TECHNICAL SUPPORT DOCUMENT

For

DRAFT/PROPOSED AIR EMISSION PERMIT NO. 04900040-008

This Technical Support Document (TSD) is intended for all parties interested in the draft/proposed permit and to meet the requirements that have been set forth by the federal and state regulations (40 CFR § 70.7(a)(5) and Minn. R. 7007.0850, subp. 1). The purpose of this document is to provide the legal and factual justification for each applicable requirement or policy decision considered in the preliminary determination to issue the draft/proposed permit.

1. General Information

1.1 Applicant and Stationary Source Location:

Table 1. Applicant and Source Address

Applicant/Address	**Stationary Source/Address** (SIC Code: 2511)
ESOP - Foldcraft Co 615 Centennial Dr Kenyon, MN 55946 Goodhue County	Foldcraft Co – Kenyon 615 Centennial Dr Kenyon, MN 55946 Goodhue County
Contact: Doug David Phone: 507-789-8210 Email: ddoug@foldcraft.com	Contact: Doug David Phone: 507-789-8210 Email: ddoug@foldcraft.com

1.2 Facility Description

The facility manufactures restaurant seating and other furniture, including booths, tables, chairs, condiment tables, and trash receptacles. Emission sources include woodworking equipment, coating operations, gluing, lamination, polyurethane fabrication, boilers, ovens, and air makeup units. All spray booths are controlled with panel filters. Woodworking equipment and the primary boiler are controlled by optional baghouses.

The permit is a Part 70 Reissuance. The facility has taken limits to avoid major source classification for New Source Review (40 CFR § 52.21) and for the National Emissions Standards for Hazardous Air Pollutants (NESHAPs, 40 CFR pt. 63). The facility is a major source under the federal operating permits program (40 CFR pt. 70). The permit contains emission, operational, and control requirements that limit the emissions of volatile organic compounds (VOCs), hazardous air pollutants (HAPs), and particulate matter (PM), particulate matter less than 10 microns (PM_{10}), and particulate matter less than 2.5 microns ($PM_{2.5}$).

1.3 Description of any Changes Allowed with this Permit Issuance

No changes are authorized by this permit.

1.4 Description of All Amendments Issued Since the Issuance of the Last Total Facility Permit

Permit Number and Issuance Date	Action Authorized
04900040-007 August 18, 2010	Major amendment action authorizing removal of a baghouse (CE027) from the permit and the retirement of multiple emission units, stacks, and associated control equipment.
04900040-006 March 13, 2007	Part 70 Reissuance

1.5 Facility Emissions:

Table 2. Total Facility Potential to Emit Summary

	PM tpy	PM_{10} tpy	$PM_{2.5}$ tpy	SO_2 tpy	NO_x tpy	CO tpy	CO_2e tpy	VOC tpy	Single HAP tpy	All HAPs tpy
Total Facility Limited Potential Emissions	172	172	172	0.85	23.3	25.6	14,020	235	9.0	24.0
Total Facility Actual Emissions (2011)	62.4	29.4	28.0	0.07	1.15	2.02	*	17.3	*	

*Not reported in MN emission inventory.

Table 3. Facility Classification

Classification	Major/Affected Source	Synthetic Minor/Area Source	Minor/Area Source
PSD		X	
Part 70 Permit Program	X		
Part 63 NESHAP			X

1.6 Changes to Permit

No significant changes have been made to the requirements in the existing permit. The following types of changes have been made:

- Updated to reflect current MPCA templates and standard citation formatting;
- Emissions calculations have been updated to reflect the PTE of the units given their current operation based on new data and the removal of equipment;

- Added PM2.5 limit to SV008, EU045, GP002, and GP005;
- The applicable requirements of 40 CFR pt. 63 subp. JJJJJJ have been added for the wood boiler (EU045);
- All associated emission units with SV027 have been removed and the associated stack and control equipment (CE015) are currently inactive as stated by the Permittee;
- Language was added to the wood boiler (EU045) control equipment CE027 to allow the Permittee to take credit for the operation of the baghouse for purposes of reporting actual emissions for emission inventory;
- Added missing calibration requirement to GP005, the CAM panel filters;
- Fuel type and recordkeeping requirements were added to the boiler (EU 045);
- CE 027 was changed to "active" in the facility description in Delta as it is still installed and used at the discretion of the Permittee.

2. Regulatory and/or Statutory Basis

New Source Review

The facility has previously accepted federally enforceable limits such that the facility is not considered a major source under New Source Review regulations. The existing limits and minor source status are maintained in this reissuance.

Part 70 Permit Program

The facility is a major source under the Part 70 permit program.

New Source Performance Standards (NSPS)

The Permittee has stated that no New Source Performance Standards are applicable to the operations at this facility.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

The facility has accepted limits on HAP emissions such that it is an area source under 40 CFR pt. 63. Thus, no major source NESHAPs apply. In addition, the facility is subject to the area source NESHAP for boilers (40 CFR pt. 63 subp. JJJJJJ).

Compliance Assurance Monitoring (CAM)

Table 4 below lists the sources which are subject to CAM, whether the source is a large pollutant specific emission unit (PSEU), and the monitoring for the applicable pollutants.

Table 4. CAM Summary

Unit	Control	CAM Applicability	Pollutant	Monitoring
EU084	CE019 Mat or Panel Filter	Other	PM/PM_{10}	Daily monitoring of pressure drop and visual

Unit	Control	CAM Applicability	Pollutant	Monitoring
				inspection
EU085	CE020 Mat or Panel Filter	Other	PM/PM_{10}	Daily monitoring of pressure drop and visual inspection

See Attachment 3 to this document for the CAM Plan submitted by the applicant.

The facility has two spray booths that are subject to CAM (40 CFR pt. 64). Both have potential post-control emissions less than 100 tpy; therefore, the units are considered other (vs. large) pollution-specific emissions units (PSEUs). See GP 005 for the CAM requirements. All other spray booths and woodworking operations have potential emission of less than 100 tpy, and are therefore not subject to CAM.

Environmental Review & AERA

Environmental review and AERA are not applicable as no construction is being authorized with this permit.

Minnesota State Rules

Portions of the facility are subject to the following Minnesota Standards of Performance:

- Minn. R. 7011.0510 Standards of Performance for Existing Indirect Heating Equipment
- Minn. R. 7011.0515 Standards of Performance for New Indirect Heating Equipment
- Minn. R. 7011.0610 Standards of Performance for Fossil-Fuel-Burning Direct Heating Equipment
- Minn. R. 7011.0710 Standards of Performance for Pre-1969 Industrial Process Equipment
- Minn. R. 7011.0715 Standards of Performance for Post-1969 Industrial Process Equipment

Table 5. Regulatory Overview of Facility

Level*	Applicable Regulations	Comments:
GP001	40 CFR § 52.21	Prevention of Significant Deterioration (PSD). Limits taken to avoid major source and modification classification under PSD for all non-combustion emissions of VOC (other than insignificant activities). The permit requires all spray booths to be controlled by GP 002 (wall filters). The permit sets a limit on emissions of VOC from all non-combustion processes. It is a rolling limit due to substantial and unpredictable variations in operation. No credit is given for materials recovered as waste and shipped offsite. The annual $PM/PM_{10}/PM_{2.5}$ emissions are inherently

		limited by the VOC limit.
	40 CFR § 63.2	National Emissions Standards for Hazardous Air Pollutants (NESHAPs). Limits taken to avoid major source classification under the NESHAPs for both individual and total HAPs. These limits involve the same recordkeeping and calculations as the VOC limits.
	Minn. R. 7011.0710 and 7011.0715	Standards of Performance for New and Existing Industrial Process Equipment
	Minn. R. 7005.0100, subp. 35a	Potential to Emit. The material contents that were used to determine the short-term PTE from the units in GP 001 are listed in Appendix II of the permit. If the Permittee wishes to switch to a material that is not consistent with the listed contents (i.e., higher for any given pollutant), then the Permittee must determine if an amendment or notification is needed based on the short-term emissions increase. This is true even if the list is not included in the permit, but it has been included to memorialize the assumptions from the various permit applications.
GP 002	40 CFR § 52.21	PSD. Control efficiency and other operating parameter requirements to limit $PM/PM_{10}/PM_{2.5}$ PTE to avoid major source classification under PSD and to meet the Minnesota Performance Standard (Minn. R. 7011.0715). All booths are considered hoods. Control requirements are written so that they apply to all non-CAM filters (new, modified, replaced, etc.).
GP 003	Minn. R. 7011.0510 and 7011.0515	Standards of Performance for Existing Indirect Heating Equipment. Fuel limited to natural gas only. The direct heating equipment rule might seem to apply to the air make up units (AMUs), since the combustion gases are vented directly into the building. However, none of the AMUs are used for "processing a material", the other criteria necessary to be direct heating equipment (e.g., process oven or dryer). Since the intent of the indirect heating rule is to limit emissions from combustion, this rule applies. The permit contains limits based on: • which units were constructed after 1977 (only EU 087); • located inside the Minneapolis/St. Paul Air Quality Control Region; and • the units and the site have $\leq$ 250 MMBtu/hr capacity.

GP004	Minn. R. 7011.0610	Standards of Performance for Direct Heating Equipment. Ovens burn natural gas only.
GP 005	40 CFR § 52.21	PSD. Control efficiency and other operating parameter requirements to limit PM/PM_{10}/$PM_{2.5}$ PTE to avoid major source classification under PSD and to meet the Minnesota Performance Standard (Minn. R. 7011.0715). Both booths are considered hoods. Control requirements are written so that they apply to all CAM filters (new, modified, replaced, etc.).
	40 CFR pt. 64	Compliance Assurance Monitoring (CAM). The panel filters are used to comply with the IPER particulate limit and are used to control emission units with pre-control potential emissions of PM greater than 100 tpy, so CAM applies.
SV008	Minn. R. 7011.0710 and 7011.0715	Standards of Performance for New and Existing Industrial Process Equipment
	Minn. Stat. § 116.07, subd. 4a; Equipment used under Minn. R. 7019.2030(G)	Control efficiency and other operating parameter requirements to reduce PM/PM_{10}/$PM_{2.5}$ emissions for emissions inventory. The control equipment is not needed to limit their PTE or to comply with any applicable requirements. All units vented to these stacks are permitted at their uncontrolled potential to emit.
EU 045	Minn. R. 7011.0510	Standards of Performance for Indirect Heating Equipment (existing and new). Fuel limited to natural gas only. The permit contains limits based on: • boiler constructed before 1977; • located inside the Minneapolis/St. Paul Air Quality Control Region; and • the boiler and the site have ≤ 250 MMBtu/hr capacity.
	Minn. Stat. § 116.07, subd. 4a; Equipment used under Minn. R. 7019.2030(G)	Control efficiency and other operating parameter requirements to reduce PM/PM_{10}/$PM_{2.5}$ emissions for emissions inventory. The control equipment is not needed to limit their PTE or to comply with any applicable requirements. The boiler is permitted at its uncontrolled potential to emit.
	40 CFR pt. 63, subp. JJJJJJ	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources The permit contains limits based on: • fuel limited to wood with natural gas as a back-up; • boiler constructed before June 4, 2010; • boiler has a capacity of < 10 MMBtu/hr capacity.

3. Technical Information

3.1 Calculations of Potential to Emit

Attachment 1 to this TSD contains a summary of the PTE of the Facility as well as detailed spreadsheets and supporting information prepared by the MPCA and the Permittee.

GP 001

GP 001 consists of VOC sources, primarily spray booths, but also some operations that do not necessarily occur in booths (gluing, cleanup, lamination, dura-edge application, and post-forming spray). GP 001 calculations are a mass balance based on the maximum VOC, HAP, and PM (if applicable) content of the material being applied, the transfer efficiency (PM from spraying only), and the control efficiency (PM from spraying only). No credit is given for recovered materials.

The facility is a major source for Part 70 due to PM and PM_{10}, so any PTE estimate will have no effect on which regulations apply to the facility. No specific data or factors are provided by EPA for $PM_{2.5}$ emissions from coating. For this facility it is assumed that $PM_{2.5}$ emissions are equivalent to PM_{10} emissions. This is considered to be a conservative estimate as $PM_{2.5}$ is defined as a subset of PM_{10}. The control efficiency for $PM_{2.5}$ was also estimated using the efficiency for PM/PM_{10}. All of the PM from painting is expected to be filterable. Research conducted for the MPCA while researching revisions to Minn. R. 7011.0070 (control equipment efficiencies) supported using the same control for PM and PM_{10} for mat and panel filters. No data was found for $PM_{2.5}$, so the same efficiency is used in this permit. The calculations are conservative estimates given the data that is currently available. As more information becomes available in the future, these numbers can be refined as needed.

Wood Working Equipment

The PTE of woodworking operations was calculated assuming 20% wood waste (based on historical records of waste collection); that is, assuming that 20% of the total wood processed ends up as sawdust that could potentially be emitted.

The facility is a major source for Part 70 due to PM and PM_{10}, so any PTE estimate will have no effect on which regulations apply to the facility. No specific data or factors are provided by EPA for $PM_{2.5}$ emissions from woodworking. All of the PM from woodworking is expected to be filterable and larger than $PM_{2.5}$. For this facility it is assumed that $PM_{2.5}$ emissions are equivalent to PM_{10} emissions. This is considered to be a conservative estimate as $PM_{2.5}$ is defined as a subset of PM_{10}. The control efficiency for $PM_{2.5}$ was also estimated using the efficiency for PM/PM_{10}.

Combustion Equipment

For most units, the PTE of the combustion units is calculated using the maximum capacity of the units and EPA emissions factors for the allowable fuels. Performance test data is used for PM from the wood boiler (EU 045), and for $PM_{10}/PM_{2.5}$, the performance data is used to adjust the AP-42 factor.

The facility is a major source for Part 70 due to PM and PM_{10}, so any PTE estimate will have no effect on which regulations apply to the facility. For this facility it is assumed that $PM_{2.5}$ emissions are equivalent to PM_{10} emissions. This is considered to be a conservative estimate as $PM_{2.5}$ is defined as a subset of PM_{10}. AP-42 emission factors for wood combustion are smaller for $PM_{2.5}$ than PM_{10} for wood, which also supports PM_{10} as a conservative estimate for $PM_{2.5}$. The control efficiency for $PM_{2.5}$ was also estimated using the efficiency for PM/PM_{10}.

3.2 Periodic Monitoring and CAM

In accordance with the Clean Air Act, it is the responsibility of the owner or operator of a facility to have sufficient knowledge of the facility to certify that the facility is in compliance with all applicable requirements.

The Permittee submitted a CAM proposal with a previous permit action as required by 40 CFR § 64.3. It can be found in Attachment 3 to this TSD. Further discussion of decisions about CAM can be found in Table 5.

In evaluating the monitoring included in the permit, the MPCA considered the following:

- The likelihood of the facility violating the applicable requirements;
- Whether add-on controls are necessary to meet the emission limits;
- The variability of emissions over time;
- The type of monitoring, process, maintenance, or control equipment data already available for the emission unit;
- The technical and economic feasibility of possible periodic monitoring methods; and
- The kind of monitoring found on similar units elsewhere.

Table 5 summarizes the periodic monitoring requirements for those emission units for which the monitoring required by the applicable requirement is nonexistent or inadequate or where CAM applies.

Table 5. Periodic Monitoring

Level*	Requirement (basis)	Additional Monitoring	Discussion
GP 001	VOC $\leq$ 235 tpy, on a 12 month rolling basis (to avoid NSR)	Recordkeeping: Daily records of material usage; On-going MSDS records of material contents; Monthly calculations	The permit limits and monitoring are carried forward from the previous permit. For the majority of materials (e.g., coatings, solvents, etc.), usage will be tracked daily using batch records and gauge readings. Smaller usage items such as adhesive will be tracked monthly using

Level*	Requirement (basis)	Additional Monitoring	Discussion
		of emissions.	purchase records.
	Total HAP ≤ 20.0 tpy and Individual HAP ≤ 9.0 tpy, on a 12 month rolling basis (to avoid NESHAP)	Recordkeeping: Daily records of material usage; On-going MSDS records of material contents; Monthly calculations of emissions.	Using the same recordkeeping as the VOC limit.
	$PM/PM_{10}/PM_{2.5}$: All booths required to be controlled by panel filters in GP 002 or GP 005 (to avoid NSR)	see GP 002 and GP 005 for monitoring	
	PM ≤ grain loading limit, varies by unit Opacity ≤ 20%, with exceptions (Minn. R. 7011.0710/0715)	None	Other PM limits at GP 002 and associated monitoring ensure that this applicable requirement is being met. Hourly PM emissions are below the allowable limits for all booths, so no additional testing is required.
GP 002 (non-CAM)	$PM/PM_{10}/PM_{2.5}$ ≥ 68% overall control (to avoid NSR)	Recordkeeping, O&M, inspections	Monitoring based on the Minnesota Performance Standard for Control Equipment is adequate to have a reasonable assurance of compliance (daily and periodic inspections, corrective actions, initial and annual hood evaluations, and O&M).
GP 003	PM ≤ 0.4 or 0.6 lb/MMBtu Opacity ≤ 20% with exceptions	Natural gas only - Keep records of fuel type used	Uncontrolled PTE when burning natural gas is less than 2% of the allowable limit.

Level*	Requirement (basis)	Additional Monitoring	Discussion
	(Minn. R. 7011.0510/0515)		
GP 004	PM ≤ grain loading limit, varies by unit Opacity ≤ 20%, with exceptions (Minn. R. 7011.0610)	Natural gas only - Keep records of fuel type used	Uncontrolled PTE when burning natural gas is less than 6% of the allowable limit.
GP 005 (CAM)	$PM/PM_{10}/PM_{2.5}$ ≥ 68% overall control (to avoid NSR)	Pressure drop, recordkeeping, O&M, inspections (CAM)	Most of the proposed CAM is similar to the Minnesota Performance Standard for Control Equipment for panel filters (daily, monthly, quarterly, etc. inspections, corrective actions, O&M, and hood design records). In addition, the Permittee proposed to monitor pressure drop on a daily basis and proposed a specific parameter range to include in the permit. Because the daily visual inspections are considered the primary DAILY compliance method, a pressure drop value outside the specified range would be considered an excursion, but not a deviation or exceedance (as defined in the CAM rule). The pressure drop range is 0.0-1.0. The minimum is zero because they calibrate the gauge to zero when they install a clean filter – so zero is the "clean" reading.
SV 008	PM ≤ grain loading limit, varies by unit Opacity ≤ 20%, with exceptions (Minn. R. 7011.0710/0715)	Monitoring of pressure drop on baghouse and maintenance	Use of the baghouse is not required to meet the limits imposed by the rules; however, the Permittee wishes to use the control efficiency when calculating actual emissions for the annual emission inventory. For this reason, the permit must contain appropriate periodic monitoring for those times credit is taken. The basic inspections, O&M, and corrective action language is streamlined by referencing the control equipment rule requirements

Level*	Requirement (basis)	Additional Monitoring	Discussion
			instead of listing them individually (Minn. R. 7011.0075, subp. 2). This is reasonable given that the controls are not needed to meet any applicable requirements. All monitoring is carried forward from the previous Part 70 permit. Monthly (vs. annual) verification of the hood performance (via fan power, speed, etc.) was specified for two main reasons. First, because the control is not required in order to limit the PTE, the Permittee has the option of not meeting these requirements all the time, so they may choose to make changes that impair hood performance. In addition, these types of units are frequently moved, modified, and/or replaced.
EU 045	PM ≤ 0.6 lb/MMBtu Opacity ≤ 20% with exceptions (Minn. R. 7011.0510)	Monitoring of pressure drop on baghouse and maintenance, fuels allowed, recordkeeping of fuel types used	Based on performance testing, the unlimited PTE is less than the allowable by rule and use of the baghouse is not required to meet the limits imposed by the rules. The Permittee wishes to use the control efficiency when calculating actual emissions for the annual emission inventory. For this reason, the permit must contain appropriate periodic monitoring for those times credit is taken. The basic inspections, O&M, and corrective action language is streamlined by referencing the control equipment rule requirements instead of listing them individually (Minn. R. 7011.0075, subp. 2). This is reasonable given that the controls are not needed to meet any applicable requirements. The basic inspections, O&M, and corrective action language is streamlined by referencing the control equipment rule requirements instead of listing them individually (Minn. R. 7011.0075, subp. 2). This is reasonable given that the controls are not needed to meet any applicable requirements. Monthly (vs. annual) verification of the hood performance (via fan power, speed, etc.) was specified for two main reasons. First, because

Level*	Requirement (basis)	Additional Monitoring	Discussion
			the control is not required in order to limit the PTE, the Permittee has the option of not meeting these requirements all the time, so they may choose to make changes that impair hood performance.

*Where the requirement appears in the permit (e.g., EU, SV, GP, etc.).

3.3 Insignificant Activities

Foldcraft has several operations which are classified as insignificant activities under the MPCA's permitting rules. These are listed in Appendix I to the permit. The permit is required to include periodic monitoring for all emissions units, including insignificant activities, per EPA guidance. The insignificant activities at this Facility are only subject to general applicable requirements. Using the criteria outlined earlier in this TSD, the following table documents the justification why no additional periodic monitoring is necessary for the current insignificant activities. See Attachment 1 of this TSD for PTE information for the insignificant activities.

Table 6. Insignificant Activities

Insignificant Activity	General Applicable Emission limit	Discussion
Brazing, soldering or welding equipment	PM, variable depending on airflow Opacity ≤ 20% (Minn. R. 7011.0710/715)	For these units, based on EPA published emissions factors, it is highly unlikely that they could violate the applicable requirement. In addition, these units are typically operated and vented inside a building, so testing for PM or opacity is not feasible.
Cleaning operations: alkaline/phosphate cleaners and associated cleaners and associated burners	PM, variable depending on airflow Opacity ≤ 20% (Minn. R. 7011.0610+ Minn. R. 7011.0710/715)	For these units, there are some factors available for the burners, but very little information regarding the cleaning operation itself. However, based on general knowledge of how they operate, it is highly unlikely that they could violate the applicable requirement or that testing would be feasible.
Infrequent use of spray paint equipment for routine housekeeping or plant upkeep activities not associated with primary production processes at the	PM, variable depending on airflow or process weight rate Opacity ≤ 20% (Minn. R. 7011.0715)	While spray equipment will have the potential to emit particulate matter, these particular activities are those not associated with production, so they would be infrequent and usually occur outdoors. Testing or monitoring is not feasible.

