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Unapproved Minutes of the November 19, 2010 Sequence III Surveillance Panel Meeting Teleconference

1. Roll Call and Attendance

The meeting was called to order at 11:00 am by Chairman Dave Glaenger. The attendance is show in **Attachment 1**.

2. Meeting Minutes

The minutes of the following meetings/teleconferences were approved unanimously: May 12, 2010; July 8, 2010; and July 27, 2010.

3. Action Item Review

Dave Glaenger reviewed action items from previous meetings:

1. 5/12/10 SP chair research and report reasoning for quarterly fuel analysis. Report distributed 8/25/10. Ties in with TGC Test Fuel TF. There will likely be a meeting in January to discuss. OPEN
2. 5/12/10 Conduct teleconference in late June to deal with extension of ACLW lower Shewhart severity criteria suspension. COMPLETE
3. 5/12/10 Conduct teleconference to define details of RO 1010 matrix. COMPLETE
4. 5/12/10 Stats group to look at LTMS V2 as applied to IIIF. OPEN
5. 5/12/10 Status of RO 435-2 OPEN
6. 5/12/10 IIIGA 168 hour time limit to analyze. Discussion of changing to 30 days. OPEN, agenda item for today.
7. 5/12/10 Form a task force to develop an LTMS recommendation for SP consideration. DONE TF approved Draft document 11/17/10. SP chair will forward to entire panel. Will work w/VID chair to schedule meeting in January, 2011.

4.) Old Business

4.1 Honing Brushes

At the 5/12/10 meeting, Charlie Leverett brought to the panel's attention that a change in the honing brushes has occurred. After conversations with Charlie, Sunnen has stated that they would be willing to manufacture brushes that were the same as had been produced in the past. With the support of the panel, Charlie committed to get a quote from Sunnen. As of 10/04/10 the SP chair had received letter from OHT offering to purchase build-out of material. Matt Snider of GM has also researched the issue (**Attachment 2**). Charlie provided photos of material that Sunnen felt that they could provide consistently going forward. The SP had no interest in this material as it was a drastic change from current material (**Attachment 3**). Photos of OHT samples were also provided (**Attachment 4**). It appears that over the years there have been variations in the patterns and number of bristles. There was discussion regarding what are the critical parameters of the brushes and the importance of securing brushes that will not change through the life of the test. Much, much, much more discussion followed. As a result of the discussion, ***OHT was asked to distribute brushes to the labs that they feel will be representative of what they would supply and then the labs can test out their honing processes with the brushes. ACTION ITEM (OHT, test labs).***

4.2 IIIGA 168h limit to analyze samples

There was discussion at 5/12/10 meeting of changing the time limit to 30 days. Data on the subject was provided prior to the meeting (**Attachment 5**). Following some brief discussion, Charlie Leverett moved (Altman second) to extend the time limit from the current 168 h, to 504 h. The motion passed 12-0-1. A question was asked about effective

date, and the chair stated that since it wasn't part of the motion, that the effective date would be the date of the meeting. The chair offered members of the panel a chance to make a motion with a different effective date, but no motion was forthcoming. **ACTION ITEM: TMC to issue Information Letter with effective date of 11/19/10.**

4.3 IIIGB Round Robin with used TMC Oil 1010

There was discussion on this at the 5/12/10 meeting. This item was left open.

5.) New Business

5.1 A summary of TMC oil 1010 was presented by Rich Grundza (**Attachment 6**). At the conclusion the presentation, Rich noted that the panel will have to decide what the appropriate targets should be. After discussion, Rich was requested to tabulate targets based on all data, using the continuous SA model. **ACTION ITEM: Rich Grundza to distribute as requested. → ACTION ITEM COMPLETED, see Attachment 7.**

5.2 Bruce Matthews has asked the panel to consider an engine build forum to be held in Pontiac, MI to discuss best practices.

6.) Next Meeting

6.1 A teleconference will be scheduled to discuss oil 1010 targets, to be scheduled by the panel chair.

6.2 January 2011 to review TF agreed upon LTMS V2 document and make changes as deemed proper by full Surveillance Panel.

The meeting adjourned at 12:35 p.m.

