Appendix D1

Clovis 1 Field Data Sheets

(This page intentionally blank.)

Console Clock - fix Reset [illegible]
Dummy Pants prep as they go - a lb Sherem's

Amp Nr B: 11563
E:

FIELD DATA RECORD

PAGE 1 of 1

RUN NO. C1
LOCATION Dec Cr Tank (w/hood)
DATE 5/25/04
OPERATOR [illegible]
METER BOX NO. 4204
LOCAL TIME 11:30 / 1510
START/STOP

STACK DIAMETER 12"
Ym: 1.006
H@: 1.752

$k = \frac{2.1}{1.0} = \frac{\Delta H}{\Delta P}$

PITOT TUBE FACTOR 0.84
NOZZLE DIAMETER 0.375 in.
PROBE LENGTH 4 ft.

SAMPLE TRAIN LEAK TEST
BEFORE 17" ok in. ~~H2O~~ Hg
AFTER 14" in. ~~H2O~~ Hg
PITOT TUBE LEAK TEST
BEFORE 7.2 ok AFTER 6.4 ok

PROJECT NO. 04-014
PLANT NAME Clovis Specialty
AMBIENT TEMP (F) 80
METER TEMP (F) 60
BAR. PRESS ("Hg) 29.58
STATIC PRESSURE ("H2O) ~~[illegible]~~ -0.24
ASSUMED MOISTURE (%) 1
ASSUMED O2 (%) 20.9
ASSUMED CO2 (%) 0
ASSUMED MW (WET, %) —
ASSUMED MW (DRY, %) —

POINT	CLOCK TIME	DRY GAS METER (cu. ft.) 10 mil/sq.	VELOCITY dP (in. H2O)	ORIFICE dH (in. H2O) DESIRED	ORIFICE dH (in. H2O) ACTUAL	TEMPERATURES (F) STACK	TEMPERATURES (F) PROBE	TEMPERATURES (F) ~~FILTER~~ Amb.	TEMPERATURES (F) ~~RESIN~~	TEMPERATURES (F) IMPGR	PUMP VAC (in. Hg)
START	0	733.95	—	—	—	—	—	—	—	—	—
W-1	10	742.00	0.10	2.1	2.1	74	74	75		47	7
2	20	750.30	0.11	~~2.2~~ 2.3	2.2	77	75	75		47	7
3	30	758.72	0.11	~~2.2~~ 2.3	2.2	78	75	77		43	7
4	40	767.3	0.11	~~2.2~~ 2.3	2.2	78	76	77		43	7
5	50	775.4	0.11	~~2.2~~ 2.3	2.2	79	76	78		43	7
6	60	784.50	0.12	2.6	2.6	79	77	78		43	8
7	70	794.8	0.16	3.4	3.4	79	77	78		43	10
8	80	805.01	0.16	3.4	3.4	79	77	79		42	10
9	90	815.59	0.17	3.6	3.6	80	77	81		42	11
10	100	826.5	0.16	3.4	3.4	80	78	80		43	10
11	110	836.63	0.18	3.8	3.8	79	78	79		43	12
12	120	847.54	0.18	3.8	3.8	80	78	79		42	12
E-1	130	855	0.09	1.9	1.9	80	78	82		44	6
2	140	863.31	0.09	1.9	1.9	79	79	82		44	6
3	150	871.84	0.11	2.3	2.3	82	79	81		44	7
4	160	880.69	0.12	2.5	2.5	82	79	81		44	8
5	170	889.54	0.12	2.5	2.5	82	80	81		44	8
6	180	899.15	0.14	3.0	3.0	82	80	81		43	10
7	190	909.12	0.15	3.2	3.2	83	81	82		43	10
8	200	919.32	0.16	3.4	3.4	83	81	83		43	11
9	210	—	0.18	3.8	3.8	83	81	82		43	12
10	220	940.9	0.18	3.8	3.8	83	82	85		43	12
11	230	951.91	0.18	3.8	3.8	84	82	83		43	12
12	240	962.79	0.18 3.37	3.8	3.8 70.8	83	82	82		43	12
	Theta: 240	Vm: 228.84	avg dP: ~0.374		avg dH: 2.95	avg Ts 80.3	1928	80.0	1921		

moist
1189.5 > Gel 25.5
- 1164.0
+ 123.0 > Il 22.4
- 100.6
+110.0 > I 2+3 8.5
- 101.5
56.4 grams