Insignificant Activity	General Applicable Emission limit	Discussion
stationary source		

3.4 Permit Organization

In general, the permit meets the MPCA Delta Guidance for ordering and grouping of requirements. One area where this permit deviates slightly from Delta guidance is in the use of appendices. While appendices are fully enforceable parts of the permit, in general, any requirement that the MPCA thinks should be electronically tracked (e.g., limits, submittals, etc.), should be in Table A or B of the permit. The main reason is that the appendices are word processing sections and are not part of the electronic tracking system. Violation of the appendices can be enforced, but the computer system will not automatically generate the necessary enforcement notices or documents. Staff must generate these.

3.5 Comments Received

This section will be completed after the public comment period.

4. Permit Fee Assessment.

This permit action is the reissuance of an individual Part 70; therefore, no application fees apply under Minn. R. 7002.0016, subp. 1.

5. Conclusion

Based on the information provided by Foldcraft Company, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 04900040-008 and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Kirsten Baker (permit writer/engineer)
Sarah Kilgriff (enforcement)
Jim Kolar (stack testing)
Peggy Bartz (peer reviewer)

AQ File No. 2012A; DQ 3654

Attachments:
1. PTE Summary and Calculation Spreadsheets
2. Facility Description and CD-01 Forms
3. CAM plan

ATTACHMENT 1:
PTE SUMMARY AND CALCULATION SPREADSHEETS

Foldcraft Company - Kenyon

AQ Facility ID No.: 04900040 **GI-07**

Facility Name: Foldcraft **Facility Emissions Summary**

	CAS #:	79-00-5			CAS #:	630-08-0			CAS #:	98-82-8			CAS #:	100-41-4		
	Pollutant	1,1,1-Trichloroethane			Pollutant	Carbon Monoxide			Pollutant	Cumene			Pollutant	Ethylbenzene		
	Potential			Actual	Potential			Actual	Potential			Actual	Potential			Actual
ID No.	Lbs per Hr	Unc tpy	Lim tpy	Tons per yr	Lbs per Hr	Unc tpy	Lim tpy	Tons per yr	Lbs per Hr	Unc tpy	Lim tpy	Tons per yr	Lbs per Hr	Unc tpy	Lim tpy	Tons per yr
EU 004																
EU 005																
EU 006					0.080	0.350	0.350									
EU 007					0.160	0.701	0.701									
EU 037					0.280	1.226	1.226									
EU 038																
EU 039																
EU 040																
EU 041																
EU 042													1.012	4.432		
EU 045					4.380	19.184	19.184						2.26E-04	9.91E-04		
EU 046					0.264	1.156	1.156									
EU 047					0.360	1.577	1.577									
EU 050																
EU 051																
EU 084																
EU 085																
EU 086																
EU 087					0.320	1.402	1.402									
EU 088																
EU 089																
EU 091																
EU 092																
EU 093																
EU 094																
EU 096																
EU 097																
GP 001																
GP 003																
GP 004																
SV 008																
Total Facility		Potential		Actual		Potential		Actual		Potential		Actual		Potential		Actual
		Unc	Lim	Yr		Unc	Lim	Yr		Unc	Lim	Yr		Unc	Lim	Yr
		0.00	0.00	0.00		25.60	25.60	0.00		0.00	0.00	0.00		4.43	0.00	0.00

Foldcraft Company - Kenyon

AQ Facility ID No.: 04900040 **GI-07**

Facility Name: Foldcraft **Facility Emissions Summary**

	CAS #:	50-00-0			CAS #:	N420			CAS #:				CAS #:			
	Pollutant	Formaldehyde			Pollutant	Glycol Ethers			Pollutant	HAPs - Single			Pollutant	HAPs - Total		
	Potential			Actual	Potential			Actual	Potential			Actual	Potential			Actual
ID No.	Lbs per Hr	Unc tpy	Lim tpy	Tons per yr	Lbs per Hr	Unc tpy	Lim tpy	Tons per yr	Lbs per Hr	Unc tpy	Lim tpy	Tons per yr	Lbs per Hr	Unc tpy	Lim tpy	Tons per yr
EU 004									0.577	2.526			0.577	2.526		
EU 005									0.577	2.526			0.577	2.53		
EU 006																
EU 007																
EU 037																
EU 038													0.020	20.000		
EU 039									0.577	2.526			0.577	2.526		
EU 040									0.577	2.526			0.577	2.526		
EU 041									11.660	51.073			22.468	98.408		
EU 042									1.012	4.432			2.138	9.364		
EU 045	0.032	0.141							0.139	0.608			0.260	1.137	1.137	
EU 046																
EU 047																
EU 050									0.577	2.526			0.577	2.526		
EU 051									1.153	5.052			1.153	5.052		
EU 084									5.190	22.734			5.190	22.734		
EU 085									5.190	22.734			5.190	22.734		
EU 086																
EU 087																
EU 088									11.239	49.229			23.366	102.344		
EU 089	3.125	13.688							3.125	13.688			3.125	13.688		
EU 091									7.702	33.735			7.980	34.952		
EU 092									2.460	10.775			4.740	20.761		
EU 093																
EU 094									3.037	13.304			3.037	13.304		
EU 096									3.037	13.304			3.037	13.304		
EU 097									0.000	0.000			0.000	0.000		
GP 001											9.000				20.000	
GP 003	7.73E-04	9.47E-05											0.020	8.51E-02	0.085	
GP 004	6.00E-04	2.63E-03											0.010	6.61E-02	0.066	
SV 008																
Total Facility		Potential		Actual		Potential		Actual		Potential		Actual		Potential		Actual
		Unc	Lim	Yr		Unc	Lim	Yr		Unc	Lim	Yr		Unc	Lim	Yr
		13.83	0.00	0.00		0.00	0.00	0.00		253.30	9.00	0.00		390.56	21.29	0.00

Foldcraft Company - Kenyon

AQ Facility ID No. 04900040 **GI-07**

Facility Name: Foldcraft **Facility Emissions Summary**

	CAS #:	822-06-0			CAS #:	110-54-3			CAS #:	7439-92-1			CAS #:	67-56-1		
	Pollutant	Hexamethylene-1,6-diisocyanate			Pollutant	Hexane			Pollutant	Lead			Pollutant	Methanol		
	Potential			Actual	Potential			Actual	Potential			Actual	Potential			Actual
ID No.	Lbs per Hr	Unc tpy	Lim tpy	Tons per yr	Lbs per Hr	Unc tpy	Lim tpy	Tons per yr	Lbs per Hr	Unc tpy	Lim tpy	Tons per yr	Lbs per Hr	Unc tpy	Lim tpy	Tons per yr
EU 004																
EU 005																
EU 006																
EU 007																
EU 037																
EU 038	0.024	0.110														
EU 039																
EU 040																
EU 041					11.660	51.073										
EU 042																
EU 045									0.000	0.002						
EU 046																
EU 047																
EU 050																
EU 051																
EU 084																
EU 085																
EU 086																
EU 087																
EU 088					12.127	53.115										
EU 089																
EU 091													0.228	0.999		
EU 092					2.460	10.775										
EU 093																
EU 094																
EU 096																
EU 097																
GP 001																
GP 003					0.019	0.081										
GP 004					0.014	0.063										
SV 008																
Total Facility		Potential		Actual		Potential		Actual		Potential		Actual		Potential		Actual
		Unc	Lim	Yr		Unc	Lim	Yr		Unc	Lim	Yr		Unc	Lim	Yr
		0.11	0.00	0.00		115.11	0.00	0.00		0.00	0.00	0.00		1.00	0.00	0.00

Foldcraft Company - Kenyon

AQ Facility ID No.: 04900040 **GI-07**

Facility Name: Foldcraft **Facility Emissions Summary**

	CAS #:	108-10-1			CAS #:	80-62-6			CAS #:	75-09-2		
	Pollutant	Methyl Isobutyl Ketone			Pollutant	Methyl Methacrylate			Pollutant	Methylene Chloride		
	Potential			Actual	Potential			Actual	Potential			Actual
ID No.	Lbs per Hr	Unc tpy	Lim tpy	Tons per yr	Lbs per Hr	Unc tpy	Lim tpy	Tons per yr	Lbs per Hr	Unc tpy	Lim tpy	Tons per yr
EU 004	0.577	2.526										
EU 005	0.577	2.526										
EU 006												
EU 007												
EU 037												
EU 038												
EU 039	0.577	2.526										
EU 040	0.577	2.526										
EU 041												
EU 042												
EU 045												
EU 046												
EU 047												
EU 050	0.577	2.526										
EU 051	1.153	5.052										
EU 084	5.190	22.734										
EU 085	5.190	22.734										
EU 086												
EU 087												
EU 088												
EU 089												
EU 091	0.050	0.219										
EU 092												
EU 093												
EU 094	3.037	13.3038										
EU 096	3.037	13.304										
EU 097												
GP 001												
GP 003												
GP 004												
SV 008												
Total Facility		Potential		Actual		Potential		Actual		Potential		Actual
		Unc	Lim	Yr		Unc	Lim	Yr		Unc	Lim	Yr
		89.98	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00

AQ Facility ID No.: 04900040 **GI-07**

Facility Name: Foldcraft **Facility Emissions Summary**

		CAS #:	101-68-8			CAS #:				CAS #:				CAS #:			
		Pollutant	thylene Diphenyl Diisocyan			Pollutant	Nitrogen Oxides			Pollutant	PM			Pollutant	PM10		
		Potential			Actual	Potential			Actual	Potential			Actual	Potential			Actual
ID	No	Lbs per Hr	Unc tpy	Lim tpy	Tons per yr	Lbs per Hr	Unc tpy	Lim tpy	Tons per yr	Lbs per Hr	Unc tpy	Lim tpy	Tons per yr	Lbs per Hr	Unc tpy	Lim tpy	Tons per yr
EU	004									11.996	52.541			11.996	52.541		
EU	005									11.996	52.541			11.996	52.541		
EU	006					0.095	0.417	0.417		0.007	0.032	0.032		0.007	0.032	0.032	
EU	007					0.190	0.834	0.834		0.014	0.063	0.063		0.014	0.063	0.063	
EU	037					0.333	1.460	1.460		0.025	0.111	0.111		0.025	0.111	0.111	
EU	038																
EU	039									6.748	29.555			6.748	29.555		
EU	040									11.996	52.541			11.996	52.541		
EU	041									10.889	47.695			10.889	47.695		
EU	042									3.196	13.999			3.196	13.999		
EU	045					3.577	15.667	15.667		3.285	14.388	14.388		2.970	13.008	13.008	
EU	046					0.314	1.377	1.377		0.024	0.105	0.105		0.024	0.105	0.105	
EU	047					0.429	1.877	1.877		0.033	0.143	0.143		0.033	0.143	0.143	
EU	050									6.748	29.555		9.457	6.748	29.555		
EU	051									11.419	28.029		16.005	11.419	28.029		
EU	084									28.029	122.765		39.285	28.029	122.765		
EU	085									28.029	122.765		39.285	28.029	122.765		
EU	086									16.738	73.312		23.460	16.738	73.312		
EU	087					0.381	1.669	1.669		0.029	0.127	0.127		0.029	0.127	0.127	
EU	088									5.229	22.904			5.229	22.904		
EU	089																
EU	091																
EU	092																
EU	093									0.024	0.105	0.105		0.024	0.105		
EU	094									16.4	71.8			16.4	71.8	0.0	
EU	096									16.4	71.8			16.4	71.8	0.0	
EU	097									0.0	0.0			0.0	0.0	0.0	
GP	001											86.9				86.9	
GP	003																
GP	004																
SV	008									16.0	70.0	70.0		16.0	70.0	70.0	
Total Facility			Potential		Actual		Potential		Actual		Potential		Actual		Potential		Actual
			Unc	Lim	Yr		Unc	Lim	Yr		Unc	Lim	Yr		Unc	Lim	Yr
			0.00	0.00	0.00		23.30	23.30	0.00		876.96	171.97	127.49		875.58	170.49	0.00

AQ Facility ID No.: 04900040

Facility Name: Foldcraft

GI-07 **Facility Emissions Summary**

		CAS #:	100-42-5			CAS #:	7446-09-5			CAS #:	108-88-3			CAS #:			
		Pollutant	Styrene			Pollutant	Sulfur Dioxide			Pollutant	Toluene			Pollutant	VOCs		
		Potential			Actual	Potential			Actual	Potential			Actual	Potential			Actual
ID	No	Lbs per Hr	Unc tpy	Lim tpy	Tons per yr	Lbs per Hr	Unc tpy	Lim tpy	Tons per yr	Lbs per Hr	Unc tpy	Lim tpy	Tons per yr	Lbs per Hr	Unc tpy	Lim tpy	Tons per yr
EU	004													23.724	103.911		
EU	005													23.724	103.91		
EU	006					0.001	0.003	0.003						0.005	0.023	0.023	
EU	007					0.001	0.005	0.005						0.010	0.046	0.046	
EU	037					0.002	0.009	0.009						0.018	0.080	0.080	
EU	038																
EU	039													24	103.9		
EU	040													24	103.9		
EU	041									10.807	47.335536			78	341.8		
EU	042									0.285	1.249			9	40.9		
EU	045					0.183	0.799	0.799						0.1	0.5	0.544	
EU	046					0.002	0.008	0.008						0.0	0.0	0.017	
EU	047					0.003	0.011	0.011						0.0	0.1	0.103	
EU	050													24	103.9		
EU	051													47	207.8		
EU	084													214	935.2		
EU	085													214	935.2		
EU	086													3.4	14.9		
EU	087					0.002	0.010	0.010						0.02	0.09	0.092	
EU	088									11.239	49.229			82	359.8		
EU	089													44	191.6		
EU	091									7.702	33.735			20	87.6		
EU	092									2.280	9.986			16	72.1		
EU	093																
EU	094													125	547.3		
EU	096													125	547.3		
EU	097													0	0.0		
GP	001															235.000	
GP	003									3.50E-05	1.53E-04						
GP	004									2.72E-05	1.19E-04						
SV	008																
Total Facility			Potential		Actual		Potential		Actual		Potential		Actual		Potential		Actual
			Unc	Lim	Yr		Unc	Lim	Yr		Unc	Lim	Yr		Unc	Lim	Yr
			0.00	0.00	0.00		0.85	0.85	0.00		141.53	0.00	0.00		4801.96	235.90	0.00

AQ Facility ID No.:

Facility Name:

		CAS #:	1330-20-7		
		Pollutant	Xylene		
		Potential			Actual
ID	No	Lbs per Hr	Unc tpy	Lim tpy	Tons per yr
EU	004				
EU	005				
EU	006				
EU	007				
EU	037				
EU	038				
EU	039				
EU	040				
EU	041				
EU	042	0.841	3.683		
EU	045				
EU	046				
EU	047				
EU	050				
EU	051				
EU	084				
EU	085				
EU	086				
EU	087				
EU	088				
EU	089				
EU	091				
EU	092				
EU	093				
EU	094				
EU	096				
EU	097				
GP	001				
GP	003				
GP	004				
SV	008				
Total Facility			Potential		Actual
			Unc	Lim	Yr
			3.68	0.00	0.00

Foldcraft Company - Kenyon

	Spray Booths	EU004	EU005	EU039	EU040	EU041	EU042	EU050	EU051	EU084	EU085	EU086	EU094	EU096		GP 001
A	Maximum Spray Rate (gal/min)	0.06	0.06	0.06	0.06	0.25	0.036	0.06	0.12	0.54	0.54	0.54	0.316	0.316		2.96
B	Maximum VOC content (%)	100.00%	100.00%	100.00%	100.00%	82.32%	65.50%	100.00%	100.00%	100.00%	100.00%	1.00%	100.00%	100.00%		11.49
C	Density of coating with max VOC (lb/gal)	6.59	6.59	6.59	6.59	6.32	6.66	6.59	6.59	6.59	6.59	10.5	6.59	6.59		89.38
C1	Maximum VOC Content (lb/gal)	6.59	6.59	6.59	6.59	5.20	4.36	6.59	6.59	6.59	6.59	0.105	6.59	6.59		75.57
D	Maximum PM content (%)	64.0%	64.0%	36%	64%	17.7%	34.50%	36%	36%	36%	36%	16.40%	36%	36%		5.13
E	Density of coating with max PM (lb/gal)	8.01	8.01	8.01	8.01	6.317	6.66	8.01	8.01	8.01	8.01	10.5	8.01	8.01		103.58
E1	Maximum Solids Content (lb/gal)	5.13	5.13	2.88	5.13	1.12	2.30	2.88	2.88	2.88	2.88	1.72	2.88	2.88		40.70
F	Transfer Efficiency (%)	35%	35%	35%	35%	35%	35%	35%	45%	70%	70%	70%	70%	70%		6.40
G	Capture efficiency (%)	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%		10.40
H	Filter Efficiency (%)	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%		11.05
J	Max VOC rate (lb/hr)	23.7	24	23.7	23.7	78.0	9.34	23.7	47.4	214	214	3.40	125	125		933.77
K	Max VOC (tpy)	104	104	104	104	342	40.89	104	208	935	935	14.9	547	547		4089.91
L	Process Weight Rate (lb/hr)	18.5	18.5	10.4	18.5	16.8	4.92	10.4	20.8	93.4	93.4	55.8	54.7	54.7		470.55
M	Max PM/PM10 emissions (lb/hr)	12.0	12.0	6.75	12.0	10.9	3.20	6.75	11.4	28.0	28.0	16.7	16.4	16.4		180.59
M2	Max PM/PM10 emissions (tpy)	52.5	52.5	29.6	52.5	47.7	14.0	29.6	50.0	123	123	73.31	71.8	71.8		790.97
N	Uncollected PM/PM10 (lb/hr)	2.40	2.40	1.35	2.40	2.18	0.64	1.35	2.28	5.61	5.61	3.35	3.28	3.28		36.12
P	Stack PM/PM10 (lb/hr)	1.44	1.44	0.81	1.44	1.31	0.38	0.81	1.37	3.36	3.36	2.01	1.97	1.97		21.67
Q	Stack PM/PM10 (tpy)	6.30	6.30	3.55	6.30	5.72	1.68	3.55	6.00	14.73	14.73	8.80	8.62	8.62		94.92
R	Total PM/PM10 (lb/hr), controlled	3.84	3.84	2.16	3.84	3.48	1.02	2.16	3.65	8.97	8.97	5.36	5.25	5.25		57.79
S	Total PM/PM10 (tpy), controlled	16.8	16.8	9.46	16.8	15.3	4.48	9.46	16.0	39.3	39.3	23.5	23.0	23.0		253.11
	Rule Limit (Minn. R. 7011.0710/0715) (lb/h	8.7	8.7	6.96	10.1	6.0	9.56	5.98	9.0	9.0	9.0	7.9	SV035	SV035		
X	Max Total HAP content (%)	2.0%	2.0%	2.0%	2.0%	23.7%	15.0%	2.00%	2.00%	2.0%	2.0%	0%	2.0%	2%		0.59
X	Max Toluene (%)					11.40%	2.00%									0.13
X	Max Xylene (%)						5.90%									0.06
X	Max Ethylbenzene (%)						7.10%									0.07
X	Max Hexane (%)					12.3%										0.12
X	Max MIBK (%)	2.0%	2.0%	2.0%	2.0%			2.0%	2.0%	2.0%	2.0%		2.0%	2%		0.20
Y	Max HAP rate (lb/hr)	0.58	0.58	0.58	0.58	22.5	2.14	0.58	1.15	5.19	5.19		3.04	3.04		45.10
Z	Max HAP rate (tpy)	2.53	2.53	2.53	2.53	98.4	9.36	2.53	5.1	22.7	22.7		13.3	13.3		197.53
Y	Max Toluene rate (lb/hr)					10.8	0.29									11.09
Z	Max Toluene rate (tpy)					47.3	1.25									48.58
Y	Max Xylene rate (lb/hr)						0.84									0.84
Z	Max Xylene rate (tpy)						3.68									3.68
Y	Max Ethylbenzene rate (lb/hr)						1.01									1.01
Z	Max Ethylbenzene rate (tpy)						4.43									4.43
Y	Max Hexane rate (lb/hr)					11.7										11.66
Z	Max Hexane rate (tpy)					51.1										51.07
Y	Max MIBK rate (lb/hr)	0.58	0.58	0.58	0.58			0.58	1.15	5.19	5.19		3.04	3.04		20.49
Z	Max MIBK rate (tpy)	2.53	2.53	2.53	2.53			2.53	5.05	22.7	22.7		13.3	13.3		89.76

J = A x B x C x 60 min/hr OR = A x C1 x 60
K = (J x 8760 hr/yr)/ 2000 lb/ton
M2 = M x (8760 hr/yr)/2000 lb/ton
N = M x (1-G)
R = N + P
S = (R x 8760 hr/yr)/2000 lb/ton

Spray Booths	EU004	EU005	EU039	EU040	EU041	EU042	EU050	EU051	EU084	EU085	EU086	EU094	EU096		GP 001

L = A x D x E x 60 min/hr OR = A x E1 x 60
M = L x (1-F)

P = M x G x (1-H)
Q = (P x 8760 hr/yr)/2000 lb/ton

Y = A x X x C x 60 min/hr
Z = (Y x 8760 hr/yr)/2000 lb/ton

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INDUSTRIAL PROCESS EQUIPMENT SPREADSHEET
This spreadsheet calculates allowable particulate emission rates based on Minnesota Rules parts 7011.0730 (Table 1) and 7011.0735 (Table 2).

