1735 Gardenia Drive New Braunfels Texas 78130-6250
830-606-0252

INVOICE COVER LETTER

Wednesday, November 7, 2018

ATTN: Andrew Hoekzema
Director of Regional Services
Capital Area Council of Governments
6800 Burleson Road, Bldg. 310, Suite 165
Austin, TX 78744

RE: Contract #: Operation of Continuous Air Monitoring Stations 2018 / 2019
Invoice #: CAPCOG 18-016
Invoice Period of Service: 10/1/18 – 10/31/18
Total Invoice Amount: $11,411.79

This invoice is for services provided by Dios Dado Environmental Ltd. for operation and network maintenance of CAPCOG sites, as the terms set forth in the above referenced contract.

See the discussion and list of deliverables as follows:

1. October Data Return reported in attachment 1: Data Return Report for Austin -- Region 11.
   All O3 sites reporting >99% data return, and Rh units were all at >99%%.
   With the exception of CAPCOG Hutto College Street C6602. The trailer was unplugged twice this month by grounds keepers, we were able to keep data loss down and stay above 90%.
   Individual RH reports are included for each site. TEOM data return from 601 is >99%.
2. Site activities are reported in attachment 2: CAPCOG activities log and operator's log set.
3. C6602 Hutto site trailer move back to some location is still pending.
4. C601 October site safety Checklist completed.
5. All units have good data that is reporting to LEADS system correctly.
6. The data sets for October were validated.
   *Only the O3 data from C601 was validated by request of TCEQ.
7. A new site survey of C690 is on hold until CAPCOG decides to move forward.
8. The Lockhart AC unit was completely replaced with a new unit under warranty finally.
9. The Lockhart wireless modem had to be sent to TCEQ for reprogramming, no data lost.
10. We delivered most of the CAPCOG equipment to your location on Burleson, which was the only extra charge this month.

Please remit payment to our corporate address below. The other offices are closed.

Respectfully,
Jim McCraw
Founding Partner
Dios Dado Environmental Ltd.
1735 Gardenia Drive
New Braunfels Texas, 78130

Attachment 1: CAPCOG Data Return Report for Austin -- Region 11

00:00 LST October 1, 2018 through 00:00 LST November 1, 2018

CAMS	Location	Pollution Data			Meteorological Data			
		O3 %	PM2.5(Lcl) accpt %	Poll %	WDR %	WSR %	Out Temp %	Met %
601	Fayette County C601	99.7	99.7	99.7	99.3	99.3	100.0	99.6
614	Dripping Springs School C614	99.7	*	99.7	100.0	100.0	100.0	100.0
684	CAPCOG McKinney Roughs C684	99.7	*	99.7	100.0	100.0	100.0	100.0
690	CAPCOG Lake Georgetown C690	99.6	*	99.6	100.0	100.0	100.0	100.0
1603	Gorzycki Middle School C1603	99.7	*	99.7	100.0	100.0	100.0	100.0
1604	Lockhart C1604	99.6	*	99.6	100.0	100.0	100.0	100.0
1605	St. Edwards University C1605	100.0	*	100.0	100.0	100.0	96.4	98.8
1675	CAPCOG San Marcos Staples Road C1675	99.7	*	99.7	100.0	100.0	100.0	100.0
6602	CAPCOG Hutto College Street C6602	92.2	*	92.2	92.5	92.5	92.5	92.5
	Region 11 Averages	98.9	99.7	99.0	99.1	99.1	98.8	99.0

Relative Humidity Hourly Data Loss Report for Austin -- Region 11
00:00 LST October 1, 2018 through 00:00 LST November 1, 2018
Selected date range: 31 days (744 hours)
Selected CAMS: 601 613 614 674 675 684 690 1603 1604 1605 1675 6602
Report includes data from only these CAMS: 614 684 690 1603 1604 1605 1675 6602

Data Flag	Rel Humid 62201
Null Data Codes	
FEW => AI (Insufficient Samples)	3
LST => AQ (Lost)	53
Ambient or Ambient With Qualifier Code	
VAL (Ambient Data) †	5896
Summary	
Total Monitors	8
Total Null Data Code Flags	56
Total Ambient Flags †	5896
Total Samples	5952
Invalid Percent	0.9
Valid Percent	99.1
	Rel Humid
† Ambient data includes all data with the following flags or qualifier codes: VAL	