FIELD DATA RECORD

PAGE 1 of

RUN NO. C-2
LOCATION Dec Cr Tank
DATE 5/26/04
OPERATOR WTOD
METER BOX NO. 4204
LOCAL TIME
START/STOP 0910-1130/1330-1530
STACK DIAMETER 12"
Ym: 1.006
H@: 1.752

$\frac{\Delta H}{\Delta p} = \frac{2.1}{0.10}$

PITOT TUBE FACTOR 0.84
NOZZLE DIAMETER 0.375 in. 1 3/8"
PROBE LENGTH 4 ft.

SAMPLE TRAIN LEAK TEST
BEFORE in. ~~H2O~~ Hg
AFTER in. ~~H2O~~ Hg
PITOT TUBE LEAK TEST
BEFORE 5.7 ok AFTER 6.2 ok

PROJECT NO. 04-014
PLANT NAME Clovis Special/A
AMBIENT TEMP (F) 81
METER TEMP (F) 60
BAR. PRESS ("Hg) 29.62
STATIC PRESSURE ("H2O) -0.23
ASSUMED MOISTURE (%) 1
ASSUMED O2 (%) 20.9
ASSUMED CO2 (%) 0.0
ASSUMED MW (WET, %)
ASSUMED MW (DRY, %)

POINT	CLOCK TIME	DRY GAS METER (cu. ft.)	VELOCITY dP (in. H2O)	ORIFICE dH (in. H2O) DESIRED	ORIFICE dH (in. H2O) ACTUAL	TEMPERATURES (F) STACK	TEMPERATURES (F) PROBE	TEMPERATURES (F) ~~FILTER~~ Amb	TEMPERATURES (F) RESIN	TEMPERATURES (F) IMPGR	PUMP VAC (in. Hg)
START	0	962.93	—	—	—	—	—	—		—	—
NW-1	10	970.78	0.09	1.9	1.9	75	74	72		45	8
2	20	979.14	0.10	2.1	2.1	77	75	74		44	9
3	30	987.74	0.11	2.3	2.3	77	75	74		44	9
4	40	996.40	0.11	2.3	2.3	77	75	75		44	9
5	50	1005.41	0.12	2.5	2.5	77	75	75		45	10
6	60	14.68	0.13	2.7	2.7	78	76	76		44	11
7	70	24.7	0.15	3.2	3.2	79	77	76		44	14
8	80	34.95	0.16	3.3	3.3	79	77	76		44	15
9	90	45.32	0.16	3.4	3.4	79	77	77		44	15
10	100	55.91	0.17	3.6	3.6 max	79	78	77		44	16
11	110	66.52	0.17	3.6	3.6 max	80	78	79		44	16
12	120	1077.11	0.17	3.6	3.6 max	79	77	77		43	16
NE-1	130	1085.74	0.10	2.1	2.1	84	87	83		50	9
2	140	94.38	0.11	2.3	2.3	87	87	85		49	10
3	150	103.04	0.11	2.3	2.3	87	87	85		49	10
4	160	111.68	0.11	2.3	2.3	87	87	85		49	10
5	170	120.6	0.12	2.5	2.5	87	87	87		48	10
6	180	129.6	0.12	2.5	2.5	86	87	85		48	10
7	190	139.65	0.15	3.2	3.2	86	87	86		48	14
8	200	149.95	0.16	3.4	3.4	87	87	86		47	15
9	210	160.29	0.16	3.4	3.4	84	~~84~~ 87	87		48	15
10	220	170.66	0.16	3.4	3.4	85	86	85		47	15
11	230	1181.0	0.16	3.4	3.4	85	87	86		47	15
12	240	1191.20	0.16 3.26	3.4	3.4 68.7	86 68.7	87	86 19.34		47	15
	Theta: 240	Vm: 228.27	avg dP: ~0.369		avg dH: 2.86	avg Ts 82		81			