**Attachment 1
Teleconference Attendance
Nov. 19, 2010**

Altman, E *
Bowden, A
Bowden, D
Bowden, J *
Brys, J
Buscher III, B
Joel Moreno for Jim Carter *
Caudill, T *
Clark, J
Clark, S
Farnsworth, G
Glaenzer, D
Grundza, R *
Lang, P *
Leverett, C *
Matthews, B *
Miranda, T *
Mosher, M *
Ritchie, A *
Seman, G *
Snider, M
Sutherland, M *
Olee, B
Andrews, A

Voting member indicated by *
13 of 17 voting members present.

Attachment 2

IIIIG Honing Brushes

Purchase Date: ~2005 / Bristles: 196



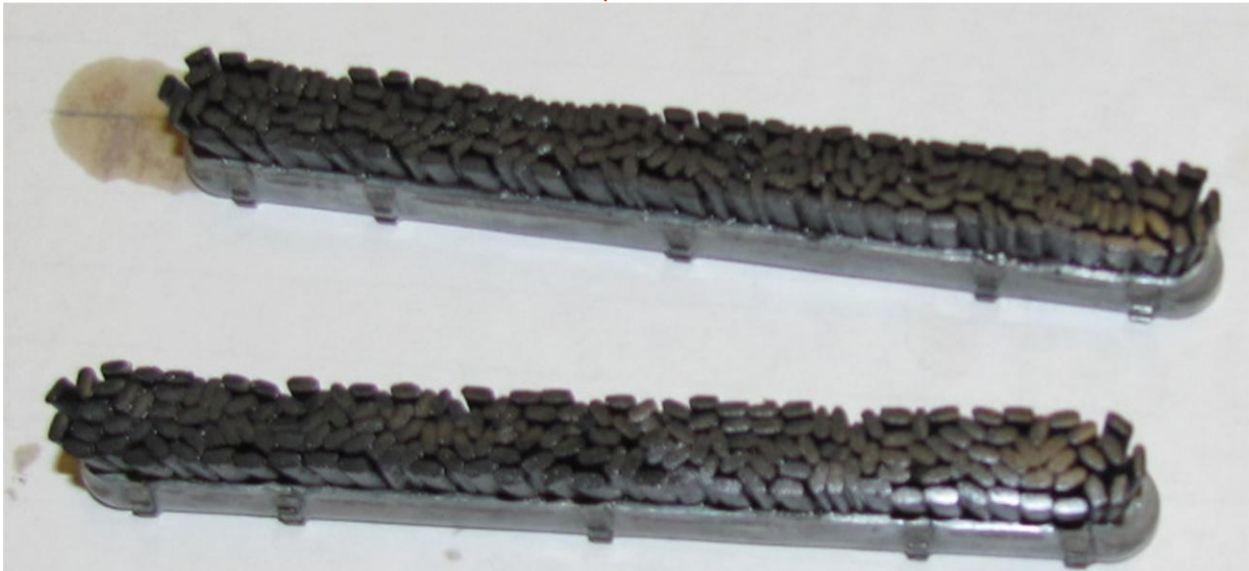
Purchase Date: May 2006 / Bristles: ~170 each



Purchase Date: ~2008 / Bristles: 178



Purchase Date: ~2008 / Bristles: ~175 each



Purchase Date: June 2009 / Bristles: ~140 each



Purchase Date: 2009-2010 / Bristles: 179



Purchase Date: Early-Mid 2010 / Bristles: 125



Purchase Date: Early-Mid 2010 / Bristles: 123



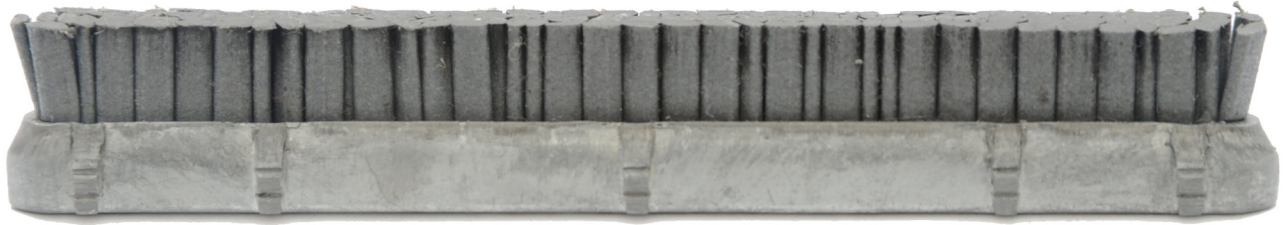
Purchase Date: Oct. 2010 / Bristles: ~170 each



