



Test Monitoring Center

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412-365-1000

MEMORANDUM: 16-022
DATE: June 8, 2016
TO: HTCBT Surveillance Panel
FROM: Michael T. Kasimirsky *Michael T. Kasimirsky*
SUBJECT: Reference Oil 1005-5 Final Test Targets

As approved by the HTCBT Surveillance Panel, the Reference Oil 1005-5 test targets were updated based upon all data points completed on or before June 2, 2016. The update targets are shown in Table 1, below:

Table 1: Reference Oil 1005-5 Updated Test Targets (N=138)			
Parameter	Mean	Standard Deviation	Acceptance Range
Copper Concentration	1.8497	0.3363	3.2 to 12.3
Lead Concentration	9.5	7.6	0.0 to 24.4

The individual test results used in generation of these test targets are shown in Table 2. The individual test results, initial & updated test target acceptance range, and the test target acceptance range for Reference Oils 1005, 1005-1, & 1005-3 for *Copper Concentration* and *Lead Concentration* are plotted in Figures 1 and 2, respectively.

These targets are effective on June 20, 2016.

c: <ftp://ftp.astmtmc.cmu.edu/docs/bench/htcvt/memos/mem16-022.pdf>

Distribution: electronic mail

Table 2 Individual Test Results									
TESTKEY	LAB	BATH	COURSON	VAL	DATE	TIME	CLC	CDCC	PBC
11218-HICBT	A	7	L	NI	20151012	17:18	7.0	1.945910149	16.0
11219-HICBT	A	7	L	NI	20151012	17:18	7.0	1.945910149	17.0
11220-HICBT	A	7	L	NI	20151012	17:18	7.0	1.945910149	18.0
11223-HICBT	A	10	L	OC	20151118	17:02	12.0	2.48490665	46.0
11222-HICBT	A	6	L	AC	20151119	16:18	8.0	2.09441542	20.0
11225-HICBT	A	12	L	AC	20151119	16:47	7.0	1.945910149	8.0
11221-HICBT	A	3	L	AC	20151130	13:57	8.0	2.09441542	20.0
11214-HICBT	A	5	L	AC	20151125	13:47	8.0	2.09441542	20.0
11216-HICBT	A	7	L	AC	20151130	15:49	8.0	2.09441542	20.0
11218-HICBT	A	6	K	AC	20151201	16:07	8.0	2.09441542	20.0
11217-HICBT	A	3	L	AC	20151202	15:28	8.0	2.09441542	20.0
11219-HICBT	A	12	L	AC	20151209	15:42	8.0	2.09441542	19.0
112130-HICBT	A	7	L	AC	20160218	12:56	8.0	2.09441542	20.0
113166-HICBT	A	12	L	AC	20160223	13:30	8.0	2.09441542	17.0
113131-HICBT	A	8	L	AC	20160224	12:49	8.0	2.09441542	20.0
113169-HICBT	A	3	L	AC	20160229	15:21	8.0	2.09441542	20.0
113170-HICBT	A	5	L	AC	20160303	14:55	8.0	2.09441542	15.0
113173-HICBT	A	12	L	AC	20160303	14:57	8.0	2.09441542	12.0
113171-HICBT	A	7	L	AC	20160304	14:00	8.0	2.09441542	16.0
113172-HICBT	A	6	L	AC	20160307	16:05	8.0	2.09441542	26.0
113174-HICBT	A	3	L	OC	20160308	14:31	28.0	3.33220451	53.0
113175-HICBT	A	5	L	AC	20160311	15:28	8.0	2.09441542	26.0
113176-HICBT	A	7	L	AC	20160314	16:39	8.0	2.09441542	22.0
113178-HICBT	A	12	L	AC	20160315	14:32	8.0	2.09441542	18.0
113177-HICBT	A	6	L	AC	20160316	16:03	8.0	2.09441542	18.0
113179-HICBT	A	3	L	AC	20160316	16:06	8.0	2.09441542	12.0
116263-HICBT	A	5	L	AC	20160318	14:21	6.0	1.791759469	10.0