1130 2400 1530 restart

Moisture
113.8 - 100.8 > I-1 13.0
110.8 - 101.0 > I-2&3 9.8
1156.8 - 1181.6 > Gel 24.8
47.6

FIELD DATA RECORD

RUN NO. C-3
LOCATION Dec. Cr TK
DATE 5/22/14
OPERATOR A Todd
METER BOX NO. 4207
LOCAL TIME
START/STOP 0900-1100/1230-1520

STACK DIAMETER 12
Ym: K = ΔH/ΔP = 2.1/0.10 = 1.006
H@: 1.752

PITOT TUBE FACTOR 0.84
NOZZLE DIAMETER ~~0.375~~ 0.373 in (3/8)
PROBE LENGTH 4 ft

SAMPLE TRAIN LEAK TEST
BEFORE 15" in. ~~H2O~~ Hg
AFTER in. ~~H2O~~ Hg
PITOT TUBE LEAK TEST
BEFORE 7.0 cfm AFTER 2.3 cfm

PAGE 1 of
PROJECT NO. 04-014
PLANT NAME Clovis Specialty
AMBIENT TEMP (F) 86
METER TEMP (F) 60
BAR. PRESS ("Hg) 29.62
STATIC PRESSURE ("H2O) -0.25
ASSUMED MOISTURE (%) 1
ASSUMED O2 (%) 20.9
ASSUMED CO2 (%) 0.0
ASSUMED MW (WET, %)
ASSUMED MW (DRY, %)

POINT	CLOCK TIME	DRY GAS METER (cu. ft.)	VELOCITY dP (in. H2O)	ORIFICE dH (in. H2O) DESIRED	ORIFICE dH (in. H2O) ACTUAL	TEMPERATURES (F) STACK	PROBE	FILTER ~~FILTER~~ Amb.	RESIN	IMPGR	PUMP VAC (in. Hg)
START	0	191.41	—	—	—	—	—	—	—	—	—
0900 PE-1	10	199.41	0.10	2.1	2.1	80	81	78		~~64~~	6
2	20	207.76	0.10	2.1	2.1	81	82	79		56	6
3	30	217	0.12	2.5	2.5	81	82	81		49	7
4	40	~~225.67~~	0.11	2.3	2.3	83	82	82		48	6
5	50	234.62	0.12	2.5	2.5	84	83	82		49	7
6	60	243.89	0.13	2.7	2.7	84	83	82		48	7
7	70	~~254.08~~	0.16	3.4	3.4	84	83	83		42	10
8	80	264.44	0.16	3.4	3.4	84	83	83		47	10
9	90	274.66	0.14	3.3	3.3	84	83	83		47	10
10	100	285.2	0.17	3.6	3.6	84	83	83		47	10
11	110	295.50	0.16	3.3	3.3	84	83	83		46	10
12	120	305.54	0.15	3.2	3.2	85	~~84~~	84		47	9
1100 restart 1230 PE-1	120	313.45	0.09	1.9	1.9	89	92	89		57	6
2	~~130~~ 140	321.00	0.08	1.7	1.7	90	92	89		54	5
3	~~140~~ 150	329.50	0.11	2.3	2.3	91	92	89		53	7
4	~~150~~ 160	338.03	0.11	2.3	2.3	92	93	90		53	7
5	170	346.56	0.11	2.3	2.3	91	93	91		53	7
6	180	355.26	0.13	2.7	2.7	91	92	91		53	8
7	190	365.89	0.15	3.2	3.2	92	92	90		52	9
8	200	375.	0.16	~~3.2~~ 3.4	3.4	92	92	91		52	9
9	210		0.17	3.6	3.6	90	91	90		52	10
10	220	396.66	0.18	3.8	3.8	90	91	90		52	10.5
11	230	407.82	0.19	3.8	3.8	90	91	92		52	10.5
12	240	417.54	0.16	3.4	3.4	90.9	91	94.1		52	9.5
	Theta: 240	Vm: 226.13	avg dP: 0.369		avg dH: 2.8667	avg Ts 86.9167		86.2			

