

Technical Center

101 Hampton Avenue Needham, MA 02494 Tel: 781-972-2300

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AUG 14 2012

DIVISION OF AIR RESOURCE MANAGEMENT

August 10, 2012

Mr. Jason Waters **Environmental Protection Commission of Hillsborough County** Roger P Stewart Center 3629 Queen Palm Rd Tampa FL 33619 813-627-2600

Re: Operating permit No. 0571326-003-AO/004-AC condition 21e submission

Dear Mr. Waters,

Enclosed are the monthly mercury throughput results for the high carbon fly ash stream through June 2012 for the Separation Technologies' fly ash processing facility as specified in our operating permit specific condition 21e.

I have also enclosed a copy of a letter dated May 10, 2012 sent by Rudy Wiechert, our plant manager, requesting that the monthly fly ash mercury sampling requirement be reduced. We believe that the objective of the fly ash mercury sampling request has been met by the 1552 days of sample compositing and testing that we have done since startup since April 2008. Please let us know the status of the sampling reduction request.

Please contact me directly, if you have any questions about the enclosed information.

Regards,

Frank Hrach

cc:

Director of Process Engineering Separation Technologies LLC

781-972-2311 office

ALinero

FDEP

RWiechert

ST (via email)

	Feed ash	Composite Feed ash	Feed ash	Estimated Feed ash	ProAsh	Composite ProAsh	Composite ProAsh	Estimated ProAsh	. (3)	HCFA	HCFA	Composite HCFA	Estimated HCFA
	processed	LOI	Hg level	Hg rate	produced	LOI	Hg level	est. Hg rate	(de	produced	LOI	Hg level	Hg rate
Mar-08	<u>stons</u> 2441	<u>wt%</u> 7.1	<u>ppm</u> 0.200	lb/month 0.98	<u>stons</u> 1630	<u>wt%</u> 2.6	<u>ppm</u> 0.062	<u>lb/month</u> 0.20		<u>stons</u> 811	<u>wt%</u> 12.6	<u>ppm</u> 0.403	<u>lb/month</u> 0.65
Apr-08	6260	7.6	0.187	2.34	4173	3.2	0.058	0.48		2087	21.5	0.548	2.29
May-08	3528	5.0	0.235	1.66	2028	2.6	0.108	0.44	-10	1500	11.7	0.499	1.50
Jun-08	9701	6.2	0.234	4.54	5620	2.4	0.097	1.09		4081	15.2	0.546	4.46
Jul-08	16417	8.5	0.376	12.35	10407	3.8	0.118	2.46	1.32	6010	17.4	0.578	6.95
Aug-08 Sep-08	9693 12218	7.1 5.7	0.557 0.406	10.80 9.92	4299 7686	4.1 3.6	0.255 0.204	2.19 3.14		5394 4532	10.7 9.3	0.779 0.644	8.40 5.84
Oct-08	11481	4.7	0.400	7.21	8885	3.0	0.147	2.61	100	2596	16.5	1.213	6.30
Nov-08	11014	4.5	0.389	8.57	7694	3.1	0.255	3.92		3320	7.7	0.728	4.83
Dec-08	9788	5.9	0.682	13.35	6894	3.4	0.261	3.60		2894	10.5	1.087	6.29
Jan-09	16133	6.3	0.243	7.84	11015	3.3	0.104	2.29	ing.	5118	8.0	0.525	5.37
Feb-09	13801	7.1	0.180	4.97	9015	3.1	0.081	1.46		4786	11.2	0.347	3.32
Mar-09 Apr-09	18134 13405	7.9 7.0	0.274 0.190	9.94 5.09	10900 8777	3.2 3.1	0.106 0.065	2.31 1.14		7234 4628	15.5 15.9	0.540 0.445	7.81 4.12