116264-HICBT	A	7	L	AC	20160321	15:47	6.0	1.791759469	7.0
11627-HICBT	A	1	L	AC	20160321	16:06	7.0	1.945910149	10.0
116265-HICBT	A	3	L	AC	20160324	15:32	6.0	1.791759469	12.0
116265-HICBT	A	6	L	AC	20160324	15:34	6.0	1.791759469	13.0
116266-HICBT	A	5	L	AC	20160325	14:57	6.0	1.791759469	16.0
116271-HICBT	A	7	L	AC	20160328	16:48	7.0	1.945910149	8.0
116273-HICBT	A	1	L	AC	20160329	14:46	6.0	1.791759469	9.0
116272-HICBT	A	6	L	AC	20160331	15:00	6.0	1.791759469	8.0
116269-HICBT	A	3	L	AC	20160401	13:28	6.0	1.791759469	9.0
116274-HICBT	A	7	L	AC	20160404	13:32	7.0	1.945910149	9.0
116274-HICBT	A	7	L	AC	20160405	16:28	6.0	1.791759469	11.0
116276-HICBT	A	6	L	AC	20160407	15:03	6.0	1.791759469	21.0
116275-HICBT	A	3	L	AC	20160411	14:51	6.0	1.791759469	7.0
116277-HICBT	A	5	L	AC	20160412	13:54	6.0	1.791759469	10.0
116278-HICBT	A	6	L	AC	20160420	13:42	7.0	1.945910149	25.0
116279-HICBT	A	3	L	AC	20160425	15:53	6.0	1.791759469	18.0
116280-HICBT	A	5	L	AC	20160428	14:39	7.0	1.945910149	20.0
116281-HICBT	A	7	L	AC	20160504	13:16	6.0	1.791759469	16.0
116282-HICBT	A	6	L	AC	20160505	12:58	8.0	2.09441542	28.0
116283-HICBT	A	5	L	AC	20160513	14:03	7.0	1.945910149	12.0
116284-HICBT	A	7	L	AC	20160518	13:51	8.0	2.09441542	18.0
116285-HICBT	A	12	L	AC	20160523	10:26	8.0	2.09441542	16.0
116286-HICBT	A	3	L	AC	20160526	10:36	8.0	2.09441542	21.0
116287-HICBT	A	5	L	AC	20160531	11:28	8.0	2.09441542	26.0
118264-HICBT	A	7	L	AC	20160602	15:18	7.0	1.945910149	12.0
112214-HICBT	B	11	L	NI	20151008	08:05	5.0	1.609437912	6.0
112215-HICBT	B	11	L	NI	20151008	08:05	6.0	1.791759469	7.0
112216-HICBT	B	11	L	NI	20151008	08:05	5.0	1.609437912	7.0
112217-HICBT	B	2	L	AC	20151117	10:15	6.0	1.791759469	6.0
112218-HICBT	B	11	L	AC	20151118	13:25	7.0	1.945910149	8.0
112219-HICBT	B	10	L	AC	20151119	10:50	8.0	2.09441542	8.0
112220-HICBT	B	6	L	AC	20151120	09:20	6.0	1.791759469	7.0
112221-HICBT	B	1	L	AC	20151123	10:10	6.0	1.791759469	8.0
112222-HICBT	B	10	L	AC	20151130	08:55	6.0	1.791759469	13.0
112224-HICBT	B	11	L	AC	20160120	08:40	7.0	1.945910149	9.0
112225-HICBT	B	10	L	AC	20160127	10:45	6.0	1.791759469	10.0
112226-HICBT	B	1	L	AC	20160203	09:55	7.0	1.945910149	10.0
112223-HICBT	B	2	L	AC	20160204	10:25	6.0	1.791759469	9.0
112227-HICBT	B	6	L	AC	20160209	13:35	6.4	1.85649799	11.0
11228-HICBT	B	10	L	AC	20160215	09:30	5.0	2.09441542	8.0
114610-HICBT	B	1	L	AC	20160217	10:40	5.0	1.609437912	5.0
114612-HICBT	B	6	L	AC	20160222	13:55	5.8	1.722766598	9.0
114613-HICBT	B	10	L	AC	20160224	09:55	7.0	1.945910149	7.0
114614-HICBT	B	1	L	AC	20160225	11:15	8.0	2.09441542	9.0
114611-HICBT	B	13	L	AC	20160226	11:10	7.0	1.945910149	6.0
114616-HICBT	B	2	L	AC	20160229	10:45	6.0	1.791759469	6.0
114617-HICBT	B	10	L	AC	20160302	13:50	7.0	1.945910149	7.0
114618-HICBT	B	10	L	AC	20160307	09:05	6.0	1.791759469	6.0
114619-HICBT	B	1	L	AC	20160309	10:15	6.3	1.840549633	6.0
