSF	67				1.502	1.530	1.516	1.516	0
		02	SLAGGING, #4 AND #10 UNITS	13,368	13,617	0	13,492	tons/yr	0.028	lb/ton	DIPRA REF. 19	S008 (Fugitive)	100	EBSF	67				0.062	0.063	0.062	0.062	0
E010	POURING #9	01	GREENSAND POURING, #9 UNIT	36,143	36,631	30,529	66,916	tons/yr	0.55	lb/ton	EPA-340/1-80-020	S008 (Fugitive)	50	EBSF	67	10	EBSF	67	1.640	1.662	1.651	0.607	-1.044
												S009	17		0	9			1.690	1.712	1.701	1.656	-0.045
												S010-S011 (REROUTED TO S090)	33	–	0	81	CD047	99	3.280	3.324	3.302	0.149	-3.153
E011	COOLING #9	01	GREENSAND COOLING #9 UNIT	36,143	36,631	30,529	66,916	tons/yr	0.55	lb/ton	EPA 340/1-80-020	S008 (Fugitive)	42	EBSF	67	40		67	1.312	1.330	1.321	2.429	1.108
												S012	10	–		10		0	0.994	1.007	1.001	1.840	0.840
												S013	15	–		15		0	1.491	1.511	1.501	2.760	1.259
												S014 (REROUTED TO S090)	25	–		25	CD047	99	2.485	2.518	2.502	0.046	-2.456
												S015	10	–		10		0	0.994	1.007	1.001	1.840	0.840
E012	POURING & COOLING #4	01	POURING AND COOLING #4 UNIT	11,140	10,803	0	10,971	tons/yr	0.55	lb/ton	EPA-340/1-80-020	S008 (Fugitive)	100	EBSF	67				1.011	0.980	0.996	0.996	0
E013	POURING & COOLING #10	01	POURING AND COOLING #10 LARGE CASTING	2,228	2,814	0	2,521	tons/yr	0.55	lb/ton	EPA-340/1-80-020.	S008 (Fugitive)	100	EBSF	67				0.202	0.255	0.229	0.229	0
E014	#9 UNIT SHAKEOUT	01	SHAKEOUT, #9 UNIT	36,143	36,631	30,529	66,916	tons/yr	4.62	lb/ton	ENGINEERING ESTIMATES	S007	90	CD003	99				0.751	0.762	0.756	1.391	0.635
												S008 (Fugitive)	10	EBSF	67				2.755	2.792	2.774	5.101	2.327
E015	#4 & #10 UNITS SHAKEOUT	01	LARGE CASTING UNITS SHAKEOUT, #4 AND #10 UNITS	13,368	13,617	0	13,492	tons/yr	4.62	lb/ton	ENGINEERING ESTIMATES	S008 (Fugitive)	100	EBSF	67				10.190	10.380	10.285	10.285	0
E020	#9 CASTING ROTOBLAST BARRELS	01	3 PANGBORN ROTOBLAST BARRELS 34 GN STEEL SHOT	396,743	604,800	–	0	tons/yr	0.00344	lb/lb Abrasive	STAPPA/ALAPCO, 1991	S023	100	CD007	99.9				2.053	2.081	2.067	0	-2.067
E124	New Automatic Cleaner System	01	AUTOMATIC CLEANER SYSTEM	–	–	806,400	806,400	tons/yr	0.00344	lb/lb Abrasive	STAPPA/ALAPCO, 1991	New Stack	–	–	–	100.0	CD007	99.9	–	–	0	2.774	2.774
E021	#9 CASTING ROTOBLAST MONORAIL & TABLE	01	STEEL SHOT BLAST CLEANING	287,560	291,840	243,225	532,925	tons/yr	0.00344	lb/lb Abrasive	STAPPA/ALAPCO 1991	S074	100	CD006	99.9				0.989	1.004	0.997	1.833	0.837
E019	#9 CASTING SECONDARY SHAKEOUT	01	#9 CASTING SECONDARY SHAKEOUT	72,187	73,262	61,058	133,783	tons/yr	1.75	lb/ton Handled	ENGINEERING ESTIMATE.	S022	100	CD006	99				0.632	0.641	0.636	1.171	0.534
E017	LARGE CASTING 12-FT ROTOBLAST TABLE	01	12-FT ROTOBLAST TABLE, STEEL SHOT	70,944	72,000	0	71,472	tons/yr	0.00344	lb/lb Abrasive	STAPPA/ALAPCO, 1991	S018	100	CD005	99				2.440	2.477	2.459	2.459	0
E105	SPECIAL COATING SPRAY BOOTH	01	COATING 1	15	15	9	24	gal/yr	1.318 g/cc	65 Wt %	60% TRANSFER EFFICIENCY	S071	100	CD036					0.021	0.021	0.021	0.034	0.013
		02	COATING 2	15	15	9	24	gal/yr	1.055 g/cc	65 Wt %	60% TRANSFER	S071	100	CD036					0.017	0.017	0.017	0.028	0.010
		04	COATING 3	27	27	16	43	gal/yr	1.04 g/cc	60.25 Wt %	60% TRANSFER	S071	100	CD036					0.028	0.028	0.028	0.045	0.017
		05	COATING 4	31	31	19	50	gal/yr	1.322 g/cc	69.31 Wt %	60% TRANSFER	S071	100	CD036					0.047	0.047	0.047	0.076	0.029
		06	COATING 5	50	51	31	82	gal/yr	1.426 g/cc	73 Wt %	60% TRANSFER	S071	100	CD036					0.087	0.089	0.088	0.142	0.054
		07	COATING 6	39	40	24	64	gal/yr	1.606 g/cc	74 Wt %	60% TRANSFER	S071	100	CD036					0.078	0.079	0.079	0.127	0.048
		08	COATING 7	451	458	280	734	gal/yr	1.714 g/cc	72.737 Wt %	60% TRANSFER	S071	100	CD036					0.939	0.953	0.946	1.528	0.582
		09	COATING 8	451	458	280	734	gal/yr	1.285 g/cc	72.399 Wt %	60% TRANSFER	S071	100	CD036					0.701	0.711	0.706	1.140	0.434
E117	BCP CABINET BLAST CLEANER	01	BCP BLAST CABINET STEEL SHOT	–	–	336,384	336,384	tons/yr	0.00344	lb/lb Abrasive	STAPPA/ALAPCO, 1991	S081	100	CD040	99.9				–	–	0	1.157	1.157
E118	GOFF ROTOBLAST TABLE CLEANER	01	GOFF ROTOBLAST TABLE CLEANER, STEEL SHOT	–	–	84,096	84,096	tons/yr	0.00344	lb/lb Abrasive	STAPPA/ALAPCO, 1991	S082	100	CD041	99.9				–	–	0	0.289	0.289
E122	NEW FBE BLASTING WITH STEEL SHOT	01	SAND BLASTING WITH STEEL SHOT	–	–	336,384	336,384	tons/yr	0.00344	lb/lb Abrasive	STAPPA/ALAPCO, 1991	New Stack	100	New	99.9				–	–	0	1.157	1.157
EV001, EV002,	MELTING FURNACES #1, #2, #3 AND #4	01	BRASS FURNACES, MELTING	709	840	2,552.66	2,552.66	tons/yr	20	lb/ton	AP 42 JAN 95	SV01	99.5	CDV01	99				0.071	0.084	0.077	0.254	0.177
												SV02 (Fugitive)	0.5	EBSF	67				0.000	0.014	0.007	0.042	0.035
EV003	HOT METAL TRANSFER	01	BRASS MELTING - HOT METAL TRANSFER	607	720	2,188	2,188	tons/yr	0.028	lb/ton	DIPRA REF. 19	SV02 (Fugitive)	100	EBSF	67				0.003	0.003	0.003	0.010	0.007
EV005	SHELLSAND MOLD POURING	01	VALVE PLANT, BRASS POURING INTO SHELL MOLD	121	144	–	0	tons/yr	0.55	lb/ton	EPA-340/1-80-020	SV03	51	–					0.017	0.020	0.019	0	0.019
												SV04 (Fugitive)	49	EBSF	67				0.005	0.006	0.006	0	0.006
EV006	GREENSAND MOLD POURING	01	VALVE PLANT, BRASS POURING INTO GREENSAND MOLD	495	576	350	350	tons/yr	0.55	lb/ton	EPA-340/1-80-020	SV04 (Fugitive)	100	EBSF	67				0.044	0.052	0.048	0.032	-0.016
EV052	HUNTER MOLD POURING	01		–	–	1,838	1,838	tons/yr	0.55	lb/ton	EPA-340/1-80-020	SV04 (Fugitive)	100	EBSF	67				–	–	0	0.167	0.167
EV007	GREENSAND SHAKEOUT	01	BRASS PLANT, GREENSAND SHAKEOUT	3,887	4,608	14,003	14,003	tons/yr	4.62	lb/ton	ENGINEERING ESTIMATES	SV05 (Fugitive)	100	EBSF	67	10	EBSF	67	2.963	3.513	3.238	1.067	-2.170
												SV26				90	CDV013	99	–	–	0	0.291	0.291
EV024	HYDRANT PRODUCTION PAINT BOOTH	06		18	21	12	31	gal/yr			60% TRANSFER EFFICIENCY	SV13	100	CDV07					0.022	0.026	0.024	0.039	0.015
EV036	SPECIAL COATING PAINT BOOTH	01		2	2	1	3	gal/yr			60% TRANSFER EFFICIENCY	SV24	100	CDV12					0.002	0.002	0.002	0.004	0.001
																			54.244	55.615	54.930	68.417	13.488

MWPS004718

Table 2. Net Annual TSP Emission Increase.

Equipment ID	Source Name	Emission Segment Number	Emission Segment Description	Annual Usages (FY'95)	Annual Usages (FY'96)	Modification Increase	Post Modification ([Avg(95 & 96)] + Mod Increase)	Annual Usages (Unit)	Emission Factor (Value)	Emission Factor (Unit)	Emission Factor Reference	Stack or Discharge ID	Capture Eff. (%)	Control Device ID	Control Eff. (%)	New Capture Eff. (%)	New Control Device ID	New Control Device - Ctrl Eff (%)	FY'95 Emissions (TPY)	FY'96 Emissions (TPY)	Avg Ann Emissions (TPY)	Post Modification Emissions (TPY)	Net Emission Increase (TPY)
CD001	AFTER BURNER	01	NATURAL GAS FIRING	21,561	21,710	62,874	84,510	MMcf/yr	13 70	lb/MMcf	AP-42 TABLE 1 4-1 (JAN 95)	S002	100	CD002	99 5								
		02	NO. 2 FUEL OIL (BACK-UP FUEL)	42,779	43 075	170,714	213 642	1000 gal/yr	2.0	lb/1000 Gal	EPA 450/4-90-003	S002	100	CD002	99.5				0 000214	0.000215		0.00107	0 0011
E001	CHARGE HANDLING	01	CHARGE HANDLING	58,254	59,764	36,113	95,122	tons/yr	0 2	lb/ton Handled	DIPRA REF # 1,2.	S001 (Fugitive)	100						5.825	5 976	5.901	9 512	3 611
E002	CUPOLA	01	CUPOLA MELTING	48,103	48,839	29,667	78,138	tons/yr	28	lb/ton	DIPRA EF REPORT	S002	99.995	CD002	99.5				3 367	3.419	3.393	5 469	2 077
				48,103	48,839	29,667	78,138	tons/yr	28	lb/ton	DIPRA EF REPORT	S004 (Fugitive)	0.005	CD001					0.034	0 034	0.034	0 055	0 021
E003	HMT MELTING	01	HOT METAL TRANSFER - MELTING, TAPPING	49,511	50,248	30,529	80,409	tons/yr	0 056	lb/ton	DIPRA REF. 19	S004 (Fugitive)	100	CD001					1.386	1.407	1.397	2.251	0 855
		02	HOT METAL TRANSFER - MELTING, SLAGGING	1,631	1,656	1,006	2,650	tons/yr	0 056	lb/ton	DIPRA REF: 19	S004 (Fugitive)	100	CD001					0.046	0 046	0 045	0 074	0 028
E004	DESULFURIZATION	01	DESULFURIZATION	49,511	50,248	30,529	80,409	tons/yr	0 98	lb/ton	DIPRA REF:5,12,19	S005-S006 (Fugitive)	100	EBSF	67				8.006	8.125	8.066	13 002	4 937
		02	SLAGGING	49,511	50,248	30,529	80,409	tons/yr	0.056	lb/ton	DIPRA REF: 19	S005-S006 (Fugitive)	100	EBSF	67				0.457	0.464	0.461	0.743	0 282
E005	HMT TO HOLDING FURNACES	01	HOT METAL TRANSFER TO THE HOLDING FURNACES	49,511	50,248	30,529	80,409	tons/yr	0 056	lb/ton	DIPRA REF: 19	S005-S006 (Fugitive)	100	EBSF	67				0 457	0 464	0 461	0 743	0 282
E006	HOLDING FURNACE PREHEAT	01	NATURAL GAS FIRING	5.428	5 428	5.896	11 324	MMcf/yr	12	lb/MMcf	AP-42 TABLE 1.4-1 (JAN 95).	S005-S006 (Fugitive)	100	EBSF	67								
E007	TREATING LADLES	01	DUCTILE TREATING	49,511	50,248	30,529	80,409	tons/yr	0.5	lb/ton	DIPRA REF. 21	S005-S006 (Fugitive)	10	EBSF	67				0.408	0 415		0 663	0 663
				49,511	50,248	30,529	80,409	tons/yr	0.5	lb/ton	DIPRA REF: 21	S007	90	CD003	99				0.111	0.113	0.112	0 181	0 069
E008	#9 UNIT INOCULATION	01	INOCULATION, #9 UNIT	36,143	36,631	30,529	66,916	tons/yr	1.336	lb/ton	JCDH	S008 (Fugitive)	100	EBSF	67				7.967	8.075	8 021	14 751	6.730
		02	SLAGGING #9 UNIT	36,143	36,631	30,529	66,916	tons/yr	0.056	lb/ton	DIPRA REF: 19	S008 (Fugitive)	100	EBSF	67				0.334	0.338	0.336	0 618	0.282
E009	#4 & #10 UNITS	01	INOCULATION, #4 AND #10 UNITS	13,368	13,617	0	13,493	tons/yr	1 336	lb/ton	JCDH	S008 (Fugitive)	100	EBSF	67				2 947	3 002	2.974	2.974	0 000
		02	SLAGGING, #4 AND #10 UNITS	13,368	13 617	0	13,493	tons/yr	0 056	lb/ton	DIPRA REF: 19	S008 (Fugitive)	100	EBSF	67				0.124	0 126	0 125	0 125	0 000
E010	POURING #9	01	GREENSAND POURING, #9 UNIT	36,143	36,631	30,529	66,916	tons/yr	0.55	lb/ton	EPA-340/1-80-020	S008 (Fugitive)	50	EBSF	67	10	EBSF	67	1.640	1.662	1.651	0.607	-1 044
				36,143	36,631	30,529	66 916	tons/yr	0 55	lb/ton	EPA-340/1-80-020	S009	17	--	0	9		0	1.690	1,712	1 701	1,656	-0 045
				36,143	36,631	30,529	66,916	tons/yr	0.55	lb/ton	EPA-340/1-80-020	S010-S011	33	--	0	STACK REROUTED	STACK REROUTED	STACK REROUTED	3.280	3.324	3 302	0 149	-3 153
				36,143	36,631	30,529	66,916	tons/yr	0 55	lb/ton	EPA-340/1-80-020	S090	--	--	--	81	CD047	99					
E011	COOLING #9	01	GREENSAND COOLING, #9 UNIT	36,143	36,631	30,529	66,916	tons/yr	0 55	lb/ton	EPA-340/1-80-020	S008 (Fugitive)	40	EBSF	67	40	EBSF	67	1.312	1.330	1 321	2.429	1 108
				36,143	36,631	30,529	66,916	tons/yr	0.55	lb/ton	EPA-340/1-80-020	S012	10	--		10		0	0.994	1.007	1.001	1.840	0.840
				36,143	36,631	30,529	66,916	tons/yr	0.55	lb/ton	EPA-340/1-80-020	S013	15	--		15		0	1 491	1.511	1.501	2.760	1.259
				36,143	36,631	30,529	66,916	tons/yr	0 55	lb/ton	EPA-340/1-80-020	S014	25	--	0	STACK REROUTED	STACK REROUTED	STACK REROUTED	2.485	2.518	2.502	0 046	-2 456
				36,143	36,631	30,529	66,916	tons/yr	0 55	lb/ton	EPA-340/1-80-020	S090	--	--	--	25	CD047	99					
				36,143	36,631	30,529	66,916	tons/yr	0.55	lb/ton	EPA-340/1-80-020	S015	10	--		10			0.994	1.007	1.001	1 840	0 840
E012	POURING & COOLING #4	01	POURING AND COOLING, #4 UNIT	11,140	10,803	0	10,972	tons/yr	0 55	lb/ton	EPA-340/1-80-020	S008 (Fugitive)	100	EBSF	67				1 011	0.980	0.996	0 996	0 000
E013	POURING & COOLING #10	01	POURING AND COOLING, #10 LARGE CASTING	2,228	2,814	0	2,521	tons/yr	0.55	lb/ton	EPA-340/1-80-020	S008 (Fugitive)	100	EBSF	67				0 202	0.255	0.229	0 229	0.000
E014	#9 UNIT SHAKEOUT	01	SHAKEOUT, #9 UNIT	36,143	36,631	30,529	66,916	tons/yr	6 6	lb/ton	EPA SOURCES	S007	90	CD003	99				1.073	1.088	1 081	1 987	0 907
				36,143	36,631	30,529	66,916	tons/yr	6 6	lb/ton	EPA SOURCES	S008 (Fugitive)	10	EBSF	67				3 936	3.989	3.963	7.287	3 325
E015	#4 & #10 UNITS SHAKEOUT	01	LARGE CASTING UNITS SHAKEOUT, #4 AND #10 UNITS	13,368	13,617	0	13,493	tons/yr	6 6	lb/ton	EPA SOURCES	S008 (Fugitive)	100	EBSF	67				14 558	14 829	14.693	14 693	0 000
E016	LARGE CASTING BURN-OFF	01	CUTTING IRON WITH OXYGEN-FUELED ARC	8,021	8,170	0	8,095	tons/yr	2	lb/ton	ENGINEERING ESTIMATE	S016	90	CD004	99				0 072	0 074	0.073	0 073	0.000
				8,021	8,170	0	8,095	tons/yr	2	lb/ton	ENGINEERING ESTIMATE	S017 (Fugitive)	10	EBSF	67				0 265	0 270	0.267	0 267	0 000
E017	LARGE CASTING 12-FT ROTOBLAST TABLE	01	12-FT ROTOBLAST TABLE, STEEL SHOT	72,000	72,000	0	72,000	tons/yr	0 004	lb/lb Abrasive	STAPPA/ALAPCO, 1991	S018	100	CD005	99				0.001	0.001	0 001	0 001	0 000
E018	#9 CASTING HANDLING	01	#9 UNIT CASTINGS AND CORES HANDLING FROM BASEMENT CONVEYOR THROUGH THE APRON	72,286	73,262	0	0	tons/yr	0.6	lb/ton Handled	FROM AP-42 EMISSION FACTOR FOR CHARGE HANDLING WITH PREHEATING	S020 (Fugitive)	51	EBSF	67	EMISSION REROUT	EMISSION REROUT	EMISSION REROUT	3 650	3.699	3 674	0	-3 674

