MANITOWOC PUBLIC UTILITIES

1303 South 8th Street P.O. Box 1090 Manitowoc, WI 54221-1090 920-683-4600 FAX 920-686-4348 www.mpu.org

Mr. Randy Matty
Wisconsin Department of Natural Resources
2984 Shawano Avenue
Green Bay, WI 54313-6727

August 23, 2013

RE: Semi-Annual Monitoring Report (first half of 2013)

Dear Mr. Matty:

Permit condition ZZZ.7.b.(1) of Manitowoc Public Utilities' permit #: 436035930-P21 requires us to submit a **semi-annual monitoring report** covering the period of January 1, 2013 to June 30, 2013. This report is to be submitted within 60 days after the end of the monitoring period.

The following significant events occurred during this monitoring period:

- EPA CAIR and Acid Rain Program (ARP) annual SO_2 reconciliation reports for compliance year 2012 received March 4, 2013 with sufficient allowances available for compliance.
- EPA CAIR NOx annual reconciliation report for compliance year 2012 received March 4, 2013 with sufficient allowances available for compliance.
- Submitted and certified the 2012 eGGRT report with EPA on March 25, 2013. Submitted and certified the revised 2010 and 2011 eGGRT reports with EPA on April 10, 2013.
- WDNR completed the Full Air Compliance Evaluation Summary and issued a report on April 12, 2013 concluding the facility was in compliance with all Wisconsin Air regulations.
- Prepared and submitted Summary of MPU Subpart ZZZZ of Part 63 RICE Units report to the WDNR On May 2, 2013. The P28 dual fuel diesel generator was removed from the MISO model as a generator effective March 1, 2013. The unit is available for MISO to call up under emergency conditions only and as a result it only operated 1-hour during the monitoring period to verify operational status.
- Filed request with the WDNR for new source CAIR allowance for unit 9. Responded to the WDNR request to review the Wisconsin CAIR NOx allocations for 2015 to 2019.
- Submitted an air pollution control operation permit application, plans and specifications on May 14, 2013. WDNR issued draft operating permit#: 436035930-P22 on June 3, 2013 to

MPU03606

address the changes requested in the application. WDNR issued public notice for the Power Plant Operating Permit Renewal (Permit-P22) on June 14, 2013.

- Quarterly excess emission reports filed on April 15, 2013 (Q1) and on July 15, 2013 (Q2).

Please find enclosed a summary of our monitoring efforts for this time period. We believe this summary report contains all the information you will need to determine MPU's compliance status.

It is our understanding that you requested the supporting documents used to create this report be included with the submittal. In order to comply with this request; enclosed please find a CD containing the reference materials.

If, however, you need additional information or have any questions about this report or its contents, please don't hesitate to contact Mr. Jerry Ahlswede of my staff at (920) 686-4211.

I hereby certify that, based on information and belief formed after reasonable inquiry, the statements and information in the attached report are true, accurate and complete.

Sincerely,

N. Laksh Kothari

Nilaksh Kothari, P.E.
General Manager

cc. Red Jones - (MPU) w/attachments
Jerry Ahlswede - (MPU) w/attachments
Tom Reed - (MPU) w/attachments
Scott Karbon - (MPU) w/attachments
Document Management Files - (MPU)

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MPU03607

Manitowoc Public Utilities
Power Plant

701 Columbus Street
Manitowoc, Wisconsin

Semi-Annual

Summary of Monitoring Results

DNR Permit No.:436035930-P21

For the Period

January 1, 2013
to
June 30, 2013

Prepared August 23, 2013

Approved by:

Jerry A Ahlswede

Jerry Ahlswede
Energy Supply and Production Supervisor

Date: Aug 23, 2013

MPU03608

File: PowerPlant/Regulatory-Environmental/Reports
Document: 2013-08-23 (DNR) PP semi-annual monitoring report 1st half 2013