Moisture
117.3 − 100.4 = 16.9
116.7 − 101.8 = 14.9
1130.6 − 1107.5 = 23.1
54.9 g

FIELD DATA RECORD

RUN NO. SP
LOCATION 14th & S Warehouse
DATE 3/17/04
OPERATOR Dan Ridolfi, Dave Tuttle
METER BOX NO. 20004206
LOCAL TIME 07:58
START/STOP ~~941.828~~ 1455 / 1741.828

STACK DIAMETER 12"
Ym: 1.002
H@: 1.755

PITOT TUBE FACTOR .84
NOZZLE DIAMETER .375 in.
PROBE LENGTH 4 ft.

SAMPLE TRAIN LEAK TEST
BEFORE 18 in. Hg ok
AFTER 15 in. Hg ok
PITOT TUBE LEAK TEST
BEFORE 5/4/04 AFTER 5/5/04

PAGE 1 of
PROJECT NO. T-03-058
PLANT NAME Shell's Post Test
AMBIENT TEMP (F) 67
METER TEMP (F) 60
BAR. PRESS ("Hg) 30.03
STATIC PRESSURE ("H2O) -.24
ASSUMED MOISTURE (%) <1%
ASSUMED O2 (%) 20.9%
ASSUMED CO2 (%) 0%
ASSUMED MW (WET, %)
ASSUMED MW (DRY, %)

POINT	CLOCK TIME	DRY GAS METER (cu. ft.)	VELOCITY dP (in. H2O)	ORIFICE dH (in. H2O)		TEMPERATURES (F)					PUMP VAC (in. Hg)
				DESIRED	ACTUAL	STACK	~~PROBE~~ Amb	FILTER	RESIN	IMPGR	
START	0	941.828									
W-1	15	954.28	.10	2.9	2.9	67	70			47	11
2	30	968.77	.12	2.9	2.9	67	68			45	11
3	45	983.20	.14	2.9	2.9	67	68			45	11
4	60	997.73	.15	2.9	2.9	67	69			45	11
5	75	1012.15	.14	2.9	2.9	67	69			45	11
6	90	1024.54	.15	2.9	2.9	67	70			45	11
7	105	1040.99	.14	2.9	2.9	68	69			45	11
8	120	1055.41	.13	2.9	2.9	68	69			45	11
9	135	1069.82	~~.14~~ .13	2.9	2.9	68	69			45	11
10	150	1084.24	.15	2.9	2.9	68	70			46	11
11	165	1098.62	.15	2.9	2.9	69	70			46	11
12	180	1112.99	.07	2.9	2.9	70	70			46	11
S-1	195	1127.32	.09	2.9	2.9	70	71			49	11
2	210	1141.67	.09	2.9	2.9	71	71			47	11
3	225	1156.00	0.11	2.9	2.9	72	71			47	11
4	240	1170.50	0.12	2.9	2.9	72	72			46	11
5	255	1184.63	0.13	2.9	2.9	72	72			47	11
6	270	1198.90	0.18	2.9	2.9	72	72			48	11
7	285	1213.16	0.22	2.9	2.9	72	72			48	11
8	300	1227.43	0.23	2.9	2.9	72	72			48	11
9	315	1241.70	0.24	2.9	2.9	73	73			48	11
10	330	1256.00	0.24	2.9	2.9	73	73			48	11
11	345	1270.27	0.26	2.9	2.9	73	73			49	11
12	360	1284.524	~	~	~	~	~			~	~
	Theta:	Vm:	avg dP:		avg dH:	avg Ts					