			CONVEYOR	72,286	73,262	0	0	tons/yr	0.6	lb/ton Handled	FROM AP-42 EMISSION FACTOR FOR CHARGE HANDLING WITH PREHEATING	S021 (Fugitive)	49	EBSF	67	EMISSION REROUT	EMISSION REROUT	EMISSION REROUT	3.507	3.554	3.530	0	-3.530
				--	--	133,832	133,832	tons/yr	0.6	lb/ton Handled	FROM AP-42 EMISSION FACTOR FOR CHARGE HANDLING WITH PREHEATING	S090	--	--	--	100	CD047	99	--	--	0	0.401	0.401
E019	#9 CASTING SECONDARY SHAKEOUT	01	#9 CASTING SECONDARY SHAKEOUT	72,286	73,262	61,058	133,832	tons/yr	2.5	lb/ton Handled	ENGINEERING ESTIMATE.	S022	100	CD006	99				0.904	0.916	0.910	1.673	0.763
E020	#9 CASTING ROTOBLAST BARRELS	01	3 PANGBORN ROTOBLAST BARRELS 34 GN. STEEL SHOT	596,743	604,800	0	0	tons/yr	0.004	lb/lb Abrasive	STAPPA/ALAPCO, 1991	S023	100	CD007	99.9	SOURCE REMOVED	SOURCE REMOVED	SOURCE REMOVED	2.387	2.419	2.403	0	-2.403
E124	#9 CASTING COOLING CONVEYOR	01	#9 CASTING (LESS 40 RISERS) COOLING CONVEYOR PRIOR TO THE AUTOMATIC CLEANER	--	--	40,150	40,150	tons/yr	0.6	lb/ton Handled	FROM AP-42 EMISSION FACTOR FOR CHARGE HANDLING WITH PREHEATING	S090	--	--	--	100	CD047	99	--	--	0	0.120	0.120
E125	#9 CASTING AUTOMATIC CLEANER	01	AUTOMATIC CLEANER SYSTEM	--	--	806,400	806,400	tons/yr	0.004	lb/lb Abrasive	STAPPA/ALAPCO, 1991	S023	--	--	--	100	CD007	99.9	--	--	0	3.228	3.226
E021	#9 CASTING ROTOBLAST MONORAIL & TABLE	01	STEEL SHOT BLAST CLEANING	291,840	291,840	0	291,840	tons/yr	0.004	lb/lb Abrasive	STAPPA/ALAPCO, 1991	S024	100	CD008	99.9				1.167	1.167	1.167	1.167	0.000
E022	SAND CONVEYING	01	CONVEYOR FOR GREENSAND	325,287	329,679	274,758	602,241	tons/yr	0.029	lb/ton Handled	AP-42, JAN. 95	S008 (Fugitive)	100	EBSF	67				1.556	1.578	1.567	2.882	1.315
E023	SAND SCREENING DRUM	01	SAND SCREENING	1,855	1,880	3,133	5,000	hr/year	0.75	lb/hr	PERMIT LIMIT	S025	100	CD009	98				0.014	0.014	0.014	0.038	0.023
E024	SAND RETURNING TO STORAGE SILO	01	RETURNING (LOADING) GREENSAND TO STORAGE SILO	325,287	329,679	274,758	602,241	tons/yr	0.029	lb/ton Handled	AP-42, JAN. 95	S026	100	EBSF	67				1.556	1.578	1.567	2.882	1.315
E025	GREENSAND MULLORS A & B	01	#9 GREENSAND MULLING PROCESS	327,206	331,841	276,560	606,084	tons/yr	1.5	lb/ton Handled	MAYSILLES'S REVIEW	S027-S028	100	WET PROC	99				2.454	2.489	2.471	4.546	2.074
E026	HERMAN MOLD MACHINE	01	#9 GREENSAND MOLDING PROCESS	327,520	331,942	276,644	606,375	tons/yr	0.05	lb/ton Handled	JIM MAYSILLES'S REVIEW.	S008 (Fugitive)	100	EBSF	67				2.702	2.739	2.720	5.003	2.282
E027	BINDER UNLOADING TO STORAGE SILO	01	UNLOADING OF BINDER FROM TANK TRUCK INTO STORAGE SILOS	2,133	2,162	1,802	3,950	tons/yr	0.27	lb/ton Handled	AP-42, TABLE 11.12-2, 01/95	S029	100	CD010	99				0.003	0.003	0.003	0.005	0.002
E028	BINDER CONVEYING	01	BINDER CONVEYING SYSTEM	2,133	2,162	1,802	3,950	tons/yr	0.27	lb/ton Handled	AP-42, TABLE 11.12-2, 01/95	S031-S032	100	CD12-13	99				0.003	0.003	0.003	0.005	0.002
E029	#4 SAND CONVEYING	01	CONVEYING #4 GREENSAND RETURNED FROM SHAKEOUT	100,260	97,227	0	98,744	tons/yr	0.029	lb/ton Handled	AP-42, JAN 95.	S008	100	EBSF	67								
E030	#4 SAND SCREENING	01	#4 SAND SCREENING	100,260	97,227	0	98,744	tons/yr	1.03	lb/ton Handled	MAYSILLES'S REVIEW	S033	100	CD014	99								
E031	#4 SAND STORAGE SILO	01	LOADING RETURNED GREENSAND TO STORAGE SILO	100,260	97,227	0	98,744	tons/yr	0.029	lb/ton Handled	AP 42, JAN 95	S008	100	EBSF	67								
E032	#4 GREENSAND MULLORS EAST & WEST	01	#4 GREENSAND MULLING PROCESS	101,438	98,370	0	99,904	tons/yr	1.5	lb/ton Handled	MAYSILLES'S REVIEW	S034-S035	100	WET PROC	99								
E033	#4 UNIT MOLD MAKING	01	#4 UNIT GREENSAND MOLDING PROCESS	101,438	98,370	0	99,904	tons/yr	0.05	lb/ton Handled	JIM MAYSILLES'S REVIEW.	S008 (Fugitive)	100	EBSF	67								
E034	#4 BINDER UNLOADING TO STORAGE SILO	01	UNLOADING OF BINDER FROM TANK TRUCK INTO STORAGE SILO	1,144	1,109	0	1,126	tons/yr	0.27	lb/ton Handled	AP-42 TABLE 11.12-2, 01/95	S036	100	CD015	99								
E035	#4 BINDER CONVEYING	01	BINDER CONVEYING SYSTEM	1,144	1,109	0	1,126	tons/yr	0.27	lb/ton Handled	AP-42, TABLE 11.12-2, 01/95	S008 (Fugitive)	100	EBSF	67								
E036	#10 SIZE REDUCTION PROCESSING	01	SAND RECLAMATION, FINES FROM SIZE REDUCTION	20,051	25,325	0	22,688	tons/yr	1.062	lb/ton Handled	ENGINEERING ESTIMATE.	S037	90	CD016	99								
												S039 (Fugitive)	10	EBSF	67								
E037	#10 CLASSIFIER PROCESSING	01	SAND RECLAMATION PROCESS, CLASSIFIER	20,051	25,325	0	22,688	tons/yr	0.0503	lb/ton Handled	ENGINEERING ESTIMATE	S038	100	CD017	99								
E038	#1 BULK SILO, RECLAIMED SAND	01	RECLAIMED SAND LOADING TO #1 BULK SILO	6,016	7,598	0	6,807	tons/yr	0.029	lb/ton Handled	AP-42 JAN 95	S040	100	CD018	99								
E039	#2 BULK SILO, NEW SAND	01	LOADING NEW SAND FROM RAIL CAR TO #3 BULK SILO	16,678	18,824	0	17,751	tons/yr	0.029	lb/ton Handled	AP-42 JAN 95	S040	100	CD018	99								
E040	#10 MOLD SAND SILO	01	MIXED SAND LOADING TO #10 UNIT MOLD SAND SILO	13,367	16,883	0	15,125	tons/yr	0.029	lb/ton Handled	AP-42, JAN 95.	S041	100	CD019	99								
E041	#10 SAND HEATER	01	SAND HEATER	13,367	16,883	0	15,125		0.029	lb/ton Handled	AP-42, JAN 95	S008B (Fugitive)	100	CD020	98								
E042	#10 SAND MIXERS	01	SAND, BINDER AND CATALYST MIXING	13,367	16,883	0	15,125	tons/yr	1.5	lb/ton Handled	MAYSILLES'S REVIEW	S042 (Fugitive)	100	CD021-22	99								
E043	#10 MOLD FORMING	01	#10 UNIT MOLD FORMING OPERATION	13,367	16,883	0	15,125	tons/yr	1.03	lb/ton Handled	MAYSILLES'S REVIEW	S008	100	EBSF	67								

E050	AIRSET CORE SAND SILO	01	PNEUMATIC LOADING INTO THE AIRSET CORE SAND SILO	5,112	6,456	0	5,784	tons/yr	0.029	lb/ton Handled	AP-42, JAN. 95	S045	100	CD023	99						
E051	AIRSET SAND HEATER	01	SAND HEATER	5,112	6,456	0	5,784	tons/yr	0.029	lb/ton Handled	AP-42, JAN. 95	S045	100	CD023	99						
E052	AIRSET SAND MIXER	01	SAND, BINDER, AND ACID CATALYST MIXING	5,112	6,456	0	5,784	tons/yr	1.5	lb/ton Handled	MAYSILLES'S REVIEW	S046	100	EBSF	67						
E053	AIRSET CORE FORMING	01	AIRSET CORE FORMING	5,483	6,926	0	6,205	tons/yr	1.03	lb/ton Handled	MAYSILLES'S REVIEW	S046	100	EBSF	67						
E060	#3 BULK SAND SILO	01	SAND TRANSFER INTO THE 900-TON SAND SILO	22,111	22,490	33,500	55,801	tons/yr	0.029	lb/ton Handled	AP-42, JAN. 95	S048	100	CD025	99	0.003	0.003	0.003	0.008	0.005	
E061	#3 & #4 ISOCURE SAND SILO	01	SAND TRANSFERRED INTO #3 & #4 ISOCURE SAND SILO	10,613	10,795	0	10,704	tons/yr	0.029	lb/ton Handled	AP-42, JAN. 95	S049	100	CD026	99						
E062	#5 ISOCURE SAND SILO	01	PNEUMATIC SAND TRANSFERRED INTO #5 ISOCURE SAND SILO	7,076	7,197	0	7,136	tons/yr	0.029	lb/ton Handled	AP-42, JAN. 95.	S050	100	CD027	99						
E063-E065	ISOCURE SAND HEATERS #3/#4/#5	01	ISOCURE CORE SAND HEATING (ELECTRIC)	17,689	17,992	0	17,840	tons/yr	0.029	lb/ton Handled	AP-42 JAN 95	S049	60	CD026	99						
				17,689	17,992	0	17,840	tons/yr	0.029	lb/ton Handled	AP-42, JAN 95.	S050	40	CD027	99						
E066-E068	ISOCURE SAND MIXERS #3/#4/#5	01	MULLING OF SAND AND ISOCURE RESINS	17,689	17,992	0	17,840	tons/yr	1.5	lb/ton Handled	MAYSILLES'S REVIEW	S053 (Fugitive)	100	WET PRO2	95						
E069-E071	ISOCURE MACHINES #3/#4/#5	01	ISOCURE MACHINES #3/#4/#5, ISOCURE CORE FORMING	17,944	18,252	0		tons/yr	1.03	lb/ton Handled	MAYSILLES'S REVIEW	S054	60	WET PRO2	95.00000						
				17,944	18,252	0		tons/yr	1.03	lb/ton Handled	MAYSILLES'S REVIEW	S055	40	WET PRO2	95.00000						
E072	REFRACTORY COATING	01	PROLITE-AB	69.543	70.735	29.50	99.64	tons/yr	243.2	lb/ton Handled	MATERIAL BALANCE	S008A (Fugitive)	20	RC117	86.8	0.223	0.227	0.225	0.320	0.095	
				69.543	70.735	29.50	99.64	tons/yr	243.2	lb/ton Handled	MATERIAL BALANCE	S008C (Fugitive)	10	RC118	100	0	0	0	0	0	
				69.543	70.735	29.50	99.64	tons/yr	243.2	lb/ton Handled	MATERIAL BALANCE	S046A	40	RC122	100	0	0	0	0	0	
				69.543	70.735	29.50	99.64	tons/yr	243.2	lb/ton Handled	MATERIAL BALANCE	S053A	10	RC123	86.8	0.112	0.114	0.113	0.160	0.047	
				69.543	70.735	29.50	99.64	tons/yr	243.2	lb/ton Handled	MATERIAL BALANCE	S053B	20	RC124	100	0	0	0	0	0	
		02	PROLITE-TSBC	46.362	47.157	19.67	66.43	tons/yr	243.2	lb/ton Handled	MATERIAL BALANCE	S008A (Fugitive)	20	RC117	86.8	0.149	0.151	0.150	0.213	0.063	
				46.362	47.157	19.67	66.43	tons/yr	243.2	lb/ton Handled	MATERIAL BALANCE	S008C (Fugitive)	10	RC118	100	0	0	0	0	0	
				46.362	47.157	19.67	66.43	tons/yr	243.2	lb/ton Handled	MATERIAL BALANCE	S046A	40	RC122	100	0	0	0	0	0	
				46.362	47.157	19.67	66.43	tons/yr	243.2	lb/ton Handled	MATERIAL BALANCE	S053A	10	RC123	86.8	0.074	0.076	0.075	0.107	0.032	
				46.362	47.157	19.67	66.43	tons/yr	243.2	lb/ton Handled	MATERIAL BALANCE	S053B	20	RC124	100	0	0	0	0	0	
E077	PEPSET SAND HEATER	01	PEPSET CORE SAND HEATING (ELECTRIC)		4,498			tons/yr	0.029	lb/ton Handled	AP-42, JAN. 95.	S048	100	CD025	99						
E078	PEPSET SAND MIXER	01	MULLING OF SAND AND PEPSET RESINS		4,498			tons/yr	1.5	lb/ton Handled	MAYSILLES'S REVIEW	S053 (Fugitive)	100	WET PRO2	95						
E079	PEPSET CORE FORMING	01	PEPSET CORE FORMING		4,587			tons/yr	1.03	lb/ton Handled	MAYSILLES'S REVIEW	S053 (Fugitive)	100	WET PRO2	95						
E081	FLAME-OFF	01	NATURAL GAS FIRING	1.085	1.085	0	1.085	MMcf/yr	12	lb/MMcf	AP-42 TABLE 1.4-1 (JAN 95).	S053	100	WET PRO2	95						
E082	SHELL CORE SAND HANDLING	01	SAND HANDLING FOR SHELL CORE MAKING PROCESS		33	N/A	N/A	tons/yr	0.029	lb/ton Handled	AP-42, JAN. 95	S053 (Fugitive)	100	WET PRO2	95						
E083	SHELL CORE HEATING	01	NATURAL GAS FIRING		3.257	N/A	N/A	MMcf/yr	12	lb/MMcf	AP-42 TABLE 1.4-1 (JAN 95).	S053	100	WET PRO2	95						
E084	CASTING FINISHING AREA #1	01	CASTING FINISHING, GRINDING (CASTINGS FROM #9 AND #4 UNITS)	18,269	18,541	13,923	32,328	tons/yr	0.32	lb/ton Handled	MAYSILLES'S REVIEW	S059 (Fugitive)	100	EBSF	67	0.965	0.979	0.972	1.707	0.735	
E085	CASTING FINISHING AREA #2	01	CASTING FINISHING, GRINDING (LARGE CASTINGS FROM #4 AND #10 UNITS)	6,239	6,332	0	6,288	tons/yr	0.32	lb/ton Handled	MAYSILLES'S REVIEW	S060 (Fugitive)	100	EBSF	67						0
E086-E087	CASTING FINISHING AREAS #3 AND #4	01	CASTING FINISHING, GRINDING (LARGE CASTINGS FROM #9 UNIT)	5,199	5,276	4,394	9,631	tons/yr	0.32	lb/ton Handled	MAYSILLES'S REVIEW	S061 (Fugitive)	51	EBSF	67	0.140	0.142	0.141	0.259	0.118	
				5,199	5,276	4,394	9,631	tons/yr	0.32	lb/ton Handled	MAYSILLES'S REVIEW	S062 (Fugitive)	49	EBSF	67	0.135	0.136	0.136	0.249	0.114	
E088	PRIMER DIP COATING OPERATION	01	100% TRANSFER EFFICIENCY FOR DIP COATING	434	440		437	gal/yr				S059	100	EBSF	67						
E089-E095	CEMENT MIXING AND LINING STATIONS	01	CEMENT HANDLING IN MIXING AND LINING OPERATIONS	1,084	1,100	213	1,304	tons/yr	0.27	lb/ton Handled	DIPRA REF:18	S063 (Fugitive)	100			0.146	0.149	0.147	0.176	0.029	

