March 7, 1999

MEMORANDUM

SUBJECT: Potential to Emit (PTE) Transition Policy for Part 71 Implementation in Indian Country

FROM: John S. Seitz, Director /s/
Office of Air Quality Planning and Standards (MD-10)

Eric V. Schaeffer, Director /s/
Office of Regulatory Enforcement (2241A)

TO: See Addressees

What is the purpose of this memorandum?

This memorandum discusses EPA's transition policy concerning potential to emit (PTE) limits for stationary air pollution sources located in Indian country.[1] Under this policy, EPA would treat a source as nonmajor for the purposes of the Federal Operating Permits Program (part 71) if its actual emissions are and remain below 50 percent of the PTE thresholds for major source status, for every consecutive 12-month period (beginning with the 12 months immediately preceding the date of this memorandum) and it maintains adequate records to demonstrate that its actual emissions are kept below these levels.

What is meant by "Indian country"?

Indian country, as defined in 40 CFR 71.2, means: (1) all land within the limits of any Indian reservation under the jurisdiction of the United States government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation; (2) all dependent Indian communities

[1]For purposes of administering the part 71 program, EPA treats areas for which EPA believes the Indian country status is in question as Indian country [40 CFR 71.4(b)].

within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a State; and (3) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same. This definition parallels the definition of Indian country contained in 18 U.S.C. section 1151 and has been applied extensively by the federal courts.

Why is EPA issuing this policy?

On July 1, 1996, EPA published final regulations, codified in 40 CFR part 71, for the Federal title V operating permits program (61 FR 34202). Subsequently, on February 19, 1999, EPA promulgated regulations setting forth EPA's approach for issuing Federal operating permits to stationary sources in Indian country (64 FR 8247). These regulations will trigger the requirement for sources in Indian country that are subject to part 71 to submit permit applications within one year, or sooner in some cases.

Sources located in areas covered by EPA-approved part 70 programs can often avoid major source permitting under title V of the Clean Air Act (CAA) by obtaining enforceable "synthetic minor" limitations on their operations.[2] However, unlike mechanisms available for many such sources, a Federal mechanism is not currently in place to create practicably enforceable synthetic minor limits for sources in Indian country. As stated in the recent final part 71 rule, EPA's view is that State or local permits that may have been issued to sources in Indian country (and limitations in such permits) are not effective in limiting the PTE of sources for purposes of avoiding the part 71 program, or for any purpose under the CAA, unless EPA has explicitly approved the State or local permitting program as applying in Indian country. As a result, some sources located in Indian country are not yet able to obtain enforceable limits to avoid being major sources under the part 71 program, even though their actual emissions may be well below the relevant major source thresholds. The EPA believes that the lack of a mechanism

[2]The term "synthetic minor" refers to air pollution sources whose maximum capacity to emit air pollution under their physical and operational design is large enough to exceed the major source threshold but are limited by an enforceable emissions restriction that prevents this physical potential from being realized. Through such synthetic minor permits, sources avoid triggering major source requirements.

to create enforceable synthetic minor limits is a disadvantage for Indian country sources who might want to obtain limits on their operations to avoid major source status under title V.

The EPA expects the minor preconstruction permit program for Indian country now being developed and other activities currently underway to provide mechanisms to limit emissions of Indian country sources in the future. However, there will be a gap between the part 71 program permit application requirement and the development of those broadly available Federal mechanisms. Because of this gap, EPA intends to implement today's policy to facilitate smooth implementation of the program, and to ensure that early implementation of the program can focus attention on creating high-quality permits for higher-emitting part 71 sources.

Who may take advantage of this policy?

Air pollution sources may take advantage of this policy if they are located in Indian country, would be covered by the part 71 program, and their potential emissions equal or exceed a major source threshold, but their actual emissions are at or below 50 percent of the threshold. The decision to utilize this policy is purely voluntary and at the discretion of the source. All sources are free to apply for a part 71 permit.

Why would sources want to take advantage of this policy?

Title V requires operating permits for major sources as well as other types of sources, as described in part 71 (see section 71.3). If a source takes advantage of this policy for all regulated air pollutants for which the source would be a major source, EPA would treat it as a nonmajor source for purposes of title V. If the source is not otherwise subject to title V, EPA would not require it to apply for a permit or to pay part 71 permit fees.

Are there any exceptions to this PTE policy?

Major sources for the purposes of title V include any stationary sources that are major sources as defined in section 112, section 302, or part D of title I of the CAA. Consistent with EPA's once-in-always-in policy for maximum achievable control technology (MACT) standards, this policy would not apply to any source that is already required to obtain a title V permit due to being subject to a MACT standard.

Likewise, this policy would not be relevant for Indian country sources with actual emissions above 50 percent of a major source threshold, but still below the major source threshold. For those sources, the only practicably enforceable mechanism currently available to limit PTE would be a limit developed by a Tribe or State with Clean Air Act programs that EPA had explicitly approved as applying in the sources' areas of Indian country.

Additionally, if a source is subject to title V for a reason other than its PTE (see 40 CFR part 71, section 71.3), then it remains subject to title V regardless of this policy. For example, if the source currently has a prevention of significant deterioration (PSD) permit under part C of title I of the CAA, then it is required to get a title V permit.

What do sources need to do to qualify under this policy?

Sources would need to do three things. First, they would need to send a letter to the appropriate EPA Regional Office indicating their intent to take advantage of this policy prior to the deadline for submittal of their part 71 permit application. The EPA believes it is appropriate to ask sources to take this step, even though EPA's transition policy for part 70 programs does not discuss it, because EPA is less familiar with source populations in specific areas than are state, local and tribal governments. This notification action will assist EPA in identifying sources and makes it clear to the Agency which sources are intending to take advantage of this policy. Second, sources would need to maintain their actual emissions, for every consecutive 12-month period (beginning with the 12 months immediately preceding the date of this memorandum), at levels that never exceed 50 percent of any of the major stationary source thresholds applicable to that source. Third, sources would need to keep records on site to demonstrate that emissions are below these thresholds for the entire transition period. A source having a PTE which is at or above the major source threshold, and which has actual emissions above the 50 percent threshold without complying with major source requirements of the CAA (or without otherwise limiting its potential to emit), could be subject to enforcement.

How long will this policy be in place?

The EPA would implement this policy from the date of this memorandum until either EPA adopts and implements a mechanism that a source can use to limit its PTE, or EPA explicitly approves a tribe's or state's program providing such a mechanism

for the relevant area of Indian country. Where the mechanism is the Federal preconstruction permit program referred to above, this policy would extend to a date to be specified in the rule that establishes the preconstruction program.

What is the connection between the Tribal Authority Rule (TAR) *and this policy?*

The Tribal Authority Rule (TAR), officially titled "Indian Tribes: Air Quality Planning and Management; Final Rule," was published on February 12, 1998 in the Federal Register. The TAR authorizes EPA to treat eligible tribes in the same manner as States for some purposes under the CAA and to approve tribal air quality programs meeting the applicable minimum requirements of the CAA. The EPA expects that many Tribes will develop and seek approval of CAA programs, including programs that may provide a practicably enforceable mechanism for limiting sources' PTE. Such a mechanism could be used to limit PTE for sources of any size. Note that if Tribes obtain EPA approval of their own part 70 programs, they will be free to require title V permits of all major sources (and minor sources, if they choose to do so) notwithstanding this policy.

Who should read this memorandum, and who are the contacts for more information?

We are asking Regional Offices to send this memorandum to States and Indian tribes within their Regions. Questions concerning specific issues and cases should be directed to the appropriate Regional Office. The Regional Office staff may contact Scott Voorhees of the Operating Permits Group (919-541-5348), Lynn Hutchinson of the Integrated Implementation Group(919-541-5795), John Walke (202-260-9856) or Mike Thrift (202-260-7709) of the Office of General Counsel, or Carol Holmes of the Office of Regulatory Enforcement (202-564-8907). The document is also available on the Internet, at http://www.epa.gov/ttn/oarpg under "Actions Sorted by CAA Title, Operating Permits & New Source Review (Title V), Memoranda, Policy & Guidance Memos."

The policies set forth in this memorandum are intended solely as guidance, do not represent final Agency action, and cannot be relied upon to create any rights enforceable by any party.

Addressees:
Director, Office of Ecosystem Protection, Region I
Director, Division of Environmental Planning and Protection, Region II
Director, Air Protection Division, Region III
Director, Air, Pesticides, and Toxics Management Division, Region IV
Director, Air and Radiation Division, Region V
Director, Multimedia Planning and Permitting Division, Region VI
Director, Air, RCRA, and Toxics Division, Region VII
Assistant Regional Administrator, Office of Partnership and Regulatory Assistance, Region VIII
Director, Air Division, Region IX
Director, Office of Air, Region X
Regional Counsels, Regions I-X
Director, Office of Environmental Stewardship, Region I
Director, Division of Enforcement and Compliance Assurance, Region II
Director, Enforcement Coordination Office, Region III
Director, Compliance Assurance and Enforcement Division, Region VI
Director, Enforcement Coordination Office, Region VII
Assistant Regional Administrator, Office of Enforcement, Compliance and Environmental Justice, Region VIII
Enforcement Coordinator, Office of Regional Enforcement Coordination, Region IX

cc: C. Holmes, OECA
J. Ketcham-Colwill, OPAR
J. Walke, OGC
T. Smith, OAQPS
J. Havard OGC
M. Thrift, OGC
S. Voorhees, OAQPS
S. Hitte, OAQPS
C. Carraway, OAQPS
J. Swanson, OAQPS
A. Hanson, OW
D. Laroche, OAR
Regional Tribal Air Coordinators, Regions I-II, IV-X

United States Department of the Interior

BUREAU OF INDIAN AFFAIRS

Great Plains Regional Office
115 Fourth Avenue S.E.
Aberdeen, South Dakota 57401

IN REPLY REFER TO:

Land Titles and Records Office
MC-306A

MAY 10 2000

Bernard Gross
Thurston Manufacturing Company
Highway 87A
Thurston, Nebraska 68062-0128

Dear Mr. Gross:

This is in response to your letter of May 4, 2000, concerning the location of your business. Our Land Titles and Records office (LTRO) staff is enclosing a certification statement prepared by the LTRO Manager.

If you have any questions, please refer them to Jim Geffre, Supervisory Legal Instruments Examiner, at (605)226-7393.

Sincerely,

Alice A. Harwood
for

Cora L. Jones
Regional Director

Enclosure

Angela Catalano
05/03/2001 12:34 PM
To: Ward Burns/ARTD/R7/USEPA/US@EPA
cc:
Subject: Facilities on Indian Territory

Ward,

I received a call today from Buck Gross. He owns two facilities in Nebraska. Both are on Indian Territory. One is on the Omaha the other on the Winnebago reservations. He currently has Class II SM permits from NDEQ. At renewal, he was told that NDEQ no longer has jurisdiction to permit the facilities. I don't know if you looked into these as Title V facilities. Can you call him back and tell him what he needs to do, if anything. The facilities are:

1. Thurston Mfg. Company, Highway 87A, Thurston, NE 31-173-00016
2. Circle R Trailers, 102 Slade Ave, Walthill, Ne 31-173-00005.

He has sent in a Form Ras a new facility. He has also talked to Mary Mindrup regarding water permits he may need from EPA

Hi phone number is 1800-658-3127.

Let me know what happens to these facilities. know we don't issue low emitter permits, so how does EPA regulate these facilities.

Angela Catalano
Environmental Scientist
Air, RCRA, & Toxics Division
Air Permitting and Compliance Branch
913-551-7411
Catalano.Angela@epa.gov

Thurston Manufacturing Company

BLU-JET

Patented CIRCLE R SIDE DUMP

(800) 658-3127 (800) 633-1648

May 11, 2001

REC'D

MAY 15 2001

APCO

EPA Region VII
Attn: Mr. Ward Burns
ARTD/APCO
901 N. 5th Street
Kansas City, KS 66101

Subject: Part 71 Program Permit

During the past few months the EPA has found that the Nebraska Department of Environmental Quality does not have the charter to write permits for this facility since it resides within the borders of the Winnebago Reservation lands. Therefore Thurston Manufacturing's request to have its Class II, synthetic minor permit renewed was denied. Therefore this is a formal request to operate under the EPA's March 9, 1999 letter subject: Potential to Emit (PTE) Transition Policy for Part 71 in Indian Country. The following is Thurston's legal address:

Thurston Manufacturing Company
68062THRSTHWY87
Highway 87A
Thurston, NE 68062-0218

Technical contact: Bernard K. "Buck" Gross
Telephone: 402 385 3041
Facsimile: 402 385 3043
E-mail: bgross@thurstonmfgco.com

The Company Environmental Engineer has done and will continue to do monthly reports on emissions as have been done in the past and they will be available for review upon request. Attached are the 2000 emissions inventory and a chart showing the progress made by this company in the area of emissions since 1996.

Sincerely,

Layton W. Jensen
President

Attch:
BIA Designation
Historical Charts
2000 Emissions Data

CERTIFICATION STATEMENT

As custodian of the Land Titles & Records of the Bureau of Indian Affairs, Aberdeen, South Dakota, I hereby certify that the parcel described as: "NW1/4NW1/4 of Section 2, Township 25 North, Range 6 East, Thurston County, Nebraska" is located within the boundaries of the Winnebago Reservation.

Jim E. Geffre
Land Titles & Records Office Manager

5/5/00
Date

COMPARISON OF VOLATILE ORGANIC COMPOUND								
		POLLUTANTS						
	1995	1996	1997	1998	1999	2000	2001	2002
POUNDS								
	56,859							
			PERMITTED CEILING					
49999								
		46,332						
40000								
			35220					
				31064				
30000								
						27303		
20000								
					17022			
10000								
							8485	
0								

COMPARISON OF HAZARDOUS AIR POLLUTANTS

POUNDS	1995	1996	1997	1998	1999	2000	2001	2002
	23,731							
			PERMITTED CEILING					
19999								
19000								
		18,411						
18000								
17000								
16000								
15000								
14000								
13000								
12000								
			11,804					
11000				11,136				
10000								
						9,642		
9000								
8000								
7000								
6000								
					5,495			
5000								
4000								
							3559.6	
3000								
2000								
1000								
0								

	2000 VOC REPORT FOR THURSTON MANUFACTURING COMPANY						
NAME	**Pounds purchased this product**	**Pounds VOC's purchased**	**xylenes**	**ethyl benzene**	**triethanol-amine**	**1-methoxy 2-propanol**	**propylene glycol monoethyl ether a**
CAS #			**1330 20 7**	**100 41 4**	**102 71 6**	**107 98 2**	**108 65 6**
SARA 313			**yes**	**yes**			
Dark Gray "wow" Primer	5555	2444.3	1055.5				
Sadosolid Hardner	461.4	233.6	2.3	16.7		3.6	
New Cat Yellow Acrylic 5093	174	95.6	62.6				5.2
Sadosol Red MS-3	286.3	67.7	2.4	0.5	0.1		1
Barsol A-3569	1326.1	1326.1					
Red Oxide	1961	862.9	686.4				
Lt. Gray	1105	630	519.4				
Dark Blue Acrylic	16835	9091	4040.4				673.4
Buff Epoxyester Primer (gray)							
Semi Gloss Black	12035	7822.9	3129.1				
D-100	2875	2875	28.7				
VLX 12533-O Lite Gray Acrylic Enamel	126.6	71.4	46.1				
PL-5533 Hi Holdout Red Primer	140.7	71.8	43.6				
DV990-100 Minion Acrylic Reducer	67.4	60.9	20.4				8.1
Total		25653.2	9636.9	17.2	0.1	3.6	687.7
			*	*			
#'s Barsol A-3569							
used in cold solvent wash		1326.1					
Total emissions		24327.1					
Total reportable HAP's = 9678.5							
Welding Wire Used							
PM							
PM-10							

		2000 VOC REPORT FOR THURSTON MANUFACTURING COMPANY						
NAME	**n-butyl alcohol**	**isobutyl isobutyrate**	**isopropyl alcohol**	**n-butyl acetate**	**M E K**	**methyl amyl kethone**	**glycol ether EB**	**aromatic hydrocarbon**
CAS #	**71 36 3**	**97 85 8**	**67 63 0**	**123 86 4**	**78 93 3**	**110 43 0**	**111 76 2**	**64742 95 6**
SARA 313	**yes**		**yes**		**yes**			
Dark Gray "wow" Primer								
Sadosolid Hardner	5.4		10.9	59.2		109.1	1.6	
New Cat Yellow Acrylic 5093								13.9
Sadosol Red MS-3		10.4		48.6				0.1
Barsol A-3569								
Red Oxide								39.2
Lt. Gray								33.2
Dark Blue Acrylic						505.1		673.4
Buff Epoxyester Primer								
Semi Gloss Black								601.8
D-100								1667.6
VLX 12533-0 Lite Gray Acrylic Enamel								19
PL 5533 Hi Holdout Red Primer								14.1
DV990-100 Minion Acrylic Reducer								
Total	5.4	10.4	10.9	107.8		614.2	1.6	3062.3
	*		*		*			

	2000 VOC REPORT FOR THURSTON MANUFACTURING COMPANY						
NAME	**solvent naphtha light aliphatic**	**VM & P naphtha**	**methoxypropyl-1 acetate 2**	**mineral sprits**	**methyl acetate**	**methyl isobutyl ketone**	**isobutanol**
CAS #	**64742 89 8**	**64742 48 9**	**70657 70 4**	**8052 41 3**	**79 20 9**	**108 10 1**	**78 83 1**
SARA 313							
Dark Gray "wow" Primer		999.9					277.8
Sadosolid Hardner	24.3					0.5	
New Cat Yellow Acrylic 5093		13.9					
Sadosol Red MS-3							
Barsol A-3569							
Red Oxide		137.3					
Lt. Gray		77.4					
Dark Blue Acrylic		2188.6					1010.1
Buff Epoxyester Primer							
Semi Gloss Black		3249.5					842.5
D-100							
VLX 12533-0 Lite Gray Acrylic Enamel	6.3						
PL 5533 Hi Holdout Red Primer	14.1						
DV990-100 Minion Acrylic Reducer							
Total	44.7	6666.6				0.5	2130.4

	2000 VOC REPORT FOR THURSTON MANUFACTURING COMPANY							
NAME	**1,2,4-trimethyl benzene**	**acetone**	**med. Alphatic solvent naphtha**	**cumene**	**methyl propyl ketone**	**2 phenoxy-ethanol**	**propyl acetate**	**toluene**
CAS #	**95 63 6**	**67 64 1**	**64742 88 7**	**98 82 8**	**107 82 9**	**122 99 6**	**109 60 4**	**108 88 3**
SARA 313								**yes**
Dark Gray "wow" Primer					111.1			
Sadosolid Hardner								
New Cat Yellow Acrylic								
Sadosol Red MS-3						0.2	4.4	
Barsol A-3569		132.6	1193.5					
Red Oxide								
Lt. Gray								
Dark Blue Acrylic								
Buff Epoxyester Primer								
Semi Gloss Black								
D-100	1150			28.7				
VLX 12533-0 Lite Gray Acrylic Enamel								
PL 5533 Hi Holdout Red Primer								
DV990-100 Minion Acrylic Reducer		8.1						8.1
Total	1150	140.7	1193.5	28.7	111.1	0.2	4.4	8.1
								*

NAME	Mineral spirits	Ethylene Glycol Butyl Ether Acetate
CAS #	64741 41 9	112 07 2
SARA 313		
Dark Gray "wow" Primer		
Sadosolid Hardner		
New Cat Yellow Acrylic		
Sadosol Red MS-3		
Barsol A-3569		
Red Oxide		
Lt. Gray		
Dark Blue Acrylic		
Buff Epoxyester Primer		
Semi Gloss Black		
D-100		
VLX 12533-0 Lite Gray Acrylic Enamel		
PL 5533 Hi Holdout Red Primer		
DV990-100 Minion Acrylic Reducer	8.1	8.1
Total	8.1	8.1

Press Release

FOR IMMEDIATE RELEASE

Contact:
Nick Jensen
Chief Marketing Officer
Thurston Manufacturing Company
800.658.3127
402.385.3043 (fax)
njensen@thurstonmfgco.com
www.thurstonmfgco.com

Thurston Manufacturing Company
JOB FAIR
Saturday, October 8, 2011
10:00 am - 2:00 pm
Complete an application, learn more about the company, tour our facility. Lunch after the application process.
1708 H Ave. Thurston, NE

Thurston Mfg. Grows Workforce By 18% in 2011: Still Looking For More

Thurston, NE
September 16th, 2011

As much of the nation's economy continues to struggle with issues of low consumer demand and high unemployment, the agricultural sector has been soaring. This growth extends past farming operations to the dealers and manufacturer's that provide farmers with agricultural equipment. As the manufacturer of Circle R Side Dump Trailers and BLU-JET fertilizer and tillage products, Thurston Manufacturing has seen tremendous growth within the last 24 months and sees the opportunity for more. Over the past year Thurston Manufacturing Company has hired 14 additional people to help meet new product demand and serve existing customers; they have 22 additional new positions open they are looking to fill immediately.

"We have been asking a lot from our current workforce this past year in terms of additional overtime hours and improving production efficiencies; and they have stepped up to the challenge", said Ryan Jensen. "We have a great group of people here that work very hard day in and day out to meet our production goals."

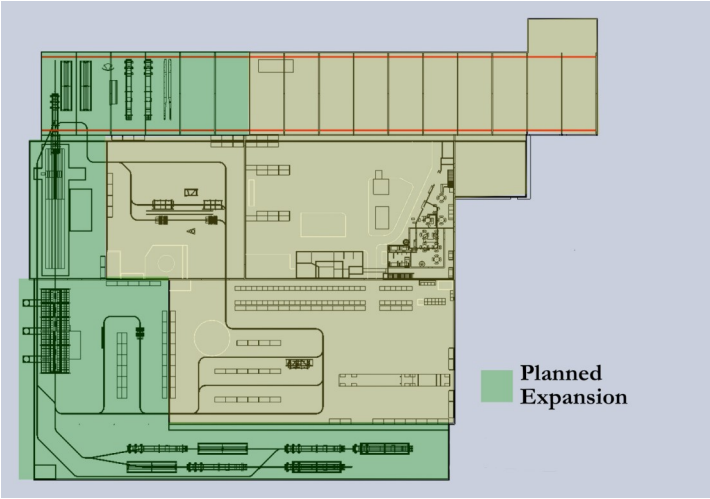
As Thurston Manufacturing's Chief Operations Officer, one of Jensen's responsibilities is to try and keep production on pace with swelling demand. He's been meeting the challenge thus far by offering overtime and additional incentives to current employees, while continuing to hire qualified candidates that apply for work.

—MORE—

Although these measures have worked to satisfy demand so far, Jensen recognizes that they are temporary solutions to a more permanent challenge. "We realized that the high level of demand we are experiencing is likely to continue, and the pace and hours our team has been working simply isn't sustainable for an extended period of time", he observed. "We have been over extending both our employees and our facilities; and the market has presented us with an opportunity to take a step forward and grow as a company in both of these areas."

Nick Jensen, Chief Marketing Officer at Thurston Manufacturing, concurs with his brother's assessment of the marketplace. "It's no secret that the agricultural sector of our nation's economy is currently one of its brightest beacons", he said. "We're seeing heightened demand for BLU-JET equipment from our traditional markets in the U.S. corn belt, as well as newer markets in North America, Europe, Asia, and Africa". Activity is also increasing in the Circle R Side Dump product line, as dealers have cleared out all existing inventory and are looking for more."

On top of filling the 22 new full time positions now available within the production facility, plans are in place to invest three to five million dollars towards a 50% increase in facilities and equipment over the next 5 years using various funding sources. The timing and total amount invested will depend on the continued stability of the agricultural economy, and the continued recovery of the construction industry. The company is working to ensure that demand for its products stays strong by aggressively pursuing the expansion of its overseas markets.



"Over the last few years, our primary domestic markets have dominated our production capacities, with export sales running a mere 6% of total sales", said Jensen "With the expansion efforts we are now making, export sales could increase to 20% in the next two to three years; while simultaneously increasing our abilities to meet higher primary and secondary domestic market demands."

The completed expansion will extend all three current buildings southward and add a new building to the east side of the facility. Cleaning, painting and assembly areas are the focus of filling the new footprint. Automation and robotics will also play a major role in the expansion process. This will increase the current square footage under roof by 50%. Concrete work for

—MORE—

the plant expansion project started September 19th. The new building should be completed by mid-summer 2012, and be fully operational at this time next year.

Based in Thurston, NE, Thurston Manufacturing is celebrating 40 years of designing, producing and marketing manufactured durable goods. It currently manufactures two prominent brands: BLU-JET Fertilizer and Tillage Products for agriculture, and Circle R Side Dump Semi-Trailers for the construction, mining, demolition, refuse and agricultural industries. For more information regarding positions currently available at Thurston Manufacturing Company, call 800.658.3127 or visit the facility located at 1708 H Ave., Thurston, NE.

—END—

Re: Thurston Manufacturing CAA Permit Application

Robert Webber to: dstone 01/31/2012 03:11 PM

Cc: Glenn Curtis, Jon Knodel, MarkA Smith, PatriciaA Scott, Wolfgang Brandner, Angela Catalano, Ward Burns

From: Robert Webber/R7/USEPA/US
To: dstone@ziaeec.com
Cc: Glenn Curtis/R7/USEPA/US@EPA, Jon Knodel/R7/USEPA/US@EPA, MarkA Smith/R7/USEPA/US@EPA, PatriciaA Scott/R7/USEPA/US@EPA, Wolfgang Brandner/R7/USEPA/US@EPA, Angela Catalano/R7/USEPA/US@EPA, Ward

Mr. Stone,

As requested during our phone conversation today, I am providing you with links to websites that may assist you with understanding the Tribal Minor NSR Rule and the EPA Region 7 Air Program:

EPA's Tribal Minor NSR website: http://www.epa.gov/air/tribal/tribalnsr.html

Region 7 Air Program website: http://www.epa.gov/region07/air/nsr/nsr.htm

Please note that the Tribal Minor NSR Rule terminates the Potential to Emit (PTE) transition policy that may have applied to sources like Thurston Manufacturing with actual emissions remaining below 50 percent of the relevant major source PTE threshold.

As explained on the Tribal NSR website link above, a source intending to apply for a synthetic minor permit under the Tribal Minor NSR rule should fill out the New Source General Application and Synthetic Minor Limit Application. Completed forms need to be submitted to my office as the Reviewing Authority for sources located in Indian country within Region 7. The deadline for submission is September 4, 2012.

Please let me know if you need further assistance.

Thank you,

Bob Webber
Air Permitting & Compliance Branch
Air and Waste Management Division
U.S. Environmental Protection Agency, Region VII
901 North 5th Street
Kansas City, KS 66208
Phone: 913-551-7251
webber.robert@epa.gov

Angela Catalano | Mr. Don Stone, Thank you for the call today requ... | 01/31/2012 01:12:27 PM

From: Angela Catalano/R7/USEPA/US
To: dstone@ziaeec.com
Cc: Robert Webber/R7/USEPA/US@EPA, PatriciaA Scott/R7/USEPA/US@EPA, Wolfgang Brandner/R7/USEPA/US@EPA, Glenn Curtis/R7/USEPA/US@EPA, MarkA Smith/R7/USEPA/US@EPA, Jon Knodel/R7/USEPA/US@EPA
Date: 01/31/2012 01:12 PM
Subject: Thurston Manufacturing CAA Permit Application

Mr. Don Stone,

Thank you for the call today requesting contact information for Clean Air Act permitting in Nebraska. The facility you are working with is located on tribal lands. Therefore EPA, Region 7 is the permitting authority for:

Thurston Manufacturing

1708 H Ave.
Thurston, NE
Air ID: 31-173-00016

Since this facility is on Indian Territory, the tribal permit contact for Region 7 is Robert Webber. He can be reached at 913-551-7960. Patricia Scott is the Nebraska permit coordinator and can also answer your concerns. Their email addresses can be found above.

You requested a storm water contact as well. Please contact Glenn Curtis for information on the storm water tribal contact at 913-551-7726.

You may also want to contact the Region 7 Tribal Coordinator who is Wolfgang Brandner, who can be reached at 913-551-7381.

Please let me know if you need additional assistance.

Angela Catalano

Environmental Scientist
Environmental Protection Agency
Air and Waste Management Division
Air Permitting and Compliance Branch
Air Compliance and Enforcement Section
913-551-7411
FAX: 913-551-9411
Catalano.Angela@epa.gov

{In Archive} Fw: Two more sources in Thurston County , NE?

PatriciaA Scott to: MarkA Smith 04/02/2012 10:04 AM
Cc: Jane Kloeckner, Robert Webber

Archive: This message is being viewed in an archive.

FYI
----- Forwarded by PatriciaA Scott/R7/USEPA/US on 04/02/2012 10:02 AM -----

From: "Smith, Clark" <clark.smith@nebraska.gov>
To: PatriciaA Scott/R7/USEPA/US@EPA
Date: 04/02/2012 08:57 AM
Subject: RE: Two more sources in Thurston County, NE?

Pat,

For all of the sources listed, we have either not permitted them, or their permits "expired". None of them have received a construction permit. The reason I put "expired" in quotes, is that Blue Ox (Automatic Equipment Mfg Co) and Thurston Manufacturing used to be covered by our VOC/HAP General Permit. That permit has been reissued, however, these companies did not reapply for coverage. In addition, we have EPA designated as the permitting authority for them in our IIS system.

Just to let you know, we also have the following sources listed as being active in Thurston Co:

Emerson Mfg, Pender
Pender Grain, Pender
Central Valley Ag, Thurston
Crop Production Services, Thurston

The only one of these that we show having an active permit is Central Valley Ag. They were issued a construction permit in 1994. I do not know where these would fall out in EPA's minor source programs, but thought you would want to know they were once on our radar.

Clark

W. Clark Smith, Supervisor
Air Quality Permitting Section
Department of Environmental Quality
Phone: 402.471.4204
Email: clark.smith@nebraska.gov

From: PatriciaA Scott [mailto:Scott.PatriciaA@epamail.epa.gov]
Sent: Friday, March 30, 2012 5:55 PM
To: Smith, Clark
Subject: Two more sources in Thurston County, NE?

Clark,

Do you have record of NDEQ ever issued any air permits - operating or construction - to the following sources? If so, are they still in affect?

Pender Municipal Power Plant
Blue Ox (Automatic Equipment NFG
Thurston Manufacturing

Thanks again,

Pat

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 7
901 NORTH 5TH STREET
KANSAS CITY, KANSAS 66101
JUL 0 2 2012

Plant Manager
Thurston Manufacturing Company
Hwy 87A,
Thurston, NE 68062

Dear Manager:

On July 1, 2011, the Environmental Protection Agency (EPA) promulgated a final Federal Implementation Plan (FIP) that implements New Source Review (NSR) preconstruction air pollution control requirements in Indian country. As set forth in the FIP, the Federal minor NSR program in Indian country found at 40 CFR Part 49, Sections 49.151 through 49.165, serves the following purposes:

(1) It establishes a preconstruction permitting program for new and modified minor sources and minor modifications at major sources located in Indian country to meet the requirements of section 110(a)(2)(C) of the Act.

(2) It establishes a registration system that will allow the reviewing authority to develop and maintain a record of minor source emissions in Indian country.

(3) It provides a mechanism for an otherwise major source to voluntarily accept restrictions on its potential to emit to become a synthetic minor source. This mechanism may also be used by an otherwise major source of HAPs to voluntarily accept restrictions on its potential to emit to become a synthetic minor HAP source. Such restrictions must be enforceable as a practical matter.

(4) It provides an additional mechanism for case-by-case maximum achievable control technology (MACT) determinations for those major sources of HAPs subject to such determinations under section 112(g)(2) of the Act.

(5) It sets forth the criteria and procedures that the reviewing authority (as defined in §49.152(d)) will use to administer the program.

We have identified the Thurston Manufacturing Company as a source potentially subject to the Federal minor NSR program. In a letter dated May 11, 2001, Thurston Manufacturing Company indicated to EPA Region 7 that it would comply with the recordkeeping requirements of the 1999 Potential to Emit (PTE) transition policy by which EPA would treat a source as nonmajor for the purposes of the Federal Part 71 program if it keeps records to show that its actual emissions are below 50 percent of the PTE thresholds for major source status. The policy specified that it would be implemented until EPA adopts and implements a mechanism that a source can use to limit its PTE. Since, as listed above, a purpose of the Federal minor NSR program is to provide such a mechanism, its

implementation terminates the PTE transition policy. Pursuant to 40 CFR 49.158(c)(3) and (4), existing sources previously operating under a synthetic minor mechanism such as the 1999 PTE transition policy, now must obtain a synthetic minor permit. An application must be submitted no later than September 4, 2012. If you do not submit your synthetic minor permit application, your source will no longer be considered a synthetic minor source and will become subject to all requirements for major sources.

Enclosed are forms you can use to apply for synthetic minor status under the Federal Minor NSR Program in Indian country, including the "New Source General Application" and "Synthetic Minor Limit Application". Use of the forms is optional, but if you choose not to use them you must provide all of the information described in 40 CFR 49.154 *Permit Application Requirements* and 40 CFR 49.158 *Synthetic Minor Source Permits*. Please note that we are not requiring a modeling analysis for your existing source previously operating under the 1999 PTE transition policy. Should you propose to construct a new source or modify an existing source, then an air quality analysis may be required. The authority to review applications and issue NSR and operating permits to stationary sources on Indian country in Iowa, Kansas, Nebraska, and Missouri has been delegated to EPA Region 7. You should submit your application forms, or required application contents, to:

Bob Webber
Air Permitting Tribal Coordinator
EPA, Region 7
901 N. 5th Street
Kansas City, Kansas 66101

If interested, the following websites contain information intended to assist you with understanding the Tribal Minor NSR Rule and the EPA Region 7 Air program:

EPA's Tribal Minor NSR website: http://www.epa.gov/air/tribal/tribalnsr.html
Region 7 Air Program website: http://www.epa.gov/region07/air/nsr/nsr.htm

We encourage you to submit a timely application for a synthetic minor source permit to ensure that your source can continue to be considered a synthetic minor source. Please contact Bob Webber of my staff at (913) 551-7251 or webber.robert@epa.gov if you have any questions about the permitting process.

Sincerely,

Leslye E Warner

for Mark A. Smith, Chief
Air Permitting and Compliance Branch
Air and Waste Management Division

Enclosures

cc: Mr. John Blackhawk
Winnebago Tribe of Nebraska
Shelley Schneider
Nebraska Department of Environmental Quality

zia engineering & environmental consultants, llc

Transmittal

To:	Bob Webber	**Date:**	August 30, 2012
From:	Zia Engineering		
Re:	Thurston Manufacturing Company Federal Minor New Source Review Program in Indian Country	**CC:**	Susan Jensen
Project No.	NIAE-12-001		

☐ **Urgent** ☐ **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

- **Comments:**

Dear Mr. Webber,

Enclosed are two copies of Thurston Manufacturing Company's applications under the Federal Minor New Source Review Program in Indian Country. The following applications have been submitted: Application for New Construction, Registration for Existing Sources, and Application for Synthetic Minor Limit.

Please copy me with all correspondence on the project.

Thank you,

Lindsay Brown

1531 Airport Road, Suite 104 • Ames, IA, 50010 • Phone: (515) 233-5794 Fax: (515) 233-5934

OMB Control No. 2060-0003
Approval expires 04/30/2012

United States Environmental Protection Agency Program Address Phone Fax Web address	*Reviewing Authority* *Program* *Address* *Phone* *Fax* *Web address*

FEDERAL MINOR NEW SOURCE REVIEW PROGRAM IN INDIAN COUNTRY

Application For Synthetic Minor Limit
(Form SYNMIN)

Please submit information to:

Bob Webber
Air Permitting & Compliance Branch
Air and Waste Management Division
U.S. Environmental Protection Agency, Region 7
901 N. 5th Street
Kansas City, KS 66208

A. GENERAL INFORMATION

Company Name Thurston Manufacturing Company	**Source Name** Thurston Manufacturing Company
Company Contact or Owner Name Ms. Susan Jensen	Title Compliance Director
Mailing Address 1708 H Avenue Thurston, NE 68062	
Email Address sjensen@thurstonmfgco.com	
Telephone Number (402) 385-3041	Facsimile Number (402) 385-3043

B. ATTACHMENTS

For each criteria air pollutant, hazardous air pollutant and for all emission units and air pollutant-generating activities to be covered by a limitation, include the following:

X **Item 1** - The proposed limitation and a description of its effect on current actual, allowable and the potential to emit.
X **Item 2** - The proposed testing, monitoring, recordkeeping, and reporting requirements to be used to demonstrate and assure compliance with the proposed limitation.
X **Item 3** - The type and quantity of fuels and/or raw materials used.
X **Item 4** - A description of estimated efficiency of air pollution control equipment under present or anticipated operating conditions, including documentation of the manufacturer specifications and guarantees.
X **Item 5** - Estimates of the Current Actual Emissions, Current Allowable Emissions including all calculations for the estimates, where applicable.
X **Item 6** - Estimates of the Post-Change Allowable Emissions that would result from compliance with the proposed limitation, including all calculations for the estimates.
X **Item 7** – Estimates of the potential emissions of Greenhouse Gas (GHG) pollutants:

Thurston
Manufacturing Company

BLU-JET

Side Dump

FEDERAL MINOR NEW SOURCE REVIEW PROGRAM IN INDIAN COUNTRY

APPLICATION FOR SYNTHETIC MINOR LIMIT

Thurston Manufacturing Company

1708 H Avenue
Thurston, NE 68062
August 2012

Prepared by
zia engineering & environmental
consultants, llc

1531 Airport Road, Suite 104
Ames, Iowa 50010
Phone (515) 233-5794 Fax: 515.233.5934

NIAE-012-001

Executive Summary

Thurston Manufacturing Company, Thurston, Nebraska, produces agricultural equipment and side-dump trailers. The manufacturing process includes a paint booth, plasma cutter, shot blast machine, wash bay, welding areas, fabricating machines, and a paint kitchen. This document requests limits for the paint booth and paint kitchen.

Proposed Limits

Permit limits have been requested for the paint booth unit. The material usage limits are based on the maximum amount of usage allowed to remain within the required thresholds. The requested limits were determined by calculating the amount of HAP, MEK, and xylene released, and limiting those amounts to within the allowable threshold while maximizing the amount of materials available for production. The requested limits for the paint booth are 2,500 tons of topcoat a year, 2,500 gallons of primer a year, and 2,500 gallons of solvent a year.

Proposed Testing and Monitoring

Thurston Manufacturing Company will track all quantities of topcoat, primer, and solvent ordered. The calculated emissions are based on the amount of material used. The maximum usage amount is directly related to the amount of material purchased.

Control Equipment Efficiency

The paint booth has a filter, CE-1, which controls emission points PB-1a, 1b, and 1c with 99 percent efficiency. The paint kitchen uses a filter, CE-9, to control emission point PK-1 with 99 percent efficiency.

Post-Change Allowable Emissions

Table 1 Uncontrolled Potential Emissions

Process	PM	PM 2.5	PM 10	VOC	HAP	Xylene	MEK
Paint Booth	0.17	0.17	0.17	502.26	288.38	236.51	206.65
Paint Kitchen	0.00	0.00	0.00	25.11	0.00	0.00	0.00
Total:	0.17	0.17	0.17	257.37	288.38	236.51	206.65

Table 2 Controlled Potential Emissions

Process	PM	PM 2.5	PM 10	VOC	HAP	Xylene	MEK
Paint Booth	3.00E-02	3.00E-02	3.00E-02	2.04E+01	1.17E+01	9.60	8.39
Paint Kitchen	0.00	0.00	0.00	1.02	0.00	0.00	0.00
Total:	3.00E-02	3.00E-02	3.00E-02	2.14E+01	1.17E+01	9.60	8.39

Greenhouse Gas Pollutants

Instructions: Please fill in the green cells with your facility information and the yellow cells with your 2011 throughputs. Then print out the spreadsheet and attach i attach electronically to Form 1.0 of your SPARS inventory submittal.

Emission Year:	**2012**
Facility Name:	Thurston Manufacturing Company
Plant #:	EIQ #:92-2078

Assumptions:

1 gallon diesel = 0.140 MMBtu, 1 gallon gasoline = 0.130 MMBtu,
1 gallon kerosene = 0.135 MMBtu, 1 gallon LPG = 0.094 MMBtu, 1 gallon residual fu
1 MMcf Natural Gas = 1050 MMBtu, 1 therm Natural Gas = 0.09997612

				CO2		CH4		N2O		CO2
Fuel Type	**Fuel Subtype**	**Throughput**	**Units**	**Emission Factor**		**Emission Factor**		**Emission Factor**		**Emiss (tons)**
Butane	-		gallons	14.38	lbs/gallon	NA	NA	NA	NA	0.0000
Coal	Commercial		MMBtu	208.11	lbs/MMBtu	0.0245	lbs/MMBtu	0.0035	lbs/MMBtu	0.0000
Coal	Industrial		MMBtu	205.15	lbs/MMBtu	0.0245	lbs/MMBtu	0.0035	lbs/MMBtu	0.0000
Coal	Industrial Coking		MMBtu	204.58	lbs/MMBtu	0.02451	lbs/MMBtu	0.0035	lbs/MMBtu	0.0000
Coal	Institutional		MMBtu	208.11	lbs/MMBtu	0.0245	lbs/MMBtu	0.0035	lbs/MMBtu	0.0000
Coal	Utility		MMBtu	206.19	lbs/MMBtu	0.0245	lbs/MMBtu	0.0035	lbs/MMBtu	0.0000
Crude Oil	-		MMBtu	161.94	lbs/MMBtu					0.0000
Distillate Fuel (Diesel)	Commercial		gallons	159.69	lbs/MMBtu	0.00309	lbs/gallon	0.00022	lbs/gallon	0.0000
Distillate Fuel (Diesel)	Industrial	1,958.00	gallons	159.69	lbs/MMBtu	0.00066	lbs/gallon	0.00022	lbs/gallon	21.8871
Distillate Fuel (Diesel)	Institutional		gallons	159.69	lbs/MMBtu	0.00309	lbs/gallon	0.00022	lbs/gallon	0.0000
Gasoline	Reformulated		gallons	18.85	lbs/gallon	0.00287	lbs/gallon	0.00022	lbs/gallon	0.0000
Gasoline - Motor	Commercial		gallons	154.79	lbs/MMBtu	0.00287	lbs/gallon	0.00022	lbs/gallon	0.0000
Gasoline - Motor	Industrial		gallons	154.79	lbs/MMBtu	NA	NA	NA	NA	0.0000
Gasoline - Motor	Institutional		gallons	154.79	lbs/MMBtu	0.00287	lbs/gallon	0.00022	lbs/gallon	0.0000
Kerosene	Commercial		gallons	157.86	lbs/MMBtu	0.00309	lbs/gallon	0.00022	lbs/gallon	0.0000
Kerosene	Industrial		gallons	157.86	lbs/MMBtu	0.00066	lbs/gallon	0.00022	lbs/gallon	0.0000
Kerosene	Institutional		gallons	157.86	lbs/MMBtu	0.00309	lbs/gallon	0.00022	lbs/gallon	0.0000
LPG	Commercial		gallons	136	lbs/MMBtu	0.00221	lbs/gallon	0.00022	lbs/gallon	0.0000
LPG	Industrial		gallons	136	lbs/MMBtu	0.00044	lbs/gallon	0.00022	lbs/gallon	0.0000
LPG	Institutional		gallons	136	lbs/MMBtu	0.00221	lbs/gallon	0.00022	lbs/gallon	0.0000
Methanol (neat)	-		gallons	9.06	lbs/gallon					0.0000
Natural Gas	Commercial		MMBtu	116.38	lbs/MMBtu	0.0130	lbs/MMBtu	0.00022	lbs/MMBtu	0.0000
Natural Gas	Industrial	34,648.29	MMBtu	116.38	lbs/MMBtu	0.0130	lbs/MMBtu	0.00022	lbs/MMBtu	2,016.1840
Natural Gas	Institutional		MMBtu	116.38	lbs/MMBtu	0.0130	lbs/MMBtu	0.00022	lbs/MMBtu	0.0000
Petroleum	Commercial		MMBtu			0.0245	lbs/MMBtu	0.0015	lbs/MMBtu	0.0000
Petroleum	Industrial		MMBtu			0.0049	lbs/MMBtu	0.0015	lbs/MMBtu	0.0000
Petroleum	Institutional		MMBtu			0.0245	lbs/MMBtu	0.0015	lbs/MMBtu	0.0000
Propane	-	3,300.00	gallons	12.57	lbs/gallon	NA	NA	NA	NA	20.7405
Residual Fuel	Commercial		gallons	172.01	lbs/MMBtu	0.00331	lbs/gallon	0.00022	lbs/gallon	0.0000
Residual Fuel	Industrial		gallons	172.01	lbs/MMBtu	0.00066	lbs/gallon	0.00022	lbs/gallon	0.0000
Residual Fuel	Institutional		gallons	172.01	lbs/MMBtu	0.00331	lbs/gallon	0.00022	lbs/gallon	0.0000
Still Gas	-		MMBtu	140.86	lbs/MMBtu					0.0000
										2,058.8116

Note: This spreadsheet is formatted to be printed on legal-size paper.

Note: Unless otherwise noted, all emission factors were obtained from the California Climate Action Registry General Reporting Protocol Version 2.2 March 2007 Tables C.5 and (DNR Form 542-1571 December 18, 2007)

Updated on 3/7/08 to add natural gs conversion factors.

to your paper inventory, or

uel = 0.150 MMBtu
MMBtu

CH4	N2O
Emiss (tons)	Emis (tons)
NA	NA
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0006	0.0002
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
NA	NA
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.2252	0.0038
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
NA	NA
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.2259	**0.0040**

C.€

Appendix A

Potential Calculations

Thurston Manufacturing **2012 Air Permits** **Thurston, NE**			
Emission Unit:	Paint Booth 1, EU-1		
Emission Point:	PB-1a-1c		
SCC:	Mass Balance		
Input Data:			
	Potential Solvent PM, PM 10, and PM 2.5	0.00	tons/yr
	Potential Primer PM, PM 10, and PM 2.5	0.02	tons/yr
	Potential Topcoat PM, PM 10, and PM 2.5	0.01	tons/yr
	Actual Solvent PM, PM 10, and PM 2.5		tons/yr
	Actual Primer PM, PM 10, and PM 2.5		tons/yr
	Actual Topcoat PM, PM 10, and PM 2.5		tons/yr
Potential Emissions:			
PM, PM 10, PM 2.5	0.00 tons/yr solvent + 0.02 tons/yr primer + 0.01 tons/yr topcoat	3.004E-02	tons/yr

Thurston Manufacturing **2012 Air Permits** **Thurston, NE**			
Emission Unit:	Paint Kitchen, EU-9		
Emission Point:	PK-1		
SCC:	Mass Balance		
Input Data:			
	Potential Solvent VOC	8.39	tons/yr
	Potential Primer VOC	5.53	tons/yr
	Potential Topcoat VOC	6.47	tons/yr
	Actual Solvent VOC		tons/yr
	Actual Primer VOC		tons/yr
	Actual Topcoat VOC		tons/yr
Potential Emissions:			
VOC	8.39 tons/yr solvent * 5% emitted + 5.53 tons/yr primer * 5% emitted + 6.47 tons/yr topcoat * 5% emitted	1.019	tons/yr

Thurston Manufacturing **2012 Air Permits** **Thurston, NE**	**Emission Units:** Paint Booth **Emission Points:** PB-1 **SCC:** Mass Balance			
Input Data:	**Solvent: Q60 Methyl Ethyl Ketone**			
	Proposed Usage		2,500	gallons/yr
	Estimated Usage @	15 oz per minute	7.0	gal/hr
	Weight per gallon, average		6.71	lb/gal
	Maximum application rate		47.18	lb/hr
	% Solid		0.0%	%
	% Volatile		100.0%	%
	% HAP		0.00%	%
	% MEK		100.00%	%
	building filter Efficiency		99%	%
	Application Efficiency		75%	%
	Air flow		17500	scf/min
Potential Emissions:				
PM-10 & 2.5	47.18 lb/hr * 0 solid * 0.99 filter eff * 0.75 app eff		0.00	lbs/hr
	0.00 lb/hr * 8760 hrs/yr / 2000 lbs/ton		0.00	tons/yr
VOC	47.18 lb/hr * 1 volatile		47.18	lbs/hr
	47.18 lb/hr * 8760 hrs/yr / 2000 lbs/ton		206.65	tons/yr
HAP	47.18 lb/hr * 0 HAP		0.00	lbs/hr
	0.00 lb/hr * 8760 hrs/yr / 2000 lbs/ton		0.00	tons/yr
MEK	47.18 lb/hr * 1.00 MEK		47.18	lbs/hr
	47.18 lbs/hr * 8760 hrs/yr / 2000 lbs/ton		206.65	tons/yr
Potential with Limits:		**LIMIT:**	2500.00	gal/yr
PM-10 & 2.5	2,500 gal/yr * 0 Solid * 0.99 filter eff * 6.71 lb/gal * 0.75 app eff		0.00	lbs/yr
	0.00 lbs/yr / 2000 lbs/ton		0.000	tons/yr
VOC	2,500 gal/yr * 1 Volatile * 6.71 lb/gal		16775.00	lbs/yr
	16,775.00 lbs/yr / 2000 lbs/ton		8.388	tons/yr
HAP	2,500 gal/yr * 0 HAP * 6.71 lb/gal		0.00	lbs/yr
	0.00 lbs/yr / 2000 lbs/ton		0.000	tons/yr
MEK	2,500 gal/yr * 1 MEK * 6.71 lb/gal		16775.00	lbs/yr
	16,775.00 lbs/yr / 2000 lbs/ton		8.388	tons/yr

**Contains methyl ethyl ketone.

Thurston Manufacturing 2012 Air Permits Thurston, NE	**Emission Units:** Paint Booth **Emission Points:** PB-1 **SCC:** Mass Balance				
Input Data:	**Primer: QAP581 WOW epoxy primer**				
	Proposed Usage			2,500	gallons/yr
	Estimated Usage @	15	oz per min.	7.0	gal/hr
	Weight per gallon, average			10.70	lb/gal
	Maximum application rate			75.23	lb/hr
	% Solid			58.7%	%
	% Volatile			41.3%	%
	% HAP			7.98%	%
	% Xylene			6.81%	%
	building filter Efficiency			99%	%
	Application Efficiency			75%	%
	Air flow			17500	scf/min
Potential Emissions:					
PM-10 & 2.5	75.23 lb/hr * 0.5869 solid * 0.99 filter eff * 0.75 app eff			0.11	lbs/hr
	0.11 lb/hr * 8760 hrs/yr / 2000 lbs/ton			0.48	tons/yr
VOC	75.23 lb/hr * 0.4131 volatile			31.08	lbs/hr
	31.08 lb/hr * 8760 hrs/yr / 2000 lbs/ton			136.13	tons/yr
HAP	75.23 lb/hr * 0.0798 HAP			6.00	lbs/hr
	6.00 lb/hr * 8760 hrs/yr / 2000 lbs/ton			26.30	tons/yr
Xylene	75.23 lb/hr * 0.07 Xylene			5.12	lbs/hr
	5.12 lbs/hr * 8760 hrs/yr / 2000 lbs/ton			22.44	tons/yr
Potential with Limits:			**LIMIT:**	2500.00	gal/yr
PM-10 & 2.5	2,500 gal/yr * 0.5869 Solid * 0.99 filter eff * 10.7 lb/gal * 0.75 app eff			39.25	lbs/yr
	39.25 lbs/yr / 2000 lbs/ton			0.020	tons/yr
VOC	2,500 gal/yr * 0.4131 Volatile * 10.7 lb/gal			11050.43	lbs/yr
	11,050.43 lbs/yr / 2000 lbs/ton			5.525	tons/yr
HAP	2,500 gal/yr * 0.0798 HAP * 10.7 lb/gal			2134.65	lbs/yr
	2,134.65 lbs/yr / 2000 lbs/ton			1.067	tons/yr
Xylene	2,500 gal/yr * 0.0681 Xylene * 10.7 lb/gal			1821.68	lbs/yr
	1,821.68 lbs/yr / 2000 lbs/ton			0.911	tons/yr

**Contains xylene and ethyl benzene.

Thurston Manufacturing **2012 Air Permits** **Thurston, NE**	**Emission Units:** Paint Booth **Emission Points:** PB-1 **SCC:** Mass Balance				
Input Data:	**Top Coat: DM19126 Black Enamel (current dip paint)**				
	Proposed Usage			2,500	gallons/yr
	Estimated Usage @	15	oz per min.	7.0	gal/hr
	Weight per gallon, average			8.51	lb/gal
	Maximum application rate			59.84	lb/hr
	% Solid			39.2%	%
	% Volatile			60.9%	%
	% HAP			100.00%	%
	% Xylene			81.68%	%
	building filter Efficiency			99%	%
	Application Efficiency			75%	%
	Air flow			17500	scf/min
Potential Emissions:					
PM-10 & 2.5	59.84 lb/hr * 0.3915 solid * 0.99 filter eff * 0.75 app eff			0.06	lbs/hr
	0.06 lb/hr * 8760 hrs/yr / 2000 lbs/ton			0.26	tons/yr
VOC	59.84 lb/hr * 0.6085 volatile			36.41	lbs/hr
	36.41 lb/hr * 8760 hrs/yr / 2000 lbs/ton			159.48	tons/yr
HAP	59.84 lb/hr * 1 HAP			59.84	lbs/hr
	59.84 lb/hr * 8760 hrs/yr / 2000 lbs/ton			262.08	tons/yr
Xylene	59.84 lb/hr * 0.82 Xylene			48.87	lbs/hr
	48.87 lbs/hr * 8760 hrs/yr / 2000 lbs/ton			214.07	tons/yr
Potential with Limits:			**LIMIT:**	2500.00	gal/yr
PM-10 & 2.5	2,500 gal/yr * 0.3915 Solid * 0.99 filter eff * 8.51 lb/gal * 0.75 app eff			20.82	lbs/yr
	20.82 lbs/yr / 2000 lbs/ton			0.010	tons/yr
VOC	2,500 gal/yr * 0.6085 Volatile * 8.51 lb/gal			12945.84	lbs/yr
	12,945.84 lbs/yr / 2000 lbs/ton			6.473	tons/yr
HAP	2,500 gal/yr * 1 HAP * 8.51 lb/gal			21275.00	lbs/yr
	21,275.00 lbs/yr / 2000 lbs/ton			10.638	tons/yr
Xylene	2,500 gal/yr * 0.8168 Xylene * 8.51 lb/gal			17377.42	lbs/yr
	17,377.42 lbs/yr / 2000 lbs/ton			8.689	tons/yr

**Contains xylene, ethyl benzene, naphthalene, methanol, and toluene.

OMB Control No. 2060-0003
Approval expires 04/30/2012

United States Environmental Protection Agency Program Address Phone Fax Web address	*Reviewing Authority* *Program* *Address* *Phone* *Fax* *Web address*

FEDERAL MINOR NEW SOURCE REVIEW PROGRAM IN INDIAN COUNTRY

Application for New Construction
(Form NEW)

Please check all that apply to show how you are using this form:

☐ **Proposed Construction of a New Source**
☐ **Proposed Construction of New Equipment at an Existing Source**
☐ **Proposed Modification of an Existing Source**
X Other – Please Explain
We would like to obtain permits for both existing sources previously unpermitted and permit new equipment.

