

Table 1
Potential Emissions from RTP Unit through Baghouse
UOP Biofuel Production Facility
Kapolei, Oahu, Hawaii

Operating Hours 8,760 hrs/yr

Input	Reheater Flue Gas (Uncontrolled)			Reheater Flue Gas through Baghouse (Controlled) ⁽¹⁾			By-Product Gas			Total (uncontrolled)	
Total Exhaust Flow	62.31 lb/hr			62.30 lb/hr			17.5 lb/hr ⁽²⁾				
Constituent	% by wt. ⁽³⁾	lb/hr	tons/yr	% by wt. ⁽³⁾	lb/hr	tons/yr	% by wt. ⁽³⁾	lb/hr	tons/yr	lb/hr	tons/yr
CO ₂ + O ₂							61.87	10.827	47.42	10.827	47.42
CO ₂	19.28	12.02	52.63	19.29	12.02	52.63				12.02	52.63
O ₂	6.41	4.00	17.50	6.41	4.00	17.50				3.996	17.505
CO	0.00	0.002	0.01	0.0035	0.002	0.010	28.79	5.038	22.068	5.040	22.077
NO _x	0.01	0.006	0.03	0.0100	0.006	0.027	0	0	0	0.0062	0.027
SO _x	0	0	0	0	0	0	0	0	0	0	0
N ₂	71.76	44.71	195.84	71.77	44.71	195.84	0	0	0	44.71	195.84
water vapor	2.52	1.567	6.87	2.52	1.567	6.865	0	0	0	1.567	6.865
PM	0.017	0.010	0.046	0.0002	0.0001	0.0005	0	0	0	0.010	0.046
hydrogen	0	0.00	0	0	0	0	0.27	0.047	0.207	0.047	0.207
methane	0	0	0	0	0	0	3.14	0.550	2.407	0.550	2.407
ethane	0	0	0	0	0	0	0.69	0.121	0.529	0.121	0.529
propane	0	0	0	0	0	0	0.41	0.072	0.314	0.072	0.314
ethylene	0	0	0	0	0	0	0.99	0.173	0.759	0.173	0.759
1-butene	0	0	0	0	0	0	0.36	0.063	0.276	0.063	0.276
<i>1,3-butadiene</i> ⁽⁴⁾	0	0	0	0	0	0	0.35	0.061	0.268	0.061	0.268
propylene	0	0	0	0	0	0	0.82	0.144	0.629	0.144	0.629
other VOCs	0	0	0	0	0	0	2.31	0.404	1.771	0.404	1.771
total	100.00	62.31	272.92	100.00	62.30	272.87	100.00	17.50	76.65	79.81	349.57

(1) Baghouse PM removal efficiency is assumed to be 99%

(2) Flow rate is dependent on feedstock used, and is given for a combination of algae, corn stover, guinea grass, and switch grass. For worst-case calculation, the constituent percentages for guinea grass are assumed

(3) Gas composition taken from UOP test data

(4) Constituents listed in *italics* are classified as hazardous air pollutants (HAPs)