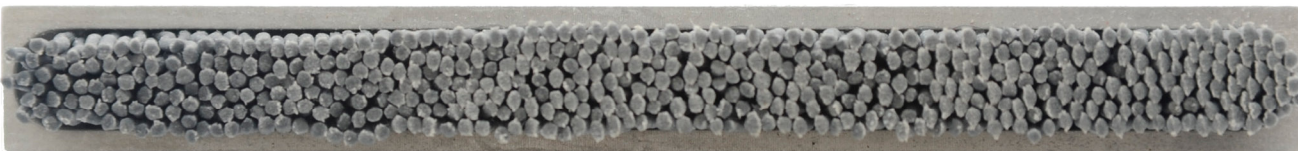
Attachment 3

Honing Stones

Currently using this stone



New stone



Attachment 4

C30-PHT-731
Sunnen Honing Brush Comparison

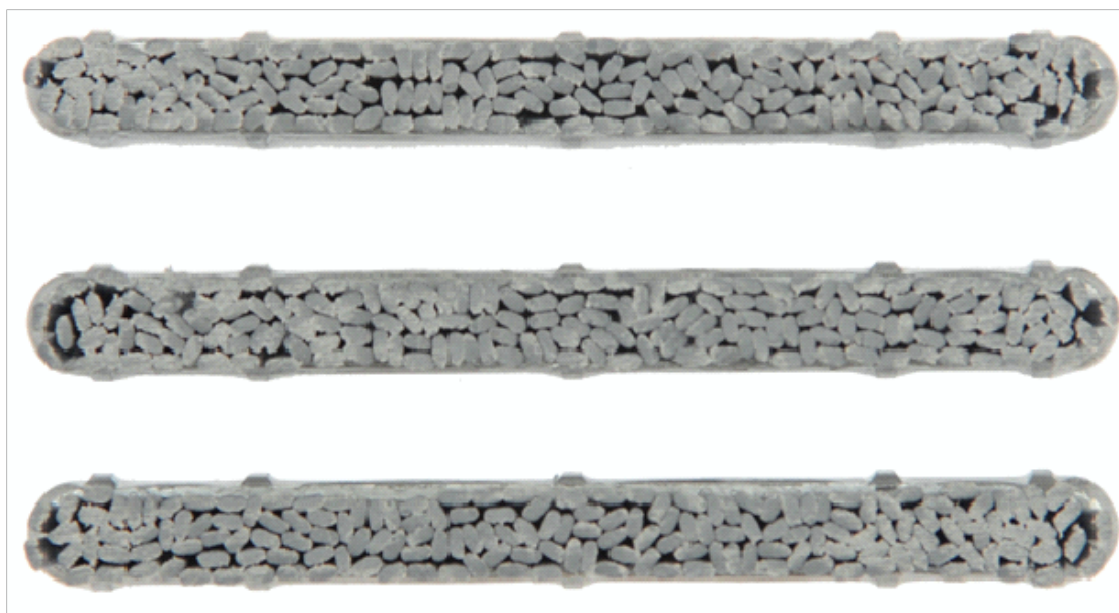
Original



Current



New OHT Honing Brush Samples Based on Original Print (~170)