Flow rate in standard cubic feet per minute (scfm) is calculated using the ideal gas law and the assumptions of 68 deg. F for standard temperature and 14.78 psia for standard pressure.

Table 1

Emission Point: **EU004**

Process Weight Rate (lbs/hour)	Emission Rate (lbs/hour)	
18.46	0.197	
	Emission Rate (grams/sec)	Emission Rate (tons/year)
	0.025	0.861

Table 2

Emission Point: **EU004**

Source Gas Volume (acfm)	Source Gas Volume (dscf/min)	
12138.000	12092.168	
Percent Moisture		
0.000	Emission Rate (gr/dscf)	Emission Rate (lbs/hour)
Outlet Temperature (deg. F)		
70.000	0.084	8.682
Outlet Gauge Pressure (psig)	Emission Rate (grams/sec)	Emission Rate (tons/year)
0.000	1.094	38.025

Emission Limit
(based on Minn. R. 7011.0715, subp. 1(A)): 0.084 gr/dscf

Table 1

Emission Point: **EU005**

Process Weight Rate (lbs/hour)	Emission Rate (lbs/hour)	
18.46	0.197	
	Emission Rate (grams/sec)	Emission Rate (tons/year)
	0.025	0.861

Table 2

Emission Point: **EU005**

Source Gas Volume (acfm)	Source Gas Volume (dscf/min)	
12138.000	12092.168	
Percent Moisture		
0.000	Emission Rate (gr/dscf)	Emission Rate (lbs/hour)
Outlet Temperature (deg. F)		
70.000	0.084	8.682
Outlet Gauge Pressure (psig)	Emission Rate (grams/sec)	Emission Rate (tons/year)
0.000	1.094	38.025

Emission Limit
(based on Minn. R. 7011.0715, subp. 1(A)): 0.084 gr/dscf

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Table 1

Emission Point: **EU039**

Process Weight Rate (lbs/hour)	Emission Rate (lbs/hour)	
10.38	0.138	
	Emission Rate (grams/sec)	Emission Rate (tons/year)
	0.017	0.603

Table 2

Emission Point: **EU039**

Source Gas Volume (acfm)	Source Gas Volume (dscf/min)	
8750.000	8716.961	
Percent Moisture		
0.000	Emission Rate (gr/dscf)	Emission Rate (lbs/hour)
Outlet Temperature (deg. F)		
70.000	0.093	6.959
Outlet Gauge Pressure (psig)	Emission Rate (grams/sec)	Emission Rate (tons/year)
0.000	0.877	30.479

Emission Limit
(based on Minn. R. 7011.0715, subp. 1(A)): 0.093 gr/dscf

Table 1

Emission Point: **EU040**

Process Weight Rate (lbs/hour)	Emission Rate (lbs/hour)	
18.46	0.197	
	Emission Rate (grams/sec)	Emission Rate (tons/year)
	0.025	0.861

Table 2

Emission Point: **EU040**

Source Gas Volume (acfm)	Source Gas Volume (dscf/min)	
15250.000	15192.417	
Percent Moisture		
0.000	Emission Rate (gr/dscf)	Emission Rate (lbs/hour)
Outlet Temperature (deg. F)		
70.000	0.078	10.130
Outlet Gauge Pressure (psig)	Emission Rate (grams/sec)	Emission Rate (tons/year)
0.000	1.276	44.368

Emission Limit
(based on Minn. R. 7011.0715, subp. 1(A)): 0.078 gr/dscf

Table 1

Emission Point: **EU041**

Process Weight Rate (lbs/hour)	Emission Rate (lbs/hour)	
16.75	0.185	
	Emission Rate (grams/sec)	Emission Rate (tons/year)

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0.023	0.811

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Table 2

Emission Point: **EU041**

Source Gas Volume (acfm)	Source Gas Volume (dscf/min)	
7000.000	6973.568	
Percent Moisture	Emission Rate (gr/dscf)	Emission Rate (lbs/hour)
0.000	0.100	5.977
Outlet Temperature (deg. F)	Emission Rate (grams/sec)	Emission Rate (tons/year)
70.000	0.753	26.181
Outlet Gauge Pressure (psig)		
0.000		

Emission Limit
(based on Minn. R. 7011.0715, subp. 1(A)): 0.100 gr/dscf

Table 1

Emission Point: **EU042**

Process Weight Rate (lbs/hour)	Emission Rate (lbs/hour)	
4.92	0.087	
	Emission Rate (grams/sec)	Emission Rate (tons/year)
	0.011	0.379

Table 2

Emission Point: **EU042**

Source Gas Volume (acfm)	Source Gas Volume (dscf/min)	
14000.000	13947.137	
Percent Moisture	Emission Rate (gr/dscf)	Emission Rate (lbs/hour)
0.000	0.080	9.561
Outlet Temperature (deg. F)	Emission Rate (grams/sec)	Emission Rate (tons/year)
70.000	1.205	41.876
Outlet Gauge Pressure (psig)		
0.000		

Emission Limit
(based on Minn. R. 7011.0715, subp. 1(A)): 0.080 gr/dscf

Table 1

Emission Point: **EU050**

Process Weight Rate (lbs/hour)	Emission Rate (lbs/hour)	
10.38	0.138	
	Emission Rate (grams/sec)	Emission Rate (tons/year)
	0.017	0.603

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Table 2

Emission Point: **EU050**

Source Gas Volume (acfm)	Source Gas Volume (dscf/min)	
7000.000	6973.568	
Percent Moisture		
0.000	Emission Rate (gr/dscf)	Emission Rate (lbs/hour)
Outlet Temperature (deg. F)		
70.000	0.100	5.977
Outlet Gauge Pressure (psig)	Emission Rate (grams/sec)	Emission Rate (tons/year)
0.000	0.753	26.181

Emission Limit
(based on Minn. R. 7011.0715, subp. 1(A)): 0.100 gr/dscf

Table 1

Emission Point: **EU051**

Process Weight Rate (lbs/hour)	Emission Rate (lbs/hour)	
20.76	0.211	
	Emission Rate (grams/sec)	Emission Rate (tons/year)
	0.027	0.926

Table 2

Emission Point: **EU051**

Source Gas Volume (acfm)	Source Gas Volume (dscf/min)	
12700.000	12652.046	
Percent Moisture		
0.000	Emission Rate (gr/dscf)	Emission Rate (lbs/hour)
Outlet Temperature (deg. F)		
70.000	0.083	8.951
Outlet Gauge Pressure (psig)	Emission Rate (grams/sec)	Emission Rate (tons/year)
0.000	1.128	39.206

Emission Limit
(based on Minn. R. 7011.0715, subp. 1(A)): 0.083 gr/dscf

Table 1

Emission Point: **EU084**

Process Weight Rate (lbs/hour)	Emission Rate (lbs/hour)	
93.43	0.537	
	Emission Rate (grams/sec)	Emission Rate (tons/year)
	0.068	2.353

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Table 2

Emission Point: **EU084**

Source Gas Volume (acfm)	Source Gas Volume (dscf/min)	
12700.000	12652.046	
Percent Moisture		
0.000	Emission Rate (gr/dscf)	Emission Rate (lbs/hour)
Outlet Temperature (deg. F)		
70.000	0.083	8.951
Outlet Gauge Pressure (psig)	Emission Rate (grams/sec)	Emission Rate (tons/year)
0.000	1.128	39.206

Emission Limit
(based on Minn. R. 7011.0715, subp. 1(A)): 0.083 gr/dscf

Table 1

Emission Point: **EU085**

Process Weight Rate (lbs/hour)	Emission Rate (lbs/hour)	
93.43	0.537	
	Emission Rate (grams/sec)	Emission Rate (tons/year)
	0.068	2.353

Table 2

Emission Point: **EU085**

Source Gas Volume (acfm)	Source Gas Volume (dscf/min)	
12700.000	12652.046	
Percent Moisture		
0.000	Emission Rate (gr/dscf)	Emission Rate (lbs/hour)
Outlet Temperature (deg. F)		
70.000	0.083	8.951
Outlet Gauge Pressure (psig)	Emission Rate (grams/sec)	Emission Rate (tons/year)
0.000	1.128	39.206

Emission Limit
(based on Minn. R. 7011.0715, subp. 1(A)): 0.083 gr/dscf

Table 1

Emission Point: **EU086**

Process Weight Rate (lbs/hour)	Emission Rate (lbs/hour)	
55.79	0.390	
	Emission Rate (grams/sec)	Emission Rate (tons/year)
	0.049	1.709

Table 2

Emission Point: **EU086**		
Source Gas Volume (acfm)	Source Gas Volume (dscf/min)	
10500.000	10460.353	
Percent Moisture		
0.000	Emission Rate (gr/dscf)	Emission Rate (lbs/hour)
Outlet Temperature (deg. F)		
70.000	0.088	7.871
Outlet Gauge Pressure (psig)	Emission Rate (grams/sec)	Emission Rate (tons/year)
0.000	0.992	34.476

Emission Limit
(based on Minn. R. 7011.0715, subp. 1(A)): 0.088 gr/dscf

Table 1

EMISSION POINT:	**EUs vented to SV035**	
Process Weight Rate	Emission Rate (lbs/hour)	
3.703	0.073	
	Emission Rate (grams/sec)	Emission Rate (tons/year)
	0.009	0.318

Table 2

EMISSION POINT: **EUs vented to SV035**		
Source Gas Volume (acfm)	Source Gas Volume (dscf/min)	
7000.000	7000.000	
Percent Moisture		
0.000	Emission Rate (gr/dscf)	Emission Rate (lbs/hour)
Outlet Temperature (deg. F)		
68.000	0.100	6.000
Outlet Gauge Pressure (psig)	Emission Rate (grams/sec)	Emission Rate (tons/year)
0.000	0.756	26.279

Emission Limit
(based on Minn. R. 7011.0715, subp. 1(A)): 0.100 gr/dscf

Foldcraft Company - Kenyon

Coating Lines

	Operations exhausting to building ventilation	EU088	EU089	EU091	EU092
A	Maximum Spray Rate (gal/min)	0.26	na	na	na
B	Maximum VOC content (%)	83.32%	35.00%	100.00%	82.32%
C	Density of coating with max VOC (lb/gal)	6.32	10.76	6.759	6.32
	Maximum VOC content (lb/gal)	5.27	3.77	6.76	5.20
D	Maximum PM content (%)	18%	na	na	na
E	Density of coating with max PM (lb/gal)	6.32	na	na	na
	Maximum PM content (lb/gal)	1.12	na	na	na
F	Transfer Efficiency (%)	70%	na	na	na
G	Capture efficiency (%)	0%	na	na	na
H	Filter Efficiency (%)	0%	na	na	na
N	Max Usage Rate (lb/hr)	99	125	20	20
J	Max VOC rate (lb/hr)	82.1	43.8	20.0	16.5
K	Max VOC (tpy)	360	192	87.6	72.1
L	Process Weight Rate (lb/hr)	17.4			
M	Max PM/PM10 emissions (lb/hr)	5.23			
N	Max PM/PM10 emissions (tpy)	22.9			
	Rule Limit (Minn. R. 7011.0710/0715)	5.94			
X	Max Total HAP content (%)	23.7%	2.5%	39.90%	23.70%
X	Max Toluene (%)	11.4%		38.51%	11.40%
X	Max Hexane (%)	12.3%			12.3%
X	Max Methyl Isobutyl Ketone (%)			0.25%	
X	Max Formaldehyde (%)		2.50%		
X	Max Methanol (%)			1.14%	
Y	Max HAP rate (lb/hr)	23.37	3.13	7.98	4.74
Z	Max HAP rate (tpy)	102.34	13.69	34.95	20.76
Y	Max Toluene rate (lb/hr)	11.24		7.70	2.28
Z	Max Toluene rate (tpy)	49.23		33.73	9.99
Y	Max Hexane rate (lb/hr)	12.13			2.46
Z	Max Hexane rate (tpy)	53.12			10.77

	Operations exhausting to building ventilation	EU088	EU089	EU091	EU092
Y	Max Methyl Isobutyl Ketone rate (lb/hr)			0.05	
Z	Max Methyl Isobutyl Ketone rate (tpy)			0.22	
Y	Max Formaldehyde rate (lb/hr)		3.13		
Z	Max Formaldehyde rate (tpy)		13.69		
Y	Max Methanol rate (lb/hr)			0.23	
Z	Max Methanol rate (tpy)			1.00	

J = A x B x C x 60 min/hr **OR** J = N x B
K = (J x 8760 hr/yr)/ 2000 lb/ton

Y = A x X x C x 60 min/hr **OR** Y = N x X
Z = (Y x 8760 hr/yr)/2000 lb/ton

L = A x D x E x 60 min/hr
M = L x (1-F)
N = M x (8760 hr/yr)/2000 lb/ton

FOLDCRAFT CO
SV 026 IPER

INDUSTRIAL PROCESS EQUIPMENT SPREADSHEET

This spreadsheet calculates allowable particulate emission rates based on Minnesota Rules parts 7011.0730 (Table 1) and 7011.0735 (Table 2).

Flow rate in standard cubic feet per minute (scfm) is calculated using the ideal gas law and the assumptions of 68 deg. F for standard temperature and 14.78 psia for standard pressure.

Table 1

Emission Point: SV026 (combined units)

Process Weight Rate (lbs/hour)	Emission Rate (lbs/hour)	
17.43	0.190	
	Emission Rate (grams/sec)	**Emission Rate (tons/year)**
	0.024	0.831

Table 2

Emission Point: SV026

Source Gas Volume (acfm)
6960.000

Percent Moisture
0.000

Outlet Temperature (deg. F)
70.000

Outlet Gauge Pressure (psig)
0.000

Source Gas Volume (dscf/min)	Emission Rate (gr/dscf)	Emission Rate (lbs/hour)
6933.719	0.100	5.943
	Emission Rate (grams/sec)	**Emission Rate (tons/year)**
	0.749	26.031

Emission Limit
(based on Minn. R. 7011.0715, subp. 1(A)): 0.100 gr/dscf

EU045 Wood Burning

Wood 7300000 Btu/hr
7.3 MMBtu/hr

Performance testing was completed in 2003 -- tested at 0.45 lb/MMBtu, PM. Use the tested rate for the uncontrolled PTE because it was higher than the AP-42 factor -- adjust PM10 up as well using the ratio of test for PM/AP-42. 1.079

Control Efficiency *baghouse removed by permit action 007

Uncontrolled EFs (AP-42 factors -- current as of 2006 - for dry wood, uncontrolled, and PM test results per above)

pollutant	**PM**	**PM_{10}**	**SO_X**	**NO_X**	**VOC**	**CO**	**CO2e**
lb/MMBtu	0.45	0.41	0.025	0.49	0.017	0.6	195
Uncontrolled							
tpy	14.39	13.01	0.80	15.67	0.54	19.18	6235
lb/hr	3.29	2.97	0.18	3.58	0.12	4.38	1424

HAP Name (CAS)	Uncontrolled Emission Factor lbs/MMBtu	Emission Rate (lbs/hr)	Maximum Uncontrolled Emissions (tons/yr)
Acetaldehyde [534-15-6]	8.30E-04	6.06E-03	2.65E-02
Acetophenopne [98-86-2]	3.20E-09	2.34E-08	1.02E-07
Acrolein [107-02-8]	4.00E-03	2.92E-02	1.28E-01
Antimony [7440-36-0]	7.90E-06	5.77E-05	2.53E-04
Arsenic [7440-38-2]	2.20E-05	1.61E-04	7.03E-04
Benzene [71-43-2]	4.20E-03	3.07E-02	1.34E-01
Beryllium [7440-41-7]	1.10E-06	8.03E-06	3.52E-05
bis(2-Ethylhexyl)phthalate [117-81-7]	4.70E-08	3.43E-07	1.50E-06
Cadmium [7440-43-9]	4.10E-06	2.99E-05	1.31E-04
Carbon Tetrachloride [56-23-5]	4.50E-05	3.29E-04	1.44E-03
Chlorine [7782-50-5]	7.90E-04	5.77E-03	2.53E-02
Chlorobenzene [108-90-7]	3.30E-05	2.41E-04	1.06E-03
Chloroform [67-66-3]	2.80E-05	2.04E-04	8.95E-04
Chromium [7440-47-3]	2.10E-05	1.53E-04	6.71E-04
Cobalt [7440-48-4]	6.50E-06	4.75E-05	2.08E-04
2,4-Dinitrophenol [51-28-5]	1.80E-07	1.31E-06	5.76E-06
Ethylbenzene [100-41-4]	3.10E-05	2.26E-04	9.91E-04
1,2-Dicloroethane [107-06-2] (Ethylene Dichlori	2.90E-05	2.12E-04	9.27E-04
Formaldehyde [50-00-0]	4.40E-03	3.21E-02	1.41E-01
Hydrochloric Acid [7647-01-0]	1.90E-02	1.39E-01	6.08E-01
Lead [7439-92-1]	4.80E-05	3.50E-04	1.53E-03
Manganese [7439-96-5]	1.60E-03	1.17E-02	5.12E-02
Mercury [7439-97-6]	3.50E-06	2.56E-05	1.12E-04

HAP Name (CAS)	Uncontrolled Emission Factor lbs/MMBtu	Emission Rate (lbs/hr)	Maximum Uncontrolled Emissions (tons/yr)
Pentachlorophenol [87-86-5]	5.10E-08	3.72E-07	1.63E-06
POM (2) - total mass not BAP Eq.	1.25E-04	9.12E-04	3.99E-03
Phenol [108-95-2]	5.10E-05	3.72E-04	1.63E-03
Propionaldehyde [123-38-6]	6.10E-05	4.45E-04	1.95E-03
Selenium [7782-49-2]	2.80E-06	2.04E-05	8.95E-05
Styrene [100-42-5]	1.90E-03	1.39E-02	6.08E-02
2,3,7,8-Tetrachlorodibenzo-p-dioxin	8.60E-12	6.28E-11	2.75E-10
Tetrachloroethene [127-18-4]	3.80E-05	2.77E-04	1.22E-03
Toluene [108-88-3]	9.20E-04	6.72E-03	2.94E-02
Trichloroethylene [79-01-6]	3.00E-05	2.19E-04	9.59E-04
2,4,6-Trichlorophenol [88-06-2]	2.20E-08	1.61E-07	7.03E-07
Vinyl Chloride [75-01-4]	1.80E-05	1.31E-04	5.76E-04
o-Xylene [95-47-6]	2.50E-05	1.83E-04	7.99E-04
Total HAP	**3.56E-02**	**0.26**	**1.137**
		Highest Single HAP	0.608

Bromomethane [74-83-9] (methyl bromide)	1.50E-05	1.10E-04	4.80E-04
Chloromethane [74-87-3] (methyl chloride)	2.30E-05	1.68E-04	7.35E-04
2-Butanone (Methyl ethyl ketone)) [78-93-3]	5.40E-06	3.94E-05	1.73E-04
Dichloromethane [75-09-2] (methylene chloride)	2.90E-04	2.12E-03	9.27E-03
Naphthalene [91-20-3]	9.70E-05	7.08E-04	3.10E-03
Nickel [7440-02-0]	3.30E-05	2.41E-04	1.06E-03
4-Nitrophenol [100-02-7]	1.10E-07	8.03E-07	3.52E-06

(1) Emission factors from AP-42, Section 1.6 (9/03) - Wood Section
(2) Total POM emission factor is equal to the sum of the individual POM compounds, does not include Naphthalene
HAP PTEs do not take any credit for the baghouse operation.

Woodworking PTE

Units vented to:	Capacity	
SV008/CE004	200000 board feet/year	(EU008 - EU036, EU052 - EU069)

Maximum dust generation = maximum wood waste = 20%
Wood density = 42 lb/ft3

Potential Uncontrolled PM/PM_{10} Emissions

= [capacity (bd ft/yr) x Percent waste x density (lb/ft3) x 144 (in2/bd ft)] / [1728 (in3/ft3) x 8760 (hr/yr)]

SV008/CE004	**16.0 lb/hr**	**70.0 tpy**

Emissions allowed under Industrial Process Equipment Rule

Units vented to:
SV008/CE004 24.7 lb/hr

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INDUSTRIAL PROCESS EQUIPMENT SPREADSHEET
This spreadsheet calculates allowable particulate emission rates based on Minnesota Rules parts 7011.0730 (Table 1) and 7011.0735 (Table 2).

Flow rate in standard cubic feet per minute (scfm) is calculated using the ideal gas law and the assumptions of 68 deg. F for standard temperature and 14.78 psia for standard pressure.