SOURCE	POLLUTANT	LIMITATION	COMPLIANCE DEMONSTRATION	COMPLIANCE STATUS	COMMENTS
S10 P28 Dual-fuel RICE Generator	Particulate	condition B1a(1)	0.15 lb/mmBtu	UNKNOWN	
		condition B1b(1)	Burn only distillate oil & natural gas	COMP-R	
	Visible	condition B2a(1)	20% opacity	COMP-COM	No excess emissions
		condition B2b(1)	Operate, maintain and calibrate a COM	COMP-EER	
	Nitrogen Oxide	condition B3a(1)	Burn ≤4,814 mmBtu fuel/month-12 avg	COMP-R	Max. avg.: 109 m/M
	Sulfur dioxide	condition B3a(3)(b)	≤ 6.0 grams NOx per brake horsepower	COMP-ST 1996	
	NR 445 HAP	condition B4a(1)	#2 Oil Sulfur content ≤0.3% by weight	COMP-R	7/10/12: 9.18 ppm S
	Fed HAP	condition B5a(1)	Burn ≤10,000 gal oil fuel/month-12 avg	COMP-R	Max. avg.: 2,530 gallons
		condition B5a(2)	Sulfur content to meet on-road use.	COMP-R	7/10/12: 9.18 ppm S
		condition B6a	Comply with Subpart ZZZZ by 5/3/2013	COMP-R	March 1, 2013 MISO status changed to emergency use only.
S10, B09 Circulating Fluidized Bed Boiler with baghouse C09 *Conditions* from air permit # 02-RV-147.	Particulate, PM_{10}, $PM_{2.5}$	condition D1.a(1)	0.03 lb/mmBtu	COMP-ST 4-2012	0.009 lb/mmBtu
		condition D1.a(3)	4.025 ton PM /12-month rolling avg.	COMP-R	Max(Ave): 0.565 ton/M
		condition D1,2b(2)	Only operate B09 with C09 operating	COMP-BH/R	
		condition D1,2b(3)	Maintain C09 Δp between 0.4 and 9 in.	COMP-R	Range: 0.77-4.77 in.
		condition D1,2c(2)	Record Δp 1x/8 hours operation, 1x/day	COMP-R	
		condition D1,2c(3)	Record inspection/maintenance on C09	COMP-R	Inspected May 8, 2013
		condition D2.a(1)	0.03 lb/mmBtu	COMP-ST 4-2012	0.017 lb/mmBtu
		condition D2.a(2)(a)	3.19 ton PM_{10} /12-month rolling avg.	COMP-R	Max(Ave): 0.565 ton/M
		condition D2.a(2)(b)	2.56 ton $PM_{2.5}$ /12-month rolling avg.	COMP-R	Max(Ave): 0.355 ton/M
	Sulfur Dioxide	condition D3a(1)(a)	0.30 lb/mmBtu 30-day avg.	COMP-CEM	Max. avg.: 0.228 lb/m
		condition D3a(1)(b)	71.2 ton /12-month rolling avg.	COMP-CEM	Max. avg.: 9.2 ton/M
		condition D3a(2)	Achieve ≥ 70% S02 reduction	COMP-CEM	Min. avg.: 95.7 %
		condition D3a(3)	Fire only coal, pet. coke, biomass	COMP-R	
		condition D3a(4)	51.02 ton /12-month rolling avg.	COMP-CEM	Max. avg.: 8.09 ton/M
		condition D3c(2)	Operate, maintain, calibrate S02-CEM	COMP-EER	
	Nitrogen Oxides	condition D4a(1)	0.155 lb/mmBtu 30-day avg except SSM	COMP-CEM	Max. avg.: 0.086 lb/m
		condition D4a(2)	24.62 ton /12-month rolling avg.	COMP-CEM	Max. avg.: 2.74 ton/M
		condition D4a(3)	23.33 ton /12-month rolling avg.	COMP-CEM	Max. avg.: 2.54 ton/M
		condition D4b(1)	Control with good combustion, SNCR	COMP-R	
		condition D4b(4)	Operate, maintain, cal. C02 & NOx-CEM	COMP-EER	
	Carbon monoxide	condition D5a(1)(b)	0.15 lb/mmBtu, 30-day avg except SSM	COMP-CEM	Max. avg.: 0.043 lb/m
		condition D5a(1)(c)	35.6 ton /12-month rolling avg.	COMP-CEM	Max. avg.: 1.02 ton/M
		condition D5b(2)	Operate, maintain, calibrate C0-CEM	COMP-EER	

