

Ohio River Clean Fuels, LLC

Baard Energy, LLC

Michael E. Hopkins
Assistant Chief, Permitting
Division of Air Pollution Control, Permitting Section
Ohio EPA
50 West Town Street
Suite 700
Columbus, Ohio 43215

November 14, 2008

SUBJECT: Ohio EPA Permit to Install – FLAG Screening Calculation
Ohio River Clean Fuels, L.L.C.
Permit Number: 02-22896, Facility ID: 0215130393

Dear Mr. Hopkins:

Given the recent changes, we looked back at the impact to the FLAG screening criteria.

Please find attached Table 2 “Actual Criteria Pollutant Emissions Summary” where at the bottom of the table, we have provided the appropriate calculations for the Phase 1 Boiler case ($Q/d_{\text{Boiler}} = 7.9$) and separately, the combined cycle case ($Q/d_{\text{CC}} = 7.8$). Both Q/d values are below the FLM/FLAG threshold of 10.

Sincerely,



Stephan M. Dopuch
Vice President, Business Development

Copy: K. Macoskey, Civil & Environmental Consultants, Inc
N. Petricoff, Beard Energy, L.L.C.

Attachments

Table 2
Actual Criteria Pollutant Emissions Summary (Tons per Year)

Module	Emission Unit	Description	CO	NO _x	PE	PM10	SO _x	VOC
1 - Feedstock Storage	F001	Coal Storage			25.7	12.3		
	F002	Biomass Storage			2.7	1.0		
	Module Totals:		0.0	0.0	28.4	13.3	0.0	0.0
2 - Feedstock Processing	F003	Coal & Biomass Hopper Bldg.			0.6	0.6		
	F004 to F008	Transfer Towers (5)			19.5	19.5		
	F009	Coal Crusher House			5.1	5.1		
	F010	Biomass Crusher House			5.1	5.1		
	F011	Coal Silos 1 & 2			3.0	3.0		
	F012	Coal Silos 3 & 4			3.8	3.8		
	F013	Coal Silos 5 & 6			3.8	3.8		
	F014	Biomass Silos 1 & 2			3.8	3.8		
	P001	Coal Milling and Drying Line 1	9.8	5.8	4.8	4.8	1.1	0.6
	P002	Coal Milling and Drying Line 2	9.8	5.8	4.8	4.8	1.1	0.6
	P003	Coal Milling and Drying Line 3	9.8	5.8	4.8	4.8	1.1	0.6
	P004	Coal Milling and Drying Line 4	9.8	5.8	4.8	4.8	1.1	0.6
	P005	Coal Milling and Drying Line 5	9.8	5.8	4.8	4.8	1.1	0.6
	P006	Coal Milling and Drying Line 6	9.8	5.8	4.8	4.8	1.1	0.6
	P007	Coal Milling and Drying Line 7	9.8	5.8	4.8	4.8	1.1	0.6
	P008	Biomass Milling and Drying Line 1	9.8	5.8	4.9	4.9	1.1	0.6
	P009	Biomass Milling and Drying Line 2	9.8	5.8	4.9	4.9	1.1	0.6
	P010	Biomass Milling and Drying Line 3	9.8	5.8	4.9	4.9	1.1	0.6
	Module Totals:		97.5	58.0	93.2	93.2	10.6	6.4
3 - Gasification	P020 to P025	Gasifiers (6) Startup/Shutdown Flaring	113.5	17.0	0.4	0.4	78.3	7.1
	Module Totals:		113.5	17.0	0.4	0.4	78.3	7.1
4 - Material Handling	F015 to F020	Fly Ash Handling Systems (6)			1.2	1.2		
	F021 to F026	Slag Dewatering Silos (6)			22.8	22.8		
	F027	Slag Storage Pile			2.0	1.0		
Module Totals:		0.0	0.0	26.0	25.0	0.0	0.0	
5 - Syngas Cleanup	P011	Sulfur Recovery Train 1	9.6	12.9	0.9	0.9	142.7	0.6
	P012	Sulfur Recovery Train 2	9.6	12.9	0.9	0.9	142.7	0.6
	P026	Syngas Cleanup Train 1	1,351.7					
	P027	Syngas Cleanup Train 2	1,351.7					
	P028	Syngas Cleanup Train 3	1,351.7					
Module Totals:		4,074.4	25.8	1.7	1.7	285.4	1.2	
6 - Fischer Tropsch & Product Upgrade	B002	F-T Catalyst Reduction Gas Heater	4.2	4.9	0.4	0.4	0.0	0.3
	B003	F-T Catalyst Oxidation Gas Heater	4.2	4.9	0.4	0.4	0.0	0.3
	B004	F-T Hydrogen Stripping Heater	4.2	4.9	0.4	0.4	0.0	0.3
	B005	Product Upgrade Heaters (3)						
	B006	F-T System Fractionator Heater	227.3	73.6	20.7	20.7	1.6	14.9
	P029	F-T Catalyst Regen and Process Vents	110.3	131.4	10.0	10.0	0.8	0.1
	P030	F-T Rotary Dryer and Heaters (2)	8.4	9.8	0.8	0.8	0.1	0.6
	P031	Equipment Leaks						1.7
Module Totals:		358.6	229.5	32.7	32.7	2.6	18.2	
7 - Tank Farm	T001 to T008	F-T Diesel Tanks (8)						6.4
	T009 to T011	F-T Naphtha Tanks (3)						2.6
	T012	Off-Spec Internal Floating Roof Tank						0.9
Module Totals:		0.0	0.0	0.0	0.0	0.0	0.0	9.9
8 - Product Loading	J001	Loading Rack						1.7
Module Totals:		0.0	0.0	0.0	0.0	0.0	0.0	1.7
9 - Combined Cycle Plant	B001	Phase 1 Boiler ¹	157.6	530.0	81.9	81.9	8.9	57.1
	P018	Combined Cycle Plant 1 ²	121.6	132.0	80.3	80.3	91.1	116.6
	P019	Combined Cycle Plant 2 ²	121.6	132.0	80.3	80.3	91.1	116.6
Final Combined Cycle Plant Totals:		243.1	263.9	160.5	160.5	182.2	233.1	
10 - Cooling Towers	P013	Cooling Tower 1			10.5	10.5		
	P014	Cooling Tower 2			10.5	10.5		
Module Totals:				21.0	21.0			
11 - Emergency Generator & Fire Pumps	P015	Emergency Generator	3.8	6.6	0.2	0.2	0.0	0.4
	P016	Emergency Fire Pump 1	0.4	1.2	0.1	0.1	0.2	0.1
	P017	Emergency Fire Pump 2	0.4	1.2	0.1	0.1	0.2	0.1
Module Totals:		4.7	9.1	0.4	0.4	0.3	0.5	
12 - Roadways & Parking	F028	Paved Roadways and Parking			79.0	15.4		
	Module Totals:				79.0	15.4		
FACILITY TOTALS:			4,891.7	603.2	443.3	363.5	559.4	278.0

Notes: 1) Phase 1 Boiler operation will be discontinued after the first CTG is brought on line.
 2) Includes startup/shutdown emissions (tpy): CO: 21.8, NO_x: 8.6, PE/PM10: 1.6, SO_x: 0.08, VOC: 1.6
 3) FLAG Screening metric: Q/d = [PM10 + SO_x + NO_x] / 196 km < 10
 Phase 1 ORCF: Q/d = [284.9 + 386.1 + 869.5] / 196 = 7.9 < 10 for Phase 1 Boiler
 Phase 2 ORCF: Q/d = [363.5 + 559.4 + 603.2] / 196 = 7.8 < 10 for Combined Cycle Plant