E096-E098	CEMENT LINING DRYING OVENS #1, #3 & #4	01	NATURAL GAS FIRING		8.141		8.141	MMcf/yr	12	lb/MMcf	AP-42 TABLE 1.4-1 (JAN 95)	S054-S066	100												
E099	#1 DIP PAINT LINE	01	100% TRANSFER EFFICIENCY FOR DIP COATING		11,000			gal/yr				S063	100												
E100	BINKS SPRAY PAINT BOOTH	01	B-523 CUTBACK ASPHALT	3.521	3,500	683	4,194	gal/yr				S067	100	CD034	99			0.0276	0.0224	0.0225	0.0269	0.0044			
E101	LARGE FITTINGS PAINT BOOTH	01	B-523 CUTBACK ASPHALT	1.006	1,000	195	1,198	gal/yr				S068	100	CD035	99			0.0064	0.0064	0.0064	0.0077	0.0013			
E102	#3 DIP PAINT LINE	01	100% TRANSFER EFFICIENCY FOR DIP COATING		8.668			gal/yr				S063	100												
E103-E104	COATING DRYING OVENS #1 AND #3	01	NATURAL GAS FIRING		5.428			MMcf/yr	12	lb/MMcf	AP-42 TABLE 1.4-1 (JAN 95)	S069-S070	100												
E106	SPECIAL COATING DRYING OVEN	01	NATURAL GAS FIRING		1.085			MMcf/yr	12	lb/MMcf	AP-42 TABLE 1.4-1 (JAN 95).	S072	100												
E109	TOUCHUP COATING	01	B-523 CUTBACK ASPHALT	3.018	3,000	586	3,595	gal/yr				S075	100					1.9342	1.9226	1.9284	2.3038	0.3753			
E110	CUPOLA BAGHOUSE DUST SOLIDIFICATION	01	CUPOLA BAGHOUSE DUST SOLIDIFICATION	1,081	1,097	667	1,756	tons/yr	0.27	lb/ton Handled	DIPRA REF # 18	S076	100	CD037	99			0.00146	0.00148	0.00147	0.00237	0.0009			
E111	CUPOLA DRYING	01	NATURAL GAS FIRING		3.80			MMcf/yr	12	lb/MMcf	AP-42 TABLE 1.4-1 (JAN 95)	S004 (Fugitive)	100	CD001											
E112	CARPENTER SHOP	01	WOOD WORKING, SAW DUST		384			ton/yr	0.03	gr/dscf	PERMIT LIMIT	S077	100	CD038	95				0.000			0.000			
E113	PATTERN SHOP	01	WOOD WORKING, SAW DUST		96			ton/yr	0.03	gr/dscf	PERMIT LIMIT	S078	100	CD039	95				0.000			0.000			
E114	LADLE PREHEAT	01	NATURAL GAS FIRING		4.342			MMcf/yr	12	lb/MMcf	AP-42 TABLE 1.4-1 (JAN 95)	S005-S006 (Fugitive)	100	EBSF	67										
E115	FITTINGS PLANT BATHHOUSE BOILER	01	NATURAL GAS FIRING		2.592			MMcf/yr	12	lb/MMcf	AP-42 TABLE 1.4-1 (JAN 95).	S079	100												
E116	ASPHALT TANKS HOT OIL HEATER	01	NATURAL GAS FIRING		1.152			MMcf/yr	12	lb/MMcf	AP-42 TABLE 1.4-1 (JAN 95)	S080	100												
E117	BCP CABINET BLAST CLEANER	01	BCP BLAST CABINET, STEEL SHOT	--	--	153,600	153,600	tons/yr	0.004	lb/lb Abrasive	STAPPA/ALAPCO, 1991	S081	100	CD040	99.9			0	0	0	0.00031	0.00031			
E118	GOFF ROTOBLAST TABLE CLEANER	01	GOFF ROTOBLAST TABLE CLEANER, STEEL SHOT	--	--	38,400	38,400	tons/yr	0.004	lb/lb Abrasive	STAPPA/ALAPCO, 1991	S082	100	CD041	99.9			0	0	0	0.00008	0.00008			
E119	RF MOTE FITTINGS PREHEAT OVEN	01	NATURAL GAS FIRING		7.20			MMcf/yr	12	lb/MMcf	AP-42 TABLE 1.4-1 (JAN 95).	S083	100												
E120	LANLY FITTINGS PREHEAT OVEN	01	NATURAL GAS FIRING		8			MMcf/yr	12	lb/MMcf	AP-42 TABLE 1.4-1 (JAN 95)	S084	100												
E123	GLA FITTINGS BURN-OFF OVEN	01	NATURAL GAS FIRING		0.48			MMcf/yr	12	lb/MMcf	AP-42 TABLE 1.4-1 (JAN 95)	S085	100												
EV001, EV002, EV049, EV050	MELTING FURNACES #1 #2, #3 AND #4	01	BRASS FURNACES, MELTING	709	840	2,552.66	2,552.66	tons/yr	20	lb/ton	AP 24, JAN. 95	SV01	99.5	CDV01	99			0.071	0.084	0.077	0.254	0.177			
EV001, EV002, EV049, EV050	MELTING FURNACES #1, #2, #3 AND #4	01	BRASS FURNACES, MELTING	709	840	2,552.66	2,552.66	tons/yr	20	lb/ton	AP-24, JAN. 95	SV02 (Fugitive)	0.5	EBSF	67			0.012	0.014	0.013	0.042	0.029			
EV003	BRASS/ALLOYS HOT METAL TRANSFER	01	BRASS MELTING - HOT METAL TRANSFER	607	720	2,188	2,188	tons/yr	0.056	lb/ton	DIPRA REF: 19	SV02 (Fugitive)	100	EBSF	67			0.006	0.007	0.006	0.020	0.014			
EV004	LADLE PREHEAT	01	NATURAL GAS FIRING	2	2			MMcf/yr	12	lb/MMcf	AP-42 TABLE 1.4-1 (JAN 95)	SV02	100	EBSF	67										
EV005	SHELLSAND MOLD POURING	01	VALVE PLANT BRASS POURING INTO SHELL MOLD	121	144	--	0	tons/yr	0.55	lb/ton	EPA-340/1-80-020	SV03	51					0.017	0.020	0.019	0.000	-0.019			
		01	VALVE PLANT, BRASS POURING INTO SHELL MOLD	121	144	--	0	tons/yr	0.55	lb/ton	EPA-340/1-80-020	SV04 (Fugitive)	49	EBSF	67			0.005	0.006	0.006	0.000	-0.006			
EV006	GREENSAND MOLD POURING	01	VALVE PLANT, BRASS POURING INTO GREENSAND MOLD	486	576	350	350	tons/yr	0.55	lb/ton	EPA-340/1-80-020	SV04 (Fugitive)	100	EBSF	67			0.044	0.052	0.048	0.032	-0.016			
EV052	HUNTER MOLD POURING	01		--	--	1,838	1,838	tons/yr	0.55	lb/ton	EPA-340/1-80-020.	SV04 (Fugitive	100	EBSF	67			--	--	0.000	0.167	0.167			
EV007	GREENSAND SHAKEOUT	01	BRASS PLANT, GREENSAND SHAKEOUT	3,887	4,608	14,003	14,003	tons/yr	6.6	lb/ton	EPA SOURCES	SV05 (Fugitive	100	EBSF	67	10	EBSF	67	4.233	5.018	4.626	1.525	-3.101		
												SV25				90	CDV013	99	--	--	0	0.416	0.416		
EV008-EV009	TUMBLE BLASTS	01	BRASS PLANT, TUMBLE BLAST CLEANING	607	720	2,188	2,188	tons/yr	3.1	lb/ton Handled	MAYSILLES'S REVIEW	SV06	100	CDV02	99			0.009	0.011	0.010	0.034	0.024			
EV010-EV012	CUT-OFF AND GRINDING	01	BRASS PLANT, CUT-OFF	607	720	2,188	2,188	tons/yr	2.6	lb/ton Handled	DIPRA EMISSION FACTOR	SV07	100	CDV03	99			0.008	0.009	0.008	0.027	0.019			

EV013	GREENSAND MULLOR	01	BRASS PLANT, ROYAL GREENSAND MULLOR	3,424	4,059	12,336	12,336	tons/yr	1.5	lb/ton Handled	MAYSILLES'S REVIEW	SV08	90	CDV04	99			0.023	0.027	0.025	0.083	0.056
				3,424	4,059	12,336	12,336	tons/yr	1.5	lb/ton Handled	MAYSILLES'S REVIEW	SV09 (Fugitive)	10	EBSF	67			0.085	0.100	0.093	0.305	0.213
EV014	MOLD FORMING	01	VALVE PLANT, GREENSAND MOLD FORMING	3,424	4,059	12,336	12,336	tons/yr	0.05	lb/ton Handled	JIM MAYSILLES'S REVIEW.	SV09 (Fugitive)	100	EBSF	67			0.028	0.033	0.031	0.102	0.071
EV015	SHELL SAND HANDLING	01	BRASS PLANT SHELL MOLD, SAND HANDLING	121	144	--	0	tons/yr	0.029	lb/ton Handled	AP-42, JAN 95	SV09 (Fugitive)	100	EBSF	67			0.001	0.001	0.001	0.000	-0.001
EV016	SHELL MOLD CURING	01	NATURAL GAS FIRING		1.036			MMcf/yr	12	lb/MMcf	AP-42 TABLE 1.4-1 (JAN 95)	SV02 (Fugitive)	100	EBSF	67							
EV018	SHELL CORE SAND HANDLING	01	BRASS PLANT, SHELL CORE SAND HANDLING	11.98	14.20	43	43	tons/yr	0.029	lb/ton Handled	AP-42, JAN. 95	SV02 (Fugitive)	100	EBSF	67			0.000	0.000	0.000	0.000	0.000
EV019	SHELL CORE SAND CURING	01	NATURAL GAS FIRING		0.259			MMcf/yr	12	lb/MMcf	AP-42 TABLE 1.4-1 (JAN 95)	SV02 (Fugitive)	100	EBSF	67							
EV020	AIRSET CORE SAND MIXER	01	SAND, FURAN BINDER AND CATALYST MIXING	88.57	105	319	319	tons/yr	1.5	lb/ton Handled	MAYSILLES'S REVIEW	SV02 (Fugitive)	100	EBSF	67			0.022	0.026	0.024	0.079	0.055
EV021	AIRSET CORE FORMING	01	AIRSET CORE FORMING	88.73	105	319	319	tons/yr	1.03	lb/ton Handled	MAYSILLES'S REVIEW	SV02 (Fugitive)	100	EBSF	67			0.015	0.018	0.016	0.054	0.038
EV022	SMALL VALVE PAINT BOOTH	01	B-523 CUTBACK ASPHALT	905	900	176	1,078	gal/yr				SV11	100	CDV06	99			0.0058	0.0058	0.0058	0.0069	0.0011
EV023	LARGE VALVE TOUCHUP COATING	01	B-523 CUTBACK ASPHALT	151	150	29	180	gal/yr				SV12	100	EBSF	67			0.0319	0.0317	0.0318	0.0380	0.0062
EV024	HYDRANT PRODUCTION PAINT BOOTH	01		1,610	1,600	312	1,917	gal/yr				SV13	100	CDV07	99			0.0103	0.0103	0.0103	0.0123	0.0020
		03		652	648	127	777	gal/yr				SV13	100	CDV07	99			0.0055	0.0055	0.0055	0.0066	0.0011
		04		100	105	21	126	gal/yr				SV13	100	CDV07	99			0.0009	0.0009	0.0009	0.0011	0.0002
EV025	PANGBORN ROTOBLAST CLEANER	01	PANGBORN ROTOBLAST CLEANER, STEEL SHOT	2,274	2,696	8,193	8,193	ton/yr	0.0053	gr/dscf	PERMIT LIMIT	SV14	100	CDV08	99			0.237	0.281	0.259015	0.437	0.178
EV026	PANGBORN AIRBLAST CLEANER	01	PANGBORN AIRBLAST CLEANER, GRIT	2,166	2,568	8,193	8,193	ton/yr	0.02	gr/dscf	ENGINEERING ESTIMATES	SV15	100	CDV09	99			0.836	0.991	0.913467	1.543	0.630
EV027	CLA CONVEYORIZED OVEN	01	NATURAL GAS FIRING		3.764			MMcf/yr	12	lb/MMcf	AP-42 TABLE 1.4-1 (JAN 95).	SV16	100									
EV028	PORBECK OVEN	01	NATURAL GAS FIRING		3.584			MMcf/yr	12	lb/MMcf	AP-42 TABLE 1.4-1 (JAN 95).	SV17	100									
EV029	LINE #1 POWDER COATING	01	R/S VALVE PRODUCTION, LINE #1 POWDER COATING	N/A	N/A	N/A	N/A	ton/yr	0.105	lb/hr	PERMIT LIMIT	SV18	100	CDV10	98			--	--	0	0	0
EV030	LINE #2 POWDER COATING	01	R/S VALVE PRODUCTION, LINE #2 POWDER COATING	N/A	N/A	N/A	N/A	ton/yr	0.001	gr/dscf	PERMIT LIMIT	SV19	100	CDV11	99			--	--	0	0	0
EV031	LEAD KETTLE MELTING	01	KETTLE LEAD MELTING		5.630			tons/yr	0.03	lb/ton	AP-42 JAN 95	SV20 (Fugitive)	100	EBSF	67							0.000
EV032	LEAD KETTLE HEATING	01	NATURAL GAS FIRING		0.324			MMcf/yr	12	lb/MMcf	AP-42 TABLE 1.4-1 (JAN 95).	SV20	100	EBSF	67							
EV033	R/S VALVE BURN-OFF OVEN	01	NATURAL GAS FIRING		0.184			MMcf/yr	12	lb/MMcf	AP-42 TABLE 1.4-1 (JAN 95)	SV21	100									
EV034 EV035	HOT WATER HEATERS #1 AND #2	01	NATURAL GAS FIRING		0.547			MMcf/yr	12	lb/MMcf	AP-42 TABLE 1.4-1 (JAN 95).	SV22-SV23	100									
EV036	SPECIAL COATING PAINT BOOTH	02		10	10	2	12	gal/yr				SV24	100	CDV12	99			0.0001	0.0001	0.0001	0.0001	0.0000
		03		65	65	13	78	gal/yr				SV24	100	CDV12	99			0.0006	0.0005	0.0006	0.0007	0.0001
		04	B-523 CUTBACK ASPHALT	161	160	31	192	gal/yr				SV24	100	CDV12	99			0.0010	0.0010	0.0010	0.0012	0.0002
EV051	HUNTER MACHINE	01	VALVE PLANT, HUNTER MOLDING	--	--	9,500	9,500	tons/yr	0.05	lb/ton Handled	JIM MAYSILLES'S REVIEW.	SV09	--	--	--	100.0	EBSF	67	--	--	0	0.0784	0.078
																			95.996	98.407	97.201	120.779	23.578

8760 (2) -0 (2) 16

Prepared by Steven Duke
2/15/99

U. S. PIPE - CHATTANOOGA PLANT
Small Diameter Fittings Expansion
Existing and Proposed Production Study

Component	(units)	Current operating capacity	Maximum Operating Hours	Maximum operating capacity	Additional Fittings Volume	Additional Valves Volume	Required operating capacity	Shortfall	Proposed operating capacity	Capital Cost for proposed capacity
Melting	(tons/hr)	25	16	30	16.2	0.3	16.5	-	16.5	0
Cores	(pieces/yr)	314,601 *	16	209,734 *	345,029	10,000	669,629	459,895	705,221 *	3,000,000
Casting	(pieces/yr)	405,421	16	810,841	385,421	20,000	810,841	-	810,841	0
Cleaning	(pieces/yr)	453,600	16	725,760	385,421	20,000	859,021	133,261	2,384,640	4,400,000
Drilling	(pieces/yr)	361,804	16	361,804	385,421	20,000	767,224	405,421	1,041,761	2,500,000
Coating	(pieces/yr)	195,360	16	502,656	385,421	0	580,781	78,125	580,781	2,500,000
Tooling										1,000,000

Total $ 13,400,000

NOTE: Numbers contained in a highlighted field (200,000) are NOT firm.