MPU03609

SOURCE	POLLUTANT	LIMITATION	COMPLIANCE DEMONSTRATION	COMPLIANCE STATUS	COMMENTS
	VOC	condition D6a(1) condition D6b(1)	0.013 lb/mmBtu Maintain good combustion practices	COMP-CEM/R COMP-CEM/R	Demonstrated by CO Demonstrated by CO
	Lead	condition D7a(1) condition D7a(2)	2.0 x 10E-4 lb/mmbtu 0.028 ton /12-month rolling avg.	COMP-ST 5/2010 COMP-BH COMP-R	9.33 E-7 lb/ mmBtu Max(A): 3.10E-05 ton/M
	Mercury	condition D8a(1)	3.52 x 10E-5 lb/mmbtu	COMP-ST 5/2010 COMP-BH	5.23 E-7 lb/ mmBtu
	Flourides	condition D9a(1) condition D9a(2)	0.0017 lb/mmbtu 0.338 ton /12-month rolling avg.	COMP-ST 5/2010 COMP-BH COMP-R	<0.000154 lb/ mmBtu Max(Ave): 0.0196 ton/M
	Visible	condition D10a(1) condition D10c(2)	20 % opacity Operate, maintain and calibrate a COM	COMP-COM COMP-EER	No excess emissions
	Benzene	condition D11a(1) condition D11b(1)	0.0325 lb/hour Maintain good combustion practices	COMP-ST 5/2010 COMP-CEM/R	6.15 E-6 lb/mmBtu Demonstrated by CO
	Polychlo-rinated Di-Dioxins	condition D12a(1)	Good combustion controls	COMP-CEM/R	Demonstrated by CO
	Ammonia	condition D13(1)(a) condition D13(1)(b)	25 ppm 15.8 lb/hour	COMP-ST 9/2011 COMP-ST 9/2011	2.64 ppm 1.01 lb/hour
	Sulfuric Acid Mist	condition D14a(1) condition D14a(2)	0.0045 lb/mmBtu, 24 hour average 0.99 ton /12-month rolling avg.	COMP-ST 9/2011 COMP-R	0.0022 lb/mmBtu Max(Ave): 0.071 ton/M
	Formaldehyde	condition D15a(1) condition D15b(1)	0.0060 lb/hour Maintain good combustion practices	COMP-ST 5/2010 COMP-CEM/R	<5.49 E-6 lb/mmBtu Demonstrated by CO
	Greenhouse Gas	condition D17a(1)	42,289 ton CO2e /12-month rolling avg.	COMP-CEM/R	Max(Ave): 7,035 ton/M
S20 B28 Boiler – Controlled by baghouse C30	Particulate /PM10	condition E1a(1) condition E1a(2) condition E1a(3) condition E1a(4) condition E1a(5)(a)	0.03 lb/mmBtu (99% reduction) Fire coal, coke, biomass, ≤30% TDF,alt. Fire ≤30%/QTR from MSW Fire natural gas @start up, stablization 1.383 ton PM /12-month rolling avg.	COMP-ST 8-2012 COMP-R COMP-R COMP-R COMP-R	0.01394 lb/mmBtu-total No TDF or approved alt. No MSW Max(Ave): 0.575 ton/M