Please submit information to:

Bob Webber
Air Permitting & Compliance Branch
Air and Waste Management Division
U.S. Environmental Protection Agency, Region 7
901 N. 5th Street
Kansas City, KS 66208

A. GENERAL SOURCE INFORMATION

1. (a) **Company Name** Thurston Manufacturing Company (b) **Operator Name**		2. **Source Name** Thurston Manufacturing Company	
3. Type of Operation: Farm machinery and equipment manufacturing.		4. Portable Source? ☐ Yes X No 5. Temporary Source? ☐ Yes X No	
6. NAICS Code: 333111		7. SIC Code: 3523 and 3531	
8. Physical Address (home base for portable sources) 1708 H Avenue Thurston, NE 68062			
9. Reservation* Winnebago	10. County* Thurston	11a. Latitude* 42.1769°N	11b. Longitude* 96.7046°W
12a. Quarter Quarter Section* NW ¼ of NW ¼ SE ¼ of SW ¼	12b. Section* 2 35	12c. Township* 25N 26N	12d. Range* 6E 6E

*Provide all proposed locations of operation for portable sources

B. PREVIOUS PERMIT ACTIONS (Provide information in this format for each permit that has been issued to this source. Provide as an attachment if additional space is necessary)

Source Name on the Permit
Permit Number (xx-xxx-xxxxx-xxxx.xx)
Date of the Permit Action

Source Name on the Permit
Permit Number (xx-xxx-xxxxx-xxxx.xx)
Date of the Permit Action

Source Name on the Permit
Permit Number (xx-xxx-xxxxx-xxxx.xx)
Date of the Permit Action

Source Name on the Permit
Permit Number (xx-xxx-xxxxx-xxxx.xx)
Date of the Permit Action

Source Name on the Permit
Permit Number (xx-xxx-xxxxx-xxxx.xx)
Date of the Permit Action

C. CONTACT INFORMATION

Company Contact Susan Jensen	Title Compliance Director
Mailing Address 1708 H Avenue Thurston, NE 68062	
Email Address sjensen@thurstonmfgco.com	
Telephone Number (402) 385-3041	Facsimile Number (402) 385-3043

Operator Contact (if different from company contact)	Title
Mailing Address	
Email Address	
Telephone Number	Facsimile Number

Source Contact Susan Jensen	Title Compliance Director
Mailing Address 1708 H Avenue Thurston, NE 68062	
Email Address sjensen@thurstonmfgco.com	
Telephone Number (402) 385-3041	Facsimile Number (402) 385-3043

Compliance Contact Same as Source Contact	Title
Mailing Address	
Email Address	
Telephone Number	Facsimile Number

D. ATTACHMENTS

Include all of the following information (see the attached instructions)

X **FORM SYNMIN** - New Source Review Synthetic Minor Limit Request Form, if synthetic minor limits are being requested.

X Narrative description of the proposed production processes. This description should follow the flow of the process flow diagram to be submitted with this application.

X Process flow chart identifying all proposed processing, combustion, handling, storage, and emission control equipment.

X A list and descriptions of all proposed emission units and air pollution-generating activities.

X Type and quantity of fuels, including sulfur content of fuels, proposed to be used on a daily, annual and maximum hourly basis.

X Type and quantity of raw materials used or final product produced proposed to be used on a daily, annual and maximum hourly basis.

X Proposed operating schedule, including number of hours per day, number of days per week and number of weeks per year.

X A list and description of all proposed emission controls, control efficiencies, emission limits, and monitoring for each emission unit and air pollution generating activity.

X **Criteria Pollutant Emissions** - Estimates of Current Actual Emissions, Current Allowable Emissions, Post-Change Uncontrolled Emissions, and Post-Change Allowable Emissions for the following air pollutants: particulate matter, PM_{10}, $PM_{2.5}$, sulfur oxides (SOx), nitrogen oxides (NOx), carbon monoxide (CO), volatile organic compound (VOC), lead (Pb) and lead compounds, fluorides (gaseous and particulate), sulfuric acid mist (H_2SO_4), hydrogen sulfide (H_2S), total reduced sulfur (TRS) and reduced sulfur compounds, including all calculations for the estimates.

These estimates are to be made for each emission unit, emission generating activity, and the project/source in total.

☐ **Modeling – Air Quality Impact Analysis (AQIA)**

X **ESA (Endangered Species Act)**

X **NHPA (National Historic Preservation Act)**

Thurston
Manufacturing Company

BLU-JET

Side Dump

FEDERAL MINOR NEW SOURCE REVIEW PROGRAM IN INDIAN COUNTRY

APPLICATION FOR NEW CONSTRUCTION

Thurston Manufacturing Company

1708 H Avenue
Thurston, NE 68062
August 2012

Prepared by
zia engineering
& environmental
consultants, llc

1531 Airport Road, Suite 104
Ames, Iowa 50010
Phone (515) 233-5794 Fax: 515.233.5934

NIAE-012-001

Air Discharge Construction Permit Application

Agricultural and Farm Machinery Manufacturer

Thurston Manufacturing Company
Thurston, Nebraska

August 2012

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Iowa.

29 Aug 12

Donn L Stone, P.E. Date

License Number: 11461
My license renewal date is December 31, 2012

Executive Summary

Thurston Manufacturing Company, Thurston, Nebraska, produces agricultural equipment and side-dump trailers. The manufacturing process includes a paint booth, plasma cutter, shot blast machine, wash bay, welding areas, fabricating machines, and a paint kitchen. This document requests permits for all air emission points and fugitive emissions for existing and new processes. Existing processes requesting permits include the plasma cutter, wash bay, both welding areas, both fabrication machines, and fugitive building heat. New processes requesting permits include the paint booth, shot blast machine, and the paint kitchen. Thurston had a paint area whose use will be discontinued once the new paint booth is installed.

Thurston Manufacturing has also submitted an Application For Synthetic Minor Limit form and a Registration for Existing Sources form.

Production Process

Thurston Manufacturing runs two lines simultaneously, one manufacturing side-dump trailers and the other manufacturing agricultural equipment. Figure 1 shows the production process for the side-dump trailers. The steel is brought in and shaped on the plasma cutter before it is moved to the welding section for the appropriate welds to be made. The welded unit is then moved to the shot blast machine to remove any extraneous materials. The unit is then moved to the paint booth were it is sprayed with a primer and top coat. Once the paint has dried, the unit is moved to the assembly area for final assembly and packaging.

Figure 2 shows the production process for the agricultural equipment. The steel is shaped in one of the two fabrication machines. The unit is then moved to the welding area to be welded. The part is then taken to the wash bay to be washed before it is taken to the paint booth. Once in the paint booth, the unit is primed and painted. The unit is then taken to the final assembly area.

Fuels

Thurston Manufacturing uses propane and diesel fuels at the plant site. Diesel is used in forklifts and pay loaders while propane is also used for forklifts. 2,000 gallons of diesel and 3,300 gallons of propane were used last year.

Emission Units

Thurston Manufacturing Company has ten emission unit processes that generate air pollution. The first emission unit is the paint booth, EU-1. It is used in both production processes. The paint booth has three stacks, EP-1a, 1b, and 1c, venting to the outside on the south side of the building. The paint booth has a filter on the bottom of the booth

that has an efficiency of 99 percent. The stacks pull the air from the bottom of the stack, beneath the filter, and then vent outside vertically unobstructed. The paint kitchen, EU-9, is situated adjacent to the paint booth. The paint kitchen has one stack, PK-1, that vents vertically unobstructed from the top of the paint kitchen on the southern part of the building. There is a filter with 99 percent efficiency to control paint kitchen emissions.

The plasma cutter, EU-2, is used only in production of the side-dump trailers. There is no control equipment for the plasma cutter. The plasma cutter is an inside fugitive emission. Both fabrication machines, EU-7 and EU-8, are used solely for the production of the agricultural equipment. Each fabrication machine is linked to a dust collector with a control efficiency of 90 percent. The dust collectors are on the east side of the building. Both fabrication machines are also inside fugitive emissions.

The shot blast machine, EU-3, is only used for production of the side-dump trailers. The shot blast machine will have a Viking Blast dust collector with a 99 percent control efficiency. This process will vent inside as a fugitive emission. The wash bay, EU-4, is used to wash parts for the agricultural process. The wash bay does not have any control equipment and will vent as an inside fugitive emission.

Welding for Thurston has been divided into two different sections, welding-trailers, EU-6, and welding-agricultural, EU-5. Each is used for its designated process. Neither have control equipment and both will vent inside as fugitive emissions.

The final emission unit for Thurston Manufacturing is fugitive building heat, EU-10. The building heat is an inside fugitive emission with no control equipment.

Raw Materials

This information is currently unavailable.

Operating Schedule

Thurston Manufacturing Company currently operates on three shifts. The day shift is Monday through Friday from 6 am - 4:30 pm. The middle shift is Sunday through Thursday from 4:15 pm – 3 am. The night shift is Sunday through Thursday from 7:30 pm - 6:15 am. There is also an optional shift on Saturday from 6 am - noon. Production runs 52 weeks a year.

Control Equipment

The paint booth has a filter, CE-1, which controls emission points PB-1a, 1b, and 1c with 99 percent efficiency. The shot blast machine has a dust collector, CE-3, made by Viking Blast which controls emission point SB-1 with 99 percent efficiency. Fabrication machine 1 uses a dust collector, CE-7, to control emission point FB-1 with 90 percent

efficiency. Fabrication machine 2 uses the same make of dust collector, CE-8, to control emission point FB-2 with 90 percent efficiency. The paint kitchen uses a filter, CE-9, to control emission point PK-1 with 99 percent efficiency.

Potential Emissions

The Paint Booth was calculated as operating continuously with a filter that has a minimum efficiency of 99 percent and an application efficiency of 75 percent. To determine the amount of HAPs released from the Paint Booth, the paint, primer, and solvent with the highest amount of HAP and usage (DM19126 Black Enamel, QAP581 W-O-W epoxy primer, and Q60 Methyl Ethyl Ketone) were input into the calculations to determine a worst case scenario. Since methyl ethyl ketone is used as a solvent, a calculation was done to determine if MEK exceeded the 10 tons per year threshold. The MEK emission would exceed 10 tons per year if it was used continuously so a limit has been requested for the amount of solvent Thurston Manufacturing is allowed to use each year. Since the total HAPs calculated for the paint and primer was over 10 tons per year, to determine if a single solvent was over 10 tons another calculation was done. Since xylene made up the largest percentage of the total HAP in the paint, a calculation was done to determine if xylene had exceeded the 10 tons per year threshold. Since they did exceed the threshold, a limit has been requested for the amount of paint and primer Thurston Manufacturing is allowed to use each year.

The plasma cutter and both fabrication machines were calculated as operating continuously using an average steel width and its corresponding cutting rate. The plasma cutter, PT-1, cuts a maximum of 40 inches per minute on an average thickness of 3/8 inch steel with a ¾ inch electrode tip. The plasma cutter does not have control equipment. The amount of pollutants emitted was assumed to be five percent. The fabrication machines, FM-1 and FM-2, cut a maximum of 35 inches per minute on an average thickness of 5/8 inch steel with a ¼ inch electrode tip. Each fabrication machine has its own dust collector with a minimum efficiency of 90 percent.

The shot blast was calculated as operating continuously with a filter that has a minimum efficiency of 90 percent. The wash bay was calculated as operating continuously with 90 percent spray efficiency.

Two types of welding will take place in the facility: trailer welding and agricultural welding. Air discharge permits are requested respective of the two welding types. The welding emissions are all internal fugitives. Both welding types use the same welding electrode, E70. The agricultural welding units are Gas Metal Arc Welding (GMAW). Electrode E70S was used to determine emission factors. The Co for E70S was determined to be less than 0.001 lb/1000lbs so for the calculations 0.001 lb/1000lbs was used. The trailer welding units are Flux Cored Arc Welding (FCAW). Electrode

E70T was used to determine emission factors. Co was not determined for this electrode type so it was assumed to be zero.

The paint kitchen was calculated as operating continuously with a filter that has a minimum efficiency of 99 percent. It was assumed that 5 percent of VOCs will be emitted while the paint is in the paint kitchen. Since the paint kitchen is used to store and mix paints, only VOCs were calculated.

The fugitive building heat was determined by assuming the therms purchased by Thurston in May through September of last year were not to heat the building but for other processes. An average was found for May through September and that number was multiplied by twelve to find an average for the year.

Production and Material Limits

Permit limits have been requested for the paint booth unit. The material usage limits are based on the maximum amount of usage allowed to remain within the required thresholds. The requested limits were determined by calculating the amount of HAP, MEK, and xylene released, and limiting those amounts to within the allowable threshold while maximizing the amount of materials available for production. The requested limits for the paint booth are 2,500 gallons of topcoat a year, 2,500 gallons of primer a year, and 2,500 gallons of solvent a year.

Endangered Species Act

Three endangered species were identified for Thurston County. For fish, the pallid sturgeon is located in Thurston County but Thurston Manufacturing is not located near any major water ways. For flowering plants, the western prairie fringed Orchid was located in Thurston County but is listed as threatened. For mammals, the gray wolf is located in Thurston County and is listed as endangered.

National Historic Preservation Act

No historic places were located in Thurston County.

AIR QUALITY BUREAU
ATTN: Application Log in
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

DNR USE ONLY	CP-AP
	Project No:
	Plant No:
	Doc Date:

FI

AIR CONSTRUCTION PERMIT APPLICATION

Form FI: Facility Information – Please see instructions on reverse side

ALL INFORMATION IS REQUIRED FOR PROCESSING – IF INFORMATION IS MISSING PERMIT WILL NOT BE ISSUED

FACILITY INFORMATION

1) Company Name	Thurston Manufacturing Company	1a) Facility Plant Number	
2) Facility Name (if different than #1)			
3) Facility Permit Contact Person/Title	Susan Jensen, Compliance Director	☐ Mr. ☐ Mrs. ☒ Ms. ☐ Dr.	
4) Telephone Number and Email Address	(402) 385-3041, sjensen@thurstonmfgco.com		
5) Facility Modeling Contact Person		☐ Mr. ☐ Mrs. ☐ Ms. ☐ Dr.	
6) Telephone Number and Email Address			
7) Name and Address Permit should be sent to	1708 H Avenue		
8) City/State/Zip	Thurston, NE 68062		
9) Equipment Location Address (if different than #7)			
10) City/State/Zip			
10a) Facility County	Thurston		
11) Is the Equipment Portable?	☐ Yes ☒ No	12) Do you want Draft Permits?	☒ Yes ☐ No
13) SIC Code and NAICS Code	SIC:3523, 3531	NAICS:333111	
14) Provide Brief Business Description and Principal Product	Manufacture farm machinery and equipment		
15) Identify any adjacent or contiguous facility that this company owns and/or operates			

PERMIT PREPARER

THIS SECTION IS REQUIRED IF APPLICATION WAS PREPARED BY SOMEONE OTHER THAN A COMPANY EMPLOYEE

16) Name	Donn L Stone, PE	☒ Mr. ☐ Mrs. ☐ Ms. ☐ Dr.
17) Address	1531 Airport Road, Suite 104	
18) City/State/Zip Code	Ames, IA 50010	
19) Phone Number and Email Address	(515) 233-5794, dstone@ziaeec.com	
20) Iowa P.E. Number (IAC 567 22.1(3)"b")	11461	
21) SIGNATURE		

CERTIFICATION

I CERTIFY THAT BASED ON INFORMATION AND BELIEF FORMED AFTER REASONABLE INQUIRY, THE ENCLOSED DOCUMENTS INCLUDING THE ATTACHMENTS ARE TRUE, ACCURATE, AND COMPLETE. LEGAL ENTITLEMENT TO INSTALL AND OPERATE THE EQUIPMENT COVERED BY AND ON THE PROPERTY IDENTIFIED IN THE PERMIT APPLICATION HAS BEEN OBTAINED.

22) Responsible Official's Name/Title	Susan Jensen, Compliance Director	☐ Mr. ☐ Mrs. ☒ Ms. ☐ Dr.
23) RESPONSIBLE OFFICIAL SIGNATURE	Susan Jensen	
24) Date	8/22/12	

APPLICATION FORMS ATTACHED

25. ☒ EU (Number of forms:11), ☒ CE (#: 5), ☒ EP (#: 12), ☒ EC(#: 10), ☒ EI, ☐ Plot Plan, ☐ MI2, ☒ FRA, ☒ MD, ☒ GHG

Other Forms and Attachments (e.g. dispersion modeling analysis)

AIR QUALITY BUREAU
ATTN: Application Log in
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

EU

AIR CONSTRUCTION PERMIT APPLICATION

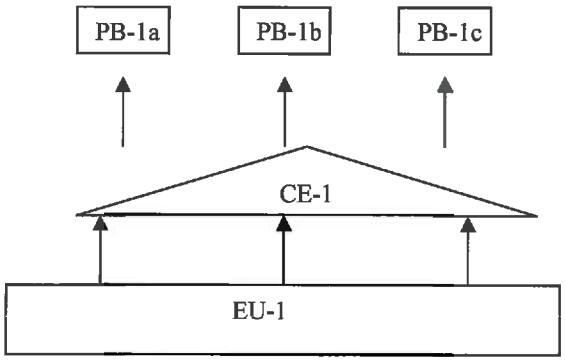
Form EU: Emission Unit Information

Please see instruction on reverse side

Company Name:	**Thurston Manufacturing Company**		
EMISSION UNIT (PROCESS) IDENTIFICATION & DESCRIPTION			
1) **Emission Unit (EU) Name:**	**Paint Booth**		
2) **EU ID Number:**	**EU-1**	**EP ID Number:**	**PB-1a -1c**
3) **EU Type:** ☒ New Source ☐ Unpermitted Existing Source ☐ Modification to a Permitted Source Previous Permit # is:			
4) **Manufacturer:**	Unknown		
5) **Model:**	Unknown		
6a) **Maximum Nameplate Capacity:**	**7 gal/hr**		
6b) **Maximum Process Design Capacity** (if different than 6a)			
7) **Date of Construction:**	**2012**		
8) **Date of Modification (if applicable)**			
9) Is this a Controlled Emission Unit? ☐ **No** ☒ **Yes**	If Yes, Control Equipment name/ID are: **CE 1**		
EMISSION UNIT OPERATING SCHEDLULE (hours/day, hours/year, or other)			
10) **Actual Operation**	**121 hrs/week**		
11) **Maximum Operation**	**127 hrs/week**		
REQUESTED LIMITS			
12) **Are you requesting any permit limits?** ☐ **No** ☒ **Yes** **If Yes, check below and write down all that apply**			
☐ **Operation Hour Limits:**			
☐ **Production Limits:**			
☒ **Material Usage Limits**	**2,500 gallons/year of solvent, 2,500 gallons/year of primer, and 2,500 gallons/year of topcoat**		
☐ **Limits Based on Stack Testing**	Please attach all relevant stack testing summary reports		
☐ **Other:**			
Rationale for Requesting the Limit(s):			

PROCESS DESCRIPTION

13 Provide a description **AND** a drawing to show quantitatively how **product or material** flows through this emission unit. Include product input and output, fuel throughput, and any parameters which impact air emissions. If space below is insufficient, attach a separate sheet labeled EU-13A.



AIR QUALITY BUREAU
ATTN: Application Log in
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

IOWA DNR Air Construction Permit Application

Form EU3: Spray Paint Booth Information

Please see instructions on the reverse side

If your facility is qualified under 567 IAC 22.8(1) **Permit by Rule**, you do not need to use this form.

Company Name:
Thurston Manufacturing Company

Booth Type: ☒ New Booth ☐ Unpermitted Existing Booth
☐ Modification to a Permitted Booth (permit #:)
Construction Date:2012

SPRAY GUN DESCRIPTION AND SPECIFICATIONS

No.	(1) Manufacturer	(2) Model	(3) Type	(4) Transfer Eff. %	(5) Rated Capacity (gal/hr)
1	GracoProxXs4	B09D	Electrostatic	75	7.0
2					
3					

Number of guns to be used simultaneously: 1

SPRAY MATERIAL DESCRIPTION AND SPECIFICATIONS

(6) Type of Spray Material Used	(7) Type of Material Coated	(8) Max. Usage (gal/day)	(9) Solid Content (lb/gal)	(10) VOC Content (lb/gal)	(11) MSDS Attached? (Y/N)
Solvent	Metal	168	0.0	7.43	Y
Solvent	Metal	168	0.0	6.7	Y
Solvent	Metal	168	0.0	6.8	Y

(12) Do any of the spray materials contain compounds of chromium, lead, manganese, nickel, or cadmium?

REQUEST FOR PERMIT LIMITATIONS

(13) Are you requesting any permit limits? ☐ No ☒ Yes. If yes, check below and write down all that apply

☐ Operation Hour Limits:

☐ Production Limits:

☒ Material Usage Limits: 2,500 gallons of solvent a year, 2,500 gallons of primer a year, and 2,500 gallons of topcoat a year.

☐ Other:

Rationale for Requesting the Limit(s): To remain within allowable limits

EMISSION CONTROL DEVICE (FILTER) DESCRIPTION AND SPECIFICATIONS

Stack Served	(14) Filter Manufacturer	(15) Model	(16) PM Control Efficiency(%)	(17) Dimension (Total Area ,Thickness and Number of Filters)
Stack 1	unknown	unknown	unknown	unknown
Stack 2	unknown	unknown	unknown	unknown
Stack 3	unknown	unknown	unknown	unknown
Stack 4				

Note: a. Provide either stack test data or vendor's documentation to support the control efficiency specified above.
b. Fill out the Form CS if other control device than a filter system is applied to this booth.

BOOTH OPERATING SCHEDULE (hours/day, or hours/year, or other)

(18) Actual Operation	121 hrs/week	(19) Maximum Operation	127 hrs/week

STACK/VENT (EMISSION POINT) SPECIFICATIONS AND EXHAUST INFORMATION

	Stack 1	Stack 2	Stack 3	Stack 4
(20) Stack/Vent ID Number	PB-1a	PB-1b	PB-1c	
(21) Emission Unit ID Number	EU-1	EU-1	EU-1	
(22) Height from the Ground (ft)	36	36	36	
(23) Height from the Building (ft)	3	6	3	
(24) Distance from Property Line (ft)	205	211	217	
(25) Stack Size (in Dia. or in.X in.)	44	46	44	
(26) Stack Discharge Style	Vertical	Vertical	Vertical	
(27) Rated Flow Rate (☒acfm ☐ scfm)	5000	7500	5000	
(28) Exhaust Exit Temperature (°F)	Ambient	Ambient	ambient	

SPRAY MATERIAL DESCRIPTION AND SPECIFICATIONS					
(6) Type of Spray Material Used	(7) Type of Material Coated	(8) Max. Usage (gal/day)	(9) Solid Content (lb/gal)	(10) VOC Content (lb/gal)	(11) MSDS Attached? (Y/N)
Primer	Metal	168	4.13	5.04	Y
Primer	Metal	168	6.28	4.42	Y
Primer	Metal	168	6.55	5.09	Y
Topcoat	Metal	168	2.50	5.29	Y
Topcoat	Metal	168	2.91	5.19	Y
Topcoat	Metal	168	9.26	3.25	Y
Topcoat	Metal	168	4.67	3.86	Y
Topcoat	Metal	168	8.49	3.35	Y
Topcoat	Metal	168	7.45	2.90	Y
Topcoat	Metal	168	6.97	1.53	Y
Topcoat	Metal	168	6.29	2.42	Y
Topcoat	Metal	168	3.44	4.52	Y
Topcoat	Metal	168	N/A	N/A	N
Topcoat	Metal	168	3.33	5.18	Y
Topcoat	Metal	168	8.49	3.35	Y
Topcoat	Metal	168	4.13	4.58	Y
Topcoat	Metal	168	N/A	N/A	N
Topcoat	Metal	168	1.02	5.31	Y

N/A= information currently unavailable

AIR QUALITY BUREAU
ATTN: Application Log in
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

EU

AIR CONSTRUCTION PERMIT APPLICATION

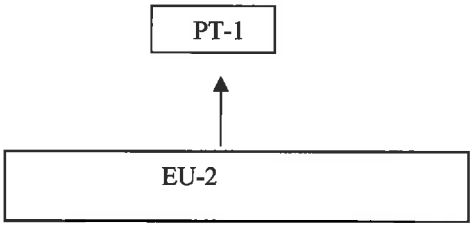
Form EU: Emission Unit Information

Please see instruction on reverse side

Company Name:	**Thurston Manufacturing Company**		
EMISSION UNIT (PROCESS) IDENTIFICATION & DESCRIPTION			
1) **Emission Unit (EU) Name:**	**Plasma Cutter**		
2) **EU ID Number:**	**EU-2**	**EP ID Number:**	**PT-1**
3) **EU Type:** ☐ New Source ☒ Unpermitted Existing Source ☐ Modification to a Permitted Source Previous Permit # is:			
4) **Manufacturer:**	**Unknown**		
5) **Model:**	**Unknown**		
6a) **Maximum Nameplate Capacity:**	**2400 inch/hr**		
6b) **Maximum Process Design Capacity** (if different than 6a)			
7) **Date of Construction:**	**unknown**		
8) **Date of Modification (if applicable)**			
9) **Is this a Controlled Emission Unit?** ☒ **No** ☐ **Yes**	If Yes, Control Equipment name/ID are:		
EMISSION UNIT OPERATING SCHEDLULE (hours/day, hours/year, or other)			
10) **Actual Operation**	**121 hrs/week**		
11) **Maximum Operation**	**127 hrs/week**		
REQUESTED LIMITS			
12) **Are you requesting any permit limits?** ☒ **No** ☐ **Yes** **If Yes, check below and write down all that apply**			
☐ **Operation Hour Limits:**			
☐ **Production Limits:**			
☐ **Material Usage Limits**			
☐ **Limits Based on Stack Testing**	Please attach all relevant stack testing summary reports		
☐ **Other:**			
Rationale for Requesting the Limit(s):			

PROCESS DESCRIPTION

13 Provide a description **AND** a drawing to show quantitatively how **product or material** flows through this emission unit. Include product input and output, fuel throughput, and any parameters which impact air emissions. If space below is insufficient, attach a separate sheet labeled EU-13A.



EU

AIR QUALITY BUREAU
ATTN: Application Log in
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

AIR CONSTRUCTION PERMIT APPLICATION

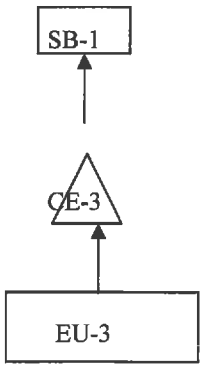
Form EU: Emission Unit Information

Please see instruction on reverse side

Company Name:	**Thurston Manufacturing Company**		
EMISSION UNIT (PROCESS) IDENTIFICATION & DESCRIPTION			
1) **Emission Unit (EU) Name:**	**Shotblast**		
2) **EU ID Number:**	**EU-3**	**EP ID Number:**	**SB-1**
3) **EU Type:** ☒ New Source ☐ Unpermitted Existing Source ☐ Modification to a Permitted Source Previous Permit # is:			
4) **Manufacturer:**	**Viking Blast**		
5) **Model:**	**Unknown**		
6a) **Maximum Nameplate Capacity:**			
6b) **Maximum Process Design Capacity** (if different than 6a)			
7) **Date of Construction:**	**2012**		
8) **Date of Modification (If applicable)**			
9) Is this a Controlled Emission Unit? ☐ No ☒ Yes	If Yes, Control Equipment name/ID are: **CE 3**		
EMISSION UNIT OPERATING SCHEDLULE (hours/day, hours/year, or other)			
10) **Actual Operation**	**121 hrs/week**		
11) **Maximum Operation**	**127 hrs/week**		
REQUESTED LIMITS			
12) **Are you requesting any permit limits?** ☒ No ☐ Yes **If Yes, check below and write down all that apply**			
☐ **Operation Hour Limits:**			
☐ **Production Limits:**			
☐ **Material Usage Limits**			
☐ **Limits Based on Stack Testing**	Please attach all relevant stack testing summary reports		
☐ **Other:**			
Rationale for Requesting the Limit(s):			

PROCESS DESCRIPTION

13 Provide a description **AND** a drawing to show quantitatively how **product or material** flows through this emission unit. Include product input and output, fuel throughput, and any parameters which impact air emissions. If space below is insufficient, attach a separate sheet labeled EU-13A.



AIR QUALITY BUREAU
ATTN: Application Log in
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

EU

AIR CONSTRUCTION PERMIT APPLICATION

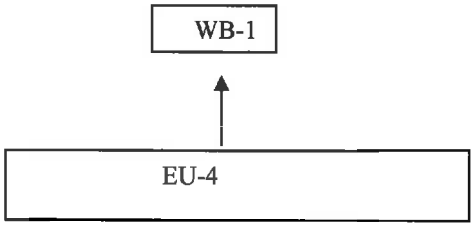
Form EU: Emission Unit Information

Please see instruction on reverse side

Company Name:	**Thurston Manufacturing Company**		
EMISSION UNIT (PROCESS) IDENTIFICATION & DESCRIPTION			
1) **Emission Unit (EU) Name:**	**Wash Bay**		
2) **EU ID Number:**	**EU-4**	**EP ID Number:**	**WB-1**
3) EU Type: ☐ New Source ☒ Unpermitted Existing Source ☐ Modification to a Permitted Source Previous Permit # is:			
4) **Manufacturer:**	**Unknown**		
5) **Model:**	**Unknown**		
6a) **Maximum Nameplate Capacity:**			
6b) **Maximum Process Design Capacity** (if different than 6a)			
7) **Date of Construction:**	**unknown**		
8) **Date of Modification (if applicable)**			
9) Is this a Controlled Emission Unit? ☒ **No** ☐ **Yes**	If Yes, Control Equipment name/ID are:		
EMISSION UNIT OPERATING SCHEDLULE (hours/day, hours/year, or other)			
10) **Actual Operation**	**121 hrs/week**		
11) **Maximum Operation**	**127 hrs/week**		
REQUESTED LIMITS			
12) **Are you requesting any permit limits?** ☒ **No** ☐ **Yes** **If Yes, check below and write down all that apply**			
☐ **Operation Hour Limits:**			
☐ **Production Limits:**			
☐ **Material Usage Limits**			
☐ **Limits Based on Stack Testing**	Please attach all relevant stack testing summary reports		
☐ **Other:**			
Rationale for Requesting the Limit(s):			

PROCESS DESCRIPTION

13 Provide a description **AND** a drawing to show quantitatively how **product or material** flows through this emission unit. Include product input and output, fuel throughput, and any parameters which impact air emissions. If space below is insufficient, attach a separate sheet labeled EU-13A.



EU

AIR QUALITY BUREAU
ATTN: Application Log in
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

AIR CONSTRUCTION PERMIT APPLICATION

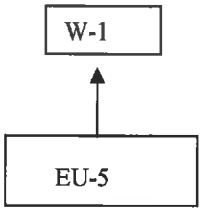
Form EU: Emission Unit Information

Please see instruction on reverse side

Company Name:	**Thurston Manufacturing Company**		
EMISSION UNIT (PROCESS) IDENTIFICATION & DESCRIPTION			
1) Emission Unit (EU) Name:	**Welding Ag. Products**		
2) EU ID Number:	**EU-5**	EP ID Number:	**W-1**
3) EU Type: ☐ New Source ☒ Unpermitted Existing Source ☐ Modification to a Permitted Source Previous Permit # is:			
4) Manufacturer:	**Miller**		
5) Model:	**Deltaweld 452**		
6a) Maximum Nameplate Capacity:	**21.7 lbs/hr**		
6b) Maximum Process Design Capacity (if different than 6a)			
7) Date of Construction:	**unknown**		
8) Date of Modification (if applicable)			
9) Is this a Controlled Emission Unit? ☒ No ☐ Yes	If Yes, Control Equipment name/ID are:		
EMISSION UNIT OPERATING SCHEDLULE (hours/day, hours/year, or other)			
10) Actual Operation	**121 hrs/week**		
11) Maximum Operation	**127 hrs/week**		
REQUESTED LIMITS			
12) Are you requesting any permit limits? ☒ No ☐ Yes If Yes, check below and write down all that apply			
☐ Operation Hour Limits:			
☐ Production Limits:			
☐ Material Usage Limits			
☐ Limits Based on Stack Testing	Please attach all relevant stack testing summary reports		
☐ Other:			
Rationale for Requesting the Limit(s):			

PROCESS DESCRIPTION

13 Provide a description **AND** a drawing to show quantitatively how **product or material** flows through this emission unit. Include product input and output, fuel throughput, and any parameters which impact air emissions. If space below is insufficient, attach a separate sheet labeled EU-13A.



EU

AIR QUALITY BUREAU
ATTN: Application Log in
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

AIR CONSTRUCTION PERMIT APPLICATION

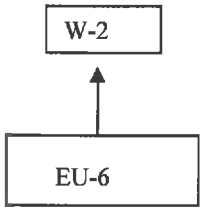
Form EU: Emission Unit Information

Please see instruction on reverse side

Company Name:	**Thurston Manufacturing Company**			
EMISSION UNIT (PROCESS) IDENTIFICATION & DESCRIPTION				
1) **Emission Unit (EU) Name:**	**Welding-Trailers**			
2) **EU ID Number:**	**EU-6**	**EP ID Number:**	**W-2**	
3) **EU Type:** ☐ New Source ☒ Unpermitted Existing Source ☐ Modification to a Permitted Source Previous Permit # is:				
4) **Manufacturer:**	**Lincoln**			
5) **Model:**	**IdealArc CV-400**			
6a) **Maximum Nameplate Capacity:**	**16.5 lbs/hr**			
6b) **Maximum Process Design Capacity** (if different than 6a)				
7) **Date of Construction:**	**unknown**			
8) **Date of Modification (if applicable)**				
9) Is this a Controlled Emission Unit? ☒ **No** ☐ **Yes**	If Yes, Control Equipment name/ID are:			
EMISSION UNIT OPERATING SCHEDLULE (hours/day, hours/year, or other)				
10) **Actual Operation**	**121 hrs/week**			
11) **Maximum Operation**	**127 hrs/week**			
REQUESTED LIMITS				
12) **Are you requesting any permit limits?** ☒ **No** ☐ **Yes** **If Yes, check below and write down all that apply**				
☐ **Operation Hour Limits:**				
☐ **Production Limits:**				
☐ **Material Usage Limits**				
☐ **Limits Based on Stack Testing**	Please attach all relevant stack testing summary reports			
☐ **Other:**				
Rationale for Requesting the Limit(s):				

PROCESS DESCRIPTION

13 Provide a description **AND** a drawing to show quantitatively how **product or material** flows through this emission unit. Include product input and output, fuel throughput, and any parameters which impact air emissions. If space below is insufficient, attach a separate sheet labeled EU-13A.



EU

AIR QUALITY BUREAU
ATTN: Application Log In
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

AIR CONSTRUCTION PERMIT APPLICATION

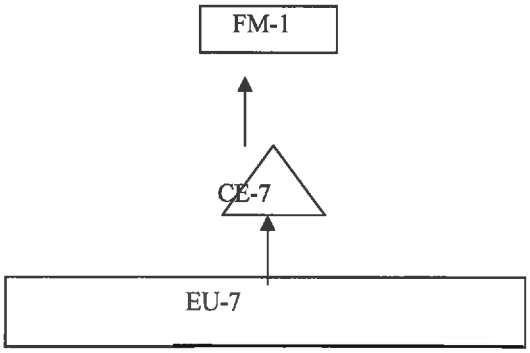
Form EU: Emission Unit Information

Please see instruction on reverse side

Company Name:	**Thurston Manufacturing Company**		
EMISSION UNIT (PROCESS) IDENTIFICATION & DESCRIPTION			
1) **Emission Unit (EU) Name:**	**Fabrication Machine 1**		
2) **EU ID Number:**	**EU-7**	**EP ID Number:**	**FM-1**
3) **EU Type:** ☐ New Source ☒ Unpermitted Existing Source ☐ Modification to a Permitted Source Previous Permit # is:			
4) **Manufacturer:**	**Peddinghaus**		
5) **Model:**	**Unknown**		
6a) **Maximum Nameplate Capacity:**	**2100 in/hr**		
6b) **Maximum Process Design Capacity** (if different than 6a)			
7) **Date of Construction:**			
8) **Date of Modification (if applicable)**			
9) Is this a Controlled Emission Unit? ☐ **No** ☒ **Yes**	If Yes, Control Equipment name/ID are: CE-7		
EMISSION UNIT OPERATING SCHEDLULE (hours/day, hours/year, or other)			
10) **Actual Operation**	**121 hrs/week**		
11) **Maximum Operation**	**127 hrs/week**		
REQUESTED LIMITS			
12) **Are you requesting any permit limits?** ☒ **No** ☐ **Yes** **If Yes, check below and write down all that apply**			
☐ **Operation Hour Limits:**			
☐ **Production Limits:**			
☐ **Material Usage Limits**			
☐ **Limits Based on Stack Testing**	Please attach all relevant stack testing summary reports		
☐ **Other:**			
Rationale for Requesting the Limit(s):			

PROCESS DESCRIPTION

13 Provide a description **AND** a drawing to show quantitatively how **product or material** flows through this emission unit. Include product input and output, fuel throughput, and any parameters which impact air emissions. If space below is insufficient, attach a separate sheet labeled EU-13A.



AIR QUALITY BUREAU
ATTN: Application Log in
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

EU

AIR CONSTRUCTION PERMIT APPLICATION

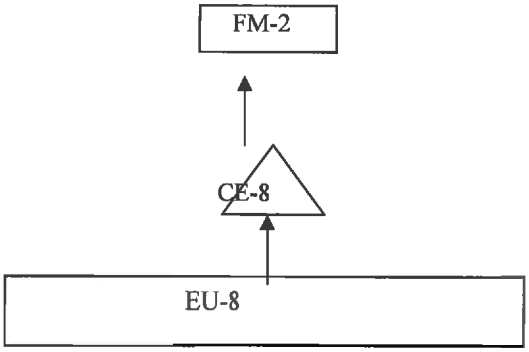
Form EU: Emission Unit Information

Please see instruction on reverse side

Company Name:	Thurston Manufacturing Company		
EMISSION UNIT (PROCESS) IDENTIFICATION & DESCRIPTION			
1) Emission Unit (EU) Name:	Fabrication Machine 2		
2) EU ID Number:	EU-8	EP ID Number:	FM-2
3) EU Type: ☐ New Source ☒ Unpermitted Existing Source ☐ Modification to a Permitted Source Previous Permit # is:			
4) Manufacturer:	Peddinghaus		
5) Model:	Unknown		
6a) Maximum Nameplate Capacity:	2100 in/hr		
6b) Maximum Process Design Capacity (if different than 6a)			
7) Date of Construction:			
8) Date of Modification (if applicable)			
9) Is this a Controlled Emission Unit? ☐ No ☒ Yes	If Yes, Control Equipment name/ID are: CE-8		
EMISSION UNIT OPERATING SCHEDLULE (hours/day, hours/year, or other)			
10) Actual Operation	121 hrs/week		
11) Maximum Operation	127 hrs/week		
REQUESTED LIMITS			
12) Are you requesting any permit limits? ☒ No ☐ Yes If Yes, check below and write down all that apply			
☐ Operation Hour Limits:			
☐ Production Limits:			
☐ Material Usage Limits			
☐ Limits Based on Stack Testing	Please attach all relevant stack testing summary reports		
☐ Other:			
Rationale for Requesting the Limit(s):			

PROCESS DESCRIPTION

13 Provide a description **AND** a drawing to show quantitatively how **product or material** flows through this emission unit. Include product input and output, fuel throughput, and any parameters which impact air emissions. If space below is insufficient, attach a separate sheet labeled EU-13A.



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ATTN: Application Log in
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Windsor Heights, IA 50324

AIR CONSTRUCTION PERMIT APPLICATION

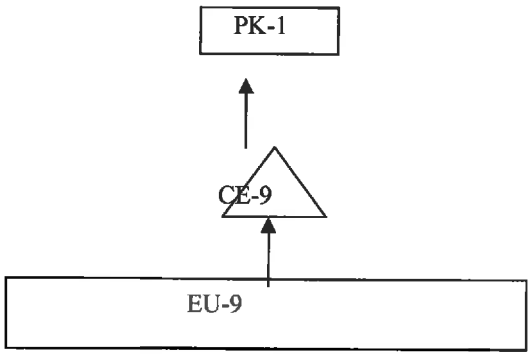
Form EU: Emission Unit Information

Please see instruction on reverse side

Company Name:	Thurston Manufacturing Company		
EMISSION UNIT (PROCESS) IDENTIFICATION & DESCRIPTION			
1) Emission Unit (EU) Name:	Paint Kitchen		
2) EU ID Number:	EU-9	EP ID Number:	PK-1
3) EU Type: ☒ New Source ☐ Unpermitted Existing Source ☐ Modification to a Permitted Source Previous Permit # is:			
4) Manufacturer:	Unknown		
5) Model:	Unknown		
6a) Maximum Nameplate Capacity:	7 gal/hr		
6b) Maximum Process Design Capacity (if different than 6a)			
7) Date of Construction:	2012		
8) Date of Modification (If applicable)			
9) Is this a Controlled Emission Unit? ☐ No ☒ Yes	If Yes, Control Equipment name/ID are: CE-9		
EMISSION UNIT OPERATING SCHEDLULE (hours/day, hours/year, or other)			
10) Actual Operation	121 hrs/week		
11) Maximum Operation	127 hrs/week		
REQUESTED LIMITS			
12) Are you requesting any permit limits? ☐ No ☒ Yes If Yes, check below and write down all that apply			
☐ Operation Hour Limits:			
☐ Production Limits:			
☐ Material Usage Limits			
☐ Limits Based on Stack Testing	Please attach all relevant stack testing summary reports		
☐ Other:			
Rationale for Requesting the Limit(s):			

PROCESS DESCRIPTION

13 Provide a description **AND** a drawing to show quantitatively how **product or material** flows through this emission unit. Include product input and output, fuel throughput, and any parameters which impact air emissions. If space below is insufficient, attach a separate sheet labeled EU-13A.



AIR QUALITY BUREAU
ATTN: Application Log in
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

AIR CONSTRUCTION PERMIT APPLICATION

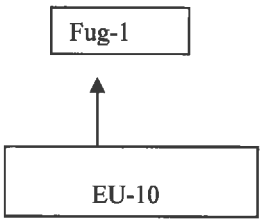
Form EU: Emission Unit Information

Please see instruction on reverse side

Company Name:	**Thurston Manufacturing Company**		
EMISSION UNIT (PROCESS) IDENTIFICATION & DESCRIPTION			
1) **Emission Unit (EU) Name:**	**Fugitive Heat**		
2) **EU ID Number:**	**EU-10**	**EP ID Number:**	**Fug-1**
3) **EU Type:** ☐ New Source ☒ Unpermitted Existing Source ☐ Modification to a Permitted Source Previous Permit # is:			
4) **Manufacturer:**			
5) **Model:**			
6a) **Maximum Nameplate Capacity:**			
6b) **Maximum Process Design Capacity** (if different than 6a)			
7) **Date of Construction:**			
8) **Date of Modification (if applicable)**			
9) Is this a Controlled Emission Unit? ☒ **No** ☐ **Yes**	If Yes, Control Equipment name/ID are:		
EMISSION UNIT OPERATING SCHEDLULE (hours/day, hours/year, or other)			
10) **Actual Operation**	**24/7 hours/day**		
11) **Maximum Operation**			
REQUESTED LIMITS			
12) **Are you requesting any permit limits?** ☒ **No** ☐ **Yes** **If Yes, check below and write down all that apply**			
☐ **Operation Hour Limits:**			
☐ **Production Limits:**			
☐ **Material Usage Limits**			
☐ **Limits Based on Stack Testing**	Please attach all relevant stack testing summary reports		
☐ **Other:**			
Rationale for Requesting the Limit(s):			

PROCESS DESCRIPTION

13 Provide a description **AND** a drawing to show quantitatively how **product or material** flows through this emission unit. Include product input and output, fuel throughput, and any parameters which impact air emissions. If space below is insufficient, attach a separate sheet labeled EU-13A.



CE

AIR QUALITY BUREAU
ATTN: Application Log in
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

IOWA DNR Air Construction Permit Application

Form CE Control Equipment Information
Please see instructions on the reverse side

Company Name Thurston Manufacturing Company

1) CE Number ID: CE - 1

2) Emission Point(s) ID: PB-1a-1c

3) Manufacturer: Unknown

4) Model Number: unknown

5) Control Equipment Description: Filter

6) Date of Construction: 2012

7) Date of Modification:

8) Capture Hood involved: ☐Yes ☐No

9) Capture Hood Efficiency (percentage):

10) Date of Hood Installation:

11) Date of Hood Modification (if any):

12) **Pollutant Controlled**

	PM	PM_{10}	VOC	SO_2	NO_x	CO	Other( )
Control Efficiency	99						

13) If manufacturer's data is not available attach a separate sheet of paper (labeled CE-13A) to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

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7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

IOWA DNR Air Construction Permit Application

Form CE Control Equipment Information

Please see instructions on the reverse side

Company Name Thurston Manufacturing Company

1) CE Number ID: CE-3

2) Emission Point(s) ID: SB-1

3) Manufacturer: Viking Blast

4) Model Number: V12-3

5) Control Equipment Description: Dust Collector

6) Date of Construction: 2012

7) Date of Modification:

8) Capture Hood involved: ☐Yes ☒No

9) Capture Hood Efficiency (percentage):

10) Date of Hood Installation:

11) Date of Hood Modification (if any):

12) **Pollutant Controlled**

	PM	PM_{10}	VOC	SO_2	NO_x	CO	Other( )
Control Efficiency	99						

13) If manufacturer's data is not available attach a separate sheet of paper (labeled CE-13A) to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

CE

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ATTN: Application Log in
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Windsor Heights, IA 50324

IOWA DNR Air Construction Permit Application

Form CE Control Equipment Information

Please see instructions on the reverse side

Company Name Thurston Manufacturing Company

1) CE Number ID: CE-7

2) Emission Point(s) ID: FB-1

3) Manufacturer: Unknown

4) Model Number: DFT2-8

5) Control Equipment Description: Dust Collector

6) Date of Construction: unknown

7) Date of Modification:

8) Capture Hood involved: ☐Yes ☒No

9) Capture Hood Efficiency (percentage):

10) Date of Hood Installation:

11) Date of Hood Modification (if any):

12) **Pollutant Controlled**

	PM	PM_{10}	VOC	SO_2	NO_x	CO	Other( )
Control Efficiency	90						

13) If manufacturer's data is not available attach a separate sheet of paper (labeled CE-13A) to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

CE

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ATTN: Application Log In
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

IOWA DNR Air Construction Permit Application

Form CE Control Equipment Information

Please see instructions on the reverse side

Company Name Thurston Manufacturing Company

1) CE Number ID: CE-8

2) Emission Point(s) ID: FB-2

3) Manufacturer: Unknown

4) Model Number: DFT2-8

5) Control Equipment Description: Dust Collector

6) Date of Construction: Unknown

7) Date of Modification:

8) Capture Hood involved: ☐Yes ☒No

9) Capture Hood Efficiency (percentage):

10) Date of Hood Installation:

11) Date of Hood Modification (if any):

12) **Pollutant Controlled**

	PM	PM_{10}	VOC	SO_2	NO_x	CO	Other( )
Control Efficiency	90						

13) If manufacturer's data is not available attach a separate sheet of paper (labeled CE-13A) to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

CE

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ATTN: Application Log in
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

IOWA DNR Air Construction Permit Application

Form CE Control Equipment Information
Please see instructions on the reverse side

Company Name Thurston Manufacturing Company

1) CE Number ID: CE-9

2) Emission Point(s) ID: PK-1

3) Manufacturer: Unknown

4) Model Number: Unknown

5) Control Equipment Description: Filter for paint kitchen

6) Date of Construction: 2012

7) Date of Modification:

8) Capture Hood involved: ☐Yes ☒No

9) Capture Hood Efficiency (percentage):

10) Date of Hood Installation:

11) Date of Hood Modification (if any):

12) **Pollutant Controlled**

	PM	PM_{10}	VOC	SO_2	NO_x	CO	Other( )
Control Efficiency	99						

13) If manufacturer's data is not available attach a separate sheet of paper (labeled CE-13A) to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

EP

AIR QUALITY BUREAU
ATTN: Application Log in
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

IOWA DNR Air Construction Permit Application

Form EP Stack/Vent Information

Please see instructions on the reverse side

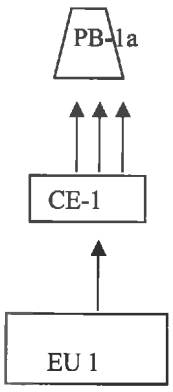
Company Name Thurston Manufacturing Company	
1) EP Number ID:PB-1a	
2) Stack Opening size: ☒ circular, diameter (inches) 44 ☐ other size (inches x inches) _____ ☐ Dual Stack	
3) Height from ground (feet): 39	
4) Height from highest building level (feet): 3	
5) Distance from the nearest property line (feet): 205	
6) Discharge Style (check one)	☒ Vertical (without rain cap or obstruction)
	☐ VR (Vertical with rain cap or obstruction)
	☐ D (Downward discharge; for example, a goose neck stack)
	☐ H (Horizontal discharge)
	☐ I (Inside-Vent inside building)

Exhaust Information

7) Moisture Content % (if known):	8) Exit Temperature (Fahrenheit): ambient °F
9) Rated Flow Rate: ☒ ACFM: 5000	☐ SCFM: _____
10) Does this emission point have control equipment? ☐ No ☒ Yes; If yes, provide control ID: CE-1	

Air Emissions Pathway Diagram

11) Air Emissions Pathway Diagram (see examples on reverse-side)



EP

AIR QUALITY BUREAU
ATTN: Application Log In
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

IOWA DNR Air Construction Permit Application

Form EP Stack/Vent Information
Please see instructions on the reverse side

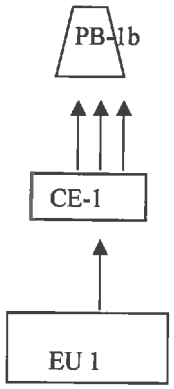
Company Name Thurston Manufacturing Company	
1) EP Number ID:PB-1b	
2) Stack Opening size: ☒ circular, diameter (inches) 46 ☐ other size (inches x inches) _____ ☐ Dual Stack	
3) Height from ground (feet): 39	
4) Height from highest building level (feet): 6	
5) Distance from the nearest property line (feet): 211	
6) Discharge Style (check one)	☒ Vertical (without rain cap or obstruction)
	☐ VR (Vertical with rain cap or obstruction)
	☐ D (Downward discharge; for example, a goose neck stack)
	☐ H (Horizontal discharge)
	☐ I (Inside-Vent inside building)

Exhaust Information

7) Moisture Content % (if known):	8) Exit Temperature (Fahrenheit): ambient °F
9) Rated Flow Rate: ☒ ACFM: 7500	☐ SCFM: _____
10) Does this emission point have control equipment? ☐ No ☒ Yes; If yes, provide control ID: CE-1	

Air Emissions Pathway Diagram

11) Air Emissions Pathway Diagram (see examples on reverse-side)



EP

AIR QUALITY BUREAU
ATTN: Application Log in
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

IOWA DNR Air Construction Permit Application

Form EP Stack/Vent Information

Please see instructions on the reverse side

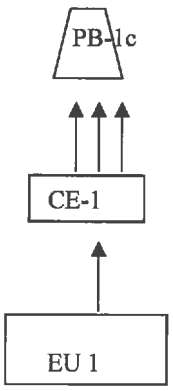
Company Name Thurston Manufacturing Company	
1) EP Number ID:**PB-1c**	
2) Stack Opening size: ☒ circular, diameter (inches) 44 ☐ other size (inches x inches) _____ ☐ Dual Stack	
3) Height from ground (feet): 39	
4) Height from highest building level (feet): 3	
5) Distance from the nearest property line (feet): 217	
6) Discharge Style (check one)	☒ Vertical (without rain cap or obstruction)
	☐ VR (Vertical with rain cap or obstruction)
	☐ D (Downward discharge; for example, a goose neck stack)
	☐ H (Horizontal discharge)
	☐ I (Inside-Vent inside building)

Exhaust Information

7) Moisture Content % (if known):	8) Exit Temperature (Fahrenheit): ambient °F
9) Rated Flow Rate: ☒ ACFM: 5000	☐ SCFM: _____
10) Does this emission point have control equipment? ☐ No ☒ Yes; If yes, provide control ID: CE-1	

Air Emissions Pathway Diagram

11) Air Emissions Pathway Diagram (see examples on reverse-side)



EP

AIR QUALITY BUREAU
ATTN: Application Log in
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

IOWA DNR Air Construction Permit Application

Form EP Stack/Vent Information
Please see instructions on the reverse side

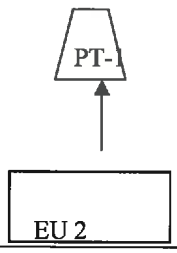
Company Name Thurston Manufacturing Company	
1) EP Number ID:PT-1	
2) Stack Opening size: ☐ circular, diameter (inches) _____ ☐ other size (inches x inches) _____ ☐ Dual Stack	
3) Height from ground (feet):	
4) Height from highest building level (feet):	
5) Distance from the nearest property line (feet):	
6) Discharge Style (check one)	☐ Vertical (without rain cap or obstruction)
	☐ VR (Vertical with rain cap or obstruction)
	☐ D (Downward discharge; for example, a goose neck stack)
	☐ H (Horizontal discharge)
	☒ I (Inside-Vent inside building)

Exhaust Information

7) Moisture Content % (if known):	8) Exit Temperature (Fahrenheit): ambient °F
9) Rated Flow Rate: ☐ ACFM: fugitive	☐ SCFM: _____
10) Does this emission point have control equipment? ☒ No ☐ Yes; If yes, provide control ID: _____	

Air Emissions Pathway Diagram

11) Air Emissions Pathway Diagram (see examples on reverse-side)



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Windsor Heights, IA 50324

IOWA DNR Air Construction Permit Application

Form EP Stack/Vent Information

Please see instructions on the reverse side

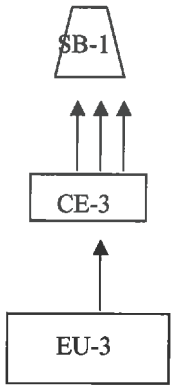
Company Name Thurston Manufacturing Company	
1) EP Number ID:SB-1	
2) Stack Opening size: ☐ circular, diameter (inches) _____ ☐ other size (inches x inches) _____ ☐ Dual Stack	
3) Height from ground (feet):	
4) Height from highest building level (feet):	
5) Distance from the nearest property line (feet):	
6) Discharge Style (check one)	☐ Vertical (without rain cap or obstruction)
	☐ VR (Vertical with rain cap or obstruction)
	☐ D (Downward discharge; for example, a goose neck stack)
	☐ H (Horizontal discharge)
	☒ I (Inside-Vent inside building)

Exhaust Information

7) Moisture Content % (if known):	8) Exit Temperature (Fahrenheit): ambient °F
9) Rated Flow Rate: ☐ ACFM: fugitive	☐ SCFM: _____
10) Does this emission point have control equipment? ☐ No ☒ Yes; If yes, provide control ID: CE-3	

Air Emissions Pathway Diagram

11) Air Emissions Pathway Diagram (see examples on reverse-side)



AIR QUALITY BUREAU
ATTN: Application Log in
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

IOWA DNR Air Construction Permit Application

Form EP Stack/Vent Information

Please see instructions on the reverse side

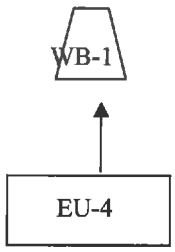
Company Name Thurston Manufacturing Company	
1) EP Number ID:WB-1	
2) Stack Opening size: ☐ circular, diameter (inches) _____ ☐ other size (inches x inches) _____ ☐ Dual Stack	
3) Height from ground (feet):	
4) Height from highest building level (feet):	
5) Distance from the nearest property line (feet):	
6) Discharge Style (check one)	☐ Vertical (without rain cap or obstruction)
	☐ VR (Vertical with rain cap or obstruction)
	☐ D (Downward discharge; for example, a goose neck stack)
	☐ H (Horizontal discharge)
	☒ I (Inside-Vent inside building)

Exhaust Information

7) Moisture Content % (if known):	8) Exit Temperature (Fahrenheit): ambient °F
9) Rated Flow Rate: ☐ ACFM: fugitive	☐ SCFM: _____
10) Does this emission point have control equipment? ☒ No ☐ Yes; If yes, provide control ID: _____	

Air Emissions Pathway Diagram

11) Air Emissions Pathway Diagram (see examples on reverse-side)



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Windsor Heights, IA 50324

IOWA DNR Air Construction Permit Application

Form EP Stack/Vent Information
Please see instructions on the reverse side

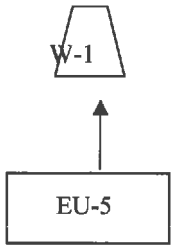
Company Name Thurston Manufacturing Company	
1) EP Number ID:W-1	
2) Stack Opening size: ☐ circular, diameter (inches) _____ ☐ other size (inches x inches) _____ ☐ Dual Stack	
3) Height from ground (feet):	
4) Height from highest building level (feet):	
5) Distance from the nearest property line (feet):	
6) Discharge Style (check one)	☐ Vertical (without rain cap or obstruction)
	☐ VR (Vertical with rain cap or obstruction)
	☐ D (Downward discharge; for example, a goose neck stack)
	☐ H (Horizontal discharge)
	☒ I (Inside-Vent inside building)