* Running 5.4 days a week.

MWPS004724

Prepared by Steven Duke
2/11/99

U. S. PIPE - CHATTANOOGA PLANT
Small Diameter Fittings Expansion
Existing and Proposed Production Study

Component	(units)	Current operating capacity	Maximum Operating Hours	Maximum operating capacity	Additional Fittings Volume	Additional Valves Volume	Required operating capacity	Shortfall	Proposed operating capacity	Capital Cost for proposed capacity
Melting	(tons/hr)	25	24	30	16.2	0.3	16.5	-	16.5	0
Cores	(pieces/yr)	314,601 *	24	314,601 *	707,961	10,000	1,022,562	707,961	1,057,831 *	3,000,000
Casting	(pieces/yr)	405,421	24	1,216,262	790,841	20,000	1,216,262	-	1,216,262	0
Cleaning	(pieces/yr)	453,600	24	1,088,640	790,841	20,000	1,264,441	175,801	3,576,960	4,400,000
Drilling	(pieces/yr)	361,804	24	542,705	790,841	20,000	1,172,645	629,939	1,562,641	2,500,000
Coating	(pieces/yr)	195,360	24	753,984	790,841	0	986,201	232,217	986,201	2,500,000
Tooling										1,000,000

Total $ 13,400,000

NOTE: Numbers contained in a highlighted field (200,000) are NOT firm.

* Running 5.4 days a week.

Max. Core Making Capacity
* → @ 100 lbs. core sand/piece
⇒ 52,900 tons core sand/yr. ⇒ 8.5 tons/hr.
794 tons binder/yr. 255 lbs./hr.
53 tons trieth./yr. 17 lbs./hr.

Existing business
@ 113 lbs. core sand/piece
⇒ 17,900 tons core sand/year ⇒ 2.9 tons core sand/hour
269 tons binder/year 86.5 lbs. binder/hour
17.9 tons triethylamine/year 5.8 lbs. trieth./hour

New fittings business
@ 92.5 lbs. core sand/piece
⇒ 33,210 tons core sand/year ⇒ 5.2 tons core sand/hour
483 tons binder/year 155 lbs. binder/hour
33.2 tons triethylamine/year 10.7 lbs. trieth./hour

NOTE: Numbers calculated using 6220 hrs. per year.
- Weight of resin (binder) used = 1.5% sand weight
- 2 lbs. triethylamine used per ton of sand.

(1) L120
(2) L40s

MWPS004725

Environmental

After installation of the new core machines, operations will be regulated by provisions of our existing Title V permit. VOC limitations are restricted by the use of total resin and TEA at the new Laempe machines plus that used at the existing Artisand machines as follows:

Resin (Part 1 + Part 2) = 750,000 #/365 day avg.
TEA = 45,000 #/365 day avg

Based on a two shift operation at #9 unit and assuming a doubling of existing #9 production it will take six months from the start of the two shift operation to exceed the above VOC limitations. With a ramp up of production to a full two 10 hour shift operation the six month period will be extended proportionately. The most restrictive schedule based on our best information at this time would have us at our "red line limit" no sooner than May 1, 2000. A more realistic date would be July 1, 2000. In either case, we

will have, baring unforeseen problems, a modified Title V permit in place with VOC limits to provid for the full two shift operation of the #9 unit. We do not see any problems with limits on particulate emissions that will restrict the two shift operation.

The "net out" of VOC emissions needed to get a modified Title V permit required use of a low VOC water base paint (1.0 # VOC / Gal paint) for all product now coated with B-523 cutback asphalt. Testing of low VOC paint has not been completed but at this time we are making the assumption that the paint will not be a true water base paint but will require solvent for clean up and for adjustment of VOC contents in the dip tanks. The solvent that will be needed is based on the quantity of B-523 paint presently used adjusted for VOC content in the two paints (3.2 : 1.0). This calculation projects a solvent use of 4,543 gallons, which

is equivalent to 34,012 # VOC. To offset this use of solvent, less paint must be used and more FBE product must be produced. This will result in a product mix of #9 unit production as follows:

Painted with 1 # VOC/gal paint	15,700 TPY
Coated @ FBE facility	18,611 TPY

Based on current FBE production of 9,400 TPY, 9,211 TPY of new production at #9 will be FBE and 6,512 TPY can be painted.

If we want to restrict VOC emissions from the modified core making facility (3 existing plus 3 new machines) where we have approximately 8 TPY of VOC in excess of projected need, we can use additional paint. For example, 4 TPY of VOC reduction from core making will add 3336 TPY to the product that can be painted. With this change, 9,848 TPY of new #9 product could be painted with the remaining 5,875 TPY to get FBE.

CHATT V&F PERMIT 2/25/99

PM_{10}

24.262 TPY INCREASE FOR 2 10HR SHIFTS 5 DAYS/WK 48WKS/YR

INCREASE TONS PRODUCTION 15,723 TONS/YR

EMISSION REDUCTION REQD TO "NET OUT"

24.262 - 15 = 9.262 TPY

LARGEST PM_{10} EMISSION SOURCE @ FACILITY - 10.38 TPY (#4 & #10 SHAKEOUT)

W/CLOSE CAPTURE HOOD AND BAGHOUSE

90% CAPTURE 99% CONTROL 10.38 × .9 × .99 = 9.25 TPY

95% CAPTURE " = 9.762 TPY

	S008 EMISSIONS		RANK	BASE	INCR (4800 HR)	TOTAL	INCR (5760 HR)	TOTAL
	E009	#4 & #10 UNITS		1.593		1.593		1.593
C/C	E008 (INNOC)	#9 UNIT	2	4.285	3.344	7.629	4.421	8.706
	E011	#9 COOLING		1.330	1.038	2.368	1.372	2.702
	E010	#9 POURING		1.662	1.297	2.959	1.715	3.377
	E013	#10 POUR & COOL		0.255		0.255		.255
	E012	#4 POUR & COOL		0.980		0.980		.980
C/C	E015	#4 & #10 SHAKEOUT	1	10.380		10.380	1	10.38
	E014	#9 SHAKEOUT	3	2.792	2.179	4.971	2.881	5.060
				23.277	7.858	31.135	10.389	33.666

NET OUT REDUCTION FOR 5760 HR (20,784 TON INCR) = 17.072 TPY

1.593
.980
.255
10.38
22.208

MWPS004729

"NET OUT" REDUCTIONS 2-10 HR SHIFTS

TSP

REDUCTION NEEDED 54.12 +

SOURCES S008

F006 #4 & #10	3.13		EVAC MONITOR OF MAIN
#9	8.41		FOUNDRY BUILDING
F007 #9 COOLING	1.33		75,000 ACFM TO
#9 POURING	1.66		BAGHOUSE $750,000
#10 & #4 POUR & COOL	1.78		
#4 & #10 SHAKEOUT	14.8	33	
#9 SHAKEOUT	3.99		
S012 - S015	6.05		88,000 ACFM - $880,000
S009 - S011	5.04		93,000 ACFM - $930,000
	46.19 → 45.7		
F009 #9 CASTING HANDLING S020 S021	7.25 → 5.7		HOOD & COLLECT IN COOLING CONV. BAGHOUSE (80% CAPTURE)
	51.4		
CARP. SHOP - SHUT DOWN	4.4		
	55.8		

PM_{10} REDUCTION NEEDED 15.5

S008 23.295

MWPS004730

FACILITY : TSP TON/YR

SOURCE		TPY ACT EMISSIONS	TPY Possible Reduction	Method
Fitting Plant				
CHARGE HAND.		5.98	3	WET MATER FOR 50 %
5005 - 5006		13.21	10.5	80 % ROOF CAPTURE (HIGH COST) 99 % CONT
# 4 & #10 , #9	5008	12.48 +1.53 = 15.67 1.66	12.5	80 % ROOF CAPTURE HIGH COST
#9 COOLING	512 - 15	6.05	5.99	EVAC. TO AMB, GO TO COLLECTOR 15000 + 20,000 + 38,000 + 15,000 = 88,000 SCFM
#9 POURING	59 - 11	5.04	4.99	Evac. to Amb 93,000
#4 & #10 SHAKEOUT	5008	14.8	11.7	80% Roof capture (High cost) need appropriate "close" capture to increase capt. and control @ 99% baghouse
Casting Handling 5020, 21		7.25	5.75	could hood conveyor up from basement and add these emissions to the cooling conveyor baghouse.
Casting cooling		?		will add emissions due to forced ventilation of cooling line but reduce emissions by eliminating pick truck handling to blast cleaning cabinets
Carpenter Shop		4.44	4.44	Shutdown
Pattern Shop		3.70	?	Improve controls?
Valve Plant				
Greensand Shakeout		5.02	4.5	Control to baghouse, Gravity stack no estimate on air flow.

MWPS004731

Facility - PM_{10} t/yr

Source	TPY Actual Emissions	TPY potential Reductions	method
Fittwip Plant			
Desulfurization S005-006	4.29		
#4 & #10 (67% settl.) #9 S008 (uncapt. fug.)	5.88		
#9 Cooling S12-15	6.05		
#9 pouring S005-11	5.04		
#4 & #10 Shakeout S008	10.4		
Valve Plant			
Green sand shakeout	3.51		

MWPS004732

CHATT #9 UNIT PERMIT
2/17/99

W/O NET-OUT MODEL EMISSION RATE

PM_{10} = 80.6 TON/YR TOTAL MOD. EM. − 50.1 BASELINE EM

= 30.5 TPY #/HR = $\frac{30.5 \times 2000}{20 \times 5 \times 48}$ = 12.7 #/HR

FOR ANNUAL STD 12.7 $\frac{\times 4800}{8760}$ = 6.96 #/Hr

TSP = 2000 (209.1 − 130)/4800 = 32.96 #/HR

ANNUAL STD → 32.96 × $\frac{4800}{8760}$ = 18.06 #/Hr

BASED ON BURLINGTON MODELING RESULTS (AUG '94 REV)

PM_{10} 24 HR NATIONAL AMBIENT AIR STAND — 150 μg/m³

BU modeled 15.0 #/HR → 50.4 μg/m³ PREDICTED IMPACT

CHATT 12.7 #/HR → 42.7 μg/m³

ANNUAL NAAQS 50 μg/m³

BU 6.8 #/HR → 5.4 μg/m³

CHATT 6.96 #/HR → 5.5 μg/m³

MAX BACKGROUND LEVEL FOR COMPLIANCE

24 HR STD 150 − 42.7 → 107.3 OR LESS (BU 71)

ANNUAL STD 50 − 5.5 → 44.5 OR LESS (BU 30)

MWPS004733

ADDITIONAL VALVES & FITTINGS #9

	24 hr 5 dy 48 wk			20 hr			16			8760		
	PC/YR	WT/PC	T/YR	PC/YR	WT/PC	T/YR	PC/YR	WT/PC	T/YR	PC/YR	WT/PC	T/YR
FITT	790,841	50	19,764	588,131	50	14,703	385,421	50	9,636	1,277,345	50	319,34
VALVES	20,000	102	1,020			1,020			1,020			1,020
TOTAL			20,784			15,723			10,656			32,954

	BASE TPY 27,000	59,954 FACTOR $\frac{32954 + 27,000}{27,000}$ 2.22	$\frac{47784}{27000}$ 1.77	$\frac{42,723}{27000}$ 1.58	$\frac{37,656}{27,000}$ 1.39	SIG INCR
	EXISTING EMISS. TPY	8760	24/5/48	20/5/48	16/5/48	
TSP	130	288.6	230.1	205.4	180.7	
CHANGE		158.6	100.1	75.4	50.7	25
RED. NEEDED		133.6	75.1	50.4	25.7	
PM_{10}	50.1	111.2	88.7	79.2	69.6	
CHANGE		61.1	38.6	29.1	19.5	15
RED. NEEDED		46.1	23.6	14.1	4.5	
VOC	227	503.9	401.8	358.7	315.5	40
CHANGE		276.9	174.8	131.7	88.5	
RED. NEEDED		236.4	134.8	91.7	48.5	

Possible Emission Reduction Projects

Source	Stack No.	Pollutant Emitted		Reduction		Reduction Needed		Reduction Method	Estimated Cost	Cost Per Ton Pollutant Removed	
		TSP T/Y	PM10 T/Y	TSP T/Y	PM10 T/Y	TSP T/Y	PM10 T/Y			$/TTSP	$/TPM10
Particulate Netting Projects											
F006-8, No. 4,9&10 Fittings areas	S008	35.1	23.3	34.8	23.1			S008 is the main rooftop monitor running the length of the foundry building. Enclose and evacuate 75,000 ACFM to a baghouse. Assume 100% captureand 99% control	$750,000	$21,552	$32,468
F007, Pouring No. 9 Fittings Area	S009-11	5.04	5.04	4.7	4.7			Capture hood and exhaust stacks (S009-11) are existing. Install baghouse with 99% control. 93,000 ACFM.	$930,000	$197,872	$197,872
F007, Cooling No. 9 Fittings Area	S0012-15	6.05	6.05	6.0	6.0			Capture hood and exhaust stacks (S012-15) are existing. Install baghouse with 99% control. 88,000 ACFM.	$880,000	$146,667	$146,667
F009, No. 9 Casting Handling	S020,21	7.25		5.7				Apron conveyor from No 9 shakeout to Secondary shakeout will be hooded and emissions ducted to baghouse. 80% capture and 99% control. 15,000 ACFM estimated.	$150,000	$26,316	
		53.44	34.39	51.2	33.8	54.2	15.5	Emission reductions for netting out of PSDwill fall short by 3.0T/Y for TSP. If possible to take credit for Carpenter Shop shutdown, could add 4.4 T/Y.			
SIP Project											
F010, No. 9 Sand screening Drum	S025	0.71		0.71				S025 discharges from a cyclone control installed to replace a wet scrubber. CHCAPCB requires LAER. Instead USP accepted hours limitation of 4000 hrs. These emissions could be included in one of the other reduction baghouse projects adding ~ 16,000ACFM	$160,000		
VOC Netting Project		VOC Emitted		Reduction		Reduction Needed					
Numerous Coating Stations at Plant						111		Conversion to waterbased coating systems			
Additional FBE Capacity											

2/18/99

MWPS004735

#9 Unit Construction Permit Evaluation

5 4600 @ 35 TPH

Pollutant	Plantwide Emissions Baseline* Tons/year	Plantwide Production Baseline+ Tons/year	#9 Modification Production Increase Plantwide, Tons/year 8760 hr	2 shift,16 hr	2 Shift,20 hr (3)	3 shift,24 hr	PSD Signifcance Threshold Tons/yr	Total Modified Emissions Plantwide, Tons/year ** 8760 (1)	2 Shift,16 hr (2)	2 shift,20 hr (3)	3 shift,24 hr (4)	Net PSD Reduction Required Plantwide, Tons/year[1] 8760	2 Shift,16 hr	2 shift,20 hr	3 shift,24 hr
TSP	130	25,833	32,954	10,656	15,723	20,784	25	295.8	183.6	209.1	234.6	140.84	28.62	54.12	79.59
PM10	50.1	25,833					15	114.0	70.8	80.6	90.4	48.91	5.67	15.49	25.31
CO	36.1	25,833					100	82.2	51.0	58.1	65.1	-53.95	-85.11	-78.03	-70.96
Lead	0.00033	25,833					0.6	0.0	0.0	0.0	0.0	-0.60	-0.60	-0.60	-0.60
Sox	3.07	25,833					40	7.0	4.3	4.9	5.5	-36.08	-38.73	-38.13	-37.53
Nox	16.5	25,833					40	37.5	23.3	26.5	29.8	-18.95	-33.19	-29.96	-26.72
VOC	227	25,833					40	516.6	320.6	365.2	409.6	249.57	53.64	98.16	142.63