Table 1		
Emission Point: **Units vented to SV008**		
Process Weight Rate (lbs/hour)	Emission Rate (lbs/hour)	
79.9086758	0.488	
	Emission Rate (grams/sec)	Emission Rate (tons/year)
	0.061	2.136

Table 2		
Emission Point: **Units vented to SV008**		
Source Gas Volume (acfm)	Source Gas Volume (dscf/min)	
57000.000		
Percent Moisture	56784.772	
0.000	Emission Rate (gr/dscf)	Emission Rate (lbs/hour)
Outlet Temperature (deg. F)		
70.000	0.051	24.695
Outlet Gauge Pressure (psig)	Emission Rate (grams/sec)	Emission Rate (tons/year)
0.000		
	3.112	108.166

Emission Limit
(based on Minn. R. 7011.0715, subp. 1(A)): 0.051 gr/dscf

Foldcraft Company - Kenyon

Natural Gas Combustion

		GP003								GP004					
		EU006		EU007		EU046		EU087		EU037		EU047		EU045*	
	Emission	1.0	MMBtu/hr	2.0	MMBtu/hr	3.3	MMBtu/hr	4.0	MMBtu/hr	3.5	MMBtu/hr	4.5	MMBtu/hr	7.3	MMBtu/hr
	Factor	0.00095	MMCf/hr	0.00190	MMCf/hr	0.00314	MMCf/hr	0.00381	MMCf/hr	0.00333	MMCf/hr	0.00429	MMCf/hr	0.00695	MMCf/hr
Pollutant	(lb/MMCf)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)
CO	84	8.0E-02	3.5E-01	1.6E-01	7.0E-01	2.6E-01	1.2E+00	3.2E-01	1.4E+00	2.8E-01	1.2E+00	3.6E-01	1.6E+00	5.8E-01	2.6E+00
NOx	100	9.5E-02	4.2E-01	1.9E-01	8.3E-01	3.1E-01	1.4E+00	3.8E-01	1.7E+00	3.3E-01	1.5E+00	4.3E-01	1.9E+00	7.0E-01	3.0E+00
PM10	7.6	7.2E-03	3.2E-02	1.4E-02	6.3E-02	2.4E-02	1.0E-01	2.9E-02	1.3E-01	2.5E-02	1.1E-01	3.3E-02	1.4E-01	5.3E-02	2.3E-01
PM	7.6	7.2E-03	3.2E-02	1.4E-02	6.3E-02	2.4E-02	1.0E-01	2.9E-02	1.3E-01	2.5E-02	1.1E-01	3.3E-02	1.4E-01	5.3E-02	2.3E-01
SO2	0.6	5.7E-04	2.5E-03	1.1E-03	5.0E-03	1.9E-03	8.3E-03	2.3E-03	1.0E-02	2.0E-03	8.8E-03	2.6E-03	1.1E-02	4.2E-03	1.8E-02
VOC	5.5	5.2E-03	2.3E-02	1.0E-02	4.6E-02	1.7E-02	7.6E-02	2.1E-02	9.2E-02	1.8E-02	8.0E-02	2.4E-02	1.0E-01	3.8E-02	1.7E-01

*EU045 can burn natural gas or wood material

Foldcraft Company - Kenyon
Combustion HAPs

HAP Name	CAS	Emission Factor* (lbs/million scf)	GP 003 Emission Rate (lb/hr)	GP 003 Max Uncontrolled Emissions (tons/yr)	GP 004 Emission Rate (lb/hr)	GP 004 Max Uncontrolled Emissions (tons/yr)
Total Group Capacity			10.3 Mmbtu/hr		8 MMbtu/hr	
Group Fuel Comsumption			10300 cf/hr		8000 cf/hr	
Benzene	71-43-2	0.0021	2.16E-05	9.47E-05	1.68E-05	7.36E-05
Formaldehyde	50-00-0	0.075	7.73E-04	3.38E-03	6.00E-04	2.63E-03
Hexane	110-54-3	1.8	1.85E-02	8.12E-02	1.44E-02	6.31E-02
Naphthalene	91-20-3	0.00061	6.28E-06	2.75E-05	4.88E-06	2.14E-05
Toluene	108-88-3	0.0034	3.50E-05	1.53E-04	2.72E-05	1.19E-04
Arsenic	7440-38-2	0.0002	2.06E-06	9.02E-06	1.60E-06	7.01E-06
Beryllium	7440-41-7	0.000012	1.24E-07	5.41E-07	9.60E-08	4.20E-07
Cadmium	7440-43-9	0.0011	1.13E-05	4.96E-05	8.80E-06	3.85E-05
Chromium	7440-47-3	0.0014	1.44E-05	6.32E-05	1.12E-05	4.91E-05
Cobalt	7440-48-4	0.000084	8.65E-07	3.79E-06	6.72E-07	2.94E-06
Manganese	7439-96-5	0.00038	3.91E-06	1.71E-05	3.04E-06	1.33E-05
Mercury	7439-97-6	0.00026	2.68E-06	1.17E-05	2.08E-06	9.11E-06
Nickel	7440-02-0	0.0021	2.16E-05	9.47E-05	1.68E-05	7.36E-05
Selenium	7782-49-2	0.000024	2.47E-07	1.08E-06	1.92E-07	8.41E-07
SUM			**1.94E-02**	**8.51E-02**	**1.51E-02**	**6.61E-02**
			max ind. HAP			

7a) Fuel Type Natural Gas
7d) Heat Value: 1000 Btu/cf
Source of Data - AP-42, table 1.4-3 dated 7/98

*POM = Sum of pollutants identified as POM in AP-42 Table 1.4-3, dated 3/98:

Acenaphthene	0.0000018		Fluoranthene	0.000003
Acenaphthylene	0.0000018		Fluorene	0.0000028
Anthracene	0.0000024		Indo(1,2,3-ed)pyrene	0.0000017
Benz(a)anthracene	0.0000018		2-Methylnaphthalene	0.000024
Benzo(a)pyrene	0.0000012		3-Methylchloranthrene	0.0000018
Benzo(b,k)fluoranthene	0.0000018	from MPCA summary	Phenanthrene	0.000017
Benzo(g,h,i)perylene	0.0000012		Pyrene	0.000005
Chrysene	0.0000018			0.0000863
Dibenzo(a,h)anthrancene	0.0000012			
7,12-Dimethylbenz(a)anthracene	0.000016			

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This spreadsheet calculates allowable particulate emission rates based on Minnesota Rules parts 7011.0730 (Table 1) and 7011.0735 (Table 2).
Flow rate in standard cubic feet per minute (scfm) is calculated using the ideal gas law and the assumptions of 68 deg. F for standard temperature and 14.78 psia for standard pressure.

Table 1

Emission Point: **EU037**

Do not have a process weight rate, so can only look at Table 2

Table 2

EMISSION POINT: **EU037**

Source Gas Volume (acfm)		
4500.000		
Percent Moisture		
0.000		
Outlet Temperature (deg. F)		
400.000		
Outlet Gauge Pressure (psig)		
0.000		
Source Gas Volume (dscf/min)	Emission Rate (gr/dscf)	Emission Rate (lbs/hour)
2762.124	0.100	2.368
	Emission Rate (grams/sec)	Emission Rate (tons/year)
	0.298	10.370

Emission Limit
(based on Minn. R. 7011.0715, subp. 1(A)): 0.100 gr/dscf

Table 1

Emission Point: **EU047**

Do not have a process weight rate, so can only look at Table 2

Table 2

Emission Point: **EU047**

Source Gas Volume (acfm)		
600.000		
Percent Moisture		
0.000		
Outlet Temperature (deg. F)		
900.000		
Outlet Gauge Pressure (psig)		
0.000		
Source Gas Volume (dscf/min)	Emission Rate (gr/dscf)	Emission Rate (lbs/hour)
232.852	0.100	0.200
	Emission Rate (grams/sec)	Emission Rate (tons/year)
	0.025	0.874

Emission Limit
(based on Minn. R. 7011.0715, subp. 1(A)): 0.100 gr/dscf

Foldcraft Co - Kenyon

CO_2e PTE Calculations GI-07-R

Boilers and Air Make Up Units	(Gas Fired only)			Emission Factor		tons/yr	lbs/hr
EU006	1.0 MMBtu/hr	8.76E+03 MMbtu/yr	8.34E+06 ft^3/yr	0.12	lb/ft^3	501	114
EU007	2.0 MMBtu/hr	1.75E+04 MMbut/yr	1.67E+07 ft^3/yr	0.12	lb/ft^3	1001	229
EU046	3.3 MMBtu/hr	2.89E+04 MMbtu/yr	2.75E+07 ft^3/yr	0.12	lb/ft^3	1652	377
EU087	4.0 MMBtu/hr	3.50E+04 MMbtu/yr	3.34E+07 ft^3/yr	0.12	lb/ft^3	2002	457
Gas Ovens							
EU037	3.5 MMBtu/hr	3.07E+04 MMbtu/yr	2.92E+07 ft^3/yr	0.12	lb/ft^3	1752	400
EU047	1.5 MMBtu/hr	1.31E+04 MMbtu/yr	1.25E+07 ft^3/yr	0.12	lb/ft^3	751	171
EU045 - Wood Boiler							
Wood	7.3 MMBtu/hr			195	lb/MMbtu	6171	1409
					Facility Total	13830	3157

Used AP-42 factors

				CO_2				N_2O				CH_4				CO_2e	
Boilers and Air Make Up Units	(Gas Fired only)			Emission Factor		tons/yr	lbs/hr	Emission Factor		tons/yr	lbs/hr	Emission Factor		tons/yr	lbs/hr	tons/yr	lbs/hr
EU006	1.0 MMBtu/hr	8.76E+03 MMbtu/yr	8.34E+06 ft^3/yr	0.12	lb/ft^3	501	114	2.20E-06	lb/ft^3	9.18E-03	2.10E-03	2.30E-06	lb/ft^3	9.59E-03	2.19E-03	504	115
EU007	2.0 MMBtu/hr	1.75E+04 MMbut/yr	1.67E+07 ft^3/yr	0.12	lb/ft^3	1001	229	2.20E-06	lb/ft^3	1.84E-02	4.19E-03	2.30E-06	lb/ft^3	1.92E-02	4.38E-03	1007	230
EU046	3.3 MMBtu/hr	2.89E+04 MMbtu/yr	2.75E+07 ft^3/yr	0.12	lb/ft^3	1652	377	2.20E-06	lb/ft^3	3.03E-02	6.91E-03	2.30E-06	lb/ft^3	3.17E-02	7.23E-03	1662	379
EU087	4.0 MMBtu/hr	3.50E+04 MMbtu/yr	3.34E+07 ft^3/yr	0.12	lb/ft^3	2002	457	2.20E-06	lb/ft^3	3.67E-02	8.38E-03	2.30E-06	lb/ft^3	3.84E-02	8.76E-03	2014	460
Gas Ovens																	
EU037	3.5 MMBtu/hr	3.07E+04 MMbtu/yr	2.92E+07 ft^3/yr	0.12	lb/ft^3	1752	400	2.20E-06	lb/ft^3	3.21E-02	7.33E-03	2.30E-06	lb/ft^3	3.36E-02	7.67E-03	1763	402
EU047	1.5 MMBtu/hr	1.31E+04 MMbtu/yr	1.25E+07 ft^3/yr	0.12	lb/ft^3	751	171	2.20E-06	lb/ft^3	1.38E-02	3.14E-03	2.30E-06	lb/ft^3	1.44E-02	3.29E-03	755	172
EU045 - Wood Boiler																	
Wood	7.3 MMBtu/hr			195	lb/MMbtu	6171	1409	1.30E-02	lb/MMbtu	4.11E-01	9.39E-02	2.10E-02	lb/MMbtu	0.66	0.15	6312	1441
					Facility Total	13830	3157			5.52E-01	1.26E-01			1.47E-01	3.35E-02	14018	3200

Wood (sawdust) Silo Baghouse
EU 093, CE 005, SV 009

Annual Dust Generated and sent to silos (20% wood waste)

70 tons per year (equivalent to potential uncontrolled dust emissions from equipment exhausting to CE004, CE006, CE007)

Amount collected and potentially put in silo (assume all wood waste as worst case)

70.00 tpy
15.98 lb/hr

Uncontrolled emissions assuming emission factors from previous AP-42 Section 10.4.3 for wood waste storage bin vents.

EF1 =	1	lb PM/ton of wood waste, from bin vent
EF2 =	2	lb PM/ton of wood waste, from bin loadout process
EF (total)	3	lb PM/ton of wood waste
PTE =	0.105	tpy PM/PM_{10}
	0.024	lb/hr PM/PM_{10}

INDUSTRIAL PROCESS EQUIPMENT

This spreadsheet calculates allowable particulate emission rates based on Minnesota Rules parts 7011.0730 (Table 1) and 7011.0735 (Table 2). Flow rate in standard cubic feet per minute (scfm) is calculated using the ideal gas law and the assumptions of 68 deg. F for standard temperature and 14.78 psia for standard pressure.

Table 1

Emission Point: **EU 093, CE 005**

Process Weight Rate (lbs/hour)	Emission Rate (lbs/hour)	Emission Rate (grams/sec)	Emission Rate (tons/year)
15.981735	0.180	0.023	0.787

Table 2

EMISSION POINT: **EU 093, CE 005**

Source Gas Volume (acfm)	Percent Moisture	Outlet Temperature (deg. F)	Outlet Gauge Pressure (psig)	Source Gas Volume (dscf/min)
15000.000	0.000	70.000	0.000	14943.361

Emission Rate (gr/dscf)	Emission Rate (lbs/hour)	Emission Rate (grams/sec)	Emission Rate (tons/year)
0.078	10.017	1.262	43.875

Emission Limit
(based on Minn. R. 7011.0715, sub 0.078 gr/dscf

Foldcraft Company - Kenyon

The numbers listed in this table are the limited PTE including proposed permit limits for each unit, as applicable, and for the total facility.

		VOC		$PM/PM_{10}/PM_{2.5}$		SO_x		NO_x		CO		Total HAP	
Emission Unit	Process Type	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
004	North Plant, Stain/Varnish Spray Booth	23.7	103.911	3.84	see GP 001	0	0	0	0	0	0	0.6	2.526
005	North Plant, Stain/Varnish Spray Booth	24	103.911	3.84	see GP 001	0	0	0	0	0	0	0.6	2.526
006	Air Make Up Unit**	0.0052	0.0229	0.0072	0.0317	0.0006	0.0025	0.0952	0.4171	0.0800	0.3504	0.0194	0.0851
007	Air Make Up Unit	0.0105	0.0459	0.0145	0.0634	0.0011	0.0050	0.1905	0.8343	0.1600	0.7008	see EU 006	
SV008	Woodworking units	0	0	16.0	70.0	0	0	0	0	0	0	0	0
037	Bake Oven	0.0183	0.0803	0.0253	0.1110	0.0020	0.0088	0.3333	1.4600	0.2800	1.2264	0.0151	0.0661
038	Dura Edge Area*	7.52	33.0	0	0	0	0	0	0	0	0	0.02	20.0
039	Finishing Room, Stain/Varnish Spray Booth	23.7	104	2.16	see GP 001	0	0	0	0	0	0	0.5767	3
040	Finishing Room, Stain/Varnish Spray Booth	23.7	104	3.84	see GP 001	0	0	0	0	0	0	0.5767	2.53
041	Upholstery Area, Adhesive Spray Booth	78.0	235	3.48	see GP 001	0	0	0	0	0	0	22.5	20.0
042	Process Build, Paint Spray Booth	9.34	40.9	1.02	see GP 001	0	0	0	0	0	0	2.14	9.36
045	Primary Boiler	0.1241	0.5436	3.2850	14.3883	0.1825	0.7994	3.58	15.67	4.38	19.2	0.2596	1.14
046	Secondary Boiler	0.0173	0.0757	0.0239	0.1046	0.0019	0.0083	0.3143	1.3766	0.2640	1.1563	see EU 006	
047	Burn Off Oven	0.0236	0.1032	0.0326	0.1427	0.0026	0.0113	0.4286	1.8771	0.3600	1.5768	see EU 037	
050	Contour Seats, Stain/Varnish Spray Booth	23.7	104	2.16	see GP 001	0	0	0	0	0	0	0.5767	2.53
051	Wood Edge, Stain/Varnish Spray Booth	47.4	208	3.65	see GP 001	0	0	0	0	0	0	1.15	5.05
084	Wood Edge, Mold Making	214	235	8.97	see GP 001	0	0	0	0	0	0	5.19	20.0
085	Wood Edge, Stain/Varnish Spray Booth	214	235	8.97	see GP 001	0	0	0	0	0	0	5.19	20.0
086	Polycast, Poly Color Spray Booth	3.40	14.9	5.36	see GP 001	0	0	0	0	0	0	0.00	0.00
087	Air Make Up Unit	0.0210	0.0918	0.0290	0.1268	0.0023	0.0100	0.3810	1.6686	0.3200	1.4016	see EU 006	
088	Post Forming Spray	82.1	235	5.23	see GP 001	0	0	0	0	0	0	23.4	20.0
089	Laminating Lines	43.8	192	0	0	0	0	0	0	0	0	13.7	13.7
091	Misc. Clean Up	20.0	87.6	0	0	0	0	0	0	0	0	7.70	20.0
092	Misc. Gluing	16.5	72.1	0	0	0	0	0	0	0	0	9.99	20.0
093	Wood storage silos	0	0	0.0240	0.1050	0	0	0	0	0	0	0	0
094	Wood Chair Area, Stain/Varnish Spray Booth	125	235	5.25	see GP 001	0	0	0	0	0	0	3.04	13.3
096	Solid Wood Tops, Stain/Varnish Spray Booth	125	235	5.25	see GP 001	0	0	0	0	0	0	3.04	13.3
097	North Plant, Stain/Varnish Booth	0	0	0.00	see GP 001	0	0	0	0	0	0	0.00	0.0
GP 001	Limited Emissions (annual only)		235		86.9								
	Total Permitted Units	1104	235.9	82.4	172	0.1930	0.8452	5.32	23.3	5.84	25.6	100.2	21.3

See individual worksheets for individual HAPs.
*Permittee's calculations from the 1995 application are attached to this TSD as Attachment 4.
**Combustion Total HAP is listed for GP 003 and GP 004, not for individual units.

total facility limits:	VOC	235	tpy
	Ind HAP	9.0	tpy
	Total HAP	20.0	tpy

Limited PM Emissions from Coating due to VOC Limit

Use lowest VOC content coating (or highest solids) to determine maximum amount of gallons that could be used to calculate how the VOC limit limits the PM/PM_{10} emissic

This is conservative since it assumes ALL VOC is used in the spraying operations (vs. gluing, cleanup, etc.).

VOC Limit 235 tpy

Density (lb/gal)	Solids (lb/gal)	VOC (lb/gal)	Limited Gallons	Limited PM/PM_{10} PTE (tpy)
8.01	5.13	2.88	162990.71	86.90

FOLDCRAFT CO
Insignificant Activities

The following activities are treated as insignificant for this permit, as allowed under Minn. R. 7007.1300, subps. 3 and 4 (per the 5/31/05 application and 11/22/06 supplemental submittal):

Rule	Activity	Pollutants
subp. 3(H)(3)	Welding	PM/PM_{10}
subp. 3(H)(7)	alkaline/phosphate cleaners	PM/PM_{10}
subp. 3(K)	maintenance spray painting	VOC and HAP PM/PM_{10}

In the 11/22/06 submittal, the Permittee requested that EU 042 be re-classified as an IA under subp. 3(K), maintenance painting. However, the PTE of this unit is significant relevant to the VOC permit limit (PTE of unit is over 40 tpy of VOC). This unit either must remain in the permit and be limited under the cap, or the cap must be lowered to allow for the PTE of the non-tracked activities (both IAs and EUs). The Permittee chose to keep EU 042 in the permit.

In the original permit and the 5/31/05 application, powder coating operations were listed under the controlled, internally-vented IA (previously subp. 3(D), now Minn. R. 7008.4110. However, the powder coating operations do not have emissions control equipment (only product recovery) and therefore they qualify as IAs under subp. 2(D)(3) and are not required to be listed in the permit application or permit.

For those remaining activities that are treated as IAs, the PTE of these units should be evaluated if they could affect the applicability of regulations. The limited PM emissions are less than 200 tpy, so it is not reasonable to expect the IA emissions to affect the applicability of regulations (i.e., PTE would need to be greater than 50 tpy). For VOC/HAP maintenance painting (other than EU 042) consists of periodic painting of the building and/or painting of lines on the floor to designate walkways. The emissions from this activity are expected to be quite low and should not affect the applicability of regulations to the facility.