FIELD DATA RECORD

PAGE 1 of 1

RUN NO. CP
LOCATION Warehouse (M&S)
DATE 6/3/04
OPERATOR DTodd
METER BOX NO. 4204
LOCAL TIME 0950 - 1355
START/STOP

STACK DIAMETER 12"
Ym: 1.001
H@: 1.728

PITOT TUBE FACTOR 0.84
NOZZLE DIAMETER 0.375 in.
PROBE LENGTH 4 ft.

SAMPLE TRAIN LEAK TEST
BEFORE 15 @ 2 in. ~~Hg~~ H2O
AFTER 14 @ 2 in. ~~Hg~~ H2O
PITOT TUBE LEAK TEST
BEFORE 4.4" @ 2 AFTER 6.2" @ 2

PROJECT NO. 04-014
PLANT NAME Clouds Specialty - Post (M&S warehouse)
AMBIENT TEMP (F) 74
METER TEMP (F) 60
BAR. PRESS ("Hg) 29.90
STATIC PRESSURE ("H2O) -0.25
ASSUMED MOISTURE (%) 1
ASSUMED O2 (%) 20.9
ASSUMED CO2 (%) 0.0
ASSUMED MW (WET, %)
ASSUMED MW (DRY, %)

POINT	CLOCK TIME	DRY GAS METER (cu. ft.)	VELOCITY dP (in. H2O)	ORIFICE dH (in. H2O) DESIRED	ORIFICE dH (in. H2O) ACTUAL	TEMPERATURES (F) STACK	PROBE	~~FILTER~~	~~RESIN~~	IMPGR	PUMP VAC (in. Hg)
START	0	417.70	—	—	—	—	—	Amb		—	—
1-1	10	424.76	0.06	1.3	~~1.7~~ 1.7	70	70	70		52	5
2	20	432.66	0.10	2.1	2.5	71	71	70		47	6.7
3	30	442.66	0.12	2.5	2.5	71	71	71		45	7
4	40	452.35	0.12	2.7	3.0	71	71	72		44	9
5	50	462.15	0.12	2.5	3.0	71	71	72		45	9
6	60	471.92	0.12	3.5	3.0	72	71	72		45	9
7	70	482.43	0.16	3.4	3.5	72	72	72		45	10
8	80	493.65	0.18	3.8	4.0	72	71	72		45	12
9	90	505.00	0.19	4.0	4.0	72	72	73		45	12
10	100	516.56	0.20	4.2	4.2	72	72	72		45	13
11	110	527.98	0.19	4.0	4.0	72	72	73		44	12
12	120	539.52	0.20	4.2	4.2	73	73	73		45	13
W-1	130	—	0.07	1.5	1.5	73	73	74		46	5
2	140	554.90	0.11	2.3	2.3	73	74	74		46	6.5
3	150	563.73	0.12	2.5	2.5	73	74	74		46	7.0
4	160	572.60	0.12	2.5	2.5	73	74	74		46	7.0
5	170	581.20	0.11	2.3	2.3	~~74~~	73	75		46	6.5
6	180	590.98	0.12	2.5	2.5	74	74	75		46	7.0
7	190	599.51	0.14	2.9	2.9	74	74	76		46	8.0
8	200	609.90	0.16	3.4	3.5	75	74	76		46	10
9	210	621.06	0.17	3.6	4.0	75	75	76		46	12
10	220	632.23	0.18	3.8	4.0	75	75	77		46	12
11	230	643.52	0.18 2.74 tot	3.8	4.0	75	75	78		46	12
12	240	654.80	0.19	4.0	4.0 2.56	75	75	78		46	12
	Theta: 240	Vm: 237.10	avg dP: ~0.379		avg dH: 3.15	avg Ts 72.8					