* Emissions based on Calander year 1996 calculations in Title V permit application.
\+ Will be calculasted based on highest 2 years of production in last 5 years.
** Increases are calculated in the following manner: TSP(8760 hr)= ((32,954+25,833)/ 25,833) x 130
[1]Net PSD Increases are calculated in the following manner: TSP(8760)= 295.8-130-25

2/18/99

Possible Emission Reduction Projects

Source	Stack No.	Pollutant Emitted		Reduction		Reduction Needed		Reduction Method	Estimated Cost	Cost Per Ton Pollutant Removed	
		TSP T/Y	PM10 T/Y	TSP T/Y	PM10 T/Y	TSP T/Y	PM10 T/Y			$/TTSP	$/TPM10
Particulate Netting Projects											
F006-8, No. 4,9&10 Fittings areas	S008	35.1	23.3	34.8	23.1			S008 is the main rooftop monitor running the length of the foundry building. Enclose and evacuate 75,000 ACFM to a baghouse. Assume 100% captureand 99% control	$750,000	$21,552	$32,468
F007, Pouring No. 9 Fittings Area	S009-11	5.04	5.04	4.7	4.7			Capture hood and exhaust stacks (S009-11) are existing. Install baghouse with 99% control. 93,000 ACFM.	$930,000	$197,872	$197,872
F007, Cooling No. 9 Fittings Area	S0012-15	6.05	6.05	6.0	6.0			Capture hood and exhaust stacks (S012-15) are existing. Install baghouse with 99% control. 88,000 ACFM.	$880,000	$146,667	$146,667
F009, No. 9 Casting Handling	S020,21	7.25		5.7				Apron conveyor from No 9 shakeout to Secondary shakeout will be hooded and emissions ducted to baghouse. 80% capture and 99% control. 15,000 ACFM estimated.	$150,000	$26,316	
		53.44	34.39	51.2	33.8	54.2	15.5	Emission reductions for netting out of PSDwill fall short by 3.0T/Y for TSP. If possible to take credit for Carpenter Shop shutdown, could add 4.4 T/Y.			
SIP Project											
F010, No. 9 Sand screening Drum	S025	0.71		0.71				S025 discharges from a cyclone control installed to replace a wet scrubber. CHCAPCB requires LAER. Instead USP accepted hours limitation of 4000 hrs. These emissions could be included in one of the other reduction baghouse projects adding ~ 16,000ACFM	$160,000		
VOC Netting Project		VOC Emitted		Reduction		Reduction Needed					
Numerous Coating Stations at Plant						111		Conversion to waterbased coating systems			
Additional FBE Capacity											

11.3 / 35.1 / 53.41 → 17.2

2/18/99

MWPS004737

John Pleasant

From: U.S. Pipe (b) (6)
Sent: Thursday, February 18, 1999 7:38 AM
To: jpleasant@uspipe.com
Subject: Tonnage by FY

So that we have it all in one place, I am providing a list of tonnages by FY:

FY	#9 Plant Good Tons	Plant Good Tons	Melted Tons
94	16,549	24,419	44,582
95	18,698	26,070	48,103
96	18,583	26,331	48,839
97	15,435	22,188	41,028
98	16,071	22,151	43,144

I hope this is helpful.

Dennis

John Pleasant

From: Tai Tang (b) (6)
Sent: Wednesday, February 10, 1999 8:47 AM
To: John Pleasant
Subject: Fw: PSD Applicability Question

-----Original Message-----
From: Tai Tang < (b) (6) >
To: Mike Sewell < sewell.mike@epa.gov <mailto:sewell.mike@epa.gov>>
Date: Tuesday, February 02, 1999 9:50 AM
Subject: PSD Applicability Question

Dear Mr. Sewell:

Thanks for returning my telephone call last week. The reason for my telephone call was to seek some answers on a PSD permitting situation. I have decided to send you this email to better describe this project. With all that being said, I presume that you do take questions on NSR/PSD permitting; otherwise, please direct me or forward this email to the right person. My particular air permitting scenario is as follows:

The facility in question is a cast metals foundry plant. Its major operations include iron melting cupola, metal casting operations, metal cleaning operations, core and mold making operations, sand handling and sand recovery operations, VOC coating operations, and other ancillary processes. It is considered a major source since its facility-wide potential to emit is greater than 250 tons per year.

The proposed modification includes 1) adding some new equipment and 2) replacing some existing equipment with newer units. The overall changes are as follows:

- Adding 3 new core making machines
- Adding a new automatic flaskless molding machine
- Replacing existing rotoblast tumbler metal cleaning equipment with a high-efficient unit.
- Adding a new powder coating operations (includes small gas-fired heating ovens and small blast cleaning equipment)

My questions are:

1. If the total increases in the emissions of VOC and TSP from this proposed modification ***based solely on the new equipment*** will be limited to less than their respective significant emission levels (i.e., 40 tons for VOC and 25 tons for TSP), can this modification be considered a minor modification (non-PSD)?

2. The additional cores produced by the new core machines and the better cleaning efficiency via the new cleaner represent a "de-bottleneck" step that will allow the plant to produce more. The existing permits allow the facility to operate 8,760 hr/yr and the facility has not undergone any previous PSD permitting process. Does such improvement result in a scenario that ***"emissions increases from existing production processes following the de-bottlenecking process"*** must be counted as parts of the total emission increases in determining PSD applicability?

Sincerely,

Tai Tang, P.E.
T3 Consulting, Inc.
(b) (6)

Table 1. VOC Emissions Increase From U.S. Pipe & Foundry Proposed Equipment Addition

Source	VOC Emission Factor *		Activity Factor		Estimated VOC Emissions (TPY)
Isocure Machine Nos. 6 & 7	0.7344	lb/ton of coated resin	54,964	ton/yr of coated resin	20.18
Isocure Core Refractory Coating	0.2434	lb/ton of coated resin	54,964	ton/yr of coated resin	6.69
Valve Plant Demolding Material	0.833	lb/ton of green sand	25,929	ton/yr of green sand	10.80
Various Gas-Fired Preheat Ovens **	5.28	lb/MMcf	57.378	MMcf/yr	0.15
Total					**37.82**

* Sand-processing-related (i.e., lb/ton) emission factors are back-calculated from detailed estimates

** Include FBE RF Mote Preheat Oven (1800 cf/hr), FBE Lanly Preheat Oven (2000 cf/hr), FBE GLA Burn-Off Oven (1500 cf/hr), and Valve Plant Kirk & Blum Oven (1250 cf/hr).

Note: 37.82 TPY is less than 40 TPY PSD significant emission rate for VOC.

sinto

SANDMOLD SYSTEMS, INC.

313 West State • P.O. Box 468 • Newaygo, Michigan 49337
Phone 231-652-1623 • Fax 231-652-1629

A SYMBOL OF ACHIEVEMENT IN THE FOUNDRY INDUSTRY

December 21, 2001

Richard Witte - V.P.

United States Pipe & Foundry
Chattanooga Valve & Fittings Plant
2701 Chestnut St.
Chattanooga, TN 37408

Attn: **Stuart J. Box; Foundry Superintendent**

Subject: **No. 4 Line - Intermediate Fittings**

Gentlemen:

The purpose of this letter is to communicate with U.S. Pipe and Foundry Company the activity SMS is pursuing in the upgrade of No. 4 Mold Line. You had mentioned during our December 7th tele-conference to focus attention on the no-bake area as you had a good handle on the green sand upgrade costs. To keep both oars in the water, SMS will look at upgrading green sand from 40 to 80 MPD and offer you a layout, then a proposal for the no-bake line, which could replace the green sand Herman Line.

To alleviate any misunderstandings, we are publishing mold sizes and rates we are working with. You are going to avail SMS flask weights for the 64 sq; 64x80 and 80x80, at maximum cope and drag heights. If you do not agree with any part of our numbers, please let us know.

Green Sand Molding -

Mold sizes in mold sequence of 5 molds:

Qty	Size	C/D	CF	15% Less Cavity		Total Weight Sand
1	80x80	40/43	307	260		13 Tons
2	64x80	40/43	245	208	x2	21 Tons
2	64x64	40/43	198	168	x2	17 Tons

Five mold cycle consumes 51 tons sand plus 20% spill and strike-off = 63.75 tons. Mold rate of 10 MPH requires (2) five mold cycles or 127.5 TPH sand. Note: if all molds are 80x80x40/43 sand tonnage will be 130 TPH plus 20% spill sand = 162 TPH.

Flask Weights: To be supplied by Owner.

Patterns: Some are cope and drag sets, some are match plates (common cope/drag patterns.)

Bolsters: Due to bolster availability, at times it is not possible to run a cope mold immediately followed by the mating drag.

Molds in Loop: Currently run four halves.

Cycle: (4) Round of copes, then round of (4) drags

Cycle Chart:

Transfer to fill	22 seconds
Fill (64x64) (80"x80" will be longer)	40 seconds
Transfer to Jolt	15 seconds
Jolt	19 seconds
Return to Fill	33 seconds
Transfer to Jolt	16 seconds
Lower/Jolt	17 seconds
Jolt w/Feet	45 seconds
Start-power out of Jolt (lapsed time)	269 seconds
Power into roll-over	37 seconds
Clamp in roll-over	12 seconds
Roll-over	50 seconds
Vibrate, draw	31 seconds
Power out of roll-over	10 seconds
Roll-over back to receive pos	55 seconds
Unclamp pattern board, lower out	17 seconds
Transfer pattern board to return line	26 seconds
Power out of transfer car	10 seconds
Power rolls in flask set on area	_____ FPM
Transfer car from roll-over to cope line	20 seconds
Power cope mold off transfer car	12 seconds
Transfer car back to roll-over	26 seconds
Mold Prep (repair parting line mold damage):	32 seconds to 270 seconds
Power to Spray Area	18 seconds
Mold Blow off (varies)	42 seconds
Mold Wash (varies)	35 seconds
Mold Dry Time	_____ seconds

Up-set Frame: Has been removed, could not use with deep 80" sq. flask, problems cycling proper up-set frame with proper flask size

Mold Handling Controls: Relay logic

Conveyor Sizes: Noted on plan view

Mulling: (2) 80 B&P with 125 HP

Sand Storage: See print

In addition to increasing mold out-put, the shake out crane must be relieved of:

a. Rolling-over / closing 80x80 molds
b. Setting all molds in pour bay
c. Pour-off of 64x64 up to 80x80 molds

Need four molds in pour zone:

Use a 20,000 lb. ladle to pour 3 to 5 molds an average of 4 at 5000 lb. each
Currently use 3 to 4 ladles to transfer iron to the 20,000 pouring ladle.

U.S. Pipe requested to look at using retired rail car trucks and can be purchased for $1,300 per set.

No-Bake Molding

Current Floor Production Per 8 Hr Day

"House" Flask:	(3) 132x132x55/55 = 1109 CF x .85 = 943 CF x 3 =	142T
	(4) 96x96x44/44 = 470 CF x .85 = 400 CF x 4 =	80T
	(3) 108x108x44/44 = 594 CF x .85 = 505 CF x 3 =	76T
	(5) 80x80x44/44 = 326 CF x .85 = 272 CF x 5 =	69T
	Total Tons of Sand (Mold only)	367T
	Total Tons of Sand in Mold 367 ÷ .85 (Core Cavity) = 431T x .95 (Iron Cavity)	410T
	Avg. Sand Usage at Floor Mold Station 367 ÷ 8 = 45.875 Tons/Hr =	1529# /min.

Proposed Loop – In 5 Mold Cycle

(1) 80x80x40/43 = 307 CF x .85 =	13T
(2) 64x80x40/43 = 245 CF x .85 = 10.4 x 2 =	20.8
(2) 64x64x40/43 = 198 CF x .85 = 8.4T x 2 =	16.8
5 Mold Cycle =	40.6 Tons
at 10 Molds Per Hour =	81.2 Tons
Total tons of Sand in Mold 81.2 ÷ .85 = 95.5 x .95 (Iron Cavity) =	91 Tons
91 Tons x 8 hours =	728 Tons
Avg. Sand Usage at Mold Line 81.2 Tons =	2706# /min.
Recommend (2) 2000# /min. mixers at 68% Utilization Or: (2) 3000# /min. mixers at 45% Utilization	
Reclaimed Sand: 410T (Floor) + 728T (Loop) = 1138 Tons ÷ .9 (breakage/growth) =	1264 Tons
Shake-out in 8 hours 1264 ÷ 8 =	158 TPH
Reclaim in 20 hours 1264 ÷ 20 =	63.2 TPH - use 70 TPH (like Betz)
Reclaim in 21 hours 1264 ÷ 21 =	60 TPH

1.0 Layout Mold Loop for pattern strip time of 20 minutes.

2.0 After rollover/draw, return pattern to loop with option to pattern removal introduction area.

3.0 Incorporate a stage area for mold inspection, repair, preparation, blow-off.

4.0 Incorporate a mold flow – coat station or mold spray.

5.0 Incorporate a mold dry area.

6.0 Incorporate a drag core set area – approximately 4 molds or more.

7.0 Incorporate a cope and drag mold stage area before closing so the cope can align with the match drag.

8.0 The preference is to pour on an indexing car with 4 to 5 molds in the pour zone.

9.0 Provide 2 hours of cooling time.

10.0 With a separate new "shake-out" crane lift the mold off the mold cooling conveyor, shake-out, returning cope and drag halves to the flask return line and pick casting out. This area needs an in-depth study to see if the existing shake-out process can handle the rate of a 6 minute cycle. A separate casting shake-out may be required.

11.0 Provide a layout for sand reclamation with a focus on a system similar to Betz, as tonnage is similar and the binder process, seems to be the same (Phenolic Urethane). We will need to determine the level of sand scrubbing necessary based on sand to metal ratios, cooling time, etc.

12.0 Sand is sub-angular AFS 55.

13.0 Resin content is 1.25%, mold is at 100 PSI after 1 hour.

14.0 Currently buy 500 T/Week of new sand.

15.0 Have (1) 300 T reclaimed sand silo
(1) 300 T New Sand Silo
Existing reclaim process is with a Hewitt-Robbins ball mill vibrator.
(Questions effectiveness)

16.0 Have (2) 1000# / minute Mixers.

Unit #9 We had a discussion about the feasibility of adding a speed-flow mixer after the existing screening drum. The purpose is to mix Bentonite with the return sand pre-condition the return sand and reduce muller cycles. Sms will develop a layout to see if this concept is workable.

Very truly yours,

SandMold Systems, Inc.

Richard M. Witte,
Vice President – Foundry Sales

cc: MEI – Mike Boucher

UNITED STATES PIPE AND FOUNDRY COMPANY

- COMBINATION NEW LOOP AND EXISTING FLOOR –
SHAKE-OUT 1264 TONS IN 8 HOURS = 158 TONS PER HOUR
RECLAIM 1264 TONS IN 21 HOURS = 60 TONS PER HOUR
MOLD 1264 TONS IN 8 HOURS* = 158 TONS PER HOUR

HR.	SHAKEOUT	RECLAIM	LUMP STORAGE	RECLAIM STORAGE	FLOOR MOLD	LOOP MOLD	CORE SAND
1	158	60	98	784	81	46	31
2	158	60	196	686	81	46	31
3	158	60	294	588	81	46	31
4	158	60	392	490	81	46	31
5	158	60	490	392	81	46	31
6	158	60	588	294	81	46	31
7	158	60	686	196	81	46	31
8	158	60	784	98	81	46	31
9		60	724	158	81	46	31
10		60	664	218	81	46	31
11		60	604	278	81	46	31
12		60	544	338	81	46	31
13		60	484	398	81	46	31
14		60	424	458	81	46	31
15		60	364	518	81	46	31
16		60	304	578	81	46	31
17		60	244	638	81	46	31
18		60	184	698	81	46	31
19		60	124	758	81	46	31
20		60	64	818	81	46	31
21		60	4	878	81	46	31

UNITED STATES PIPE & FOUNDRY COMPANY

Emission Source Fact Sheet

EMISSION UNIT 120 - NO. 9 UNIT GREENDSAND MOLD SYSTEM

F010 - #9 UNIT GREENSAND MOLD SYSTEM

E026 - HERMAN MOLD MACHINE

General Source Information

Facility Abrev:	CV&F
Process Area ID:	F010
Emission Unit ID:	E026
Source Desc:	HERMAN MOLD MACHINE
Building No.:	MAIN FOUNDRY BUILDING
UTM Location:	East: 653395 m North: 3877376 m
Source POC:	DENNIS URBANIAK
POC Phone:	(423)752-3912
Air Permit No.:	N/A

Equipment Information

Equip. Type:	#9 UNIT HERMAN MOLD MACHINE
Make/Model:	USPIPE DESIGN
Mfg Date:	
Installed Date:	
Max. Capacity:	MAXIMUM 237.88 TPH AND 2,083,857.8 TPY OF GREENSAND/BINDER/MOLDALL ADDITIVE.