Relative Humidity – Data Return Loss for Austin -- Region 11

00:00 LST October 1, 2018 through 00:00 LST November 1, 2018
Selected date range: 31 days (744 hours)
Selected CAMS: 614
Report includes data from only these CAMS: 614

Data Flag	Rel Humid 62201
Null Data Codes	
Ambient or Ambient With Qualifier Code	
VAL (Ambient Data) †	744
Summary	
Total Monitors	1
Total Null Data Code Flags	0
Total Ambient Flags †	744
Total Samples	744
Invalid Percent	0.0
Valid Percent	100.0
	Rel Humid
† Ambient data includes all data with the following flags or qualifier codes: VAL	

00:00 LST October 1, 2018 through 00:00 LST November 1, 2018
Selected date range: 31 days (744 hours)
Selected CAMS: 684
Report includes data from only these CAMS: 684

Data Flag	Rel Humid 62201
Null Data Codes	
Ambient or Ambient With Qualifier Code	
VAL (Ambient Data) †	744
Summary	
Total Monitors	1
Total Null Data Code Flags	0
Total Ambient Flags †	744
Total Samples	744
Invalid Percent	0.0
Valid Percent	100.0
	Rel Humid
† Ambient data includes all data with the following flags or qualifier codes: VAL	

00:00 LST October 1, 2018 through 00:00 LST November 1, 2018
Selected date range: 31 days (744 hours)
Selected CAMS: 690
Report includes data from only these CAMS: 690

Data Flag	Rel Humid 62201
Null Data Codes	
Ambient or Ambient With Qualifier Code	
VAL (Ambient Data) †	744
Summary	
Total Monitors	1
Total Null Data Code Flags	0
Total Ambient Flags †	744
Total Samples	744
Invalid Percent	0.0
Valid Percent	100.0
	Rel Humid
† Ambient data includes all data with the following flags or qualifier codes: VAL	

00:00 LST October 1, 2018 through 00:00 LST November 1, 2018
Selected date range: 31 days (744 hours)
Selected CAMS: 1603
Report includes data from only these CAMS: 1603

Data Flag	Rel Humid 62201
Null Data Codes	
Ambient or Ambient With Qualifier Code	
VAL (Ambient Data) †	744
Summary	
Total Monitors	1
Total Null Data Code Flags	0
Total Ambient Flags †	744
Total Samples	744
Invalid Percent	0.0
Valid Percent	100.0
	Rel Humid
† Ambient data includes all data with the following flags or qualifier codes: VAL	

00:00 LST October 1, 2018 through 00:00 LST November 1, 2018
Selected date range: 31 days (744 hours)
Selected CAMS: 1604
Report includes data from only these CAMS: 1604

Data Flag	Rel Humid 62201
Null Data Codes	
Ambient or Ambient With Qualifier Code	
VAL (Ambient Data) †	744
Summary	
Total Monitors	1
Total Null Data Code Flags	0
Total Ambient Flags †	744
Total Samples	744
Invalid Percent	0.0
Valid Percent	100.0
	Rel Humid
† Ambient data includes all data with the following flags or qualifier codes: VAL	

00:00 LST October 1, 2018 through 00:00 LST November 1, 2018
Selected date range: 31 days (744 hours)
Selected CAMS: 1675
Report includes data from only these CAMS: 1675

Data Flag	Rel Humid 62201
Null Data Codes	
Ambient or Ambient With Qualifier Code	
VAL (Ambient Data) †	744
Summary	
Total Monitors	1
Total Null Data Code Flags	0
Total Ambient Flags †	744
Total Samples	744
Invalid Percent	0.0
Valid Percent	100.0
	Rel Humid
† Ambient data includes all data with the following flags or qualifier codes: VAL	

00:00 LST October 1, 2018 through 00:00 LST November 1, 2018
Selected date range: 31 days (744 hours)
Selected CAMS: 6602
Report includes data from only these CAMS: 6602

Data Flag	Rel Humid 62201
Null Data Codes	
FEW => AI (Insufficient Samples)	3
LST => AQ (Lost)	53
Ambient or Ambient With Qualifier Code	
VAL (Ambient Data) †	688
Summary	
Total Monitors	1
Total Null Data Code Flags	56
Total Ambient Flags †	688
Total Samples	744
Invalid Percent	7.5
Valid Percent	92.5
	Rel Humid
† Ambient data includes all data with the following flags or qualifier codes: VAL	

Attachment 2: CAPCOG Site Activities Log and Operators Log set.