Exhaust Information

7) Moisture Content % (if known):	8) Exit Temperature (Fahrenheit): ambient °F
9) Rated Flow Rate: ☐ ACFM: fugitive	☐ SCFM: _____
10) Does this emission point have control equipment? ☒ No ☐ Yes; If yes, provide control ID: _____	

Air Emissions Pathway Diagram

11) Air Emissions Pathway Diagram (see examples on reverse-side)



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7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

IOWA DNR Air Construction Permit Application

Form EP Stack/Vent Information

Please see instructions on the reverse side

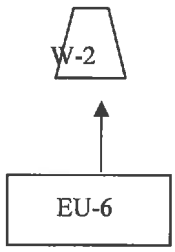
Company Name Thurston Manufacturing Company	
1) EP Number ID:W-2	
2) Stack Opening size: ☐ circular, diameter (inches) _____ ☐ other size (inches x inches) _____ ☐ Dual Stack	
3) Height from ground (feet):	
4) Height from highest building level (feet):	
5) Distance from the nearest property line (feet):	
6) Discharge Style (check one)	☐ Vertical (without rain cap or obstruction)
	☐ VR (Vertical with rain cap or obstruction)
	☐ D (Downward discharge; for example, a goose neck stack)
	☐ H (Horizontal discharge)
	☒ I (Inside-Vent inside building)

Exhaust Information

7) Moisture Content % (if known):	8) Exit Temperature (Fahrenheit): ambient °F
9) Rated Flow Rate: ☐ ACFM: fugitive	☐ SCFM: _____
10) Does this emission point have control equipment? ☒ No ☐ Yes; If yes, provide control ID: _____	

Air Emissions Pathway Diagram

11) Air Emissions Pathway Diagram (see examples on reverse-side)



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7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

IOWA DNR Air Construction Permit Application

Form EP Stack/Vent Information

Please see instructions on the reverse side

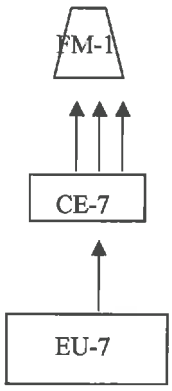
Company Name Thurston Manufacturing Company	
1) EP Number ID:FM-1	
2) Stack Opening size: ☐ circular, diameter (inches) _____ ☒ other size (inches x inches) 10x16 ☐ Dual Stack	
3) Height from ground (feet): 6	
4) Height from highest building level (feet): -30	
5) Distance from the nearest property line (feet): 40	
6) Discharge Style (check one)	☐ Vertical (without rain cap or obstruction)
	☐ VR (Vertical with rain cap or obstruction)
	☒ D (Downward discharge; for example, a goose neck stack)
	☐ H (Horizontal discharge)
	☐ I (Inside-Vent inside building)

Exhaust Information

7) Moisture Content % (if known):	8) Exit Temperature (Fahrenheit): ambient °F
9) Rated Flow Rate: ☒ ACFM: 5000	☐ SCFM: _____
10) Does this emission point have control equipment? ☐ No ☒ Yes; If yes, provide control ID: CE-7	

Air Emissions Pathway Diagram

11) Air Emissions Pathway Diagram (see examples on reverse-side)



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Windsor Heights, IA 50324

IOWA DNR Air Construction Permit Application

Form EP Stack/Vent Information

Please see instructions on the reverse side

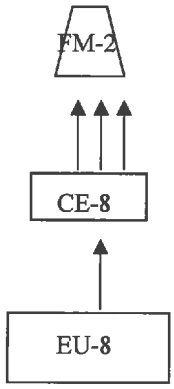
Company Name Thurston Manufacturing Company	
1) EP Number ID:FM-2	
2) Stack Opening size: ☐ circular, diameter (inches) _____ ☒ other size (inches x inches) 12x18 ☐ Dual Stack	
3) Height from ground (feet): 6	
4) Height from highest building level (feet): -30	
5) Distance from the nearest property line (feet): 40	
6) Discharge Style (check one)	☐ Vertical (without rain cap or obstruction)
	☐ VR (Vertical with rain cap or obstruction)
	☐ D (Downward discharge; for example, a goose neck stack)
	☒ H (Horizontal discharge)
	☐ I (Inside-Vent inside building)

Exhaust Information

7) Moisture Content % (if known):	8) Exit Temperature (Fahrenheit): ambient °F
9) Rated Flow Rate: ☒ ACFM: 5000	☐ SCFM: _____
10) Does this emission point have control equipment? ☐ No ☒ Yes; If yes, provide control ID: CE-8	

Air Emissions Pathway Diagram

11) Air Emissions Pathway Diagram (see examples on reverse-side)



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Windsor Heights, IA 50324

IOWA DNR Air Construction Permit Application

Form EP Stack/Vent Information

Please see instructions on the reverse side

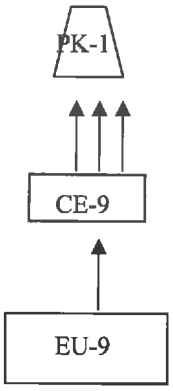
Company Name Thurston Manufacturing Company	
1) EP Number ID:PK-1	
2) Stack Opening size: ☒ circular, diameter (inches) 12 ☐ other size (inches x inches) _____ ☐ Dual Stack	
3) Height from ground (feet): 46	
4) Height from highest building level (feet): 10	
5) Distance from the nearest property line (feet): 193	
6) Discharge Style (check one)	☒ Vertical (without rain cap or obstruction)
	☐ VR (Vertical with rain cap or obstruction)
	☐ D (Downward discharge; for example, a goose neck stack)
	☐ H (Horizontal discharge)
	☐ I (Inside-Vent inside building)

Exhaust Information

7) Moisture Content % (if known):	8) Exit Temperature (Fahrenheit): ambient °F
9) Rated Flow Rate: ☒ ACFM: 2000	☐ SCFM: _____
10) Does this emission point have control equipment? ☐ No ☒ Yes; If yes, provide control ID: CE-9	

Air Emissions Pathway Diagram

11) Air Emissions Pathway Diagram (see examples on reverse-side)



EP

AIR QUALITY BUREAU
ATTN: Application Log in
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

IOWA DNR Air Construction Permit Application

Form EP Stack/Vent Information
Please see instructions on the reverse side

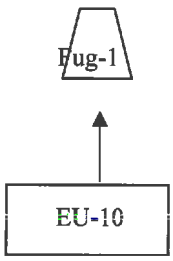
Company Name Thurston Manufacturing Company	
1) EP Number ID:Fug-1	
2) Stack Opening size: ☐ circular, diameter (inches) ☐ other size (inches x inches) _____ ☐ Dual Stack	
3) Height from ground (feet):	
4) Height from highest building level (feet):	
5) Distance from the nearest property line (feet):	
6) Discharge Style (check one)	☐ Vertical (without rain cap or obstruction)
	☐ VR (Vertical with rain cap or obstruction)
	☐ D (Downward discharge; for example, a goose neck stack)
	☐ H (Horizontal discharge)
	☒ I (Inside-Vent inside building)

Exhaust Information

7) Moisture Content % (if known):	8) Exit Temperature (Fahrenheit): ambient °F
9) Rated Flow Rate: ☐ ACFM: fugitives	☐ SCFM: _____
10) Does this emission point have control equipment? ☐ No ☐ Yes; If yes, provide control ID:	

Air Emissions Pathway Diagram

11) Air Emissions Pathway Diagram (see examples on reverse-side)



AIR QUALITY BUREAU
Application Log in Desk
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

AIR CONSTRUCTION PERMIT APPLICATION

Form EC: Emission Calculations
Please see instructions on reverse side

1) Company Name: Thurston Manufacturing Company

2) Emission Point (Stack/Vent) Number: EP-1 Paint Booth

3) Emission Calculation (Please see instructions for proper way to calculate). This calculation is based on (check all that apply):
☐ Emission Factors ☒ Mass Balance ☐ Testing Data ☐ Other:

Calculations:

4) POTENTIAL EMISSIONS: SUMMARY OF EMISSIONS FROM THIS EMISSION POINT

Pollutant	PM	PM_{10}	$PM_{2.5}$	SO_2	NOx	VOC	CO	CO_2e	Lead	HAP	THAP
Concentration, (Unit):											
lbs/hr	6.90E-03	6.90E-03	6.90E-03			4.654				2.673	2.192
tons/year	3.00E-02	3.00E-02	3.00E-02			2.04E+01				1.17E+01	9.60

Thurston Manufacturing **2012 Air Permits** **Thurston, NE**			
Emission Unit:	Paint Booth 1, EU-1		
Emission Point:	PB-1a-1c		
SCC:	Mass Balance		
Input Data:			
	Potential Solvent PM, PM 10, and PM 2.5	0.00	tons/yr
	Potential Primer PM, PM 10, and PM 2.5	0.02	tons/yr
	Potential Topcoat PM, PM 10, and PM 2.5	0.01	tons/yr
	Actual Solvent PM, PM 10, and PM 2.5		tons/yr
	Actual Primer PM, PM 10, and PM 2.5		tons/yr
	Actual Topcoat PM, PM 10, and PM 2.5		tons/yr
Potential Emissions:			
PM, PM 10, PM 2.5	0.00 tons/yr solvent + 0.02 tons/yr primer + 0.01 tons/yr topcoat	3.004E-02	tons/yr

Thurston Manufacturing **2012 Air Permits** **Thurston, NE**	**Emission Units:** Paint Booth **Emission Points:** PB-1 **SCC:** Mass Balance			
Input Data:	**Solvent: Q60 Methyl Ethyl Ketone**			
	Proposed Usage		2,500	gallons/yr
	Estimated Usage @	15 oz per minute	7.0	gal/hr
	Weight per gallon, average		6.71	lb/gal
	Maximum application rate		47.18	lb/hr
	% Solid		0.0%	%
	% Volatile		100.0%	%
	% HAP		0.00%	%
	% MEK		100.00%	%
	building filter Efficiency		99%	%
	Application Efficiency		75%	%
	Air flow		17500	scf/min
Potential Emissions:				
PM-10 & 2.5	47.18 lb/hr * 0 solid * 0.99 filter eff * 0.75 app eff		0.00	lbs/hr
	0.00 lb/hr * 8760 hrs/yr / 2000 lbs/ton		0.00	tons/yr
VOC	47.18 lb/hr * 1 volatile		47.18	lbs/hr
	47.18 lb/hr * 8760 hrs/yr / 2000 lbs/ton		206.65	tons/yr
HAP	47.18 lb/hr * 0 HAP		0.00	lbs/hr
	0.00 lb/hr * 8760 hrs/yr / 2000 lbs/ton		0.00	tons/yr
MEK	47.18 lb/hr * 1.00 MEK		47.18	lbs/hr
	47.18 lbs/hr * 8760 hrs/yr / 2000 lbs/ton		206.65	tons/yr
Potential with Limits:		**LIMIT:**	2500.00	gal/yr
PM-10 & 2.5	2,500 gal/yr * 0 Solid * 0.99 filter eff * 6.71 lb/gal * 0.75 app eff		0.00	lbs/yr
	0.00 lbs/yr / 2000 lbs/ton		0.000	tons/yr
VOC	2,500 gal/yr * 1 Volatile * 6.71 lb/gal		16775.00	lbs/yr
	16,775.00 lbs/yr / 2000 lbs/ton		8.388	tons/yr
HAP	2,500 gal/yr * 0 HAP * 6.71 lb/gal		0.00	lbs/yr
	0.00 lbs/yr / 2000 lbs/ton		0.000	tons/yr
MEK	2,500 gal/yr * 1 MEK * 6.71 lb/gal		16775.00	lbs/yr
	16,775.00 lbs/yr / 2000 lbs/ton		8.388	tons/yr

**Contains methyl ethyl ketone.

Thurston Manufacturing 2012 Air Permits Thurston, NE	**Emission Units:** Paint Booth **Emission Points:** PB-1 **SCC:** Mass Balance			
Input Data:	**Primer: QAP581 WOW epoxy primer**			
	Proposed Usage		2,500	gallons/yr
	Estimated Usage @	15 oz per min.	7.0	gal/hr
	Weight per gallon, average		10.70	lb/gal
	Maximum application rate		75.23	lb/hr
	% Solid		58.7%	%
	% Volatile		41.3%	%
	% HAP		7.98%	%
	% Xylene		6.81%	%
	building filter Efficiency		99%	%
	Application Efficiency		75%	%
	Air flow		17500	scf/min
Potential Emissions:				
PM-10 & 2.5	75.23 lb/hr * 0.5869 solid * 0.99 filter eff * 0.75 app eff		0.11	lbs/hr
	0.11 lb/hr * 8760 hrs/yr / 2000 lbs/ton		0.48	tons/yr
VOC	75.23 lb/hr * 0.4131 volatile		31.08	lbs/hr
	31.08 lb/hr * 8760 hrs/yr / 2000 lbs/ton		136.13	tons/yr
HAP	75.23 lb/hr * 0.0798 HAP		6.00	lbs/hr
	6.00 lb/hr * 8760 hrs/yr / 2000 lbs/ton		26.30	tons/yr
Xylene	75.23 lb/hr * 0.07 Xylene		5.12	lbs/hr
	5.12 lbs/hr * 8760 hrs/yr / 2000 lbs/ton		22.44	tons/yr
Potential with Limits:		**LIMIT:**	2500.00	gal/yr
PM-10 & 2.5	2,500 gal/yr * 0.5869 Solid * 0.99 filter eff * 10.7 lb/gal * 0.75 app eff		39.25	lbs/yr
	39.25 lbs/yr / 2000 lbs/ton		0.020	tons/yr
VOC	2,500 gal/yr * 0.4131 Volatile * 10.7 lb/gal		11050.43	lbs/yr
	11,050.43 lbs/yr / 2000 lbs/ton		5.525	tons/yr
HAP	2,500 gal/yr * 0.0798 HAP * 10.7 lb/gal		2134.65	lbs/yr
	2,134.65 lbs/yr / 2000 lbs/ton		1.067	tons/yr
Xylene	2,500 gal/yr * 0.0681 Xylene * 10.7 lb/gal		1821.68	lbs/yr
	1,821.68 lbs/yr / 2000 lbs/ton		0.911	tons/yr

**Contains xylene and ethyl benzene.

Thurston Manufacturing **2012 Air Permits** **Thurston, NE**	**Emission Units:** Paint Booth **Emission Points:** PB-1 **SCC:** Mass Balance				
Input Data:	**Top Coat: DM19126 Black Enamel (current dip paint)**				
	Proposed Usage			2,500	gallons/yr
	Estimated Usage @	15	oz per min.	7.0	gal/hr
	Weight per gallon, average			8.51	lb/gal
	Maximum application rate			59.84	lb/hr
	% Solid			39.2%	%
	% Volatile			60.9%	%
	% HAP			100.00%	%
	% Xylene			81.68%	%
	building filter Efficiency			99%	%
	Application Efficiency			75%	%
	Air flow			17500	scf/min
Potential Emissions:					
PM-10 & 2.5	59.84 lb/hr * 0.3915 solid * 0.99 filter eff * 0.75 app eff			0.06	lbs/hr
	0.06 lb/hr * 8760 hrs/yr / 2000 lbs/ton			0.26	tons/yr
VOC	59.84 lb/hr * 0.6085 volatile			36.41	lbs/hr
	36.41 lb/hr * 8760 hrs/yr / 2000 lbs/ton			159.48	tons/yr
HAP	59.84 lb/hr * 1 HAP			59.84	lbs/hr
	59.84 lb/hr * 8760 hrs/yr / 2000 lbs/ton			262.08	tons/yr
Xylene	59.84 lb/hr * 0.82 Xylene			48.87	lbs/hr
	48.87 lbs/hr * 8760 hrs/yr / 2000 lbs/ton			214.07	tons/yr
Potential with Limits:			**LIMIT:**	2500.00	gal/yr
PM-10 & 2.5	2,500 gal/yr * 0.3915 Solid * 0.99 filter eff * 8.51 lb/gal * 0.75 app eff			20.82	lbs/yr
	20.82 lbs/yr / 2000 lbs/ton			0.010	tons/yr
VOC	2,500 gal/yr * 0.6085 Volatile * 8.51 lb/gal			12945.84	lbs/yr
	12,945.84 lbs/yr / 2000 lbs/ton			6.473	tons/yr
HAP	2,500 gal/yr * 1 HAP * 8.51 lb/gal			21275.00	lbs/yr
	21,275.00 lbs/yr / 2000 lbs/ton			10.638	tons/yr
Xylene	2,500 gal/yr * 0.8168 Xylene * 8.51 lb/gal			17377.42	lbs/yr
	17,377.42 lbs/yr / 2000 lbs/ton			8.689	tons/yr

**Contains xylene, ethyl benzene, naphthalene, methanol, and toluene.

AIR QUALITY BUREAU
Application Log in Desk
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

AIR CONSTRUCTION PERMIT APPLICATION

Form EC: Emission Calculations
Please see instructions on reverse side

1) Company Name: Thurston Manufacturing Company

2) Emission Point (Stack/Vent) Number:
EP-2 Plasma Table

3) Emission Calculation (Please see instructions for proper way to calculate). This calculation is based on (check all that apply):
☐ Emission Factors ☐ Mass Balance ☐ Testing Data ☒ Other: Engineering Calculations

Calculations:

4) POTENTIAL EMISSIONS: SUMMARY OF EMISSIONS FROM THIS EMISSION POINT

Pollutant	PM	PM_{10}	$PM_{2.5}$	SO_2	NOx	VOC	CO	CO_2e	Lead	HAP	THAP
Concentration, (Unit):											
lbs/hr	0.814	0.814	0.814								
tons/year	3.564	3.564	3.564								

Thurston Manufacturing **2012 Air Permits** **Thurston, NE**			
Emission Unit:	Plasma Table, EU-2		
Emission Point:	PT-1		
SCC:	Engineering Calculations		
Input Data:	Bag House Efficiency	0%	%
	Metal thickness	0.375	inches
	Width of cut	0.125	inches
	Volume of cut per inch	0.0469	ci
	Weight of Steel	250	lbs/cf
		0.145	lbs/ci
	Weight of steel per inch of cut	0.00678	lbs/inch
	Percent emitted	5	%
	Controlled emissions	3.39E-04	lbs/inch
	Maximum inches per time	2,400	inches/hr
	Actual inches per time	0	inches/hr
	Actual operating time	0	hrs/yr
Potential Emissions:			
PM 10	0.00678 lbs/inch of cut * 5% emitted * 2,400 inches/hr * 0% efficiency	0.814	lbs/hr
	0.814 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	3.564	tons/yr

Max. cut is 40 in/min on an average of 3/8" steel with ¾" electrode tip

AIR QUALITY BUREAU
Application Log in Desk
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

AIR CONSTRUCTION PERMIT APPLICATION

Form EC: Emission Calculations
Please see instructions on reverse side

1) Company Name: Thurston Manufacturing Company

2) Emission Point (Stack/Vent) Number: EP-3 Shot Blast

3) Emission Calculation (Please see instructions for proper way to calculate). This calculation is based on (check all that apply):
☒ Emission Factors ☐ Mass Balance ☐ Testing Data ☐ Other:

Calculations:

4) POTENTIAL EMISSIONS: SUMMARY OF EMISSIONS FROM THIS EMISSION POINT

Pollutant	PM	PM_{10}	$PM_{2.5}$	SO_2	NOx	VOC	CO	CO_2e	Lead	HAP	THAP
Concentration, (Unit):											
lbs/hr	1.242	1.242	1.242								
tons/year	5.44	5.44	5.44								

Thurston Manufacturing 2012 Air Permits Thurston, NE			
Emission Unit:	Shot Blast, EU-3		
Emission Point:	SB-1		
SCC:	30900202		
Input Data:			
	Bag House Efficiency	90.00%	%
	SCC Emission Factor, PM 2.5	0.69	lbs/1000 lbs
	SCC Emission Factor, PM 10	0.69	lbs/1000 lbs
	Max. shot consumed	1.58E+08	lbs/yr
	Actual shot consumed	0	lbs/yr
Potential Emissions:			
PM 2.5	0.69 lbs/1000 lbs shot * 157680000 lbs/yr consumed * 90% efficiency	10879.92	lbs/yr
	10,879.9 lbs/yr / 2000 lbs/ton	5.44	tons/yr
PM 10	0.69 lbs/1000 lbs shot * 157680000 lbs/yr consumed * 90% efficiency	10879.92	lbs/yr
	10,879.9200 lbs/yr / 2000 lbs/ton	5.44	tons/yr

AIR QUALITY BUREAU
Application Log in Desk
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

AIR CONSTRUCTION PERMIT APPLICATION

Form EC: Emission Calculations
Please see instructions on reverse side

1) Company Name: Thurston Manufacturing Company

2) Emission Point (Stack/Vent) Number: EP-4 Wash Bay

3) Emission Calculation (Please see instructions for proper way to calculate). This calculation is based on (check all that apply):
☐ Emission Factors ☒ Mass Balance ☐ Testing Data ☐ Other:

Calculations:

4) POTENTIAL EMISSIONS: SUMMARY OF EMISSIONS FROM THIS EMISSION POINT

Pollutant	PM	PM_{10}	$PM_{2.5}$	SO_2	NOx	VOC	CO	CO_2e	Lead	HAP	THAP
Concentration, (Unit):											
lbs/hr	0.0	0.0	0.0			0.1229					
tons/year	0.0	0.0	0.0			0.54					

Thurston Manufacturing 2012 Air Permits Thurston, NE			
Emission Unit:	Wash Bay, EU-4		
Emission Point:	WB-1		
SCC:	Mass Balance		
Input Data:	*Phosphate Wash Bay*		
	Efficiency	90.00%	%
	Density	9.10	lb/gal
	SCC Emission Factor, PM 2.5/10	0.00	lbs/1000 lbs
	SCC Emission Factor, VOC	0.45	lbs/1000 lbs
	Max. wash material consumed	23914800	lb/yr
	Actual wash material consumed		lb/yr
Potential Emissions:			
PM 2.5/10	0.00 lbs/1000 lbs material * 23914800lbs/yr consumed * 90% efficiency	0.00	lbs/yr
	0.0 lbs/yr / 2000 lbs/ton	0.00	tons/yr
VOC	0.45 lbs/1000 lbs material * 23914800 lbs/yr consumed * 90% efficiency	1076.17	lbs/yr
	1,076.1660 lbs/yr / 2000 lbs/ton	0.54	tons/yr

AIR QUALITY BUREAU
Application Log In Desk
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

AIR CONSTRUCTION PERMIT APPLICATION

Form EC: Emission Calculations
Please see instructions on reverse side

1) Company Name: Thurston Manufacturing Company

2) Emission Point (Stack/Vent) Number: EP-5 Welding Ag.

3) Emission Calculation (Please see instructions for proper way to calculate). This calculation is based on (check all that apply):
☒ Emission Factors ☐ Mass Balance ☐ Testing Data ☐ Other:

Calculations:

4) POTENTIAL EMISSIONS: SUMMARY OF EMISSIONS FROM THIS EMISSION POINT

Pollutant	PM	PM_{10}	$PM_{2.5}$	SO_2	NOx	VOC	CO	CO_2e	Lead	HAP	THAP
Concentration, (Unit):											
lbs/hr	1.354	1.354	1.354								0.0836
tons/year	5.931	5.931	5.931								0.366

Thurston Manufacturing **2012 Air Permits** **Thurston, NE**			
Emission Units:	Welding Ag EU-5		
Emission Points:	W-1		
SCC:	30905254		
Input Data:	***E70 Electrode***		
	Material Used		lbs/yr
	SCC Emission Factor, PM 10	5.20	lb/10^3 lb
	SCC Emission Factor, Manganese	0.318	lb/10^3 lb
	SCC Emission Factor, Cobalt	0.001	lb/10^3 lb
	SCC Emission Factor, Nickel	0.001	lb/10^3 lb
	SCC Emission Factor, Chromium	0.001	lb/10^3 lb
	Maximum yearly output for 12 welders	2281104	lbs/yr
Potential Emissions:			
PM-10	5.200 lb/10^3 lb * 2,281,104.000 lbs/yr / 2000 lbs/ton	5.931	tons/yr
Manganese	0.318 lb/10^3 lb * 2,281,104.000 lbs/yr / 2000 lbs/ton	0.363	tons/yr
Cobalt	0.001 lb/10^3 lb * 2,281,104.000 lbs/yr / 2000 lbs/ton	0.001	tons/yr
Nickel	0.001 lb/10^3 lb * 2,281,104.000 lbs/yr / 2000 lbs/ton	0.001	tons/yr
Chromium	0.001 lb/10^3 lb * 2,281,104.000 lbs/yr / 2000 lbs/ton	0.001	tons/yr

GMAW E70s

AIR QUALITY BUREAU
Application Log in Desk
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

AIR CONSTRUCTION PERMIT APPLICATION

Form EC: Emission Calculations
Please see instructions on reverse side

1) Company Name: Thurston Manufacturing Company

2) Emission Point (Stack/Vent) Number: EP-6 Welding-Trailers

3) Emission Calculation (Please see instructions for proper way to calculate). This calculation is based on (check all that apply):
☒ Emission Factors ☐ Mass Balance ☐ Testing Data ☐ Other:

Calculations:

4) POTENTIAL EMISSIONS: SUMMARY OF EMISSIONS FROM THIS EMISSION POINT

Pollutant	PM	PM_{10}	$PM_{2.5}$	SO_2	NOx	VOC	CO	CO_2e	Lead	HAP	THAP
Concentration, (Unit):											
lbs/hr	1.744	1.744	1.744								0.104
tons/year	7.639	7.639	7.639								0.455

Thurston Manufacturing **2012 Air Permits** **Thurston, NE**			
Emission Units:	Welding Trailers EU-6		
Emission Points:	W-2		
SCC:	30905354		
Input Data:	***E70 Electrode***		
	Ma erial Used		lbs/yr
	SCC Emission Factor, PM 10	15.10	lb/10^3 lb
	SCC Emission Factor, Manganese	0.891	lb/10^3 lb
	SCC Emission Factor, Cobalt	0	lb/10^3 lb
	SCC Emission Factor, Nickel	0.005	lb/10^3 lb
	SCC Emission Factor, Chromium	0.004	lb/10^3 lb
	Maximum yearly output for 7 welders	1011780	lbs/yr
Potential Emissions:			
PM-10	15.100 lb/10^3 lb * 1,011,780.000 lbs/yr / 2000 lbs/ton	7.639	tons/yr
Manganese	0.891 lb/10^3 lb * 1,011,780.000 lbs/yr / 2000 lbs/ton	0.451	tons/yr
Cobalt	0.000 lb/10^3 lb * 1,011,780.000 lbs/yr / 2000 lbs/ton	0.000	tons/yr
Nickel	0.005 lb/10^3 lb * 1,011,780.000 lbs/yr / 2000 lbs/ton	0.003	tons/yr
Chromium	0.004 lb/10^3 lb * 1,011,780.000 lbs/yr / 2000 lbs/ton	0.002	tons/yr

FCAW E70
Co not determined for FCAW E70

AIR QUALITY BUREAU
Application Log in Desk
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

AIR CONSTRUCTION PERMIT APPLICATION

Form EC: Emission Calculations
Please see instructions on reverse side

1) Company Name: Thurston Manufacturing Company

2) Emission Point (Stack/Vent) Number:
EP-7 Fabrication Machine 1

3) Emission Calculation (Please see instructions for proper way to calculate). This calculation is based on (check all that apply):
☐ Emission Factors ☐ Mass Balance ☐ Testing Data ☒ Other: Engineering Calculations

Calculations:

4) POTENTIAL EMISSIONS: SUMMARY OF EMISSIONS FROM THIS EMISSION POINT

Pollutant	PM	PM_{10}	$PM_{2.5}$	SO_2	NOx	VOC	CO	CO_2e	Lead	HAP	THAP
Concentration, (Unit):											
lbs/hr	0.237	0.237	0.237								
tons/year	1.040	1.040	1.040								

For Assistance 1-877AIR IOWA (1-877-247-4692)

Thurston Manufacturing 2012 Air Permits Thurston, NE			
Emission Unit:	Fab. Machine 1, EU-7		
Emission Point:	FM-1		
SCC:	Engineering Calculations		
Input Data:	Bag House Efficiency	90.00%	%
	Metal thickness	0.625	inches
	Width of cut	0.250	inches
	Volume of cut per inch	0.1563	ci
	Weight of Steel	250	lbs/cf
		0.145	lbs/ci
	Weight of steel per inch of cut	0.02261	lbs/inch
	Percent emitted	5	%
	Controlled emissions	1.13E-03	lbs/inch
	Maximum inches per time	2,100	inches/hr
	Actual inches per time	0	inches/hr
	Actual operating time	0	hrs/yr
Potential Emissions:			
PM 10	0.02261 lbs/inch of cut * 5% emitted * 2,100 inches/hr * 90% efficiency	0.237	lbs/hr
	0.237 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	1.040	tons/yr

AIR QUALITY BUREAU
Application Log in Desk
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

AIR CONSTRUCTION PERMIT APPLICATION

Form EC: Emission Calculations
Please see instructions on reverse side

1) Company Name: Thurston Manufacturing Company

2) Emission Point (Stack/Vent) Number:
EP-8 Fabrication Machine 2

3) Emission Calculation (Please see instructions for proper way to calculate). This calculation is based on (check all that apply):
☐ Emission Factors ☐ Mass Balance ☐ Testing Data ☒ Other: Engineering Calculations

Calculations:

4) POTENTIAL EMISSIONS: SUMMARY OF EMISSIONS FROM THIS EMISSION POINT

Pollutant	PM	PM_{10}	$PM_{2.5}$	SO_2	NOx	VOC	CO	CO_2e	Lead	HAP	THAP
Concentration, (Unit):											
lbs/hr	0.237	0.237	0.237								
tons/year	1.040	1.040	1.040								

Thurston Manufacturing 2012 Air Permits Thurston, NE			
Emission Unit:	Fab. Machine 2, EU-8		
Emission Point:	FM-2		
SCC:	Engineering Calculations		
Input Data:	Bag House Efficiency	90.00%	%
	Metal thickness	0.625	inches
	Width of cut	0.250	inches
	Volume of cut per inch	0.1563	ci
	Weight of Steel	250	lbs/cf
		0.145	lbs/ci
	Weight of steel per inch of cut	0.02261	lbs/inch
	Percent emitted	5	%
	Controlled emissions	1.13E-03	lbs/inch
	Maximum inches per time	2,100	inches/hr
	Actual inches per time	0	inches/hr
	Actual operating time	0	hrs/yr
Potential Emissions:			
PM 10	0.02261 lbs/inch of cut * 5% emitted * 2,100 inches/hr * 90% efficiency	0.237	lbs/hr
	0.237 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	1.040	tons/yr

AIR QUALITY BUREAU
Application Log in Desk
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

AIR CONSTRUCTION PERMIT APPLICATION

Form EC: Emission Calculations
Please see instructions on reverse side

1) Company Name: Thurston Manufacturing Company

2) Emission Point (Stack/Vent) Number: EP-9 Paint Kitchen

3) Emission Calculation (Please see instructions for proper way to calculate). This calculation is based on (check all that apply):
☐ Emission Factors ☐ Mass Balance ☐ Testing Data ☒ Other:

Calculations:

4) POTENTIAL EMISSIONS: SUMMARY OF EMISSIONS FROM THIS EMISSION POINT

Pollutant	PM	PM_{10}	$PM_{2.5}$	SO_2	NOx	VOC	CO	CO_2e	Lead	HAP	THAP
Concentration, (Unit):											
lbs/hr						0.233					
tons/year						1.019					

Thurston Manufacturing **2012 Air Permits** **Thurston, NE**			
Emission Unit:	Paint Kitchen, EU-9		
Emission Point:	PK-1		
SCC:	Mass Balance		
Input Data:			
	Potential Solvent VOC	8.39	tons/yr
	Potential Primer VOC	5.53	tons/yr
	Potential Topcoat VOC	6.47	tons/yr
	Actual Solvent VOC		tons/yr
	Actual Primer VOC		tons/yr
	Actual Topcoat VOC		tons/yr
Potential Emissions:			
VOC	8.39 tons/yr solvent * 5% emitted + 5.53 tons/yr primer * 5% emitted + 6.47 tons/yr topcoat * 5% emitted	1.019	tons/yr

AIR QUALITY BUREAU
Application Log in Desk
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

AIR CONSTRUCTION PERMIT APPLICATION

Form EC: Emission Calculations
Please see instructions on reverse side

1) Company Name: Thurston Manufacturing Company

2) Emission Point (Stack/Vent) Number:
EP-10 Fugitive Heat

3) Emission Calculation (Please see instructions for proper way to calculate). This calculation is based on (check all that apply):
☒ Emission Factors ☐ Mass Balance ☐ Testing Data ☒ Other: Engineering Calculations

Calculations:

4) POTENTIAL EMISSIONS: SUMMARY OF EMISSIONS FROM THIS EMISSION POINT

Pollutant	PM	PM_{10}	$PM_{2.5}$	SO_2	NOx	VOC	CO	CO_2e	Lead	HAP	THAP
Concentration, (Unit):											
lbs/hr	0.0012	0.0018	0.0018	0.0001	0.0205	0.0011	0.0011		1.03E-07	0.0001	
tons/year	0.005	0.008	0.008	0.001	0.090	0.005	0.005		4.497E-07	4.407E-04	

Thurston Manufacturing 2012 Air Permits Thurston, NE			
Emission Units:	Fugitive Heat, EU-10		
Emission Points:	Fug-1		
SCC:	10500206		
Input Data:			
	Natural Gas Consumed	0	therms
		0	mmcf/yr
	SCC Emission Factor, PM	5.70	lbs/mmcf
	SCC Emission Factor, PM 10	8.700	lbs/mmcf
	SCC Emission Factor, PM 2.5	8.7	lbs/mmcf
	SCC Emission Factor, Sox	0.6	lbs/mmcf
	SCC Emission Factor, Nox	100	lbs/mmcf
	SCC Emission Factor, VOC	5.3	lbs/mmcf
	SCC Emission Factor, CO	20	lbs/mmcf
	SCC Emission Factor, Pb	0.0005	lbs/mmcf
	SCC Emission Factor, Ammonia	0.49	lbs/mmcf
	Maximum yearly usage	2	mmcf/yr
Potential Emissions:			
PM	5.700 lbs/mmcf * 1.799 mmcf/yr / 2000 lbs/ton	0.005	tons/yr
PM 10	8.700 lbs/mmcf * 1.799 mmcf/yr / 2000 lbs/ton	0.008	tons/yr
PM 2.5	8.700 lbs/mmcf * 1.799 mmcf/yr / 2000 lbs/ton	0.008	tons/yr
Sox	0.600 lbs/mmcf * 1.799 mmcf/yr / 2000 lbs/ton	0.001	tons/yr
Nox	100.000 lbs/mmcf * 1.799 mmcf/yr / 2000 lbs/ton	0.090	tons/yr
VOC	5.300 lbs/mmcf * 1.799 mmcf/yr / 2000 lbs/ton	0.005	tons/yr
CO	20.000 lbs/mmcf * 1.799 mmcf/yr / 2000 lbs/ton	0.005	tons/yr
Pb	0.001 lbs/mmcf * 1.799 mmcf/yr / 2000 lbs/ton	4.497E-07	tons/yr
Ammonia	0.490 lbs/mmcf * 1.799 mmcf/yr / 2000 lbs/ton	4.407E-04	tons/yr

EI

AIR QUALITY BUREAU
ATTN: Application Log In
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

IOWA DNR Air Construction Permit Application

Form EI Facility Emission Inventory

See instructions on reverse side

Company Name: Thurston Manufacturing Company

PSD Classification: ☐ Major ☒ Minor ☐ Unknown

STACK/VENT EMISSIONS SUMMARY

(1) EP ID	(2) EU ID	(3) Source Description	(4) Construction Date	(5) Permit Number	(6) Potential or Permitted Emission Rate (tons/yr)									
					PM	PM_{10}	$PM_{2.5}$	SO_2	NO_X	VOC	CO	Pb	HAP	THAP
PB-1	EU-1	Paint Booth	2012	Requested	0.030	0.030	0.030			20.4			11.7	9.60
PT-1	EU-2	Plasma Table	Unknown	Requested	3.564	3.564	3.564							
SB-1	EU-3	Shot Blast	2012	Requested	5.44	5.44	5.44							
WB-1	EU-4	Wash Bay	Unknown	Requested	0.00	0.00	0.00			0.538				
W-1	EU-5	Welding-Ag	Unknown	Requested	5.93	5.93	5.93							0.366
W-2	EU-6	Welding-Trailers	Unknown	Requested	7.64	7.64	7.64							0.455
FM-1	EU-7	Fabrication Machine 1	Unknown	Requested	1.04	1.04	1.04							
FM-2	EU-8	Fabrication Machine 2	Unknown	Requested	1.04	1.04	1.04							
PK-1	EU-9	Paint Kitchen	2012	Requested	0.00	0.00	0.00			1.02				
(7) Total Stack Emissions (This Page)					24.684	24.684	24.684			21.958			11.7	10.421

FUGITIVE EMISSIONS SUMMARY

(8) Source:													
(9) Total Fugitive Emissions													
(10) Total Plant Emissions													

AIR QUALITY BUREAU
ATTN: Application Log in
7900 Hickman Rd., Suite 1
Windsor Heights, IA
50324

IOWA DNR Air Construction Permit Application

Form GHG Facility and Project Greenhouse Gas Emission Inventory

See instructions on reverse side

Company Name: Thurston Manufacturing Company

PSD Classification: ☐ Major ☒ Minor ☐ Unknown

**Check box in (1) below if source is part of project*

STACK/VENT EMISSIONS SUMMARY

(1) *	(2) EP ID	(3) EU ID	(4) Source Description	(5) Construction Date	(6) Permit Number	(7) Potential or Permitted Emission Rate						
						CO_2 (TPY)	CH_4 (TPY)	N_2O (TPY)	SF_6 (lb/yr)	HFCs (lb/yr)	PFCs (lb/yr)	CO_2e (TPY)
☐	Fug-1	EU-10	Fugitive Heat	Unknown	Requested	2016.184	0.2252	0.0038				
☐			Diesel Usage			21.887	0.0006	0.0002				
☐			Propane Usage			20.741	0.000	0.000				
☐												
☐												
☐												
☐												
☐												
(8) Total Stack Emissions						2016.184	0.2252	0.0038				

FUGITIVE EMISSIONS SUMMARY

	(9) Source:										
☐											
☐											
☐											
(10) Total Fugitive Emissions											
(11) Total Project Emissions											
(12) Total Plant Emissions			2058.812	0.2258	0.0040						

Instructions: Please fill in the green cells with your facility information and the yellow cells with your 2011 throughputs. Then print out the spreadsheet and attach i attach electronically to Form 1.0 of your SPARS inventory submittal.

Emission Year:	2012
Facility Name:	Thurston Manufacturing Company
Plant #:	EIQ #:92-2078

Assumptions:

1 gallon diesel = 0.140 MMBtu, 1 gallon gasoline = 0.130 MMBtu,
1 gallon kerosene = 0.135 MMBtu, 1 gallon LPG = 0.094 MMBtu, 1 gallon residual fu
1 MMcf Natural Gas = 1050 MMBtu, 1 therm Natural Gas = 0.09997612

				CO2		CH4		N2O		CO2
Fuel Type	**Fuel Subtype**	**Throughput**	**Units**	**Emission Factor**		**Emission Factor**		**Emission Factor**		**Emiss (tons)**
Butane	-		gallons	14.38	lbs/gallon	NA	NA	NA	NA	0.0000
Coal	Commercial		MMBtu	208.11	lbs/MMBtu	0.0245	lbs/MMBtu	0.0035	lbs/MMBtu	0.0000
Coal	Industrial		MMBtu	205.15	lbs/MMBtu	0.0245	lbs/MMBtu	0.0035	lbs/MMBtu	0.0000
Coal	Industrial Coking		MMBtu	204.58	lbs/MMBtu	0.02451	lbs/MMBtu	0.0035	lbs/MMBtu	0.0000
Coal	Institutional		MMBtu	208.11	lbs/MMBtu	0.0245	lbs/MMBtu	0.0035	lbs/MMBtu	0.0000
Coal	Utility		MMBtu	206.19	lbs/MMBtu	0.0245	lbs/MMBtu	0.0035	lbs/MMBtu	0.0000
Crude Oil	-		MMBtu	161.94	lbs/MMBtu					0.0000
Distillate Fuel (Diesel)	Commercial		gallons	159.69	lbs/MMBtu	0.00309	lbs/gallon	0.00022	lbs/gallon	0.0000
Distillate Fuel (Diesel)	Industrial	1,958.00	gallons	159.69	lbs/MMBtu	0.00066	lbs/gallon	0.00022	lbs/gallon	21.8871
Distillate Fuel (Diesel)	Institutional		gallons	159.69	lbs/MMBtu	0.00309	lbs/gallon	0.00022	lbs/gallon	0.0000
Gasoline	Reformulated		gallons	18.85	lbs/gallon	0.00287	lbs/gallon	0.00022	lbs/gallon	0.0000
Gasoline - Motor	Commercial		gallons	154.79	lbs/MMBtu	0.00287	lbs/gallon	0.00022	lbs/gallon	0.0000
Gasoline - Motor	Industrial		gallons	154.79	lbs/MMBtu	NA	NA	NA	NA	0.0000
Gasoline - Motor	Institutional		gallons	154.79	lbs/MMBtu	0.00287	lbs/gallon	0.00022	lbs/gallon	0.0000
Kerosene	Commercial		gallons	157.86	lbs/MMBtu	0.00309	lbs/gallon	0.00022	lbs/gallon	0.0000
Kerosene	Industrial		gallons	157.86	lbs/MMBtu	0.00066	lbs/gallon	0.00022	lbs/gallon	0.0000
Kerosene	Institutional		gallons	157.86	lbs/MMBtu	0.00309	lbs/gallon	0.00022	lbs/gallon	0.0000
LPG	Commercial		gallons	136	lbs/MMBtu	0.00221	lbs/gallon	0.00022	lbs/gallon	0.0000
LPG	Industrial		gallons	136	lbs/MMBtu	0.00044	lbs/gallon	0.00022	lbs/gallon	0.0000
LPG	Institutional		gallons	136	lbs/MMBtu	0.00221	lbs/gallon	0.00022	lbs/gallon	0.0000
Methanol (neat)	-		gallons	9.06	lbs/gallon					0.0000
Natural Gas	Commercial		MMBtu	116.38	lbs/MMBtu	0.0130	lbs/MMBtu	0.00022	lbs/MMBtu	0.0000
Natural Gas	Industrial	34,648.29	MMBtu	116.38	lbs/MMBtu	0.0130	lbs/MMBtu	0.00022	lbs/MMBtu	2,016.1840
Natural Gas	Institutional		MMBtu	116.38	lbs/MMBtu	0.0130	lbs/MMBtu	0.00022	lbs/MMBtu	0.0000
Petroleum	Commercial		MMBtu			0.0245	lbs/MMBtu	0.0015	lbs/MMBtu	0.0000
Petroleum	Industrial		MMBtu			0.0049	lbs/MMBtu	0.0015	lbs/MMBtu	0.0000
Petroleum	Institutional		MMBtu			0.0245	lbs/MMBtu	0.0015	lbs/MMBtu	0.0000
Propane	-	3,300.00	gallons	12.57	lbs/gallon	NA	NA	NA	NA	20.7405
Residual Fuel	Commercial		gallons	172.01	lbs/MMBtu	0.00331	lbs/gallon	0.00022	lbs/gallon	0.0000
Residual Fuel	Industrial		gallons	172.01	lbs/MMBtu	0.00066	lbs/gallon	0.00022	lbs/gallon	0.0000
Residual Fuel	Institutional		gallons	172.01	lbs/MMBtu	0.00331	lbs/gallon	0.00022	lbs/gallon	0.0000
Still Gas	-		MMBtu	140.86	lbs/MMBtu					0.0000
										2,058.8116

Note: This spreadsheet is formatted to be printed on legal-size paper.

Note: Unless otherwise noted, all emission factors were obtained from the California Climate Action Registry General Reporting Protocol Version 2.2 March 2007 Tables C.5 and (DNR Form 542-1571 December 18, 2007)

Updated on 3/7/08 to add natural gs conversion factors.

to your paper inventory, or

ıel = 0.150 MMBtu
MMBtu

CH4	N2O
Emiss (tons)	Emis (tons)
NA	NA
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0006	0.0002
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
NA	NA
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.2252	0.0038
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
NA	NA
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.2259	**0.0040**

C.ℓ

FORM FRA

AIR CONSTRUCTION PERMIT APPLICATION

FEDERAL REGULATION APPLICABILITY (FRA)

Please see instructions on the reverse side

AIR QUALITY BUREAU
ATTN: Application Log in
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50322

Company Name: Thurston Manufacturing Company

APPLICABILITY DETERMINATION

1) Will this project be subject to 1990 Clean Air Act (CAA) Section 112(g) (Case-by-Case Maximum Achievable Control Technology (MACT))	☒ NO ☐ YES The applicant shall submit an application for a case-by-case MACT determination [IAC 567 22-1(3)"b" (8)] ☐ DON'T KNOW
2) Will this project be subject to a New Source Performance Standard? (40 CFR part 60)	☒ NO ☐ YES Applicable subpart 40 CFR Part 60 Subpart _____ ☐ DON'T KNOW
3) Will this project be subject to a MACT Regulation? (40 CFR part 63) THIS ONLY APPLIES IF THE PROJECT EMITS A HAZARDOUS AIR POLLUTANT – SEE TABLE A FOR LIST	☒ NO ☐ YES Applicable subpart 40 CFR Part 63 Subpart _____ ☐ DON'T KNOW
4) Will this project be subject to a NESHAP (National Emission Standards for Hazardous Air Pollutants) Regulation? (40 CFR part 61)	☒ NO ☐ YES Applicable subpart 40 CFR Part 61 Subpart _____ ☐ DON'T KNOW
5) Will this project be subject to PSD (Prevention of Significant Deterioration) ? (40 CFR section 52.21)	☒ NO ☐ YES ☐ DON'T KNOW
6) Was netting done for this project to avoid PSD?	☒ NO ☐ YES Attach netting calculations ☐ DON'T KNOW

IF YOU ARE UNSURE HOW TO ANSWER ANY OF THESE QUESTIONS CALL 1-877 AIR IOWA

FEDERAL REGULATIONS APPLICABILITY FORM INSTRUCTIONS

This form is designed to provide the review engineer information regarding applicable federal regulations. This project may be subject to a federal regulation. These regulations have also been adopted by the state of Iowa in IAC 567 23.1(1), 23.1(2), 23.1(3), 23.1(4) and 23.1(5).

1) The 112(g) provision is a transitional measure to ensure that facilities protect the public from hazardous air pollutants until EPA issues MACT standards that apply to the facilities. If this project is already subject to a MACT regulation it will not be subject to the provisions of 112 (g).

2) New Source Performance Standards are Federal Regulations that apply to a wide range of sources of criteria air pollutants. To locate the rule go to: http://www.access.gpo.gov/nara/cfr/waisidx_09/40cfr60_09.html.

3) MACT regulations apply to sources of hazardous air pollutants. See Table A for a list of hazardous air pollutants (http://www.epa.gov/ttn/atw/orig189.html). To locate specific rules for specific source categories go to http://www.epa.gov/ttn/atw/mactfnlalph.html.

4) NESHAP regulations apply to sources of the following pollutants: beryllium, mercury, vinyl chloride, radionuclides, benzene, asbestos and arsenic. To locate the rule - go to http://www.access.gpo.gov/cgi-bin/cfrassemble.cgi?title=200940 and then review items 9 thru 14.

5) If you are a PSD major source and the net emissions increase from this project exceeds significance levels (as defined by 40 CFR 52.21: http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr52.21.htm) this project will be subject to PSD regulations. Please contact DNR prior to application submission on how to proceed.

FORM MD

AIR QUALITY BUREAU
ATTN: Application Log in
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

AIR CONSTRUCTION PERMIT APPLICATION

NON-PSD MODELING DETERMINATION – FORM MD

Company Name: Thurston Manufacturing Company	Facility ID:

DISPERSION MODELING DETERMINATION

Completion of Form MD is intended to assist applicants in determining whether or not point source emissions associated with non-PSD construction permit projects will require an air dispersion modeling analysis. Modeling requirements for non-point source emissions will be determined on a case-by-case basis. This procedure is used for both new construction permit projects and for modifications to previous projects, but does not apply to emissions from VOC-only sources at this time.

This form reflects the Air Dispersion Modeling Applicability Procedure found in the DNR "Air Dispersion Modeling Guidelines for Non-PSD Pre-Construction Permit Applications". A flow chart of the Air Dispersion Modeling Applicability Procedure is on the back of this form. As you go through the flowchart, one should identify the flow of this project for each emission point being permitted or re-permitted. Please check the appropriate box below depending on whether the flow chart indicates that dispersion modeling is required or not.

Note: ALL projects must include a site plan; see Form MI-1 instructions.

☒ DISPERSION MODELING ANALYSIS IS NOT REQUIRED

Since the point source emissions in this application meet the criteria currently listed in the Air Dispersion Modeling Applicability Procedure, it is likely that modeling is not required.

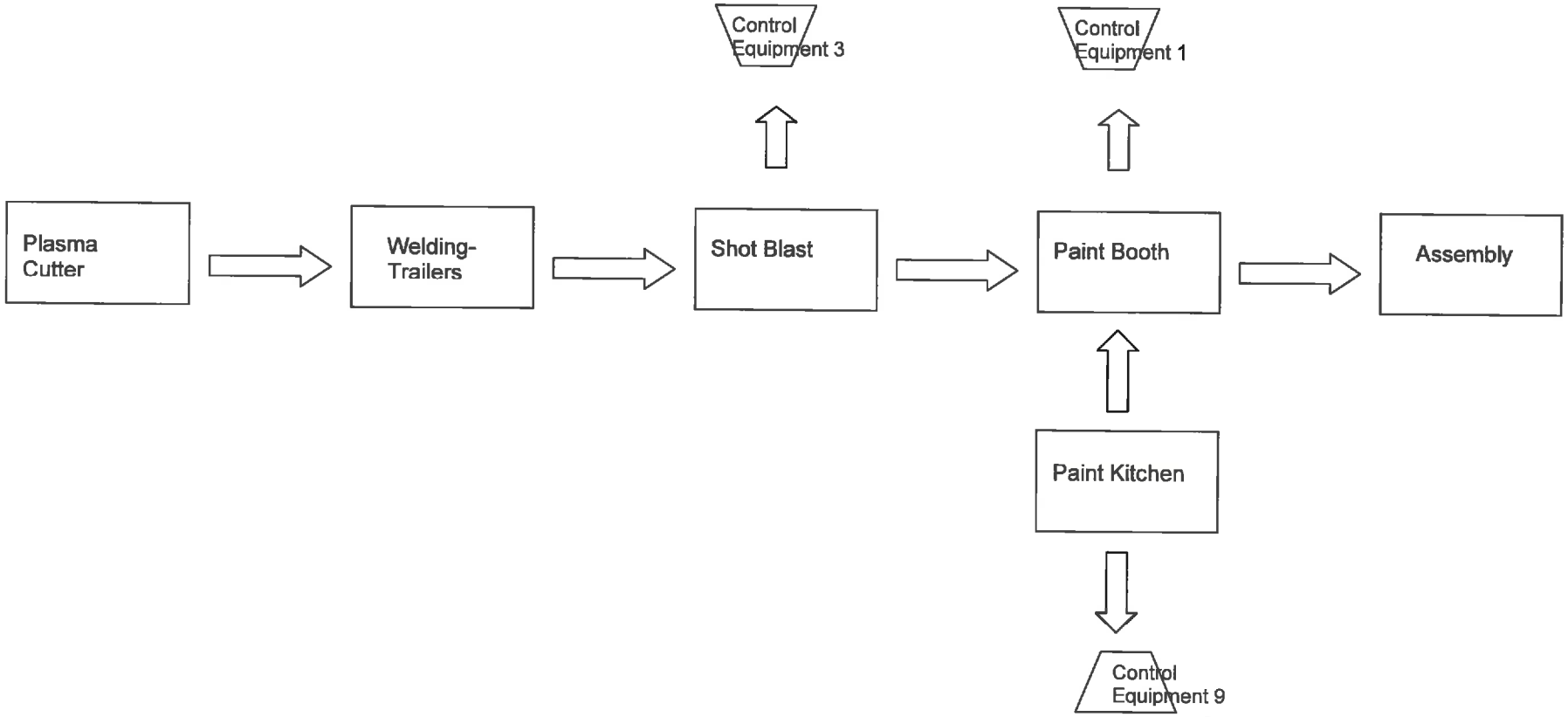
There are unique circumstances that the Air Dispersion Modeling Applicability Procedure does not address that may trigger a modeling review. Recommendations for modeling reviews that fall outside of the Air Dispersion Modeling Applicability Procedure will be reviewed by DNR management.

☐ DISPERSION MODELING ANALYSIS IS REQUIRED

When dispersion modeling is required, the modeling analysis is either conducted by the DNR or is submitted by the applicant for DNR review as noted below:

- All applicants have the option to prepare and submit a complete dispersion modeling analysis per DNR's "Air Dispersion Modeling Guidelines for Non-PSD Pre-Construction Permit Applications" and the "Dispersion Modeling Checklist for Non-PSD Projects".
- For major sources as defined in 567 IAC 22.100 that have previously been modeled, the DNR will conduct the modeling analysis if resources allow. Applicants with extensive changes to their facility may expedite the modeling review by submitting their own modeling analysis.
- For major sources as defined in 567 IAC 22.100 that have not previously been modeled, the applicant must prepare and submit the dispersion modeling analysis.
- For non-major sources (minor) which are not major sources as defined in 567 IAC 22.100, the DNR will conduct the initial dispersion modeling as a service to minor sources when a modeling analysis has not been submitted by the applicant.

Appendix A



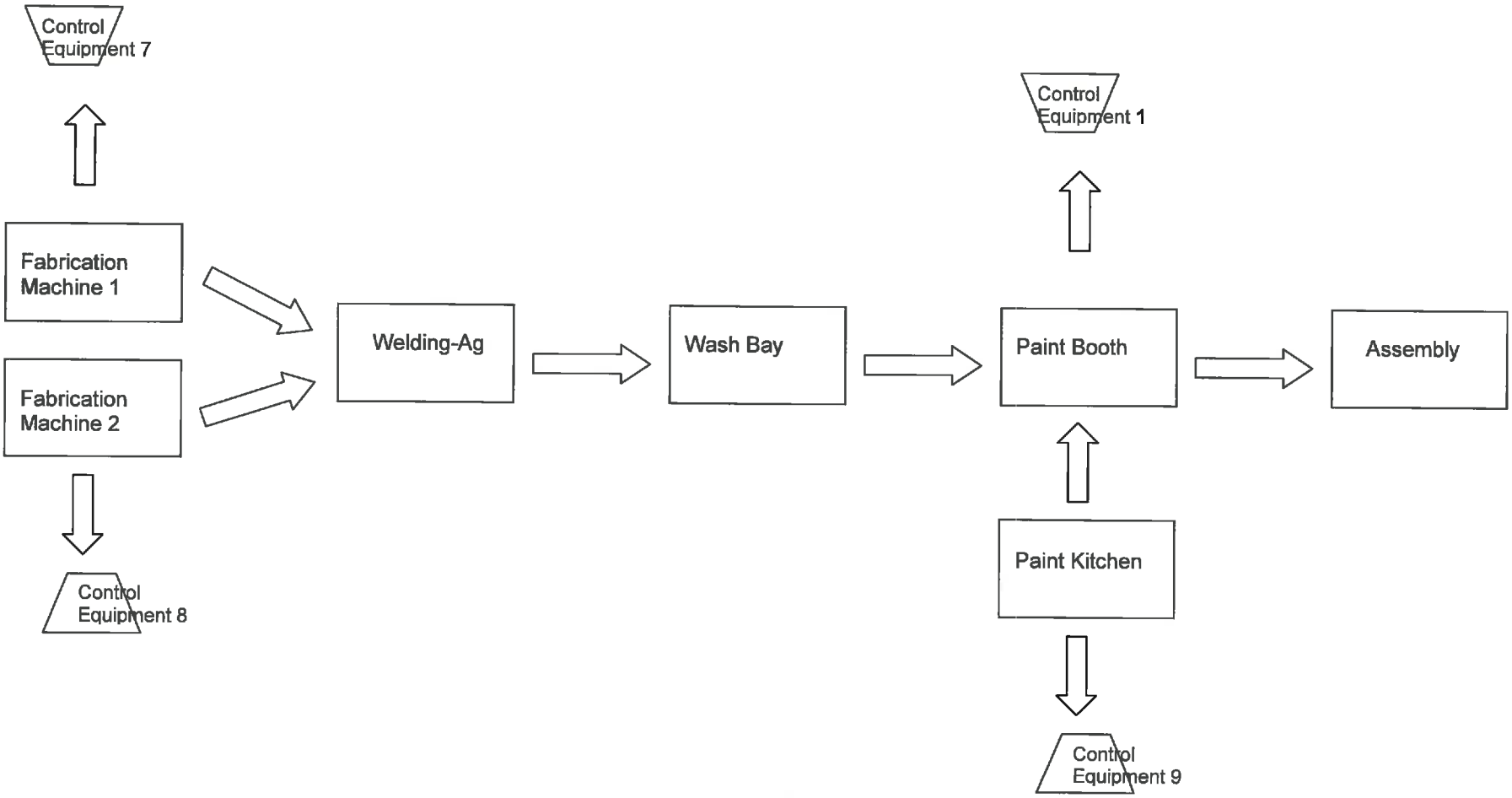
zia engineering & environmental consultants, LLC.