Description of Operation:

EMISSIONS FROM THE #9 HERMAN MOLDING MACHINE ARE RELEASED AS FUGITIVE EMISSIONS, FIRST RELEASED INSIDE THE BUILDING THEN VENTED TO THE ATMOSPHERE VIA THE BUILDING ROOF MONITOR (S008).

Emission Point Information

Stack ID	Dischrg % By Stack	Stack Ht. (ft)	Stack Dia./Width (ft)		Stack Area (ft2)	Flowrate (acfm)	Primary Emission Ctrl Device ID	Primary Emission Ctrl Device Description.	Secondary Emission Ctrl Device ID	Secondary Emission Ctrl Device Description.
S008	100%	55	[N/A]	[N/A]	[N/A]	[N/A]	EBSF	SETTLING FACTOR	[N/A]	[No Sec. Control]

Comments: MAIN FOUNDRY BUILDING ROOF MONITOR. EMISSIONS DISCHARGED THROUGH S008 INCLUDE A 67% SETTLING FACTOR FOR PARTICULATE MATTER.

Operational Parameters

Segment ID	Description	SCC Code	Operation Hour (hr/yr) Actual	Operation Hour (hr/yr) Maximum	Process Rate (ton/yr) Actual	Process Rate (ton/yr) Maximum	Process Weight Rate (ton/hr)	Allowable Emissions (lb/hr)
01	#9 GREENSAND MOLDING PROCESS	30400398	1,880	8,760	331,941.80	2,083,857.80	237.88	57.336

Comments: PROCESS WEIGHT RATES ARE FOR COMBINED TOTAL WEIGHTS OF GREENSAND AND BINDER. AVERAGE '96 FY USAGES = 329,679 TPY OF GREENSAND + 2,162 TPY OF BINDER + 100.8 TPY OF MOLDALL = 331,941.8 TPY. MAXIMUM ANNUAL USAGES = 2,069,652 TPY OF GREENSAND + 13,573 TPY OF BINDER + 632.8 TPY OF MOLDALL = 2,083,857.8 TPY. AVERAGE AND MAXIMUM HOURLY USAGES ARE 176.56 TPH AND 237.88 TPH, RESPECTIVELY. PROCESS WEIGHT RATE = 237.88 TPH * 2000 = 475,760 LB/HR.

02	PARTING OIL FOR MOLD FORMING	30400398	1,880	8,760	37.11	232.97	Not Appl.	Not Appl.

Comments: AVERAGE ANNUAL USAGE BASED ON 1996 FISCAL YEAR REPORT IS 11,314 GAL/YR * 6.56 LB/GAL * 1 TON/2000 LB = 37.11 TPY. MAXIMUM ANNUAL USAGE = 37.11 TPY * (229,961.3/36,631) = 232.97 TPY.

Emission Factors

Segment ID	EF Set	Pollutant Name	Value	Units	References
01	0018	PARTICULATE MATTER (TSP)	0.05	lb/ton Handled	JIM MAYSILLES'S REVIEW.
	Comments:	UNCONTROLLED EMISSION RATE FOR MULLING. SOURCE: JIM MAYSILLES, EPA, REVIEW OF FOUNDRY EMISSIONS DATA.			
02	C041	VOLATILE ORGANIC COMPOUN	1860	lb/ton Handled	MATERIAL BALANCE
	Comments:	HYDROCARBON (VOLATILE ORGANIC COMPOUND) INGREDIENT IN THE PARTING OIL IS LISTED AS 93% BY WEIGHT OR APPROXIMATELY 1,860 LB/TON (2,000 * 0.93). THIS MATERIAL BALANCE IS BASED ON MSDS NO CVF070, NILES CHEMICALS PARTING OIL.			

Calculated Emission Rates

Pollutant	Segment ID	Stack ID	Emission Type	Control Eff. Prim.	Control Eff. Sec.	HAP?	Hourly Emissions (lb/hr) Act.	Hourly Emissions (lb/hr) Max.	Hourly Emissions (lb/hr) Allowable	Annual Emissions (TPY) Actual	Annual Emissions (TPY) Maximum
PARTICULATE MATTER (TSP)	01	S008	Fugitive	67%	0%	☐	2.913	3.925	57.336	2.739	17.192
Total Emissions of PARTICULATE MATTER (TSP) from HERMAN MOLD MACHINE:							**2.913**	**3.925**	**57.336**	**2.739**	**17.192**
VOLATILE ORGANIC COMPOUNDS (VOC)	02	S008	Fugitive	0%	0%	☐	36.715	49.466	Not Appl.	34.512	216.662
Total Emissions of VOLATILE ORGANIC COMPOUNDS (VOC) from HERMAN MOLD MACHINE:							**36.715**	**49.466**	**Not Appl.**	**34.512**	**216.662**

Supporting Emission Calculations

Emission Calculations for PARTICULATE MATTER (TSP) (CAS 01791)
Stack ID or Designation: S008
Segment No: 01, #9 GREENSAND MOLDING PROCESS

Actual Annual:	.05 lb/ton Handled * 331,942 tons * (1 - 67% control eff.) * 1 ton/2,000 lb = 2.739 TPY.
Maximum Annual:	.05 lb/ton Handled * 2,083,858 tons * (1 - 67% control eff.) * 1 ton/2,000 lb = 17.192 TPY.
Average Hourly:	Actual annual emissions of 2.739 TPY / 1,880. hr/yr act. * 2,000 lb/ton = 2.913 lb/hr.
Maximum Hourly:	Maximum annual emissions of 17.192 TPY / 8,760 hr/yr max. * 2,000 lb/ton = 3.925 lb/hr.
Allowable Emissions:	Allowable TSP emissions are determined (linear extrapolation) from Schedule 1 of Table 2 using a hourly input weight rate of 237.88 ton/hr or 475,760 lb/hr. Calculation : 51.2 lb/hr + (475,760 - 200,000) * (17.8 / 800,000) lb/hr = 57.336 lb/hr.

Emission Calculations for VOLATILE ORGANIC COMPOUNDS (VOC) (CAS 01615)
Stack ID or Designation: S008
Segment No: 02, PARTING OIL FOR MOLD FORMING

Actual Annual:	1,860 lb/ton Handled * 37 tons * 1 ton/2,000 lb = 34.512 TPY.
Maximum Annual:	1,860 lb/ton Handled * 233 tons * 1 ton/2,000 lb = 216.662 TPY.
Average Hourly:	Actual annual emissions of 34.512 TPY / 1,880. hr/yr act. * 2,000 lb/ton = 36.715 lb/hr.
Maximum Hourly:	Maximum annual emissions of 216.662 TPY / 8,760 hr/yr max. * 2,000 lb/ton = 49.466 lb/hr.
Allowable Emissions:	Not applicable.

End Page Report for HERMAN MOLD MACHINE

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 1-3-06

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
No Air Pressure Cleaned up.					

[signature] OPERATOR

MWPS004751

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 1-4-06

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		

OPERATOR

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 1-5-06

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		

OPERATOR

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 1-6-06

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		

OPERATOR

MWPS004754

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 1-9-06

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		

OPERATOR

MWPS004755

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 1-10-06

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	66		Silo Empty

OPERATOR

MWPS004756

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 1-11-06

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
Cleaned. cyp					

OPERATOR

MWPS004757

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 1-12-06

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
Rom	Dust				

OPERATOR

MWPS004758

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 1-13-04

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		

OPERATOR

MWPS004759

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 1-16-06

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	600	110	60		
11	450	110	60		

OPERATOR

MWPS004760

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 1-17-06

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
~~RAN DUST~~	High winch Cleaned up.				

[signature] OPERATOR

MWPS004761

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 1-18-06

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	300	55	30		

OPERATOR

MWPS004762

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 12-1-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
Dust	12-1-05				

Virgil Oldham OPERATOR

MWPS004763

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 12-2-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		

OPERATOR

MWPS004764

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 12-5-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 12-5-05					

OPERATOR

MWPS004765

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 12-6-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110			
2	600	110			
3	600	110			
4	600	110			
5	600	110			
6	600	110			
7	600	110			
8	600	110			
9	600	110			

Virgil Veach OPERATOR

MWPS004766

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 12-7-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 12-7-05					

OPERATOR

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 12-8-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	110	110	60		
2	110	110	60		
3	110	110	60		
4	110	110	60		
5	110	110	60		
6	110	110	60		
7	110	110	60		
8	110	110	60		
9	110	110	60		

Virgil Oldham OPERATOR

MWPS004768

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 12-9-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 12-9-05					

Virgil Oldham OPERATOR

MWPS004769

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 12-12-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1.	600	110	60		
2.	600	110	60		
3.	600	110	60		
4	600	110	60		
5.	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		

OPERATOR

MWPS004770

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 12-13-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 12-13-05					

OPERATOR

MWPS004771

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 12-14-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		

OPERATOR

MWPS004772

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 12-15-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAN DUST 12-15-05					

OPERATOR

MWPS004773

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 12-16-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		

OPERATOR

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 12-19-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 12-19-05					

OPERATOR

MWPS004775

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 12-20-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		

OPERATOR

MWPS004776

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 12-21-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 12-21-05					

OPERATOR

MWPS004777

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 12-22-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
Ran	Dust + Cleaned	up.	12-22-	05	LAST DAY THIS
					YEAR
					BACK TO WORK
					JAN-3-06

OPERATOR

MWPS004778

CT-172

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 12-1-03

BATCH NO.	BAGHOUSE DUST LBS.	CEMENT LBS.	WATER GALLONS	SOLIFIX LIQUID GALLONS	REMARKS
Raw Dust 12-1-03					
Silo Empty					

TEST BATCH NO. DATE:

TEST RESULTS: DATE:

Virgil Oakham OPERATOR

FOREMAN

MWPS004779

CT-172

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 12-2-03

BATCH NO.	BAGHOUSE DUST LBS.	CEMENT LBS.	WATER GALLONS	SOLIFIX LIQUID GALLONS	REMARKS
RAW DUST	12-2-03				

TEST BATCH NO. DATE:

TEST RESULTS: DATE:

OPERATOR

FOREMAN

MWPS004780

CT-172

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 12-3-03

BATCH NO.	BAGHOUSE DUST LBS.	~~CEMENT~~ Enviro Blend LBS.	WATER GALLONS	SOLIFIX LIQUID GALLONS	REMARKS
1	600	100	52		
2	600	100	52		
3	600	100	52		
4	600	100	52		
5	600	100	52		
6	600	100	52		
7	600	100	52		
8	600	100	52		
9	600	100	52		
10	600	100	52		
11	600	100	52		
12	600	100	52		
13	600	100	52		
14	600	100	52		
15	600	100	52		
16	600	100	52		
17	600	100	52		
18	600	100	52		
Silo	Empty	12-3-03			

TEST BATCH NO. DATE:

TEST RESULTS: DATE:

OPERATOR

FOREMAN

MWPS004781

CT-172

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 12-4-03

BATCH NO.	BAGHOUSE DUST LBS.	CEMENT LBS.	WATER GALLONS	SOLIFIX LIQUID GALLONS	REMARKS
Raw Dust 12-4-03					

TEST BATCH NO. DATE:

TEST RESULTS: DATE:

Dwight Oldham OPERATOR

FOREMAN

MWPS004782

CT-172

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 12-5-03

Emmio Blend

BATCH NO.	BAGHOUSE DUST LBS.	~~CEMENT~~ LBS.	WATER GALLONS	SOLIFIX LIQUID GALLONS	REMARKS
1	600	100	52		
2	600	100	52		
3	600	100	52		
4	600	100	52		
5	600	100	52		
6	600	100	52		
7	600	100	52		
8	600	100	52		
9	600	100	52		
10	600	100	52		
11	600	100	52		
12	600	100	52		
13	600	100	52		
14	600	100	52		
15	600	100	52		
16	600	100	52		
17	600	100	52		

TEST BATCH NO. DATE:

TEST RESULTS: DATE:

Dwight Clark OPERATOR

FOREMAN

MWPS004783

CT-172

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 12-8-03

BATCH NO.	BAGHOUSE DUST LBS.	CEMENT LBS.	WATER GALLONS	SOLIFIX LIQUID GALLONS	REMARKS
Raw Dust 12-8-03					

TEST BATCH NO. DATE:

TEST RESULTS: DATE:

Virgil Oleh OPERATOR

FOREMAN

MWPS004784

CT-172

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 12-9-03

BATCH NO.	BAGHOUSE DUST LBS.	~~CEMENT~~ Enviro Blend LBS.	WATER GALLONS	SOLIFIX LIQUID GALLONS	REMARKS
1	600	100	52		
2	600	100	52		
3	600	100	52		
4	600	100	52		
5	600	100	52		
6	600	100	52		
7	600	100	52		
8	600	100	52		
9	600	100	52		
10	600	100	52		
11	600	100	52		
12	600	100	52		
13	600	100	52		
14	600	100	52		
15	600	100	52		
16	600	100	52		
17	600	100	52		

TEST BATCH NO. DATE:

TEST RESULTS: DATE:

OPERATOR

FOREMAN

MWPS004785

CT-172

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 12-10-03

BATCH NO.	BAGHOUSE DUST LBS.	CEMENT LBS.	WATER GALLONS	SOLIFIX LIQUID GALLONS	REMARKS
Rotal Dust 12-10-03					

TEST BATCH NO. DATE:

TEST RESULTS: DATE:

[illegible] OPERATOR

FOREMAN

MWPS004786

CT-172

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 12-11-03

BATCH NO.	BAGHOUSE DUST LBS.	~~CEMENT~~ Enviro Blend LBS.	WATER GALLONS	SOLIFIX LIQUID GALLONS	REMARKS
1	600	100	52		
2	600	100	52		
3	600	100	52		
4	600	100	52		
5	600	100	52		
6	600	100	52		
7	600	100	52		
8	600	100	52		
9	600	100	52		
10	600	100	52		
11	600	100	52		
12	600	100	52		
13	600	100	52		
14	600	100	52		
15	600	100	52		
16	600	100	52		
17	600	100	52		
18	600	100	52		

TEST BATCH NO. DATE:

TEST RESULTS: DATE:

OPERATOR

FOREMAN

MWPS004787

CT-172

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 12-12-03

BATCH NO.	BAGHOUSE DUST LBS.	CEMENT LBS.	WATER GALLONS	SOLIFIX LIQUID GALLONS	REMARKS
Raw Dust 12-12-03					

TEST BATCH NO. DATE:

TEST RESULTS: DATE:

OPERATOR

FOREMAN

MWPS004788

CT-172

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 12-13-03

BATCH NO.	BAGHOUSE DUST LBS.	~~CEMENT~~ LBS.	WATER GALLONS	SOLIFIX LIQUID GALLONS	REMARKS
1	600	100	52		
2	600	100	52		
3	600	100	52		
4	600	100	52		
5	600	100	52		
6	600	100	52		
7	600	100	52		
8	600	100	52		
9	600	100	52		
10	600	100	52		
11	600	100	52		
12	600	100	52		
13	600	100	52		
14	600	100	52		
15	600	100	52		
16	600	100	52		
17	600	100	52		

TEST BATCH NO. DATE:

TEST RESULTS: DATE:

OPERATOR

FOREMAN

MWPS004789

CT-172

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 12-15-03

BATCH NO.	BAGHOUSE DUST LBS.	CEMENT LBS.	WATER GALLONS	SOLIFIX LIQUID GALLONS	REMARKS
Raw Dust 12-15-03					

TEST BATCH NO. DATE:

TEST RESULTS: DATE:

OPERATOR

FOREMAN

MWPS004790

CT-172

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 12-16-03

Emma Bland

BATCH NO.	BAGHOUSE DUST LBS.	~~CEMENT~~ LBS.	WATER GALLONS	SOLIFIX LIQUID GALLONS	REMARKS
1	600	100	52		
2	600	100	52		
3	600	100	52		
4	600	100	52		
5	600	100	52		
6	600	100	52		
7	600	100	52		
8	600	100	52		
9	600	100	52		
10	600	100	52		
11	600	100	52		
12	600	100	52		
13	600	100	52		
14	600	100	52		
15	600	100	52		
16	600	100	52		
17	600	100	52		
18	600	100	52		
19	600	100	52		

TEST BATCH NO. DATE:

TEST RESULTS: DATE:

Virgil Oldham OPERATOR

FOREMAN

MWPS004791

CT-172

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 12-17-03

BATCH NO.	BAGHOUSE DUST LBS.	CEMENT LBS.	WATER GALLONS	SOLIFIX LIQUID GALLONS	REMARKS
Raw Dust 12-17-03					

TEST BATCH NO. DATE:

TEST RESULTS: DATE:

OPERATOR

FOREMAN

MWPS004792

CT-172

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 12-18-03

BATCH NO.	BAGHOUSE DUST LBS.	~~CEMENT~~ Enviroblend LBS.	WATER GALLONS	SOLIFIX LIQUID GALLONS	REMARKS
1	600	100	52		
2	600	100	52		
3	600	100	52		
4	600	100	52		
5	600	100	52		
6	600	100	52		
7	600	100	52		
8	600	100	52		
9	600	100	52		
10	600	100	52		
11	600	100	52		
12	600	100	52		
13	600	100	52		
14	600	100	52		
15	600	100	52		
16	600	100	52		
17	600	100	52		
18	600	100	52		