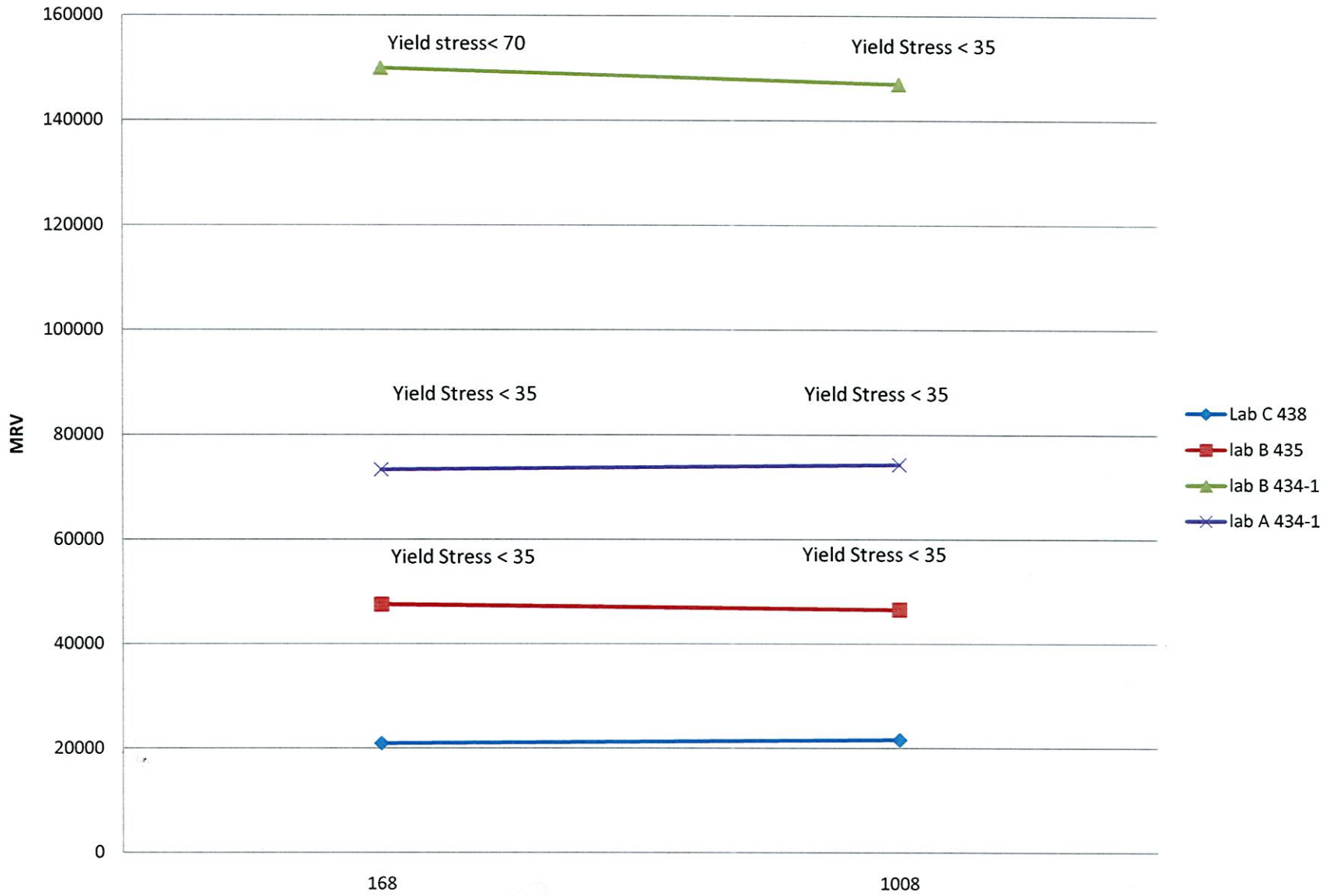


Attachment 5

Sequence IIIGA (Test started within 168 hours after EOT)					Re-check					
Lab	IIIG Stand	EOT Date	(A) MRV @ -30°C	Yield Stress	(B) MRV @ -30°C	Yield Stress	Re-test Date	Days after EOT	Delta (B) - (A)	% Change
D	2		38905	< 35	36760	< 35	23-Feb-10	36	-2145	-5.5
D	1		36000	< 35	45138	< 35	26-Feb-10	73	9138	25.4
D	1		15933	< 35	15751	< 35	23-Feb-10	86	-182	-1.1
D	3		38281	< 35	40089	< 35	23-Feb-10	105	1808	4.7
D	2		20396	< 35	20609	< 35	23-Feb-10	114	213	1.0
D	1		51796	< 35	54264	< 35	23-Feb-10	164	2468	4.8

