

Trainor, Scott

From: Hoefert, Lee
Sent: Tuesday, April 16, 2013 11:18 AM
To: 'Michael Tyson'
Cc: Trainor, Scott; Schmitt, Erik; Lurix, Joe; mmclean@swa.org
Subject: RE: SWA woody waste test engine guidance

Michael,

Your limitation would be 2 inches greater than the 4.9 inches obtained during the test. In your case, **6.9 inches**. The 10 percent described in the condition is the allowable load range that at which the engine is operating during the initial test and while obtaining valid compliance readings. That is to say that the initial test is required to be performed with the engine operating between 90 and 110 percent of rated load. The engine must be able to operate in this 90 and 110 percent of rated load range without exceeding the 2 inch limitation.

Are these instantaneous values, or rolling averages? It would be better to use rolling data, and alarm based on rolling data. This would limit nuisance alarms caused by spikes and minor fluctuations. I recall that your monitoring system has the ability to use 4 hour averages.

I also have some concerns about the ability your measuring system to detect a 2 inch change in differential pressure. Based on the vendor literature you showed me at the site, the error in your system could be as high as +/- 3 inches w.c., which in itself is in excess of the allowable 2 inch drop. Part of the problem is that you are using pressure instruments that have an operating range of 0-130 inches w.c. I would recommend that you run a pressure drop test using instrumentation that more closely in range with the lower pressure drops that you supposedly are experiencing.

Lee C. Hoefert, P.E.
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From: Michael Tyson [<mailto:mtyson@swa.org>]
Sent: Tuesday, April 16, 2013 8:02 AM
To: Hoefert, Lee
Subject: FW: SWA woody waste test engine guidance

From: Michael Tyson
Sent: Monday, April 15, 2013 4:19 PM
To: Michael Tyson
Subject: SWA woody waste test engine

Mr. Hoefert,

Hello sir, I'm seeking the departments guidance on the pressure drop alarm limit for the Woody Waste engine CO reduction HI back system. On 4/4/2013 we conducted the testing for CO reduction. The log below was pulled from the data for that time period minus this negative numbers we got before you and I corrected the issue. *The Title V permit D.18 reads: Maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10% from the pressure drop across the catalyst that was measured during the initial performance test.*

Testing data:

Log from test: 4/4/2013

Time	Inlet Temperature (°F)	Inlet Pressure	
		(in H2O)	Pressure Drop (in H2O)
4/4/2013 10:16	608	2.1	2.5
4/4/2013 10:31	747	3.3	4.3
4/4/2013 10:46	806	5.2	6.5
4/4/2013 11:01	788	4.9	6.1
4/4/2013 11:16	615	2.5	2.8
4/4/2013 11:31	678	2.6	2.8
4/4/2013 11:46	714	3.3	3.5
4/4/2013 12:01	891	6.6	8.2
4/4/2013 12:16	858	6.5	7.9
4/4/2013 12:31	788	3.6	4.3
4/4/2013 12:46	766	4.3	5.2

Inlet Temperature (°F)	Pressure Drop (in H2O)
608	2.5
747	4.3
806	6.5
788	6.1
615	2.8
678	2.8
714	3.5
891	8.2
858	7.9
788	4.3
766	5.2

total	54.1
mean	4.918182
plus 2"	6.918182
10%	7.61

I currently have the alarm limit at 7 the (+/-) 10% is 7.61. Francis Morlu is awaiting this information so he can write his report. Thank-you again for all your assistance. Please contact me if you need any further information.

Respectfully,

Michael Tyson
Environmental Programs
Solid Waste Authority
(561)640-4000 ext 4616
Cell: (561) 307-8644
Fax: (561) 640-3400

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