MPU03610

SOURCE	POLLUTANT	LIMITATION	COMPLIANCE DEMONSTRATION	COMPLIANCE STATUS	COMMENTS
		condition E1a(5)(b)	1.383 ton PM_{10}/12-month rolling avg.	COMP-R	Max(Ave): 0.575 ton/M
		condition E1a(5)(c)	0.94 ton $PM_{2.5}$/12-month rolling avg.	COMP-R	Max(Ave): 0.33 ton/M
		condition E1b(1)	Only operate B28 with C30 operating	COMP-BH/R	
		condition E1b(2)	Maintain C30 Δp between 0.2 and 10 in.	COMP-R	Range: 0.34-6.79 in.
		condition E1b(4)	Fluorescent Powder Test 1x/yr on C30	COMP-R	Tested 03-21-2013 AOK
		condition E1c(4)	Record Δp 1x/8 hours operation, 1x/day	COMP-R	
	Sulfur Dioxide	condition E2a(1)	0.89 lb/mmBtu, and 90% reduction when S >1% or 70% reduction when S <1%	COMP-CEM	Max. Avg.: 0.138 lb/m Min. Reduction: 94.1 %
		condition E2a(2)(a)	≤ 4.5% Sulfur content for coal	COMP-R	Max. coal S: 0.24%
		condition E2a(2)(b)	≤ 8.0% Sulfur content for pet. coke	COMP-R	Max. coke S: 5.91%
		condition E2a(3)	34.125 ton /12-month rolling avg.	COMP-CEM	Max. avg.: 6.520 ton/M
		condition E2b(2)	Operate, maintain, calibrate S02-CEM	COMP-EER	
	Visible Emissions	condition E3a(1)	20% Opacity	INT-COMP-COM	60 min excess emissions
		condition E3b(1)	Operate, maintain and calibrate a COM	COMP-EER	
	Nitrogen Oxides	condition E4a(1)	0.55 lb/MMBtu and 65% reduction PCC	COMP-CEM	Max. Avg.: 0.178 lb/m
		condition E4a(2)	0.20 lb/MMBtu in ozone season	COMP-CEM	Max. Avg.: 0.105 lb/m
		condition E4a(3)	7.76 ton NOx/12-month rolling avg.	COMP-CEM/R	Max(Ave): 3.48 ton/M
		condition E4b(1)	Operate, maintain, cal. C02 & NOx-CEM	COMP-EER	
	Carbon Monoxide	condition E5a(1)(b)	0.36 lb/mmBtu, 30-day avg except SSM	COMP-CEM	Max. avg.: 0.180 lb/m
		condition E5a(1)(c)	35.5 ton /12-month rolling avg.	COMP-CEM	Max. avg.: 4.4 ton/M
		condition E5b(2)	Operate, maintain, calibrate C0-CEM	COMP-EER	
	Organic compds.	condition E6a(1)	0.16 lb/mmBtu	COMP-CEM/R	Demonstrated by CO
		condition E6a(1)	0.16 lb/mmBtu	COMP-ST 8-2012	0.000707 lb/mmBtu
		condition E6a(2)	1.3 ton /12-month rolling avg.	COMP-CEM/R	Max. avg.: 0.05 ton/M
		condition E6b(2)(a)	Maintain good combustion practices	COMP-CEM/R	Demonstrated by CO
	Beryllium	condition E7a(1)	0.00004 lb/MMBtu	COMP-R	Max.: 4.14 E-7 lb/mmBtu
		condition E7c(2)	Analyze each fuel delivery for Be	COMP-R	Coke: <1.0 μg/g Coal: 0.23 μg/g Paper:<0.1 μg/g
	Mercury	condition E8a(1)	≤ 1 ug/cubic meter ambient, 30-day avg.	COMP-BH	
	Lead	condition E9a(1)(a)	0.012 Lb/hr	COMP-BH	
	Nickel	condition E9a(1)(b)	0.008 Lb/hr	COMP-BH	