CAPCOG ACTIVITIES LOG 2018

OCTOBER

DATE	DESCRIPTON
10/03/2018	C1604 - power-cycled modem
	C6602 - plugged trailer back in, and checked ops.
10/04/2018	C601 - Performed monthly TEOM audit, PMI 41-030, 41-030a, 41-030b, and PMI 04-014.
10/09/2018	C684 - Performed PMI 04-014
	C1604 - Performed PMI 04-014, retrieved modem for replacement
	C1675 - Performed PMI 04-014
10/10/2018	C614 - Performed PMI 04-014. Mowed weeds and applied weed killer.
.	C1603 - Performed PMI 04-014
	C690 - Performed PMI 04-014
	C6602 - Performed PMI 04-014
10/11/2018	C601 - Performed PMI 04-014
	C1604 - Retrieved Log data from 2018/10/1 00:00 to 2018/10/11 15:00
10/17/2018	C6602 - plugged trailer back in, power cycled modem, adjusted heat
	C690 - Adjusted heat
	C614 - Adjusted heat
10/22/2018	C1604 - Conducted 5pt calibration, Performed PMI 04-014
	C684 - Conducted 5pt calibration, Performed PMI 04-014
10/23/2018	C614 - Conducted 5pt calibration, Performed PMI 04-014
	C1603 - Conducted 5pt calibration, Performed PMI 04-014
10/24/2018	C690 - Conducted 5pt calibration, Performed PMI 04-014
	C6602 - Conducted 5pt calibration, Performed PMI 04-014
10/25/2018	C1675 - Conducted 5pt calibration, Performed PMI 04-014
	C601 - Conducted 5pt calibration, Performed PMI 04-014

October 2018 CAPCOG Operator Logs:

Operator Logs for Fayette County C601

Date	Time (CST)	Operator	Visit Date	Log Entry
				10/01/2018 -- 11/01/2018 Fayette County C601 (48_149_0001)
Tue Oct 02, 2018	03:28:48			Automatic time sync
Tue Oct 02, 2018	07:26:28	jm	10/02/2018	checked status online.
Wed Oct 03, 2018	09:47:01	jm	10/03/2018	status checked on line.
Thu Oct 04, 2018	08:06:51	jm	10/04/2018	checked status online
Thu Oct 04, 2018	14:00:03			Entered Station to perform TEOM monthly and quarterly audits. found station computer off and not working. completed audit and log entry with laptop. placed TEOM unit in Q code. and proceeded with PMI 41-030, 41-030a, 41-030b. completed site safety checklist. audits completed satisfactory. placed TEOM unit back in K code. left site safe and secure. JRM/NC
Thu Oct 04, 2018	14:12:45			Posting TEOM operation Values : Pre audit, OK, 4, 33%, 4.0 mass, 0.064 noise, 252.69406 freq, 50.0, 50.1, 50.0, main flow 3.00, AUX flow 13.63. Post Audit : Ok, 4, 20%, -4.1 mass, 0.044 noise, 251.93341 freq, 50.0, 50.0, 50.0, main flow 3.0, AUX flow 13.63 NC/jrm
Fri Oct 05, 2018	07:49:43	jm	10/05/2018	checked status online.
Fri Oct 05, 2018	17:12:08	jm	10/05/2018	log added remotely by jm for LCRA. site computer is in for repair by LCRA. Status: OK Mode: 4 %Filter Loading: 21% Mass: 3.8 Noise: 0.068 Frequency: 251.93133 Case Temp: 50.00 Air Temp: 50.00 Cap Temp: 50.00 Main Flow: 3.00 Aux Flow: 13.63. Joey Tierce
Sat Oct 06, 2018	03:28:49			Automatic time sync
Mon Oct 08, 2018	07:04:02	jm	10/08/2018	station status checked on line.
Tue Oct 09, 2018	03:28:50			Automatic time sync
Tue Oct 09, 2018	08:35:27	jm	10/09/2018	station checked online.
Wed Oct 10, 2018	07:40:07	jm	10/10/2018	status checked on line.
Thu Oct 11, 2018	07:53:37	jm	10/11/2018	status checked online.
Thu Oct 11, 2018	12:07:02			entered station to perform PMI 04-014. changed particulate filter. checked parameters on ozone unit, all OK. Left site safe and secure. Ncinecoe/Jm
Fri Oct 12, 2018	09:59:35	jm	10/12/2018	status checked online.
Sat Oct 13, 2018	07:46:11			10/13/2018 Status, OK, Mode 4, 24% Filter Loading, Mass 8.7, Noise 0.051, Freq 251.87908, Total Mass Not Avail, All Temps 50, Main Flow 3.00, Aux Flow 13.63 Mark Olsovsky LCRA
Mon Oct 15, 2018	08:30:09	jm	10/15/2018	station checked online.
Tue Oct 16, 2018	03:28:51			Automatic time sync
Tue Oct 16, 2018	09:43:41	jm	10/16/2018	station checked online.
Tue Oct 16, 2018	09:44:20	jm	10/16/2018	both temps low will contact lcra to adjust temps upward.
Wed Oct 17, 2018	10:10:54	jm	10/17/2018	site status check online.
Thu Oct 18, 2018	09:53:27	jm	10/18/2018	site status checked online. LCRA notified to raise temps again on next visit.