114621-HICBT	B	2	L	AC	20160314	10:45	6.0	1.791759469	5.0
114620-HICBT	B	10	L	AC	20160315	13:20	7.0	1.945910149	6.0
114622-HICBT	B	6	L	AC	20160316	11:15	6.0	1.791759469	9.0
114623-HICBT	B	1	L	AC	20160317	10:35	7.5	2.014903021	9.0
114625-HICBT	B	11	L	AC	20160318	09:25	6.2	1.824549292	7.0
114624-HICBT	B	2	L	AC	20160321	11:55	6.0	1.791759469	7.0
114626-HICBT	B	10	L	AC	20160323	10:15	6.8	1.916922612	8.0
114627-HICBT	B	6	L	AC	20160324	09:40	6.0	1.791759469	7.0
114628-HICBT	B	1	L	AC	20160328	11:35	5.5	1.704748092	7.0
114625-HICBT	B	2	L	AC	20160329	09:15	6.1	1.808288771	8.0
114629-HICBT	B	11	L	AC	20160331	11:30	6.0	1.791759469	8.0
11636-HICBT	B	2	L	AC	20160413	10:40	7.0	1.945910149	7.0
11636-HICBT	B	10	L	AC	20160414	11:00	5.0	1.609437912	7.0
11635-HICBT	B	2	L	AC	20160420	08:20	6.0	1.791759469	7.0
11638-HICBT	B	2	L	AC	20160421	09:25	5.0	1.609437912	6.0
116307-HICBT	B	10	L	AC	20160425	11:35	6.0	1.791759469	8.0
116308-HICBT	B	6	L	AC	20160427	11:25	7.0	1.945910149	7.0
116309-HICBT	B	11	L	AC	20160428	11:35	5.0	1.609437912	7.0
116310-HICBT	B	12	L	AC	20160504	09:05	5.0	1.609437912	6.0
116311-HICBT	B	6	L	AC	20160505	09:10	7.0	1.945910149	7.0
116312-HICBT	B	2	L	AC	20160509	10:50	7.0	1.945910149	8.0
116313-HICBT	B	2	L	AC	20160517	10:10	6.0	1.791759469	7.0
116314-HICBT	B	6	L	AC	20160518	09:30	6.0	1.791759469	8.0
116315-HICBT	B	1	L	AC	20160519	10:50	6.0	1.791759469	7.0
116316-HICBT	B	11	L	AC	20160523	09:45	7.0	1.945910149	8.0
116317-HICBT	B	2	L	AC	20160601	08:40	6.0	1.791759469	7.0
11226-HICBT	G	2	L	NI	20151020	21:30	5.8	1.878679718	6.6
11228-HICBT	G	2	L	NI	20151020	21:30	6.0	1.791759469	5.7
11228-HICBT	G	2	L	NI	20151020	21:30	9.0	2.192224577	21.0
112273-HICBT	G	2	L	AC	20151223	22:30	9.0	2.192224577	27.5
112166-HICBT	I	5	L	NI	20151022	11:00	5	1.609437912	6
112167-HICBT	I	5	L	NI	20151022	11:00	6	1.791759469	7
112168-HICBT	I	5	L	NI	20151022	11:00	5	1.609437912	6
112169-HICBT	I	3	K	AC	20151117	11:00	5	1.609437912	3
112170-HICBT	I	4	K	AC	20151118	11:00	6	1.791759469	3
112171-HICBT	I	5	K	AC	20151119	11:00	6	1.791759469	2
112172-HICBT	I	4	K	AC	20151125	11:00	5	1.609437912	5
112173-HICBT	I	5	K	AC	20151126	11:00	5	1.609437912	4
112174-HICBT	I	2	K	AC	20151208	11:00	5	1.609437912	6
112175-HICBT	I	3	K	AC	20151208	11:00	6	1.791759469	6
112178-HICBT	I	1	K	AC	20151228	11:00	5	1.609437912	5
112179-HICBT	I	3	K	AC	20151229	11:00	6	1.791759469	9
112180-HICBT	I	1	K	AC	20160111	11:00	5	1.609437912	0
113102-HICBT	I	2	K	AC	20160112	11:00	5	1.609437912	0
113103-HICBT	I	3	K	AC	20160112	11:00	5	1.609437912	0
112176-HICBT	I	4	K	AC	20160113	11:00	6	1.791759469	0
112177-HICBT	I	5	K	AC	20160114	11:00	6	1.791759469	2
113104-HICBT	I	1	K	AC	20160118	11:00	5	1.609437912	1
113105-HICBT	I	2	K	AC	20160119	11:00	5	1.609437912	2
113106-HICBT	I	3	K	AC	20160119	11:00	5	1.609437912	3
113107-HICBT	I	4	K	AC	20160120	11:00	6	1.791759469	3
113108-HICBT									