ATTACHMENT 2:
FACILITY DESCRIPTION AND CD-01 FORMS

MINNESOTA POLLUTION CONTROL AGENCY
AIR QUALITY
520 LAFAYETTE ROAD
ST. PAUL, MN 55155-4194

FACILITY DESCRIPTION: CONTROL EQUIPMENT (CE)

Show: Active and Pending Records
Action: PER 008
AQD Facility ID: 04900040
Facility Name: Foldcraft Co - Kenyon

	ID No.	Control Equip. Status	Added By (Action)	Retired By (Action)	Operator ID for Item	Control Equip. Type	Control Equipment Description	Manufacturer	Model	Pollutants Controlled	Capture Efficiency (%)	Destruction/ Collection Efficiency (%)	Afterburner Combustion Parameters
1	CE 001	Removed	PER 001			058	Mat or Panel Filter	Chemco Company	fiberglass				
2	CE 002	Active	PER 006			058	Mat or Panel Filter	Chemco Company	fiberglass	PM10 PM	80 80	92 92	
3	CE 003	Active	PER 006			058	Mat or Panel Filter	Chemco Company	fiberglass	PM10 PM	80 80	92 92	
4	CE 004	Active	PER 006			018	Fabric Filter - Low Temperature, i.e., T<180 Degrees F	Carter Day	RFC-376-RF12	PM10 PM	100 100	99 99	
5	CE 005	Removed	PER 007			018	Fabric Filter - Low Temperature, i.e., T<180 Degrees F	Micropol	12158-20	PM	100	99	
6	CE 006	Removed	PER 007			018	Fabric Filter - Low Temperature, i.e., T<180 Degrees F	Murphy Rodgers	MRM9	PM	100	99	
7	CE 007	Removed	PER 007			018	Fabric Filter - Low Temperature, i.e., T<180 Degrees F	Clean Air Products	custom	PM	100	99	
8	CE 008	Removed	PER 001			058	Mat or Panel Filter						
9	CE 009	Active	PER 006			058	Mat or Panel Filter	Chemco Company	interlocked paint filters	PM	80	92	
10	CE 010	Active	PER 006			058	Mat or Panel Filter	Chemco Company	interlocked paint filters	PM	80	92	
11	CE 011	Active	PER 006			058	Mat or Panel Filter	Chemco Company	interlocked paint filters	PM	80	92	
12	CE 012	Active	PER 006			058	Mat or Panel Filter	Chemco Company	fiberglass	PM10 PM	80 80	92 92	
13	CE 013	Removed	PER 006			058	Mat or Panel Filter	Chemco Company	fiberglass				
14	CE 014	Removed	PER 001			058	Mat or Panel Filter	Chemco Company	interlocked paint filters				
15	CE 015	Active	PER 006			018	Fabric Filter - Low Temperature, i.e., T<180 Degrees F	Carter Day	RJ-6X-1803	PM10 PM	100 100	99 99	
16	CE 015	Removed	PER 008			018	Fabric Filter - Low Temperature, i.e., T<180 Degrees F	Carter Day	RJ-6X-1803	PM10 PM	100 100	99 99	
17	CE 016	Active	PER 006			058	Mat or Panel Filter	Chemco Company	interlocked paint filters	PM10 PM	80 80	92 92	
18	CE 017	Active	PER 006			058	Mat or Panel Filter	Chemco	2.5 duo pads	PM10 PM	80 80	92 92	
19	CE 018	Removed	PER 006			099	Fly ash collection hopper	Breslove Seperator Company	custom				
20	CE 019	Active	PER 006			058	Mat or Panel Filter	Binks	Andreae	PM10 PM	80 80	92 92	
21	CE 020	Active	PER 006			058	Mat or Panel Filter	Binks	Andreae	PM10 PM	80 80	92 92	
22	CE 021	Active	PER 006			058	Mat or Panel Filter	Binks	Andreae	PM10 PM	80 80	92 92	
23	CE 022	Removed	PER 006			058	Mat or Panel Filter	never installed	never installed				

MINNESOTA POLLUTION CONTROL AGENCY
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Action: PER 008
AQD Facility ID: 04900040
Facility Name: Foldcraft Co - Kenyon

	ID No.	Control Equip. Status	Added By (Action)	Retired By (Action)	Operator ID for Item	Control Equip. Type	Control Equipment Description	Manufacturer	Model	Pollutants Controlled	Capture Efficiency (%)	Destruction/ Collection Efficiency (%)	Afterburner Combustion Parameters
24	CE 023	Active	PER 002			058	Mat or Panel Filter	Speedaire	NMF149265	PM	80	92	
25	CE 024	Removed	PER 007			058	Mat or Panel Filter	Speedaire	NMF149265	PM	80	92	
26	CE 025	Active	PER 004			058	Mat or Panel Filter	Global Finishing Solutions	PNR-12810-S	PM10 PM	80 80	92 92	
27	CE 026	Removed	PER 007			058	Mat or Panel Filter	Global Finishing Solutions	GPS Special	PM	80	92	
28	CE 027	Removed	PER 007			016	Fabric Filter - High Temperature, i.e., T>250 Degrees F	Ver-Tech	SPJ-72-X4T8	PM	100	99	
29	CE 027	Active	PER 008			016	Fabric Filter - High Temperature, i.e., T>250 Degrees F	Ver-Tech	SPJ-72-X4T8	PM	100	99	

MINNESOTA POLLUTION CONTROL AGENCY
AIR QUALITY
520 LAFAYETTE ROAD
ST. PAUL, MN 55155-4194

FACILITY DESCRIPTION: EMISSION UNIT (EU)

Show: Active and Pending Records
Action: PER 008
AQD Facility ID: 04900040
Facility Name: Foldcraft Co - Kenyon

	ID No.	Emission Unit Status	Added By (Action)	Retired By (Action)	Insignificant Activity	Operator ID for Item	Stack/ Vent ID No(s).	Control Equip. ID No(s).	Operator Description	Manufacturer	Model Number	SIC	Max. Design Capacity	Maximum Design Capacity Materials	Units n	Units d	Max Fuel Input (mil Btu)
1	EU 001	Removed	PER 001		☐	001			Spray Paint Booth PB-1			2511					
2	EU 002	Active	PER 001		☒	002			Powder Paint Booth PB-2	Nordson	B	2511	45		Lb	Hr	
3	EU 002	Removed	PER 008		☐	002			Powder Paint Booth PB-2	Nordson	B	2511	45		Lb	Hr	
4	EU 003	Active	PER 001		☒	003			Powder Paint Booth PB-3	Nordson	NQCB	2511	45		Lb	Hr	
5	EU 003	Removed	PER 008		☐	003			Powder Paint Booth PB-3	Nordson	NQCB	2511	45		Lb	Hr	
6	EU 004	Active	PER 006		☐	004	SV 004 (M)	CE 002	North Plant, Contact Cement Spray Booth (T-80382)	Binks	71-60	2511	15.5		Gal	Hr	
7	EU 004	Active	PER 008		☐	004	SV 004 (M)	CE 002	North Plant, Stain/Varnish Spray Booth (T-80382)	Binks	71-60	2511	15.5		Gal	Hr	
8	EU 005	Active	PER 006		☐	005	SV 005 (M)	CE 003	North Plant, Contact Cement (T-80382)	Binks	71-60	2511	31		Gal	Hr	
9	EU 005	Active	PER 008		☐	005	SV 005 (M)	CE 003	North Plant, Stain/Varnish Spray Booth (T-80382)	Binks	71-60	2511	31		Gal	Hr	
10	EU 006	Active	PER 006		☐	006	SV 006 (M)		Air Make Up Unit AM-1	Champion	RA-25	2511					1
11	EU 007	Active	PER 006		☐	007	SV 007 (M)		Air Make Up Unit AM-2	Champion	RA-27	2511					2
12	EU 008	Active	PER 001		☐	008	SV 008 (M)	CE 004	Spindle Sander D-1	Nash	50-72	2511					
13	EU 009	Active	PER 001		☐	009	SV 008 (M)	CE 004	Oscillating Edge Sander D-1	Yates	S4	2511					
14	EU 010	Active	PER 001		☐	010	SV 008 (M)	CE 004	Edge Belt Sander D-1	A&A	FES-72	2511					
15	EU 011	Active	PER 001		☐	011	SV 008 (M)	CE 004	Balloon Sander D-1	custom made	na	2511					
16	EU 012	Active	PER 001		☐	012	SV 008 (M)	CE 004	Ball Sander D-1	custom made	na	2511					
17	EU 013	Active	PER 001		☐	013	SV 008 (M)	CE 004	Stroker Sander D-1	Yates	5-7	2511					
18	EU 014	Active	PER 001		☐	014	SV 008 (M)	CE 004	Saw	Pistorius	180-CP	2511					
19	EU 015	Active	PER 001		☐	015	SV 008 (M)	CE 004	Right Cut Off Saw D-1	Pistorius	SC11	2511					
20	EU 016	Active	PER 001		☐	016	SV 008 (M)	CE 004	Mitre Saw D-1	Pistorius	MN11FC	2511					
21	EU 017	Active	PER 001		☐	017	SV 008 (M)	CE 004	Planer System D-1	Newman	S-282	2511					
22	EU 018	Active	PER 001		☐	018	SV 008 (M)	CE 004	Single Mortiser D-1	Bacci	MOA	2511					
23	EU 019	Active	PER 001		☐	019	SV 008 (M)	CE 004	Double Sided Tenoner D-1	Helma	DRP2500	2511					
24	EU 020	Active	PER 001		☐	020	SV 008 (M)	CE 004	Sizer D-1	Heian	WS-24	2511					
25	EU 021	Active	PER 001		☐	021	SV 008 (M)	CE 004	Saddle Seat Machine D-1	McKnight	1E	2511					

FACILITY DESCRIPTION: EMISSION UNIT (EU)

	ID No.	Emission Unit Status	Added By (Action)	Comm-ence Const. Date	Initial Startup Date	Removal Date	Firing Method	Pct. Fuel/ Space Heat	Bottleneck	Elevator Type
1	EU 001	Removed	PER 001			12/01/1994				
2	EU 002	Active	PER 001	01/01/1993	01/01/1993					
3	EU 002	Removed	PER 008	01/01/1993	01/01/1993					
4	EU 003	Active	PER 001	01/01/1993	01/01/1993					
5	EU 003	Removed	PER 008	01/01/1993	01/01/1993					
6	EU 004	Active	PER 006	01/01/1993	01/01/1993					
7	EU 004	Active	PER 008	01/01/1993	01/01/1993					
8	EU 005	Active	PER 006	01/01/1993	01/01/1993					
9	EU 005	Active	PER 008	01/01/1993	01/01/1993					
10	EU 006	Active	PER 006	01/01/1966	01/01/1966					
11	EU 007	Active	PER 006	01/01/1967	01/01/1967					
12	EU 008	Active	PER 001	01/01/1983	01/01/1983					
13	EU 009	Active	PER 001	01/01/1955	01/01/1955					
14	EU 010	Active	PER 001	01/01/1981	01/01/1981					
15	EU 011	Active	PER 001	01/01/1952	01/01/1952					
16	EU 012	Active	PER 001	01/01/1961	01/01/1961					
17	EU 013	Active	PER 001	01/01/1985	01/01/1985					
18	EU 014	Active	PER 001							
19	EU 015	Active	PER 001	01/01/1969	01/01/1969					
20	EU 016	Active	PER 001	01/01/1964	01/01/1964					
21	EU 017	Active	PER 001	01/01/1990	01/01/1990					
22	EU 018	Active	PER 001	01/01/1986	01/01/1986					
23	EU 019	Active	PER 001	01/01/1985	01/01/1985					
24	EU 020	Active	PER 001	01/01/1976	01/01/1976					
25	EU 021	Active	PER 001	01/01/1989	01/01/1989					

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AQD Facility ID: 04900040
Facility Name: Foldcraft Co - Kenyon

	ID No.	Emission Unit Status	Added By (Action)	Retired By (Action)	Insignificant Activity	Operator ID for Item	Stack/ Vent ID No(s).	Control Equip. ID No(s).	Operator Description	Manufacturer	Model Number	SIC	Max. Design Capacity	Maximum Design Capacity Materials	Units n	Units d	Max Fuel Input (mil Btu)
26	EU 022	Active	PER 001		☐	022	SV 008 (M)	CE 004	Lathe D-1	Seavey	M6HD	2511					
27	EU 023	Active	PER 001		☐	023	SV 008 (M)	CE 004	Lathe D-1	Palpator	TM1200	2511					
28	EU 024	Active	PER 001		☐	024	SV 008 (M)	CE 004	Molder D-1	Mattison	276	2511					
29	EU 025	Active	PER 001		☐	025	SV 008 (M)	CE 004	Molder D-1	Mattison	276	2511					
30	EU 025	Removed	PER 008		☐	025	SV 008 (M)		Molder D-1	Mattison	276	2511					
31	EU 026	Active	PER 001		☐	026	SV 008 (M)	CE 004	Sander D-1	Timesaver	352-3HT	2511					
32	EU 027	Active	PER 001		☐	027	SV 008 (M)	CE 004	Rip Saw D-1	Mareen	424-DC	2511					
33	EU 028	Active	PER 001		☐	028	SV 008 (M)	CE 004	Straight Line Rip Saw D-1	Mattsion	202	2511					
34	EU 029	Active	PER 001		☐	029	SV 008 (M)	CE 004	Table Saw D-1	Delta	3020A	2511					
35	EU 030	Active	PER 001		☐	030	SV 008 (M)	CE 004	Swing Saw D-1	Heston & Anders	5	2511					
36	EU 031	Active	PER 001		☐	031	SV 008 (M)	CE 004	Table Saw D-1	Roll	655-16	2511					
37	EU 032	Active	PER 001		☐	032	SV 008 (M)	CE 004	Whirlwind Cut Off Saw D-1	Simplec	212L	2511					
38	EU 033	Active	PER 001		☐	033	SV 008 (M)	CE 004	CNC Router D-1	Heian	NC-831-P	2511					
39	EU 034	Active	PER 001		☐	034	SV 008 (M)	CE 004	CNC Router D-1	Heian	NC-431-P	2511					
40	EU 035	Active	PER 001		☐	035	SV 008 (M)	CE 004	Double Spindle Shaper D-1	Carter	206	2511					
41	EU 036	Active	PER 001		☐	036	SV 008 (M)	CE 004	Shaper D-1	Whitney	34A	2511					
42	EU 037	Active	PER 006		☐	059	SV 014 (M)		Bake Oven O-1	Beattie	na	2511					3.5
43	EU 038	Active	PER 001		☐	060	SV 015 (M)		Dura Edge Area DE-1	Dura Edge	H1CE180	2511					
44	EU 039	Active	PER 006		☐	061	SV 016 (M)	CE 009	Finishing Room, Stain/Varnish Spray Booth (T-80373)	Nordson	A4B	2511	3.6		Gal	Hr	
45	EU 040	Active	PER 006		☐	062	SV 017 (M)	CE 010	Finishing Room, Stain/Varnish Spray Booth (T-80377)	Nordson	A4B	2511	3.6		Gal	Hr	
46	EU 041	Active	PER 006		☐	063	SV 018 (M)	CE 011	Upholstery Area, Adhesive Spray Booth (T-80376)	Nordson	A4B	2511	15		Gal	Hr	
47	EU 042	Active	PER 006		☐	064	SV 019 (M)	CE 012	Process Build, Paint Spray Booth (T-80382)	Nordson	A4B	2511	15		Gal	Hr	
48	EU 043	Removed	PER 003		☐	065	SV 020 (M)		Fiberglass Mix Booth M-1	Hamilton	13300-3	2511	195		Lb	Hr	
49	EU 043	Removed	PER 008		☐	065	SV 020 (M)		Fiberglass Mix Booth M-1	Hamilton	13300-3	2511	195		Lb	Hr	
50	EU 044	Removed	PER 001		☐	066			Seat Finish Spray Booth PB-10	Nordson	A4B	2511	3.6		Gal	Hr	

FACILITY DESCRIPTION: EMISSION UNIT (EU)

	ID No.	Emission Unit Status	Added By (Action)	Comm-ence Const. Date	Initial Startup Date	Removal Date	Firing Method	Pct. Fuel/ Space Heat	Bottleneck	Elevator Type
26	EU 022	Active	PER 001	01/01/1985	01/01/1985					
27	EU 023	Active	PER 001	01/01/1982	01/01/1982					
28	EU 024	Active	PER 001	01/01/1977	01/01/1977					
29	EU 025	Active	PER 001	01/01/1962	01/01/1962					
30	EU 025	Removed	PER 008	01/01/1962	01/01/1962					
31	EU 026	Active	PER 001	01/01/1990	01/01/1990					
32	EU 027	Active	PER 001	01/01/1990	01/01/1990					
33	EU 028	Active	PER 001	01/01/1961	01/01/1961					
34	EU 029	Active	PER 001	01/01/1963	01/01/1963					
35	EU 030	Active	PER 001	01/01/1963	01/01/1963					
36	EU 031	Active	PER 001	01/01/1986	01/01/1986					
37	EU 032	Active	PER 001	01/01/1982	01/01/1982					
38	EU 033	Active	PER 001	01/01/1984	01/01/1984					
39	EU 034	Active	PER 001	01/01/1989	01/01/1989					
40	EU 035	Active	PER 001	01/01/1954	01/01/1954					
41	EU 036	Active	PER 001	01/01/1962	01/01/1962					
42	EU 037	Active	PER 006	01/01/1983	01/01/1983					
43	EU 038	Active	PER 001	01/01/1992	01/01/1992					
44	EU 039	Active	PER 006	01/01/1992	01/01/1992					
45	EU 040	Active	PER 006	01/01/1992	01/01/1992					
46	EU 041	Active	PER 006	01/01/1992	01/01/1992					
47	EU 042	Active	PER 006	01/01/1992	01/01/1992					
48	EU 043	Removed	PER 003	01/01/1980	01/01/1980	11/15/2002				
49	EU 043	Removed	PER 008	01/01/1980	01/01/1980	11/15/2002				
50	EU 044	Removed	PER 001	01/01/1992	01/01/1992	08/01/1999				

MINNESOTA POLLUTION CONTROL AGENCY
AIR QUALITY
520 LAFAYETTE ROAD
ST. PAUL, MN 55155-4194

FACILITY DESCRIPTION: EMISSION UNIT (EU)

Show: Active and Pending Records
Action: PER 008
AQD Facility ID: 04900040
Facility Name: Foldcraft Co - Kenyon

	ID No.	Emission Unit Status	Added By (Action)	Retired By (Action)	Insignif-icant Activity	Operator ID for Item	Stack/ Vent ID No(s).	Control Equip. ID No(s).	Operator Description	Manufacturer	Model Number	SIC	Max. Design Capacity	Maximum Design Capacity			Max Fuel Input (mil Btu)
														Materials	Units n	Units d	
51	EU 045	Active	PER 007		☐	067	SV 022 (M)		Primary Boiler	Keiler	CP	2511					7.3
52	EU 045	Active	PER 008		☐	067	SV 022 (M)	CE 027	Primary Boiler	Keiler	CP	2511					7.3
53	EU 046	Active	PER 006		☐	068	SV 023 (M)		Secondary Boiler	York Shipley	448 spec.	2511					3.3
54	EU 047	Active	PER 006		☐	069			Burn Off Oven O-2	Bayco	88150	2511					1.5
55	EU 047	Active	PER 008		☐	069	SV 024 (M)		Burn Off Oven O-2	Bayco	88150	2511					1.5
56	EU 048	Removed	PER 006		☐	070			Chair Back Oven O-3	Despatch	73794	2511					0.5
57	EU 049	Active	PER 001		☐	071	SV 027 (M)	CE 015	Cut Off Saw D-5	DeWalt	1605	2511					
58	EU 049	Removed	PER 008		☐	071			Cut Off Saw D-5	DeWalt	1605	2511					
59	EU 050	Active	PER 006		☐	087	SV 028 (M)	CE 016	Contour Seats, Stain/Varnish Spray Booth (T-80310)	Binks	custom	2511	3.6		Gal	Hr	
60	EU 051	Active	PER 006		☐		SV 033 (M)	CE 017	Wood Edge, Stain/Varnish Spray Booth (T-22860)	JBI	IDB-127-S	2511	7		Gal	Hr	
61	EU 052	Active	PER 001		☐	037	SV 008 (M)	CE 004	Round Pole Milling D-1	LOBO	RM-70	2511					
62	EU 053	Active	PER 001		☐	038	SV 008 (M)	CE 004	Round Pole Sander D-1	Champsonel	SD-22	2511					
63	EU 054	Active	PER 001		☐	039	SV 008 (M)	CE 004	Mitre Chop Saw D-1	Hitachi	C12FA	2511					
64	EU 055	Active	PER 001		☐	040	SV 008 (M)	CE 004	Table Saw D-1	Delta	843377	2511					
65	EU 056	Active	PER 001		☐	041	SV 008 (M)	CE 004	Belt Sander D-1	AEM	AEM75	2511					
66	EU 057	Active	PER 001		☐	042	SV 008 (M)	CE 004	Sander D-1	Timesaver	336-1	2511					
67	EU 058	Active	PER 001		☐	043	SV 008 (M)	CE 004	Autoedge Bander D-1	Adwood	203	2511					
68	EU 059	Active	PER 001		☐	044	SV 008 (M)	CE 004	Edgebander D-1	Manea	13341047	2511					
69	EU 059	Removed	PER 008		☐	044	SV 008 (M)		Edgebander D-1	Manea	13341047	2511					
70	EU 060	Active	PER 001		☐	045	SV 008 (M)	CE 004	Topmaster Machine D-1	Topmaster	3000HF	2511					
71	EU 061	Active	PER 001		☐	046	SV 008 (M)	CE 004	Panel Saw D-1	Holzma	HPP0421	2511					
72	EU 062	Active	PER 001		☐	047	SV 008 (M)	CE 004	Overtable Saw D-1	Midwest	4036	2511					
73	EU 063	Active	PER 001		☐	048	SV 008 (M)	CE 004	Panel Saw D-1	Rodgers	707	2511					
74	EU 064	Active	PER 001		☐	049	SV 008 (M)	CE 004	Pin Router D-1	Onsrud	W1024	2511					
75	EU 065	Active	PER 001		☐	050	SV 008 (M)	CE 004	CNC Router D-1	Heian	NC34IP	2511					
76	EU 066	Active	PER 001		☐	051	SV 008 (M)	CE 004	CNC Router D-1	Heian	NC44IP	2511					

FACILITY DESCRIPTION: EMISSION UNIT (EU)

	ID No.	Emission Unit Status	Added By (Action)	Comm-ence Const. Date	Initial Startup Date	Removal Date	Firing Method	Pct. Fuel/ Space Heat	Bottleneck	Elevator Type
51	EU 045	Active	PER 007	01/01/1967	01/01/1967					
52	EU 045	Active	PER 008	01/01/1967	01/01/1967					
53	EU 046	Active	PER 006	01/01/1967	01/01/1967					
54	EU 047	Active	PER 006	01/01/1984	01/01/1984					
55	EU 047	Active	PER 008	01/01/1984	01/01/1984					
56	EU 048	Removed	PER 006	01/01/1981	01/01/1981	12/01/1997				
57	EU 049	Active	PER 001	01/01/1979	01/01/1979					
58	EU 049	Removed	PER 008	01/01/1979	01/01/1979					
59	EU 050	Active	PER 006	01/01/1994	01/01/1994					
60	EU 051	Active	PER 006	01/01/2000	01/01/2000					
61	EU 052	Active	PER 001	01/01/1994	01/01/1994					
62	EU 053	Active	PER 001	01/01/1994	01/01/1994					
63	EU 054	Active	PER 001	01/01/1994	01/01/1994					
64	EU 055	Active	PER 001	01/01/1964	01/01/1964					
65	EU 056	Active	PER 001	01/01/1984	01/01/1984					
66	EU 057	Active	PER 001	01/01/1974	01/01/1974					
67	EU 058	Active	PER 001	01/01/1994	01/01/1994					
68	EU 059	Active	PER 001	01/01/1987	01/01/1987					
69	EU 059	Removed	PER 008	01/01/1987	01/01/1987					
70	EU 060	Active	PER 001	01/01/1994	01/01/1994					
71	EU 061	Active	PER 001	01/01/1992	01/01/1992					
72	EU 062	Active	PER 001	01/01/1990	01/01/1990					
73	EU 063	Active	PER 001	01/01/1975	01/01/1975					
74	EU 064	Active	PER 001	01/01/1961	01/01/1961					
75	EU 065	Active	PER 001	01/01/1984	01/01/1984					
76	EU 066	Active	PER 001	01/01/1988	01/01/1988					