Thu Oct 18, 2018	13:12:36			Status: ok, Mode: 4, %filter loading: 26%, Mass: 6.5, Noise: 0.078, Freq: 251.86251, Total mass: N/A, Case Temp: 50.00, Air Temp: 49.99, Cap Temp: 50.00, Main Flow: 3.00, Aux Flow: 13.63. Joey Tierce i[DT[Dp[D4[D9[D [Dp[De[D:[D0[D0[DM[DLCRA, Joey Tierce, 10/18/18
Fri Oct 19, 2018	08:22:51	jm	10/19/2018	site checked online.
Sat Oct 20, 2018	03:28:49			Automatic time sync
Mon Oct 22, 2018	09:21:46	jm	10/22/2018	station checked online.
Tue Oct 23, 2018	03:28:49			Automatic time sync
Tue Oct 23, 2018	07:29:56	jm	10/23/2018	station checked online.
Wed Oct 24, 2018	08:07:39	jm	10/24/2018	station checked online.
Thu Oct 25, 2018	09:11:18	jm	10/25/2018	station checked online.
Thu Oct 25, 2018	15:51:58			Entered station to perform PMI 04-014 and conduct 5-pt manual calibration on 03 unit 49i capcog sn 006595 with calibrator unit 165C-45919-275 (next cal due 6-7-19). Placed O3 unit into Q code. 400 set = 398.0 ppb. 300 set = 299.0 ppb. 200 set = 200.5 ppb. 070 set = 070.5 ppb. 000 set = 000.3 ppb. calibration completed satisfactory. all parameters OK. Changed particulate filter. placed unit back in K code. left station safe and secure. NC/jrm
Fri Oct 26, 2018	09:23:13			Status: ok, Mode: 4, %filter loading: 30%, Mass: 12.7, Noise:0.089, Frequency: 251.79443, Total Mass: N/A, Case Temp: 50.00, Air Temp: 50.00, Cap Temp: 50.00, Main Flow: 3.00, Aux Flow: 13.63. LCRA, JT 10/26/18
Fri Oct 26, 2018	16:11:13	jm	10/26/2018	station checked online.
Sat Oct 27, 2018	03:28:51			Automatic time sync
Mon Oct 29, 2018	08:03:29	jm	10/29/2018	station checked online.
Tue Oct 30, 2018	03:28:50			Automatic time sync
Tue Oct 30, 2018	08:47:48	jm	10/30/2018	station checked online.
Wed Oct 31, 2018	07:49:17	jm	10/31/2018	station checked online.

Operator Logs for Dripping Springs School C614

Date	Time (CST)	Operator	Visit Date	Log Entry 10/01/2018 -- 11/01/2018 Dripping Springs School C614 (48_209_0614)
Tue Oct 02, 2018	03:28:45			Automatic time sync
Tue Oct 02, 2018	07:26:44	jm	10/02/2018	checked status online.
Wed Oct 03, 2018	09:47:16	jm	10/03/2018	status checked on line.
Thu Oct 04, 2018	08:07:01	jm	10/04/2018	checked status online
Fri Oct 05, 2018	07:49:58	jm	10/05/2018	checked status online
Sat Oct 06, 2018	03:28:44			Automatic time sync
Mon Oct 08, 2018	07:08:39	jm	10/08/2018	station status checked on line.
Tue Oct 09, 2018	03:28:41			Automatic time sync
Tue Oct 09, 2018	08:35:58	jm	10/09/2018	Station checked online.