Facility Process Flow Diagram-Trailers
Thurston Manufacturing Company
Thurston, Nebraska

Figure 1

August 2012

1531 Airport Road, Suite 104 • Ames, Iowa 50010 • phone (515) 233-5794 • fax (515) 233-5934



zia engineering & environmental consultants, LLC

Facility Process Flow Diagram-Ag
Thurston Manufacturing Company
Thurston, Nebraska

Figure 2

August 2012

1531 Airport Road, Suite 104 • Ames, Iowa 50010 • phone (515) 233-5794 • fax (515) 233-5934

Actual Calculations

Thurston Manufacturing 2012 Air Permits Thurston, NE			
Emission Unit:	Wash Bay, EP-4		
Emission Point:	WB-1		
SCC:	Mass Balance		
Input Data:	*Phosphate Wash Bay*		
	Efficiency	90.00%	%
	Density	9.10	lb/gal
	SCC Emission Factor, PM 2.5/10	0.00	lbs/1000 lbs
	SCC Emission Factor, VOC	0.45	lbs/1000 lbs
	Max. wash material consumed	23914800	lb/yr
	Actual wash material consumed	364	lb/yr
Actual Emissions:			
PM 2.5/10	0.00 lbs/1000 lbs * 364 lbs/yr consumed * 90% efficency	0.00	lbs/yr
	0.0 lbs/yr * / 2000 lbs/ton	0.00	tons/yr
VOC	0.45 lbs/1000 lbs * 364 lbs/yr consumed * 90% efficency	0.02	lbs/yr
	0.0 lbs/yr * / 2000 lbs/ton	8.19E-06	tons/yr

Thurston Manufacturing **2012 Air Permits** **Thurston, NE**			
Emission Units:	Welding Ag EP-5		
Emission Points:	W-1		
SCC:	30905254		
Input Data:	***E70 Electrode***		
	Material Used	119790	lbs/yr
	SCC Emission Factor, PM 10	5.20	lb/10^3 lb
	SCC Emission Factor, Manganese	0.318	lb/10^3 lb
	SCC Emission Factor, Cobalt	0.001	lb/10^3 lb
	SCC Emission Factor, Nickel	0.001	lb/10^3 lb
	SCC Emission Factor, Chromium	0.001	lb/10^3 lb
	Maximum yearly output for 12 welders	2281104	lbs/yr
Actual Emissions:			
PM-10	5.200 lb/10^3 lb * 119,790.000 lbs/yr / 2000 lbs/ton	0.311	tons/yr
Manganese	0.318 lb/10^3 lb * 119,790.000 lbs/yr / 2000 lbs/ton	0.019	tons/yr
Cobalt	0.001 lb/10^3 lb * 119,790.000 lbs/yr / 2000 lbs/ton	0.000	tons/yr
Nickel	0.001 lb/10^3 lb * 119,790.000 lbs/yr / 2000 lbs/ton	0.000	tons/yr
Chromium	0.001 lb/10^3 lb * 119,790.000 lbs/yr / 2000 lbs/ton	0.000	tons/yr

Thurston Manufacturing **2012 Air Permits** **Thurston, NE**			
Emission Units:	Welding Trailers EP-6		
Emission Points:	W-2		
SCC:	30905354		
Input Data:	***E70 Electrode***		
	Material Used	7600	lbs/yr
	SCC Emission Factor, PM 10	15.10	lb/10^3 lb
	SCC Emission Factor, Manganese	0.891	lb/10^3 lb
	SCC Emission Factor, Cobalt	0	lb/10^3 lb
	SCC Emission Factor, Nickel	0.005	lb/10^3 lb
	SCC Emission Factor, Chromium	0.004	lb/10^3 lb
	Maximum yearly output for 7 welders	1011780	lbs/yr
Actual Emissions:			
PM-10	15.100 lb/10^3 lb * 7,600.000 lbs/yr / 2000 lbs/ton	0.057	tons/yr
Manganese	0.891 lb/10^3 lb * 7,600.000 lbs/yr / 2000 lbs/ton	0.003	tons/yr
Cobalt	0.000 lb/10^3 lb * 7,600.000 lbs/yr / 2000 lbs/ton	0.000	tons/yr
Nickel	0.005 lb/10^3 lb * 7,600.000 lbs/yr / 2000 lbs/ton	0.000	tons/yr
Chromium	0.004 lb/10^3 lb * 7,600.000 lbs/yr / 2000 lbs/ton	0.000	tons/yr

Species Reports

Environmental Conservation Online System

(http://www.fws.gov)

Species By County Report

The following report contains Species that are known to or are believed to occur in this county. Species with range unrefined past the state level are now excluded from this report. If you are looking for the Section 7 range (for Section 7 Consultations), please visit the IPaC (/ipac) application.

County: Thurston, NE

Group (countySearch!speciesByCountyReport.action?d-16544-s=0&d-16544-o=2&d-16544-p=1&fips=31173)	Name (countySearch!speciesByCountyReport.action?d-16544-s=1&d-16544-o=2
Fishes	Pallid sturgeon (*Scaphirhynchus albus*) (http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=E06X)
Flowering Plants	Western prairie fringed Orchid (*Platanthera praeclara*) (http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q2YD)
Mammals	Gray wolf (*Canis lupus*) (http://ecos.fws.gov/speciesProfile/profile/speciesProf

Export options: CSV (countySearch!speciesByCountyReport.action?d-16544-e=1&6578706f7274=1&fips=31173) | EXCEL (countySearch!speciesByCountyReport.action?d-16544-e=2&6578706f7274=1&fips=31173) | XML (countySearch!speciesByCountyReport.action?d-16544-e=3&6578706f7274=1&fips=31173) | PDF (countySearch!speciesByCountyReport.action?d-16544-e=5&6578706f7274=1&fips=31173)

Last updated: August 22, 2012

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nps.gov

National Park Service
U.S. Department of the Interior

National Register of Historic Places

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History & Culture
Nature & Science
Education & Interpretation

TITLE LIST DISPLAY

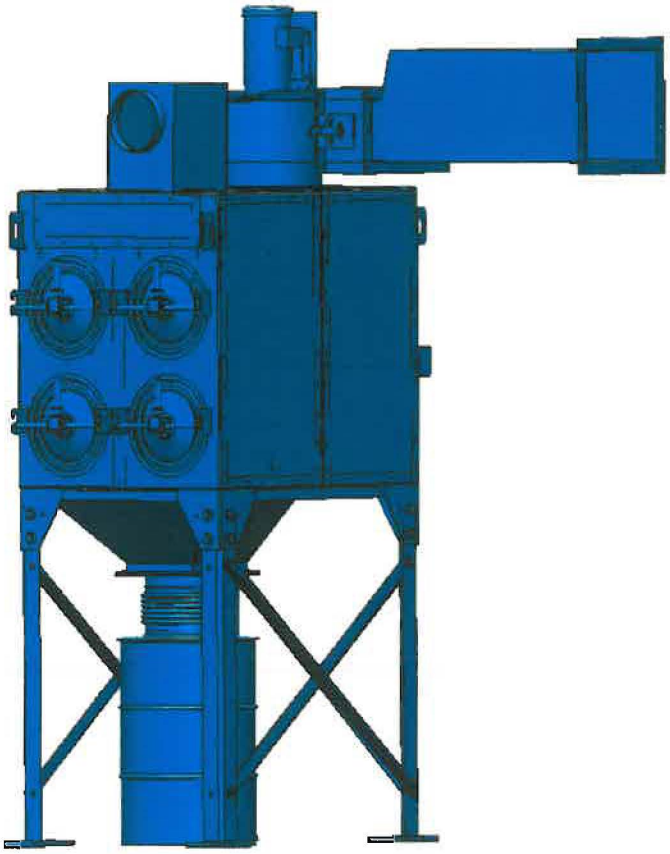
From: NPS Digital Library
Term(s) Searched: Nebraska and Thurston
Records Displayed: 1 to 0 of 0

Go back to: Revise Search

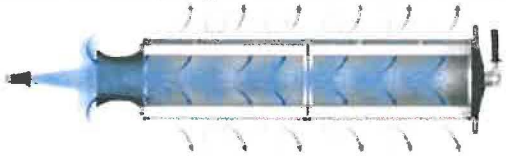
Sort By: Title | Relevancy | Modified

Prev | | **Next**

VK Series Dust Collectors



Fewer Pulse are needed to clean the cartridge filters, so less compressed air is used. This a substantial cost saving for the customer over the life of the unit.



UNMATCHED CLEANING EFFICIENCY
Viking dust collectors are engineered for powerful filtration at lower total costs. The cartridge cleaning system cleans more filter area, lengthens filter life, reduces maintenance costs, and uses less compressed air than typical backflush systems.
LOWER ENERGY NEEDS
Viking dust collectors help you conserve costly resources. The cartridge cleaning system requires less compressed air, and each unit incorporates an energy efficient EPACT motor. The amp load is smaller, and voltage requirements are less restrictive.
SMALL FOOTPRINT
Our compact design allows you to locate dust collectors in virtually any area.
EAR-FRIENDLY OPERATION
Walk by a Viking dust collector, you won't hear the telltale BANG! of a competitor's cartridge cleaning system. Our cartridge cleaning system is much quieter, by up to 15 DBA, depending on the type of pulse system used.

STANDARD FEATURES:
Construction: 12 and 14 gauge steel

OMB Control No. 2060-0003
Approval expires 04/30/2012

United States Environmental Protection Agency Program Address Phone Fax Web address	*Reviewing Authority* *Program* *Address* *Phone* *Fax* *Web address*

FEDERAL MINOR NEW SOURCE REVIEW PROGRAM IN INDIAN COUNTRY

Registration for Existing Sources
(FORM REG)

Please submit information to:

Bob Webber
Air Permitting & Compliance Branch
Air and Waste Management Division
U.S. Environmental Protection Agency, Region 7
901 N. 5th Street
Kansas City, KS 66208

A. GENERAL SOURCE INFORMATION

1. Company Name Thurston Manufacturing Company		**2. Source Name** Thurston Manufacturing Company	
3. Type of Operation Farm machinery and equipment manufacturing		**4. Portable Source?** ☐ Yes X No **5. Temporary Source?** ☐ Yes X No	
6. NAICS Code 333111		**7. SIC Code** 3523 and 3531	
8. Physical Address (home base for portable sources) 1708 H Avenue Thurston, NE 68062			
9. Reservation* Winnebago	10. County* Thurston	11a. Latitude* 42.1769°N	11b. Longitude* 96.7046°W
12a. Quarter Quarter Section* NW ¼ of NW ¼ SE ¼ of SW ¼	12b. Section* 2 35	12c. Township* 25N 26N	12d. Range* 6E 6E

* Provide all locations of operation for portable sources

B. CONTACT INFORMATION

1. Owner Name Layton Jensen	Title President/CEO
Mailing Address 1708 H Avenue Thurston, NE 68062	
Email Address	
Telephone Number (402) 385-3041	Facsimile Number (402) 385-3043
2. Operator Name (if different from owner)	Title
Mailing Address	
Email Address	
Telephone Number	Facsimile Number
3. Source Contact Susan Jensen	Title Compliance Director
Mailing Address 1708 H Avenue Thurston, NE 68062	
Email Address	
Telephone Number (402) 385-3041	Facsimile Number (402) 385-3043
4. Compliance Contact Same as Source Contact	Title
Mailing Address	
Email Address	
Telephone Number	Facsimile Number

C. ATTACHMENTS

Include all of the following information as attachments to this form

X Narrative description of the operations

X Identification and description of all emission units and air pollution generating activities (with the exception of the exempt emissions units and activities listed in §49.153(c)

X Identification and description of any existing air pollution control equipment and compliance monitoring devices or activities

X Type and amount of each fuel used

X Type raw materials used
X Production Rates

X Operating Schedules

☐ Any existing limitations on source operations affecting emissions or any work practice standards, where applicable, for all regulated NSR pollutants at your source.
X Total allowable (potential to emit if there are no legally and practically enforceable restrictions) emissions from the air pollution source for the following air pollutants: particulate matter, PM_{10}, $PM_{2.5}$, sulfur oxides (SO_x), nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compound (VOC), lead (Pb) and lead compounds, fluorides (gaseous and particulate), sulfuric acid mist (H_2SO_4), hydrogen sulfide (H_2S), total reduced sulfur (TRS) and reduced sulfur compounds, including all calculations for the estimates.

X Estimates of the total actual emissions from the air pollution source for the following air pollutants: particulate matter, PM_{10}, $PM_{2.5}$, sulfur oxides (SO_x), nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compound (VOC), lead (Pb) and lead compounds, ammonia (NH_3), fluorides (gaseous and particulate), sulfuric acid mist (H_2SO_4), hydrogen sulfide (H_2S), total reduced sulfur (TRS) and reduced sulfur compounds, including all calculations for the estimates.

☐ Other

[Disclaimers] The public reporting and recordkeeping burden for this collection of information is estimated to average 6 hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

Thurston
Manufacturing Company

BLU-JET

Side Dump

FEDERAL MINOR NEW SOURCE REVIEW PROGRAM IN INDIAN COUNTRY

REGISTRATION FOR EXISTING SOURCES

Thurston Manufacturing Company

1708 H Avenue
Thurston, NE 68062
August 2012

Prepared by
zia engineering & environmental
consultants, llc

1531 Airport Road, Suite 104
Ames, Iowa 50010
Phone (515) 233-5794 Fax: 515.233.5934

NIAE-012-001

Air Discharge Construction Permit Application

Agricultural and Farm Machinery Manufacturer

Thurston Manufacturing Company
Thurston, Nebraska

August 2012

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Iowa.

29 Aug 12

Donn L Stone, P.E. Date

License Number: 11461
My license renewal date is December 31, 2012

Executive Summary

Thurston Manufacturing Company, Thurston, Nebraska, produces agricultural equipment and side-dump trailers. The manufacturing process currently includes a paint booth, plasma cutter, wash bay, welding areas, and fabricating machines. This document requests permits for all air emission points and fugitive emissions for existing processes. Thurston had a paint area whose use will be discontinued once the new paint booth is installed.

Production Process

Thurston Manufacturing runs two lines simultaneously, one manufacturing side-dump trailers and the other manufacturing agricultural equipment. Figure 1 shows the production process for the side-dump trailers. The steel is brought in and shaped on the plasma cutter before it is moved to the welding section for the appropriate welds to be made. The unit is then moved to the paint booth were it is sprayed with a primer and top coat. Once the paint has dried, the unit is moved to the assembly area for final assembly and packaging.

Figure 2 shows the production process for the agricultural equipment. The steel is shaped in one of the two fabrication machines. The unit is then moved to the welding area to be welded. The part is then taken to the wash bay to be washed before it is taken to the paint booth. Once in the paint booth, the unit is primed and painted. The unit is then taken to the final assembly area.

Fuels

Thurston Manufacturing uses propane and diesel fuels at the plant site. Diesel is used in forklifts and pay loaders while propane is also used for forklifts. 2,000 gallons of diesel and 3,300 gallons of propane were used last year.

Emission Units

Thurston Manufacturing Company has eight existing emission unit processes that generate air pollution. The first emission unit is the paint booth, EU-1. It is used in both production processes. The paint booth currently is an inside fugitive. Thurston Manufacturing is building a new paint booth that will vent outside.

The plasma cutter, EU-2, is used only in production of the side-dump trailers. There is no control equipment for the plasma cutter. The plasma cutter is an inside fugitive emission. Both fabrication machines, EU-7 and EU-8, are used solely for the production of the agricultural equipment. Each fabrication machine is linked to a dust collector with a control efficiency of 90 percent. The dust collectors are on the east side of the building. Both fabrication machines are also inside fugitive emissions.

The wash bay, EU-4, is used to wash parts for the agricultural process. The wash bay does not have any control equipment and will vent as an inside fugitive emission.

Welding for Thurston has been divided into two different sections, welding-trailers, EU-6, and welding-agricultural, EU-5. Each is used for its designated process. Neither have control equipment and both will vent inside as fugitive emissions.

The final emission unit for Thurston Manufacturing is fugitive building heat, EU-10. The building heat is an inside fugitive emission with no control equipment.

Raw Materials

This data is not currently available.

Operating Schedule

Thurston Manufacturing Company currently operates on three shifts. The day shift is Monday through Friday from 6 am - 4:30 pm. The middle shift is Sunday through Thursday from 4:15 pm – 3 am. The night shift is Sunday through Thursday from 7:30 pm - 6:15 am. There is also an optional shift on Saturday from 6 am - noon. Production runs 52 weeks a year.

Control Equipment

Fabrication machine 1 uses a dust collector, CE-7, to control emission point FB-1 with 90 percent efficiency. Fabrication machine 2 uses the same make of dust collector, CE-8, to control emission point FB-2 with 90 percent efficiency.

Potential Emissions

The Paint Booth was calculated as operating continuously with no filter and an application efficiency of 75 percent. To determine the amount of HAPs released from the Paint Booth, the paint, primer, and solvent with the highest amount of HAP and usage (DM19126 Black Enamel, QAP581 W-O-W epoxy primer, and Q60 Methyl Ethyl Ketone) were input into the calculations to determine a worst case scenario. Since methyl ethyl ketone is used as a solvent, a calculation was done to determine if MEK exceeded the 10 tons per year threshold. The MEK emission would exceed 10 tons per year if it was used continuously so a limit has been requested for the amount of solvent Thurston Manufacturing is allowed to use each year. Since the total HAPs calculated for the paint and primer was over 10 tons per year, to determine if a single solvent was over 10 tons another calculation was done. Since xylene made up the largest percentage of the total HAP in the paint, a calculation was done to determine if xylene had exceeded the 10 tons per year threshold. Since they did exceed the threshold, a limit has been requested for the amount of paint and primer Thurston Manufacturing is allowed to use each year. Thurston Manufacturing is currently building a new paint booth that will replace the existing one once it is operational.

The plasma cutter and both fabrication machines were calculated as operating continuously using an average steel width and its corresponding cutting rate. The plasma cutter, PT-1, cuts a maximum of 40 inches per minute on an average thickness of 3/8 inch steel with a ¾ inch electrode tip. The plasma cutter does not have control

equipment. The amount of pollutants emitted was assumed to be five percent. The fabrication machines, FM-1 and FM-2, cut a maximum of 35 inches per minute on an average thickness of 5/8 inch steel with a ¼ inch electrode tip. Each fabrication machine has its own dust collector with a minimum efficiency of 90 percent.

Two types of welding will take place in the facility: trailer welding and agricultural welding. Air discharge permits are requested respective of the two welding types. The welding emissions are all internal fugitives. Both welding types use the same welding electrode, E70. The agricultural welding units are Gas Metal Arc Welding (GMAW). Electrode E70S was used to determine emission factors. The Co for E70S was determined to be less than 0.001 lb/1000lbs so for the calculations 0.001 lb/1000lbs was used. The trailer welding units are Flux Cored Arc Welding (FCAW). Electrode E70T was used to determine emission factors. Co was not determined for this electrode type so it was assumed to be zero.

The fugitive building heat was determined by assuming the therms purchased by Thurston in May through September of last year were not to heat the building but for other processes. An average was found for May through September and that number was multiplied by twelve to find an average for the year.

Production and Material Limits

Permit limits have been requested for the new paint booth unit that Thurston Manufacturing is currently putting in. The limits have been requested in the Application For Synthetic Minor Limit form and the Application For New Construction form.

Endangered Species Act

Three endangered species were identified for Thurston County. For fish, the pallid sturgeon is located in Thurston County but Thurston Manufacturing is not located near any major water ways. For flowering plants, the western prairie fringed Orchid was located in Thurston County but is listed as threatened. For mammals, the gray wolf is located in Thurston County and is listed as endangered.

National Historic Preservation Act

No historic places were located in Thurston County.

AIR QUALITY BUREAU
ATTN: Application Log in
7900 Hickman Rd., Suite 1
Windsor Heights, IA 50324

DNR USE ONLY	CP-AP
	Project No:
	Plant No:
	Doc Date:

FI

AIR CONSTRUCTION PERMIT APPLICATION

Form FI: Facility Information – Please see instructions on reverse side

ALL INFORMATION IS REQUIRED FOR PROCESSING – IF INFORMATION IS MISSING PERMIT WILL NOT BE ISSUED

FACILITY INFORMATION

1) Company Name	Thurston Manufacturing Company	1a) Facility Plant Number	
2) Facility Name (If different than #1)			
3) Facility Permit Contact Person/Title	Susan Jensen, Compliance Director	☐ Mr. ☐ Mrs. ☒ Ms. ☐ Dr.	
4) Telephone Number and Email Address	(402) 385-3041, sjensen@thurstonmfgco.com		
5) Facility Modeling Contact Person		☐ Mr. ☐ Mrs. ☐ Ms. ☐ Dr.	
6) Telephone Number and Email Address			
7) Name and Address Permit should be sent to	1708 H Avenue		
8) City/State/Zip	Thurston, NE 68062		
9) Equipment Location Address (If different than #7)			
10) City/State/Zip			
10a) Facility County	Thurston		
11) Is the Equipment Portable?	☐ Yes ☒ No	12) Do you want Draft Permits?	☒ Yes ☐ No
13) SIC Code and NAICS Code	SIC:3523, 3531	NAICS:333111	
14) Provide Brief Business Description and Principal Product	Manufacture farm machinery and equipment		
15) Identify any adjacent or contiguous facility that this company owns and/or operates			

PERMIT PREPARER

THIS SECTION IS REQUIRED IF APPLICATION WAS PREPARED BY SOMEONE OTHER THAN A COMPANY EMPLOYEE

16) Name	Donn L Stone, PE	☒ Mr. ☐ Mrs. ☐ Ms. ☐ Dr.
17) Address	1531 Airport Road, Suite 104	
18) City/State/Zip Code	Ames, IA 50010	
19) Phone Number and Email Address	(515) 233-5794, dstone@ziaeec.com	
20) Iowa P.E. Number (IAC 567 22.1(3)"b")	11461	
21) SIGNATURE		

CERTIFICATION

I CERTIFY THAT BASED ON INFORMATION AND BELIEF FORMED AFTER REASONABLE INQUIRY, THE ENCLOSED DOCUMENTS INCLUDING THE ATTACHMENTS ARE TRUE, ACCURATE, AND COMPLETE. LEGAL ENTITLEMENT TO INSTALL AND OPERATE THE EQUIPMENT COVERED BY AND ON THE PROPERTY IDENTIFIED IN THE PERMIT APPLICATION HAS BEEN OBTAINED.

22) Responsible Official's Name/Title	Susan Jensen, Compliance Director	☐ Mr. ☐ Mrs. ☒ Ms. ☐ Dr.
23) RESPONSIBLE OFFICIAL SIGNATURE	Susan Jensen	
24) Date	8/22/12	

APPLICATION FORMS ATTACHED

25. ☒ EU (Number of forms:11), ☒ CE (#: 5), ☒ EP (#: 12), ☒ EC(#: 10), ☒ EI, ☐ Plot Plan, ☐ MI2, ☒ FRA, ☒ MD, ☒ GHG

Other Forms and Attachments (e.g. dispersion modeling analysis)

Form 2.0 EMISSION POINT INFORMATION

Duplicate this form for EACH Emission POINT

1) Company/Facility Name	2) EIQ No.	3) Form 2.0
Thurston Manufacturing Company		Page 1 of 8

4) EMISSION POINT NO.	5) EMISSION POINT DESCRIPTION
PT-1	Plasma Cutter

6) Is this stack/vent used as an Emergency Bypass Stack? ☒ No ☐ Yes If YES, for which stack(s)? List Emission Point Nos.:

EMISSION POINT INFORMATION

7) Emission Point Type ☐ Vertical Stack/Vent ☐ Wall Vent ☒ Fugitive Specify Inside ☐ Other (specify)

8) Stack Shape and Dimensions: (interior dimensions at exit point) ☐ Circular Diameter: in ☐ Rectangular Dimensions: in X in ☐ Other Dimensions in

9) Stack Height Above Ground	10) Reserved
ft.	

11) Stack Location UTM Coordinates

Easting (meters)	Northing (meters)	UTM Zone and Datum	
		☐ Zone 14 ☐ Zone 15	☐ NAD 27 ☐ NAD 83

12) Does the Emission Point have a rain cap (or anything else) which obstructs the flow of gases leaving the Emission Point?
☐ No ☐ YES (specify):

13) COMPOSTION OF EXHAUST STREAM

Exhaust Stream Characteristics	Units of Measure	Emission Point Composition of Exhaust Stream
a) Flow Rate	☐ ACFM or ☐ SCFM	Inside fugitive
b) Temperature	Deg F	ambient

14) BYPASS STACKS

Bypass Stack – Emission Point No.	Bypass Stack Description
Bypass Stack – Emission Point No.	Bypass Stack Description

15) LIST OF EMISSION UNITS VENTING THROUGH THIS EMISSION POINT

Emission Unit No.	SCC Number	Emission Unit No.	SCC No.
2	Engineering calculation		

16) LIST OF CONTROL EQUIPMENT ASSOCIATED WITH THIS EMISSION POINT

Control Equipment No.	Control Equipment No.	Control Equipment No.	Control Equipment No.

17) LIST OF MONITORING EQUIPMENT ASSOCIATED WITH THIS POINT

Monitoring Equipment No.	Monitoring Equipment No.	Monitoring Equipment No.	Monitoring Equipment No.

Duplicate this form as needed TYPE ALL INFORMATION (DNR Form 542-4013. December 2007)

Form 2.0 EMISSION POINT INFORMATION

Duplicate this form for EACH Emission POINT

1) Company/Facility Name	2) EIQ No.	3) Form 2.0
Thurston Manufacturing Company		Page 2 of 8

4) EMISSION POINT NO.	5) EMISSION POINT DESCRIPTION
WB-1	Wash bay

6) Is this stack/vent used as an Emergency Bypass Stack? ☒ No ☐ Yes If YES, for which stack(s)? List Emission Point Nos.:

EMISSION POINT INFORMATION

7) Emission Point Type ☐ Vertical Stack/Vent ☐ Wall Vent ☒ Fugitive Specify Inside ☐ Other (specify)

8) Stack Shape and Dimensions: (interior dimensions at exit point) ☐ Circular Diameter: In ☐ Rectangular Dimensions: in X In ☐ Other Dimensions in

9) Stack Height Above Ground	10) Reserved
ft.	

11) Stack Location UTM Coordinates

Easting (meters)	Northing (meters)	UTM Zone and Datum	
		☐ Zone 14 ☐ Zone 15	☐ NAD 27 ☐ NAD 83

12) Does the Emission Point have a rain cap (or anything else) which obstructs the flow of gases leaving the Emission Point?

☐ No ☐ YES (specify):

13) COMPOSTION OF EXHAUST STREAM

Exhaust Stream Characteristics	Units of Measure	Emission Point Composition of Exhaust Stream
a) Flow Rate	☐ ACFM or ☐ SCFM	Inside fugitive
b) Temperature	Deg F	ambient

14) BYPASS STACKS

Bypass Stack – Emission Point No.	Bypass Stack Description
Bypass Stack – Emission Point No.	Bypass Stack Description

15) LIST OF EMISSION UNITS VENTING THROUGH THIS EMISSION POINT

Emission Unit No.	SCC Number	Emission Unit No.	SCC No.
4	Mass Balance		

16) LIST OF CONTROL EQUIPMENT ASSOCIATED WITH THIS EMISSION POINT

Control Equipment No.	Control Equipment No.	Control Equipment No.	Control Equipment No.

17) LIST OF MONITORING EQUIPMENT ASSOCIATED WITH THIS POINT

Monitoring Equipment No.	Monitoring Equipment No.	Monitoring Equipment No.	Monitoring Equipment No.

Duplicate this form as needed TYPE ALL INFORMATION (DNR Form 542-4013. December 2007)

Form 2.0 EMISSION POINT INFORMATION

Duplicate this form for EACH Emission POINT

1) Company/Facility Name	2) EIQ No.	3) Form 2.0
Thurston Manufacturing Company		Page 3 of 8

4) EMISSION POINT NO.	5) EMISSION POINT DESCRIPTION
W-1	Welding-Ag

6) Is this stack/vent used as an Emergency Bypass Stack? ☒ No ☐ Yes If YES, for which stack(s)? List Emission Point Nos.:

EMISSION POINT INFORMATION

7) Emission Point Type ☐ Vertical Stack/Vent ☐ Wall Vent ☒ Fugitive Specify Inside ☐ Other (specify)

8) Stack Shape and Dimensions: (Interior dimensions at exit point) ☐ Circular Diameter: in ☐ Rectangular Dimensions: in X in ☐ Other Dimensions in

9) Stack Height Above Ground	10) Reserved
ft.	

11) Stack Location UTM Coordinates

Easting (meters)	Northing (meters)	UTM Zone and Datum	
		☐ Zone 14 ☐ Zone 15	☐ NAD 27 ☐ NAD 83

12) Does the Emission Point have a rain cap (or anything else) which obstructs the flow of gases leaving the Emission Point?

☐ No ☐ YES (specify):

13) COMPOSTION OF EXHAUST STREAM

Exhaust Stream Characteristics	Units of Measure	Emission Point Composition of Exhaust Stream
a) Flow Rate	☐ ACFM or ☐ SCFM	Inside fugitive
b) Temperature	Deg F	ambient

14) BYPASS STACKS

Bypass Stack – Emission Point No.	Bypass Stack Description
Bypass Stack – Emission Point No.	Bypass Stack Description

15) LIST OF EMISSION UNITS VENTING THROUGH THIS EMISSION POINT

Emission Unit No.	SCC Number	Emission Unit No.	SCC No.
5	30905254		

16) LIST OF CONTROL EQUIPMENT ASSOCIATED WITH THIS EMISSION POINT

Control Equipment No.	Control Equipment No.	Control Equipment No.	Control Equipment No.

17) LIST OF MONITORING EQUIPMENT ASSOCIATED WITH THIS POINT

Monitoring Equipment No.	Monitoring Equipment No.	Monitoring Equipment No.	Monitoring Equipment No.

Form 2.0 EMISSION POINT INFORMATION

Duplicate this form for EACH Emission POINT

1) Company/Facility Name	2) EIQ No.	3) Form 2.0
Thurston Manufacturing Company		Page 4 of 8

4) EMISSION POINT NO.	5) EMISSION POINT DESCRIPTION
W-2	Welding-Trailers

6) Is this stack/vent used as an Emergency Bypass Stack? ☒ No ☐ Yes — If YES, for which stack(s)? List Emission Point Nos.:

EMISSION POINT INFORMATION

7) Emission Point Type: ☐ Vertical Stack/Vent ☐ Wall Vent ☒ Fugitive Specify Inside ☐ Other (specify)

8) Stack Shape and Dimensions: (interior dimensions at exit point) ☐ Circular Diameter: in ☐ Rectangular Dimensions: in X in ☐ Other Dimensions in

9) Stack Height Above Ground	10) Reserved
ft.	

11) Stack Location UTM Coordinates

Easting (meters)	Northing (meters)	UTM Zone and Datum	
		☐ Zone 14 ☐ Zone 15	☐ NAD 27 ☐ NAD 83

12) Does the Emission Point have a rain cap (or anything else) which obstructs the flow of gases leaving the Emission Point?

☐ No ☐ YES (specify):

13) COMPOSTION OF EXHAUST STREAM

Exhaust Stream Characteristics	Units of Measure	Emission Point Composition of Exhaust Stream
a) Flow Rate	☐ ACFM or ☐ SCFM	Inside fugitive
b) Temperature	Deg F	ambient

14) BYPASS STACKS

Bypass Stack – Emission Point No.	Bypass Stack Description
Bypass Stack – Emission Point No.	Bypass Stack Description

15) LIST OF EMISSION UNITS VENTING THROUGH THIS EMISSION POINT

Emission Unit No.	SCC Number	Emission Unit No.	SCC No.
6	30905354		

16) LIST OF CONTROL EQUIPMENT ASSOCIATED WITH THIS EMISSION POINT

Control Equipment No.	Control Equipment No.	Control Equipment No.	Control Equipment No.

17) LIST OF MONITORING EQUIPMENT ASSOCIATED WITH THIS POINT

Monitoring Equipment No.	Monitoring Equipment No.	Monitoring Equipment No.	Monitoring Equipment No.

Duplicate this form as needed — TYPE ALL INFORMATION — (DNR Form 542-4013. December 2007)

Form 2.0 EMISSION POINT INFORMATION

Duplicate this form for EACH Emission POINT

1) Company/Facility Name	2) EIQ No.	3) Form 2.0
Thurston Manufacturing Company		Page 5 of 8

4) EMISSION POINT NO.	5) EMISSION POINT DESCRIPTION
FM-1	Fabrication Machine 1

6) Is this stack/vent used as an Emergency Bypass Stack? ☒ No ☐ Yes If YES, for which stack(s)? List Emission Point Nos.:

EMISSION POINT INFORMATION

7) Emission Point Type ☐ Vertical Stack/Vent ☐ Wall Vent ☒ Fugitive Specify Inside ☐ Other (specify)

8) Stack Shape and Dimensions: (interior dimensions at exit point) ☐ Circular Diameter: in ☐ Rectangular Dimensions: in X in ☐ Other Dimensions in

9) Stack Height Above Ground	10) Reserved
ft.	

11) Stack Location UTM Coordinates

Easting (meters)	Northing (meters)	UTM Zone and Datum	
		☐ Zone 14 ☐ Zone 15	☐ NAD 27 ☐ NAD 83

12) Does the Emission Point have a rain cap (or anything else) which obstructs the flow of gases leaving the Emission Point?

☐ No ☐ YES (specify):

13) COMPOSTION OF EXHAUST STREAM

Exhaust Stream Characteristics	Units of Measure	Emission Point Composition of Exhaust Stream
a) Flow Rate	☐ ACFM or ☐ SCFM	Inside fugitive
b) Temperature	Deg F	ambient

14) BYPASS STACKS

Bypass Stack – Emission Point No.	Bypass Stack Description
Bypass Stack – Emission Point No.	Bypass Stack Description

15) LIST OF EMISSION UNITS VENTING THROUGH THIS EMISSION POINT

Emission Unit No.	SCC Number	Emission Unit No.	SCC No.
7	Engineering Calculation		

16) LIST OF CONTROL EQUIPMENT ASSOCIATED WITH THIS EMISSION POINT

Control Equipment No.	Control Equipment No.	Control Equipment No.	Control Equipment No.
CE-7			

17) LIST OF MONITORING EQUIPMENT ASSOCIATED WITH THIS POINT

Monitoring Equipment No.	Monitoring Equipment No.	Monitoring Equipment No.	Monitoring Equipment No.

Duplicate this form as needed TYPE ALL INFORMATION (DNR Form 542-4013. December 2007)

Form 2.0 EMISSION POINT INFORMATION

Duplicate this form for EACH Emission POINT

1) Company/Facility Name	2) EIQ No.	3) Form 2.0
Thurston Manufacturing Company		Page 6 of 8

4) EMISSION POINT NO.	5) EMISSION POINT DESCRIPTION
FM-2	Fabrication Machine 2

6) Is this stack/vent used as an Emergency Bypass Stack? ☒ No ☐ Yes If YES, for which stack(s)? List Emission Point Nos.:

EMISSION POINT INFORMATION

7) Emission Point Type ☐ Vertical Stack/Vent ☐ Wall Vent ☒ Fugitive Specify Inside ☐ Other (specify)

8) Stack Shape and Dimensions: (interior dimensions at exit point) ☐ Circular Diameter: in ☐ Rectangular Dimensions: in X in ☐ Other Dimensions in

9) Stack Height Above Ground	10) Reserved
ft.	

11) Stack Location UTM Coordinates

Easting (meters)	Northing (meters)	UTM Zone and Datum	
		☐ Zone 14 ☐ Zone 15	☐ NAD 27 ☐ NAD 83

12) Does the Emission Point have a rain cap (or anything else) which obstructs the flow of gases leaving the Emission Point?

☐ No ☐ YES (specify):

13) COMPOSTION OF EXHAUST STREAM

Exhaust Stream Characteristics	Units of Measure	Emission Point Composition of Exhaust Stream
a) Flow Rate	☐ ACFM or ☐ SCFM	Inside fugitive
b) Temperature	Deg F	ambient

14) BYPASS STACKS

Bypass Stack – Emission Point No.	Bypass Stack Description
Bypass Stack – Emission Point No.	Bypass Stack Description

15) LIST OF EMISSION UNITS VENTING THROUGH THIS EMISSION POINT

Emission Unit No.	SCC Number	Emission Unit No.	SCC No.
8	Engineering Calculation		

16) LIST OF CONTROL EQUIPMENT ASSOCIATED WITH THIS EMISSION POINT

Control Equipment No.	Control Equipment No.	Control Equipment No.	Control Equipment No.
CE-8			

17) LIST OF MONITORING EQUIPMENT ASSOCIATED WITH THIS POINT

Monitoring Equipment No.	Monitoring Equipment No.	Monitoring Equipment No.	Monitoring Equipment No.

Duplicate this form as needed TYPE ALL INFORMATION (DNR Form 542-4013. December 2007)

Form 2.0 EMISSION POINT INFORMATION

Duplicate this form for EACH Emission POINT

1) Company/Facility Name	2) EIQ No.	3) Form 2.0
Thurston Manufacturing Company		Page 7 of 8

4) EMISSION POINT NO.	5) EMISSION POINT DESCRIPTION
Fug-1	Fugitive building heat

6) Is this stack/vent used as an Emergency Bypass Stack? ☒ No ☐ Yes If YES, for which stack(s)? List Emission Point Nos.:

EMISSION POINT INFORMATION

7) Emission Point Type ☐ Vertical Stack/Vent ☐ Wall Vent ☒ Fugitive Specify Inside ☐ Other (specify)

8) Stack Shape and Dimensions: (interior dimensions at exit point) ☐ Circular Diameter: in ☐ Rectangular Dimensions: in X in ☐ Other Dimensions in

9) Stack Height Above Ground	10) Reserved
ft.	

11) Stack Location UTM Coordinates

Easting (meters)	Northing (meters)	UTM Zone and Datum	
		☐ Zone 14 ☐ Zone 15	☐ NAD 27 ☐ NAD 83

12) Does the Emission Point have a rain cap (or anything else) which obstructs the flow of gases leaving the Emission Point?

☐ No ☐ YES (specify):

13) COMPOSTION OF EXHAUST STREAM

Exhaust Stream Characteristics	Units of Measure	Emission Point Composition of Exhaust Stream
a) Flow Rate	☐ ACFM or ☐ SCFM	Inside fugitive
b) Temperature	Deg F	ambient

14) BYPASS STACKS

Bypass Stack – Emission Point No.	Bypass Stack Description
Bypass Stack – Emission Point No.	Bypass Stack Description

15) LIST OF EMISSION UNITS VENTING THROUGH THIS EMISSION POINT

Emission Unit No.	SCC Number	Emission Unit No.	SCC No.
10	10500206		

16) LIST OF CONTROL EQUIPMENT ASSOCIATED WITH THIS EMISSION POINT

Control Equipment No.	Control Equipment No.	Control Equipment No.	Control Equipment No.

17) LIST OF MONITORING EQUIPMENT ASSOCIATED WITH THIS POINT

Monitoring Equipment No.	Monitoring Equipment No.	Monitoring Equipment No.	Monitoring Equipment No.

Form 2.0 EMISSION POINT INFORMATION

Duplicate this form for EACH Emission POINT

1) Company/Facility Name	2) EIQ No.	3) Form 2.0
Thurston Manufacturing Company		Page 8 of 8

4) EMISSION POINT NO.	5) EMISSION POINT DESCRIPTION
PB-1	Paint booth

6) Is this stack/vent used as an Emergency Bypass Stack? ☒ No ☐ Yes If YES, for which stack(s)? List Emission Point Nos.:

EMISSION POINT INFORMATION

7) Emission Point Type ☐ Vertical Stack/Vent ☐ Wall Vent ☒ Fugitive Specify Inside ☐ Other (specify)

8) Stack Shape and Dimensions: (interior dimensions at exit point) ☐ Circular Diameter: in ☐ Rectangular Dimensions: in X in ☐ Other Dimensions in

9) Stack Height Above Ground	10) Reserved
ft.	

11) Stack Location UTM Coordinates

Easting (meters)	Northing (meters)	UTM Zone and Datum	
		☐ Zone 14 ☐ Zone 15	☐ NAD 27 ☐ NAD 83

12) Does the Emission Point have a rain cap (or anything else) which obstructs the flow of gases leaving the Emission Point?

☐ No ☐ YES (specify):

13) COMPOSTION OF EXHAUST STREAM

Exhaust Stream Characteristics	Units of Measure	Emission Point Composition of Exhaust Stream
a) Flow Rate	☐ ACFM or ☐ SCFM	Inside fugitive
b) Temperature	Deg F	ambient

14) BYPASS STACKS

Bypass Stack – Emission Point No.	Bypass Stack Description
Bypass Stack – Emission Point No.	Bypass Stack Description

15) LIST OF EMISSION UNITS VENTING THROUGH THIS EMISSION POINT

Emission Unit No.	SCC Number	Emission Unit No.	SCC No.
1	Mass Balance		

16) LIST OF CONTROL EQUIPMENT ASSOCIATED WITH THIS EMISSION POINT

Control Equipment No.	Control Equipment No.	Control Equipment No.	Control Equipment No.

17) LIST OF MONITORING EQUIPMENT ASSOCIATED WITH THIS POINT

Monitoring Equipment No.	Monitoring Equipment No.	Monitoring Equipment No.	Monitoring Equipment No.

Duplicate this form as needed TYPE ALL INFORMATION (DNR Form 542-4013. December 2007)

Form 4.0 EMISSION UNIT – ACTUAL OPERATIONS & EMISSIONS

Duplicate this form for EACH Emission UNIT

1) Company/Facility name	2) EIQ No.	3) Form 4.0
Thurston Manufacturing Company		Page 1 of 10

4) Emissions Point No.	5) Emissions Point Description	6) EMISSION YEAR
PB-1	Paint Booth	2011

EMISSION UNIT – ACTUAL OPERATIONS AND EMISSIONS

7) EMISSION UNIT NO.	8) SCC NO.	9) DESCRIPTION OF PROCESS
EU-1	Mass Balance	Paint booth

ACTUAL THROUGHPUT

10) Raw Material	11) Actual Throughput – Yearly Total	12) Units Raw Material
Paint	unknown	gal/yr

Actual Operating Rate/Schedule

	Jan.-Mar	April-June	July-Sept.	Oct.-Dec.
13) Percent of Total Operating Time	25 %	25 %	25 %	25 %
14) Hours/Day	10 Hours	10 Hours	10 Hours	10 Hours
15) Days/Week	5 Days	5 Days	5 Days	5 Days
16) Weeks/13 Week Quarter	52 Weeks	52 Weeks	52 Weeks	52 Weeks

ASSOCIATED EQUIPMENT

(17) Control Equipment (CE) No.				
(18) Monitoring Equip. (ME) No.				

ACTUAL EMISSIONS

(19) Air Pollutant	(20) Emission Factor	(21) Emission Factor Units	(22) *Source of Emission Factor	(23) Ash or Sulfur %	(24) Combined Control Efficiency %	(25) ACTUAL Emissions (Tons/YR)
PM-2.5						unknown
PM-10						unknown
Total PM						unknown
SO_2						unknown
NO_x						unknown
VOC						unknown
CO						unknown
Lead						unknown
Ozone						unknown
Ammonia						unknown

Report Hazardous Air Pollutants and additional regulated air pollutants emitted on page 2 of this form.

*Sources of Emission Factors: CEM .. Stack Test .. Mass Balance .. AP-42 .. EPA-WebFire .. EPA-TANKS .. EPA-L&E .. Worksheet .. Other – Specify

Form 4.0 EMISSION UNIT – ACTUAL OPERATIONS & EMISSIONS

Duplicate this form for EACH Emission UNIT

1) Company/Facility name	2) EIQ No.	3) Form 4.0
Thurston Manufacturing Company		Page 2 of 10

4) Emissions Point No.	5) Emissions Point Description	6) EMISSION YEAR
PT-1	Plasma cutter	2011

EMISSION UNIT – ACTUAL OPERATIONS AND EMISSIONS

7) EMISSION UNIT NO.	8) SCC NO.	9) DESCRIPTION OF PROCESS
EU-2	Engineering calculation	Plasma Table

ACTUAL THROUGHPUT

10) Raw Material	11) Actual Throughput – Yearly Total	12) Units Raw Material
Steel	unknown	Lbs/yr

Actual Operating Rate/Schedule

	Jan.-Mar	April-June	July-Sept.	Oct.-Dec.
13) Percent of Total Operating Time	25 %	25 %	25 %	25 %
14) Hours/Day	10 Hours	10 Hours	10 Hours	10 Hours
15) Days/Week	5 Days	5 Days	5 Days	5 Days
16) Weeks/13 Week Quarter	52 Weeks	52 Weeks	52 Weeks	52 Weeks

ASSOCIATED EQUIPMENT

(17) Control Equipment (CE) No.				
(18) Monitoring Equip. (ME) No.				

ACTUAL EMISSIONS

(19) Air Pollutant	(20) Emission Factor	(21) Emission Factor Units	(22) *Source of Emission Factor	(23) Ash or Sulfur %	(24) Combined Control Efficiency %	(25) ACTUAL Emissions (Tons/YR)
PM-2.5						unknown
PM-10						unknown
Total PM						unknown
SO_2						unknown
NO_x						unknown
VOC						unknown
CO						unknown
Lead						unknown
Ozone						unknown
Ammonia						unknown

Report Hazardous Air Pollutants and additional regulated air pollutants emitted on page 2 of this form.

*Sources of Emission Factors: CEM .. Stack Test .. Mass Balance .. AP-42 .. EPA-WebFire .. EPA-TANKS .. EPA-L&E .. Worksheet .. Other – Specify

Form 4.0 EMISSION UNIT – ACTUAL OPERATIONS & EMISSIONS

Duplicate this form for EACH Emission UNIT

1) Company/Facility name	2) EIQ No.	3) Form 4.0
Thurston Manufacturing Company		Page 3 of 10

4) Emissions Point No.	5) Emissions Point Description	6) EMISSION YEAR
WB-1	Wash Bay	2011

EMISSION UNIT – ACTUAL OPERATIONS AND EMISSIONS

7) EMISSION UNIT NO.	8) SCC NO.	9) DESCRIPTION OF PROCESS
EU-4	30900202	Wash Bay

ACTUAL THROUGHPUT

10) Raw Material	11) Actual Throughput – Yearly Total	12) Units Raw Material
Wash material	40	gal/yr

Actual Operating Rate/Schedule

	Jan.-Mar	April-June	July-Sept.	Oct.-Dec.
13) Percent of Total Operating Time	25 %	25 %	25 %	25 %
14) Hours/Day	10 Hours	10 Hours	10 Hours	10 Hours
15) Days/Week	5 Days	5 Days	5 Days	5 Days
16) Weeks/13 Week Quarter	52 Weeks	52 Weeks	52 Weeks	52 Weeks

ASSOCIATED EQUIPMENT

(17) Control Equipment (CE) No.				
(18) Monitoring Equip. (ME) No.				

ACTUAL EMISSIONS

(19) Air Pollutant	(20) Emission Factor	(21) Emission Factor Units	(22) *Source of Emission Factor	(23) Ash or Sulfur %	(24) Combined Control Efficiency %	(25) ACTUAL Emissions (Tons/YR)
PM-2.5	0.00	Lbs/1000lbs	Mass balance			0.00
PM-10	0.00	Lbs/1000lbs	Mass Balance			0.00
Total PM						
SO_2						
NO_x						
VOC	0.45	Lbs/1000 lbs	Mass balance			0.54
CO						
Lead						
Ozone						
Ammonia						

Report Hazardous Air Pollutants and additional regulated air pollutants emitted on page 2 of this form.

*Sources of Emission Factors: CEM .. Stack Test .. Mass Balance .. AP-42 .. EPA-WebFire .. EPA-TANKS .. EPA-L&E .. Worksheet .. Other – Specify

Form 4.0 EMISSION UNIT – ACTUAL OPERATIONS & EMISSIONS

Duplicate this form for EACH Emission UNIT

1) Company/Facility name	2) EIQ No.	3) Form 4.0
Thurston Manufacturing Company		Page 4 of 10

4) Emissions Point No.	5) Emissions Point Description	6) EMISSION YEAR
W-1	Welding-Ag	2011

EMISSION UNIT – ACTUAL OPERATIONS AND EMISSIONS

7) EMISSION UNIT NO.	8) SCC NO.	9) DESCRIPTION OF PROCESS
EU-5	30905254	Welding-Ag

ACTUAL THROUGHPUT

10) Raw Material	11) Actual Throughput – Yearly Total	12) Units Raw Material
Steel	119790	Lbs/yr

Actual Operating Rate/Schedule

	Jan.-Mar	April-June	July-Sept.	Oct.-Dec.
13) Percent of Total Operating Time	25 %	25 %	25 %	25 %
14) Hours/Day	10 Hours	10 Hours	10 Hours	10 Hours
15) Days/Week	5 Days	5 Days	5 Days	5 Days
16) Weeks/13 Week Quarter	52 Weeks	52 Weeks	52 Weeks	52 Weeks

ASSOCIATED EQUIPMENT

(17) Control Equipment (CE) No.				
(18) Monitoring Equip. (ME) No.				

ACTUAL EMISSIONS

(19) Air Pollutant	(20) Emission Factor	(21) Emission Factor Units	(22) *Source of Emission Factor	(23) Ash or Sulfur %	(24) Combined Control Efficiency %	(25) ACTUAL Emissions (Tons/YR)
PM-2.5	5.20					unknown
PM-10	5.20					unknown
Total PM						unknown
SO_2						unknown
NO_x						unknown
VOC						unknown
CO						unknown
Lead						unknown
Ozone						unknown
Ammonia						unknown

Report Hazardous Air Pollutants and additional regulated air pollutants emitted on page 2 of this form.

*Sources of Emission Factors: CEM .. Stack Test .. Mass Balance .. AP-42 .. EPA-WebFire .. EPA-TANKS .. EPA-L&E .. Worksheet .. Other – Specify

Duplicate this form as needed

TYPE OR PRINT ALL INFORMATION

(DNR Form 542-4007, p. 1. December 2009)

Form 4.0 EMISSION UNIT – ACTUAL OPERATIONS & EMISSIONS (continued – page 2)

Company/Facility name		EIQ No.
Thurston Manufacturing Company		
Emissions Point No.	**EMISSION UNIT NO.**	**EMISSION YEAR**
W-1	EU-5	2011

ACTUAL EMISSIONS - HAPs and additional regulated air pollutants

(19) Air Pollutant		(20) Emission Factor	(21) Emission Factor Units	(22) *Source of Emission Factor	(24) Combined Control Efficiency %	(25) ACTUAL Emissions (Tons/YR)
CAS No.	Name					
	Manganese	0.318	Lb/1000 lbs	30905254		0.363
	Cobalt	0.001	Lb/1000 lbs	30905254		0.001
	Nickel	0.001	Lb/1000 lbs	30905254		0.001
	Chromium	0.001	Lb/1000 lbs	30905254		0.001

*Sources of Emission Factors: CEM .. Stack Test .. Mass Balance .. AP-42 .. EPA-WebFire .. EPA-TANKS .. EPA-L&E .. Worksheet .. Other – Specify

Duplicate this form as needed | TYPE OR PRINT ALL INFORMATION | (DNR Form 542-4007, p. 2. December 2009)

Form 4.0 EMISSION UNIT – ACTUAL OPERATIONS & EMISSIONS

Duplicate this form for EACH Emission UNIT

1) Company/Facility name	2) EIQ No.	3) Form 4.0
Thurston Manufacturing Company		Page 6 of 10

4) Emissions Point No.	5) Emissions Point Description	6) EMISSION YEAR
FM-1	Fabrication Machine 1	2011

EMISSION UNIT – ACTUAL OPERATIONS AND EMISSIONS

7) EMISSION UNIT NO.	8) SCC NO.	9) DESCRIPTION OF PROCESS
EU-7	Engineering Calculation	Fabrication Machine

ACTUAL THROUGHPUT

10) Raw Material	11) Actual Throughput – Yearly Total	12) Units Raw Material
Steel	unknown	Lbs/yr

Actual Operating Rate/Schedule

	Jan.-Mar	April-June	July-Sept.	Oct.-Dec.
13) Percent of Total Operating Time	25 %	25 %	25 %	25 %
14) Hours/Day	10 Hours	10 Hours	10 Hours	10 Hours
15) Days/Week	5 Days	5 Days	5 Days	5 Days
16) Weeks/13 Week Quarter	52 Weeks	52 Weeks	52 Weeks	52 Weeks

ASSOCIATED EQUIPMENT

(17) Control Equipment (CE) No.				
(18) Monitoring Equip. (ME) No.				

ACTUAL EMISSIONS

(19) Air Pollutant	(20) Emission Factor	(21) Emission Factor Units	(22) *Source of Emission Factor	(23) Ash or Sulfur %	(24) Combined Control Efficiency %	(25) ACTUAL Emissions (Tons/YR)
PM-2.5	0.02261	Lbs/inch of cut	Engineering calcs.			unknown
PM-10						unknown
Total PM						unknown
SO_2						unknown
NO_x						unknown
VOC						unknown
CO						unknown
Lead						unknown
Ozone						unknown
Ammonia						unknown

Report Hazardous Air Pollutants and additional regulated air pollutants emitted on page 2 of this form.

*Sources of Emission Factors: CEM .. Stack Test .. Mass Balance .. AP-42 .. EPA-WebFire .. EPA-TANKS .. EPA-L&E .. Worksheet .. Other – Specify

Form 4.0 EMISSION UNIT – ACTUAL OPERATIONS & EMISSIONS

Duplicate this form for EACH Emission UNIT

1) Company/Facility name	2) EIQ No.	3) Form 4.0
Thurston Manufacturing Company		Page 7 of 10

4) Emissions Point No.	5) Emissions Point Description	6) EMISSION YEAR
W-2	Welding-Trailers	2011

EMISSION UNIT – ACTUAL OPERATIONS AND EMISSIONS

7) EMISSION UNIT NO.	8) SCC NO.	9) DESCRIPTION OF PROCESS
EU-6	30905354	Welding-Trailers

ACTUAL THROUGHPUT

10) Raw Material	11) Actual Throughput – Yearly Total	12) Units Raw Material
Steel	7600	Lbs/yr

Actual Operating Rate/Schedule

	Jan.-Mar	April-June	July-Sept.	Oct.-Dec.
13) Percent of Total Operating Time	25 %	25 %	25 %	25 %
14) Hours/Day	10 Hours	10 Hours	10 Hours	10 Hours
15) Days/Week	5 Days	5 Days	5 Days	5 Days
16) Weeks/13 Week Quarter	52 Weeks	52 Weeks	52 Weeks	52 Weeks

ASSOCIATED EQUIPMENT

(17) Control Equipment (CE) No.				
(18) Monitoring Equip. (ME) No.				