MINNESOTA POLLUTION CONTROL AGENCY
AIR QUALITY
520 LAFAYETTE ROAD
ST. PAUL, MN 55155-4194

FACILITY DESCRIPTION: EMISSION UNIT (EU)

Show: Active and Pending Records
Action: PER 008
AQD Facility ID: 04900040
Facility Name: Foldcraft Co - Kenyon

	ID No.	Emission Unit Status	Added By (Action)	Retired By (Action)	Insignif-icant Activity	Operator ID for Item	Stack/ Vent ID No(s).	Control Equip. ID No(s).	Operator Description	Manufacturer	Model Number	SIC	Max. Design Capacity	Maximum Design Capacity			Max Fuel Input (mil Btu)
														Materials	Units n	Units d	
77	EU 067	Active	PER 001		☐	052	SV 008 (M)	CE 004	Auto Shaper D-1	A&B	500	2511					
78	EU 068	Active	PER 001		☐	053	SV 008 (M)	CE 004	Spindle Shaper D-1	Central Machines	na	2511					
79	EU 069	Active	PER 001		☐	054	SV 008 (M)	CE 004	Sander D-2	Timesaver	VW-30	2511					
80	EU 070	Removed	PER 007		☐	055			Spindle Router D-3	Onsrud	W-240	2511					
81	EU 071	Removed	PER 007		☐	056			Drill & Tap D-3	Hypneumat	HB125-6	2511					
82	EU 072	Removed	PER 007		☐	057			Seat Fabricating Cleanup D-4	custom	na	2511					
83	EU 073	Active	PER 001		☐	072	SV 027 (M)	CE 015	Panel Cut Saw D-5	Safety Speed	H-5-C-4	2511					
84	EU 073	Removed	PER 008		☐	072	SV 027 (M)		Panel Cut Saw D-5	Safety Speed	H-5-C-4	2511					
85	EU 074	Active	PER 001		☐	073	SV 027 (M)	CE 015	Vertical Band Saw D-5	Northfield	573510K	2511					
86	EU 074	Removed	PER 008		☐	073	SV 027 (M)		Vertical Band Saw D-5	Northfield	573510K	2511					
87	EU 075	Active	PER 001		☐	074	SV 027 (M)	CE 015	Stat Balloon Saw D-5	Lobo	FL-901	2511					
88	EU 075	Removed	PER 008		☐	074	SV 027 (M)		Stat Balloon Saw D-5	Lobo	FL-901	2511					
89	EU 076	Active	PER 001		☐	075	SV 027 (M)	CE 015	Edge Bander D-5	Crouch	71-60	2511					
90	EU 076	Removed	PER 008		☐	075	SV 027 (M)		Edge Bander D-5	Crouch	71-60	2511					
91	EU 077	Active	PER 001		☐	076	SV 027 (M)	CE 015	Motorized Mitre Saw D-5	Rockwell	34-010	2511					
92	EU 077	Removed	PER 008		☐	076	SV 027 (M)		Motorized Mitre Saw D-5	Rockwell	34-010	2511					
93	EU 078	Active	PER 001		☐	077	SV 027 (M)	CE 015	Tilting Table Saw D-5	Delta	unknown	2511					
94	EU 078	Removed	PER 008		☐	077	SV 027 (M)		Tilting Table Saw D-5	Delta	unknown	2511					
95	EU 079	Active	PER 001		☐	078	SV 027 (M)	CE 015	Sliding Table Saw D-5	SCMI	SI116WA	2511					
96	EU 079	Removed	PER 008		☐	078	SV 027 (M)		Sliding Table Saw D-5	SCMI	SI116WA	2511					
97	EU 080	Active	PER 001		☐	079	SV 027 (M)	CE 015	Sliding Table Saw D-5	SCMI	SC3	2511					
98	EU 080	Removed	PER 008		☐	079	SV 027 (M)		Sliding Table Saw D-5	SCMI	SC3	2511					
99	EU 081	Active	PER 001		☐	080	SV 027 (M)	CE 015	Shaper D-5	SCMI	T110A	2511					
100	EU 081	Removed	PER 008		☐	080	SV 027 (M)		Shaper D-5	SCMI	T110A	2511					
101	EU 082	Active	PER 001		☐	081	SV 027 (M)	CE 015	Stat Belt Sander D-5	Timesaver	1371HP75	2511					
102	EU 082	Removed	PER 008		☐	081	SV 027 (M)		Stat Belt Sander D-5	Timesaver	1371HP75	2511					

FACILITY DESCRIPTION: EMISSION UNIT (EU)

	ID No.	Emission Unit Status	Added By (Action)	Comm-ence Const. Date	Initial Startup Date	Removal Date	Firing Method	Pct. Fuel/ Space Heat	Bottleneck	Elevator Type
77	EU 067	Active	PER 001	01/01/1974	01/01/1974					
78	EU 068	Active	PER 001	01/01/1965	01/01/1965					
79	EU 069	Active	PER 001	01/01/1975	01/01/1975					
80	EU 070	Removed	PER 007	01/01/1967	01/01/1967					
81	EU 071	Removed	PER 007	01/01/1982	01/01/1982					
82	EU 072	Removed	PER 007	01/01/1972	01/01/1972					
83	EU 073	Active	PER 001	01/01/1994	01/01/1994					
84	EU 073	Removed	PER 008	01/01/1994	01/01/1994					
85	EU 074	Active	PER 001	01/01/1982	01/01/1982					
86	EU 074	Removed	PER 008	01/01/1982	01/01/1982					
87	EU 075	Active	PER 001	01/01/1993	01/01/1993					
88	EU 075	Removed	PER 008	01/01/1993	01/01/1993					
89	EU 076	Active	PER 001	01/01/1993	01/01/1993					
90	EU 076	Removed	PER 008	01/01/1993	01/01/1993					
91	EU 077	Active	PER 001	01/01/1986	01/01/1986					
92	EU 077	Removed	PER 008	01/01/1986	01/01/1986					
93	EU 078	Active	PER 001	01/01/1952	01/01/1952					
94	EU 078	Removed	PER 008	01/01/1952	01/01/1952					
95	EU 079	Active	PER 001	01/01/1993	01/01/1993					
96	EU 079	Removed	PER 008	01/01/1993	01/01/1993					
97	EU 080	Active	PER 001	01/01/1993	01/01/1993					
98	EU 080	Removed	PER 008	01/01/1993	01/01/1993					
99	EU 081	Active	PER 001	01/01/1993	01/01/1993					
100	EU 081	Removed	PER 008	01/01/1993	01/01/1993					
101	EU 082	Active	PER 001	01/01/1993	01/01/1993					
102	EU 082	Removed	PER 008	01/01/1993	01/01/1993					

FACILITY DESCRIPTION: EMISSION UNIT (EU)

Show: Active and Pending Records
Action: PER 008
AQD Facility ID: 04900040
Facility Name: Foldcraft Co - Kenyon

	ID No.	Emission Unit Status	Added By (Action)	Retired By (Action)	Insignif-icant Activity	Operator ID for Item	Stack/ Vent ID No(s).	Control Equip. ID No(s).	Operator Description	Manufacturer	Model Number	SIC	Max. Design Capacity	Maximum Design Capacity Materials	Units n	Units d	Max Fuel Input (mil Btu)
103	EU 083	Active	PER 001		☐	082	SV 027 (M)	CE 015	Shaper D-5	Delta	240C	2511					
104	EU 083	Removed	PER 008		☐	082	SV 027 (M)		Shaper D-5	Delta	240C	2511					
105	EU 084	Active	PER 006		☐		SV 029 (M)	CE 019	Wood Edge, Mold Making (T-80389)	Binks	PFA-16-8-B-LH	2511	32.4		Gal	Hr	
106	EU 085	Active	PER 006		☐		SV 030 (M)	CE 020	Wood Edge, Stain/Varnish Spray Booth (T-80390)	Binks	PFA-16-8-B-LH	2511	32.4		Gal	Hr	
107	EU 086	Active	PER 006		☐		SV 033 (M)	CE 021	Polycast, Poly Color Spray Booth (T-22509)	Binks	PFA-16-8-B-LH	2511	32.4		Gal	Hr	
108	EU 087	Active	PER 006		☐		SV 032 (M)		Air Make-up unit	Concept & Design, Inc.	DF120/125	2511					4
109	EU 088	Active	PER 006		☐	084	SV 026 (M)		Post Forming Spray			2511					
110	EU 088	Active	PER 008		☐	084	SV 026 (M)		Post Forming Spray	na	na	2511					
111	EU 089	Active	PER 006		☐	085	SV 026 (M)		Laminating Lines			2511					
112	EU 089	Active	PER 008		☐	085	SV 026 (M)		Laminating Lines	na	na	2511					
113	EU 090	Removed	PER 006		☐				Back Panel Booth -- never installed			2511					
114	EU 091	Active	PER 006		☐	083	SV 026 (M)		Miscellaneous Clean up	na	na	2511					
115	EU 092	Active	PER 006		☐	084	SV 026 (M)		Miscellaneous Gluing	na	na	2511					
116	EU 093	Active	PER 007		☐		SV 008 (M)	CE 004	Wood storage silos	na	na	2511					
117	EU 094	Active	PER 007		☐	094	SV 038 (M)	CE 023	Wall Cell	Speedaire	70473	2511	18.98		Gal	Hr	
118	EU 095	Removed	PER 007		☐	095			Wood Chair Area, Stain/Varnish Spray Booth (T-84174)	Speedaire	70473	2511	18.98		Gal	Hr	
119	EU 096	Active	PER 007		☐	096	SV 026 (M)	CE 025	Solid Wood Tops, Stain/Varnish Spray Booth			2511	19.2		Gal	Hr	
120	EU 096	Active	PER 008		☐	096	SV 026 (M)	CE 025	Solid Wood Tops, Stain/Varnish Spray Booth	Kremlin		2511	19.2		Gal	Hr	
121	EU 097	Removed	PER 007		☐	097			North Plant, Stain/Varnish Spray Booth	Global Finishing Syster	GPS Special	2511	3.74		Lb	Hr	

FACILITY DESCRIPTION: EMISSION UNIT (EU)

	ID No.	Emission Unit Status	Added By (Action)	Comm-ence Const. Date	Initial Startup Date	Removal Date	Firing Method	Pct. Fuel/ Space Heat	Bottleneck	Elevator Type
103	EU 083	Active	PER 001	01/01/1993	01/01/1993					
104	EU 083	Removed	PER 008	01/01/1993	01/01/1993					
105	EU 084	Active	PER 006	05/01/1997	05/01/1997					
106	EU 085	Active	PER 006	05/01/1997	05/01/1997					
107	EU 086	Active	PER 006	12/01/1997	12/01/1997					
108	EU 087	Active	PER 006	05/01/1997	05/01/1997					
109	EU 088	Active	PER 006	06/01/1984	06/01/1984					
110	EU 088	Active	PER 008	06/01/1984	06/01/1984					
111	EU 089	Active	PER 006	06/01/1984	06/01/1984					
112	EU 089	Active	PER 008	06/01/1984	06/01/1984					
113	EU 090	Removed	PER 006							
114	EU 091	Active	PER 006	06/01/1984	06/01/1984					
115	EU 092	Active	PER 006	06/01/1984	06/01/1984					
116	EU 093	Active	PER 007	06/01/1984	06/01/1984					
117	EU 094	Active	PER 007	06/01/2001	06/01/2001					
118	EU 095	Removed	PER 007	06/01/2001	06/01/2001					
119	EU 096	Active	PER 007	08/01/2004	08/01/2004					
120	EU 096	Active	PER 008	08/01/2004	08/01/2004					
121	EU 097	Removed	PER 007	09/01/2005	09/01/2005					

MINNESOTA POLLUTION CONTROL AGENCY
AIR QUALITY
520 LAFAYETTE ROAD
ST. PAUL, MN 55155-4194

FACILITY DESCRIPTION: GROUPS (GP)

Show: Active and Pending Records
Action: PER 008
AQD Facility ID: 04900040
Facility Name: Foldcraft Co - Kenyon

	ID No.	Group Status	Added By (Action)	Retired By (Action)	Include in EI	Operator ID for Item	Group Description	Group Items
1	GP 001	Active	PER 007		☐		VOC and HAPs Limits	EU 004, EU 005, EU 038, EU 039, EU 040, EU 041, EU 042, EU 050, EU 051, EU 084, EU 085, EU 086, EU 088, EU 089, EU 091, EU 092, EU 094, EU 096
2	GP 002	Active	PER 006		☐		Panel Filter Requirements	CE 002, CE 003, CE 009, CE 010, CE 011, CE 012, CE 016, CE 017, CE 021, CE 023, CE 024, CE 025, CE 026
3	GP 003	Active	PER 001		☐		Gas-Fired Indirect Heating Equipment	EU 006, EU 007, EU 046, EU 087
4	GP 004	Active	PER 001		☐		Ovens	EU 037, EU 047
5	GP 005	Active	PER 006		☐		CAM Panel Filter Requirements	CE 019, CE 020

MINNESOTA POLLUTION CONTROL AGENCY
AIR QUALITY
520 LAFAYETTE ROAD
ST. PAUL, MN 55155-4194

FACILITY DESCRIPTION: STACK/VENTS (SV)

Show: Active and Pending Records
Action: PER 008
AQD Facility ID: 04900040
Facility Name: Foldcraft Co - Kenyon

	ID No.	Stack/ Vent Status	Added By (Action)	Retired By (Action)	Operator ID for Item	Operators Description	Height of Opening From Ground (feet)	Inside Dimensions		Design Flow Rate at Top (ACFM)	Exit Gas Temperature at Top (ºF)	Flow Rate/ Temperature Information Source	Discharge Direction
								Diameter or Length (feet)	Width (feet)				
1	SV 004	Active	PER 001		PB-4	Paint Booth PB-4	16	2.67	2.67	12138	70		Up, No Cap
2	SV 005	Active	PER 001		PB-5	Paint Booth PB-5	16	2.67	2.67	12138	70		Up, No Cap
3	SV 006	Active	PER 001		AM-1	Air Makeup Unit	20	3.50	3.67	10000	80		Up, No Cap
4	SV 007	Active	PER 001		AM-2	Air Makeup Unit	20	3.50	3.67	18000	80		Up, No Cap
5	SV 008	Active	PER 001		D-1	Main Baghouse - Woodworking equipment	20	4.67	4.75	57000	70		*Error
6	SV 008	Active	PER 008		D-1	Main Baghouse - Woodworking equipment	20	4.67	4.75	57000	70		Horizontal
7	SV 009	Removec	PER 007		D-2	Baghouse - Outside Storage Silos	16	1.25	3.00	15000	70		Up, No Cap
8	SV 010	Removec	PER 007		D-3	Baghouse - Drill & Tap unit	16	0.67	0.83	2200	70		Up, No Cap
9	SV 011	Removec	PER 007		D-4	Baghouse - Seat Fabrication Clean up	16	1.33	1.50	6300	70		Up, No Cap
10	SV 014	Active	PER 001		O-1	Bake Oven	27	1.50	1.50	4500	400		Up, No Cap
11	SV 015	Active	PER 001		DE-1	Dura Edge Area	22	2.00	2.00	3000	70		Up, No Cap
12	SV 016	Active	PER 001		PB-6	Wood Finishing Spray Booth PB-6	30	2.00	2.00	8750	70		Up, No Cap
13	SV 017	Active	PER 001		PB-7	Wood Finishing Spray Booth PB-7	30	2.83	2.83	15250	70		Up, No Cap
14	SV 018	Active	PER 001		PB-8	Upholstery Glue Booth PB-8	25	3.00	3.00	7000	70		Up, No Cap
15	SV 019	Active	PER 007		PB-9	Fiberglass Gelcoat Booth PB-9	5	2.48	2.50	14000	70		Horizontal
16	SV 020	Retired	PER 003		M-1	Fiberglass Mix Booth	5	2.48		14000	70		Horizontal
17	SV 021	Active	PER 001		PB-10	Seat Finish Spray Booth PB-10	30	2.83	3.00	15800	70		Up, No Cap
18	SV 022	Active	PER 001		B-1	Primary Boiler	60	2.00	2.00	2325	390		Up, No Cap
19	SV 023	Active	PER 001		B-2	Secondary Boiler	25	1.00	1.00	1000	350		Up, No Cap
20	SV 024	Active	PER 001		O-2	Burn Off Oven	25	2.00	2.00	600	900		Up, No Cap
21	SV 026	Active	PER 001		F-1	Building Ventilation - miscellaneous processes	20	3.00	3.00	6960	70		Up, No Cap
22	SV 027	Active	PER 001		D-5	Baghouse - North Building Woodworking equipment	25	2.00	2.50	6300	70		Up, No Cap
23	SV 027	Removec	PER 008		D-5	Baghouse - North Building Woodworking equipment	25	2.00	2.50	6300	70		Up, No Cap
24	SV 028	Active	PER 001		PB-11	Seat Finish Spray Booth PB-11	18	2.00	2.00	7000	70		Up, No Cap
25	SV 029	Active	PER 007			Polyurethane spray booth	4	2.80	3.00	12700	70	Manufacturer	Horizontal
26	SV 030	Active	PER 007			Polyurethane spray booth	4	2.80	3.00	12700	70	Manufacturer	Horizontal
27	SV 031	Active	PER 007			Polyurethane spray booth	4	2.80	3.00	12700	70	Manufacturer	Horizontal

MINNESOTA POLLUTION CONTROL AGENCY
AIR QUALITY
520 LAFAYETTE ROAD
ST. PAUL, MN 55155-4194

FACILITY DESCRIPTION: STACK/VENTS (SV)

Show: Active and Pending Records
Action: PER 008
AQD Facility ID: 04900040
Facility Name: Foldcraft Co - Kenyon

	ID No.	Stack/ Vent Status	Added By (Action)	Retired By (Action)	Operator ID for Item	Operators Description	Height of Opening From Ground (feet)	Inside Dimensions		Design Flow Rate at Top (ACFM)	Exit Gas Temperature at Top (ºF)	Flow Rate/ Temperature Information Source	Discharge Direction
								Diameter or Length (feet)	Width (feet)				
28	SV 032	Active	PER 007			Air make-up unit (polyurethane area)	15	17.00	11.38	40000	80	Manufacturer	Horizontal
29	SV 033	Active	PER 006			Seat Finish Spray Booth PB-12	22	2.80	3.00	10500	70	Manufacturer	Up, With Cap
30	SV 034	Removec	PER 006			Back Panel Booth - never installed							
31	SV 035	Removec	PER 007			Wood Finishing Spray Booths	12	2.00	2.00	7000	70	Manufacturer	Up, No Cap
32	SV 036	Removec	PER 007			North Building Spraybooth Stack	27	2		6400	70	Manufacturer	Up, No Cap
33	SV 037	Active	PER 007		PB-15	PB-15 Wood Varnish Booth	8	2.83	2.83	10000	70	Manufacturer	Horizontal
34	SV 038	Active	PER 007		PB-14	PB-14 Wood Varnish Booth	5.5	2	2	5250	70		Horizontal

COMPLIANCE PLAN CD-01

Facility Name: Foldcraft Co - Kenyon

Permit Number: 04900040 - 008

Subject Item: **Total Facility**

	NC/ CA	Type	Citation	Requirement
1.0		CD	hdr	SOURCE-SPECIFIC REQUIREMENTS
2.0		CD	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000	This permit establishes limits on the facility to keep it a minor source under New Source Review. The Permittee cannot make any change at the source that would make the source a major source under New Source Review until a major permit amendment has been issued. This includes changes that might otherwise qualify as insignificant modifications and minor or moderate amendments.
3.0		S/A	Minn. R. 7007.0800, subp. 2	Annual Report: due 30 days after end of each calendar year following Permit Issuance. The Permittee shall submit an annual report by January 30th that describes the changes made at the facility during the previous calendar year using the latest MPCA application forms (GI-04 and GI-05 series). The report shall document any equipment that was modified, installed, or replaced. The report shall be submitted with the annual Compliance Certification listed in Table B. As part of the Annual Report, the Permittee shall verify and certify that the facility has maintained minor source status for New Source Review.
4.0		CD	Minn. R. 7007.0800, subp. 2	Equipment Inventory: The Permittee shall maintain a written list of all emissions units, stack/vents, and control equipment on site. The Permittee shall update the list to include any replaced, modified, or new equipment prior to making the change. The list shall correlate the units to the numbers used in this permit (EU, SV, GP, and CE) and shall include the data on Forms GI-04, GI-05A, and GI-05B. The date of construction shall be the date the change was made for replaced, modified, or new equipment. For spray booths, the record shall include the spray technology and manufacturer specified transfer efficiency and the spray capacity in gallons per hour.
5.0		CD	Minn. R. 7007.0800, subp. 2	Permit Appendices: This permit contains appendices as listed in the permit Table of Contents. The Permittee shall comply with all requirements contained in the appendices.
6.0		CD	hdr	OPERATIONAL REQUIREMENTS
7.0		CD	Minn. R. 7011.0020	Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.
8.0		CD	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)	Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, except as noted for SV 008 and EU 045.
9.0		CD	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)	Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O & M plan shall identify all air pollution control equipment and control practices and shall include a preventative maintenance program for the equipment and practices, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment and practices to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment and practices, and the records kept to demonstrate plan implementation.
10.0		CD	Minn. R. 7019.1000, subp. 4	Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate.
11.0		CD	Minn. R. 7011.0150	Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150.
12.0		CD	Minn. R. 7030.0010 - 7030.0080	Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.
13.0		CD	Minn. R. 7007.0800, subp. 9(A)	Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A).