Wed Oct 10, 2018	07:40:17	jm	10/10/2018	status checked on line.
Wed Oct 10, 2018	10:33:57			Entered station to perform PMI 04-014. changed particulate filter. station temp 72F. Checked all paramteres on ozone unit, all OK. Trimmed vegetation on site and applied weed killer. left site safe and secure. NC/jrm
Thu Oct 11, 2018	07:53:47	jm	10/11/2018	status checked online.
Fri Oct 12, 2018	09:59:49	jm	10/12/2018	status checked online.
Sat Oct 13, 2018	03:28:40			Automatic time sync
Mon Oct 15, 2018	08:30:24	jm	10/15/2018	station checked online.
Tue Oct 16, 2018	03:28:45			Automatic time sync
Tue Oct 16, 2018	09:44:33	jm	10/16/2018	station checked online.
Wed Oct 17, 2018	10:11:05	jm	10/17/2018	site status check online.
Wed Oct 17, 2018	16:02:05			Entered station to adjust space heater setting. station temp 58F. Left site safe and secure. NC/jrm
Thu Oct 18, 2018	09:53:42	jm	10/18/2018	site status checked online.
Fri Oct 19, 2018	08:23:02	jm	10/19/2018	site checked online.
Mon Oct 22, 2018	09:21:56	jm	10/22/2018	station checked online.
Tue Oct 23, 2018	03:28:42			Automatic time sync
Tue Oct 23, 2018	07:30:12	jm	10/23/2018	station checked online.
Tue Oct 23, 2018	12:11:16			Entered station to perform PMI 04-014 and conduct monthly 5-pt manual calibration on O3 unit 49i SN 006593 with calibrator unit 165C-45919-275 next calibration due 6-7-19. Placed O3 unit into Q code. 400 set = 400.7 ppb. 300 set = 298.8 ppb. 200 set = 200.1 ppb. 070 set = 69.5 ppb. 000 set = 000.1 ppb. calibration completed satisfacory. all parameters OK. Changed particulate filter. placed unit back in K code. Left station safe and secure. NC/jrm
Wed Oct 24, 2018	08:07:48	jm	10/24/2018	station checked online.
Thu Oct 25, 2018	09:11:27	jm	10/25/2018	station checked online.
Fri Oct 26, 2018	16:11:22	jm	10/26/2018	station checked online.
Sat Oct 27, 2018	03:28:40			Automatic time sync
Mon Oct 29, 2018	08:03:45	jm	10/29/2018	station checked online.
Tue Oct 30, 2018	03:28:45			Automatic time sync
Tue Oct 30, 2018	08:47:58	jm	10/30/2018	station checked online.
Wed Oct 31, 2018	07:49:10	jm	10/31/2018	station checked online.

Operator Logs for CAPCOG McKinney Roughs C684

Date	Time (CST)	Operator	Visit Date	Log Entry
				10/01/2018 -- 11/01/2018 CAPCOG McKinney Roughs C684 (48_021_0684)
Tue Oct 02, 2018	03:43:39			Automatic time sync
Tue Oct 02, 2018	07:27:03	jm	10/02/2018	checked status online.
Wed Oct 03, 2018	09:47:41	jm	10/03/2018	status checked on line.