ACTUAL EMISSIONS

(19) Air Pollutant	(20) Emission Factor	(21) Emission Factor Units	(22) *Source of Emission Factor	(23) Ash or Sulfur %	(24) Combined Control Efficiency %	(25) ACTUAL Emissions (Tons/YR)
PM-2.5	15.10	Lbs/1000 lbs	30905354			0.057
PM-10	15.10					0.057
Total PM						
SO_2						
NO_x						
VOC						
CO						
Lead						
Ozone						
Ammonia						

Report Hazardous Air Pollutants and additional regulated air pollutants emitted on page 2 of this form.

*Sources of Emission Factors: CEM .. Stack Test .. Mass Balance .. AP-42 .. EPA-WebFire .. EPA-TANKS .. EPA-L&E .. Worksheet .. Other – Specify

Form 4.0 EMISSION UNIT – ACTUAL OPERATIONS & EMISSIONS (continued – page 2)

Company/Facility name		EIQ No.
Thurston Manufacturing		
Emissions Point No.	**EMISSION UNIT NO.**	**EMISSION YEAR**
W-2	EU-6	2011

ACTUAL EMISSIONS - HAPs and additional regulated air pollutants

(19) Air Pollutant		(20) Emission Factor	(21) Emission Factor Units	(22) *Source of Emission Factor	(24) Combined Control Efficiency %	(25) ACTUAL Emissions (Tons/YR)
CAS No.	Name					
	Manganese	0.891	Lb/1000 lbs	30905354		0.003
	Cobalt	0.0	Lb/1000 lbs	30905354		0.000
	Nickel	0.005	Lb/1000 lbs	30905354		0.000
	Chromium	0.004	Lb/1000 lbs	30905354		0.000

*Sources of Emission Factors: CEM .. Stack Test .. Mass Balance .. AP-42 .. EPA-WebFire .. EPA-TANKS .. EPA-L&E .. Worksheet .. Other – Specify

Duplicate this form as needed

TYPE OR PRINT ALL INFORMATION

(DNR Form 542-4007, p. 2. December 2009)

Form 4.0 EMISSION UNIT – ACTUAL OPERATIONS & EMISSIONS

Duplicate this form for EACH Emission UNIT

1) Company/Facility name	2) EIQ No.	3) Form 4.0
Thurston Manufacturing Company		Page 9 of 10

4) Emissions Point No.	5) Emissions Point Description	6) EMISSION YEAR
FM-2	Fabrication Machine 2	2011

EMISSION UNIT – ACTUAL OPERATIONS AND EMISSIONS

7) EMISSION UNIT NO.	8) SCC NO.	9) DESCRIPTION OF PROCESS
EU-8	Engineering Calculation	Fabrication Machine

ACTUAL THROUGHPUT

10) Raw Material	11) Actual Throughput – Yearly Total	12) Units Raw Material
Steel	unknown	Lbs/yr

Actual Operating Rate/Schedule

	Jan.-Mar	April-June	July-Sept.	Oct.-Dec.
13) Percent of Total Operating Time	25 %	25 %	25 %	25 %
14) Hours/Day	10 Hours	10 Hours	10 Hours	10 Hours
15) Days/Week	5 Days	5 Days	5 Days	5 Days
16) Weeks/13 Week Quarter	52 Weeks	52 Weeks	52 Weeks	52 Weeks

ASSOCIATED EQUIPMENT

(17) Control Equipment (CE) No.				
(18) Monitoring Equip. (ME) No.				

ACTUAL EMISSIONS

(19) Air Pollutant	(20) Emission Factor	(21) Emission Factor Units	(22) *Source of Emission Factor	(23) Ash or Sulfur %	(24) Combined Control Efficiency %	(25) ACTUAL Emissions (Tons/YR)
PM-2.5	0.02261	Lbs/inch of cut	Engineering calcs.			unknown
PM-10						unknown
Total PM						unknown
SO_2						unknown
NO_x						unknown
VOC						unknown
CO						unknown
Lead						unknown
Ozone						unknown
Ammonia						unknown

Report Hazardous Air Pollutants and additional regulated air pollutants emitted on page 2 of this form.

*Sources of Emission Factors: CEM .. Stack Test .. Mass Balance .. AP-42 .. EPA-WebFire .. EPA-TANKS .. EPA-L&E .. Worksheet .. Other – Specify

Form 4.0 EMISSION UNIT – ACTUAL OPERATIONS & EMISSIONS

Duplicate this form for EACH Emission UNIT

1) Company/Facility name	2) EIQ No.	3) Form 4.0
Thurston Manufacturing Company		Page 10 of 10

4) Emissions Point No.	5) Emissions Point Description	6) EMISSION YEAR
Fug-1	Fugitive building heat	2011

EMISSION UNIT – ACTUAL OPERATIONS AND EMISSIONS

7) EMISSION UNIT NO.	8) SCC NO.	9) DESCRIPTION OF PROCESS
EU-10	10500206	Fugitive building heat

ACTUAL THROUGHPUT

10) Raw Material	11) Actual Throughput – Yearly Total	12) Units Raw Material
Natural gas	1.5	therms/yr

Actual Operating Rate/Schedule

	Jan.-Mar	April-June	July-Sept.	Oct.-Dec.
13) Percent of Total Operating Time	25 %	25 %	25 %	25 %
14) Hours/Day	10 Hours	10 Hours	10 Hours	10 Hours
15) Days/Week	5 Days	5 Days	5 Days	5 Days
16) Weeks/13 Week Quarter	52 Weeks	52 Weeks	52 Weeks	52 Weeks

ASSOCIATED EQUIPMENT

(17) Control Equipment (CE) No.				
(18) Monitoring Equip. (ME) No.				

ACTUAL EMISSIONS

(19) Air Pollutant	(20) Emission Factor	(21) Emission Factor Units	(22) *Source of Emission Factor	(23) Ash or Sulfur %	(24) Combined Control Efficiency %	(25) ACTUAL Emissions (Tons/YR)
PM-2.5	8.7	Lbs/mmcf	10500206			6.53E-06
PM-10	8.7	Lbs/mmcf	10500206			6.53E-06
Total PM	5.7	Lbs/mmcf	10500206			4.28E-09
SO_2	0.600	Lbs/mmcf	10500206			4.50E-07
NO_x	100.00	Lbs/mmcf	10500206			7.50E-05
VOC	5.300	Lbs/mmcf	10500206			3.98E-06
CO	20.00	Lbs/mmcf	10500206			1.50E-05
Lead	0.001	Lbs/mmcf	10500206			3.75E-10
Ozone						
Ammonia	0.490	Lbs/mmcf	10500206			3.68E-07

Report Hazardous Air Pollutants and additional regulated air pollutants emitted on page 2 of this form.

*Sources of Emission Factors: CEM .. Stack Test .. Mass Balance .. AP-42 .. EPA-WebFire .. EPA-TANKS .. EPA-L&E .. Worksheet .. Other – Specify

Form 5.0 - Title V Annual Emissions Summary/Fee (567 IAC 22.106)

Facility Name	EIQ No.	Emission Year
Thurston Manufacturing Company		2011

Check Submission Type (a) or (b)

0325-542-325A-0432

Check Here ☐ **(a) Annual Emissions Summary**

Each facility subject to Title V permitting is required to submit an Annual Emissions Summary postmarked by March 31 of each year. The summary shall include the air emissions from the previous calendar year. The following forms are required:
- Form 1.0 Facility Information (check the Annual Emissions / Fee box)
- Form 4.0 Emission Unit Actual Operations & Emissions for EACH emission unit
- Form 5.0 Title V Annual Emissions Summary/Fee
- Part 3 Application Certification (sign under "Certification of Truth, Accuracy & Completeness")

Check Here ☐ **(b) Annual Fee Payment**

Each facility subject to Title V permitting shall submit an Annual Fee Payment postmarked by July 1 of each year. The fee payment is based on the previous calendar year's air emissions. The following forms are required:
- Form 1.0 Facility Information (check the Annual Emissions / Fee box)
- Form 5.0 Title V Annual Emissions Summary/Fee
- Part 3 Application Certification (sign under "Certification of Fees" AND "Certification of Truth, Accuracy and Completeness")

For DNR use only

For each regulated air pollutant listed below, enter the TONS emitted:

Regulated Air Pollutant	Total Emissions (tons) *(full amount, may be over 4,000 tons per pollutant)*	Emissions Subject To Fees (tons) *(maximum of 4,000 tons per pollutant)*
PM-2.5	0.369	*No Fee Required*
PM-10	0.369	
PM (total particulate matter)	0.369	*No Fee Required*
Sulfur Dioxide (SO_2)	4.50E-07	
Nitrogen Oxides (NO_x)	7.50E-05	
Volatile Organic Compounds (VOC)	1.22E-05	
Carbon Monoxide (CO)	1.50E-05	*No Fee Required*
Lead	3.75E-10	
Ozone (O_3)		
Ammonia (NH_3)	3.68E-07	*No Fee Required*
	Criteria Pollutant Fee Subtotal (tons):	

- If your facility emitted any hazardous air pollutants (HAPs) and additional regulated air pollutants (fluorides, etc.), report them on page 2 of this form.
- Otherwise, continue to the Emissions Fee Calculation table below.

Emissions Fee Calculation

Criteria Pollutant Fee Subtotal from page 1 (tons):	
HAP and Additional Regulated Air Pollutant Fee Subtotal from page 2 (tons):	+
Emissions Subject to Fee TOTAL (tons):	=

Annual Fee Payment *(complete for July 1 submission)*

Emissions Subject to Fee TOTAL	Fee Rate (as set by the EPC)	Fee Due
Tons	X $ /ton =	$

Duplicate this form as needed — TYPE OR PRINT ALL INFORMATION — (DNR Form 542-4009, p.1. 07/2011)

Form 5.0 - Title V Annual Emissions Summary/Fee (continued)

Facility Name	EIQ No.	Emission Year	Form 5.0 (page 2)
			Page of

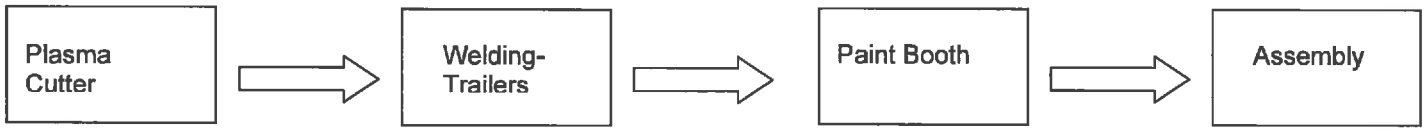
Instructions: Use the table below to report actual emissions of HAPs and additional regulated air pollutants emitted. Duplicate this page, as needed.

- Enter the pollutant name and CAS No. for each HAP. In addition, enter any regulated air pollutant that is not reported on page 1 of this form.
- Total Emissions (tons): Enter the total plant-wide emissions for each pollutant listed. Include fugitive emissions, but do not include emissions from insignificant activities (567 IAC 22.103). Totals should come directly from the values reported on Form 4.0. Report totals to the nearest hundredth of a ton. Totals less than 0.005 tons do not need to be reported.
- Emissions Subject to Fees (tons): Enter the total plant-wide emissions for each pollutant subject to fees. Ensure that you do not double-count emissions, as noted below.
- Double-counting: A majority of the hazardous air pollutants (HAPs) are also considered volatile organic compounds (VOCs) or particulate matter. Form RE-01, Tables A-1 & A-2, lists all of the HAPs and whether or not each is also considered a VOC or particulate matter. Facilities are not required to pay fees twice for the same emissions. If a HAP you reported below is a VOC or PM HAP, DO NOT include the value in the Emissions Subject to Fees column. Enter "0.00" instead.
- HAP and Additional Regulated Air Pollutant Fee Subtotal (tons): Add the values reported in the Emissions Subject to Fees column, and list the total here. Return to page 1 of this form, and enter the HAP and Additional Regulated Air Pollutant Fee Subtotal in the Emissions Fee Calculation table.

Pollutant Name	CAS No.	Total Emissions (tons)	Emissions Subject to Fees (tons)
Manganese		2.24E-02	
Cobalt		5.99E-05	
Nickel		7.89E-05	
Chromium		7.51E-05	

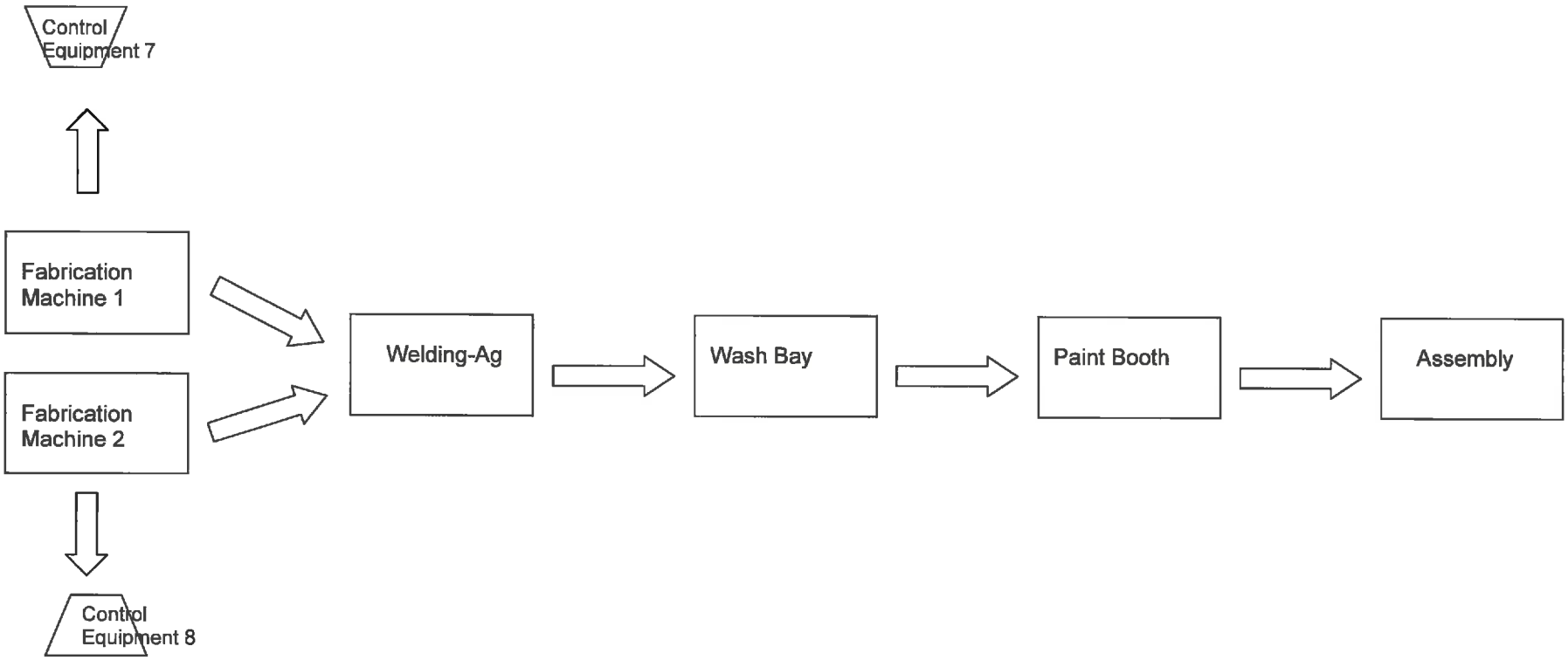
HAP and Additional Regulated Air Pollutant Fee Subtotal (tons):

Appendix A



zia engineering & environmental consultants, LLC.	Facility Process Flow Diagram-Trailers Thurston Manufacturing Company Thurston, Nebraska	Figure 1 August 2012

1531 Airport Road, Suite 104 • Ames, Iowa 50010 • phone (515) 233-5794 • fax (515) 233-5934



zia engineering & environmental consultants, LLC

Facility Process Flow Diagram-Ag
Thurston Manufacturing Company
Thurston, Nebraska

Figure 2

August 2012

1531 Airport Road, Suite 104 • Ames, Iowa 50010 • phone (515) 233-5794 • fax (515) 233-5934

Potential Calculations

Thurston Manufacturing **2012 Air Permits** **Thurston, NE**			
Emission Unit:	Paint Booth 1, EU-1		
Emission Point:	PB-1a-1c		
SCC:	Mass Balance		
Input Data:			
	Potential Solvent PM, PM 10, and PM 2.5	0.00	tons/yr
	Potential Primer PM, PM 10, and PM 2.5	0.02	tons/yr
	Potential Topcoat PM, PM 10, and PM 2.5	0.01	tons/yr
	Actual Solvent PM, PM 10, and PM 2.5		tons/yr
	Actual Primer PM, PM 10, and PM 2.5		tons/yr
	Actual Topcoat PM, PM 10, and PM 2.5		tons/yr
Potential Emissions:			
PM, PM 10, PM 2.5	0.00 tons/yr solvent + 0.02 tons/yr primer + 0.01 tons/yr topcoat	3.004E-02	tons/yr

Thurston Manufacturing **2012 Air Permits** **Thurston, NE**			
Emission Unit:	Plasma Table, EU-2		
Emission Point:	PT-1		
SCC:	Engineering Calculations		
Input Data:	Bag House Efficiency	0%	%
	Metal thickness	0.375	inches
	Width of cut	0.125	inches
	Volume of cut per inch	0.0469	ci
	Weight of Steel	250	lbs/cf
		0.145	lbs/ci
	Weight of steel per inch of cut	0.00678	lbs/inch
	Percent emitted	5	%
	Controlled emissions	3.39E-04	lbs/inch
	Maximum inches per time	2,400	inches/hr
	Actual inches per time	0	inches/hr
	Actual operating time	0	hrs/yr
Potential Emissions:			
PM 10	0.00678 lbs/inch of cut * 5% emitted * 2,400 inches/hr * 0% efficiency	0.814	lbs/hr
	0.814 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	3.564	tons/yr

Max. cut is 40 in/min on an average of 3/8" steel with ¾" electrode tip

Thurston Manufacturing 2012 Air Permits Thurston, NE			
Emission Unit:	Shot Blast, EU-3		
Emission Point:	SB-1		
SCC:	30900202		
Input Data:			
	Bag House Efficiency	90.00%	%
	SCC Emission Factor, PM 2.5	0.69	lbs/1000 lbs
	SCC Emission Factor, PM 10	0.69	lbs/1000 lbs
	Max. shot consumed	1.58E+08	lbs/yr
	Actual shot consumed	0	lbs/yr
Potential Emissions:			
PM 2.5	0.69 lbs/1000 lbs shot * 157680000 lbs/yr consumed * 90% efficiency	10879.92	lbs/yr
	10,879.9 lbs/yr / 2000 lbs/ton	5.44	tons/yr
PM 10	0.69 lbs/1000 lbs shot * 157680000 lbs/yr consumed * 90% efficiency	10879.92	lbs/yr
	10,879.9200 lbs/yr / 2000 lbs/ton	5.44	tons/yr

Thurston Manufacturing 2012 Air Permits Thurston, NE			
Emission Unit:	Wash Bay, EU-4		
Emission Point:	WB-1		
SCC:	Mass Balance		
Input Data:	*Phosphate Wash Bay*		
	Efficiency	90.00%	%
	Density	9.10	lb/gal
	SCC Emission Factor, PM 2.5/10	0.00	lbs/1000 lbs
	SCC Emission Factor, VOC	0.45	lbs/1000 lbs
	Max. wash material consumed	23914800	lb/yr
	Actual wash material consumed		lb/yr
Potential Emissions:			
PM 2.5/10	0.00 lbs/1000 lbs material * 23914800lbs/yr consumed * 90% efficiency	0.00	lbs/yr
	0.0 lbs/yr / 2000 lbs/ton	0.00	tons/yr
VOC	0.45 lbs/1000 lbs material * 23914800 lbs/yr consumed * 90% efficiency	1076.17	lbs/yr
	1,076.1660 lbs/yr / 2000 lbs/ton	0.54	tons/yr

Thurston Manufacturing **2012 Air Permits** **Thurston, NE**			
Emission Units:	Welding Ag EU-5		
Emission Points:	W-1		
SCC:	30905254		
Input Data:	***E70 Electrode***		
	Material Used		lbs/yr
	SCC Emission Factor, PM 10	5.20	lb/10^3 lb
	SCC Emission Factor, Manganese	0.318	lb/10^3 lb
	SCC Emission Factor, Cobalt	0.001	lb/10^3 lb
	SCC Emission Factor, Nickel	0.001	lb/10^3 lb
	SCC Emission Factor, Chromium	0.001	lb/10^3 lb
	Maximum yearly output for 12 welders	2281104	lbs/yr
Potential Emissions:			
PM-10	5.200 lb/10^3 lb * 2,281,104.000 lbs/yr / 2000 lbs/ton	5.931	tons/yr
Manganese	0.318 lb/10^3 lb * 2,281,104.000 lbs/yr / 2000 lbs/ton	0.363	tons/yr
Cobalt	0.001 lb/10^3 lb * 2,281,104.000 lbs/yr / 2000 lbs/ton	0.001	tons/yr
Nickel	0.001 lb/10^3 lb * 2,281,104.000 lbs/yr / 2000 lbs/ton	0.001	tons/yr
Chromium	0.001 lb/10^3 lb * 2,281,104.000 lbs/yr / 2000 lbs/ton	0.001	tons/yr

GMAW E70s

Thurston Manufacturing **2012 Air Permits** **Thurston, NE**			
Emission Units:	Welding Trailers EU-6		
Emission Points:	W-2		
SCC:	30905354		
Input Data:	***E70 Electrode***		
	Ma erial Used		lbs/yr
	SCC Emission Factor, PM 10	15.10	lb/10^3 lb
	SCC Emission Factor, Manganese	0.891	lb/10^3 lb
	SCC Emission Factor, Cobalt	0	lb/10^3 lb
	SCC Emission Factor, Nickel	0.005	lb/10^3 lb
	SCC Emission Factor, Chromium	0.004	lb/10^3 lb
	Maximum yearly output for 7 welders	1011780	lbs/yr
Potential Emissions:			
PM-10	15.100 lb/10^3 lb * 1,011,780.000 lbs/yr / 2000 lbs/ton	7.639	tons/yr
Manganese	0.891 lb/10^3 lb * 1,011,780.000 lbs/yr / 2000 lbs/ton	0.451	tons/yr
Cobalt	0.000 lb/10^3 lb * 1,011,780.000 lbs/yr / 2000 lbs/ton	0.000	tons/yr
Nickel	0.005 lb/10^3 lb * 1,011,780.000 lbs/yr / 2000 lbs/ton	0.003	tons/yr
Chromium	0.004 lb/10^3 lb * 1,011,780.000 lbs/yr / 2000 lbs/ton	0.002	tons/yr

FCAW E70
Co not determined for FCAW E70

Thurston Manufacturing 2012 Air Permits Thurston, NE			
Emission Unit:	Fab. Machine 1, EU-7		
Emission Point:	FM-1		
SCC:	Engineering Calculations		
Input Data:	Bag House Efficiency	90.00%	%
	Metal thickness	0.625	inches
	Width of cut	0.250	inches
	Volume of cut per inch	0.1563	ci
	Weight of Steel	250	lbs/cf
		0.145	lbs/ci
	Weight of steel per inch of cut	0.02261	lbs/inch
	Percent emitted	5	%
	Controlled emissions	1.13E-03	lbs/inch
	Maximum inches per time	2,100	inches/hr
	Actual inches per time	0	inches/hr
	Actual operating time	0	hrs/yr
Potential Emissions:			
PM 10	0.02261 lbs/inch of cut * 5% emitted * 2,100 inches/hr * 90% efficiency	0.237	lbs/hr
	0.237 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	1.040	tons/yr

Thurston Manufacturing 2012 Air Permits Thurston, NE			
Emission Unit:	Fab. Machine 2, EU-8		
Emission Point:	FM-2		
SCC:	Engineering Calculations		
Input Data:	Bag House Efficiency	90.00%	%
	Metal thickness	0.625	inches
	Width of cut	0.250	inches
	Volume of cut per inch	0.1563	ci
	Weight of Steel	250	lbs/cf
		0.145	lbs/ci
	Weight of steel per inch of cut	0.02261	lbs/inch
	Percent emitted	5	%
	Controlled emissions	1.13E-03	lbs/inch
	Maximum inches per time	2,100	inches/hr
	Actual inches per time	0	inches/hr
	Actual operating time	0	hrs/yr
Potential Emissions:			
PM 10	0.02261 lbs/inch of cut * 5% emitted * 2,100 inches/hr * 90% efficiency	0.237	lbs/hr
	0.237 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	1.040	tons/yr

Thurston Manufacturing **2012 Air Permits** **Thurston, NE**			
Emission Unit:	Paint Kitchen, EU-9		
Emission Point:	PK-1		
SCC:	Mass Balance		
Input Data:			
	Potential Solvent VOC	8.39	tons/yr
	Potential Primer VOC	5.53	tons/yr
	Potential Topcoat VOC	6.47	tons/yr
	Actual Solvent VOC		tons/yr
	Actual Primer VOC		tons/yr
	Actual Topcoat VOC		tons/yr
Potential Emissions:			
VOC	8.39 tons/yr solvent * 5% emitted + 5.53 tons/yr primer * 5% emitted + 6.47 tons/yr topcoat * 5% emitted	1.019	tons/yr

Thurston Manufacturing
2012 Air Permits
Thurston, NE

Emission Units:	Fugitive Heat, EU-10		
Emission Points:	Fug-1		
SCC:	10500206		
Input Data:			
	Natural Gas Consumed	0	therms
		0	mmcf/yr
	SCC Emission Factor, PM	5.70	lbs/mmcf
	SCC Emission Factor, PM 10	8.700	lbs/mmcf
	SCC Emission Factor, PM 2.5	8.7	lbs/mmcf
	SCC Emission Factor, Sox	0.6	lbs/mmcf
	SCC Emission Factor, Nox	100	lbs/mmcf
	SCC Emission Factor, VOC	5.3	lbs/mmcf
	SCC Emission Factor, CO	20	lbs/mmcf
	SCC Emission Factor, Pb	0.0005	lbs/mmcf
	SCC Emission Factor, Ammonia	0.49	lbs/mmcf
	Maximum yearly usage	2	mmcf/yr
Potential Emissions:			
PM	5.700 lbs/mmcf * 1.799 mmcf/yr / 2000 lbs/ton	0.005	tons/yr
PM 10	8.700 lbs/mmcf * 1.799 mmcf/yr / 2000 lbs/ton	0.008	tons/yr
PM 2.5	8.700 lbs/mmcf * 1.799 mmcf/yr / 2000 lbs/ton	0.008	tons/yr
Sox	0.600 lbs/mmcf * 1.799 mmcf/yr / 2000 lbs/ton	0.001	tons/yr
Nox	100.000 lbs/mmcf * 1.799 mmcf/yr / 2000 lbs/ton	0.090	tons/yr
VOC	5.300 lbs/mmcf * 1.799 mmcf/yr / 2000 lbs/ton	0.005	tons/yr
CO	20.000 lbs/mmcf * 1.799 mmcf/yr / 2000 lbs/ton	0.005	tons/yr
Pb	0.001 lbs/mmcf * 1.799 mmcf/yr / 2000 lbs/ton	4.497E-07	tons/yr
Ammonia	0.490 lbs/mmcf * 1.799 mmcf/yr / 2000 lbs/ton	4.407E-04	tons/yr

Thurston Manufacturing **2012 Air Permits** **Thurston, NE**	**Emission Units:** Paint Booth **Emission Points:** PB-1 **SCC:** Mass Balance			
Input Data:	**Solvent: Q60 Methyl Ethyl Ketone**			
	Proposed Usage		2,500	gallons/yr
	Estimated Usage @	15 oz per minute	7.0	gal/hr
	Weight per gallon, average		6.71	lb/gal
	Maximum application rate		47.18	lb/hr
	% Solid		0.0%	%
	% Volatile		100.0%	%
	% HAP		0.00%	%
	% MEK		100.00%	%
	building filter Efficiency		99%	%
	Application Efficiency		75%	%
	Air flow		17500	scf/min
Potential Emissions:				
PM-10 & 2.5	47.18 lb/hr * 0 solid * 0.99 filter eff * 0.75 app eff		0.00	lbs/hr
	0.00 lb/hr * 8760 hrs/yr / 2000 lbs/ton		0.00	tons/yr
VOC	47.18 lb/hr * 1 volatile		47.18	lbs/hr
	47.18 lb/hr * 8760 hrs/yr / 2000 lbs/ton		206.65	tons/yr
HAP	47.18 lb/hr * 0 HAP		0.00	lbs/hr
	0.00 lb/hr * 8760 hrs/yr / 2000 lbs/ton		0.00	tons/yr
MEK	47.18 lb/hr * 1.00 MEK		47.18	lbs/hr
	47.18 lbs/hr * 8760 hrs/yr / 2000 lbs/ton		206.65	tons/yr
Potential with Limits:		**LIMIT:**	2500.00	gal/yr
PM-10 & 2.5	2,500 gal/yr * 0 Solid * 0.99 filter eff * 6.71 lb/gal * 0.75 app eff		0.00	lbs/yr
	0.00 lbs/yr / 2000 lbs/ton		0.000	tons/yr
VOC	2,500 gal/yr * 1 Volatile * 6.71 lb/gal		16775.00	lbs/yr
	16,775.00 lbs/yr / 2000 lbs/ton		8.388	tons/yr
HAP	2,500 gal/yr * 0 HAP * 6.71 lb/gal		0.00	lbs/yr
	0.00 lbs/yr / 2000 lbs/ton		0.000	tons/yr
MEK	2,500 gal/yr * 1 MEK * 6.71 lb/gal		16775.00	lbs/yr
	16,775.00 lbs/yr / 2000 lbs/ton		8.388	tons/yr

**Contains methyl ethyl ketone.

Thurston Manufacturing 2012 Air Permits Thurston, NE	**Emission Units:** Paint Booth **Emission Points:** PB-1 **SCC:** Mass Balance				
Input Data:	**Primer: QAP581 WOW epoxy primer**				
	Proposed Usage			2,500	gallons/yr
	Estimated Usage @	15	oz per min.	7.0	gal/hr
	Weight per gallon, average			10.70	lb/gal
	Maximum application rate			75.23	lb/hr
	% Solid			58.7%	%
	% Volatile			41.3%	%
	% HAP			7.98%	%
	% Xylene			6.81%	%
	building filter Efficiency			99%	%
	Application Efficiency			75%	%
	Air flow			17500	scf/min
Potential Emissions:					
PM-10 & 2.5	75.23 lb/hr * 0.5869 solid * 0.99 filter eff * 0.75 app eff			0.11	lbs/hr
	0.11 lb/hr * 8760 hrs/yr / 2000 lbs/ton			0.48	tons/yr
VOC	75.23 lb/hr * 0.4131 volatile			31.08	lbs/hr
	31.08 lb/hr * 8760 hrs/yr / 2000 lbs/ton			136.13	tons/yr
HAP	75.23 lb/hr * 0.0798 HAP			6.00	lbs/hr
	6.00 lb/hr * 8760 hrs/yr / 2000 lbs/ton			26.30	tons/yr
Xylene	75.23 lb/hr * 0.07 Xylene			5.12	lbs/hr
	5.12 lbs/hr * 8760 hrs/yr / 2000 lbs/ton			22.44	tons/yr
Potential with Limits:			**LIMIT:**	2500.00	gal/yr
PM-10 & 2.5	2,500 gal/yr * 0.5869 Solid * 0.99 filter eff * 10.7 lb/gal * 0.75 app eff			39.25	lbs/yr
	39.25 lbs/yr / 2000 lbs/ton			0.020	tons/yr
VOC	2,500 gal/yr * 0.4131 Volatile * 10.7 lb/gal			11050.43	lbs/yr
	11,050.43 lbs/yr / 2000 lbs/ton			5.525	tons/yr
HAP	2,500 gal/yr * 0.0798 HAP * 10.7 lb/gal			2134.65	lbs/yr
	2,134.65 lbs/yr / 2000 lbs/ton			1.067	tons/yr
Xylene	2,500 gal/yr * 0.0681 Xylene * 10.7 lb/gal			1821.68	lbs/yr
	1,821.68 lbs/yr / 2000 lbs/ton			0.911	tons/yr

**Contains xylene and ethyl benzene.

Thurston Manufacturing **2012 Air Permits** **Thurston, NE**	**Emission Units:** Paint Booth **Emission Points:** PB-1 **SCC:** Mass Balance				
Input Data:	**Top Coat: DM19126 Black Enamel (current dip paint)**				
	Proposed Usage			2,500	gallons/yr
	Estimated Usage @	15	oz per min.	7.0	gal/hr
	Weight per gallon, average			8.51	lb/gal
	Maximum application rate			59.84	lb/hr
	% Solid			39.2%	%
	% Volatile			60.9%	%
	% HAP			100.00%	%
	% Xylene			81.68%	%
	building filter Efficiency			99%	%
	Application Efficiency			75%	%
	Air flow			17500	scf/min
Potential Emissions:					
PM-10 & 2.5	59.84 lb/hr * 0.3915 solid * 0.99 filter eff * 0.75 app eff			0.06	lbs/hr
	0.06 lb/hr * 8760 hrs/yr / 2000 lbs/ton			0.26	tons/yr
VOC	59.84 lb/hr * 0.6085 volatile			36.41	lbs/hr
	36.41 lb/hr * 8760 hrs/yr / 2000 lbs/ton			159.48	tons/yr
HAP	59.84 lb/hr * 1 HAP			59.84	lbs/hr
	59.84 lb/hr * 8760 hrs/yr / 2000 lbs/ton			262.08	tons/yr
Xylene	59.84 lb/hr * 0.82 Xylene			48.87	lbs/hr
	48.87 lbs/hr * 8760 hrs/yr / 2000 lbs/ton			214.07	tons/yr
Potential with Limits:			**LIMIT:**	2500.00	gal/yr
PM-10 & 2.5	2,500 gal/yr * 0.3915 Solid * 0.99 filter eff * 8.51 lb/gal * 0.75 app eff			20.82	lbs/yr
	20.82 lbs/yr / 2000 lbs/ton			0.010	tons/yr
VOC	2,500 gal/yr * 0.6085 Volatile * 8.51 lb/gal			12945.84	lbs/yr
	12,945.84 lbs/yr / 2000 lbs/ton			6.473	tons/yr
HAP	2,500 gal/yr * 1 HAP * 8.51 lb/gal			21275.00	lbs/yr
	21,275.00 lbs/yr / 2000 lbs/ton			10.638	tons/yr
Xylene	2,500 gal/yr * 0.8168 Xylene * 8.51 lb/gal			17377.42	lbs/yr
	17,377.42 lbs/yr / 2000 lbs/ton			8.689	tons/yr

**Contains xylene, ethyl benzene, naphthalene, methanol, and toluene.

Actual Calculations

Thurston Manufacturing 2012 Air Permits Thurston, NE			
Emission Unit:	Wash Bay, EP-4		
Emission Point:	WB-1		
SCC:	Mass Balance		
Input Data:	*Phosphate Wash Bay*		
	Efficiency	90.00%	%
	Density	9.10	lb/gal
	SCC Emission Factor, PM 2.5/10	0.00	lbs/1000 lbs
	SCC Emission Factor, VOC	0.45	lbs/1000 lbs
	Max. wash material consumed	23914800	lb/yr
	Actual wash material consumed	364	lb/yr
Actual Emissions:			
PM 2.5/10	0.00 lbs/1000 lbs * 364 lbs/yr consumed * 90% efficency	0.00	lbs/yr
	0.0 lbs/yr * / 2000 lbs/ton	0.00	tons/yr
VOC	0.45 lbs/1000 lbs * 364 lbs/yr consumed * 90% efficency	0.02	lbs/yr
	0.0 lbs/yr * / 2000 lbs/ton	8.19E-06	tons/yr

Thurston Manufacturing **2012 Air Permits** **Thurston, NE**			
Emission Units:	Welding Ag EP-5		
Emission Points:	W-1		
SCC:	30905254		
Input Data:	***E70 Electrode***		
	Material Used	119790	lbs/yr
	SCC Emission Factor, PM 10	5.20	lb/10^3 lb
	SCC Emission Factor, Manganese	0.318	lb/10^3 lb
	SCC Emission Factor, Cobalt	0.001	lb/10^3 lb
	SCC Emission Factor, Nickel	0.001	lb/10^3 lb
	SCC Emission Factor, Chromium	0.001	lb/10^3 lb
	Maximum yearly output for 12 welders	2281104	lbs/yr
Actual Emissions:			
PM-10	5.200 lb/10^3 lb * 119,790.000 lbs/yr / 2000 lbs/ton	0.311	tons/yr
Manganese	0.318 lb/10^3 lb * 119,790.000 lbs/yr / 2000 lbs/ton	0.019	tons/yr
Cobalt	0.001 lb/10^3 lb * 119,790.000 lbs/yr / 2000 lbs/ton	0.000	tons/yr
Nickel	0.001 lb/10^3 lb * 119,790.000 lbs/yr / 2000 lbs/ton	0.000	tons/yr
Chromium	0.001 lb/10^3 lb * 119,790.000 lbs/yr / 2000 lbs/ton	0.000	tons/yr

Thurston Manufacturing **2012 Air Permits** **Thurston, NE**			
Emission Units: **Emission Points:** **SCC:**	Welding Trailers EP-6 W-2 30905354		
Input Data:	***E70 Electrode***		
	Material Used	7600	lbs/yr
	SCC Emission Factor, PM 10	15.10	lb/10^3 lb
	SCC Emission Factor, Manganese	0.891	lb/10^3 lb
	SCC Emission Factor, Cobalt	0	lb/10^3 lb
	SCC Emission Factor, Nickel	0.005	lb/10^3 lb
	SCC Emission Factor, Chromium	0.004	lb/10^3 lb
	Maximum yearly output for 7 welders	1011780	lbs/yr
Actual Emissions:			
PM-10	15.100 lb/10^3 lb * 7,600.000 lbs/yr / 2000 lbs/ton	0.057	tons/yr
Manganese	0.891 lb/10^3 lb * 7,600.000 lbs/yr / 2000 lbs/ton	0.003	tons/yr
Cobalt	0.000 lb/10^3 lb * 7,600.000 lbs/yr / 2000 lbs/ton	0.000	tons/yr
Nickel	0.005 lb/10^3 lb * 7,600.000 lbs/yr / 2000 lbs/ton	0.000	tons/yr
Chromium	0.004 lb/10^3 lb * 7,600.000 lbs/yr / 2000 lbs/ton	0.000	tons/yr

Species Reports

Environmental Conservation Online System

(http://www.fws.gov)

Species By County Report

The following report contains Species that are known to or are believed to occur in this county. Species with range unrefined past the state level are now excluded from this report. If you are looking for the Section 7 range (for Section 7 Consultations), please visit the IPaC (/ipac) application.

County: Thurston, NE

Group (countySearch!speciesByCountyReport.action?d-16544-s=0&d-16544-o=2&d-16544-p=1&fips=31173)	Name (countySearch!speciesByCountyReport.action?d-16544-s=1&d-16544-o=2
Fishes	Pallid sturgeon (*Scaphirhynchus albus*) (http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=E06X)
Flowering Plants	Western prairie fringed Orchid (*Platanthera praeclara*) (http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q2YD)
Mammals	Gray wolf (*Canis lupus*) (http://ecos.fws.gov/speciesProfile/profile/speciesProf

Export options: CSV (countySearch!speciesByCountyReport.action?d-16544-e=1&6578706f7274=1&fips=31173) | EXCEL (countySearch!speciesByCountyReport.action?d-16544-e=2&6578706f7274=1&fips=31173) | XML (countySearch!speciesByCountyReport.action?d-16544-e=3&6578706f7274=1&fips=31173) | PDF (countySearch!speciesByCountyReport.action?d-16544-e=5&6578706f7274=1&fips=31173)

Last updated: August 22, 2012

ECOS Home (/ecos/indexPublic.do) | Contact Us (/ecos/helpdesk.do?version=TESS_PUBLIC-1_1_11)

nps.gov

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U.S. Department of the Interior

National Register of Historic Places

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History & Culture
Nature & Science
Education & Interpretation

TITLE LIST DISPLAY

From: NPS Digital Library
Term(s) Searched: Nebraska and Thurston
Records Displayed: 1 to 0 of 0

Go back to: Revise Search

Sort By: **Title** | Relevancy | Modified

Prev | | **Next**

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7
11201 Renner Boulevard
Lenexa, Kansas 66219

NOV 02 2012

Ms. Susan Jensen
Compliance Director
Thurston Manufacturing Company
1708 H Avenue
Thurston, NE 68062

Dear Ms. Jensen:

On September 4, 2012, the U.S. Environmental Protection Agency received a synthetic minor construction permit application for the Thurston Manufacturing Company. We are writing to inform you that the EPA has completed its review of the permit application and determined that it is complete.

Pursuant to 40 CFR § 49.154, we have determined that the information submitted in the permit application is administratively complete. We have disregarded all references to the Iowa Department of Natural Resources, including its regulations, policies and practices, in the application forms you submitted. Please be advised that this application completeness determination does not constitute a thorough evaluation of the merits of the application. If we determine that additional information is necessary to evaluate or take final action on the application, we may request additional information from you and require your response in a reasonable time period.

If you have any questions, please contact Bob Webber, of my staff, at (913) 551-7251. We look forward to working with you in preparing this synthetic minor construction permit.

Sincerely,

Leslye E Werner

for Mark A. Smith, Chief
Air Permitting and Compliance Branch
Air and Waste Management Division

cc: Lindsay Brown, Zia Engineering


05.14.2013 10:32


05.14.2013 10:33


05.14.2013 09:05


STEEL
RECEIVING
ONLY
NO FINISHED
PRODUCT
BETWEEN THESE
RACKS
05.14.2013 10:33

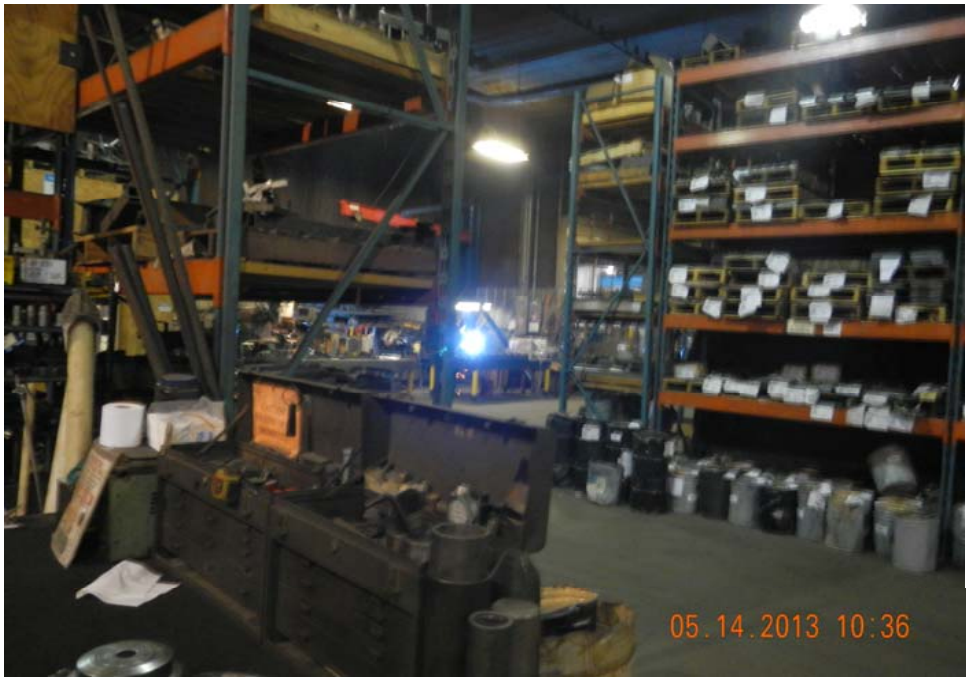

05.14.2013 10:33


05.14.2013 10:34


GRADE 80 =
GREEN
GRADE 100 =
05.14.2013 10:33


05.14.2013 10:34


05.14.2013 10:35


05.14.2013 10:36


05.14.2013 10:34


05.14.2013 10:35


05.14.2013 10:37


05.14.2013 10:38


05.14.2013 10:36


DANGER
05.14.2013 10:38


05.14.2013 10:39


05.14.2013 10:40


05.14.2013 10:39


05.14.2013 10:39


05.14.2013 10:40


AMASTEEL
CAST STEEL SHOT AND GRIT
2042
2000
S-280
AB130430
05.14.2013 10:42


05.14.2013 10:40


05.14.2013 10:40

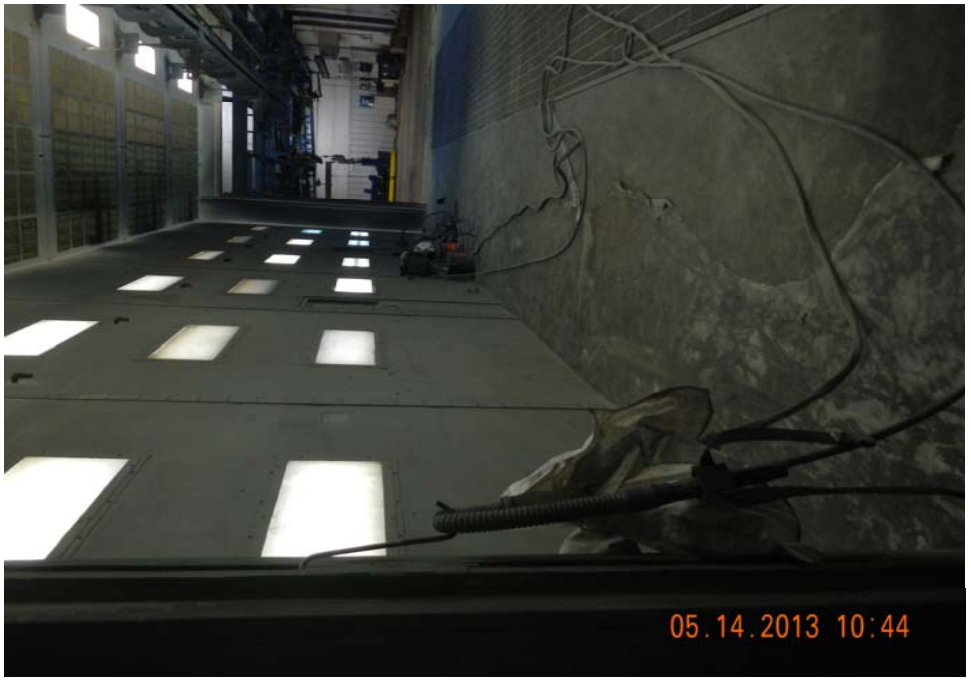

05.14.2013 10:43


05.14.2013 10:43


05.14.2013 10:42


05.14.2013 10:43


05.14.2013 10:44


05.14.2013 10:44


05.14.2013 10:43


05.14.2013 10:44


05.14.2013 10:45


05.14.2013 10:45


05.14.2013 10:44

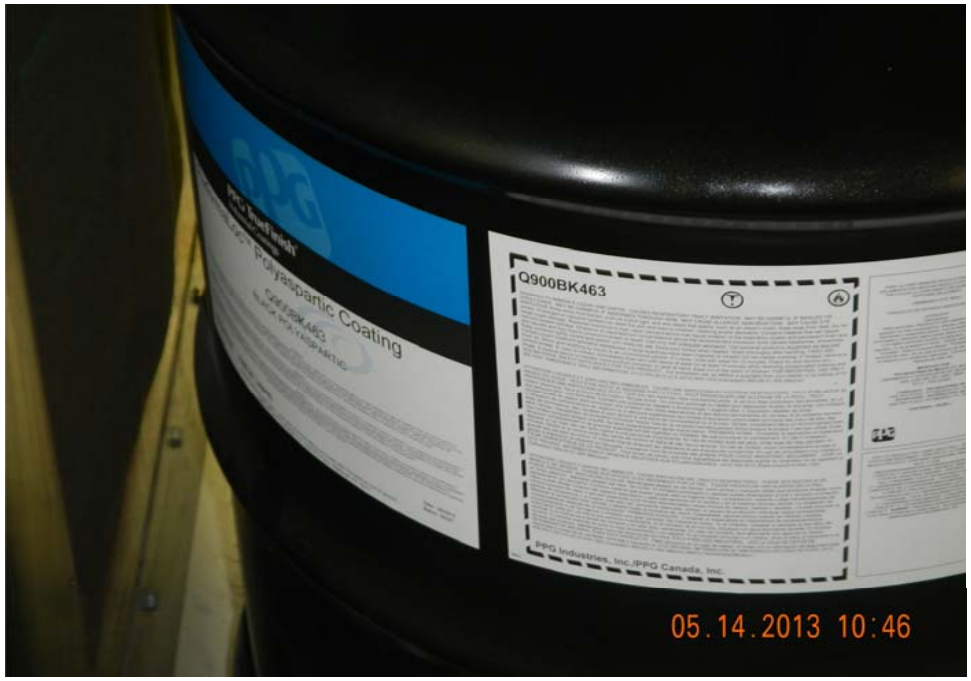

05.14.2013 10:45


05.14.2013 10:46
120 VOLTS
DANGER


05.14.2013 10:46


05.14.2013 10:45


05.14.2013 10:46


PPG TrueFinish
Polyaspartic Coating
Q900BK463
PPG Industries, Inc./PPG Canada, Inc.
05.14.2013 10:46


GRACO
Q900BL413
PPG TrueFinish
05.14.2013 10:47


05.14.2013 10:46


METHYL ETHYL KETONE
BARSOL
05.14.2013 10:46

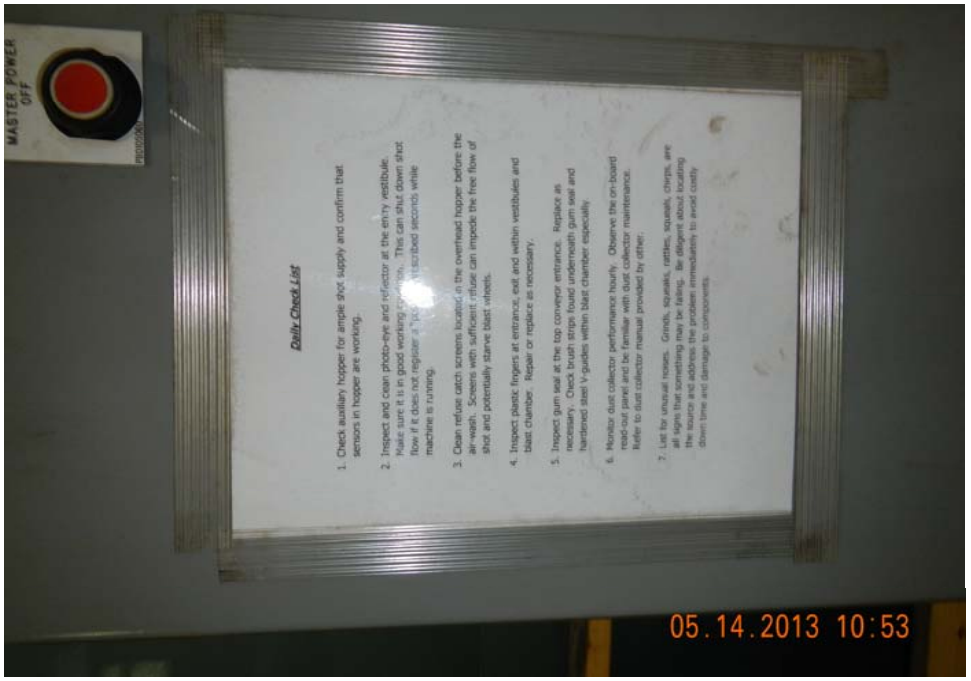

05.14.2013 10:47


05.14.2013 10:48


05.14.2013 10:47


05.14.2013 10:48


05.14.2013 10:51


MASTER POWER
OFF
Daily Check List
1. Check auxiliary hopper for ample shot supply and confirm that sensors in hopper are working.
2. Inspect and clean photo-eye and reflector at the entry vestibule. Make sure it is in good working
flow if it does not register a
machine is running.
3. Clean refuse catch screens located in the overhead hopper before the air-wash. Screens with sufficient refuse can impede the free flow of shot and potentially starve blast wheels.
4. Inspect plastic fingers at entrance, exit and within vestibules and blast chamber. Repair or replace as necessary.
5. Inspect gum seal at the top conveyor entrance. Replace as necessary. Check brush strips found underneath gum seal and hardened steel V-guides within blast chamber especially
6. Monitor dust collector performance hourly. Observe the on-board read-out panel and be familiar with dust collector maintenance. Refer to dust collector manual provided by other.
7. Listen for unusual noises. Grinds, squeaks, rattles, squeals, chirps, are all signs that something may be failing. Be diligent about locating the source and address the problem immediately to avoid costly down time and damage to components.
05.14.2013 10:53

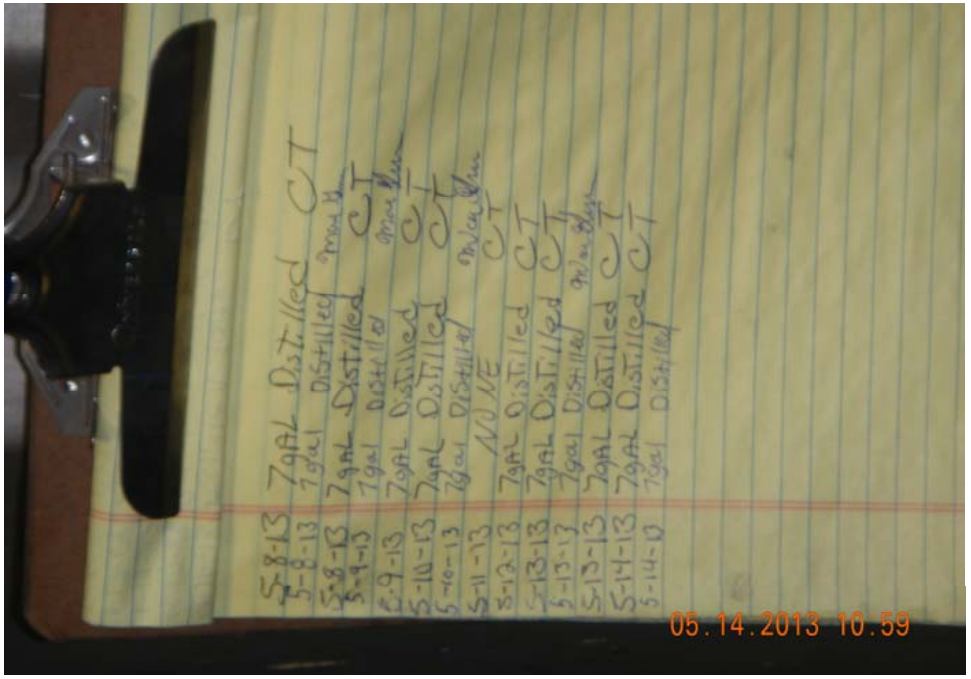

05.14.2013 10:50


CONVEYOR
CONTROL
05.14.2013 10:52


05.14.2013 10:59


05.14.2013 11:00


Dwyer
3
2
1
0
.05
.10
.20
.30
.50
05.14.2013 10:55


5-8-13 7gal Distilled CT
5-9-13 1gal Distilled
5-8-13 7gal Distilled CT
5-9-13 1gal Distilled
5-9-13 7gal Distilled CT
5-10-13 7gal Distilled CT
5-10-13 7gal Distilled
5-11-13 CT
5-12-13 7gal Distilled CT
5-13-13 7gal Distilled CT
5-13-13 1gal Distilled
5-13-13 7gal Distilled CT
5-14-13 7gal Distilled CT
5-14-13 1gal Distilled
05.14.2013 10:59


05.14.2013 11:00


05.14.2013 11:01


05.14.2013 11:00


05.14.2013 11:01


NOTICE
BOILER
05.14.2013 11:01


05.14.2013 11:44


NOTICE
NO STORAGE
BOILER ROOM
05.14.2013 11:01


05.14.2013 11:44


05.14.2013 11:44


05.14.2013 11:44

From:	Rick Rohr
To:	Webber, Robert; Bergin, Sean
Cc:	Amie Lyle; Susan Jensen (sjensen@thurstonmfgco.com); Donn L Stone (dstone@ziaeec.com); Kris Snyder
Subject:	FW: Thurston Mfg Rolling 12
Date:	Tuesday, June 04, 2013 12:08:56 PM
Attachments:	2013 Thurston Rolling 12.xls 2012 Thurston Rolling 12 - with emissions.xls 2011 Thurston Rolling 12 - with emissions.xls

---

Please read over any the attachment. Call me if you need anything else.
Rick Rohr

From: Amie Lyle
Sent: Monday, June 03, 2013 11:52 AM
To: Rick Rohr
Subject: Thurston Mfg Rolling 12

Here's the most recent rolling 12 for Thurston – emissions are calculated also. I have 2010-2011-2012 done also, just don't have the charts for emissions on those. Do you want them??