Moisture
+ 107.4 > ~~7.3~~ 7.3
- 100.1 10.5
+ 110.5 > ~~29.1~~
- 100.0
+ 1174.4 > 29.1
- 1145.3
~~46.9~~

California Air Resources Board
Monitoring & Laboratory Division

Method 425 Recovery Field Data Sheet

Project: **Clovis Specialty**
Project #: T-04-014

Page: 1 of 1
Project Lead: D.Todd

Run #: C1	Container No.1 (Probe Rinse)	Container No. 2 (Impinger 1)	Container No. 3 (Impinger 2)	Silica Gel Cartridge (Weight Only)	Total Stack Moisture, gm
pH	9.0	9.0	9.0	—	----
Tare (gm)	Ø	100.6	101.5	1164.0	1366.1
Final (gm)	47.0	123.0	110.[illegible]	1189.5	1,422.5
Diff (gm)	----	22.4	8.5	25.5	56.4

Run #: C2	Container No.1 (Probe Rinse)	Container No. 2 (Impinger 1)	Container No. 3 (Impinger 2)	Silica Gel Cartridge (Weight Only)	Total Stack Moisture, gm
pH	10.0	10.0	10.0	10.0	----
Tare (gm)	Ø	100.8	101.0	1156.8	1,358.6
Final (gm)	73.4	113.8	110.8	1181.6	1,406.2
Diff (gm)	----	13.0	9.8	24.8	47.6

Run #: C3	Container No.1 (Probe Rinse)	Container No. 2 (Impinger 1)	Container No. 3 (Impinger 2)	Silica Gel Cartridge (Weight Only)	Total Stack Moisture, gm
pH	10.0	10.0	10.0	10.0	----
Contr #3 = 116.7g Tare (gm)	Ø	100.4	101.8	1107.5	1309.7
Final (gm)	101.3	117.3	[illegible]	1130.6	1,364.6
Diff (gm)	----	16.9	116.7 14.9	23.1	54.9

Run #: SPARE CP	Container No.1 (Probe Rinse)	Container No. 2 (Impinger 1)	Container No. 3 (Impinger 2)	Silica Gel Cartridge (Weight Only)	Total Stack Moisture, gm
pH					----
Tare (gm)	Ø	100.1	100.0	1145.3	1345.4
Final (gm)	76.2	107.4	110.5	1174.4	1392.3
Diff (gm)	----	7.3	10.5	29.1	46.9

Run #:	Container No.1 (Probe Rinse)	Container No. 2 (Impinger 1)	Container No. 3 (Impinger 2)	Silica Gel Cartridge (Weight Only)	Total Stack Moisture, gm
pH					----
Tare (gm)					
Final (gm)					
Diff (gm)	----				

W:\Forms\Stack Testing\425Recov.xls

California Air Resources Board
Monitoring & Laboratory Divison

Plating Tank Data

Project: **Clovis Specialty** Page: 1 of 1

Project #: T-04-014 By: D.Todd

		Time	Volts	Amps	Temp.	Totalizer, A-hr	Freeboard (from low side – High side ~1" more)		
5/25	1	11:30	0 7½	0	—	11563	4½"		Start
	2	12:06				711656			
	3	13:33				711850			END Dummy Run
	4				→	711910			End all
	5	1530				~~711917~~			
	6								
5/26	7	0830				711919	4"		Start
	8	1130				~~712127~~ 712216			
	9					712290			End
	10								
5/27	11	0840				712291	3¾"		Beginning of Day
	12	1300				712595			end of dummies
	13	1530				712631			end of Day
	14								
	15								
	16								
	17								
	18								
	19								
	20								
	21								
	22								
	23								
	24								
	25								
	26								
	27								
	28								
	29								
	30								

(This page intentionally blank.)