Figure 1: Change in Copper Concentration Test Target Data Set and Acceptance Bands

HTCBT Reference Oil 1005-5

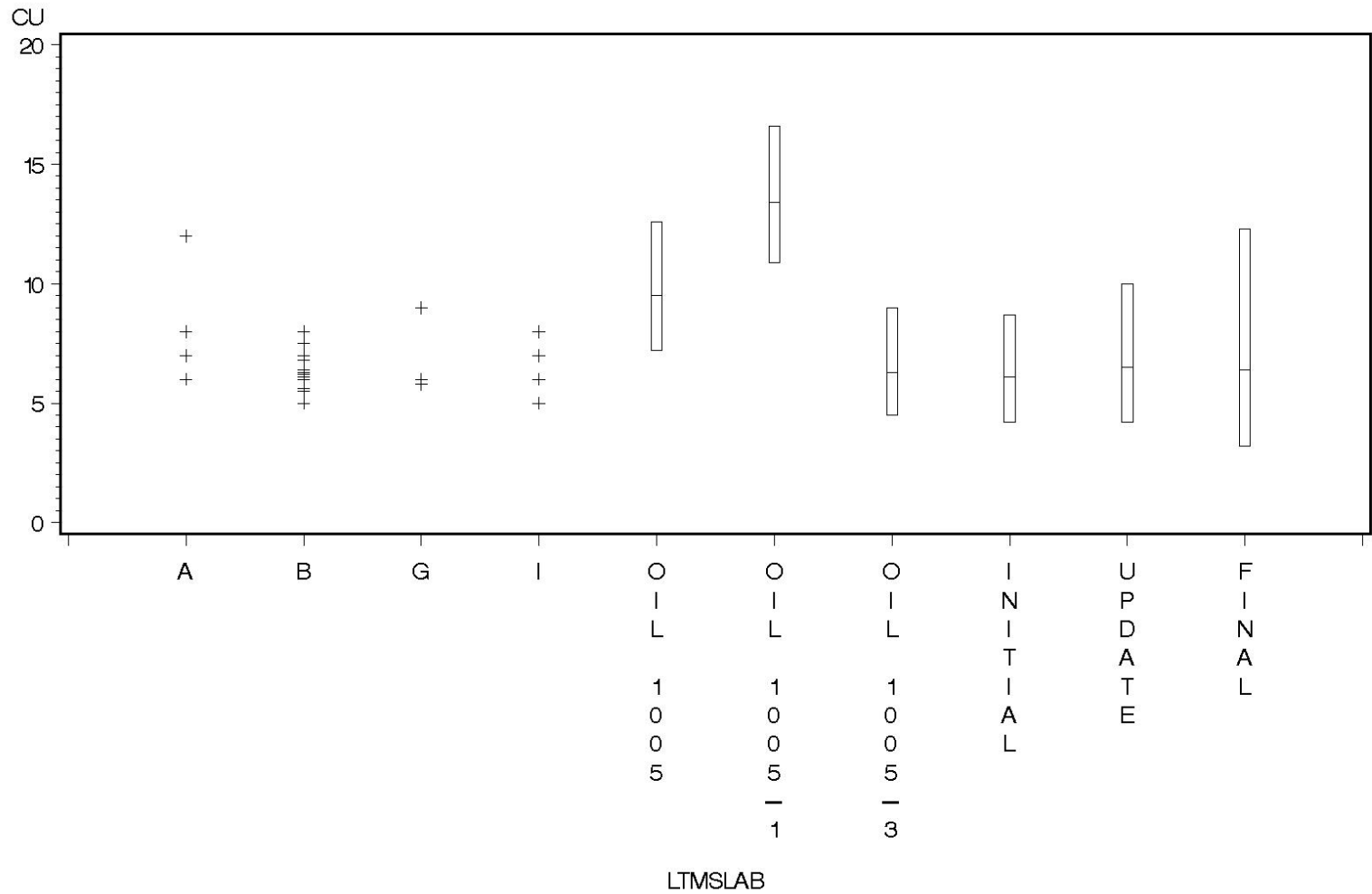


Figure 2: Change in Lead Concentration Test Target Data Set and Acceptance Bands

HTCBT Reference Oil 1005-5