Amie Lyle
Office Assistant
Rohr Manufacturing Services
Storm Lake, IA 50588
712-732-6550

Company Name: **Thurston Manufacturing**

Company Address: Thurston, NE

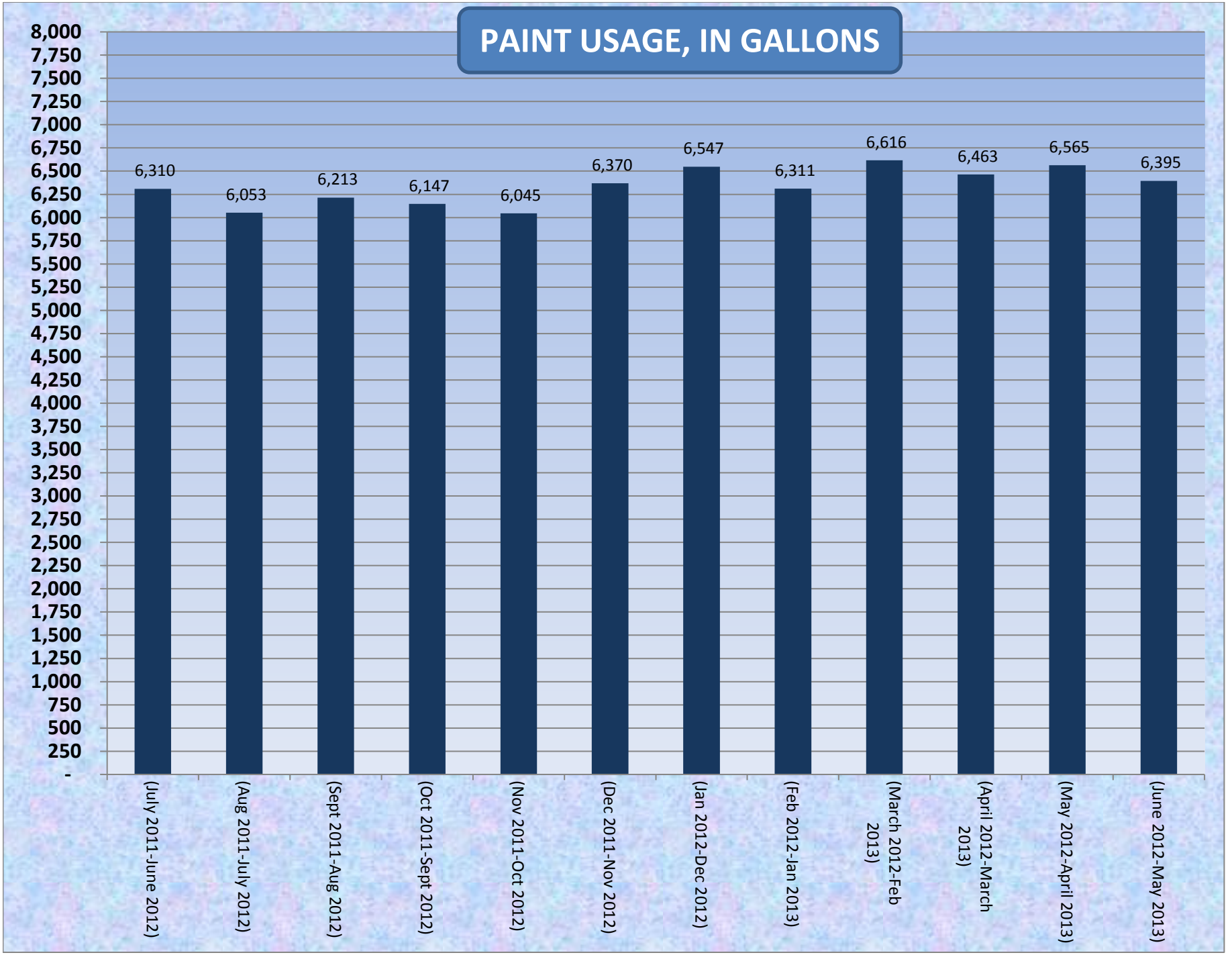
last date revised: **11/10/15**

purchasing year: **2013**

Paint Consumption Report

No.	Mfr.	1st Part #	1st Description	2nd Description	Unit of Meas.	Jan. 2013	Feb. 2013	Mar. 2013	April 2013	May 2013	June 2013	July 2013	Aug. 2013	Sept. 2013	Oct. 2013	Nov. 2013	Dec. 2013	Total Gal.
1	PPG	95-819/04	Pitthane Ultra Component B		gal.													0
2	PPG	95-8000/01	Pitthane Ultra Neutral Base A		gal.													0
3	PPG	CHMX 1053	01CL030 GL WB Booth Coat Clr		gal.		2											2
4	PPG	DM 18996/05	Low VOC Urethane Comp B		gal.		25			30								55
5	PPG	DM 18998/05	Gr L/F MD Alk All Purpose Primer		gal.													0
6	PPG	DM 19040/05	Poly IO Sup Gloss Black	Gloss Black	gal.		20			30								50
7	PPG	DM 19052/05	Poly IO Sup Clear Base	Shaw Yellow	gal.													0
8	PPG	DM 19054/01	Poly IO Sup Yellow Base	Thurston Safety Yellow	gal.													0
9	PPG	DM 19126/05	FD Ind Enamel SG Black	Summer Dip Black	gal.	110	165	90										365
10	PPG	DM 19131/01	Poly IO Sup Metallic Base	Glacier Silver	gal.													0
11	PPG	DM 19147/05	Poly IO HS Supreme Primer White	Buff Primer	gal.		30			20								50
12	PPG	DM 19152/05	Fd Ind Enamel HV Clear TB		gal.	50												50
13	PPG	DM 19318/55	L/H Fd Enamel SG Black	Black	gal.													0
14	PPG	Q 900 BK 463	Black Polyaspartic		gal.			110	110									220
15	PPG	Q 900 BL 413	Jet Blue Polyureathane	Jet Blue	gal.	110	110	110	165									495
16	PPG	Q 1330-9009	Thurston Black Aerosol	AP 2693-F003	gal.		49	1										50
17	PPG	Q 1387-9009	Thurston Blu-Jet Blue		gal.	0	49		49									98
18	PPG	Q 1392-9023	Thurston Gloss Black Aerosol		gal.				48									48
19	PPG	Q 1393-9012	Thurston Blue Aerosol	AP 2688-F003	gal.													0
20	PPG	Q 5501/01	Epoxy Catalyst		gal.													0
21	PPG	Q 9001/05	Polyureathane Activator		gal.	50	50	100	125									325
22	PPG	QAP 111/05	Fd Primer Non Lift Grey	Grey	gal.													0
23	PPG	QAP 560/05	W-O-W Light Gray Epoxy		gal.													0
24	PPG	QAP 581/05	Spectracron Fd Gray Epoxy Primer	Grey	gal.	80	70	65	125	30								370
25	PPG	QAP 582/05	Spectracron Fd Epoxy Hardener		gal.	90	70	65	170	30								425
26	PPG	QAP 591/05	2K Gray Epoxy Primer		gal.	10												10
27	PPG	QAP 592/01	2K Epoxy Primer Activator		gal.	3												3
28	PPG	QT 110BK259	Satin Black		gal.													0
29	PPG	QT 110HC/05	Spectracron Alkaline Enamel	Blue Jet Blue	gal.													0
30	PPG	QT 380HC/05	Spectracron HS Clear BS	Clear	gal.													0
31	PPG	QT 380HW/05	Poly IO HS White Base	DM 19087	gal.		15			25								40
32					gal.													
			Waste - Excess Paint sent for Hazardous Waste disposal		gal.			48										2,656
			Waste - Excess Paint sent for Hazardous Waste disposal		gal.			150										
			This paint has HAP's			Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
						2013												Gal.
						503	655	343	792	165	0	0	0	0	0	0	0	2,458
						Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
						2012												Gal.
						739	350	496	690	335	762	273	630	561	398	685	627	6,547

PERIOD COVERED	TOTALS	
Jun-12	(July 2011-June 2012)	**6,310**
Jul-12	(Aug 2011-July 2012)	**6,053**
Aug-12	(Sept 2011-Aug 2012)	**6,213**
Sep-12	(Oct 2011-Sept 2012)	**6,147**
Oct-12	(Nov 2011-Oct 2012)	**6,045**
Nov-12	(Dec 2011-Nov 2012)	**6,370**
Dec-12	(Jan 2012-Dec 2012)	**6,547**
Jan-13	(Feb 2012-Jan 2013)	**6,311**
Feb-13	(March 2012-Feb 2013)	**6,616**
Mar-13	(April 2012-March 2013)	**6,463**
Apr-13	(May 2012-April 2013)	**6,565**
May-13	(June 2012-May 2013)	**6,395**


PAINT USAGE, IN GALLONS
8,000
7,750
7,500
7,250
7,000
6,750
6,500
6,250
6,000
5,750
5,500
5,250
5,000
4,750
4,500
4,250
4,000
3,750
3,500
3,250
3,000
2,750
2,500
2,250
2,000
1,750
1,500
1,250
1,000
750
500
250
-
6,310
6,053
6,213
6,147
6,045
6,370
6,547
6,311
6,616
6,463
6,565
6,395
(July 2011-June 2012)
(Aug 2011-July 2012)
(Sept 2011-Aug 2012)
(Oct 2011-Sept 2012)
(Nov 2011-Oct 2012)
(Dec 2011-Nov 2012)
(Jan 2012-Dec 2012)
(Feb 2012-Jan 2013)
(March 2012-Feb 2013)
(April 2012-March 2013)
(May 2012-April 2013)
(June 2012-May 2013)

Company Name: **Thurston Mfg**

last date revised: **5/16/2013**

purchasing year: **2013**

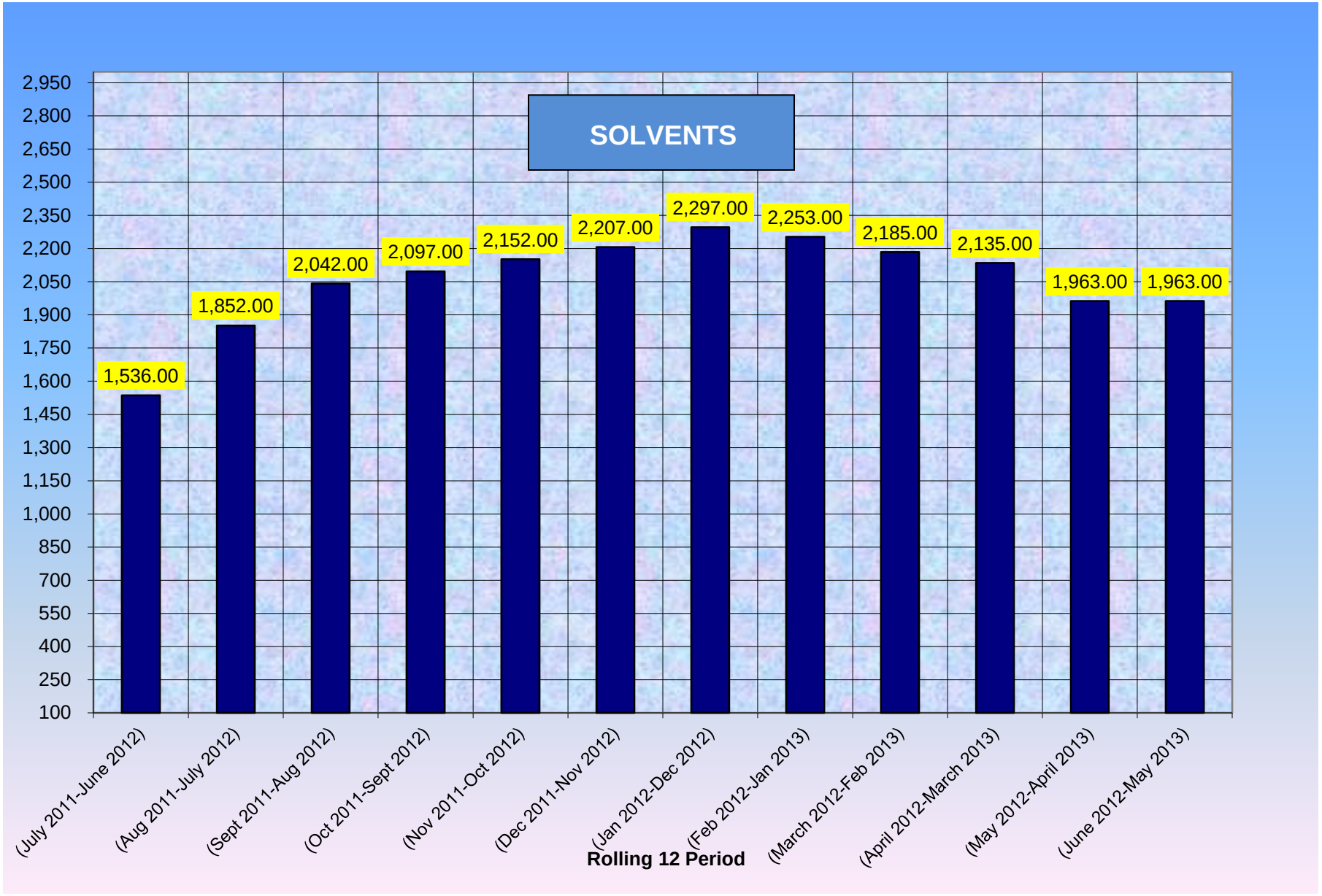
Solvents Consumption Report

No.	Mfr.	1st Part #	2nd Part #	1st Description	2nd Description	Unit of Meas.	Jan. 2013	Feb. 2013	Mar. 2013	April 2013	May 2013	June 2013	July 2013	Aug. 2013	Sept. 2013	Oct. 2013	Nov. 2013	Dec. 2013	Total Gal.
1	Barton	D-150	406000092	Barsol D-150	A-3569	gal.													0
2	Barton		1201000010	MEK Red	MEK	gal.	110	110	165	330									715
3	PPG	Q70/05		Methyl Amyl Ketone	MAK	gal.													0
4	PPG	STX 10820		10820 MAK	MAK	gal.		2	5										7
5	PPG	PAS 71251		Lacquer Thinner		gal.													0
6	PPG	PAS 72651		Methyl Ethyl Ketone	MEK	gal.													0
7	PPG	Q160/05		Aromatic 150	SC-150	gal.													0
8																			
9																			
10																			
																			722
	TOTALS						110	112	170	330	0	0	0	0	0	0	0	0	722

No.	Mfr.	1st Part #	2nd Part #	1st Description	2nd Description	Unit of Meas.	Jan. 2013	Feb. 2013	Mar. 2013	April 2013	May 2013	June 2013	July 2013	Aug. 2013	Sept. 2013	Oct. 2013	Nov. 2013	Dec. 2013	Total Gal.
2013 Totals							110	112	170	330	0	0	0	0	0	0	0	0	722

No.	Mfr.	1st Part #	2nd Part #	1st Description	2nd Description	Unit of Meas.	Jan. 2012	Feb. 2012	Mar. 2012	April 2012	May 2012	June 2012	July 2012	Aug. 2012	Sept. 2012	Oct. 2012	Nov. 2012	Dec. 2012	Total Gal.
2012 Totals							154	180	220	502	0	40	376	325	115	165	110	110	2,297

PERIOD COVERED		TOTALS
Jun-12	(July 2011-June 2012)	**1,536**
Jul-12	(Aug 2011-July 2012)	**1,852**
Aug-12	(Sept 2011-Aug 2012)	**2,042**
Sep-12	(Oct 2011-Sept 2012)	**2,097**
Oct-12	(Nov 2011-Oct 2012)	**2,152**
Nov-12	(Dec 2011-Nov 2012)	**2,207**
Dec-12	(Jan 2012-Dec 2012)	**2,297**
Jan-13	(Feb 2012-Jan 2013)	**2,253**
Feb-13	(March 2012-Feb 2013)	**2,185**
Mar-13	(April 2012-March 2013)	**2,135**
Apr-13	(May 2012-April 2013)	**1,963**
May-13	(June 2012-May 2013)	**1,963**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2,950
2,800
2,650
2,500
2,350
2,200
2,050
1,900
1,750
1,600
1,450
1,300
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850
700
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(Jan 2012-Dec 2012)
(Feb 2012-Jan 2013)
(March 2012-Feb 2013)
(April 2012-March 2013)
(May 2012-April 2013)
(June 2012-May 2013)
Rolling 12 Period

VOC/HAP Emission Calculation Spreadsheet - 2011

Month	VOC	Xylene	Xylene	Toulene	Toulene	Ethyl Benzene	Ethyl Benzene	Naphthalene	Naphthalene	Total HAP	Total HAP
	tons	lbs	tons	lbs	tons	lbs	tons	lbs	tons	lbs	tons
Jan-11	0.70	344.65	0.172324	1.71	0.000857	68.73	0.034366	4.19	0.002097	419.29	0.209644
Feb-11	0.62	663.17	0.331584	1.55	0.000776	122.46	0.061229	0.00	0.000000	787.18	0.393589
Mar-11	1.03	833.33	0.416664	4.65	0.002327	131.06	0.065532	0.00	0.000000	969.05	0.484523
Apr-11	0.90	607.93	0.303965	3.10	0.001551	98.61	0.049304	0.00	0.000000	709.64	0.354820
May-11	0.72	641.33	0.320664	3.10	0.001551	104.88	0.052438	0.00	0.000000	749.30	0.374652
Jun-11	1.55	1644.39	0.822193	79.30	0.039651	327.11	0.163555	17.23	0.008614	2068.03	1.034014
Jul-11	0.85	791.75	0.395873	25.92	0.012958	162.63	0.081316	10.41	0.005207	990.71	0.495355
Aug-11	0.91	1077.22	0.538608	25.92	0.012958	220.90	0.110448	13.73	0.006866	1337.76	0.668880
Sep-11	1.28	1130.76	0.565378	54.43	0.027213	235.74	0.117869	15.19	0.007597	1436.11	0.718056
Oct-11	0.89	916.64	0.458319	25.92	0.012958	188.14	0.094072	11.89	0.005944	1142.59	0.571294
Nov-11	0.64	544.07	0.272037	51.83	0.025917	114.04	0.057021	9.03	0.004514	718.98	0.359488
Dec-11	0.77	807.54	0.403771	0.00	0.000000	164.22	0.082110	9.22	0.004609	980.98	0.490490

VOC/HAP Emission Calculation Spreadsheet - 2012

Month	VOC	Xylene	Xylene	Toulene	Toulene	Ethyl Benzene	Ethyl Benzene	Naphthalene	Naphthalene	Total HAP	Total HAP
	tons*	lbs	tons***	lbs	tons***	lbs	tons***	lbs	tons***	lbs	tons**
Jan-12	1.19	657.19	0.328593	31.10	0.015550	136.40	0.068200	8.73	0.004367	833.42	0.416711
Feb-12	0.98	1064.92	0.532462	0.00	0.000000	216.62	0.108312	12.17	0.006084	1293.72	0.646858
Mar-12	0.95	756.89	0.378443	2.59	0.001296	155.02	0.077508	8.38	0.004190	922.87	0.461437
Apr-12	0.68	209.09	0.104546	25.92	0.012958	45.08	0.022540	3.41	0.001704	283.50	0.141748
May-12	0.46	185.34	0.092670	0.00	0.000000	37.41	0.018705	2.03	0.001014	224.78	0.112388
Jun-12	1.24	793.54	0.396768	0.00	0.000000	162.05	0.081023	8.11	0.004056	963.70	0.481848
Jul-12	0.84	746.43	0.373216	7.78	0.003888	152.21	0.076103	8.91	0.004457	915.33	0.457663
Aug-12	0.92	645.87	0.322937	25.92	0.012958	132.93	0.066463	8.75	0.004377	813.47	0.406735
Sep-12	0.83	539.52	0.269760	0.00	0.000000	109.46	0.054732	6.08	0.003042	655.07	0.327533
Oct-12	0.72	498.20	0.249102	25.92	0.012958	104.03	0.052016	6.73	0.003363	634.88	0.317440
Nov-12	1.01	651.03	0.325514	25.92	0.012958	133.85	0.066924	8.75	0.004377	819.55	0.409773
Dec-12	1.56	1047.70	0.523851	0.00	0.000000	218.73	0.109367	10.14	0.005070	1276.58	0.638289

* Permit 98-A-1030-S7, Item #15-A-iii: The amount of VOC emissions from all non-combustion sources, in tons

** Permit 98-A-1030-S7, Item #15-A-v: The amount of all cumulative HAP emissions from all non-combustion sources, in tons

*** Permit 98-A-1030-S7, Item #15-A-vii: The amount of emissions of each individual HAP from all non-combustion sources, in tons (Column E, G, I and K)

VOC/HAP Emission Calculation Spreadsheet - 2013

Month	VOC	Xylene	Xylene	Toulene	Toulene	Ethyl Benzene	Ethyl Benzene	Naphthalene	Naphthalene	Total HAP	Total HAP
	tons*	lbs	tons***	lbs	tons***	lbs	tons***	lbs	tons***	lbs	tons**
Jan-13	0.79	475.79	0.237897	25.92	0.012958	98.25	0.049126	6.73	0.003363	606.69	0.303344
Feb-13	1.20	709.35	0.354676	25.92	0.012958	147.88	0.073942	8.75	0.004377	891.91	0.445954
Mar-13	0.67	301.13	0.150564	0.00	0.000000	60.60	0.030298	3.32	0.001659	365.04	0.182521
Apr-13	0.92	48.60	0.024302	0.00	0.000000	10.01	0.005007	0.00	0.000000	58.62	0.029309
May-13	0.21	4.40	0.002200	0.00	0.000000	0.69	0.000345	0.00	0.000000	5.09	0.002545
Jun-13											
Jul-13											
Aug-13											
Sep-13											
Oct-13											
Nov-13											
Dec-13											

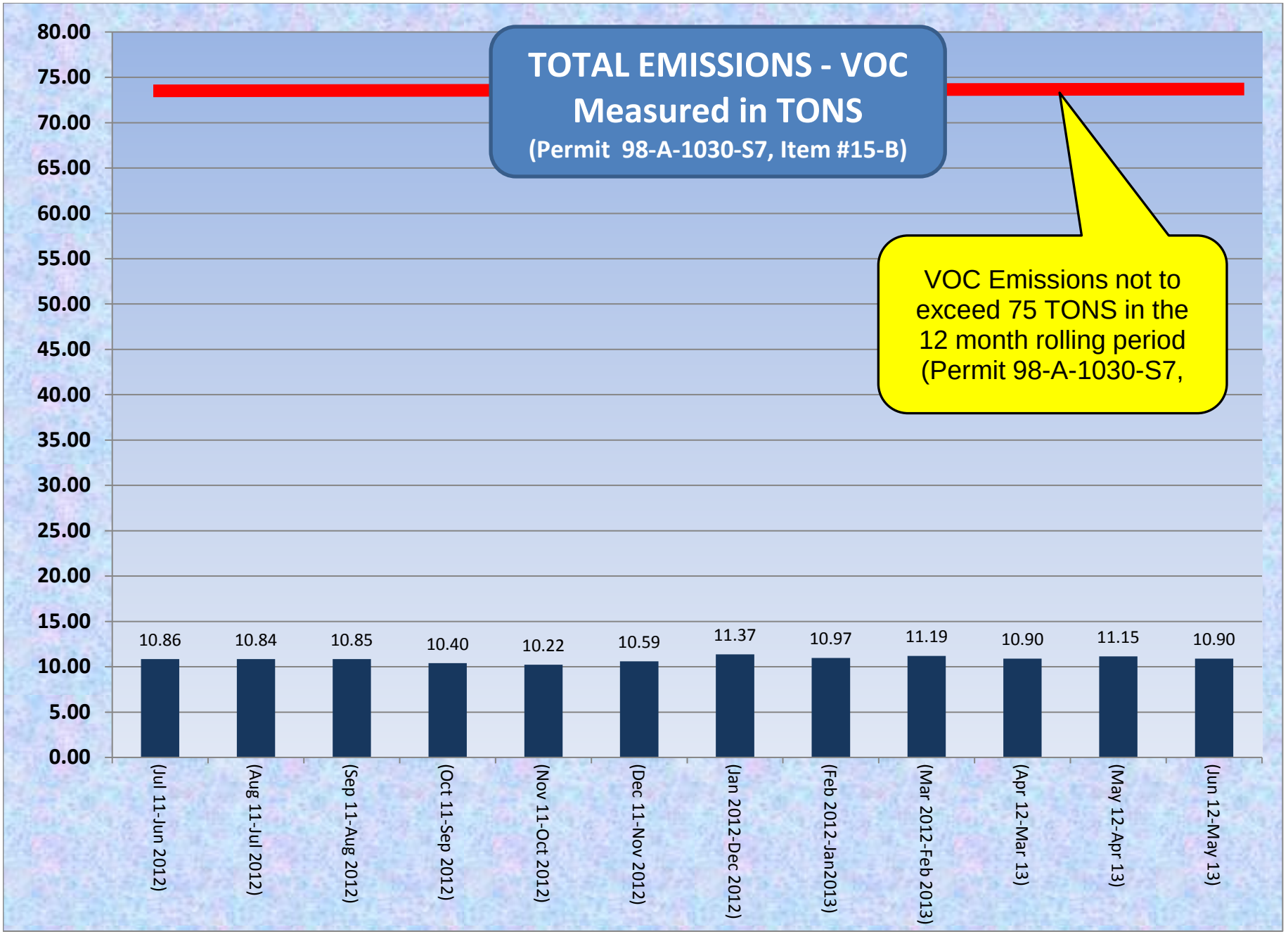
12 month Rolling Totals

	Month	VOC	Xylene	Xylene	Toulene	Toulene	Ethyl Benzene	Ethyl Benzene	Naphthalene	Naphthalene	Total HAP	Total HAP
		tons*	lbs	tons***	lbs	tons***	lbs	tons***	lbs	tons***	lbs	tons**
Jun-12	(Jul 11-Jun 2012)	10.86		4.467470		0.121809		0.919123		0.056151	11129.11	6.598567
Jul-12	(Aug 11-Jul 2012)	10.84		4.444812		0.112738		0.913910		0.055401	11053.72	5.526862
Aug-12	(Sep 11-Aug 2012)	10.85		4.229141		0.112738		0.869925		0.052912	10529.43	5.264716
Sep-12	(Oct 11-Sep 2012)	10.40		3.933522		0.085525		0.806788		0.048357	9748.39	4.874193
Oct-12	(Nov 11-Oct 2012)	10.22		3.724305		0.085525		0.764733		0.045776	9240.68	4.620339
Nov-12	(Dec 11-Nov 2012)	10.59		3.777782		0.072567		0.774636		0.045640	9341.25	4.670624
Dec-12	(Jan 2012-Dec 2012)	11.37		3.897862		0.072567		0.801893		0.046100	9636.84	4.818422
Jan-13	(Feb 2012-Jan2013)	10.97		3.807166		0.069975		0.782818		0.000023	9410.11	4.705055
Feb-13	(Mar 2012-Feb 2013)	11.19		0.001815		0.082934		0.748449		0.043389	9008.30	4.504151
Mar-13	(Apr 12-Mar 13)	10.90		0.001701		0.081638		0.701239		0.040859	8450.47	4.225235
Apr-13	(May 12-Apr 13)	11.15		0.001661		0.163011		1.035388		0.059695	8225.59	4.112796
May-13	(Jun 12-May 13)	10.90		3.323455		0.068680		0.665346		0.038141	8005.91	4.002953

* Permit 98-A-1030-S7, Item #15-A-iv: 12-month rolling total of the amount of VOC emissions from all non-combustion sources, in tons

** Permit 98-A-1030-S7, Item #15-A-vi: 12-month rolling total of the amount of cumulative HAP emissions from all non-combustions sources, in tons.

*** Permit 98-A-1030-S7, Item #15-A-viii: 12-month rolling total of the amount of emissions of each individual HAP from all non-combustion sources, in tons (Columns E, G, I and K)


TOTAL EMISSIONS - VOC
Measured in TONS
(Permit 98-A-1030-S7, Item #15-B)
VOC Emissions not to exceed 75 TONS in the 12 month rolling period (Permit 98-A-1030-S7,
80.00
75.00
70.00
65.00
60.00
55.00
50.00
45.00
40.00
35.00
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25.00
20.00
15.00
10.00
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0.00
10.86
10.84
10.85
10.40
10.22
10.59
11.37
10.97
11.19
10.90
11.15
10.90
(Jul 11-Jun 2012)
(Aug 11-Jul 2012)
(Sep 11-Aug 2012)
(Oct 11-Sep 2012)
(Nov 11-Oct 2012)
(Dec 11-Nov 2012)
(Jan 2012-Dec 2012)
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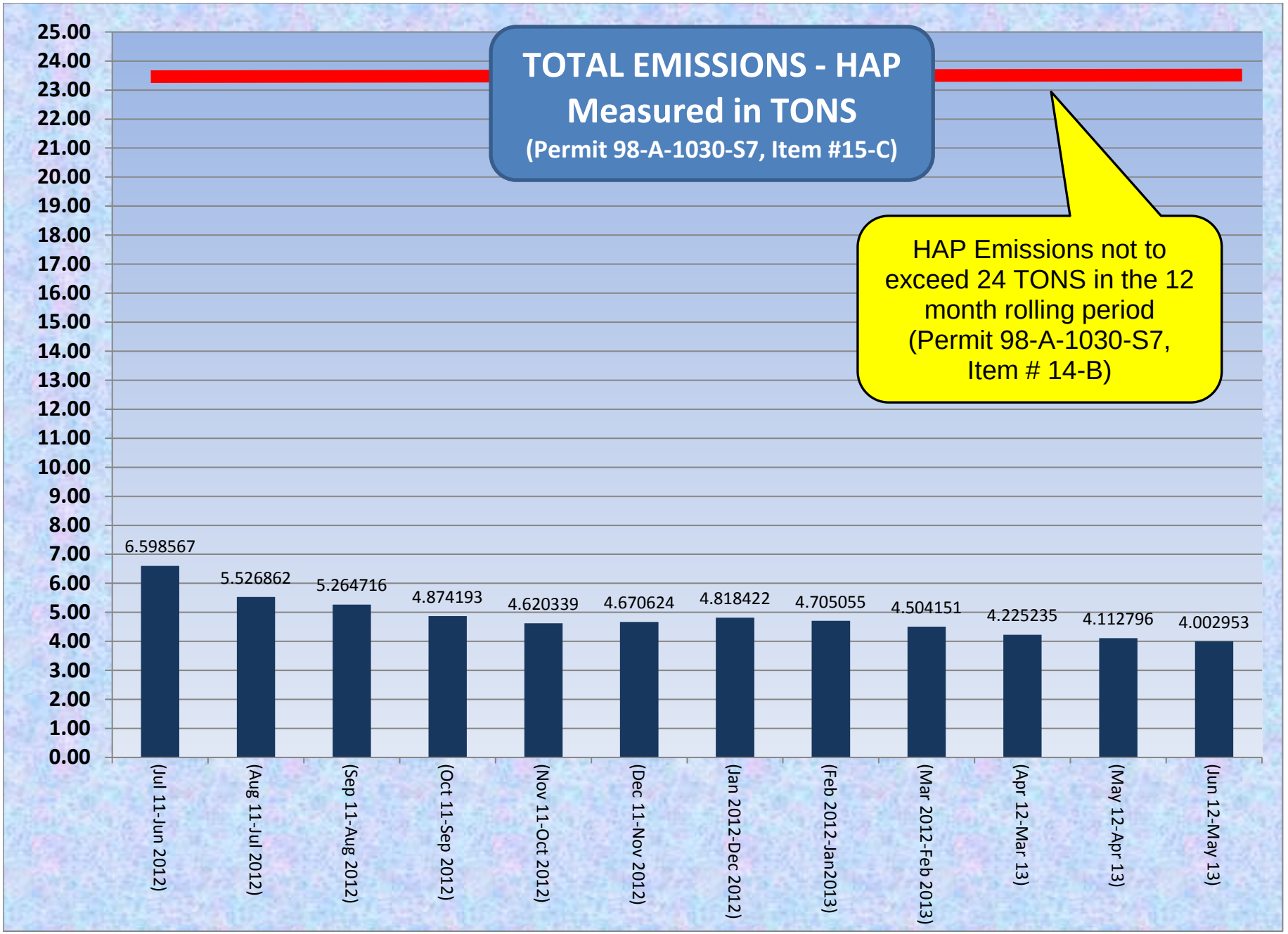
(May 12-Apr 13)
(Jun 12-May 13)


TOTAL EMISSIONS - HAP
Measured in TONS
(Permit 98-A-1030-S7, Item #15-C)
HAP Emissions not to exceed 24 TONS in the 12 month rolling period (Permit 98-A-1030-S7, Item # 14-B)
25.00
24.00
23.00
22.00
21.00
20.00
19.00
18.00
17.00
16.00
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12.00
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
6.598567
5.526862
5.264716
4.874193
4.620339
4.670624
4.818422
4.705055
4.504151
4.225235
4.112796
4.002953
(Jul 11-Jun 2012)
(Aug 11-Jul 2012)
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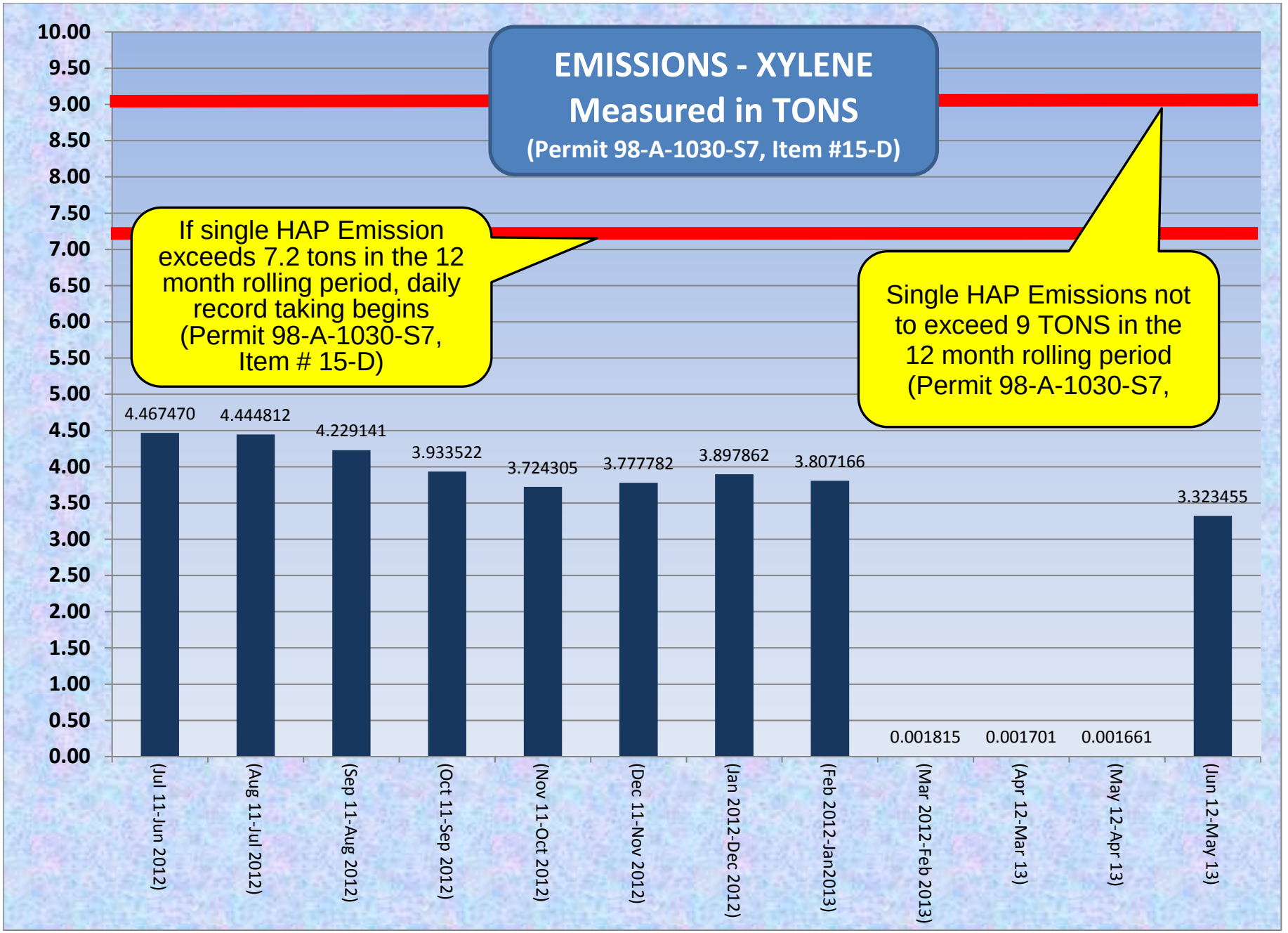
(May 12-Apr 13)
(Jun 12-May 13)


EMISSIONS - XYLENE
Measured in TONS
(Permit 98-A-1030-S7, Item #15-D)
If single HAP Emission exceeds 7.2 tons in the 12 month rolling period, daily record taking begins (Permit 98-A-1030-S7, Item # 15-D)
Single HAP Emissions not to exceed 9 TONS in the 12 month rolling period (Permit 98-A-1030-S7,
10.00
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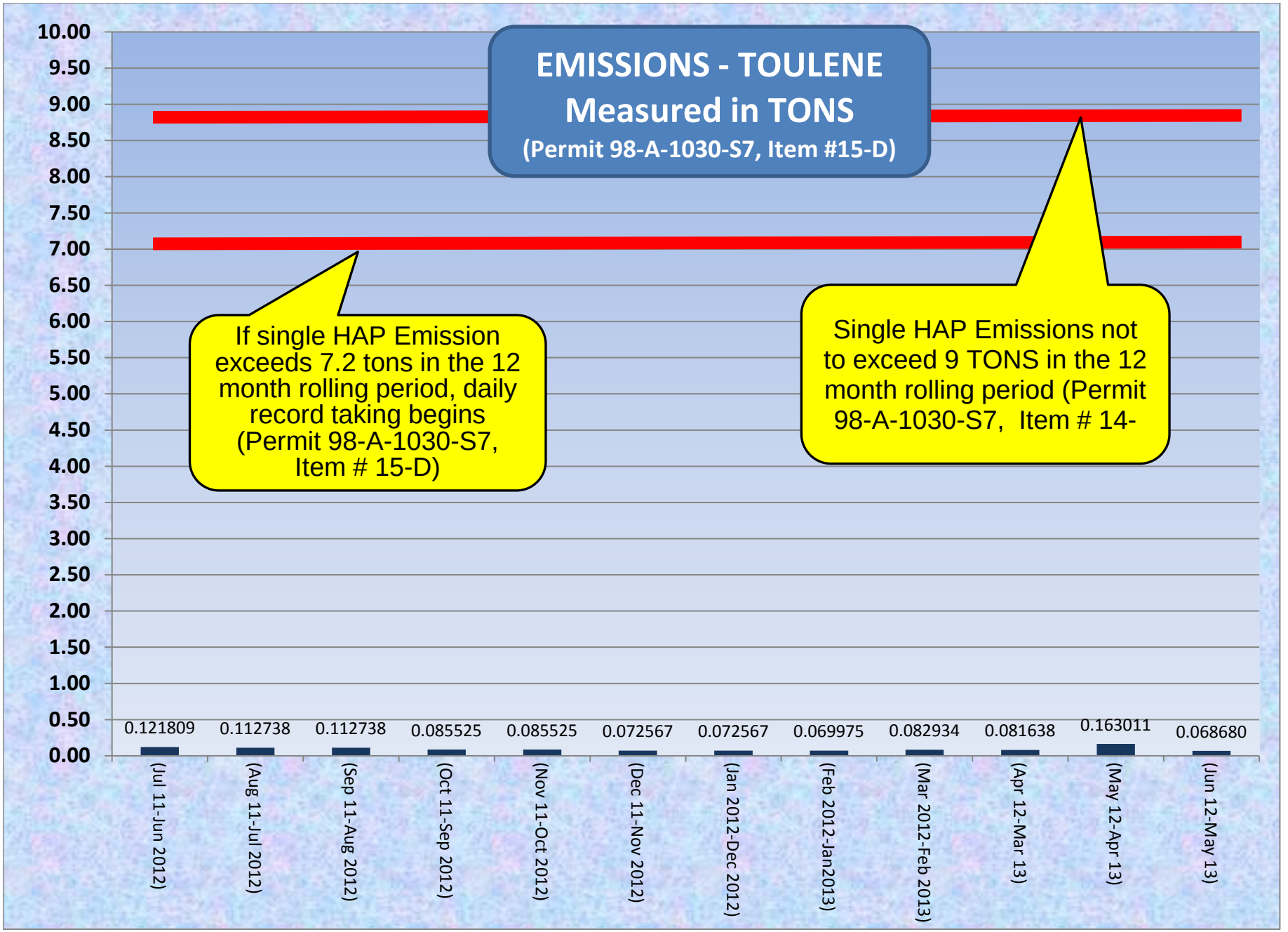
1.00
0.50
0.00
4.467470
4.444812
4.229141
3.933522
3.724305
3.777782
3.897862
3.807166
0.001815
0.001701
0.001661
3.323455
(Jul 11-Jun 2012)
(Aug 11-Jul 2012)
(Sep 11-Aug 2012)
(Oct 11-Sep 2012)
(Nov 11-Oct 2012)
(Dec 11-Nov 2012)
(Jan 2012-Dec 2012)
(Feb 2012-Jan2013)
(Mar 2012-Feb 2013)
(Apr 12-Mar 13)
(May 12-Apr 13)
(Jun 12-May 13)


EMISSIONS - TOULENE
Measured in TONS
(Permit 98-A-1030-S7, Item #15-D)
If single HAP Emission exceeds 7.2 tons in the 12 month rolling period, daily record taking begins (Permit 98-A-1030-S7, Item # 15-D)
Single HAP Emissions not to exceed 9 TONS in the 12 month rolling period (Permit 98-A-1030-S7, Item # 14-
10.00
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0.50
0.00
0.121809
0.112738
0.112738
0.085525
0.085525
0.072567
0.072567
0.069975
0.082934
0.081638
0.163011
0.068680
(Jul 11-Jun 2012)
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(Nov 11-Oct 2012)
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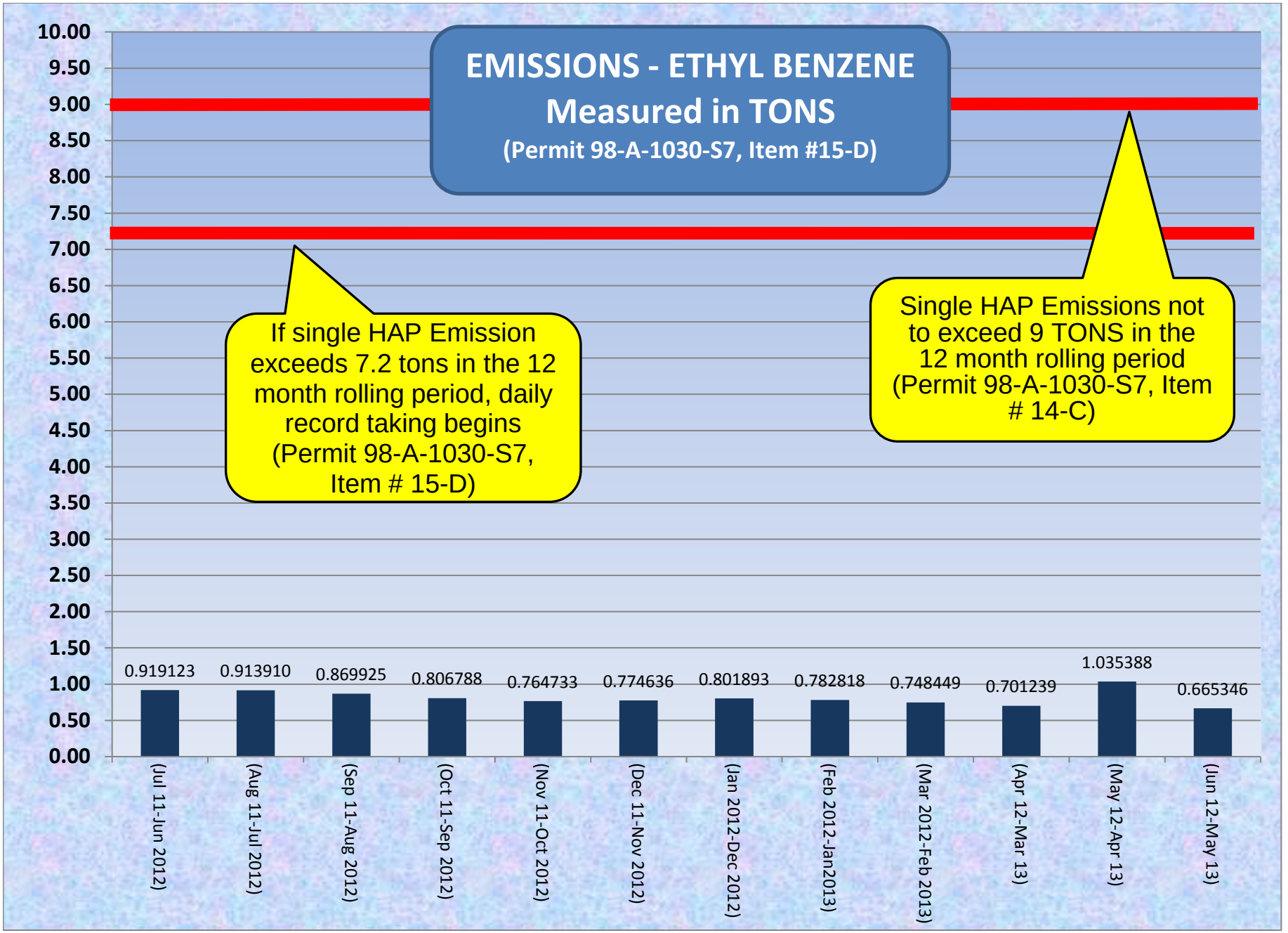
(Jun 12-May 13)


EMISSIONS - ETHYL BENZENE
Measured in TONS
(Permit 98-A-1030-S7, Item #15-D)
If single HAP Emission exceeds 7.2 tons in the 12 month rolling period, daily record taking begins (Permit 98-A-1030-S7, Item # 15-D)
Single HAP Emissions not to exceed 9 TONS in the 12 month rolling period (Permit 98-A-1030-S7, Item # 14-C)
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0.00
0.919123
0.913910
0.869925
0.806788
0.764733
0.774636
0.801893
0.782818
0.748449
0.701239
1.035388
0.665346
(Jul 11-Jun 2012)
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(Nov 11-Oct 2012)
(Dec 11-Nov 2012)
(Jan 2012-Dec 2012)
(Feb 2012-Jan2013)
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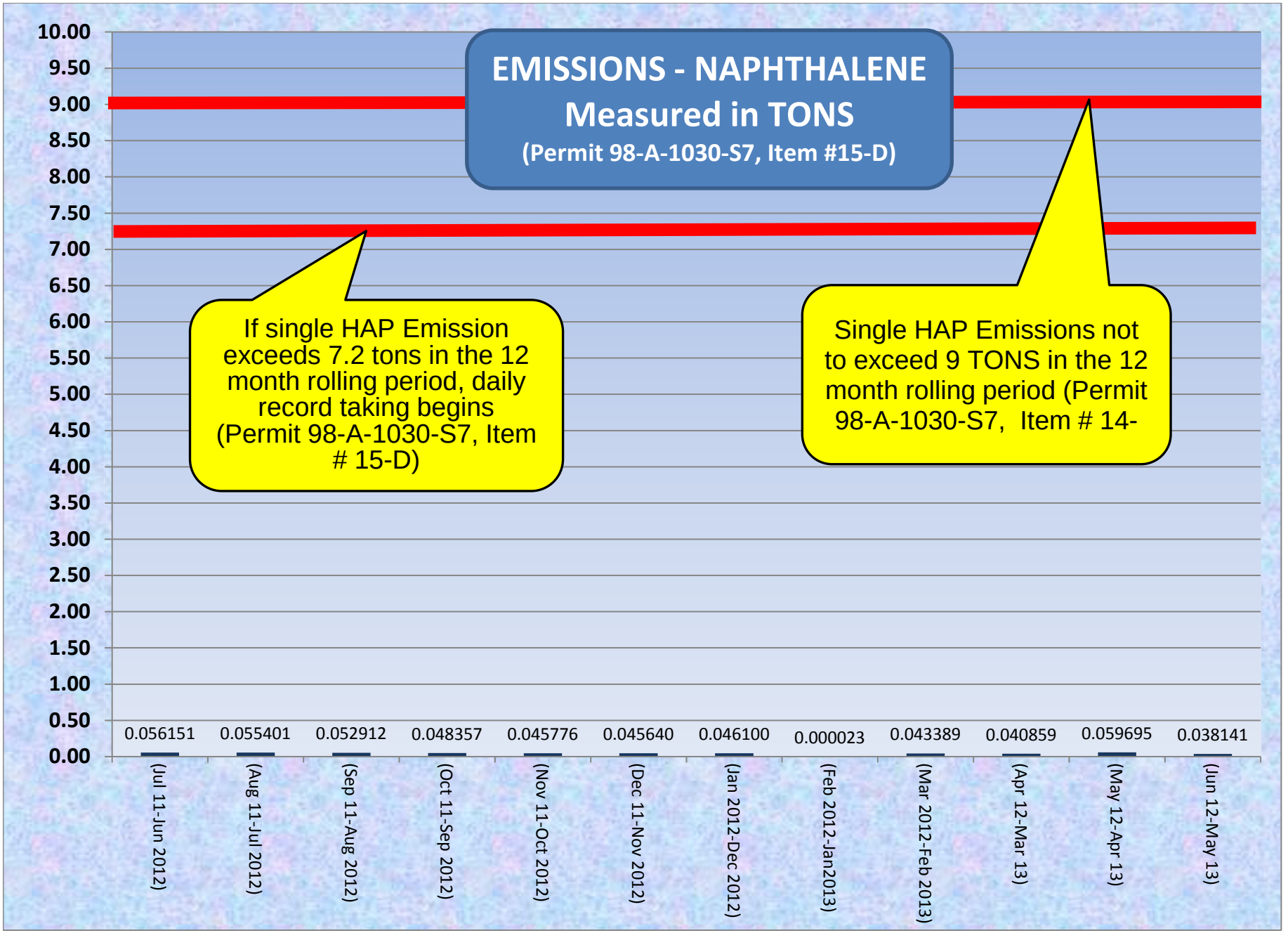
(May 12-Apr 13)
(Jun 12-May 13)


EMISSIONS - NAPHTHALENE
Measured in TONS
(Permit 98-A-1030-S7, Item #15-D)
If single HAP Emission exceeds 7.2 tons in the 12 month rolling period, daily record taking begins (Permit 98-A-1030-S7, Item # 15-D)
Single HAP Emissions not to exceed 9 TONS in the 12 month rolling period (Permit 98-A-1030-S7, Item # 14-
10.00
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0.50
0.00
0.056151
0.055401
0.052912
0.048357
0.045776
0.045640
0.046100
0.000023
0.043389
0.040859
0.059695
0.038141
(Jul 11-Jun 2012)
(Aug 11-Jul 2012)
(Sep 11-Aug 2012)
(Oct 11-Sep 2012)
(Nov 11-Oct 2012)
(Dec 11-Nov 2012)
(Jan 2012-Dec 2012)
(Feb 2012-Jan2013)
(Mar 2012-Feb 2013)
(Apr 12-Mar 13)
(May 12-Apr 13)
(Jun 12-May 13)

Webber, Robert

From: Webber, Robert
Sent: Wednesday, October 22, 2014 12:10 PM
To: jharral@thurstonmfgco.com
Subject: Information Request re Combustion Equipment and Paint Kitchen emissions
Attachments: Thurston cover letter and Syn Minor App recd 4Sept2012.pdf; Thurston Manufacturing - FORM REG - recd 4Sept2012.pdf; Thurston Mfg - Form NEW 1of2 w-out MSDSs -recd 4Sept2012.pdf; Thurston Mfg - Form NEW 2of2 MSDSs -recd 4Sept2012.pdf

Jim:

I understand from our phone conversation this morning that you have replaced Susan Jensen as the facility contact person for the air permit application submitted by Thurston Manufacturing Company. As I mentioned, EPA is reviewing Thurston Manufacturing Company's application for an air permit. Our review has indicated information gaps in the application and this email is intended to request information regarding combustion equipment and the paint kitchen emissions at the Thurston, NE facility.

Please provide a list of every combustion equipment unit (i.e. anything that combusts fuel) at the facility. On your list, please include the following information for each piece of equipment:

1) Combustion equipment rating in Btu per hour
2) The purpose/use of each combustion equipment - e.g. space heat for paint booth etc.
3) The type of fuel that each combustion equipment is capable of combusting and the sulfur content of that fuel. (Please specify all fuels - e.g. diesel #2, natural gas, propane etc.
4) The location of the combustion unit and the location of where the combustion unit currently vents to (i.e. inside building, outside building via dedicated vent, in booth etc.).
5) For each fuel indicate how fuel use is measured - e.g. at each combustion unit, or for a group of units (specify exactly which units) etc.

To facilitate future discussions, I have scanned each of the permit application materials originally submitted which consists of: Cover Letter with Application for Synthetic Minor Limit (Form SYNMIN), Application for New Construction (Form NEW), and Registration for Existing Sources (Form REG). Further, at the bottom of each page, I inserted page numbering and a file name. To reduce file size, I separated the Application for New Construction into two files.

On page 10 of 79 of Form NEW 1of2, there is a discussion that indicates there are potential air emissions from natural gas combustion processes other than used to heat the building.

Also, on the same page is a discussion of potential air emissions from the paint kitchen, including a statement: "Since the paint kitchen is used to store and mix paints, only VOCs were calculated." Please explain the purpose/use of the exhaust filter associated with the paint kitchen. If used to control particulate matter (PM) emissions, please describe the process equipment that generate the emissions.

Please contact me if you have any questions.

Sincerely,

Bob Webber
Air Permitting & Compliance Branch
Air and Waste Management Division
U.S. Environmental Protection Agency, Region VII
11201 Renner Boulevard
Lenexa, KS 66219
Phone: 913-551-7251

webber.robert@epa.gov

Webber, Robert

From: Jim Harral <jharral@thurstonmfgco.com>
Sent: Friday, October 31, 2014 12:13 PM
To: Webber, Robert
Subject: FW:
Attachments: doc11840620141031121926.pdf

Read utility requirements

-----Original Message-----
From: TMC Scanner
Sent: Friday, October 31, 2014 12:20 PM
To: Jim Harral
Subject:

From Kyocera 5500i

CHEMICAL WARNING

The use of improper chemicals in this tank will void all warranties. This tank is of mild steel construction and the use of a rust removing chemical agent may attack the steel. Your chemical supplier should inform you of what the proper chemical usage is for this tank.

On tanks that are heated electrically, the heating element will be the first place the use of improper chemicals will appear. This is due to the high heat and, thus, faster chemical reaction.

Another important requirement on electric heating elements is to keep them clean and free of a scale build-up. This scale is the result of a deposit formed when the chemical mixes with impurities in the water and settles them out. Every time the tank is drained, the heating element should be cleaned. This is necessary for any chemical.