Thu Oct 04, 2018	08:07:13	jm	10/04/2018	checked status online
Fri Oct 05, 2018	07:50:10	jm	10/05/2018	checked status online
Fri Oct 05, 2018	07:50:10	jm	10/05/2018	checked status online
Sat Oct 06, 2018	03:43:40			Automatic time sync
Mon Oct 08, 2018	07:04:17	jm	10/08/2018	station status checked on line.
Tue Oct 09, 2018	03:43:38			Automatic time sync
Tue Oct 09, 2018	08:36:09	jm	10/09/2018	Station checked online.
Tue Oct 09, 2018	13:26:38			Entered station to conduct PMI 04-014. changed particulate filter, checked all parameters on ozone unit, All ok. Left site safe and secure. NC/jrm
Wed Oct 10, 2018	07:40:32	jm	10/10/2018	status checked on line.
Thu Oct 11, 2018	07:53:59	jm	10/11/2018	status checked online.
Fri Oct 12, 2018	10:00:06	jm	10/12/2018	status checked online.
Mon Oct 15, 2018	08:30:39	jm	10/15/2018	station checked online.
Tue Oct 16, 2018	03:43:37			Automatic time sync
Tue Oct 16, 2018	09:44:47	jm	10/16/2018	station checked online.
Wed Oct 17, 2018	10:11:17	jm	10/17/2018	site status check online.
Thu Oct 18, 2018	09:54:03	jm	10/18/2018	site status checked online.
Fri Oct 19, 2018	08:23:20	jm	10/19/2018	site checked online.
Mon Oct 22, 2018	09:22:07	jm	10/22/2018	station checked online.
Mon Oct 22, 2018	16:09:04			Entered station to perform PMI 04-014 and conduct monthly 5-pt manual calibration on O3 unit 49i SN 006521 with calibrator unit 165C-45919-275 next calibration due 6-7-19. Placed O3 unit into Q code. 400 set = 399.8 ppb. 300 set = 297.7 ppb. 200 set = 200.0 ppb. 070 set = 070.0 ppb. 000 set = 000.2 ppb. calibration completed satisfacory. all parameters OK. Changed particulate filter. placed unit back in K code. Left station safe and secure. NC/jrm
Tue Oct 23, 2018	03:43:38			Automatic time sync
Tue Oct 23, 2018	07:30:26	jm	10/23/2018	station checked online.
Wed Oct 24, 2018	08:07:55	jm	10/24/2018	station checked online.
Thu Oct 25, 2018	09:11:38	jm	10/25/2018	station checked online.
Fri Oct 26, 2018	16:11:33	jm	10/26/2018	station checked online.
Mon Oct 29, 2018	08:04:03	jm	10/29/2018	station checked online.
Tue Oct 30, 2018	03:43:39			Automatic time sync
Tue Oct 30, 2018	08:48:10	jm	10/30/2018	station checked online.
Wed Oct 31, 2018	07:49:01	jm	10/31/2018	station checked online.

Operator Logs for CAPCOG Lake Georgetown C690

Date	Time (CST)	Operator	Visit Date	Log Entry
				10/01/2018 -- 11/01/2018 CAPCOG Lake Georgetown C690 (48_491_0690)
Tue Oct 02, 2018	03:13:08			Automatic time sync

Tue Oct 02, 2018	07:27:15	jm	10/02/2018	checked status online.
Wed Oct 03, 2018	09:48:03	jm	10/03/2018	status checked on line.
Thu Oct 04, 2018	08:07:29	jm	10/04/2018	checked status online
Fri Oct 05, 2018	07:50:22	jm	10/05/2018	checked status online
Sat Oct 06, 2018	03:13:10			Automatic time sync
Mon Oct 08, 2018	07:04:26	jm	10/08/2018	station status checked on line.
Mon Oct 08, 2018	07:08:48	jm	10/08/2018	station status checked on line.
Tue Oct 09, 2018	03:13:09			Automatic time sync
Tue Oct 09, 2018	08:36:23	jm	10/09/2018	Station checked online.
Wed Oct 10, 2018	07:40:42	jm	10/10/2018	status checked on line.
Wed Oct 10, 2018	12:54:47			Entered station to conduct PMI 04-014. changed particulate filter,checked all parameters on ozone unit, All ok. station temp 76F. Left site safe and secure. NC/jrm
Thu Oct 11, 2018	07:54:08	jm	10/11/2018	status checked online.
Fri Oct 12, 2018	10:00:16	jm	10/12/2018	status checked online.
Sat Oct 13, 2018	03:13:09			Automatic time sync
Mon Oct 15, 2018	08:30:50	jm	10/15/2018	station checked online.
Tue Oct 16, 2018	03:13:10			Automatic time sync
Tue Oct 16, 2018	09:44:59	jm	10/16/2018	station checked online.
Wed Oct 17, 2018	10:11:33	jm	10/17/2018	site status check online.
Wed Oct 17, 2018	13:48:15			Entered station to adjust space heater setting. station temp 66F. Left site safe and secure. NC/jrm
Thu Oct 18, 2018	09:54:14	jm	10/18/2018	site status checked online.
Fri Oct 19, 2018	08:23:30	jm	10/19/2018	site checked online.
Sat Oct 20, 2018	03:13:06			Automatic time sync
Mon Oct 22, 2018	09:22:18	jm	10/22/2018	station checked online.
Tue Oct 23, 2018	03:13:07			Automatic time sync
Tue Oct 23, 2018	07:30:38	jm	10/23/2018	station checked online.
Wed Oct 24, 2018	08:08:06	jm	10/24/2018	station checked online.
Wed Oct 24, 2018	13:44:16			Entered station to perform PMI 04-014 and conduct monthly 5-pt manual calibration on O3 unit 49i SN 006592 with calibrator unit 165C-45919-275 next calibration due 6-7-19. Placed O3 unit into Q code. 400 set = 400.1 ppb. 300 set = 301.7 ppb. 200 set = 201.4 ppb. 070 set = 070.3 ppb. 000 set = 001.4 ppb. calibration completed satisfacory. all parameters OK. Changed particulate filter. placed unit back in K code. Left station safe and secure. NC/jrm
Thu Oct 25, 2018	09:11:51	jm	10/25/2018	station checked online.
Fri Oct 26, 2018	16:11:44	jm	10/26/2018	station checked online.
Sat Oct 27, 2018	03:13:07			Automatic time sync
Mon Oct 29, 2018	08:04:11	jm	10/29/2018	station checked online.
Tue Oct 30, 2018	03:13:07			Automatic time sync