14.0		CD	Minn. R. 7007.0800, subp. 16	The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.
15.0		CD	40 CFR pt. 50; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 4; Minn.R. 7009.0010-7009.0080	The Permittee shall comply with National Primary and Secondary Ambient Air Quality Standards, 40 CFR pt. 50, and the Minnesota Ambient Air Quality Standards, Minn. R. 7009.0010 to 7009.0080. Compliance shall be demonstrated upon written request by the MPCA.
16.0		CD	hdr	PERFORMANCE TESTING
17.0		CD	Minn. R. ch. 7017	Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, B, and/or C.
18.0		CD	Minn. Rs. 7017.2030, subps. 1-4, 7017.2018 and Minn. R. 7017.2035, subps. 1-2	Performance Test Notifications and Submittals: Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements. Performance Test Notification (written): due 30 days before each Performance Test Performance Test Plan: due 30 days before each Performance Test Performance Test Pre-test Meeting: due 7 days before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - Microfiche Copy: due 105 days after each Performance Test The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.
19.0		CD	Minn. R. 7017.2025, subp. 3	Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as stated in the MPCA's Notice of Compliance letter granting preliminary approval. Preliminary approval is based on formal review of a subsequent performance test on the same unit as specified by Minn. R. 7017.2025, subp. 3. The limit is final upon issuance of a permit amendment incorporating the change.
20.0		CD	hdr	MONITORING REQUIREMENTS
21.0		CD	Minn. R. 7007.0800, subp. 4(D)	Monitoring Equipment Calibration: The Permittee shall calibrate all required monitoring equipment at least once every 12 months (any requirements applying to continuous emission monitors are listed separately in this permit).
22.0		CD	Minn. R. 7007.0800, subp. 4(D)	Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.
23.0		CD	hdr	RECORDKEEPING
24.0		CD	Minn. R. 7007.0800, subp. 5(C)	Recordkeeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).
25.0		CD	Minn. R. 7007.0800, subp. 5(B)	Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350, subp. 2), including records of the emissions resulting from those changes.
26.0		CD	Minn. R. 7007.1200, subp. 4	If the Permittee determines that no permit amendment or notification is required prior to making a change, the Permittee must retain records of all calculations required under Minn. R. 7007.1200. For expiring permits, these records shall be kept for a period of five years from the date the change was made or until permit reissuance, whichever is longer. The records shall be kept at the stationary source for the current calendar year of operation and may be kept at the stationary source or office of the stationary source for all other years. The records may be maintained in either electronic or paper format.
27.0		CD	hdr	REPORTING/SUBMITTALS

28.0		CD	Minn. R. 7019.1000, subp. 3	Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3. At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.
29.0		CD	Minn. R. 7019.1000, subp. 2	Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2. At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.
30.0		CD	Minn. R. 7019.1000, subp. 1	Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.
31.0		CD	Minn. R. 7019.1000, subp. 1	Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.
32.0		S/A	Minn. R. 7007.0800, subp. 6(A)(2)	Semiannual Deviations Report: due 30 days after end of each calendar half-year following Permit Issuance. The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31. If no deviations have occured, the Permittee shall submit the report stating no deviations.
33.0		CD	Minn. R. 7007.1150 - Minn. R. 7007.1500	Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.
34.0		S/A	Minn. R. 7007.0400, subp. 2	Application for Permit Reissuance: due 180 days before expiration of Existing Permit
35.0		CD	Minn. R. 7007.1400, subp. 1(H)	Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H). Performance testing deadlines from the General Provisions of 40 CFR pt. 60 and pt. 63 are examples of deadlines for which the MPCA does not have authority to grant extensions and therefore do not meet the requirements of Minn. R. 7007.1400, subp. 1(H).
36.0		S/A	Minn. R. 7007.0800, subp. 6(C)	Compliance Certification: due 31 days after end of each calendar year following Permit Issuance (for the previous calendar year). The Permittee shall submit this report on a form approved by the Commissioner, both to the Commissioner and to the US EPA regional office in Chicago. This report covers all deviations experienced during the calendar year.
37.0		CD	Minn. R. 7019.3000 - Minn. R. 7019.3100	Emission Inventory Report: due on or before April 1 of each calendar year following permit issuance. To be submitted on a form approved by the Commissioner.

38.0		CD	Minn. R. 7002.0005 - Minn. R. 7002.0095	Emission Fees: due 60 days after receipt of an MPCA bill.

COMPLIANCE PLAN CD-01

Facility Name: Foldcraft Co - Kenyon

Permit Number: 04900040 - 008

Subject Item: **GP 001 VOC and HAPs Limits**

Associated Items:
EU 004 North Plant, Stain/Varnish Spray Booth (T-80382)
EU 005 North Plant, Stain/Varnish Spray Booth (T-80382)
EU 038 Dura Edge Area DE-1
EU 039 Finishing Room, Stain/Varnish Spray Booth (T-80373)
EU 040 Finishing Room, Stain/Varnish Spray Booth (T-80377)
EU 041 Upholstery Area, Adhesive Spray Booth (T-80376)
EU 042 Process Build, Paint Spray Booth (T-80382)
EU 050 Contour Seats, Stain/Varnish Spray Booth (T-80310)
EU 051 Wood Edge, Stain/Varnish Spray Booth (T-22860)
EU 084 Wood Edge, Mold Making (T-80389)
EU 085 Wood Edge, Stain/Varnish Spray Booth (T-80390)
EU 086 Polycast, Poly Color Spray Booth (T-22509)
EU 089 Laminating Lines
EU 091 Miscellaneous Clean up
EU 092 Miscellaneous Gluing
EU 094 Wall Cell
EU 096 Solid Wood Tops, Stain/Varnish Spray Booth

	NC/ CA	Type	Citation	Requirement
1.0		CD	hdr	EMISSION AND OPERATIONAL LIMITS
2.0		LIMIT	Title I Condition: To avoid major source classification under 40 CFR Section 63.2	HAP-Single: less than or equal to 9.0 tons/year using 12-month Rolling Sum of each individual HAP to be calculated by the 15th day of each month for the previous 12 months as described later in this permit. Individual HAP content shall be determined as described in the Material Content requirement of this section. All non-combustion HAP-emitting equipment at the Facility is covered by this limit except for activites listed in Appendix I of this permit.
3.0		LIMIT	Title I Condition: To avoid major source classification under 40 CFR Section 63.2	HAPs - Total: less than or equal to 20.0 tons/year using 12-month Rolling Sum to be calculated by the 15th day of each month for the previous 12 months as described later in this permit. Total HAP content shall be determined as described in the Material Content requirement of this section. All non-combustion HAP-emitting equipment at the Facility is covered by this limit except for activites listed in Appendix I of this permit.
4.0		LIMIT	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000	Volatile Organic Compounds: less than or equal to 235 tons/year using 12-month Rolling Sum to be calculated by the 15th day of each month for the previous 12 months as described later in this permit. VOC content shall be determined as described in the Material Content requirement of this section. All non-combustion VOC-emitting equipment at the Facility is subject to this limit except for activites listed in Appendix I of this permit.
5.0		CD	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; To avoid major source classification under 40 CFR Section 63.2	VOC and HAP PreCaps: If the Permittee replaces any non-combustion VOC or HAP-emitting equipment, adds new VOC or HAP-emitting equipment, or modifies the existing equipment listed in GP 001, such equipment is subject to the above permit limits as well as all of the requirements of GP 001. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. For changes described in this item, the Permittee is not required to repeat VOC calculations described in Minn. R. 7007.1200, subp. 2. A permit amendment will still be needed regardless of the emissions increase if the change will be subject to a new applicable requirement or requires revisions to the limits or monitoring and recordkeeping in this permit.

6.0		CD	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7011.0715	The Permittee shall vent emissions from all spray booths, including existing, modified, or new spray booths, to control equipment meeting the requirements of either GP 002 or GP 005.
7.0		LIMIT	Minn. R. 7011.0710, subp. 1(A) OR Minn. R. 7011.0715, subp. 1(A)	Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. This limit applies separately to each emission unit listed in GP 001.
8.0		LIMIT	Minn. R. 7011.0715, subp. 1(B)	Opacity: less than or equal to 20 percent opacity . This limit applies separately to each piece of equipment listed in GP 001 that was not in operation before July 9, 1969.
9.0		LIMIT	Minn. R. 7011.0710, subp. 1(B)	Opacity: less than or equal to 20 percent opacity , except for one six-minute period per hour of not more than 60 percent opacity. This limit applies separately to each piece of equipment listed in GP 001 that was in operation before July 9, 1969.
10.0		CD	hdr	MONITORING AND RECORDKEEPING REQUIREMENTS
11.0		CD	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; To avoid major source classification under 40 CFR Section 63.2	Material Usage Recordkeeping: For all coating materials and solvents (e.g., clean up materials, thinnners, etc.): On each day of operations, the Permittee shall calculate, record, and maintain the total quantity of all VOC and HAP-containing materials used. This shall be based on either written usage logs or meter/gauge readings. Other VOC and HAP-containing materials: The Permittee shall calculate, record, and maintain monthly usage records showing the quantity of each material used. This shall be based on either wirtten usage logs or purchase/delivery records.
12.0		CD	Minn. R. 7007.0800. subps. 4 and 5	Monthly Calculations - HAP and VOC Emissions By the 15th of each month, the Permittee shall calculate and record the following: 1) The total usage of VOC and HAP containing materials for the previous calendar month using the material usage records. This record shall also include the VOC, total HAP, each individual HAP, and solids contents of each material as determined by the Material Content requirement of this permit. 2) The VOC, total HAP, and each individual HAP emissions for the previous month using the formulas specified in this permit. 3) The 12-month rolling sum VOC, total HAP, and each individual HAP emissions for the previous 12 month period by summing the monthly emissions data for the previous 12 months.
13.0		CD	Minn. R. 7007.0800. subps. 4 and 5	Monthly Calculation -- HAP Emissions. The Permittee shall calculate each individual HAP and total HAP emissions using the following equation: HAP Emissions (tons/month) = (A1 x B1) + (A2 x B2) + (A3 x B3) + ... Where: HAP Emissions = the amount of each pollutant (either total HAP or each individual HAP), used, in tons/month; A# = Amount of each HAP containing material used in the previous month, in tons/month; and B# = weight percent of each individual or total HAP in A#, as a fraction (e.g., 50% is 0.50).
14.0		CD	Minn. R. 7007.0800, subps. 4 and 5	Monthly Calculation -- VOC Emissions. The Permittee shall calculate VOC emissions using the following equation: VOC (tons/month) = (A1 x B1) + (A2 x B2) + (A3 x B3) + ... Where: VOC = total VOC used in tons/month; A# = amount of each VOC containing material used, in tons/month; and B# = weight percent VOC in A#, as a fraction.

15.0		CD	Minn. R. 7007.0800, subp. 4	Material Content: VOC, HAP, and Solids contents of raw materials shall be determined by the Material Safety Data Sheet (MSDS) provided by the supplier for each material used. The Permittee shall obtain a certification from the supplier as to the accuracy of the MSDS. The Permittee shall maintain an MSDS on-site at all times, for each material used. If the MSDS provides a material content range, the highest number in the range shall be used for all calculations. Other alternative methods approved by the MPCA may be used to determine the VOC, HAP, or Solids content. The MPCA reserves the right to require the Permittee to take samples of VOC containing materials, and to conduct analysis of VOC, HAP, or Solids as per EPA and ASTM reference methods. If the EPA or ASTM reference method is used, it shall supersede the MSDS.
16.0		CD	Minn. R. 7005.0100, subp. 35a	Maximum Contents of Materials and Spray Booth Operating Parameters: The Permittee assumed certain worst-case contents of materials when determining the annual and short term potential to emit of units in GP 001. These assumptions are listed in Appendix II of this permit. Changing to a material that has a higher content of any of the given pollutants or changing the sprary rate or transfer efficiency is considered a change in method of operation that must be evaluated under Minn. R. 7007.1200, subp. 3 to determine if a permit amemdment or notification is required under Minn. R. 7007.1150.
17.0		CD	Minn. R. 7007.0800, subp. 5	Recordkeeping of Coating Changes: The Permittee shall keep a log of all coating materials and their VOC, total HAP, each individual HAP, and Solids contents, as determined by the Material Content requirement of this permit.

COMPLIANCE PLAN CD-01

Facility Name: Foldcraft Co - Kenyon

Permit Number: 04900040 - 008

Subject Item: **GP 002 Panel Filter Requirements**

Associated Items:
CE 002 Mat or Panel Filter
CE 003 Mat or Panel Filter
CE 009 Mat or Panel Filter
CE 010 Mat or Panel Filter
CE 011 Mat or Panel Filter
CE 012 Mat or Panel Filter
CE 016 Mat or Panel Filter
CE 017 Mat or Panel Filter
CE 021 Mat or Panel Filter
CE 023 Mat or Panel Filter
CE 025 Mat or Panel Filter

	NC/ CA	Type	Citation	Requirement
1.0		CD	Minn. R. 7007.0800, subp. 2	The requirements of GP 002 apply separately to each control device in GP 002.
2.0		CD	hdr	LIMITS
3.0		LIMIT	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7011.0715	The Permittee shall operate and maintain the control equipment such that it acheives an overall control efficiency (=80% capture efficiency x removal efficiency of the panel filter), for Total Particulate Matter: greater than or equal to 68 percent control efficiency
4.0		LIMIT	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7011.0715	The Permittee shall operate and maintain the control equipment such that it acheives an overall control efficiency (=80% capture efficiency x removal efficiency of the panel filter), for PM < 10 micron: greater than or equal to 68 percent control efficiency
5.0		LIMIT	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7011.0715	The Permittee shall operate and maintain the control equipment such that it acheives an overall control efficiency (=80% capture efficiency x removal efficiency of the panel filter), for PM < 2.5 micron: greater than or equal to 68 percent control efficiency
6.0		CD	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000	If the Permittee replaces any existing panel filter in GP 002, adds new panel filters to a non-CAM spray booth, or modifies the panel filters listed in GP 002, such equipment is subject to all of the requirements of GP 002. Prior to making such a change, the Permittee shall apply for an obtain the appropriate permit amendment, if applicable.
7.0		CD	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7011.0715	The Permittee shall operate and maintain the panel filters any time that any process equipment controlled by the panel filters is(are) in operation. The Permittee shall document periods of non-operation of the control equipment.
8.0		CD	Minn. R. 7007.0800, subp. 14	Operation and Maintenance of Filters: The Permittee shall operate and maintain each filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.
9.0		CD	hdr	MONITORING AND RECORDKEEPING
10.0		CD	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000	Daily Inspections: Once each operating day, the Permittee shall visually inspect the condition of the panel filters, including, but not limited to, alignment, saturation, tears, and holes. The Permittee shall maintain a daily written record of filter inspections.
11.0		CD	Minn. R. 7007.0800, subp. 14	Periodic Inspections: The Permittee shall inspect the control equipment components as required by the manufacturing specifications. The Permittee shall maintain a written record of these inspections.

12.0		CD	Minn. R. 7007.0800, subps. 4, 5, and 14	Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.
13.0		CD	Minn. R. 7007.0800, subps. 4, 5, and 14	Initial Hood Certification and Evaluation: The control device hood must conform to the requirements listed in Minn. R. 7011.0070, subp. 1, and the Permittee shall certify this as specified in Minn. R. 7011.0070, subp. 3. The Permittee shall maintain a copy of the evaluation and certification on site.
14.0		CD	Minn. R. 7007.0800, subps. 4, 5, and 14	Annual Hood Evaluation: The Permittee shall measure and record at least once every 12 months the fan rotation speed, fan power draw, or face velocity of each hood, or other comparable air flow indication method. The Permittee shall maintain a copy of the annual evaluation on site.

MINNESOTA POLLUTION CONTROL AGENCY
AIR QUALITY
520 LAFAYETTE ROAD
ST. PAUL, MN 55155-4194

COMPLIANCE PLAN CD-01

Facility Name: Foldcraft Co - Kenyon

Permit Number: 04900040 - 008

Subject Item: **GP 003 Gas-Fired Indirect Heating Equipment**

Associated Items: EU 006 Air Make Up Unit AM-1

EU 007 Air Make Up Unit AM-2

EU 046 Secondary Boiler

EU 087 Air Make-up unit

	NC/ CA	Type	Citation	Requirement
1.0		LIMIT	Minn. R. 7011.0510, subp. 1	Total Particulate Matter: less than or equal to 0.6 lbs/million Btu heat input for each of units EU 006, EU 007, and EU 046. Due to equipment design, PTE of each unit is 0.0072 lb/MMBtu.
2.0		LIMIT	Minn. R. 7011.0515, subp. 1	Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input for EU 087. Due to equipment design, PTE of the unit is 0.0072 lb/MMBtu.
3.0		LIMIT	Minn. R. 7011.0515, subp. 2 & Minn. R. 7011.0510, subp. 2	Opacity: less than or equal to 20 percent opacity , except for one six-minute period per hour of not more than 60 percent opacity.
4.0		CD	Minn. R. 7005.0100, subp. 35a	Fuel Type: natural gas only, by design.
5.0		CD	Minn. R. 7007.0800, subps. 4 & 5	The Permittee shall keep records of fuel type and usage on a monthly basis.

MINNESOTA POLLUTION CONTROL AGENCY
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COMPLIANCE PLAN CD-01

Facility Name: Foldcraft Co - Kenyon

Permit Number: 04900040 - 008

Subject Item: **GP 004 Ovens**

Associated Items: EU 037 Bake Oven O-1

EU 047 Burn Off Oven O-2

	NC/ CA	Type	Citation	Requirement
1.0		LIMIT	Minn. R. 7011.0610, subp. 1(A)(1)	Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. This limit applies individually to each unit listed in GP 004.
2.0		LIMIT	Minn. R. 7011.0610, subp. 1(A)(2)	Opacity: less than or equal to 20 percent opacity , except for one six-minute period per hour of not more than 60 percent opacity. This limit applies individually to each unit listed in GP 004.
3.0		CD	Minn. R. 7005.0100, subp. 35a	Fuel Type: natural gas only, by design.
4.0		CD	Minn. R. 7007.0800, subps. 4 & 5	The Permittee shall keep records of fuel type and usage on a monthly basis.

COMPLIANCE PLAN CD-01

Facility Name: Foldcraft Co - Kenyon

Permit Number: 04900040 - 008

Subject Item: **GP 005 CAM Panel Filter Requirements**

Associated Items: CE 019 Mat or Panel Filter

CE 020 Mat or Panel Filter

	NC/ CA	Type	Citation	Requirement
1.0		CD	Minn. R. 7007.0800, subp. 2	The requirements of GP 005 apply separately to each control device in GP 005.
2.0		CD	hdr	LIMITS
3.0		LIMIT	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7011.0715	The Permittee shall operate and maintain the control equipment such that it acheives an overall control efficiency (=80% capture efficiency x removal efficiency of the panel filter), for Total Particulate Matter: greater than or equal to 68 percent control efficiency
4.0		LIMIT	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7011.0715	The Permittee shall operate and maintain the control equipment such that it acheives an overall control efficiency (=80% capture efficiency x removal efficiency of the panel filter), for PM < 10 micron: greater than or equal to 68 percent control efficiency
5.0		LIMIT	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7011.0715	The Permittee shall operate and maintain the control equipment such that it acheives an overall control efficiency (=80% capture efficiency x removal efficiency of the panel filter), for PM < 2.5 micron: greater than or equal to 68 percent control efficiency
6.0		CD	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000	If the Permittee replaces any existing panel filter in GP 005, adds new panel filters to a CAM spray booth, or modifies the panel filters listed in GP 005, such equipment is subject to all of the requirements of GP 005. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, if applicable.
7.0		CD	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7011.0715	The Permittee shall operate and maintain the panel filters any time that any process equipment controlled by the panel filters is(are) in operation. The Permittee shall document periods of non-operation of the control equipment.
8.0		CD	Minn. R. 7007.0800, subp. 14	Operation and Maintenance of Filters: The Permittee shall operate and maintain each filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.
9.0		CD	hdr	MONITORING AND RECORDKEEPING
10.0		LIMIT	40 CFR Section 64.3; Minn. R. 7017.0200	Pressure Drop: greater than or equal to 0.0 inches of water column and less than or equal to 1.0 inches of water column , unless a new range is required to be set pursuant to Minn. R. 7017.2025, subp. 3.
11.0		CD	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; 40 CFR Section 64.7(c); Minn. R. 7017.0200	Pressure Drop Monitoring: Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities, the Permittee shall continuously monitor the pressure drop across each panel filter when the booth controlled by the panel filter is in operation. Monitoring data shall be used in assessing the control device operation as required by 40 CFR Section 64.7(c).
12.0		CD	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; 40 CFR Section 64.3; Minn. R. 7017.0200	Daily Inspections: At least once per 24-hour period, the Permittee shall visually inspect the condition of each panel filter with respect to alignment, saturation, tears, holes and any other matter that may affect the filter's performance. The Permittee shall record the time and date of each inspection and any actions resulting from the inspection.
13.0		CD	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; 40 CFR Section 64.3; Minn. R. 7017.0200	Pressure Drop Recordkeeping. At least once per 24-hour period, the Permittee shall read and record the pressure drop across each panel filter. The Permittee shall record the time and date of each pressure drop reading and whether or not the observed pressure drop was within the range specified in this permit. Recorded values outside the range specified in this permit are considered excursions as defined in 40 CFR Section 64.1.