The heating element manufacturer will not warrant a heating element that has been deteriorated by chemical attack or chemical deposits.

Many chemicals will do the cleaning job you need, but **NOT** all are suitable in mild steel tanks. Be sure to check with the chemical manufacturer before using any chemical. Our cast iron cleaner and aluminum cleaner are compatible with mild steel tanks but electric heating elements must still be cleaned.

UTILITY REQUIREMENTS

ELECTRICAL

The Model 72B Electric operates on 208-240V, 3-phase power and will draw 125 amps on 230 volt, 3-phase. A Model 72B Gas machine will draw 35 amps on 230 volt, 3-phase. A manual disconnect capable of being locked in an "*off*" position must be provided by the customer with fuses of the proper size to protect the machine circuit. Old style manual disconnects that are capable of being locked into an "*on*" position are no longer legal and must not be used. The controls for the machine will require a 115 volt, 2-amp supply (located in the electrical enclosure).

GAS SERVICE

The Model 72B Gas is equipped with a 200,000 BTU burner, at 3½" WC pressure. A 1" line, with 6" WC, is recommended for the installation. The installer should provide the necessary drip leg and external shut-off valve to complete the installation.

GAS BURNER VENT

The Model 72B Spraycabinet will require a 6" class B, double-wall vent stack. It is recommended that this vent stack be installed to run directly up through the roof and protrude through the roof by at least 30" while avoiding any unnecessary horizontal runs. Further information on burner vent stack installation will be found under Model 72B Gas Set-Up Instructions.

Webber, Robert

From: Webber, Robert
Sent: Friday, October 31, 2014 5:03 PM
To: 'Jim Harral'
Subject: RE:
Attachments: Viking Blast & Wash Systems Product Catalog _ Monorail Flow Through Washer.pdf

Jim:

The attachment in your email specifies a Model 72B Gas machine equipped with 200,000 BTU burner. Is that for the Viking monorail flow through parts washer at your facility? If so, please provide the rest of the document with the washer manufacturer's design specifications, as well as operation and maintenance instructions. When I checked the Viking website I did not find any information for that model number. I did find the attached document that specifies 300,000 BTU burner and has a photo of a Viking washer that looks like the one I saw at your facility. Also, please provide the date that the Viking washer was installed (replacing the wash bay) and provide the names, quantities and MSDS for the chemical solutions used by the Viking washer since it was installed.

I understand from our conversation this morning the only other combustion units associated with the manufacturing areas of the facility are forklifts, pay loaders, and two make up air combustion units located on the roof used for heating the manufacturing process areas (north and south) of the building. Please provide the previously requested information related to those combustion units.

Please respond by early next week for me to stay on schedule.

Sincerely,

Bob Webber
Air Permitting & Compliance Branch
Air and Waste Management Division
U.S. Environmental Protection Agency, Region VII
11201 Renner Boulevard
Lenexa, KS 66219
Phone: 913-551-7251
webber.robert@epa.gov

-----Original Message-----
From: Jim Harral [mailto:jharral@thurstonmfgco.com]
Sent: Friday, October 31, 2014 12:13 PM
To: Webber, Robert
Subject: FW:

Read utility requirements

-----Original Message-----
From: TMC Scanner
Sent: Friday, October 31, 2014 12:20 PM
To: Jim Harral
Subject:

From Kyocera 5500i

Webber, Robert

From: Jim Harral <jharral@thurstonmfgco.com>
Sent: Monday, November 03, 2014 3:02 PM
To: Webber, Robert
Subject: FW: PHOTOS
Attachments: DSC_0008.JPG; DSC_0009.JPG; DSC_0010.JPG; DSC_0011.JPG; DSC_0012.JPG; DSC_0014.JPG

The first three picture are of the air make up in the north wall the last three are of the one in the south wall

---

From: Larry Thieman
Sent: Monday, November 03, 2014 11:00 AM
To: Jim Harral
Subject: PHOTOS


1708


BOBCAT


TRACKMASTER


Weather-Rite


Weather-Rite


Weather-Rite

Webber, Robert

From: Jim Harral <jharral@thurstonmfgco.com>
Sent: Monday, November 03, 2014 3:03 PM
To: Webber, Robert
Subject: FW:
Attachments: doc11867020141103150425.pdf

One in south wall.

-----Original Message-----
From: TMC Scanner
Sent: Monday, November 03, 2014 3:05 PM
To: Jim Harral
Subject:

From Kyocera 5500i

WEATHER-RITE

TESTED BY: GEORGE WESTERHOFF

SPECIFICATION - TEST REPORT

DATE TESTED: 11/15/2011

DIRECT FIRED

SALES ORDER: 58179 MODEL: AR TT218VTL JOB NAME: THURSTON

TYPE: OUTDOOR FUEL: NATURAL VOLTAGE: 460 PHASE: 3 SCCR rating: 5 KA

INPUT BTU: 1,944,000 INLET PRESSURE: 2PSI MANIFOLD INLET PRESSURE: (INWC 4.5" C.F.M.: 20,000

MANIFOLD SIZE (INCHES): 1.25 DIELECTRIC WITHSTAND TEST: 2500/SEC TEMPERATURE RISE (F): 90

INSURANCE CODE: ANSI CERTIFICATION: ETL BLOWER MOTOR HP: 20

ELECTRICAL DRAWING NUMBER: C-930050-1A REV NONE

SUPPLY BLOWER INFORMATION MANUFACTURER: MARATHON SERIAL NO: KVA 256TTDCA6

MOTOR VOLTAGE: 460 PHASE: 3 MOTOR TYPE: ODP EFF

FRAME TYPE: 256T AMP DRAW/ACTUAL: 21 AMP DRAW/NAMEPLATE: 24

PULLEY DRIVER: 3B5V64 PULLEY DRIVEN: 3B5V12 RPM: 912 BHP: 15.72

BELTS SIZE: B95 BELT QUANTITY: 3

BURNER MANUFACTURE (MIDCO)(FEET): 4 ORFICE SIZE: N/A

PROFILE BLADE % OPEN: 90 PRESSURE DROP ACROSS BURNER: (INWC) .50

FLAME SIGNAL--PILOT: (VDC) 10 FLAME SIGNAL--MAIN: (VDC) 10

- X Clamps and set screws on wheels are tight.
- X Sheaves are securly mounted and aligned.
- X All linkage is adjusted and free to operate.
- X Bearings set screws are tight.
- X Gas connections are tight and leak tested.
- X Proper drive belt adjustment range.

COMMENTS:

COMPONENT DATA

OPERATION /RESET		OPERATION /RESET	
X	Main pressure regulator: N/A	X	Flame safeguard relay: FIREYE MEC120-MEP1
X	Pilot pressure regulator: MAXITROL 325-3	X	Scanner: FLAME ROD, MIDCO
X	Main gas valve: ASCO JB8214060 (1 1/4)	X	Ignition: HONEYWELL Q624A
X	Block valve: ASCO JB8214060 (1 1/4)	X	Ignitor: MIDCO
X	Pilot valve: ASCO SV311A	65 F	Outdoor stat: HONEYWELL T675A
X	Vent valve: N/A	X	Discharge contol: TS114
X	Control valve: MR212D	X	High discharge control: N/A
6"W.C.	High gas safety: HONEYWELL C6097B	X	Low discharge control: N/A
3"W.C.	Low gas: N/A	X	Room stat or reset: N/A
180 F	High limit: HONEYWELL L4008E	X	Night stat: N/A
165 F	Safety limit or firestat: HONEYWELL L4008E	X	Volumatic control 5.1
35 F	Low limit freeze stat: N/A	X	Profile motor: INVENSYS MA418
3 MIN.	Time delay relay RE11R	X	Profile sensor: N/A
X	Volumatic air flow switch: ANTUNES SMD 0,17>1,0"	X	Transformer: SD 9070TF
X	Air flow switch: ANTUNES SMD 0,17>1,0"	X	Clogged filter switch: N/A
X	Blower motor starter: LC1D32	X	Maximum fire pot: MAXITROL 10542
X	Overload heaters: 24-32	X	Minimum air pot: OHMITE 150 ohms
X	Damper motor (fresh air): NA	X	Remote panel: 8.3LS
X	Damper motor (return): NA		
X	Damper motor (discharge): M9185C		
X	Space pressure box: N/A		
X	High pressure regulator: N/A N/A N/A N/A		

Air Make up machine in south wall

Michael C. Haas

Phone (314) 351-6900

Cell - (314) 460-0226

Webber, Robert

From: Webber, Robert
Sent: Monday, November 03, 2014 5:56 PM
To: Jim Harral
Subject: RE: washer / name plate photos for make up air combustion units

Jim Harral:

Given the amount of Viking equipment at Thurston, would think they would be more responsive. I am also interested in seeing photos of the name plates for both make up air combustion units.

Sincerely,

Bob Webber
Air Permitting & Compliance Branch
Air and Waste Management Division
U.S. Environmental Protection Agency, Region VII
11201 Renner Boulevard
Lenexa, KS 66219
Phone: 913-551-7251
webber.robert@epa.gov

From: Jim Harral [mailto:jharral@thurstonmfgco.com]
Sent: Monday, November 03, 2014 4:51 PM
To: Webber, Robert
Subject: RE: washer

We can't even find nameplates on the washer to take pictures of or you would have them I apologize for making this so difficult when I know it shouldn't be I will be working tomorrow just not here in Thurston my cell is 712-223-4050 email address is the same I will be working on this tomorrow also. If this means anything we have had a lot of trouble getting Viking to return calls

---

From: Webber, Robert [mailto:Webber.Robert@epa.gov]
Sent: Monday, November 03, 2014 4:11 PM
To: Jim Harral
Subject: RE: washer

Jim Harral:

Glad you got through to Viking. It would be helpful for me to see photos of the name plates (with make/model number and burner specifications) on each of the combustion units, especially if other sources of information are not readily available today. I understand you are planning not to be available tomorrow.

Sincerely,

Bob Webber
Air Permitting & Compliance Branch
Air and Waste Management Division
U.S. Environmental Protection Agency, Region VII
11201 Renner Boulevard
Lenexa, KS 66219

Phone: 913-551-7251
webber.robert@epa.gov

From: Jim Harral [mailto:jharral@thurstonmfgco.com]
Sent: Monday, November 03, 2014 3:09 PM
To: Webber, Robert
Subject: washer

Was finally able to get through to Martin at Viking and his guy that does the washer end of the business is making up a speck sheet that we should be able to use.

Webber, Robert

From: Webber, Robert
Sent: Thursday, November 20, 2014 10:00 PM
To: 'Jim Harral'
Cc: 'dstone@ziaeec.com'
Subject: follow up to recent conversations with Donn Stone

Jim Harral,

As a follow up to recent conversations with Thurston Manufacturing Company's consultant Donn Stone with Zia Engineering, I want to clarify what additional information that is being requested by EPA for use in drafting a proposed synthetic minor permit pursuant to the Federal minor NSR program in Indian country for the Thurston Manufacturing Company facility in Thurston, Nebraska.

1. It is my understanding that information submitted in the air permit application for the following emission units and/or associated emission control equipment has changed or otherwise requires clarification. Please verify and/or provide any necessary clarifications to the changes described below, and provide the additional information requested:

   - The Plasma Cutter now has a fabric filter that vents inside. Please describe how the plasma cutter and associated emission control equipment (water table and fabric filter) are operated and describe all proposed emission limitation(s), if any. Provide an MSDS for each consumable material associated with the plasma cutter. Provide all available manufacturer specifications, guarantees, and recommended operation and maintenance procedures for the plasma cutter and associated emission control equipment.

   - The Wash Bay listed in the permit application has been replaced by a Parts Washer manufactured by Viking Corporation. The Parts Washer includes a natural gas fired heater. Provide an MSDS for each consumable to be used with the Parts Washer. Provide all available manufacturer specifications, guarantees, and recommended operation and maintenance procedures for the Parts Washer.

   - Contrary to information provided in the permit application, the Paint Kitchen does not have an exhaust filter used to control PM10 emissions. The Paint Kitchen does have an air intake filter. Less solvent is used for cleaning or flushing than estimated in the permit application. Provide all available manufacturer specifications, guarantees, and recommended operation and maintenance procedures for the Paint Kitchen.

   - Primarily due to emissions from the Paint Booth, the facility-wide uncontrolled PTE for VOC emissions is more than the PSD and Title V major source thresholds, and the facility-wide uncontrolled PTE for HAP (total and individual) emissions are above the Title V and MACT applicability thresholds.

     The permit application requests synthetic minor material usage limits of 2,500 gal/year for each of the three type of paint-related materials: Top Coat, Primer and Solvents. On June 4, 2013, EPA Region 7 received an email from Thurston Manufacturing Company's consultant Rick Rohr that provides material usage recordkeeping data and charts for 2011, 2012, and 2013. The data indicates that the facility's actual combined paint usage (topcoat and primer) has consistently averaged over 6,000 gallons per rolling 12-month period, and the facility's actual solvent usage has averaged as high as 2,297 gallons per rolling 12-month period. It appears based on the reported actual material usage data, the requested material usage limits in the September 2012 permit application are too restrictive.

     The charts included with the June 4, 2013 email appear to display the following revised proposed emission limits:

     - VOC emissions not to exceed 75 TONS in the 12-month rolling period

- HAP Emissions not to exceed 24 TONS in the 12-month rolling period
- If a single HAP Emission (xylene, toluene, ethyl benzene, or naphthalene) exceeds 7.2 tons in the 12-month rolling period, daily record taking begins
- Single HAP Emissions not to exceed 9 TONS in the 12-month rolling period

Please provide a copy of all available manufacturer's specifications, guarantees, and recommended operation and maintenance procedures associated with the Paint Booth enclosure, spray gun(s), and exhaust filter system.

- Primarily due to emissions from the Shot Blast Machine, the facility-wide uncontrolled PTE for PM10 emissions is more than the Title V major source threshold.

  Please provide an MSDS for:

  - each shot or grit material used in the Shot Blast Machine
  - each consumable associated with Welding Emission Units EU-5 and EU-6
  - each consumable associated with Fabrication Machines EU-7 and EU-8

  Please provide a copy of all available manufacturer's specifications, guarantees, and recommended operation and maintenance procedures for:

  - Shot Blast Machine and associated Dust Collector
  - Welding Emission Units EU-5 and EU-6
  - Fabrication Machines EU-7 and EU-8 and the associated dust collectors

2. Please provide updated process flow chart(s) identifying all processing, combustion, handling, storage and emission control equipment (include the unit identification numbers).

3. Please provide an updated narrative description of the production processes occurring at the facility. The narrative description should identify and describe the raw materials used and the outputs from each step of the process.

4. Please provide an updated list and narrative description for all of the emission units and air pollution-generating activities at the facility. At a minimum, include the following:

   a. The hourly, daily and annual maximum operating rates for each operating unit, production process, and activity.
   b. The hourly, daily and annual maximum firing rates for each fuel and combustion equipment.
   c. The capacity for storage units and the hourly, daily and annual maximum throughput of material in the storage units.
   d. Material and product handling equipment and the hourly, daily and annual maximum throughput of material and product.
   e. Tank designs, tank storage capacities, hourly, daily and annual maximum throughput of material and product.

5. Please clarify what emission limitations, if any, you are proposing for each emissions unit to avoid major source requirements. Emission limitations may include pollution prevention techniques, air pollution control devices, design standards, equipment standards, work practices, operational standards or a combination thereof. You may include an explanation of why you believe the proposed emission limitations to be appropriate.

Please respond timely to this request for information. It is my intention to prepare a draft permit by the end of December. Please contact me if you have any questions or concerns.

Sincerely,

Bob Webber

Air Permitting & Compliance Branch
Air and Waste Management Division
U.S. Environmental Protection Agency, Region VII
11201 Renner Boulevard
Lenexa, KS 66219
Phone: 913-551-7251
webber.robert@epa.gov

Webber, Robert

From: Webber, Robert
Sent: Friday, November 21, 2014 12:38 PM
To: Jim Harral
Subject: RE: follow up to recent conversations with Donn Stone

Jim Harral,

That is the type of clarification that will allow the permit to be accurately drafted. Since the water table no longer exists I see no reason to include it in the permit. I assume the fabric filter installed for the plasma cutter is much more effective at controlling particulate matter emissions.

Sincerely,

Bob Webber
Air Permitting & Compliance Branch
Air and Waste Management Division
U.S. Environmental Protection Agency, Region VII
11201 Renner Boulevard
Lenexa, KS 66219
Phone: 913-551-7251
webber.robert@epa.gov

From: Jim Harral [mailto:jharral@thurstonmfgco.com]
Sent: Friday, November 21, 2014 11:45 AM
To: Webber, Robert
Subject: RE: follow up to recent conversations with Donn Stone

We were done with our meeting by the time you sent this. In number one you keep talking about a water table that we don't have do we still need to include this in the permit?

From: Webber, Robert [mailto:Webber.Robert@epa.gov]
Sent: Thursday, November 20, 2014 10:00 PM
To: Jim Harral
Cc: dstone@ziaeec.com
Subject: follow up to recent conversations with Donn Stone

Jim Harral,

As a follow up to recent conversations with Thurston Manufacturing Company's consultant Donn Stone with Zia Engineering, I want to clarify what additional information that is being requested by EPA for use in drafting a proposed synthetic minor permit pursuant to the Federal minor NSR program in Indian country for the Thurston Manufacturing Company facility in Thurston, Nebraska.

1. It is my understanding that information submitted in the air permit application for the following emission units and/or associated emission control equipment has changed or otherwise requires clarification. Please verify and/or provide any necessary clarifications to the changes described below, and provide the additional information requested:

   - The Plasma Cutter now has a fabric filter that vents inside. Please describe how the plasma cutter and associated emission control equipment (water table and fabric filter) are operated and describe all proposed emission

limitation(s), if any. Provide an MSDS for each consumable material associated with the plasma cutter. Provide all available manufacturer specifications, guarantees, and recommended operation and maintenance procedures for the plasma cutter and associated emission control equipment.

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  - If a single HAP Emission (xylene, toluene, ethyl benzene, or naphthalene) exceeds 7.2 tons in the 12-month rolling period, daily record taking begins
  - Single HAP Emissions not to exceed 9 TONS in the 12-month rolling period

  Please provide a copy of all available manufacturer's specifications, guarantees, and recommended operation and maintenance procedures associated with the Paint Booth enclosure, spray gun(s), and exhaust filter system.

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  Please provide an MSDS for:

  - each shot or grit material used in the Shot Blast Machine
  - each consumable associated with Welding Emission Units EU-5 and EU-6
  - each consumable associated with Fabrication Machines EU-7 and EU-8

  Please provide a copy of all available manufacturer's specifications, guarantees, and recommended operation and maintenance procedures for:

- Shot Blast Machine and associated Dust Collector
- Welding Emission Units EU-5 and EU-6
- Fabrication Machines EU-7 and EU-8 and the associated dust collectors

2. Please provide updated process flow chart(s) identifying all processing, combustion, handling, storage and emission control equipment (include the unit identification numbers).

3. Please provide an updated narrative description of the production processes occurring at the facility. The narrative description should identify and describe the raw materials used and the outputs from each step of the process.

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   a. The hourly, daily and annual maximum operating rates for each operating unit, production process, and activity.
   b. The hourly, daily and annual maximum firing rates for each fuel and combustion equipment.
   c. The capacity for storage units and the hourly, daily and annual maximum throughput of material in the storage units.
   d. Material and product handling equipment and the hourly, daily and annual maximum throughput of material and product.
   e. Tank designs, tank storage capacities, hourly, daily and annual maximum throughput of material and product.

5. Please clarify what emission limitations, if any, you are proposing for each emissions unit to avoid major source requirements. Emission limitations may include pollution prevention techniques, air pollution control devices, design standards, equipment standards, work practices, operational standards or a combination thereof. You may include an explanation of why you believe the proposed emission limitations to be appropriate.

Please respond timely to this request for information. It is my intention to prepare a draft permit by the end of December. Please contact me if you have any questions or concerns.

Sincerely,

Bob Webber
Air Permitting & Compliance Branch
Air and Waste Management Division
U.S. Environmental Protection Agency, Region VII
11201 Renner Boulevard
Lenexa, KS 66219
Phone: 913-551-7251
webber.robert@epa.gov

Webber, Robert

From: Donn Stone <dstone@ziaeec.com>
Sent: Wednesday, December 17, 2014 3:57 PM
To: Webber, Robert
Cc: jharral@thurstonmfgco.com; 'Ryan Jensen'
Subject: Thurston Manufacturing

Bob:

When we initiated the air permitting process, you indicated that EPA did not have permit application documents. We confirmed with you that the Iowa air permitting application documents would be appropriate. Your email of November 20th basically suggests that another permit application be submitted as you request information that is not typically part of an air permit application. Specifically you have requested an explanation of all of the processes in the facility which will require a substantial amount of time to prepare.

The permit applications that were submitted provided typical process data; potential throughputs, operational scenarios, and projected emissions based on established EPA emission factors. We request that you direct your questions to information previously provided as a means to expedite the processing of the requested permits.

Can you provide us with a recent permit you have processed and the conditions of that permit such that we can further understand the reasoning behind the information request and the EPA permitting process.

Thank you.

Donn

Donn L Stone, PE
Midwest Operations Manager
Zia Engineering & Environmental Consultants, LLC
1531 Airport Road, Suite 104
Ames, Iowa 50010
515-233-5794 Office
515-689-7701 Cell

Webber, Robert

From: Webber, Robert
Sent: Thursday, December 18, 2014 3:57 PM
To: Donn Stone
Cc: jharral@thurstonmfgco.com; 'Ryan Jensen'
Subject: RE: Thurston Manufacturing

Donn,

In EPA Region 7's letter to Thurston Manufacturing Company dated July 2, 2012, we enclosed forms for use in applying for synthetic minor status under the Federal Minor NSR Program in Indian country, including the "New Source General Application" and "Synthetic Minor Limit Application." We pointed out that the use of the forms is optional, but if you choose not to use them you must provide all of the information described in 40 CFR 49.154 Permit Application Requirements and 40 CFR 49.158 Synthetic Minor Source Permits.

Subsequently, in a letter dated November 2, 2012, EPA Region 7 informed Thurston Manufacturing Company that the permit application received on September 4, 2012, was administratively complete. We disregarded all references to the Iowa Department of Natural Resources, including its regulations, policies and practices, in the application forms you submitted. We indicated that the application completeness determination does not constitute a thorough evaluation of the merits of the application. We stated that if we determine that additional information is necessary to evaluate or take final action on the application, we may request additional information from you and require your response in a reasonable time period.

The information currently being requested is focused on filling information gaps in the 2012 permit application and clarifying changes that may have occurred since the permit application was received by EPA. I look forward to working with you to clarify the information previously provided as a means to expedite the processing of the requested synthetic minor permit.

You may find useful the following web links regarding a synthetic minor permit recently issued by EPA Region 10, for a metal fabrication plant in Indian country:

http://www.epa.gov/region10/pdf/permits/air/petersen_incorporated/petersen_2014_synthetic_minor_permit_administrative_record.pdf
http://www.epa.gov/region10/pdf/permits/air/petersen_incorporated/petersen_incorporated_idaho_synthetic_minor_source_permit.pdf

Thank you.

Bob Webber
Air Permitting & Compliance Branch
Air and Waste Management Division
U.S. Environmental Protection Agency, Region VII
11201 Renner Boulevard
Lenexa, KS 66219
Phone: 913-551-7251
webber.robert@epa.gov

From: Donn Stone [mailto:dstone@ziaeec.com]
Sent: Wednesday, December 17, 2014 3:57 PM
To: Webber, Robert

Cc: jharral@thurstonmfgco.com; 'Ryan Jensen'
Subject: Thurston Manufacturing

Bob:

When we initiated the air permitting process, you indicated that EPA did not have permit application documents. We confirmed with you that the Iowa air permitting application documents would be appropriate. Your email of November 20th basically suggests that another permit application be submitted as you request information that is not typically part of an air permit application. Specifically you have requested an explanation of all of the processes in the facility which will require a substantial amount of time to prepare.

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Thank you.

Donn

Donn L Stone, PE
Midwest Operations Manager
Zia Engineering & Environmental Consultants, LLC
1531 Airport Road, Suite 104
Ames, Iowa 50010
515-233-5794 Office
515-689-7701 Cell

Webber, Robert

From: Donn Stone <dstone@ziaeec.com>
Sent: Friday, January 09, 2015 12:00 PM
To: Webber, Robert
Cc: jharral@thurstonmfgco.com; Ryan Jensen
Subject: Thurston Manufacturing

Bob:

As you suggested, a face to face discussion would be good. I think I know what you are wanting, but not positive. In sitting down and going through each process we should be able to determine what information you need. We can then make a list of that information such that we have something for guidance.

I have completed revised calculations on most of the equipment as we discussed over the phone. We can review those for applicability when we meet.

Since the initial permit application, as you know, there have been a couple of equipment additions that need to be included in the permitting process. We can also address those in our discussion.

I have visited with Thurston personnel and Wednesday January 21st appears to be the next day we would all be available. I would suggest meeting there at 8AM to make the most of the day.

Let me know what day fits your schedule best.

Thanks

Donn

Donn L Stone, PE
Midwest Operations Manager
Zia Engineering & Environmental Consultants, LLC
1531 Airport Road, Suite 104
Ames, Iowa 50010
515-233-5794 Office
515-689-7701 Cell

Webber, Robert

From: Donn Stone <dstone@ziaeec.com>
Sent: Tuesday, January 13, 2015 8:48 AM
To: Webber, Robert
Cc: Ryan Jensen; jharral@thurstonmfgco.com
Subject: RE: Thurston Manufacturing
Attachments: Thurston 2014 calcs.xls

Bob:

Attached are the revised calcs I have prepared. They are not in a format to be presented for permit review. But rather my working documents to get to the end result.

Donn

Donn L Stone, PE
Midwest Operations Manager
Zia Engineering & Environmental Consultants, LLC
1531 Airport Road, Suite 104
Ames, Iowa 50010
515-233-5794 Office
515-689-7701 Cell

From: Webber, Robert [mailto:Webber.Robert@epa.gov]
Sent: Friday, January 09, 2015 3:55 PM
To: Donn Stone
Cc: jharral@thurstonmfgco.com; 'Ryan Jensen'
Subject: RE: Thurston Manufacturing

Donn,

Looks like I should be available to meet on Wednesday, January 21st.
Please email me your revised calculations.

Thanks,

Bob Webber
Air Permitting & Compliance Branch
Air and Waste Management Division
U.S. Environmental Protection Agency, Region VII
11201 Renner Boulevard
Lenexa, KS 66219
Phone: 913-551-7251
webber.robert@epa.gov

From: Donn Stone [mailto:dstone@ziaeec.com]
Sent: Friday, January 09, 2015 12:00 PM
To: Webber, Robert
Cc: jharral@thurstonmfgco.com; Ryan Jensen
Subject: Thurston Manufacturing

Bob:

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I have completed revised calculations on most of the equipment as we discussed over the phone. We can review those for applicability when we meet.

Since the initial permit application, as you know, there have been a couple of equipment additions that need to be included in the permitting process. We can also address those in our discussion.

I have visited with Thurston personnel and Wednesday January 21st appears to be the next day we would all be available. I would suggest meeting there at 8AM to make the most of the day.

Let me know what day fits your schedule best.

Thanks

Donn

Donn L Stone, PE
Midwest Operations Manager
Zia Engineering & Environmental Consultants, LLC
1531 Airport Road, Suite 104
Ames, Iowa 50010
515-233-5794 Office
515-689-7701 Cell

Thurston Manufacturing
Air Permits
2012

	Equipment Name	EU Number	EP Number	Stack Opening Size	Height from ground (ft)	Height from highest building level (ft)	Distance from nearest property line (ft)	Discharge Style	Exit Temp. (F)	Flow Rate	CE Equipment (Y/N)
1	Paint Booth	1	W-1								
2	Plasma Cutter	2	WB-1								
3	Shotblast	3	PK-1								
4	Wash Bay	4	PB-1								
5	Welding	5	BH-1					Fugitive			N
6	Fab Machines										
7	Fab Machines2										
8	Fugitive Heat										
9	Green House Gas										

Thurston Manufacturing Company

Use for
Total Paint Consumed

Paint	15000	Total Gallons
	8.92	lbs/gal
Total Paint Consumed	133800	lbs

Use for
Plasma Cutter 1008.5 hours

Emissions are based on inches cut
Inches are determined by hourly rate of cutting and actual hours logged

Rate of cut	0.4903	lbs/min
	29.418	lbs/hr

Use for
Shot Blasting

Shot consumption rating	1000	lbs/hr
Actual shot consumed	2500000	lbs/yr

Use for
Fugitive Heat therms

Total Consumption	168656	input nat gas therms
building heat summer ave * 12	75420	

Use for
Welding
Total Pounds of Wire 99690 pounds

Use for
Wash Bay

Pounds consumed	21575	pounds
Density	9.13	lb/gal

Use for
Fab machines - 2 Penninghouse
Material shaped 50000 pounds

Use for
Fab machines - 1 Mazak, 1 Haas
Material shaped pounds

	therms		
Jan	49421		
Feb	58414		
Mar	0		
Apr	28850		
May	0		
June	0		
July	0	6285	**summer average**
Aug	9510		
Sept	9345		
Oct	13116		
Nov	0		
Dec	0		
	168656	75420	93236

one therm = 100,000 btu
16865.6 mmbtu

Summary of Emission for Friesen of Iowa
2008

Emission Point	Description		PM	PM10	PM2.5	VOC	HAP	Sox	Nox	CO	NH3	Lead	Ethyl Benzene	MIK	Toluene	Xylene	n-Butyl Alcohol	Trimethyl Benxene	Pb	Cr	Mn	Ni	Cu	P	V
													100-41-4	108-10-1	1330-20-7	108-88-3	71363	95636							
Paint Booth	paint booth	has filter	30.90	30.90	30.90	2.13	0.54						2.13	0.00	0.02	0.01	0.00	0.10							
Plasma Cutter	plasma cutter	has dust collector	5.94	5.94	5.94														0.00	0.00	0.00	0.00			
Shot Blasting	shot blasting	has dust collector	30.22																						
Wash Bay	wash bay		0.17	0.17	0.17																				
Wire Welding	Welding		3.76	3.76	3.76															0.00	0.02	0.00			
Building Heat	fug heat		0.21	0.33	0.33	0.20	0.00	0.02	3.77	0.75	0.02	0.00							0.00						
Shapers	Shaper machines	has dust collector	0.00	0.00	0.00	0.00																			
Shapers 2	Shaper machines	has oil collection	0.00	0.00	0.00	0.00																			
Totals, tons			71.20	41.09	41.09	2.33	0.54	0.02	3.77	0.75	0.02	0.00	2.13	0.00	0.02	0.01	0.00	0.10	0.00	0.00	0.02	0.00	0.00	0.00	0.00

Paint Booth	paint booth	has filter	3.09	3.09	3.09
Plasma Cutter	plasma cutter	has dust collector	0.59	0.59	0.59
Shot Blasting	shot blasting	has dust collector	3.02	3.02	3.02
Wash Bay	wash bay		0.17	0.17	0.17
Wire Welding	Welding		0.12	0.12	0.12
Building Heat	fug heat		0.00	0.00	0.00
Shapers	Shaper machines	has dust collector	0.00	0.00	0.00
Shapers 2	Shaper machines	has oil collection	0.00	0.00	0.00
Totals, tons			6.99	6.99	6.99

Emission factor input

Emission Point	Description	SCC Listed	SCC Used	SCC Confirmed	units	PM	PM10	PM2.5	SOx	NOx	VOC	CO	Cr	Co	Mn	Ni	Pb	NH3
Paint Booth	paint booth	40200101 40200510				0.6	0.6	0.6			1.0							
Plasma Cutter	plasma cutter	MB	MB	MB		0.136	0.136	0.136										
Shot Blasting	Shot blasting	30900204	30900204	30900204		0.69	0.69	0.69										
Wash Bay	wash bay	MB	MB	MB		0	0	0			0.0							
Wire Welding	welding	30905254 E70s 30905212 E308l	30905254			5.2	5.2	5.2					0.001	0.001	0.318	0.001		
Building Heat	nat gas	10500206	10500206	10500106	lbs/mmcf	5.7	8.7	8.7	0.6	100	5.3	20					0.0005	0.49
Shapers	shaper machines					0	0	0			0							
Shapers 2	shaper machines					0	0	0			0							

Thurston Manufacturing Company

Wire Welders

	Pounds	factor	1000# units	Emission Factor	emissions lbs	emissions tons
	99690	1000	99.69	lb/1000 lbs		
PM				5.2	518.39	0.26
PM10				5.2	518.39	0.26
PM2.5				5.2	518.39	0.26
VOC				0	0.00	0.00
Cr				0.001	0.10	0.00
Mn				0.318	31.70	0.02
Ni				0.001	0.10	0.00
Co				0.001	0.10	0.00

Totals

PM	0.26
PM10	0.26
PM2.5	0.26
VOC	0.00
Cr	0.00
Mn	0.02
Ni	0.00
Co	0.00

494	hours
999	inches per minute
59940	inches per hour
29610360	total inches
2467530	total feet

Emission Units:	WELD 1, 2, 3 & 4 - Interior Venting Welding Stations		
Emission Points:	Interior Welding Weld 1, 2, 3, & 4		
SCC:	30905212 - Electric Arc Welding, GMAW, E308 Electrode		
Input Data:	***E308 Electrode***		
	Requested usage	700,000	lbs/yr
		4400	hrs/yr
	Estimated Hourly Electrode Usage	159.1	lbs/hr
	PM 10	5.40	lb/10^3 lb
	Manganese	0.346	lb/10^3 lb
	Cobalt	0.001	lb/10^3 lb
	Nickel	0.184	lb/10^3 lb
	Chromium	0.524	lb/10^3 lb
Assumptions:	Hours of operation per day	16	hours
	Days of operation per week	5	days
	Weeks of operation per year	50	weeks
Potential Emissions:			
Electrode Usage		159.09	lb/hr
PM-10	88.36 lb/hr / 1,000 * 5.40 lb/10^3 lb	0.86	lbs/hr
	0.25 lbs/hr * 8760 hrs / 2000 lbs	3.76	tons/yr
Manganese	88.36 lb/hr / 1,000 * 0.346 lb/10^3 lb	0.06	lbs/hr
	0.03 lbs/hr * 8760 hrs / 2000 lbs	0.24	tons/yr
Cobalt	88.36 lb/hr / 1,000 * 0.001 lb/10^3 lb	0.0002	lbs/hr
	0.000 lbs/hr * 8760 hrs / 2000 lbs	0.0007	tons/yr
Nickel	88.36 lb/hr / 1,000 * 1.84 lb/10^3 lb	0.03	lbs/hr
	0.08 lbs/hr * 8760 hrs / 2000 lbs	0.13	tons/yr
Chromium	88.36 lb/hr / 1,000 * 0.524 lb/10^3 lb	0.08	lbs/hr
	0.238 lbs/hr * 8760 hrs / 2000 lbs	0.37	tons/yr
Actual Emissions:			
Usage	Current usage 45 tpy, estimated growth to	190.00	tons/yr
		700,000	lbs/yr
PM-10	700,000 lbs/yr / 1,000 * 5.40 lb/10^3 lb/2000 lbs/ton	1.890	tons/yr
Manganese	700,000 lbs/yr / 1,000 * 0.346 lb/10^3 lb/2000 lbs/ton	0.121	tons/yr
Cobalt	700,000 lbs/yr / 1,000 * 0.001 lb/10^3 lb/2000 lbs/ton	0.0004	tons/yr
Nickel	700,000 lbs/yr / 1,000 * 0.184 lb/10^3 lb/2000 lbs/ton	0.064	tons/yr
Chromium	700,000 lbs/yr / 1,000 * 0.524 lb/10^3 lb/2000 lbs/ton	0.183	tons/yr

Thurston Manufacturing Company
2014 Permitting Update
Emission Unit Parts Washer
Emission Point PW 1
SCC 10500206

Input Data:

Oven Rating	5,000,000	btu/hr
Oven Rating	5.0	mmbtu/hr
SCC Emission Factor, PM	0.0076	lbs/mmbtu
SCC Emission Factor, PM 10	0.0076	lbs/mmbtu
SCC Emission Factor, SOx	0.0006	lbs/mmbtu
SCC Emission Factor, NOx	0.0022	lbs/mmbtu
SCC Emission Factor, VOC	0.0055	lbs/mmbtu
SCC Emission Factor, CO	0.0840	lbs/mmbtu
SCC Emission Factor, Pb	0.0000005	lbs/mmbtu
Potential operating hours	8760	hrs/yr

Potential Emissions:

PM, PM 10 & PM 2.5	0.0076 * 5 mmbtu per hour consumed	0.038	lbs/hr
	0.038 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	0.166	tons/yr
PM 10	0.0076 lb/ton * 5 mmbtu per hour consumed	0.038	lbs/hr
	0.038 * 8760 hrs/yr / 2000 lbs/ton	0.166	tons/yr
SOx	0.0006 lb/ton * 5 mmbtu per hour consumed	0.003	lbs/hr
	0.003 * 8760 hrs/yr / 2000 lbs/ton	0.013	tons/yr
NOx	0.0022 lb/ton * 5 mmbtu per hour consumed	0.011	lbs/hr
	0.01 * 8760 hrs/yr / 2000 lbs/ton	0.048	tons/yr
VOC	0.0055 lb/ton * 5 mmbtu per hour consumed	0.028	lbs/hr
	0.03 * 8760 hrs/yr / 2000 lbs/ton	0.120	tons/yr
CO	0.0840 lb/ton * 5 mmbtu per hour consumed	0.420	lbs/hr
	0.42 * 8760 hrs/yr / 2000 lbs/ton	1.840	tons/yr
Pb	0.0000 lb/ton * 0.0006 mmbtu per hour consumed	3.00E-10	lbs/hr
	0.00 * 8760 hrs/yr / 2000 lbs/ton	1.31E-09	tons/yr

Thurston Manufacturing Company
2014 Permitting Update

Emission Unit	Paint Booth, EU-1
Emission Point	PB 1
SCC	Mass Balance

		Gallons consumed	lb/gal	pounds consumed	Emission Factor		%
		15,000	8.92	133,800			
PM			5.23	78,375	0.01		58.6%
PM10			5.23	78,375	0.01		58.6%
PM2.5			5.23	78,375	0.01		58.6%
VOC			3.70	55,425	1.00		41.4%
Ethyl Benzene	**100-41-4**		0.04	2,195	1.00		0.44%
MIK	**108-10-1**		0.05	2,694	1.00		0.54%
Toluene	**1330-20-7**		0.05	2,921	1.00		0.59%
Xylene	**108-88-3**		0.78	11,742	1.00		8.78%
n-butyl alcohol	**71363**		0.01	355	1.00		0.07%
Trimethyl Benzene	95636		0.01	582	1.00		0.12%
HAP			0.94	521	1.00		10.5%
Application efficiency					60.00	%	
Overspray					40.00	%	
Filter Efficiency					90.00	%	
Application rate					6.00	oz/min	
					117.56	lbs/hr	
Fan Rate						cfm	
Fan Capture Efficiency					15.00	%	

Potential Emissions: Continual Spray, no filter.

P, PM 10, PM 2.5	117.56 lbs/hr sprayed * 40 % Overspray * 15% Caputure	7.05	lbs/hr
	7.1 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	30.90	tons/yr

Potential Emissions, with filter compensation

PM, PM 10, PM 2.5	117.56 lbs/hr spr'd * 40 % O'spr * 15% Cap * 90% fil eff	**0.71**	lbs/hr
	0.7 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	**3.09**	tons/yr
VOC	117.56 lbs/hr spr'd * 41 % VOC	**0.49**	lbs/hr
	0.5 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	**2.13**	tons/yr
Ethyl Benzene	117.56 lbs/hr spr'd * 0.4 % Ethyl Benzene	**0.01**	lbs/hr
	0.0 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	**0.02**	tons/yr
MIK	117.56 lbs/hr spr'd * 0.5 % MIK	**0.01**	lbs/hr
	0.0 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	**0.03**	tons/yr
Xylene	117.56 lbs/hr spr'd * 8.8 % Xylene	**0.10**	lbs/hr
	0.1 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	**0.45**	tons/yr
Toluene	117.56 lbs/hr spr'd * 0.6 % Toluene	**0.01**	lbs/hr
	0.0 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	**0.03**	tons/yr
n-butyl alcohol	117.56 lbs/hr spr'd * 0.1 % n-butyl alcohol	**0.001**	lbs/hr
	0.0 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	**0.004**	tons/yr
Trimethyl Benzene	117.56 lbs/hr spr'd * 0.1 % Trimethly Benzene	**0.001**	lbs/hr
	0.0 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	**0.006**	tons/yr
HAP	117.56 lbs/hr spr'd * 10.5 % HAP	**0.12**	lbs/hr
	0.1 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	**0.54**	tons/yr

Thurston Manufacturing Company
2014 Permitting Update
Emission Unit Shot Blast
Emission Point SB 1
SCC

Input Data:

	Shot consumption rating	1,000	lbs/hr
	SCC Emission Factor, PM	0.69	lbs/1000 lbs
	SCC Emission Factor, PM 10	0.69	lbs/1000 lbs
	SCC Emission Factor, PM 2.5	0.69	lbs/1000 lbs
	Actual shot consumed	2,500,000	lbs/yr
		2,500	hrs of operation

Potential Emissions: Assumes no filter

PM 2.5	0.69 lbs/1000 lbs shot * 1000 pounds per hour consumed	6.90	lbs/hr
	6.9 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	30.22	tons/yr
PM 10	0.69 * 1000 pounds per hour consumed / 1,000 lbs	6.90	lbs/hr
	6.9000 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	30.22	tons/yr
PM	0.69 * 1000 pounds per hour consumed / 1,000 lbs	6.90	lbs/hr
	6.9000 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	30.22	tons/yr

Potential Emissions: Emission Fcator Assumes filtering

PM 2.5	0.69 lbs/1000 lbs shot * 1000 pounds per hour consumed	0.69	lbs/hr
	0.7 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	3.02	tons/yr
PM 10	0.69 * 1000 pounds per hour consumed / 1,000 lbs	0.69	lbs/hr
	0.6900 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	3.02	tons/yr
PM	0.69 * 1000 pounds per hour consumed / 1,000 lbs	0.69	lbs/hr
	0.6900 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	3.02	tons/yr

Actual Emissions:

PM 2.5	0.69 * 2500000 pounds consumed / 1000	1725.00	lbs/yr
	1,725.0 lbs/yr * / 2000 lbs/ton	0.86	tons/yr
PM 10	0.69 * 2500000 pounds consumed / 1000	1725.00	lbs/yr
	1,725.0 lbs/yr * / 2000 lbs/ton	0.86	tons/yr
PM	0.69 * 2500000 pounds consumed / 1000	1725.00	lbs/yr
	1,725.0 lbs/yr * / 2000 lbs/ton	0.86	tons/yr

Thurston Manufacturing Company
2014 Permitting Update
Emission Unit Peddinghouse 1, Fabrication Unit
Emission Point Fab 1
SCC

Input Data:

	Shot consumption rating	1,000	lbs/hr
	SCC Emission Factor, PM	0.69	lbs/1000 lbs
	SCC Emission Factor, PM 10	0.69	lbs/1000 lbs
	SCC Emission Factor, PM 2.5	0.69	lbs/1000 lbs
	Actual shot consumed	2,500,000	lbs/yr
		2,500	hrs of operation

Potential Emissions: Assumes no filter

PM 2.5	0.69 lbs/1000 lbs shot * 1000 pounds per hour consumed	6.90	lbs/hr
	6.9 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	30.22	tons/yr
PM 10	0.69 * 1000 pounds per hour consumed / 1,000 lbs	6.90	lbs/hr
	6.9000 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	30.22	tons/yr
PM	0.69 * 1000 pounds per hour consumed / 1,000 lbs	6.90	lbs/hr
	6.9000 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	30.22	tons/yr

Potential Emissions: Emission Fcator Assumes filtering

PM 2.5	0.69 lbs/1000 lbs shot * 1000 pounds per hour consumed	0.69	lbs/hr
	0.7 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	3.02	tons/yr
PM 10	0.69 * 1000 pounds per hour consumed / 1,000 lbs	0.69	lbs/hr
	0.6900 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	3.02	tons/yr
PM	0.69 * 1000 pounds per hour consumed / 1,000 lbs	0.69	lbs/hr
	0.6900 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	3.02	tons/yr

Actual Emissions:

PM 2.5	0.69 * 2500000 pounds consumed / 1000	1725.00	lbs/yr
	1,725.0 lbs/yr * / 2000 lbs/ton	0.86	tons/yr
PM 10	0.69 * 2500000 pounds consumed / 1000	1725.00	lbs/yr
	1,725.0 lbs/yr * / 2000 lbs/ton	0.86	tons/yr
PM	0.69 * 2500000 pounds consumed / 1000	1725.00	lbs/yr
	1,725.0 lbs/yr * / 2000 lbs/ton	0.86	tons/yr

Thurston Manufacturing Company

Shapers - 2 Penninghouse, with dust collectors

	Material Shaped (lbs) 50000	pounds		Emission Factor	emissions lbs	emissions tons
PM				0	0.00	0.00
PM10				0	0.00	0.00
PM2.5				0	0.00	0.00
VOC		0	0	0	0.00	0.00

Totals	
PM	0.000
PM10	0.000
PM2.5	0.000
VOC	0.000

Thurston Manufacturing Company

Shapers - 1 Mazak, 1 Haas, with oil collection system

	Material Shaped (lbs)	pounds		Emission Factor	emissions lbs	emissions tons
	0					
PM				0	0.00	0.00
PM10				0	0.00	0.00
PM2.5				0	0.00	0.00
VOC		0	0	0	0.00	0.00

Totals	
PM	0.000
PM10	0.000
PM2.5	0.000
VOC	0.000

Thurston Manufacturing Company
2014 Permitting Update

Emission Unit	Make Up Air Unit 1
Emission Point	MUA 1
SCC	10500206

Input Data:

Oven Rating	5,000,000	btu/hr
Oven Rating	5.0	mmbtu/hr
SCC Emission Factor, PM	0.0076	lbs/mmbtu
SCC Emission Factor, PM 10	0.0076	lbs/mmbtu
SCC Emission Factor, SOx	0.0006	lbs/mmbtu
SCC Emission Factor, NOx	0.0022	lbs/mmbtu
SCC Emission Factor, VOC	0.0055	lbs/mmbtu
SCC Emission Factor, CO	0.0840	lbs/mmbtu
SCC Emission Factor, Pb	0.0000005	lbs/mmbtu
Potential operating hours	8760	hrs/yr

Potential Emissions:

PM, PM 10 & PM 2.5	0.0076 * 5 mmbtu per hour consumed	0.038	lbs/hr
	0.038 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	0.166	tons/yr
PM 10	0.0076 lb/ton * 5 mmbtu per hour consumed	0.038	lbs/hr
	0.038 * 8760 hrs/yr / 2000 lbs/ton	0.166	tons/yr
SOx	0.0006 lb/ton * 5 mmbtu per hour consumed	0.003	lbs/hr
	0.003 * 8760 hrs/yr / 2000 lbs/ton	0.013	tons/yr
NOx	0.0022 lb/ton * 5 mmbtu per hour consumed	0.011	lbs/hr
	0.01 * 8760 hrs/yr / 2000 lbs/ton	0.048	tons/yr
VOC	0.0055 lb/ton * 5 mmbtu per hour consumed	0.028	lbs/hr
	0.03 * 8760 hrs/yr / 2000 lbs/ton	0.120	tons/yr
CO	0.0840 lb/ton * 5 mmbtu per hour consumed	0.420	lbs/hr
	0.42 * 8760 hrs/yr / 2000 lbs/ton	1.840	tons/yr
Pb	0.0000 lb/ton * 0.0006 mmbtu per hour consumed	3.00E-10	lbs/hr
	0.00 * 8760 hrs/yr / 2000 lbs/ton	1.31E-09	tons/yr

Thurston Manufacturing Company
2014 Permitting Update
Emission Unit Make Up Air Unit 2
Emission Point MUA 2
SCC 10500206

Input Data:

Oven Rating	5,000,000	btu/hr
Oven Rating	5.0	mmbtu/hr
SCC Emission Factor, PM	0.0076	lbs/mmbtu
SCC Emission Factor, PM 10	0.0076	lbs/mmbtu
SCC Emission Factor, SOx	0.0006	lbs/mmbtu
SCC Emission Factor, NOx	0.0022	lbs/mmbtu
SCC Emission Factor, VOC	0.0055	lbs/mmbtu
SCC Emission Factor, CO	0.0840	lbs/mmbtu
SCC Emission Factor, Pb	0.0000005	lbs/mmbtu
Potential operating hours	8760	hrs/yr

Potential Emissions:

PM, PM 10 & PM 2.5	0.0076 * 5 mmbtu per hour consumed	0.038	lbs/hr
	0.038 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	0.166	tons/yr
PM 10	0.0076 lb/ton * 5 mmbtu per hour consumed	0.038	lbs/hr
	0.038 * 8760 hrs/yr / 2000 lbs/ton	0.166	tons/yr
SOx	0.0006 lb/ton * 5 mmbtu per hour consumed	0.003	lbs/hr
	0.003 * 8760 hrs/yr / 2000 lbs/ton	0.013	tons/yr
NOx	0.0022 lb/ton * 5 mmbtu per hour consumed	0.011	lbs/hr
	0.01 * 8760 hrs/yr / 2000 lbs/ton	0.048	tons/yr
VOC	0.0055 lb/ton * 5 mmbtu per hour consumed	0.028	lbs/hr
	0.03 * 8760 hrs/yr / 2000 lbs/ton	0.120	tons/yr
CO	0.0840 lb/ton * 5 mmbtu per hour consumed	0.420	lbs/hr
	0.42 * 8760 hrs/yr / 2000 lbs/ton	1.840	tons/yr
Pb	0.0000 lb/ton * 0.0006 mmbtu per hour consumed	3.00E-10	lbs/hr
	0.00 * 8760 hrs/yr / 2000 lbs/ton	1.31E-09	tons/yr

Thurston Manufacturing Company			
2014 Permitting Update			
Emission Unit	Plasma Table 1		
Emission Point	PB 1		
SCC:	Engineering Calculations		
Input Data:	Bag House Efficency	90%	%
	Metal thickness	0.5	inches
	Width of cut	0.188	inches
	Volume of cut per inch	0.094	ci
	Weight of Steel	250	lbs/cf
		0.145	lbs/ci
	Weight of steel per inch of cut	0.0136	lbs/inch
	Percent emitted	5	%
	Uncontrolled emissions	6.78E-04	lbs/inch
	Controlled emissions	6.78E-05	lbs/inch
	Maximum inches per time	2,000	inches/hr
	Actual inches per time	1,000	inches/hr
	Actual operating time	1,000	hrs/yr
Potential Emissions: without filter			
PM 10	0.00068 lbs/inch of cut * 2,000 inches/hr	1.356	lbs/hr
	1.356 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	5.941	tons/yr
Potential Emissions: with filter			
PM 10	0.00007 lbs/inch of cut * 2,000 inches/hr	0.136	lbs/hr
	0.136 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	0.594	tons/yr
Actual Emissions:			
	0.00000 lbs/inch of cut * 1 inches/hr	0.000	lbs/hr
PM 10	0.000 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	0.000	tons/yr

Thurston Manufacturing Company

Fug Natural Gas Consumption, heat

	Therms	Cubic Feet/therm			emissions lbs	emissions tons
Natural Gas	75420	1000	75.42			
PM				5.7	429.89	0.215
PM10				8.7	656.15	0.328
PM2.5				8.7	656.15	0.328
VOC				5.3	399.73	0.200
Sox				0.6	45.252	0.023
Nox				100	7542	3.771
Lead				0.0005	0.04	0.000
CO				20	1508.40	0.754
ammonia				0.49	36.96	0.018

Totals	
PM	0.215
PM10	0.328
PM2.5	0.328
VOC	0.200
Sox	0.023
Nox	3.771
Lead	0.000

Instructions: Please fill in the green cells with your facility information and the yellow cells with your 2011 throughputs. Then print out the spreadsheet and attach to your paper inventory, or attach electronically to Form 1.0 of your SPARS inventory submittal.

Emission Year:	**2012**		
Facility Name:	Thurston Manufacturing Company		
Plant #:		EIQ #:92-2078	

Assumptions:

1 gallon diesel = 0.140 MMBtu, 1 gallon gasoline = 0.130 MMBtu,
1 gallon kerosene = 0.135 MMBtu, 1 gallon LPG = 0.094 MMBtu, 1 gallon residual fuel = 0.150 MMBtu
1 MMcf Natural Gas = 1050 MMBtu, 1 therm Natural Gas = 0.09997612 MMBtu

				CO2		CH4		N2O		CO2	CH4	N2O
Fuel Type	**Fuel Subtype**	**Throughput**	**Units**	**Emission Factor**		**Emission Factor**		**Emission Factor**		**Emiss (tons)**	**Emiss (tons)**	**Emis (tons)**
Butane	-		gallons	14.38	lbs/gallon	NA	NA	NA	NA	0.0000	NA	NA
Coal	Commercial		MMBtu	208.11	lbs/MMBtu	0.0245	lbs/MMBtu	0.0035	lbs/MMBtu	0.0000	0.0000	0.0000
Coal	Industrial		MMBtu	205.15	lbs/MMBtu	0.0245	lbs/MMBtu	0.0035	lbs/MMBtu	0.0000	0.0000	0.0000
Coal	Industrial Coking		MMBtu	204.58	lbs/MMBtu	0.02451	lbs/MMBtu	0.0035	lbs/MMBtu	0.0000	0.0000	0.0000
Coal	Institutional		MMBtu	208.11	lbs/MMBtu	0.0245	lbs/MMBtu	0.0035	lbs/MMBtu	0.0000	0.0000	0.0000
Coal	Utility		MMBtu	206.19	lbs/MMBtu	0.0245	lbs/MMBtu	0.0035	lbs/MMBtu	0.0000	0.0000	0.0000
Crude Oil	-		MMBtu	161.94	lbs/MMBtu					0.0000	0.0000	0.0000
Distillate Fuel (Diesel)	Commercial		gallons	159.69	lbs/MMBtu	0.00309	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
Distillate Fuel (Diesel)	Industrial		gallons	159.69	lbs/MMBtu	0.00066	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
Distillate Fuel (Diesel)	Institutional		gallons	159.69	lbs/MMBtu	0.00309	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
Gasoline	Reformulated		gallons	18.85	lbs/gallon	0.00287	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
Gasoline - Motor	Commercial		gallons	154.79	lbs/MMBtu	0.00287	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
Gasoline - Motor	Industrial		gallons	154.79	lbs/MMBtu	NA	NA	NA	NA	0.0000	NA	NA
Gasoline - Motor	Institutional		gallons	154.79	lbs/MMBtu	0.00287	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
Kerosene	Commercial		gallons	157.86	lbs/MMBtu	0.00309	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
Kerosene	Industrial		gallons	157.86	lbs/MMBtu	0.00066	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
Kerosene	Institutional		gallons	157.86	lbs/MMBtu	0.00309	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
LPG	Commercial		gallons	136	lbs/MMBtu	0.00221	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
LPG	Industrial		gallons	136	lbs/MMBtu	0.00044	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
LPG	Institutional		gallons	136	lbs/MMBtu	0.00221	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
Methanol (neat)	-		gallons	9.06	lbs/gallon					0.0000	0.0000	0.0000
Natural Gas	Commercial		MMBtu	116.38	lbs/MMBtu	0.0130	lbs/MMBtu	0.00022	lbs/MMBtu	0.0000	0.0000	0.0000
Natural Gas	Industrial	16,865.60	MMBtu	116.38	lbs/MMBtu	0.0130	lbs/MMBtu	0.00022	lbs/MMBtu	981.4093	0.1096	0.0019
Natural Gas	Institutional		MMBtu	116.38	lbs/MMBtu	0.0130	lbs/MMBtu	0.00022	lbs/MMBtu	0.0000	0.0000	0.0000
Petroleum	Commercial		MMBtu			0.0245	lbs/MMBtu	0.0015	lbs/MMBtu	0.0000	0.0000	0.0000
Petroleum	Industrial		MMBtu			0.0049	lbs/MMBtu	0.0015	lbs/MMBtu	0.0000	0.0000	0.0000
Petroleum	Institutional		MMBtu			0.0245	lbs/MMBtu	0.0015	lbs/MMBtu	0.0000	0.0000	0.0000
Propane	-		gallons	12.57	lbs/gallon	NA	NA	NA	NA	0.0000	NA	NA
Residual Fuel	Commercial		gallons	172.01	lbs/MMBtu	0.00331	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
Residual Fuel	Industrial		gallons	172.01	lbs/MMBtu	0.00066	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
Residual Fuel	Institutional		gallons	172.01	lbs/MMBtu	0.00331	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
Still Gas	-		MMBtu	140.86	lbs/MMBtu					0.0000	0.0000	0.0000
										981.4093	**0.1096**	**0.0019**

Note: This spreadsheet is formatted to be printed on legal-size paper.