May-09	16634	6.4	0.190	6.39	11417	3.1	0.067	1.53		5217	14.8	0.523	5.46
Jun-09	20278	6.4	0.219	8.88	14547	3.4	0.102	2.97		5731	14.7	0.602	6.90
Jul-09	18046	6.0	0.470	16.96	10221	3.3	0.178	3.64		7825	11.3	0.833	13.04
Aug-09	17875	5.1	0.480	17.16	10867	3.5	0.273	5.93	16 E	7008	8.5	0.817	11.45
Sep-09	18402	5.0	0.438	16.12	13182	3.3	0.24	6.33		5220	10.9	0.912	9.52
Oct-09	14280	4.6	0.355 0.298	7.05	10770 8443	2.9	0.215	4.63		3510 3392	9.9	0.783	5.50
Nov-09 Dec-09	11835 20754	4.8 5.7	0.298	22.54	12744	3.3 3.5	0.218 0.246	3.68 6.27	20	8010	8.3 9.4	0.783 0.844	5.31 13.52
Jan-10	12437	5.9	0.418	10.40	7890	4.0	0.2	3.16	1904	4547	9.1	0.653	5.94
Feb-10									30.3	5798	12.1	1.191	13.81
Mar-10									13	6044	11.2	0.993	12.00
Apr-10				F-1.				1		4809	15.6	0.990	9.52
May-10				1:14				1		4005	22.5	1.154	9.24
Jun-10 Jul-10				17.5				}	**************************************	5200 5106	18.6 16.0	0.651 0.665	6.77 6.79
Aug-10				h. F						4281	15.7	0.948	8.12
Sep-10				J. :.				ĺ	1 17	3699	19.0	0.927	6.86
Oct-10				F7.	İ			ì	360	9322	10.2	1.001	18.66
Nov-10				17.00				ļ		6790	12.4	1.384	18.79
Dec-10				.						3792	12.5	2.120	16.08
Jan-11 Feb-11				F .					gr mer S	3135 4858	14.7 14.1	2.330 1.303	14.61 12.66
Mar-11								ļ		4764	10.0	1.229	11.71
Apr-11									N.	5713	10.4	1.594	18.21
May-11				-					1000	2589	15.9	2.731	14.14
Jun-11				<u> </u>						4986	11.2	1.695	16.90
Jul-11						,			T.	3610	11.6	1.660	11.99
Aug-11 Sep-11									200	5028 4933	10.9 12.5	1.473 1.684	14.81 16.61
Oct-11				1 1						3131	15.6	1.781	11.15
Nov-11				1.					100	3894	13.2		14.08
Dec-11				F.	i				. Ochra	3141	10.5	1.742	10.94
Jan-12										4333	11.2		13.47
Feb-12										4810	13.8	1.521	14.63
Mar-12 Apr-12				liki ti	į					4266 6233	11.8 19.3	1.651 1.009	14.09 12.58
May-12				. Pali						6245	19.3		18.20
Jun-12									4.5	4236	8.9	1.121	9.50
											3.0		
12-month				File.						[
rolling total				<u>.</u>						F0000		4.504	400
iolai				jir t					L volt	53860		1.504	162
									1.00				
	Feed Ash = R	aw Flyash fro	m Big Bend		ProAsh= M	ineral enriched	Flyash		di A	HCFA = C	arbon enriche	d Flyash	



G and C Coal Analysis Lab., Inc.

1341 Hoffman Hollow Road Summerville, Pa 15864 814-849-2559 Fax: 814-849-8878

Received From: **SEPARATION TECHNOLOGIES LLC** 101 HAMPTON AVE. NEEDHAM, MA 02494

Date Received:

07/25/12

Date Reported:

08/01/12

PO# 381521 (ST) * RESULTS REPORTED USING EPA METHOD 7473

Lab#

Sample ID

Mercury/ppb dry

931251

T-0612-AB-C

1121

Blank:

BCR143R

Lab Value 1100 dry

<5.000 ppb dry

Certified Value: 1100 ppb dry

8563 DUP 8563 DUP SPIKE 370 ppb dry

Lab Value: 527 ppb

Calculated Value: 516 ppb +/-20%

The above analytical results were obtained following ASTM procedures.