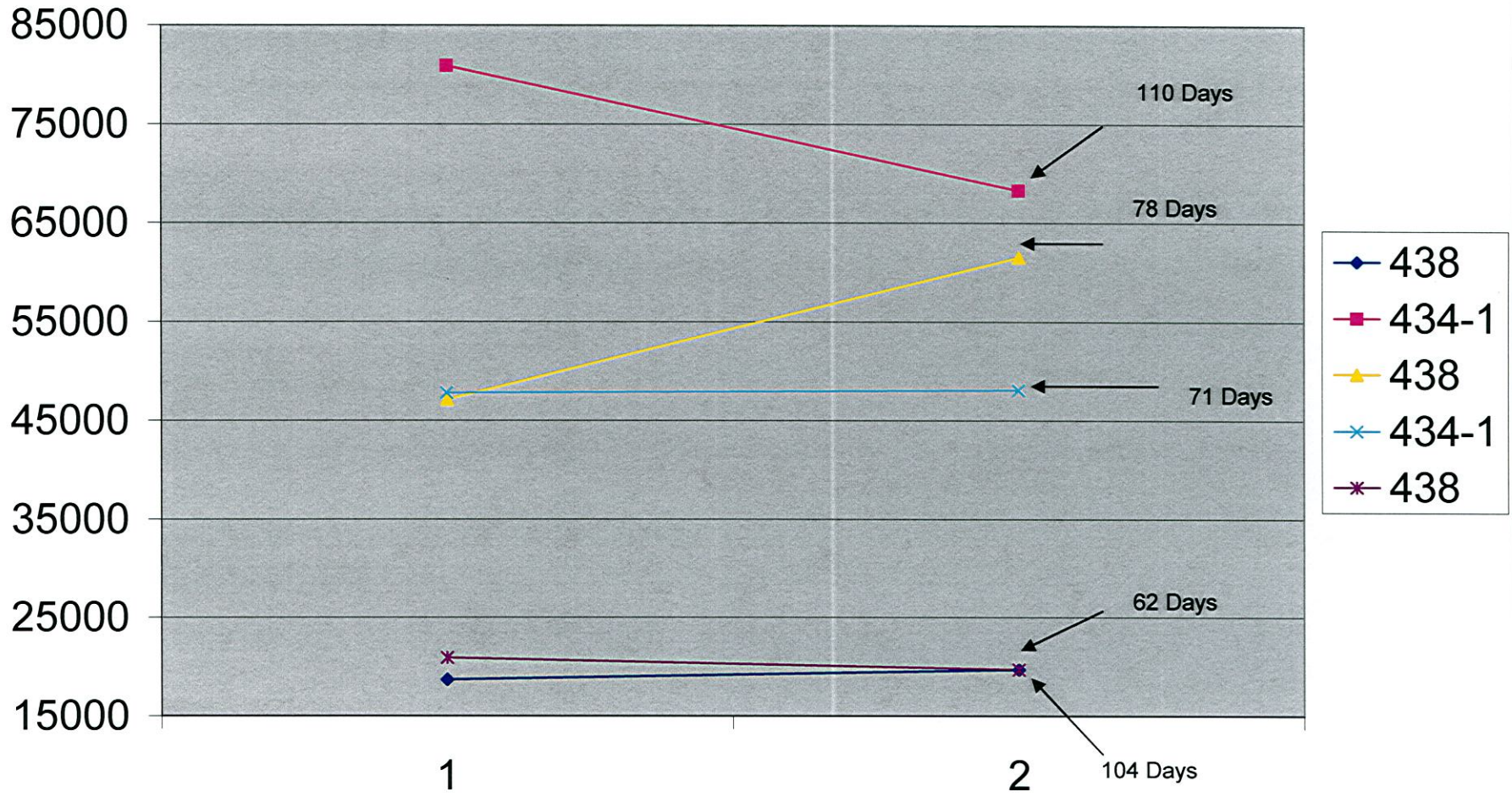
Yield Stress < 35

IIIGA MRV Results vs Age



IIIGA MRV Reruns

IAR



Yield Stress on all runs <35

Attachment 6



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IIIG 1010 Results

November 19, 2010

Results to Date

	Testkey	LTMSLAB	LTMSAPP	PVIS	WPD	ACLW
•	77822-IIIG	E	1	86.93	3.31	16.7
•	77823-IIIG	G	4	.	.	.
•	77824-IIIG	G	4	107.55	4.13	8.0
•	77825-IIIG	D	2	81.66	3.31	17.4
•	77826-IIIG	B	2	220.39	2.98	19.7
•	77828-IIIG	F	1	0.00	0.00	0.0
•	77829-IIIG	A	4A	71.96	3.51	18.1
•	A 77835-IIIG	F	1	298.06	3.10	23.3
•	78820-IIIG	F	1	0.00	0.00	0.0

A Test run on green (1st run) block, for conditioning.

NOTE: NOT all IIIGA and B results reported yet.