MPU03611

SOURCE	POLLUTANT	LIMITATION	COMPLIANCE DEMONSTRATION	COMPLIANCE STATUS	COMMENTS
	Arsenic	condition E9a(1)(c)	0.004 Lb/hr	COMP-BH	
	Cadmium	condition E9a(1)(d)	0.014 Lb/hr	COMP-BH	
	Chromium	condition E9a(1)(e)	0.29 Lb/hr	COMP-BH	
	Lead	condition E9a(2)	0.017 ton /12-month rolling avg.	COMP-R	Max.: 9.01E-05 ton/M
	Benzene	condition E10a(1)(a)	0.012 Lb/hr	COMP-CEM/R	Demonstrated by CO
	Formaldehyde	condition E10a(1)(b)	0.028 Lb/hr	COMP-CEM/R	Demonstrated by CO
		condition E10b(1)	Maintain good combustion practices	COMP-CEM/R	Demonstrated by CO
	Stack Flow	condition E11a(1)	Operate, maintain and calibrate a CFM	COMP-EER	
	Fugitive Dust	condition E12a(1)	10% opacity from transfer points and silo vents for limestone and ash handling	COMP-R because vented into B28	
	Greenhouse Gas	condition E14a(1)	Operate and maintain a CO2 CEM	COMP-EER	
		condition E14a(2)	13,816 ton CO2e /12-month rolling avg.	COMP-CEM/R	Max(Ave): 4,893 ton/M
	Fuel Limit	condition E15a(1)	133,333 mmBtu/M/12-month rolling avg. excluding biomass.	COMP-CEM/R	Max(Ave): 16,532 mmBtu/M
	Sulfuric Acid Mist	condition E17a(1)	0.64 ton /12-month rolling avg.	COMP-CEM/R	Max(Ave): 0.12 ton/M
	Fluorides	condition E18a(1)	0.054 ton F/12-month rolling avg.	COMP-BH/R	Max(Ave): 0.014 ton/M
S31, P31 North Ash Conveyor –	Particulate	condition F1a(1)	0.57 lb/hour when direct discharging	COMP-BH	
		condition F1b(1)	Only operate P31 with C31	COMP-R	
		condition F1b(2)	Maintain C31 Δp between 0.2-10 in	COMP-R	1.55 inches.
Controlled by baghouse C31		condition F1c(3)	Record Δp 1x/8 hrs operation or 1x/day	COMP-R	The north ash system was
		condition F1b(3)	Perform annual inspection of C31	COMP-R	not in service during this
		condition F1b(4)	Operate, maintain and calibrate a CDMS	COMP-R	period and was operated
		condition F1b(5)	If opacity >0% shutdown P31 when Δp across downstream in-line filter ≥1 in Hg	COMP-R	one day for testing.
	Visible	condition F2a(1)	10% opacity from transfer points and silo vents handling ash from B28	COMP-R	
S32, P32 South Ash Conveyor –	Particulate	condition G1a(1)	0.92 lb/hour when direct discharging	COMP-BH	Process P32 is currently
		condition G1b(1)	Only operate P32 with C32	COMP-R	recycled to boiler B28.
		condition G1b(2)	Maintain C32 Δp between 0.2-10 in	COMP-R	Range: 1.85-9.42 in.
Controlled by		condition G1c(3)	Record Δp 1x/8 hrs operation or 1x/day	COMP-R	
		condition G1b(3)	Perform annual inspection of C32	COMP-R	Inspected March 12, 2013

MPU03612

SOURCE	POLLUTANT	LIMITATION	COMPLIANCE DEMONSTRATION	COMPLIANCE STATUS	COMMENTS
baghouse C32		condition G1b(4)	Operate, maintain and calibrate a CDMS	COMP-R	
		condition G1b(5)	If opacity >0% shutdown P32 when Δp across downstream in-line filter ≥1 in Hg	COMP-R	
	Visible	condition G2a(1)	20% opacity	COMP-R	
		condition G2a(2)	10% opacity from transfer points and silo vents handling ash from B28	COMP-R	
S11, P11 Solid Fuel Storage & Reclaim Area (coke pile)	Fugitive Dust	condition H1a(1)	20% opacity from fuel storage areas	COMP-R	
		condition H1b(1)	Dust created shall be controlled using wet suppression system per FDCP.	COMP-R	Note: No coke delivered during this period.
		condition H1b(2)	Transfer to pile with stacking conveyor.	COMP-R	
		condition H1b(3)	Develop and follow a FDCP.	COMP-R	
		condition H1b(4)	≥ 1 trained person to monitor compliance	COMP-R	21 trained employees
		condition H1c(2)	Record operation daily and FDCP action	COMP-R	
S12, P12,C12 B09 Solid Fuel Crusher House & Conveyor	Particulate PM-10	condition I1a(1)	3.42 lb/hr	COMP-ST	
		condition I1b(1)	Use baghouse C12 to control P12	COMP-R	
		condition I1b(2)	Operate C12 when P12 is in operation	COMP-R	
		condition I1b(4)	Maintain C12 Δp between 0.2-10 in	COMP-R	Range: 0.50-7.88 in.
	Visible	condition I2a(1)	20% opacity	COMP-BH	
		condition I2a(2)	10% opacity w/coal dust	COMP-BH	
S13b, P13b,C13b Solid Fuel Conveyor for B09, B28	Particulate PM-10	condition J1a(1)(a)	Do not use bypass stack S13	COMP-R	
		condition J1a(1)(b)	Exhaust into B28	COMP-R	
		condition J1a(1)(c)	2.28 lb/hour if discharged out S10	COMP-R	
		condition J1b(1)	only operate P13b with baghouse C13b	COMP-R	
		condition J1b(2)	maintain C13b Δp between 0.2-10 in	COMP-R	Range: 0.9-4.5 in.
		condition J1c(3)	record Δp 1x/8 hours operation or 1x/day	COMP-R	
		condition J1b(3)	perform annual inspection of C13b	COMP-R	Inspected June 12, 2013
	Visible	condition J2a(1)	20% opacity	COMP-BH	
		condition J2a(2)	10% opacity w/coal dust	COMP-BH	
S14, P14 East Ash Conveyor Controlled by baghouse C14	Particulate	condition K1a	0.02 grains/dscf	COMP-ST 2/2006	
		condition K1b(4)	only operate P14 with C14	COMP-R	
		condition K1c(3)	record Δp 1x/8 hours operation or 1x/day	COMP-R	
		condition K1b(6)	maintain C14 Δ p between 0.2-10 in	COMP-R	Range: 0.26-6.19 in.
	Visible	condition K2a(1)	20% opacity	COMP-BH	
	Fugitive Dust	condition K3b(1)(a)	Ash shall be loaded into enclosed trucks	COMP-R	