13151 Wyandotte Road Gibsonton, FL 33534 781-972-2386

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May 10, 2012

Mr. Jason Waters
Environmental Protection Commission of Hillsborough County
Roger P Stewart Center
3629 Queen Palm Rd
Tampa FL 33619
813-627-2600

Mr. Alvaro Linero
Florida Department of Environmental Protection
2600 Blair Stone Rd
Tallahassee FL 32399

Re: Fly Ash Mercury Monitoring Reduction Request

Separation Technologies (ST) Fly Ash Processing Facility

Air Operating Permit 0571326-003-AO/004-AC

The current air operating permit for the subject facility includes a requirement for sampling and testing high carbon fly ash (HCFA) for mercury content (Specific Condition 21). The request for this data is made under the authority of Rule 624.070 (3) F.A.C. and FDEP's Mercury Control Initiatives, December 19, 2006. Rule 62-4.070(3) states that the permit may contain specific conditions necessary to provide reasonable assurance that the Department rules are met. However, the FDEP Mercury Control Initiatives are just that – an initiative, not a regulation. As there are no specific rules applicable to the mercury content of the materials this facility and since mercury is not being emitted to the air from the process, the data is being requested and provided in a spirit of cooperation, and as such, warrants consideration for the amount and cost of data being requested.

ST supports the efforts of the State of Florida to understand, manage, and reduce mercury emissions. For the past four years, ST has been cooperative with the FDEP Mercury Control Initiatives and has provided data at our expense.

Since start-up of the facility in March 2008, monthly composite samples are obtained for the HCFA stream by combining daily subsamples. The composite sample is tested for mercury content each month, and the results are used to estimate the mercury throughput rate for the HCFA stream. The results are reported to EPC and FDEP within 45 days after the end of each month. Since start-up of the facility in March 2008, approximately forty-seven (47) months of samples have been composited, tested, and reported.

In analyzing the results since start-up, ST observes that:

1. There was an upward trend in HCFA mercury content from start-up to approximately June 2011. This trend roughly corresponds to the installation schedules of Selective Catalytic Reduction (SCR) pollution controls at the Tampa Electric Big Bend generating units. It was expected that as new SCR controls were put into operation on the Big Bend generating units, the mercury content of fly ash from the station would increase. All four units at Big Bend now have operational SCR systems. Therefore we do not expect any further increase in the HCFA mercury content.

Separation Technologies LLC A Titan America Business

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2. The HCFA mercury content measured in our composite samples has been stable since June 2011. For the data since June 2011, the average HCFA mercury content has been 1.66 ppm with a standard deviation of only 0.12 ppm (7% relative standard deviation). Mercury test repeatable for EPA method 7471 was estimated by comparing results for a 1.1 ppm certified standard tested each month by G&C Coal Analysis Lab. Over the past year, the certified sample test results averaged 1.1 ppm with a standard deviation of 0.8 ppm (7% relative standard deviation). The variation observed for the monthly composite samples since June 2011 is equivalent to the analytical method repeatability. Therefore the mercury content in the monthly composite samples since June 2011 is constant within the measurement limitations of the analytical test method.

The primary objective of the HCFA mercury testing requirement (Specific Condition 21 in Air Operatings). Permit 0571326-003-AO) is to quantify the annual mercury quantity present in the solid HCFA stream. Furthermore, in the cover memorandum for our permit, it is also indicated that the testing requirement was included in an effort to quantify mercury emissions that may be released by the end user as part of the cement production process. However, the cement plants that use or may use HCFA are required to conduct mercury sampling on their raw materials as part of their air permits. Therefore, ST believes that the objective has been met over the past four years of sampling, that the FDEP receives adequate mercury information from the cement plant end users, and requests that the sampling and testing requirement for the ST facility be dropped.

Specific Condition 21, paragraph (b) states "The owner or operator shall provide the samples to the Department or EPC if requested within 180 days of submittal of results, until the facility receives written approval from the Department of Environmental Protection that the sampling is no longer required."

ST requests that the Department of Environmental Protection issue written approval that the sampling is no longer required.

Thank you for your consideration,

Rudolph A. Wiechert III

Plant Manager

Separation Technologies, LLC

Gibsonton, FL 813-727-2301

cc(via email):

FHrach

ST Needham

JWillis

TA Corp Engineering