Severity Adjusted Results

1010 Results	PVIS	WPD	ACLW	PVIS SA	WPD SA	ACLW SA	Adj PVIS	ADJ WPD	ADJ ACLW
Lab D	81.7	3.31	17.4	0	0	0.2944	81.7	3.31	23.4
Lab A	72	3.51	18.1	-0.2026	0.507	0.2416	58.79555	4.017	23.0
Lab B	220.4	2.98	19.7	0	0.3376	0.231	220.4	3.3176	24.8
Lab E	86.9	3.31	16.7	0	0	0.2663	86.9	3.31	21.8
Lab G	107.5	4.13	8	0	0.4052	0.4254	107.5	4.5352	12.2
Supplier	81	3.49	9.9	0	0.479	0.226	81	3.969	12.4
Mean							96.4	3.74	18.8
Lab F results	298.1	3.1	23.3	0	0	0.1165	298.1	3.1	26.2
Mean including F results							113.2	3.65	19.7

Severity Adjusted Results, using Continuous SA's

1010 Results	PVIS	WPD	ACLW	PVIS SA	WPD SA	ACLW SA	Adj PVIS	ADJ WPD	ADJ ACLW
Lab D	81.7	3.31	17.4	-0.12493	0.24	0.2944	72.10481	3.55	23.4
Lab A	72	3.51	18.1	-0.2026	0.507	0.2416	58.79555	4.017	23.0
Lab B	220.4	2.98	19.7	-0.04758	0.3376	0.231	210.159	3.3176	24.8
Lab E	86.9	3.31	16.7	0.151204	0.1704	0.2663	101.085	3.4804	21.8
Lab G	107.5	4.13	8	-0.11764	0.4052	0.4254	95.56964	4.5352	12.2
Supplier	81	3.49	9.9	-0.08932	0.479	0.226	74.07868	3.969	12.4
Mean							92.8	3.81	18.8
Lab F results	298.1	3.1	23.3	0.035904	0.1344	0.1165	308.9973	3.2344	26.2
Mean including F results							110.2	3.73	19.7

11/16/2010

MRV + Phos

1010 Results	PHOS	MRV	Phos SA	Adj Phos	xformed MRV
Lab D	86.93	11837	-1.44	85.49	9.378985
Lab A	83.94	10800	0	83.94	9.287301
Lab B	84.31	25900	0	84.31	10.162
Lab E	87.32	24280	0	87.32	10.09741
Lab G	86.86	14095	0	86.86	9.553575
Supplier	86.47	11400	-1.36	85.11	9.341369
Mean				85.505	9.636773
Lab F results	83.09 NM		0	83.09 NM	
				85.16	
std dev				1.353791	0.392636
std dev with Lab F results				1.536381	N/A



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Attachment 7



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IIIG Reference Oil 1010 Results

November 19, 2010

Summary of Results

Continuous SA Model

1010 Results	PVIS	WPD	ACLW	PVIS SA	WPD SA	ACLW SA	Adj PVIS	ADJ WPD	ADJ ACLW	Oil Consumption
Lab D	81.7	3.31	17.4	-0.12493	0.24	0.2944	72.10481	3.55	23.4	3.68
Lab A	72	3.51	18.1	-0.2026	0.507	0.2416	58.79555	4.017	23.0	3.08
Lab B	220.4	2.98	19.7	-0.04758	0.3376	0.231	210.159	3.3176	24.8	4.15
Lab E	86.9	3.31	16.7	0.151204	0.1704	0.2663	101.085	3.4804	21.8	3.82
Lab G	107.5	4.13	8	-0.11764	0.4052	0.4254	95.56964	4.5352	12.2	3.80
Supplier	81	3.49	9.9	-0.08932	0.479	0.226	74.07868	3.969	12.4	3.46
Lab F results	298.1	3.1	23.3	0.035904	0.1344	0.1165	308.9973	3.2344	26.2	4.42
Mean							110.2	3.73	19.7	
Standard deviation							0.6110	0.47	0.3261	
Mean in Transformed units							4.7020		2.9814	

Summary of Results

Continuous SA Model

MRV + Phos

1010 Results	PHOS	MRV	Phos SA	Adj Phos	xformed MRV
Lab D	86.93	11837	-1.44	85.49	9.378985
Lab A	83.94	10800	1.13	85.07	9.287301
Lab B	84.31	25900	0.01	84.32	10.162
Lab E	87.32	24280	2.31	89.63	10.09741
Lab G	86.86	14095	0.37	87.23	9.553575
Supplier	86.47	11400	-1.36	85.11	9.341369
Lab F results	83.09	NM	2.1	85.19	NM
Mean					9.6368
Standard Deviation				1.83	0.3926

11/19/2010

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