TEST BATCH NO. DATE:

TEST RESULTS: DATE:

OPERATOR

FOREMAN

MWPS004793

CT-172

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 12-15-03

BATCH NO.	BAGHOUSE DUST LBS.	CEMENT LBS.	WATER GALLONS	SOLIFIX LIQUID GALLONS	REMARKS
Raw Dust 12-19-03					

TEST BATCH NO. DATE:

TEST RESULTS: DATE:

OPERATOR

FOREMAN

MWPS004794

CT-172

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 12-20-03

BATCH NO.	BAGHOUSE DUST LBS.	~~CEMENT~~ Emulsified LBS.	WATER GALLONS	SOLIFIX LIQUID GALLONS	REMARKS
1	600	100	52		Shut Down
2	600	100	52		12-22-03 thru 12-29-03
3	600	100	52		
4	600	100	52		
5	600	100	52		
6	600	100	52		
7	600	100	52		
8	600	100	52		
9	600	100	52		
10	600	100	52		
11	600	100	52		
12	600	100	52		
13	600	100	52		
14	600	100	52		
15	600	100	52		
16	600	100	52		
17	600	100	52		
	Silo Emptied				

TEST BATCH NO. DATE:

TEST RESULTS: DATE:

OPERATOR

FOREMAN

MWPS004795

CT-172

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 12-29-0

BATCH NO.	BAGHOUSE DUST LBS.	CEMENT LBS.	WATER GALLONS	SOLIFIX LIQUID GALLONS	REMARKS
Raw Dust 12-		29-03			

TEST BATCH NO. DATE:

TEST RESULTS: DATE:

OPERATOR

FOREMAN

MWPS004796

CT-172

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 12-30-0

BATCH NO.	BAGHOUSE DUST LBS.	CEMENT LBS.	WATER GALLONS	SOLIFIX LIQUID GALLONS	REMARKS
1	600	100	52		
2	600	100	52		
3	600	100	52		
4	600	100	52		
5	600	100	52		
6	600	100	52		
7	600	100	52		
8	600	100	52		
9	600	100	52		
10	600	100	52		
11	600	100	52		
12	600	100	52		
13	600	100	52		
14	600	100	52		
15	600	100	52		
16	600	100	52		
17	600	100	52		

TEST BATCH NO. DATE:

TEST RESULTS: DATE:

OPERATOR

FOREMAN

MWPS004797

CT-172

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 12-31-03

BATCH NO.	BAGHOUSE DUST LBS.	CEMENT LBS.	WATER GALLONS	SOLIFIX LIQUID GALLONS	REMARKS
RAW Dust 12-31-03					

TEST BATCH NO. DATE:

TEST RESULTS: DATE:

OPERATOR

FOREMAN

MWPS004798

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 11-1-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAN DUST 11-1-05					
					11-2-05
					Silo Empty of Dust
					11-2-05

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 11-2-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	600	110	60		
11	600	110	60		
				Silo Empty of Dust	
					11-2-05

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 11-3-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 11-3-05					
Virgil Oldham					

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 11-4 05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAN DUST 11-4-05					

[signature]

MWPS004802

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 11-4-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 11-4-05					

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 11-7-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
Raw	Dust 11-7-05				

OPERATOR

MWPS004804

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 11-8-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	600	110	60		

OPERATOR

MWPS004805

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 11-9-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 11-9-05					

OPERATOR

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 11-10-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		

OPERATOR

MWPS004807

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 11-11-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
Raw Dust 11-11-05					

OPERATOR

MWPS004808

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 11-14-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		

OPERATOR

MWPS004809

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 11-15-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW	DUST 11-15-05				

OPERATOR

MWPS004810

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 11-16-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		

OPERATOR

MWPS004811

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 11-17-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAN DUST 11-17-05					

OPERATOR

MWPS004812

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 11-18-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	600	110	60		

OPERATOR

MWPS004813

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 11-21-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAN	DUST 11-21-05				

OPERATOR

MWPS004814

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 11-22-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		

OPERATOR

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 11-23-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 11-23-05					

U. Oldham OPERATOR

MWPS004816

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 11-28-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		

OPERATOR

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 11-29-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 11-29-05					

OPERATOR

MWPS004818

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 11-30-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		

OPERATOR

MWPS004819

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 1-6-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
RAN DUST; Dust and water in frozen water Heavy at Baghouse				

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

[signature] OPERATOR _____

_____ FOREMAN _____

MWPS004820

CT 172; Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 1-7-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	50	125	
2	804	50	125	
3	804	50	125	
4	804	40	125	
5	804	50	125	
6	804	50	125	
7	804	60	125	
8	804	60	125	
9	804	50	125	
10	804	50	125	
11	804	50	125	
12	804	50	125	

TEST BATCH NO. Silo Empty DATE:

TEST RESULTS: DATE:

OPERATOR

FOREMAN

MWPS004821

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 1-8-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
RAN Dust: Dust is Froze and will				
Not fall Some Hoppers have ice in them				
where the Dust is Frozen, ICE AND Water				
is all in the Dust.				

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

[signature] OPERATOR _____

_____ FOREMAN _____

MWPS004822

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 1-9-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	40	125	
2	804	40	125	
3	804	40	125	
4	804	40	125	
5	804	40	125	
6	804	40	125	
7	804	40	125	
8	804	40	125	
9	804	40	125	
10	804	40	125	
11	804	40	125	
12	804	40	125	

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

MWPS004823

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 1-10-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Ran Bag House Dust "It is Cold down Here"				
the Dust is Frozen Slow to run				

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

[signature] OPERATOR _____

_____ FOREMAN _____

MWPS004824

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 1-13-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Water Froze Dust is FROZE				
Temperture is below Freezing Everything is FROZEN				
Dust Running Very Slow				

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

[signature] OPERATOR _____

_____ FOREMAN _____

MWPS004825

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 1-14-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Water is FROZEN		Trying to Run the Dust		
Water & ice is in the Dust. Making it				
Slow Process to Run Dust to Silo.				

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

Cheryl Odom OPERATOR _____

_____ FOREMAN _____

MWPS004826

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 1-15-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Water is FROZE. RAN Dust its full of				
ice making it Slow to Run.				
Having lots of trouble over Here.				

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

[signature] OPERATOR _____

_____ FOREMAN _____

MWPS004827

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 1-16-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Running	Dust	Water	is	Frozen
and the	Dust also	water	and	ice
is all we	got.			

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

MWPS004828

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 1-17-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Running Dust i		Water FROZE		
Dust in FROZE also		Slow to get	Running.	

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

Virgil Oldham OPERATOR _____

_____ FOREMAN _____

MWPS004829

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 1-20-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
RAN Dust		Water FROZEN		1-20-03

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

Virgil Walker OPERATOR _____

_____ FOREMAN _____

MWPS004830

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 1-21-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Water FROZE	RAW Dust	it FROZE also		
water and ice in	Dust.			

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

Virgil Coleman OPERATOR _____

_____ FOREMAN _____

MWPS004831

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 1-22-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
RAN Dust: Dust FROZE Water FROZE				
trying to get the Dust To fall from				
Hoppers its FROZEN in the Hoppers				

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

[signature] OPERATOR _____

_____ FOREMAN _____

MWPS004832

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 1-23-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
RAW Dust		Water FROZE		

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

MWPS004833

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 1-24-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
RAW Bag House		Dust	Water	FROZE

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

Virgil Walker _____ OPERATOR _____

_____ FOREMAN _____

MWPS004834

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 1-27-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Bad Dust		Water FROZE		
DUST is full of Water and ice				
Dust is FROZE to Sides of Hoppers.				

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

Virgil Walker OPERATOR _____

_____ FOREMAN _____

MWPS004835

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 1-28-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Rotn Bag	House Dust			
Water	FROZE			

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

MWPS004836

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 1-29-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	50	125	
2	804	50	125	
3	804	50	125	
4	804	50	125	
5	804	50	125	
6	804	50	125	
7	804	50	125	
8	804	50	125	
9	804	50	125	
10	804	50	125	
11	804	50	125	
12	804	50	125	

TEST BATCH NO. Silo Empty DATE:

TEST RESULTS: DATE:

Cheryl Oldham OPERATOR

FOREMAN

MWPS004837

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 1-30-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
RAW Dust.				

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

MWPS004838

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 1-31-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	50	125	
2	804	50	125	
3	804	50	125	
4	804	50	125	
5	804	50	125	
6	804	50	125	
7	804	50	125	
8	804	50	125	
9	804	50	125	
10	804	50	125	
11	804	50	125	
12	804	50	125	

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

Virgil C. Walker OPERATOR _____

_____ FOREMAN _____

MWPS004839

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 10 - 3 - 05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAN	DUST 10-3-05				

OPERATOR

MWPS004840

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 10-4-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		

OPERATOR

MWPS004841

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 10-5-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW	DUST 10-5-05				

OPERATOR

MWPS004842

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 10-6-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	600	110	60		

OPERATOR

MWPS004843

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 10-7-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW	DUST 10-	7-05			

OPERATOR

MWPS004844

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 10-10-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	600	110	60		

OPERATOR

MWPS004845

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 10-11-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAN DUST 10-11-05					

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 10-12-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		

OPERATOR

MWPS004847

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 10-13-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAN DUST 10-13-05					

OPERATOR

MWPS004848

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 10-14-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	600	110	60		

OPERATOR

MWPS004849

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 10-17-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
Dust	10-17-	05			

[illegible signature]

MWPS004850

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 10-18-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		

OPERATOR

MWPS004851

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 10-19-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAN DUST 10-19-05					

Virgil Oldham

MWPS004852

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 10-20-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 10-21 05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 10-21-05					

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 10-24-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 10-25-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 10-25-05					

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 10-26-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	600	110	60		

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 10-27-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 10-27-05					

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 10-28-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9.	600	110	60		

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 10-31-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAN DUST 10-31-05					

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 2-3-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Raw Dust,	2-3-03	Dust	Wet	Water in
Bag House.				

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

Virgil Oldham OPERATOR _____

_____ FOREMAN _____

MWPS004861

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 2-4-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	50	125	
2	804	50	125	
3	804	50	125	
4	804	50	125	
5	804	50	125	
6	804	40	125	
7	804	50	125	
8	804	50	125	
9	804	40	125	
10	804	40	125	
11	804	50	125	
12	804	50	125	
13	804	50	125	
14	804	50		

TEST BATCH NO. Silo Empty DATE:

TEST RESULTS: DATE:

OPERATOR

FOREMAN

MWPS004862

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 2-5-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Raw Dust	Dust	Wet	Water in	Bag
House	Dust	Sticking	to	Side of Hopper.

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

Virgil Oldham OPERATOR _____

_____ FOREMAN _____

MWPS004863

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 2-6-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	50	125	
2	804	50	125	
3	804	50	125	
4	804	50	125	
5	804	50	125	
6	804	50	125	
7	804	50	125	
8	804	50	125	
9	804	50	125	
10	804	50	125	
11	804	50	125	
12	804	50	125	
13	804	50	125	
14	804	50	125	

TEST BATCH NO. Geo Gregory DATE:

TEST RESULTS: DATE:

OPERATOR

FOREMAN

MWPS004864

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 2-7-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Raw Dust		Water in	Baghouse	
Water	Heavy	at Bag	House.	

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

MWPS004865

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 2-10-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Ran Dust; 2-10-03 Water				
Still in Dust; Dust Wet.				

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

[signature] OPERATOR _____

_____ FOREMAN _____

MWPS004866

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 2-11-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Raw Dust;	Water at	Baghouse		
Dust	Wet	Moist	Dust Heavy	and
Slow to	Transport	to Silo		

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

MWPS004867

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 2-12-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	50	125	
2	804	50	125	
3	804	50	125	
4	804	50	125	
5	804	50	125	
6	804	50	125	
7	804	50	125	
8	804	50	125	
9	804	50	125	
10	804	50	125	
11	804	50	125	
12	804	50		
Dust will not fall from Silo its a slow process trying to get it out.				

TEST BATCH NO. Silo Empty DATE:

TEST RESULTS: DATE:

Virgil Oldham OPERATOR

FOREMAN

MWPS004868

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 2-13-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Raw Dust: Dust wet water in				
Baghouse Dust Sticking to Side of Hoppers				
and has to Be Hammer out Little at a time.				

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

Virgil [illegible] OPERATOR _____

_____ FOREMAN _____

MWPS004869

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 2-14-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	50	125	
2	804	50	125	
3	804	50	125	
4	804	50	125	
5	804	50	125	
6	804	50	125	
7	804	50	125	
8	804	50	125	
9	804	50	125	
10	804	50	125	
11	804	50	125	
12	804	50	125	

TEST BATCH NO. Sieo Empty DATE:

TEST RESULTS: DATE:

[signature] OPERATOR

FOREMAN

MWPS004870

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 2-18-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	50	125	
2	804	50	125	
3	804	50	125	
4	804	50	125	
5	804	50	125	
6	804	50	125	
7	804	50	125	
8	804	50	125	
9	804	50	125	
10	804	50	125	
11	804	50	125	
12	804	50	125	
13	804	50	125	
14	804	50	125	

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

[signature] OPERATOR _____

_____ FOREMAN _____

MWPS004871

CT 172. Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 2-19-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Raw Dust Dust wet water in				
Bag House it just a mess.				
Auger will not pull mud:				
			2-19-03	

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

Virgil Walker OPERATOR _____

_____ FOREMAN _____

MWPS004872

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 2-20-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	58	125	
2	804	58	125	
3	804	58	125	
4	804	58	125	
5	804	58	125	
6	804	58	125	
7	804	58	125	
8	804	58	125	
9	804	58	125	
10	804	58	125	
11	804	58	125	
12	804	58	125	
13	804	58	125	
14	804	58	125	

TEST BATCH NO. Eco Empty DATE:

TEST RESULTS: DATE:

Virgil Oldham OPERATOR

FOREMAN

MWPS004873

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 2-21-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
RAN Dust		Dust Wet.		

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

[signature] OPERATOR _____

_____ FOREMAN _____

MWPS004874

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 2-24-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	50	125	
2	804	50	125	
3	804	50	125	
4	804	50	125	
5	804	50	125	
6	804	50	125	
7	804	50	125	
8	804	50	125	
9	804	50	125	
10	804	50	125	
11	804	50	125	
12	804	50	125	

TEST BATCH NO. [illegible] DATE:

TEST RESULTS: DATE:

[illegible] OPERATOR

FOREMAN

MWPS004875

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 2-26-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	50	125	
2	804	50	125	
3	804	50	125	
4	804	50	125	
5	804	50	125	
6	804	50	125	
7	804	50	125	
8	804	50	125	
9	804	50	125	
10	804	50	125	
11	804	50	125	
12	804	50	125	
13	804	50	125	
14	804	50	125	

TEST BATCH NO. Two Empty DATE:

TEST RESULTS: DATE:

OPERATOR

FOREMAN

MWPS004876

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 2-27-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
RAN DUST	DUST	MOIST	HARD TO	fall
from Hoppers to		augers		

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

MWPS004877

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 2-28-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	50	125	
2	804	50	125	
3	804	50	125	
4	804	50	125	
5	804	50	125	
6	804	50	125	
7	804	50	125	
8	804	50	125	
9	804	50	125	
10	804	50	125	
11	804	50	125	
12	804	50	125	
13	804	50	125	
14	804	50	125	

TEST BATCH NO. [illegible] DATE:

TEST RESULTS: DATE:

[illegible] OPERATOR

FOREMAN

MWPS004878

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 9-1-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	600	110	60		
11	600	110	60		
12	600	110	60		
					9-30-05
					Silo Empty of Dust
					9-30-05

OPERATOR

MWPS004879

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 9-2-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
Raw	Dust	5-2-05			

Virgil Oldham OPERATOR

MWPS004880

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 9-6-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9.	600	110	60		
10.	600	110	60		

OPERATOR

MWPS004881

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 9-7-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 9-7-05					

OPERATOR

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 9-8-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	600	110	60		
11	600	110	60		
12	600	110	60		

OPERATOR

MWPS004883

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 9-9-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 9-9-05					

OPERATOR

MWPS004884

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 9-12-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	600	110	60		
11	600	110	60		
12	600	110	60		

OPERATOR

MWPS004885

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 9-13-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 9-13-05					

OPERATOR

MWPS004886

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 9-14-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	600	110	60		

OPERATOR

MWPS004887

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 9-15-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAN DUST 9-15-05					

OPERATOR

MWPS004888

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 9-16-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	600	110	60		

OPERATOR

MWPS004889

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 9-19-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 9-19-05					

OPERATOR

MWPS004890

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 9-20-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	600	110	60		

OPERATOR

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 9-21-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 9-21-05					

OPERATOR

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 9-22-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		

OPERATOR

MWPS004893

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 9-23-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
Bags Dust 9-23-05					

OPERATOR

MWPS004894

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 9-26-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		

OPERATOR

MWPS004895

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 9-27-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 9-27-05					

OPERATOR

MWPS004896

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 9-28-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		

OPERATOR

MWPS004897

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 9-29-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
Raw Dust 9-29-05					

OPERATOR

MWPS004898

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 9-30-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
					Silo Empty of Dust 9-30-05

OPERATOR

MWPS004899

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 3-3-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Raw Dust	3-3-03			

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

Virgil Oleham OPERATOR _____

_____ FOREMAN _____

MWPS004900

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 3-4-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Water Line Burst: No WATER AT MUD MACHINE Maintenance Notified				
RAW DUST.				

