TECHNICAL SUPPORT DOCUMENT
For
DRAFT/PROPOSED AIR EMISSION PERMIT NO. 14100036-006

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: 2361)
Liberty Diversified Industries 5600 North Highway 169 New Hope, MN 55428	Liberty Paper, Inc. 13500 Liberty Ln Becker, Sherburne County, MN
Contact: Mr. Tim Swanson, 763-261-6155	

1.2 Facility Description

Liberty Paper, Inc. (hereafter referred to as "LPI" or "Permittee") owns and operates a cardboard recycling facility ("facility") in the city of Becker, Sherburne County, Minnesota. The emission units at the facility consists of a cardboard paper line (CPL), a paper coating machine (PCM), paper dyeing, solvent cleaning, 4 temporary boilers, biogas flare, and flash aerator. The major sources of air emissions are Volatile Organic Compounds (VOCs) and Carbon Monoxide (CO).

1.3 Description of any Changes Allowed with this Permit Issuance

This permit action is the reissuance of the Title V operating permit. The changes allowed with this permit issuance that were not permitted before includes a major amendment to install and operate a biogas generator (EU 012), to increase the throughput and chemical use of the CPL (EU 001) requiring a revised Best Available Control Technology (BACT) analysis for the CPL and to add the effluent treatment plant (ETP).

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

Permit Number and Issuance Date	Action Authorized
14100036-004	Major amendment that allowed the occasional use of up to 4

Permit Number and Issuance Date	Action Authorized
September 20, 2010	temporary package boilers to be brought on-site to maintain steam production during scheduled maintenance.
14100036-005 February 21, 2012	Major amendment authorized the installation and operation of an anaerobic digester system to process waster with a biogas flare. In addition, the permit authorized to revised permit conditions for the temporary boilers.

1.5 Facility Emissions:

Table 2. Title I Emissions Increase Summary

Pollutant	**Limited Potential Emissions from the Existing Facility** (tpy)	**Limited Potential Emissions with the Proposed Modification** (tpy)	**Net Increase in Potential Emissions (tpy)**	**NSR/112(g) Threshold for New Major Source** (tpy)	**NSR/ 112(g) Review Required?** (Yes/No)
PM	14.74	15.05	0.31	250	No
PM_{10}	1.21	1.21	0.0020	250	No
$PM_{2.5}$	1.21	1.21	0.0020	250	No
NO_x	15.58	28.06	12.48	250	No
SO_2	12.4	16.35	3.89	250	No
CO	240	240	0	250	No
Ozone (VOC)	131.28	200	68.72	250	No
H_2S	0.049	0.049	0	250	No
CO_2e*	32,696	40,010	7,314	100,000	No
Total HAPs	14.25	16.53	2.28	10/25	No

*Carbon dioxide equivalents as defined in Minn. R. 7007.0100.

Table 3. 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	15	1.2	1.2	16	28	240	40,010	200	7.6	16.5
Total Facility Actual Emissions (2010)	0	0	0	0	0	0	*	87	*	

Level*	Requirement (basis)	Additional Monitoring	Discussion
	heat release NOx: ≤ 0.20 lb/MMBtu with high heat release (NSPS: 40 CFR pt. 60, subp. Db) c. PM:≤ 0.030 lb/MMBtu (NSPS: 40 CFR pt. 60, subp. Db) d. Fuel Restriction: Natural gas, propane and distillate fuel oil (Minn. R. 7007.0800, subp. 2)	30-day rolling average for NOx and PM; Performance test; and Continuous Emission Monitors (CEMS) for NOx and PM	verify emission rates for NOx and PM. The Permittee will use CEMS to monitor NOx and PM emissions. By limiting the CO emissions from the boilers, the overall CO emissions of the total facility will be limited to 240 tpy.
EU 001 (Cardboard Paper Line)	a. VOC:≤ 1.11 lbs/ton, on a 12-month rolling average basis (BACT Limit; 40 CFR § 52.21) b. PM: ≤ variable depending on the air flow (Minn. R. 7011.0715 c. Opacity: ≤ 20% (Minn. R. 7011.0715)	a. Recordkeeping and calculations on a daily and monitoring for VOC emissions. b. & c. None	LPI has an environmental management system that tracks and systematizes its activities. So the current system already tracks the production in tons; therefore recordkeeping and calculations of VOCs in all CPL chemicals will be adequate to verify compliance with the BACT limit. No PM or opacity emissions are expected from this line due to the nature of the process.
EU 010 (Biogas flare)	a. PM: $\leq$ variable depending on the air flow (Minn. R. 7011.0715 b. Opacity: $\leq$ 20 % (Minn. R. 7011.0715)	None	The flare will be combusting only biogas; therefore the likelihood of violating either of these applicable requirements is very small.
EU 011	a. PM: $\leq$ variable	None	The flash aerator is used to aerate the

Attachment 1
PTE Summary and Emission Increase Calculation Spreadsheets
Available Electronically in the Central File of Delta

Attachment 2
Facility Description and CD-01 Form
Available Electronically in the Central File of Delta

Attachment 3
Points Calculator
Available Electronically in the Central File of Delta

Attachment 4
BACT Analysis Evaluation
Available Electronically in the Central File of Delta