MPU03613

SOURCE	POLLUTANT	LIMITATION	COMPLIANCE DEMONSTRATION	COMPLIANCE STATUS	COMMENTS
			through a tightly fitted port.		
		condition K3b(1)(a)	Ash loaded to open trucks shall be wetted	COMP-R	
S15 P15 B09 Fuel Storage Silo Vents	Particulate	condition L1a(1) condition L1b(2) condition L1b(3) condition L1b(4) condition L1b(5)	0.25 pounds per hour only operate P12 with bin vent filters Follow MPAP for bin vent filter system. maintain C15 Δ p between 1-4 in water perform annual inspection of C15	COMP-BH COMP-R COMP-R INT-COMP-R COMP-R	 See Note 2: P22 revised C15 Δ p to 1-7 inches Range: 3.8-6.5 in. Inspected: May 8, 2013
	Visible	condition L2a(1) condition L2a(2)	20% opacity 10% opacity w/coal dust	COMP-BH COMP-BH	
P16 C16 Limestone Storage Silo controlled by baghouse C16	Particulate PM-10	condition M1a(1) condition M1b(3) condition M1c(2) condition M1b(4)	Exhaust air from the baghouse shall be vented inside the building. Only operate P13 with a baghouse record Δp 1x/8 hours operation or 1x/day maintain baghouse Δp between 0.5-6 in.	COMP-R COMP-R COMP-R COMP-R	 Range: 1.98-4.74 in.
F21 Solid Fuel Railcar & Truck Unloading to crusher house and store silos	Fugitive Dust	condition N1a(1) condition N1b(1) condition N1b(2) condition N1b(3) condition N1c(2) condition N1b(4)	20% opacity during unloading Use below grade hopper and totally enclosed conveying system for unloading Dust created shall be controlled using wet suppression system per FDCP. Develop and follow a FDCP. Record operation daily and FDCP action ≥ 1 trained person to monitor compliance	COMP-R COMP COMP-R COMP-R COMP-R COMP-R	 21 trained employees
F23 Limestone Unloading railcars/trucks	Fugitive Dust	condition O1a(1) condition O1b(1) condition O1b(2) condition O1c(2) condition O1b(3)	20% opacity from trailer unloading Transfer limestone to P13 via totally enclosed pneumatic distress system. Develop and follow a FDCP. Record operation daily and FDCP action ≥ 1 trained person to monitor compliance	COMP-R COMP COMP-R COMP-R COMP-R	 21 trained employees
S10, B10 Package Gas Boiler	PM,PM10,PM2.5	condition P1a(1) condition P1a(2) condition P1b(2)	0.10 lb/mmBtu 195 lbs of PM/12-month rolling avg. Perform annual tune-up	COMP-R COMP-R COMP-R	Natural gas is only fuel Max(Ave): 31.6 lb/M Tuned: May 23, 2013
	Visible emissions	condition P2a(1)	20% opacity	COMP-R	
	Nitrogen Oxides	condition P3a(1)	1,086 lbs of NOx/12-month rolling avg.	COMP-R	Max(Ave): 177 lb/M