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

[illegible] OPERATOR _____

_____ FOREMAN _____

MWPS004901

CT 172; Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 3-5-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Water Lines	Still Down	Maintenance	Still working	on them
RAW Dust	3-5-	03		

TEST BATCH NO. DATE:

TEST RESULTS: DATE:

Virgil Oldham OPERATOR

FOREMAN

MWPS004902

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 3-6-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	60	125	
2	804	60	125	
3	804	60	125	
4	804	60	125	
5	804	60	125	
6	804	60	125	
7	804	60	125	
8	804	60	125	
9	804	60	125	
10	804	60	125	
11	804	60	125	
12	804	60	125	
13	804	60	125	
14	804	60	125	
	11,256	840	1750	

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

MWPS004903

CT 172; Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 3-7-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	60	125	
2	804	60	125	
3	804	60	125	
4	804	60	125	
5	804	60	125	
6	804	60	125	
7	804	60	125	
8	804	60	125	
9	804	60	125	
10	804	60	125	
11	804	60	125	
12	804	60	125	
13	804	60	125	
14	804	60	125	
	11,256	840	1750	

TEST BATCH NO. Two Empty DATE:

TEST RESULTS: DATE:

OPERATOR

FOREMAN

MWPS004904

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 3-10-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Raw Dust	Dust Dry	3-10-03		

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

[signature] OPERATOR _____

_____ FOREMAN _____

MWPS004905

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 3-11-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	60		
2	804	60		
3	804	60		
4	804	60		
5	804	60		
6	804	60		
7	804	60		
8	804	60		
9	804	60		
10	804	60		
11	804	60		
12	804	60		
13	804	60		
14	804	60		
	11,256	840	1250	

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

MWPS004906

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 3-12-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Raw Dust	Dust Dry: 3-12-03			

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

Virgil Oldham OPERATOR _____

_____ FOREMAN _____

MWPS004907

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 3-13-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	58	125	
2	804	58	125	
3	804	50	125	
4	804	58	125	
5	804	58	125	
6	804	58	125	
7	804	58	125	
8	804	58	125	
9	804	50	125	
10	804	58	125	
11	804	58	125	
12	804	50	125	
	10,080	600	1500	

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

MWPS004908

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 3-14-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Raw Dust; 3-14-03				

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

MWPS004909

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 3-15-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	60	125	
2	804	60	125	
3	804	60	125	
4	804	60	125	
5	804	60	125	
6	804	60	125	
7	804	60	125	
8	804	60	125	
9	804	60	125	
10	804	60	125	
11	804	60	125	
12	804	60	125	
13	804	60	125	
14	804	60	125	
15	804	60	125	
	12060	900	1875	

TEST BATCH NO. [illegible] DATE:

TEST RESULTS: DATE:

OPERATOR

FOREMAN

MWPS004910

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 3-17-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Raw Dust	Dust	Dry	3-17-03	

TEST BATCH NO. DATE:

TEST RESULTS: DATE:

OPERATOR

FOREMAN

MWPS004911

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 3-18-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Raw Dust	Dust Dry.		3-18-03	

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

[signature] OPERATOR _____

_____ FOREMAN _____

MWPS004912

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 3-19-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	60	125	
2	804	60	125	
3	804	60	125	
4	804	60	125	
5	804	60	125	
6	804	60	125	
7	804	60	125	
8	804	60	125	
9	804	60	125	
10	804	60	125	
11	804	60	125	
12	804	60	125	
13	804	60	125	
14	804	60	125	
15	804	60	125	
	12060	900	1875	

TEST BATCH NO. [illegible] DATE:

TEST RESULTS: DATE:

[illegible] OPERATOR

FOREMAN

MWPS004913

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 3-20-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Raw Dust 3-20-03				

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

3-20-03 _____ OPERATOR _____

_____ FOREMAN _____

MWPS004914

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 3-21-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	60	125	
2	804	60	125	
3	804	60	125	
4	804	60	125	
5	804	60	125	
6	804	60	125	
7	804	60	125	
8	804	60	125	
9	804	60	125	
10	804	60	125	
11	804	60	125	
12	804	60	125	
	10080	600	1500	

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

MWPS004915

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 3-22-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	60	125	
2	804	60	125	
3	804	60	125	
4	804	60	125	
5	804	60	125	
6	804	60	125	
7	804	60	125	
8	804	60	125	
9	804	60	125	
10	804	60	125	
11	804	60	125	
12	804	60	125	
13	804	60	125	
14	804	60	125	
15	804	60	125	
	12060	900	1875	

TEST BATCH NO. [illegible] DATE:

TEST RESULTS: DATE:

[illegible] OPERATOR

FOREMAN

MWPS004916

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 3-24-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Raw Dust	Dust Dry.	3-24-03		

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

Virgil Oldham OPERATOR _____

_____ FOREMAN _____

MWPS004917

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 3-25-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	60	125	
2	804	60	125	
3	804	60	125	
4	804	60	125	
5	804	60	125	
6	804	60	125	
7	804	60	125	
8	804	60	125	
9	804	60	125	
10	804	60	125	
11	804	60	125	
12	804	60	125	
13	804	60	125	
14	804	60	125	
	11256	840	1750	

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

MWPS004918

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 3-26-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
PAN Dust	Dust Dry	3-26-03		

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

Virgil Oldham OPERATOR _____

_____ FOREMAN _____

MWPS004919

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 3-27-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	60	125	
2	804	60	125	
3	804	60	125	
4	804	60	125	
5	804	60	125	
6	804	60	125	
7	804	60	125	
8	804	60	125	
9	804	60	125	
10	804	60	125	
11	804	60	125	
12	804	60	125	
13	804	60	125	
14	804	60	125	
15	804	60	125	
	12060	900	1875	

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

Craig D. Walker OPERATOR _____

_____ FOREMAN _____

MWPS004920

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 3-28-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Raw Dust	Dust	Dry 3-28-03		

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

Virgil Allen OPERATOR _____

_____ FOREMAN _____

MWPS004921

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 3-29-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	60	125	
2	804	60	125	
3	804	60	125	
4	804	60	125	
5	804	60	125	
6	804	60	125	
7	804	60	125	
8	804	60	125	
9	804	60	125	
10	804	60	125	
11	804	60	125	
12	804	60	125	
13	804	60	125	
14	804	60	125	
15	804	60	125	1st Sample
16	804	60	125	
17	804	60	125	
18.	804	60	125	
19.	804	60	125	
Silo Empty of Dust 3-29-03				
	15,276	1,140	2,375	

TEST BATCH NO. Not Empty DATE:

TEST RESULTS: DATE:

Virgil Oldham OPERATOR

FOREMAN

MWPS004922

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: Sunday 3-30-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Started To	Run mud	maintenance	and the Electric	Stope
Did not work	was no	air	pressure	and without
Air over	Here I Can	not Run.	Cleaned up	went
Home at	9:00 Am	worked 4 Hours,		

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

Charles Walker OPERATOR _____

_____ FOREMAN _____

MWPS004923

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 3-31-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
RAW Dust:	Dust is Dry.	3-31-03		

TEST BATCH NO. DATE:

TEST RESULTS: DATE:

OPERATOR

FOREMAN

MWPS004924

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 8-1-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAN	DUST 8-1-05				
					8-12-05
					Silo Empty of Dust

Virgil Oldham OPERATOR

MWPS004925

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 8-2-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	600	110	60		
11	600	110	60		
12	600	110	60		
13	600	110	60		
14	600	110	60		
15	600	110	60		

OPERATOR

MWPS004926

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 8-3-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
PAN	DUST 8-3-05				

OPERATOR

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 8-4-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	600	110	60		
11	600	110	60		
12	600	110	60		
13	600	110	60		
14	600	110	60		
15	600	110	60		

OPERATOR

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 8-5-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
PAN DUST 8-5-05					

OPERATOR

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 8-8-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 8-8-05					

OPERATOR

MWPS004930

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 8-9-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	600	110	60		
11	600	110	60		
12	600	110	60		

OPERATOR

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 8-10-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	600	110	60		
11	600	110	60		
12	600	110	60		

OPERATOR

MWPS004932

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 8-11-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	600	110	60		
11	600	110	60		
12	600	110	60		

OPERATOR

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 8-12-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
~~10~~					Silo Empty of
~~11~~					Dust.
					8-12-05

OPERATOR

MWPS004934

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 8-15-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAN DUST 8-15-05					

OPERATOR

MWPS004935

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 8-16-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	600	110	60		
11	600	110	60		
12	600	110	60		

OPERATOR

MWPS004936

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 8-17-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 8-17-05					

OPERATOR

MWPS004937

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 8-18-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	600	110	60		
11	600	110	60		
12	600	110	60		

OPERATOR

MWPS004938

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 8-19-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 8-19-05					

OPERATOR

MWPS004939

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 8-22-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	600	110	60		
11	600	110	60		
12	600	110	60		

OPERATOR

MWPS004940

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 8-23-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 8-23-05					

OPERATOR

MWPS004941

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 8-24-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	600	110	60		
11	600	110	60		
12	600	110	60		

OPERATOR

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 8-25-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 8-25-05					

OPERATOR

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 8-26-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	600	110	60		
11	600	110	60		
12	600	110	60		

OPERATOR

MWPS004944

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 8-29-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAN	DUST 8-29	-05			

OPERATOR

MWPS004945

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 8-30-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	110	60		
2	600	110	60		
3	600	110	60		
4	600	110	60		
5	600	110	60		
6	600	110	60		
7	600	110	60		
8	600	110	60		
9	600	110	60		
10	600	110	60		
11	600	110	60		
12	600	110	60		

OPERATOR

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 8-31-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
RAW DUST 8-31-05					

OPERATOR

MWPS004947

U.S PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

CUPOLA DUST TREATMENT

OPERATING REPORT

Date: 7-1-05

BATCH NO.	CUPOLA DUST LBS.	ENVIROBLEND LBS.	WATER GALLONS	SILO EMPTY? Y/N	REMARKS
1	600	120	60		
2	600	120	60		
3	600	120	60		
4	600	120	60		
5	600	120	60		
6	600	120	60		
7	600	120	60		
8	600	120	60		
TOTAL	8 LOADS				

OPERATOR

MWPS004948

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 4-1-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
RAW DUST				

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

Virgil Wilham OPERATOR _____

_____ FOREMAN _____

MWPS004949

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 4-2-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
RAW DUST:	Dust	Dry		

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

Virgil Walker _____ OPERATOR _____

_____ FOREMAN _____

MWPS004950

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 4-3-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	60	125	
2	804	60	125	
3	804	60	125	
4	804	60	125	
5	804	60	125	
6	804	60	125	
7	804	60	125	
8	804	60	125	
9	804	60	125	
10	804	60	125	
11	804	60	125	
12	804	60	125	
13	804	60	125	
14	804	60	125	
15	804	60	125	

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

MWPS004951

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 4-4-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
RAN DUST	HIGH PRESSURE WASHER DOWN.			

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

MWPS004952

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 4-5-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1.	804	60	125	
2.	804	60	125	
3.	804	60	125	
4.	804	60	125	
5.	804	60	125	
6.	804	60	125	
7.	804	60	125	
8.	804	60	125	
9.	804	60	125	
10.	804	60	125	Sample # 10
11	804	60	125	
12.	804	60	125	
13.	804	60	125	
14.	804	60	125	
15.	804	60	125	
16.	804	60	125	
17.	804	60	125	
18.	804	60	125	
19.	804	60	125	
20.	804	60	125	

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 4-7-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
RAN DUST				

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

[signature] OPERATOR _____

_____ FOREMAN _____

MWPS004954

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 4-8-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	60	125	
2	804	60	125	
3	804	60	125	
4	804	60	125	
5	804	60	125	
6	804	60	125	
7	804	60	125	
8	804	60	125	
9	804	60	125	
10	804	60	125	
11	804	60	125	
12	804	60	125	
13	804	60	125	
14	804	60	125	

TEST BATCH NO. DATE:

TEST RESULTS: DATE:

OPERATOR

FOREMAN

MWPS004955

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 4-9-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
VACATION DAY	No Work Done	Here		

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

Virgil Clark OPERATOR _____

_____ FOREMAN _____

MWPS004956

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 4-10-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Dust				

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

[signature] OPERATOR _____

_____ FOREMAN _____

MWPS004957

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 4-11-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	60	125	
2	804	60	125	
3	804	60	125	
4	804	60	125	
5	804	60	125	
6	804	60	125	
7	804	60	125	
8	804	60	125	
9	804	60	125	
10	804	60	125	
11	804	60	125	
12	804	60	125	
13	804	60	125	
14	804	60	125	
15	804	60	125	
16	804	60	125	

TEST BATCH NO. [illegible] DATE:

TEST RESULTS: DATE:

[illegible] OPERATOR

FOREMAN

MWPS004958

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 4-12-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
RAW Dust.				

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

MWPS004959

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 4-14-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	60	125	
2	804	60	125	
3	804	60	125	
4	804	60	125	
5	804	60	125	
6	804	60	125	
7	804	60	125	
8	804	60	125	
9	804	60	125	
10	804	60	125	
11	804	60	125	
12	804	60	125	
13	804	60	125	
14	804	60	125	
15	804	60	125	
16	804	60	125	
17	804	60	125	

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 4-15-83

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
RAW Dust.				

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

MWPS004961

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 4-16-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	60	125	
2	804	60	125	
3	804	60	125	
4	804	60	125	
5	804	60	125	
6	804	60	125	
7	804	60	125	
8	804	60	125	Sample
9	804	60	125	
10	804	60	125	
11	804	60	125	
12	804	60	125	
13	804	60	125	
14	804	60	125	Sample

TEST BATCH NO. [illegible] DATE:

TEST RESULTS: DATE:

[illegible] OPERATOR

FOREMAN

MWPS004962

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 4-17-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Bar Dust				

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

MWPS004963

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 4-21-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	60	125	
2	804	60	125	
3	804	60	125	
4	804	60	125	
5	804	60	125	
6	804	60	125	
7	804	60	125	
8	804	60	125	
9	804	60	125	
10	804	60	125	
11	804	60	125	
12	804	60	125	
13	804	60	125	
14	804	60	125	

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

MWPS004964

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 4-22-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
RAN DUST				

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

[illegible] OPERATOR _____

_____ FOREMAN _____

MWPS004965

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 4-23-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	60	125	
2	804	60	125	
3	804	60	125	
4	804	60	125	
5	804	60	125	
6	804	60	125	
7	804	60	125	
8	804	60	125	
9	804	60	125	
10	804	60	125	
11	804	60	125	
12	804	60	125	
13	804	60	125	
14	804	60	125	
15	804	60	125	

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

MWPS004966

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 4-24-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
RAW DUST				

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

MWPS004967

CT 172; Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 4-25-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	60	125	
2	804	60	125	
3	804	60	125	
4	804	60	125	
5	804	60	125	
6	804	60	125	
7	804	60	125	
8	804	60	125	
9	804	60	125	
10	804	60	125	
11	804	60	125	
12	804	60	125	
13	804	60	125	
14	804	60	125	

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

Cheryl D Calhoun OPERATOR _____

_____ FOREMAN _____

MWPS004968

CT 172; Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 4-26-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
Ran Dust				

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

[signature] OPERATOR _____

_____ FOREMAN _____

MWPS004969

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 4-28-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
1	804	60	12.5	
2	804	60	12.5	
3	804	60	12.5	
4	804	60	12.5	
5	804	60	12.5	
6	804	60	12.5	
7	804	60	12.5	
8	804	60	12.5	
9	804	60	12.5	
10	804	60	12.5	
11	804	60	12.5	
12	804	60	12.5	
13	804	60	12.5	
14	804	60	12.5	

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

MWPS004970

CT 172, Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 4-29-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
VACATION DAY		NO WORK	DONE	HERE

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

[illegible] OPERATOR _____

FOREMAN _____

MWPS004971

CT 172; Rev. 1/02

U.S. PIPE & FOUNDRY CO.

CHATTANOOGA VALVE & FITTINGS PLANT

BAGHOUSE DUST TREATMENT

OPERATING REPORT

DATE: 4-30-03

BATCH NO.	BAGHOUSE DUST LBS.	WATER GALLONS	ENVIROBLEND LBS.	REMARKS
RAW DUST.				

TEST BATCH NO. _____ DATE: _____

TEST RESULTS: _____ DATE: _____

_____ OPERATOR _____

_____ FOREMAN _____

MWPS004972