Note: Unless otherwise noted, all emission factors were obtained from the California Climate Action Registry General Reporting Protocol Version 2.2 March 2007 Tables C.5 and C.6
(DNR Form 542-1571 December 18, 2007)
Updated on 3/7/08 to add natural gs conversion factors.


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HyPerformance Plasma HPR260XD


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RETRO Systems CNC Profile Cutting Machine


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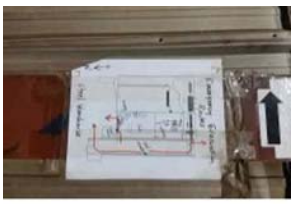
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HyPerformance Plasma HPR260XD


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Photos taken during 2015-01-21 on-site visit - EPA received CD with photos on 2015-02-06 from Jim Harral (with EPA captions added)


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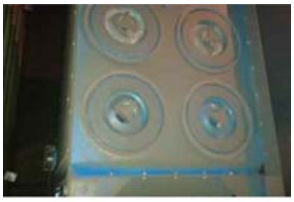
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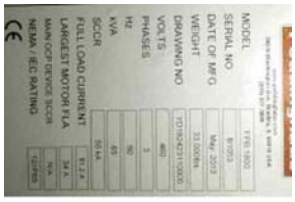

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Peddinghaus Model FPB 500


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Peddinghaus Model FPB 500


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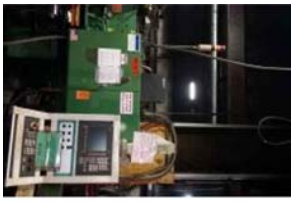
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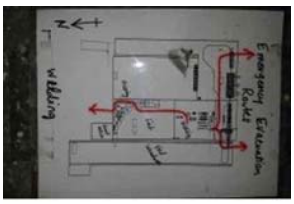
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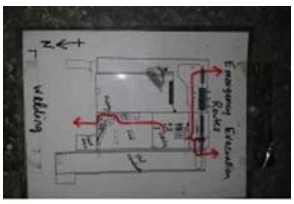
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Peterson Machine Tool Model MRW4824 Council Grove, Kansas


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Galaxy Associates GF PHOS 757CL

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Viking Model SFC 12-3


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Viking Model SFC 12-3

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Graco ProMix Easy


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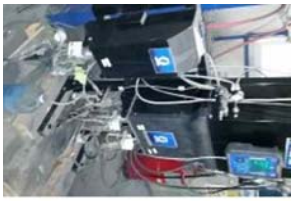
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PD2X Color Change & Cleanout Procedures

ProMix **PD2X** Electronic Proportioner

ProMix **PD2X** Electronic Proportioner


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20150121_121503.jpg


20150121_121509.jpg

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20150121_122210.jpg

ProMix **2KS** Plural Component Proportioner

ProMix **Easy** Plural Component Proportioner


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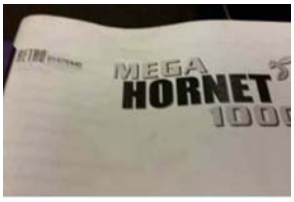

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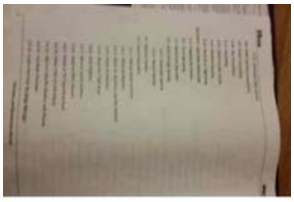
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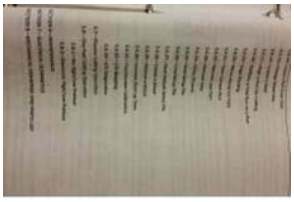
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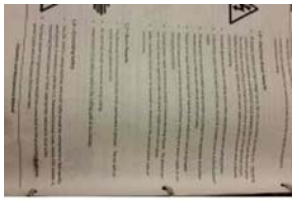
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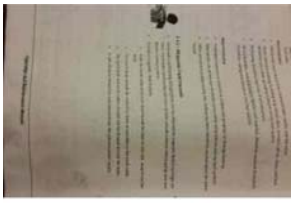
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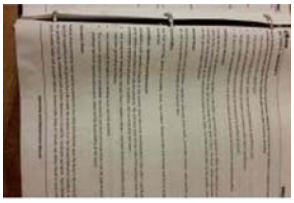
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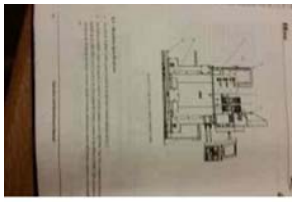
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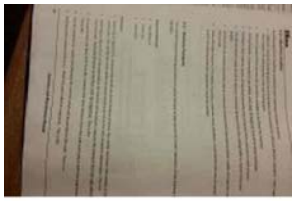
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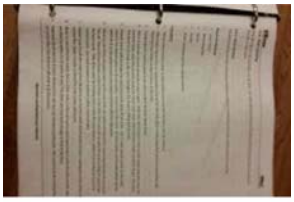
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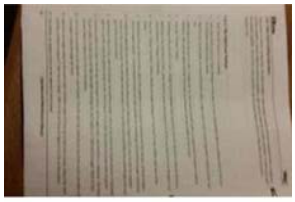
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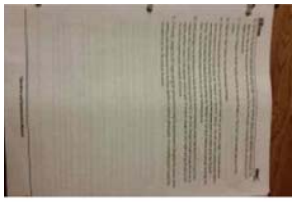
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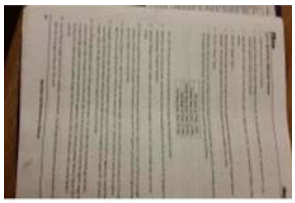
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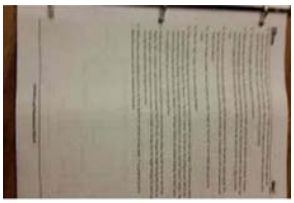
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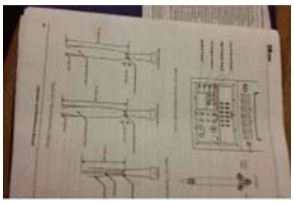
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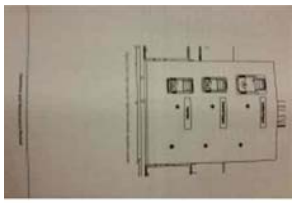
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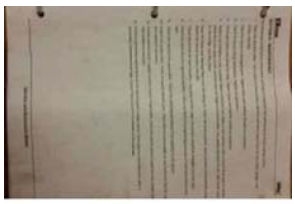
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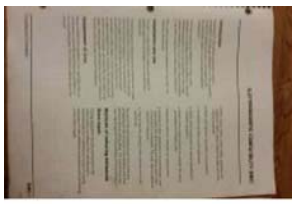
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HyPerformance Plasma HPR260XD


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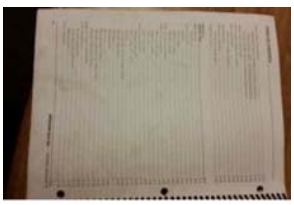
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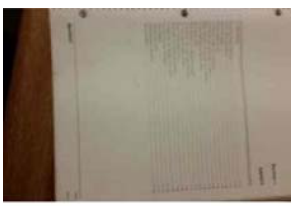
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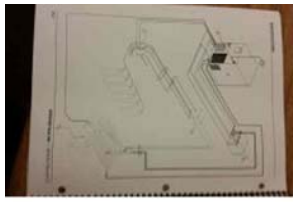
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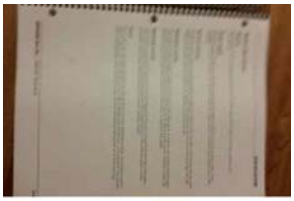
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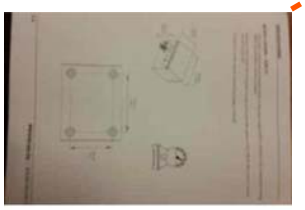
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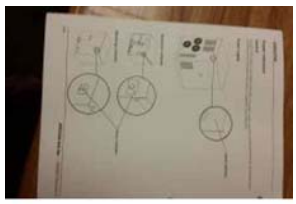
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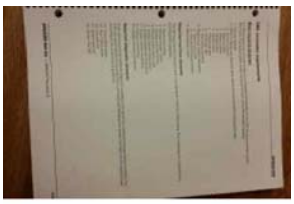
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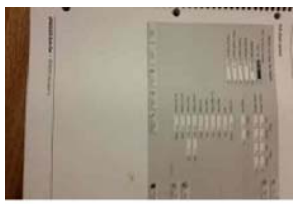
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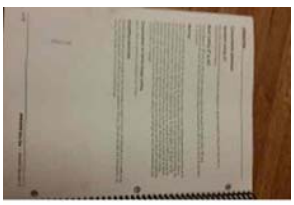
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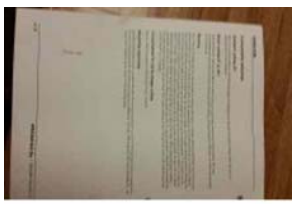
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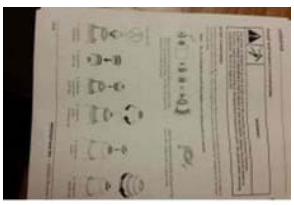
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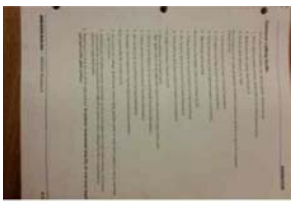
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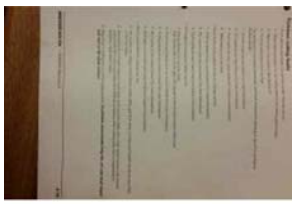
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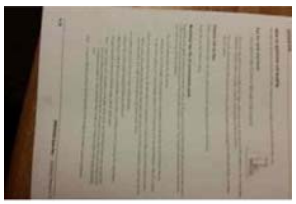
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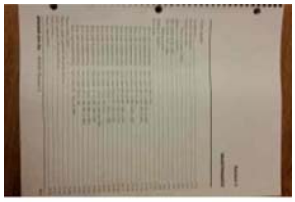
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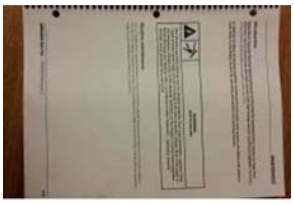
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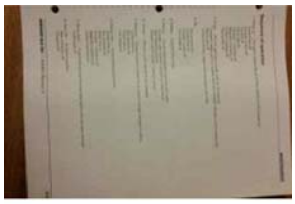
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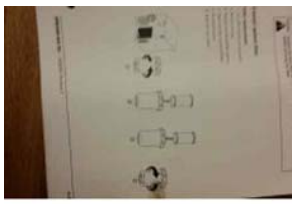
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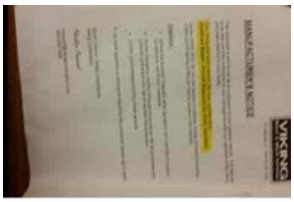
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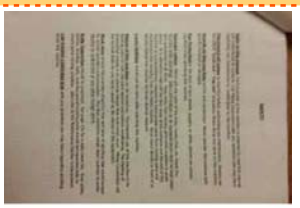
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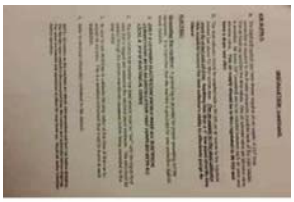
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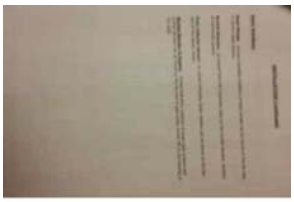
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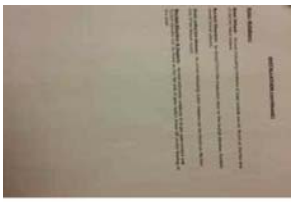
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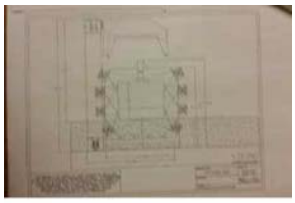
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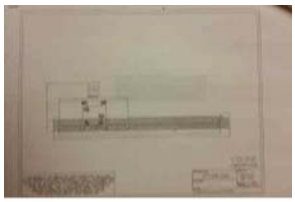
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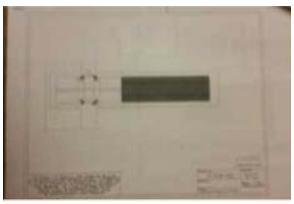
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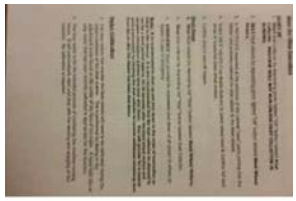
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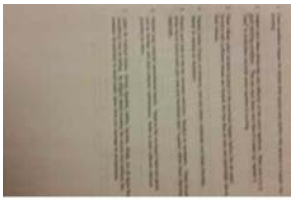
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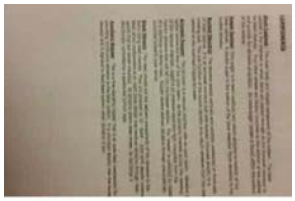
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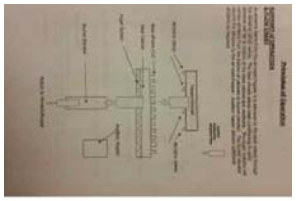
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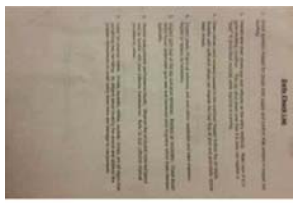
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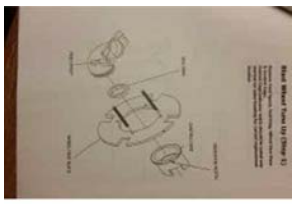
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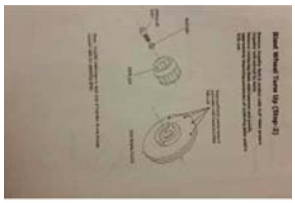
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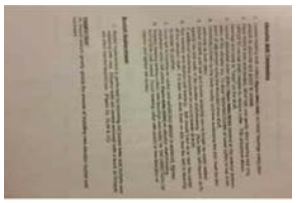
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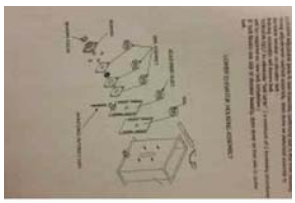
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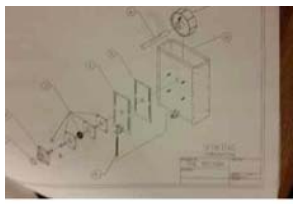
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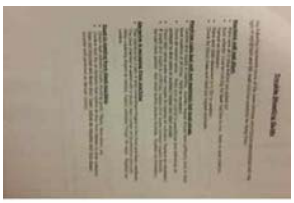
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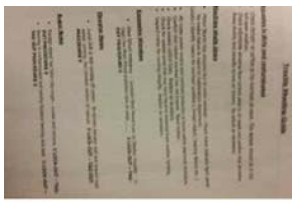
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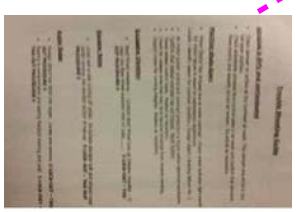
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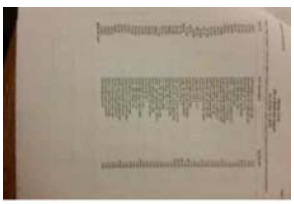
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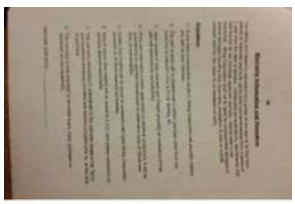
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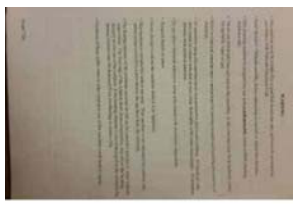
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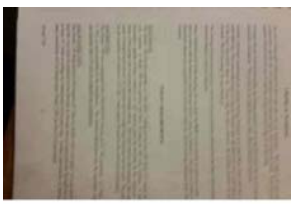
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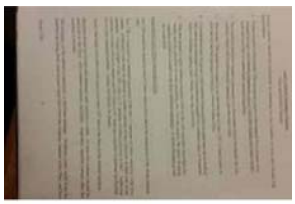
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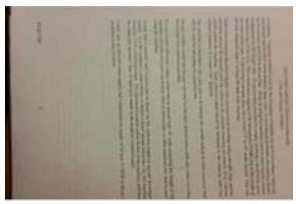
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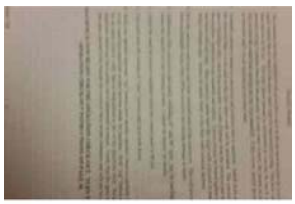
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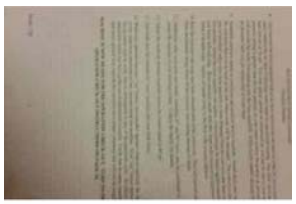
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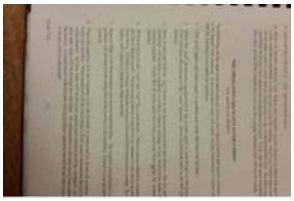
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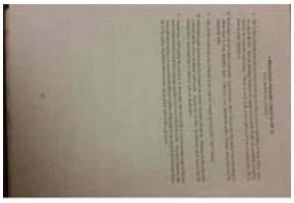
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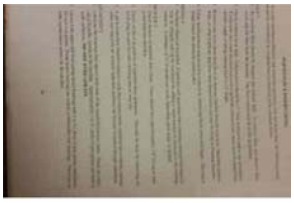
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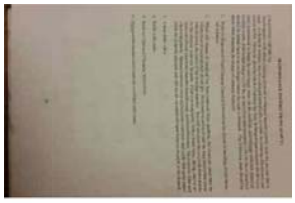
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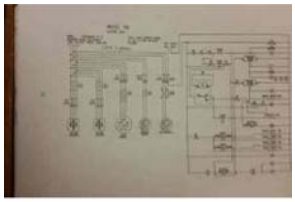
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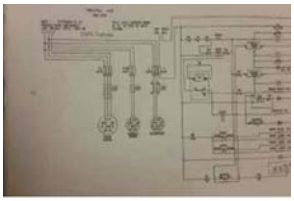
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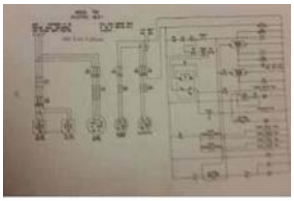
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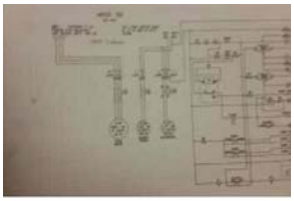
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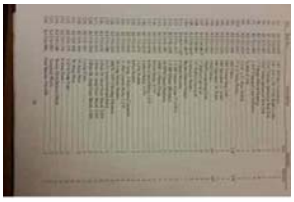
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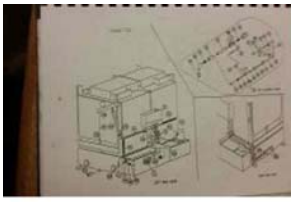
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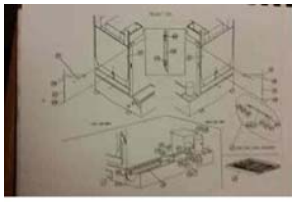
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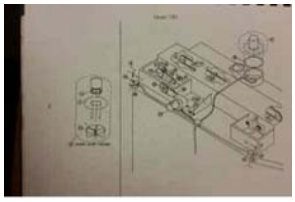
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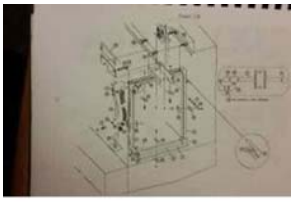
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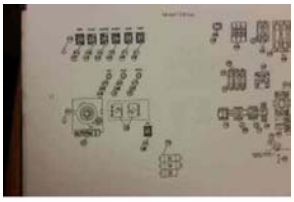
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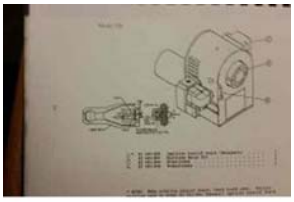
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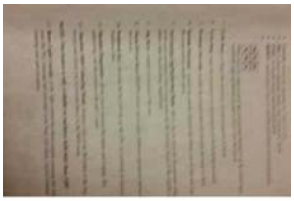
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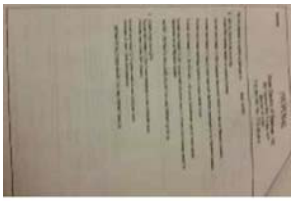
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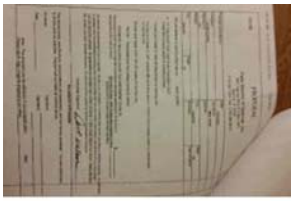
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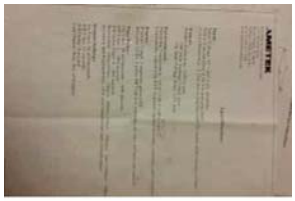
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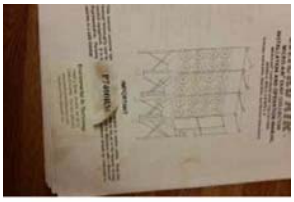
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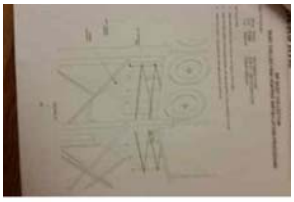
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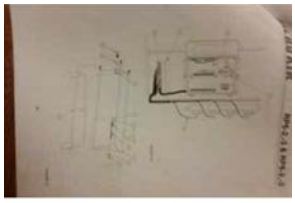
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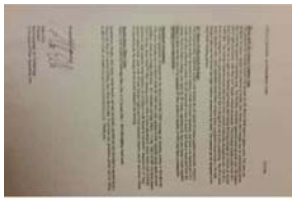
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20150121_145516.jpg

Webber, Robert

From: Webber, Robert
Sent: Thursday, January 22, 2015 1:26 PM
To: Ryan Jensen
Subject: RE: Air make up serial tag for north unit

Mr. Jensen,

Unfortunately, I am unable to see the body of the message you have forwarded from Tom Renz. Perhaps you might try providing the details for the north air make up unit in email directly to me or in a separate attachment.

Respectfully,

Bob Webber
Air Permitting & Compliance Branch
Air and Waste Management Division
U.S. Environmental Protection Agency, Region VII
11201 Renner Boulevard
Lenexa, KS 66219
Phone: 913-551-7251
webber.robert@epa.gov

From: Ryan Jensen [mailto:rjensen@thurstonmfgco.com]
Sent: Wednesday, January 21, 2015 2:10 PM
To: Webber, Robert
Subject: Air make up serial tag for north unit

Ryan Jensen
President of Operations and Strategy - Thurston Manufacturing - www.ThurstonMfgCo.com
President - Simonsen Iron Works -www.SimonsenIron.com
Operations Manager - AgriRep -www.AgriRep.com

Begin forwarded message:

> **From:** "Tom Renz" <trenz@thurstonmfgco.com>
> **To:** "Ryan Jensen" <rjensen@thurstonmfgco.com>

Sent from my iPhone

Webber, Robert

From: Webber, Robert
Sent: Monday, February 02, 2015 11:18 AM
To: 'Jim Harral'
Subject: RE: SDS's from PPG Industries

Jim Harral,

Thank you! I look forward to reviewing the requested additional information and scheduling a time to discuss it with your consultant Donn Stone.

Bob Webber
Air Permitting & Compliance Branch
Air and Waste Management Division
U.S. Environmental Protection Agency, Region VII
11201 Renner Boulevard
Lenexa, KS 66219
Phone: 913-551-7251
webber.robert@epa.gov

From: Jim Harral [mailto:jharral@thurstonmfgco.com]
Sent: Monday, February 02, 2015 8:18 AM
To: Webber, Robert
Subject: RE: SDS's from PPG Industries

The pictures are on a disc in the mail

From: Webber, Robert [mailto:Webber.Robert@epa.gov]
Sent: Friday, January 30, 2015 5:03 PM
To: Jim Harral
Subject: RE: SDS's from PPG Industries

Jim Harral,

Thank you!

Bob Webber
Air Permitting & Compliance Branch
Air and Waste Management Division
U.S. Environmental Protection Agency, Region VII
11201 Renner Boulevard
Lenexa, KS 66219
Phone: 913-551-7251
webber.robert@epa.gov

From: Jim Harral [mailto:jharral@thurstonmfgco.com]
Sent: Friday, January 30, 2015 1:34 PM
To: Webber, Robert
Subject: SDS's from PPG Industries

Jim Harral
Safety Director
Thurston Manufacturing Company
www.thurstonmfgco.com
Phone: 402-385-3041
Fax: 402-385-3043


Thurston Manufacturing Company

Blu-Jet

Circle-R Side-Dump

Webber, Robert

From: Donn Stone <dstone@ziaeec.com>
Sent: Friday, April 17, 2015 11:14 AM
To: Webber, Robert
Cc: jharral@thurstonmfgco.com; Ryan Jensen
Subject: Update

Bob:

Left you a voice mail in response to your call of Monday of this week.

I will be out of the office Sunday – Wednesday of next week. Back in mid-morning on Thursday then out again on Friday.

Contact me on Thursday if you can.

Have a good weekend.

Donn

Donn L Stone, PE
Midwest Operations Manager
Zia Engineering & Environmental Consultants, LLC
1531 Airport Road, Suite 104
Ames, Iowa 50010
515-233-5794 Office
515-689-7701 Cell

Webber, Robert

From: Donn Stone <dstone@ziaeec.com>
Sent: Thursday, May 28, 2015 9:30 AM
To: Webber, Robert
Cc: jharral@thurstonmfgco.com; Ryan Jensen
Subject: Thruston Manufacturing Calculations
Attachments: Thurston calcs may 2015 EPA copy.xlsx

Bob:

Attached are the calculations for the Thurston Manufacturing air permits.

I have provided notes detailing what the thought process was for the calcs.

Donn

Donn L Stone, PE
Midwest Operations Manager
Zia Engineering & Environmental Consultants, LLC
1531 Airport Road, Suite 104
Ames, Iowa 50010
515-233-5794 Office
515-689-7701 Cell

Emission Un	WELD 1, 2, 3 & 4 - Interior Venting Welding Stations		
Emission Poi	Interior Welding Weld 1, 2, 3, & 4		
SCC:	30905212 - Electric Arc Welding, GMAW, E308 Electrode		
Input Data:	***E308 Electrode***		
	Potential usage	5,000,000	lbs/yr
		4400	hrs/yr
	Estimated Hourly Electrode Usage	1136.4	lbs/hr
	PM 10	5.40	lb/10^3 lb
	Manganese	0.346	lb/10^3 lb
	Cobalt	0.001	lb/10^3 lb
	Nickel	0.184	lb/10^3 lb
	Chromium	0.524	lb/10^3 lb
Assumptions:	Hours of operation per day	16	hours
	Days of operation per week	5	days
	Weeks of operation per year	50	weeks
Potential Emissions:			
Electrode Usage		1136.36	lb/hr
PM-10	88.36 lb/hr / 1,000 * 5.40 lb/10^3 lb	6.14	lbs/hr
	0.25 lbs/hr * 8760 hrs / 2000 lbs	26.88	tons/yr
Manganese	88.36 lb/hr / 1,000 * 0.346 lb/10^3 lb	0.39	lbs/hr
	0.03 lbs/hr * 8760 hrs / 2000 lbs	1.72	tons/yr
Cobalt	88.36 lb/hr / 1,000 * 0.001 lb/10^3 lb	0.0011	lbs/hr
	0.000 lbs/hr * 8760 hrs / 2000 lbs	0.0050	tons/yr
Nickel	88.36 lb/hr / 1,000 * 1.84 lb/10^3 lb	0.21	lbs/hr
	0.08 lbs/hr * 8760 hrs / 2000 lbs	0.92	tons/yr
Chromium	88.36 lb/hr / 1,000 * 0.524 lb/10^3 lb	0.60	lbs/hr
	0.238 lbs/hr * 8760 hrs / 2000 lbs	2.61	tons/yr
Actual Emissions:			
Usage	Current usage 45 tpy, estimated growth to	190.00	tons/yr
		380,000	lbs/yr
PM-10	700,000 lbs/yr / 1,000 * 5.40 lb/10^3 lb/2000 lbs/ton	1.026	tons/yr
Manganese	700,000 lbs/yr / 1,000 * 0.346 lb/10^3 lb/2000 lbs/ton	0.066	tons/yr
Cobalt	700,000 lbs/yr / 1,000 * 0.001 lb/10^3 lb/2000 lbs/ton	0.0002	tons/yr
Nickel	700,000 lbs/yr / 1,000 * 0.184 lb/10^3 lb/2000 lbs/ton	0.035	tons/yr
Chromium	700,000 lbs/yr / 1,000 * 0.524 lb/10^3 lb/2000 lbs/ton	0.100	tons/yr

We assumed a usage of welding wire that Thurston Man. would not exceed at maximum prodcution

We applied the AP 42 SCC based on the type of wire electrode that was being used, and then considered a worst case emission factor for that electrode.

The potential emissions note that at 24/7 there are mininmal emissions from the welding process.

Emissions caluclated on a requested amount of electrode as a permit condtion, reduces the potential emissions.

Thurston Manufacturing Company
2014 Permitting Update
Emission Unit Parts Washer
Emission Point PW 1
SCC 10500206

Input Data:

Oven Rating	150,000	btu/hr
Oven Rating	0.2	mmbtu/hr
SCC Emission Factor, PM	0.0076	lbs/mmbtu
SCC Emission Factor, PM 10	0.0076	lbs/mmbtu
SCC Emission Factor, SOx	0.0006	lbs/mmbtu
SCC Emission Factor, NOx	0.0022	lbs/mmbtu
SCC Emission Factor, VOC	0.0055	lbs/mmbtu
SCC Emission Factor, CO	0.0840	lbs/mmbtu
SCC Emission Factor, Pb	0.0000005	lbs/mmbtu
Potential operating hours	8760	hrs/yr

Potential Emissions:

PM, PM 10 & PM 2.5	0.0076 * 0.15 mmbtu per hour consumed	0.001	lbs/hr
	0.001 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	0.005	tons/yr
PM 10	0.0076 lb/ton * 0.15 mmbtu per hour consumed	0.001	lbs/hr
	0.001 * 8760 hrs/yr / 2000 lbs/ton	0.005	tons/yr
SOx	0.0006 lb/ton * 0.15 mmbtu per hour consumed	0.000	lbs/hr
	0.000 * 8760 hrs/yr / 2000 lbs/ton	0.000	tons/yr
NOx	0.0022 lb/ton * 0.15 mmbtu per hour consumed	0.000	lbs/hr
	0.00 * 8760 hrs/yr / 2000 lbs/ton	0.001	tons/yr
VOC	0.0055 lb/ton * 0.15 mmbtu per hour consumed	0.001	lbs/hr
	0.00 * 8760 hrs/yr / 2000 lbs/ton	0.004	tons/yr
CO	0.0840 lb/ton * 0.15 mmbtu per hour consumed	0.013	lbs/hr
	0.01 * 8760 hrs/yr / 2000 lbs/ton	0.055	tons/yr
Pb	0.0000 lb/ton * 0.0006 mmbtu per hour consumed	3.00E-10	lbs/hr
	0.00 * 8760 hrs/yr / 2000 lbs/ton	1.31E-09	tons/yr

The parts washer is rated at 150,000 btu/hr.

AP 42 notes the emissions for consuming matural gas as SCC 10500206. There are several SCCs for natural gas usage. We thought this was the best match to the process.

Because the potential emissions were low, we assumed this unit runs 24/7. with that thought it should not have permit limits for usage.

Thurston Manufacturing Company
2014 Permitting Update
Emission Unit Paint Booth, EU-1
Emission Point PB 1
SCC Mass Balance

		Gallons consumed	lb/gal	pounds consumed	Emission Factor	%
		15,000	8.92	133,800		
PM			5.23	78,375	0.01	58.6%
PM10			5.23	78,375	0.01	58.6%
PM2.5			5.23	78,375	0.01	58.6%
VOC			3.70	55,425	1.00	41.4%
Ethyl Benzene	100-41-4		0.04	2,195	1.00	0.44%
MIK	108-10-1		0.05	2,694	1.00	0.54%
Toluene	1330-20-7		0.05	2,921	1.00	0.59%
Xylene	108-88-3		0.78	11,742	1.00	8.78%
n-butyl alcohol	71363		0.01	355	1.00	0.07%
Trimethyl Benzene	95636		0.01	582	1.00	0.12%
HAP			0.94	521	1.00	10.5%
Application efficiency					60.00 %	
Overspray					40.00 %	
Filter Efficiency					90.00 %	
Application rate					6.00 oz/min	
					117.56 lbs/hr	
Fan Rate					cfm	
Fan Capture Efficiency					15.00 %	

Paint emissions were determined by using a mass balance based on the MSDS for the worst case paint used at the facility.

Potential Emissions: Continual Spray, no filter.

P, PM 10, PM 2.5	117.56 lbs/hr sprayed * 40 % Overspray * 15% Caputure	7.05 lbs/hr
	7.1 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	30.90 tons/yr

Potential Emissions, with filter compensation

PM, PM 10, PM 2.5	117.56 lbs/hr spr'd * 40 % O'spr * 15% Cap * 90% fil eff	**0.71** lbs/hr
	0.7 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	**3.09** tons/yr
VOC	117.56 lbs/hr spr'd * 41 % VOC	**48.70** lbs/hr
	48.7 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	**213.30** tons/yr
Ethyl Benzene	117.56 lbs/hr spr'd * 0.4 % Ethyl Benzene	**0.01** lbs/hr
	0.0 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	**0.02** tons/yr
MIK	117.56 lbs/hr spr'd * 0.5 % MIK	**0.01** lbs/hr
	0.0 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	**0.03** tons/yr
Xylene	117.56 lbs/hr spr'd * 8.8 % Xylene	**0.10** lbs/hr
	0.1 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	**0.45** tons/yr
Toluene	117.56 lbs/hr spr'd * 0.6 % Toluene	**0.01** lbs/hr
	0.0 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	**0.03** tons/yr
n-butyl alcohol	117.56 lbs/hr spr'd * 0.1 % n-butyl alcohol	**0.001** lbs/hr
	0.0 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	**0.004** tons/yr
Trimethyl Benzene	117.56 lbs/hr spr'd * 0.1 % Trimethly Benzene	**0.001** lbs/hr
	0.0 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	**0.006** tons/yr
HAP	117.56 lbs/hr spr'd * 10.5 % HAP	**0.12** lbs/hr
	0.1 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	**0.54** tons/yr

The potential emissions are based on the maximum paint gun flow running 24/7 with the emissions being reduced by the application rate, the ability of the suction to capture the emissions, and the filter efficiency.

the potential emissions are high considering continual operation suggesting that a material limit should be taken to become a synthetic minor and not Title V

Actual Emissions, with filter compensation

PM, PM 10, PM 2.5	15,000.00 gal/yr spr'd * 40 % O'spr * 15% Cap * 90% fil eff	**802.8** lbs/yr
	802.8 lbs/yr / 2000 lbs/ton	**0.40** tons/yr
VOC	15,000.00 gal/yr spr'd * 41 % VOC	**55425.0** lbs/yr
	55,425.0 lbs/yr / 2000 lbs/ton	**27.71** tons/yr
Ethyl Benzene	15,000.00 gal/yr spr'd * 0.44 % ethyl benzene	**790.5** lbs/yr
	790.5 lbs/yr / 2000 lbs/ton	**0.40** tons/yr
MIK	15,000.00 gal/yr spr'd * 0.54 % MIK	**729.0** lbs/yr
	729.0 lbs/yr / 2000 lbs/ton	**0.36** tons/yr
Xylene	15,000.00 gal/yr spr'd * 8.78 % xylene	**11742.0** lbs/yr
	11,742.0 lbs/yr / 2000 lbs/ton	**5.87** tons/yr
Toluene	15,000.00 gal/yr spr'd * 0.59 % toluene	**790.5** lbs/yr
	790.5 lbs/yr / 2000 lbs/ton	**0.40** tons/yr
n-butyl alcohol	15,000.00 gal/yr spr'd * 0.07 % n-butyl alcohol	**96.0** lbs/yr
	96.0 lbs/yr / 2000 lbs/ton	**0.05** tons/yr
Trimethyl Benzene	15,000.00 gal/yr spr'd * 0.12 % trimethyl benzene	**157.5** lbs/yr
	157.5 lbs/yr / 2000 lbs/ton	**0.08** tons/yr
HAP	15,000.00 gal/yr spr'd * 10.54 % HAP	**14109.0** lbs/yr
	14,109.0 lbs/yr / 2000 lbs/ton	**7.05** tons/yr

Based on a material limit of 15,000 gallons of paint per year the emissions, particularly VOC and HAP are lower than 50% of the Title V thresholds, other emissions are somewhat insignificant

Thurston Manufacturing Company
2014 Permitting Update
Emission Unit Shot Blast
Emission Point SB 1
SCC 30900204

Input Data:

	Shot consumption rating	1,000	lbs/hr
	SCC Emission Factor, PM	0.69	lbs/1000 lbs
	SCC Emission Factor, PM 10	0.69	lbs/1000 lbs
	SCC Emission Factor, PM 2.5	0.69	lbs/1000 lbs
	Actual shot consumed	2,500,000	lbs/yr
		2,500	hrs of operation

Potential Emissions: Emission Fcator Assumes filtering

PM 2.5	0.69 lbs/1000 lbs shot * 1000 pounds per hour consumed	0.69	lbs/hr
	0.69 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	3.02	tons/yr
PM 10	0.69 * 1000 pounds per hour consumed / 1,000 lbs	0.69	lbs/hr
	0.6900 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	3.02	tons/yr
PM	0.69 * 1000 pounds per hour consumed / 1,000 lbs	0.69	lbs/hr
	0.6900 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	3.02	tons/yr

Actual Emissions:

PM 2.5	0.69 * 2500000 pounds consumed / 1000	1725.00	lbs/yr
	1,725.0 lbs/yr * / 2000 lbs/ton	0.86	tons/yr
PM 10	0.69 * 2500000 pounds consumed / 1000	1725.00	lbs/yr
	1,725.0 lbs/yr * / 2000 lbs/ton	0.86	tons/yr
PM	0.69 * 2500000 pounds consumed / 1000	1725.00	lbs/yr
	1,725.0 lbs/yr * / 2000 lbs/ton	0.86	tons/yr

AP provides this SCC for abrasive blasting controlled by a filter, such as what Thruston uses.

the potential emissions based on the 1000 pound per hour consumption rate of shot note total emissions that are failry minor.

Based on the amount of shot currently used by Thurston, we selected a shot usage that would provide for growth while allowing for emissions that were insignificant.

Thurston Manufacturing Company
2014 Permitting Update

Emission Unit	Fabriation Machines			These units cut steel with a plasma torch.
Emission Point	FM 1, FM 2			
SCC:	Engineering Calculations			There is no SCC for plasma cutting
Input Data:	Bag House Efficency	90%	%	We have developed an emission factor that considers the amount/volume of steel in the cut area and then assumes a percentage of that steel becomes an emission. The emission is further reduced by the fabric filter.
	Metal thickness	0.5	inches	
	Width of cut	0.188	inches	
	Volume of cut per inch	0.094	ci	
	Weight of Steel	250	lbs/cf	
		0.145	lbs/ci	
	Weight of steel per inch of cut	0.0136	lbs/inch	
	Percent emitted	5	%	
	Uncontrolled emissions	6.78E-04	lbs/inch	
	Controlled emissions	6.78E-05	lbs/inch	
	Maximum inches per time	2,000	inches/hr	
	Actual inches per time	1,000	inches/hr	
	Actual operating time	1,000	hrs/yr	
Potential Emissions: without filter				
PM 10	0.00068 lbs/inch of cut * 2,000 inches/hr	1.356	lbs/hr	the potential emissions are somewhat minor without considerig a fillter
	1.356 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	5.941	tons/yr	
Potential Emissions: with filter				
PM 10	0.000068 lbs/inch of cut * 2,000 inches/hr	0.136	lbs/hr	with the filter the potential emissions are redcued to insignificant such that permit limits are not necessary as the machine cannot operate at a higher capacity
	0.136 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	0.594	tons/yr	
Actual Emissions:				
	0.144676 lbs/inch of cut * 1,000 inches/hr	0.068	lbs/hr	actual emissions based on the ability of the operator to feed material to the unit, that is the machine cannot operate continuously as it needs to be "feed" material and be reset with each piece to be cut.
PM 10	0.068 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	0.297	tons/yr	

Thurston Manufacturing Company
2014 Permitting Update
Emission Unit Make Up Air Unit 1
Emission Point MUA 1
SCC 10500206

Input Data:

Oven Rating	4,860,000	btu/hr
Oven Rating	4.9	mmbtu/hr
SCC Emission Factor, PM	0.0076	lbs/mmbtu
SCC Emission Factor, PM 10	0.0076	lbs/mmbtu
SCC Emission Factor, SOx	0.0006	lbs/mmbtu
SCC Emission Factor, NOx	0.0022	lbs/mmbtu
SCC Emission Factor, VOC	0.0055	lbs/mmbtu
SCC Emission Factor, CO	0.0840	lbs/mmbtu
SCC Emission Factor, Pb	0.0000005	lbs/mmbtu
Potential operating hours	8760	hrs/yr

Potential Emissions:

PM, PM 10 & PM 2.5	0.0076 * 4.86 mmbtu per hour consumed	0.037	lbs/hr
	0.037 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	0.162	tons/yr
PM 10	0.0076 lb/ton * 4.86 mmbtu per hour consumed	0.037	lbs/hr
	0.037 * 8760 hrs/yr / 2000 lbs/ton	0.162	tons/yr
SOx	0.0006 lb/ton * 4.86 mmbtu per hour consumed	0.003	lbs/hr
	0.003 * 8760 hrs/yr / 2000 lbs/ton	0.013	tons/yr
NOx	0.0022 lb/ton * 4.86 mmbtu per hour consumed	0.011	lbs/hr
	0.01 * 8760 hrs/yr / 2000 lbs/ton	0.047	tons/yr
VOC	0.0055 lb/ton * 4.86 mmbtu per hour consumed	0.027	lbs/hr
	0.03 * 8760 hrs/yr / 2000 lbs/ton	0.117	tons/yr
CO	0.0840 lb/ton * 4.86 mmbtu per hour consumed	0.408	lbs/hr
	0.41 * 8760 hrs/yr / 2000 lbs/ton	1.788	tons/yr
Pb	0.0000 lb/ton * 0.0006 mmbtu per hour consumed	3.00E-10	lbs/hr
	0.00 * 8760 hrs/yr / 2000 lbs/ton	1.31E-09	tons/yr

The make up air unit is rated at 4,860,000 btu/hr.

AP 42 notes the emissions for consuming matural gas as SCC 10500206. There are several SCCs for natural gas usage. We thought this was the best match to the process.

Because the potential emissions were low, we assumed this unit runs 24/7. with that thought it should not have permit limits for usage.

Thurston Manufacturing Company
2014 Permitting Update
Emission Unit Make Up Air Unit 2
Emission Point MUA 2
SCC 10500206

Input Data:

Oven Rating	1,944,000	btu/hr
Oven Rating	1.9	mmbtu/hr
SCC Emission Factor, PM	0.0076	lbs/mmbtu
SCC Emission Factor, PM 10	0.0076	lbs/mmbtu
SCC Emission Factor, SOx	0.0006	lbs/mmbtu
SCC Emission Factor, NOx	0.0022	lbs/mmbtu
SCC Emission Factor, VOC	0.0055	lbs/mmbtu
SCC Emission Factor, CO	0.0840	lbs/mmbtu
SCC Emission Factor, Pb	0.0000005	lbs/mmbtu
Potential operating hours	8760	hrs/yr

Potential Emissions:

PM, PM 10 & PM 2.5	0.0076 * 1.944 mmbtu per hour consumed	0.015	lbs/hr
	0.015 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	0.065	tons/yr
PM 10	0.0076 lb/ton * 1.944 mmbtu per hour consumed	0.015	lbs/hr
	0.015 * 8760 hrs/yr / 2000 lbs/ton	0.065	tons/yr
SOx	0.0006 lb/ton * 1.944 mmbtu per hour consumed	0.001	lbs/hr
	0.001 * 8760 hrs/yr / 2000 lbs/ton	0.005	tons/yr
NOx	0.0022 lb/ton * 1.944 mmbtu per hour consumed	0.004	lbs/hr
	0.00 * 8760 hrs/yr / 2000 lbs/ton	0.019	tons/yr
VOC	0.0055 lb/ton * 1.944 mmbtu per hour consumed	0.011	lbs/hr
	0.01 * 8760 hrs/yr / 2000 lbs/ton	0.047	tons/yr
CO	0.0840 lb/ton * 1.944 mmbtu per hour consumed	0.163	lbs/hr
	0.16 * 8760 hrs/yr / 2000 lbs/ton	0.715	tons/yr
Pb	0.0000 lb/ton * 0.0006 mmbtu per hour consumed	3.00E-10	lbs/hr
	0.00 * 8760 hrs/yr / 2000 lbs/ton	1.31E-09	tons/yr

The make up air unit is rated at 1,944,000 btu/hr.

AP 42 notes the emissions for consuming matural gas as SCC 10500206. There are several SCCs for natural gas usage. We thought this was the best match to the process.

Because the potential emissions were low, we assumed this unit runs 24/7. with that thought it should not have permit limits for usage.

Thurston Manufacturing Company
2014 Permitting Update

Emission Unit	Plasma Table 1			
Emission Point	PB 1			
SCC:	Engineering Calculations			There is no SCC for plasma cutting
Input Data:	Bag House Efficency	90%	%	We have developed an emission factor that considers the amount/volume of steel in the cut area and then assumes a percentage of that steel becomes an emission. The emission is further reduced by the fabric filter.
	Metal thickness	0.5	inches	
	Width of cut	0.188	inches	
	Volume of cut per inch	0.094	ci	
	Weight of Steel	250	lbs/cf	
		0.145	lbs/ci	
	Weight of steel per inch of cut	0.0136	lbs/inch	
	Percent emitted	5	%	
	Uncontrolled emissions	6.78E-04	lbs/inch	
	Controlled emissions	6.78E-05	lbs/inch	
	Maximum inches per time	2,000	inches/hr	
	Actual inches per time	1,000	inches/hr	
	Actual operating time	1,000	hrs/yr	
Potential Emissions: without filter				
PM 10	0.00068 lbs/inch of cut * 2,000 inches/hr	1.356	lbs/hr	the potential emissions are somewhat minor without considerig a fillter
	1.356 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	5.941	tons/yr	
Potential Emissions: with filter				
PM 10	0.000068 lbs/inch of cut * 2,000 inches/hr	0.136	lbs/hr	with the filter the potential emissions are redcued to insignificant such that permit limits are not necessary as the machine cannot operate at a higher capacity
	0.136 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	0.594	tons/yr	
Actual Emissions:				
	0.144676 lbs/inch of cut * 1,000 inches/hr	0.068	lbs/hr	actual emissions based on the ability of the operator to feed material to the unit, that is the machine cannot operate continuously as it needs to be "feed" material and be reset with each piece to be cut.
PM 10	0.068 lbs/hr * 8760 hrs/yr / 2000 lbs/ton	0.297	tons/yr	

Thurston Manufacturing Company

Fug Natural Gas Consumption, heat

	Therms	Cubic Feet/therm		emissions lbs		emissions tons
Natural Gas	75420	1000	75.42			
PM				5.7	429.89	0.215
PM10				8.7	656.15	0.328
PM2.5				8.7	656.15	0.328
VOC				5.3	399.73	0.200
Sox				0.6	45.252	0.023
Nox				100	7542	3.771
Lead				0.0005	0.04	0.000
CO				20	1508.40	0.754
ammonia				0.49	36.96	0.018

Totals	
PM	0.215
PM10	0.328
PM2.5	0.328
VOC	0.200
Sox	0.023
Nox	3.771
Lead	0.000

Instructions: Please fill in the green cells with your facility information and the yellow cells with your 2011 throughputs. Then print out the spreadsheet and attach to your paper inventory, or attach electronically to Form 1.0 of your SPARS inventory submittal.

Emission Year:	**2012**
Facility Name:	Thurston Manufacturing Company
Plant #:	EIQ #:92-2078

Assumptions:

1 gallon diesel = 0.140 MMBtu, 1 gallon gasoline = 0.130 MMBtu,
1 gallon kerosene = 0.135 MMBtu, 1 gallon LPG = 0.094 MMBtu, 1 gallon residual fuel = 0.150 MMBtu
1 MMcf Natural Gas = 1050 MMBtu, 1 therm Natural Gas = 0.09997612 MMBtu

				CO2		CH4		N2O		CO2	CH4	N2O
Fuel Type	**Fuel Subtype**	**Throughput**	**Units**	**Emission Factor**		**Emission Factor**		**Emission Factor**		**Emiss (tons)**	**Emiss (tons)**	**Emis (tons)**
Butane	-		gallons	14.38	lbs/gallon	NA	NA	NA	NA	0.0000	NA	NA
Coal	Commercial		MMBtu	208.11	lbs/MMBtu	0.0245	lbs/MMBtu	0.0035	lbs/MMBtu	0.0000	0.0000	0.0000
Coal	Industrial		MMBtu	205.15	lbs/MMBtu	0.0245	lbs/MMBtu	0.0035	lbs/MMBtu	0.0000	0.0000	0.0000
Coal	Industrial Coking		MMBtu	204.58	lbs/MMBtu	0.02451	lbs/MMBtu	0.0035	lbs/MMBtu	0.0000	0.0000	0.0000
Coal	Institutional		MMBtu	208.11	lbs/MMBtu	0.0245	lbs/MMBtu	0.0035	lbs/MMBtu	0.0000	0.0000	0.0000
Coal	Utility		MMBtu	206.19	lbs/MMBtu	0.0245	lbs/MMBtu	0.0035	lbs/MMBtu	0.0000	0.0000	0.0000
Crude Oil	-		MMBtu	161.94	lbs/MMBtu					0.0000	0.0000	0.0000
Distillate Fuel (Diesel)	Commercial		gallons	159.69	lbs/MMBtu	0.00309	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
Distillate Fuel (Diesel)	Industrial		gallons	159.69	lbs/MMBtu	0.00066	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
Distillate Fuel (Diesel)	Institutional		gallons	159.69	lbs/MMBtu	0.00309	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
Gasoline	Reformulated		gallons	18.85	lbs/gallon	0.00287	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
Gasoline - Motor	Commercial		gallons	154.79	lbs/MMBtu	0.00287	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
Gasoline - Motor	Industrial		gallons	154.79	lbs/MMBtu	NA	NA	NA	NA	0.0000	NA	NA
Gasoline - Motor	Institutional		gallons	154.79	lbs/MMBtu	0.00287	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
Kerosene	Commercial		gallons	157.86	lbs/MMBtu	0.00309	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
Kerosene	Industrial		gallons	157.86	lbs/MMBtu	0.00066	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
Kerosene	Institutional		gallons	157.86	lbs/MMBtu	0.00309	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
LPG	Commercial		gallons	136	lbs/MMBtu	0.00221	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
LPG	Industrial		gallons	136	lbs/MMBtu	0.00044	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
LPG	Institutional		gallons	136	lbs/MMBtu	0.00221	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
Methanol (neat)	-		gallons	9.06	lbs/gallon					0.0000	0.0000	0.0000
Natural Gas	Commercial		MMBtu	116.38	lbs/MMBtu	0.0130	lbs/MMBtu	0.00022	lbs/MMBtu	0.0000	0.0000	0.0000
Natural Gas	Industrial	16,865.60	MMBtu	116.38	lbs/MMBtu	0.0130	lbs/MMBtu	0.00022	lbs/MMBtu	981.4093	0.1096	0.0019
Natural Gas	Institutional		MMBtu	116.38	lbs/MMBtu	0.0130	lbs/MMBtu	0.00022	lbs/MMBtu	0.0000	0.0000	0.0000
Petroleum	Commercial		MMBtu			0.0245	lbs/MMBtu	0.0015	lbs/MMBtu	0.0000	0.0000	0.0000
Petroleum	Industrial		MMBtu			0.0049	lbs/MMBtu	0.0015	lbs/MMBtu	0.0000	0.0000	0.0000
Petroleum	Institutional		MMBtu			0.0245	lbs/MMBtu	0.0015	lbs/MMBtu	0.0000	0.0000	0.0000
Propane	-		gallons	12.57	lbs/gallon	NA	NA	NA	NA	0.0000	NA	NA
Residual Fuel	Commercial		gallons	172.01	lbs/MMBtu	0.00331	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
Residual Fuel	Industrial		gallons	172.01	lbs/MMBtu	0.00066	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
Residual Fuel	Institutional		gallons	172.01	lbs/MMBtu	0.00331	lbs/gallon	0.00022	lbs/gallon	0.0000	0.0000	0.0000
Still Gas	-		MMBtu	140.86	lbs/MMBtu					0.0000	0.0000	0.0000
										981.4093	**0.1096**	**0.0019**

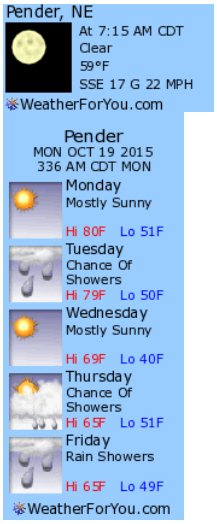
Green house gas emissions basesd on amount of natural gas comsumed at the facility. fro calendar year 2012

Note: This spreadsheet is formatted to be printed on legal-size paper.

Note: Unless otherwise noted, all emission factors were obtained from the California Climate Action Registry General Reporting Protocol Version 2.2 March 2007 Tables C.5 and C.6

(DNR Form 542-1571 December 18, 2007)

Updated on 3/7/08 to add natural gs conversion factors.



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October 19, 2015

Thurston Manufacturing announces reduction in staff size due to agriculture market conditions

23 percent of staff out of jobs, 86 remain

Thurston Manufacturing Company in Thurston announced Tuesday that it has found it necessary to reduce its employee base by approximately 23 percent in its local facility.

The move was made in order to “right size” for the current agricultural market conditions. The remaining 86 employees will continue to design, manufacture and market the BLU-JET product line consisting of fertilizer injection application equipment and conservation tillage products, which are currently experiencing a lessening in sales.

According to Thurston Manufacturing CEO Layton Jensen, the company had enjoyed a rapid expansion in the agriculture sector over the past six years, building its staff to record high numbers.

In 2014, corn prices tumbled to half the value of their high water mark of more than $7 per bushel, forcing growers to re-evaluate their previous aggressive equipment buying habits.

“Unfortunately, at this time, it is unknown how long it will be before employees may be recalled back to their jobs,” Jensen said. “These circumstances are very difficult for everyone to endure and I, along with my sons, Nick and Ryan, would like to express our sincere thanks to each one for the dedication shown during their years of employment with us”.

Thurston Manufacturing also produces Circle R Side Dump trailers, performs contract manufacturing for various clients and sells other brands of agriculture related equipment.

The company has a second facility in Spencer, Iowa, that performs contract manufacturing services.

The Iowa facility is unaffected by the Thurston facility layoff.

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