14.0		CD	40 CFR Section 64.7(d); Minn. R. 7017.0200	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - the recorded pressure drop is outside the required operating range; or - If the filters or any of their components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.
15.0		CD	40 CFR Section 64.7(b); Minn. R. 7017.0200	Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained, including maintaining necessary parts for routine repairs of the monitoring equipment, when the monitored panel filter is in operation.
16.0		CD	40 CFR Section 64.3; Minn. R. 7017.0200	The Permittee shall calibrate the pressure gauge at least once every 12 months and shall maintain a written record of any action resulting from the calibration.
17.0		CD	40 CFR Section 64.3; Minn. R. 7017.0200	Monthly Inspections: At least once per calendar month, the Permittee shall inspect the control equipment components that are subject to wear or plugging, including, but not limited to, bearings, belts, hoses, fans, nozzles, orifices and ducts. The Permittee shall maintain a written record of the inspection and any action resulting from the inspection.
18.0		CD	40 CFR Section 64.3; Minn. R. 7017.0200	Quarterly Inspections: At least once per calendar quarter, the Permittee shall inspect all components that are not subject to wear or plugging, including structural components, housing, ducts, and hoods. The Permittee shall maintain a written record of the inspection and any action resulting from the inspection.
19.0		CD	40 CFR Section 64.3; Minn. R. 7017.0200	Annual Inspection: At least once per calendar year, the Permittee shall conduct an internal inspection of the control device that includes all operating systems of the control device. The Permittee shall maintain a written record of the inspection and any action resulting from the inspection.
20.0		CD	40 CFR Section 64.3; Minn. R. 7017.0200	The Permittee shall calibrate each pressure gauge at least once every 12 months and shall maintain a written record of any action resulting from the calibration.
21.0		CD	Minn. R. 7007.0800, subps. 4, 5, and 14	Initial Hood Certification and Evaluation: The control device hood must conform to the requirements listed in Minn. R. 7011.0070, subp. 1, and the Permittee shall certify this as specified in Minn. R. 7011.0070, subp. 3. The Permittee shall maintain a copy of the evaluation and certification on site.
22.0		CD	Minn. R. 7007.0800, subps. 4, 5, and 14	Annual Hood Evaluation: The Permittee shall measure and record at least once every 12 months the fan rotation speed, fan power draw, or face velocity of each hood, or other comparable air flow indication method. The Permittee shall maintain a copy of the annual evaluation on site.
23.0		CD	40 CFR Section 64.7(e); Minn. R. 7017.0200	Documentation of Need for Improved Monitoring. If the Permittee fails to achieve compliance with an emission limitation or standard for which the monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing pressure drop range, the Permittee shall promptly notify the MPCA and, if necessary, submit a permit amendment application to address the necessary monitoring changes.
24.0		CD	40 CFR Section 64.9(a)(2); Minn. R. 7017.0200	As required by 40 CFR Section 64.9(a)(2), for the Semi-Annual Deviations Report listed in Table B of this permit and/or the Notification of Deviations Endangering Human Health and the Environment listed earlier in Table A of this permit, as applicable, the Permittee shall include the following related to the monitoring identified as required by 40 CFR pt. 64: 1) Summary information on the number, duration and cause of excursions or exceedances, as applicable, and the corrective actions taken; and 2) Summary information on the number, duration and cause for monitor downtime incidents.
25.0		CD	40 CFR Section 64.9(b); Minn. R. 7017.0200	The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, and other supporting information required to be maintained. The Permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

COMPLIANCE PLAN CD-01

Facility Name: Foldcraft Co - Kenyon

Permit Number: 04900040 - 008

Subject Item: **SV 008 Main Baghouse - Woodworking equipment**

Associated Items:
EU 009 Oscillating Edge Sander D-1
EU 010 Edge Belt Sander D-1
EU 011 Balloon Sander D-1
EU 012 Ball Sander D-1
EU 013 Stroker Sander D-1
EU 019 Double Sided Tenoner D-1
EU 021 Saddle Seat Machine D-1
EU 022 Lathe D-1
EU 023 Lathe D-1
EU 024 Molder D-1
EU 026 Sander D-1
EU 027 Rip Saw D-1
EU 028 Straight Line Rip Saw D-1
EU 029 Table Saw D-1
EU 030 Swing Saw D-1
EU 031 Table Saw D-1
EU 032 Whirlwind Cut Off Saw D-1
EU 033 CNC Router D-1
EU 034 CNC Router D-1
EU 035 Double Spindle Shaper D-1
EU 036 Shaper D-1
EU 054 Mitre Chop Saw D-1
EU 055 Table Saw D-1
EU 056 Belt Sander D-1
EU 057 Sander D-1
EU 060 Topmaster Machine D-1
EU 061 Panel Saw D-1
EU 062 Overtable Saw D-1
EU 063 Panel Saw D-1
EU 064 Pin Router D-1
EU 065 CNC Router D-1
EU 066 CNC Router D-1
EU 067 Auto Shaper D-1
EU 068 Spindle Shaper D-1
EU 069 Sander D-2
EU 093 Wood storage silos

	NC/ CA	Type	Citation	Requirement
1.0		CD	hdr	EMISSION LIMITS
2.0		LIMIT	Minn. R. 7011.0715, subp. 1(A) OR Minn. R. 7011.0710, subp. 1A	Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. This limit applies separately to each piece of wood working equipment.

3.0		LIMIT	Minn. R. 7011.0715, subp. 1(B)	Opacity: less than or equal to 20 percent opacity . This limit applies separately to each piece of wood working equipment that was not in operation prior to July 9, 1969.
4.0		LIMIT	Minn. R. 7011.0710, subp. 1(B)	Opacity: less than or equal to 20 percent opacity , except for one six-minute period per hour of not more than 60 percent opacity. This limit applies separately to each piece of wood working equipment that was in operation before July 9, 1969.
5.0		CD	hdr	OPERATIONAL LIMITS - CE 004
6.0		CD	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020 (G)	The operation of this piece of control equipment is not necessary in order for the process to meet applicable emissions limits. However, the Permittee wishes to take credit for its operation for the purposes of reporting actual emissions for emission inventory. Therefore, in order for the PM, PM10, and PM2.5 to be considered controlled for the purposes of emissions inventory, the fabric filter must comply with the requirements of this permit during the time credit for control is taken. The PM, PM10, and PM2.5 generated during that time shall be considered controlled, and the control efficiency used is the limit given in this table.
7.0		LIMIT	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020(G)	Total Particulate Matter: greater than or equal to 99 percent control efficiency or greater than or equal to 79 percent control efficiency, whichever is applicable based on if the device has a total enclosure or a hood capture system.
8.0		LIMIT	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020(G)	PM < 10 micron: greater than or equal to 93 percent control efficiency or greater than or equal to 74 percent control efficiency, whichever is applicable based on if the device has a total enclosure or a hood capture system.
9.0		LIMIT	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020(G)	PM < 2.5 micron: greater than or equal to 93 percent control efficiency or greater than or equal to 74 percent control efficiency, whichever is applicable based on if the device has a total enclosure or a hood capture system.
10.0		LIMIT	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020 (G)	Pressure Drop: greater than or equal to 1 inches of water column and less than or equal to 6 inches of water column , recorded once every 24 hours when in operation. If the pressure drop is outside the specified pressure drop range, this shall be considered a deviation that must be reported in the Semiannual Deviations Report.
11.0		CD	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020 (G)	Maintenance of Control Equipment: The Permittee shall maintain the control equipment as specified in Minn. R. 7011.0075, subp. 2(A)-(G) and maintain records of maintenance activities and corrective actions as specified in Minn. R. 7011.0075, subp. 2(H) and (I).
12.0		CD	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020 (G)	Hood Certification and Recordkeeping: If the control device does not collect through a total enclosure as defined in Minn. R. 7011.0060, subp. 5, the Permittee can use the hood control efficiency listed in Minn. R. 7011.0070, subp. 1 (and given above as 74%) if the hood conforms to the rule requirements listed in Minn. R. 7011.0070, subp. 1, and the Permittee certifies this as required in Minn. R. 7011.0070, subp. 3. The Permittee shall maintain a copy of this certification on site. Hood Evaluation: The Permittee shall measure and record at least once per calendar month the fan rotation speed, fan power draw, or face velocity of each hood, or other comparable air flow indication method. The Permittee shall maintain a copy of the evaluation on site.

COMPLIANCE PLAN CD-01

Facility Name: Foldcraft Co - Kenyon

Permit Number: 04900040 - 008

Subject Item: **EU 045 Primary Boiler**

Associated Items: CE 027 Fabric Filter - High Temperature, i.e., T>250 Degrees F

SV 022 Primary Boiler

	NC/ CA	Type	Citation	Requirement
1.0		CD	hdr	EMISSION LIMITS
2.0		LIMIT	Minn. R. 7011.0510, subp. 1	Total Particulate Matter: less than or equal to 0.6 lbs/million Btu heat input
3.0		LIMIT	Minn. R. 7011.0510, subp. 2	Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.
4.0		CD	hdr	OPERATIONAL LIMITS - CE 027
5.0		CD	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020 (G)	The operation of this piece of control equipment is not necessary in order for the process to meet applicable emissions limits. However, the Permittee wishes to take credit for its operation for the purposes of reporting actual emissions for emission inventory when burning wood. Therefore, in order for the PM, PM10, and PM2.5 to be considered controlled for the purposes of emissions inventory, the fabric filter must comply with the requirements of this permit during the time credit for control is taken. The PM, PM10, and PM2.5 generated during that time shall be considered controlled, and the control efficiency used is the limit given in this table. The Permittee shall document periods of non-operation of the control equipment.
6.0		LIMIT	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020(G)	Total Particulate Matter: greater than or equal to 99 percent control efficiency or greater than or equal to 79 percent control efficiency, whichever is applicable based on if the device has a total enclosure or a hood capture system.
7.0		LIMIT	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020(G)	PM < 10 micron: greater than or equal to 93 percent control efficiency or greater than or equal to 74 percent control efficiency, whichever is applicable based on if the device has a total enclosure or a hood capture system.
8.0		LIMIT	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020(G)	PM < 2.5 micron: greater than or equal to 93 percent control efficiency or greater than or equal to 74 percent control efficiency, whichever is applicable based on if the device has a total enclosure or a hood capture system.
9.0		LIMIT	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020 (G)	Pressure Drop: greater than or equal to 1 inches of water column and less than or equal to 6 inches of water column , recorded once every 24 hours when in operation. If the pressure drop is outside the specified pressure drop range, this shall be considered a deviation that must be reported in the Semiannual Deviations Report.
10.0		CD	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020 (G)	Maintenance of Control Equipment: The Permittee shall maintain the control equipment as specified in Minn. R. 7011.0075, subp. 2(A)-(G) and maintain records of maintenance activities and corrective actions as specified in Minn. R. 7011.0075, subp. 2(H) and (I).
11.0		CD	Minn. R. 7007.0800, subp. 2	Fuel type: limited to wood and natural gas
12.0		CD	Minn. R. 7007.0800, supbs. 4 & 5	The Permittee shall keep record of fuel type and usage on a monthly basis.
13.0		CD	hdr	NESHAP SUBPART JJJJJJ REQUIREMENTS: Requirements under 40 CFR pt. 63, Subpart JJJJJJ: National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers Area Sources Enforcement not delegated to MPCA.
14.0		CD	hdr	OPERATIONAL REQUIREMENTS
15.0		CD	40 CFR Section 63.11196(a)(1)	The Permittee must comply with the requirement to conduct a tune-up according to 40 CFR Section 63.11223(b) no later than March 21, 2012, or a later date as determined by EPA rulemaking to amend Subpart JJJJJJ.

16.0		CD	40 CFR Section 63.11205(a)	At all times the Permittee must operate and maintain the affected boiler, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenances records, and inspection of the source.
17.0		CD	40 CFR Section 63.11210(c)	The Permittee must demonstrate initial compliance with each applicable work practice standard, management practice, or emission reduction measure no later than March 21, 2014 and according to the applicable provisions in 40 CFR Section 63.7(a)(2).
18.0		CD	40 CFR Section 63.11201(b); 40 CFR Section 63.11223(a); 40 CFR Section 63, subp. JJJJJJ, Table 2	The Permittee must conduct a tune-up for each boiler biennially and keep records as required in 40 CFR Section 63.11225(c) to demonstrate continuous compliance. Each biennial tune-up must be conducted no more than 25 months after the previous tune-up.
19.0		CD	40 CFR Section 63.11223(b)	The Permittee must conduct a tune-up of the boiler biennially to demonstrate continuous compliance as specified in (1) through (7) as follows: (1) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown, but you must inspect each burner at least once every 36 months). (2) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available. (3) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly. (4) Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available. (continued below)
20.0		CD	Continued from above	(continued from above) (5) Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). (6) Maintain onsite and submit, if requested by the Administrator, a biennial report containing the information in (6)(i) through (iii) below: (i) The concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured before and after the tune-up of the boiler. (ii) A description of any corrective actions taken as a part of the tune-up of the boiler. (iii) The type and amount of fuel used over the 12 months prior to the biennial tune-up of the boiler. (7) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within one week of startup.
21.0		CD	40 CFR Section 63.11201(d)	The standards in 40 CFR Section 63.11201 apply at all times.
22.0		CD	40 CFR Section 63.11235; 40 CFR pt. 63 subp. JJJJJJ, Table 8	The Permittee must comply with the General Provisions as applicable in Table 8 of 40 CFR pt. 63, subp. JJJJJJ.
23.0		CD	hdr	RECORDKEEPING
24.0		CD	40 CFR Section 63.11225(c)	The Permittee must maintain the following records: (1) A copy of each notification and report that was submitted to comply with subpart JJJJJJ, including all documentation supporting any Initial Notification or Notification of Compliance Status that was submitted, according to the requirements in 40 CFR Section 63.10(b)(2)(xiv); (2) The Permittee must keep records to document conformance with the work practices, emission reduction measures, and management practices required by 40 CFR Section 63.11214 as specified as follows: (i) Records must identify each boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned.

25.0		CD	Continued from above	(continued from above) (2)(ii) Records documenting the fuel type(s) used monthly by each boiler, including, but not limited to, a description of the fuel, including whether the fuel has received a non-waste determination by the Permitee or EPA, and the total fuel usage amount with units of measure. Records of the occurrence and duration of each malfunction of each boiler or of the associated air pollution control and monitoring equipment. (continued below)
26.0		CD	Continued from above	(continued from above) (4) Records of the occurrence and duration of each malfunction of each boiler or of the associated air pollution control and monitoring equipment. (5) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in 40 CFR Section 63.11205(a), including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation. (continued below)
27.0		CD	Continued from above	(continued from above) (6) Records of all inspection and monitoring data as required by 40 CFR Sections 63.11221 and 63.11222, and the information identified below for each required inspection or monitoring: (i) The date, place, and time of the monitoring event; (ii) Person conducting the monitoring. (iii) Technique or method used; (iv) Operating conditions during the activity; (v) Results, including the date, time, and duration of the period from the time the monitoring indicated a problem to the time that monitoring indicated proper operation; (vi) Maintenance or corrective action taken (if applicable).
28.0		CD	40 CFR Section 63.11225(d)	Records must be in a form suitable and readily available for expeditious review, according to 40 CFR Section 63.10(b)(1). The Permittee must keep each record for 5 years following the date of each recorded action. The Permittee must keep each record onsite for at least 2 years after the date of each recorded action according to 40 CFR Section 63.10(b)(1). The Permittee may keep the records off site for the remaining 3 years.
29.0		CD	hdr	REPORTING AND NOTIFICATION REQUIREMENTS
30.0		CD	40 CFR Sections 63.11225(b)	The Permittee must prepare by March 1 every two years, and submit to the Administrator upon request, a biennial compliance certification report. The Permittee must submit the biennial compliance report by March 15 if the Permittee had any instance described by item 3 below. The biennial compliance certification report for the previous calendar year must contain the information the following. (1) Company name and address (2) Statement by a responsible official, with the official's name, title, phone number, e-mail address, and signature, certifying the truth, accuracy, and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of Subpart JJJJJJ. (3) Include a description of deviations from the applicable requirements during the reporting period, the time periods during which the deviations occurred, and the corrective actions taken.
31.0		CD	40 CFR Section 63.11225(a)(4)	Notification of compliance status: due 120 days after 03/21/2014, in accordance with 40 CFR Section 63.9(h). In addition to the information required in 40 CFR Section 63.9(h)(2), the notification must include the following certifications of compliance, as applicable and signed by a responsible official: (1) "This facility complies with the requirements in 40 CFR Section 63.11214 to conduct an initial tune-up of the boiler."
32.0		CD	40 CFR Section 63.11214(b)	The Permittee must conduct a performance tune-up according to 40 CFR pt. 63.11223(b) and submit a signed statement in the Notification of Compliance Status report that indicates that the Permittee conducted a tune-up of the boiler.
33.0		CD	40 CFR Section 63.11225(a)(1)	The Permittee must submit all of the notifications in 40 CFR Sections 63.7(b); 63.8(e) and (f); 63.9(b) through (e); and 63.9(g) and (h) that apply by the dates specified in those sections.

ATTACHMENT 3
CAM PLAN (SCANNED)

ATTACHMENT 3

NOV 22, 2006
Submittal

COMPLIANCE ASSURANCE MONITORING PLAN
FOLDCRAFT COMPANY-KENYON, MINNESOTA

This Compliance Assurance Monitoring (CAM) Plan describes the procedures and methods that will be implemented by the Foldcraft Company to comply with the regulations set forth by 40 CFR 64. This plan is submitted as part of the Foldcraft Company's Part 70 Federal Air Emissions Permit No. 04900040.

1.0 FACILITY AND EMISSION UNIT INFORMATION					
1.1 Facility Information	Description:	This facility manufactures restaurant seating and other furnishings, including booths, tables, chairs, condiment tables, and trash receptacles.			
	SIC Code:	2599			
	AQ Facility ID No.:	04900040			
	Owner/Operator:	ESOP; Employee Owned Company, Foldcraft Company			
	CEO:	Charles Mayhew			
1.2 Emission Unit Information	Emission Unit		Control Equipment		Stack Vent
	EU 085 Wood Edge, Stain/Varnish Spray Booth (T-80390)		CE 020 Mat or Panel Filter		SV 030
1.3 Applicable Regulations and Emission Limits	Applicable Regulations:	Minn 7011.0070 Minn. 7011.0075 Minn. 7011.0080			
	Regulated Pollutant:	PM/PM_{10}			
	Emission Limit	Total Particulate Matter less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas. This limit applies to each unit. Each unit is also required to maintain opacity of less than 20% except for one six minute period per hour of not more than 60% opacity.			
1.4 Monitoring Requirements in the Permit		Identification Numbers	Control Equipment	Monitoring Parameter	Recordkeeping Requirement
	Comply with Minn. 7011.0080	058A, 058B	HEPA and other Wall Filters	Condition of the filters including but not limited to, alignment, saturation, and tears and holes	Record of filter(s) condition every 24 hours if in operation
1.5 Control Technology	Each spray booth is operated with a Wall/Mat Panel filter with a capture efficiency of 92% or greater.				

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2.0 MONITORING APPROACH	
2.1 Capture/ Control System Monitoring	All coating and spraying operations will be conducted within the confines of the spray booth enclosure. This will guarantee that the control device will collect all of the overspray produced from coating operations, performed within the spray booth. All spray booths will be operated with panel filters with a minimum control efficiency of 92%. The filter manufacturer's guaranteed minimum control efficiency will be used by the facility to ensure that each filter meets the 92% control efficiency requirement. The facility will keep a record of each utilized filter's control efficiency rating. Prior to spray booth operation, an inspection of the booth's associated filter will be conducted. The filter must be inspected for loading, and for the presence of any sags, gaps or tears. If there are any deficiencies in the filter it will be repaired or replaced prior to the booth's use. A log will be kept of this daily inspection. **See Table 2 Below which outlines the CAM Indicators

Table 2 CAM Indicators for CE 002 and CE 003		
Bypass System Operation	Indicator #1	Indicator #2
I. Indicator	Differential Pressure (ΔP)	Visual Inspection
Measurement Approach	The ΔP across the panel filter will be measured by a manometer or other appropriate measuring device which will be installed on the source.	Determine if the control equipment (panel filter) is in proper working order.
II. Indicator Range	If the ΔP across the panel filter exceeds 1.0" w.c. an excursion occurs.	The filters are determined by the inspector to be in poor working condition.
III. Performance Criteria		
Representation of Data	A gauge with a range of 0" w.c. to 3" w.c. and increments of 0.01" w.c. will be used to determine the ΔP of the panel filter.	The inspector will visually look for any tears, sags, gaps and over saturation of the panel filter.
Verification of Operational Status	During the reading of any gauge to monitor ΔP, ongoing spraying operations must be taking place.	Daily visual inspection of each panel filter shall be done prior to the commencement of spraying operations on that day.
Quality Assurance/Quality Control Practices and Criteria	All gauges will be calibrated after a new filter is installed. All gauges will also be annually calibrated for accuracy.	A log of the visual inspections will be kept for each panel filter.
IV. Monitoring Frequency		
Data Collection Procedure	The inspector will read and document gauge readings while spraying operations are taking place on all days when the booth is in operation. All readings will be done over a 1 minute period.	The inspector will look for any tears, sags, gaps, over saturation, and overall filter placement. All of the inspector's observations will be recorded in a log that will be kept by the facility.

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3.0 MAINTENANCE of CONTROL EQUIPMENT	
3.1 Maintenance Schedule	All control equipment will be maintained in accordance with the manufacturer's specifications. A maintenance schedule will be followed for each panel filter. The panel filter maintenance schedule is summarized below in Table 3. The facility will respond to any routine or minor breakdowns of the control equipment and restore it to working order as soon as possible. When the control equipment is not in proper working order, the facility will discontinue all spraying operations in the affiliated booth until the control equipment has been restored to its proper working order.

Table 3 Maintenance Schedule: CE 002 and CE 003

Frequency	Maintenance Task to be Performed
Daily	Daily readings of the pressure drop shall be recorded. Daily inspections of the filters condition will be performed and observations will be recorded in an inspection log.
Monthly	Inspect all bearings, belts, hoses, fans, nozzles, orifices and ducts fore signs of wear. Record observations in inspection log and make required repairs and or replacements.
Quarterly	Inspect all structural components (housing, ducts, and hoods) for signs of deterioration. Record observations in inspection log and make required repairs and or replacements.
Annually	Calibrate all monitoring gauges as well as inspect the control device to ensure it is still operating properly and effectively.

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