MPU03614

SOURCE	POLLUTANT	LIMITATION	COMPLIANCE DEMONSTRATION	COMPLIANCE STATUS	COMMENTS
	Carbon monoxide	condition P4a(1)(a) condition P4a(1)(b) condition P4c(5)(a)	0.109 lbs/mmBtu @ <50% load 0.036 lbs/mmBtu @ <50% load Monthly record the PV and setpoints	COMP-ST 8/ 2012 COMP-ST 8/ 2012 COMP-R	0.000290 lb/m 0.000283 lb/m
	Sulfur dioxide	condition P5a(1)	16.7 lbs of SO2/12-month rolling avg.	COMP-R	Max(Ave): 2.5 lb/M
	Organic compds.	condition P6a(1)	153 lbs of SO2/12-month rolling avg.	COMP-R	Max(Ave): 22.9 lb/M
	Greenhouse gas	condition P7a(1)	1,492 ton CO2e /12-month rolling avg.	COMP-R	Max(Ave): 250 ton/M
Facility Wide Emission Limits	Hydrogen Chloride	condition ZZZ2a(1) condition ZZZ2a(2)	≤ 11 Lb/hr from S10 – See Note 1. ≤ 28 Lb/hr from S20 – See Note 1.	COMP-ST 5/ 2010 COMP-ST 5/ 2010	
	Arsenic	condition ZZZ3a(1) condition ZZZ3a(2)	≤ 27.4 Lb/12 M from S10– See Note 1. ≤ 98.1 Lb/12 M from S20– See Note 1.	COMP-ST 5/ 2010 COMP-ST 5/ 2010	Max: 2.95 lb/12 M Max: 0.21 lb/12 M

Note 1: HCL from S10 (lb/hr) = 270 mmBtu/hr x 4.09 E-3 (from B09 emission factor test) ≈ **1.1 lb HCl/hr** (which is < the limit).
HCL from S20 (lb/hr) = 650 mmBtu/hr x 4.09 E-3 (from B09 emission factor test) ≈ **2.6 lb HCl/hr** (which is < the limit).
As from S10 (lb/hr) = 270 mmBtu/hr x 3.31 E-6 (from B09 emission factor test) ≈ **<0.1 lb As/hr** (which is < the limit).
As from S20 (lb/hr) = 650 mmBtu/hr x 3.31 E-6 (from B09 emission factor test) ≈ **<0.1 lb As/hr** (which is < the limit).

Note 2: MPU submitted an air pollution control operation permit application, plans and specifications on May 14, 2013 to address what the appropriate range should be for this baghouse. WDNR issued draft operating permit#: 436035930-P22 on June 3, 2013 and the final permit on July 22, 2013 to address the changes requested in the application. The current limit was revised as follows: "The pressure drop across the bin vent filter system shall be maintained between 1 and 7 inches water column."

MPU03615

ABBREVIATIONS USED IN THIS REPORT	
CDMS means a continuous dust monitoring system.	M means Month
COMP-BH means in compliance with limit based on use of a baghouse.	gal means gallon
INT-COMP-BH means in intermittent compliance with limit based on use of a baghouse.	HI means Heat Input
COMP-CEM means in compliance with limit based on use of a continuous emission monitor.	lb/m means pounds per million Btu
COMP-COM means in compliance with the limit based on use of a continuous opacity monitor.	Btu means British thermal unit
INT-COMP-COM means in intermittent compliance with the limit based on use of a continuous opacity monitor.	mmBtu means million British thermal unit
COMP-EER means in compliance based on review of quarterly excess emission reports.	m/M means million Btu per month.
COMP-FSA means compliance with limit based on quarterly fuel sampling and analysis reports.	in. means inches of water
COMP-R means in compliance based on review of daily or monthly records or file documents.	Q means calendar quarter
INT-COMP-R means in intermittent compliance based on review of daily or monthly records or file documents.	µg/g means micrograms per gram
FDCP means a fugitive dust control plan.	PV means Process Variable
HAP means hazardous air pollutants.	A means Average
MPAP means Malfunction, Prevention and Abatement Plan.	
SNCR means Selective Non-Catalytic Reduction (a NOx control system).	
SSM means startup, shutdown and malfunction.	
WDNR means Wisconsin Department of Natural Resources.	

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