Tue Oct 30, 2018	08:48:20	jm	10/30/2018	station checked online.
Wed Oct 31, 2018	07:48:55	jm	10/31/2018	station checked online.

Operator Logs for Gorzycki Middle School C1603

Date	Time (CST)	Operator	Visit Date	Log Entry 10/01/2018 -- 11/01/2018 Gorzycki Middle School C1603 (48_453_1603)
Tue Oct 02, 2018	03:13:09			Automatic time sync
Tue Oct 02, 2018	07:27:38	jm	10/02/2018	checked status online.
Wed Oct 03, 2018	09:48:21	jm	10/03/2018	status checked on line.
Thu Oct 04, 2018	08:07:42	jm	10/04/2018	checked status online
Fri Oct 05, 2018	07:50:33	jm	10/05/2018	checked status online
Sat Oct 06, 2018	03:13:11			Automatic time sync
Mon Oct 08, 2018	07:05:02	jm	10/08/2018	station status checked on line.
Tue Oct 09, 2018	03:13:09			Automatic time sync
Tue Oct 09, 2018	08:36:34	jm	10/09/2018	Station checked online.
Wed Oct 10, 2018	07:40:52	jm	10/10/2018	status checked on line.
Wed Oct 10, 2018	11:44:17			Entered station to conduct PMI 04-014. changed particulate filter,checked all parameters on ozone unit, All ok. Left site safe and secure. NC/jrm
Thu Oct 11, 2018	07:54:23	jm	10/11/2018	status checked online.
Fri Oct 12, 2018	10:00:29	jm	10/12/2018	status checked online.
Sat Oct 13, 2018	03:13:09			Automatic time sync
Mon Oct 15, 2018	08:31:03	jm	10/15/2018	station checked online.
Tue Oct 16, 2018	03:13:09			Automatic time sync
Tue Oct 16, 2018	09:45:07	jm	10/16/2018	station checked online.
Wed Oct 17, 2018	10:11:43	jm	10/17/2018	site status check online.
Thu Oct 18, 2018	09:54:39	jm	10/18/2018	site status checked online.
Fri Oct 19, 2018	08:23:46	jm	10/19/2018	site checked online.
Sat Oct 20, 2018	03:13:06			Automatic time sync
Mon Oct 22, 2018	09:22:29	jm	10/22/2018	station checked online.
Tue Oct 23, 2018	03:13:08			Automatic time sync
Tue Oct 23, 2018	07:30:55	jm	10/23/2018	station checked online.
Tue Oct 23, 2018	14:45:34			Entered station to perform PMI 04-014 and conduct monthly 5-pt manual calibration on O3 unit 49i SN 006522 with calibrator unit 165C-45919-275 next calibration due 6-7-19. Placed O3 unit into Q code. 400 set = 399.7 ppb. 300 set = 300.0 ppb. 200 set = 200.1 ppb. 070 set = 070.0 ppb. 000 set = 000.1 ppb. calibration completed satisfacory. all parameters OK. Changed particulate filter. placed unit back in K code. Left station safe and secure. NC/jrm
Wed Oct 24, 2018	08:08:15	jm	10/24/2018	station checked online.

Thu Oct 25, 2018	09:12:05	jm	10/25/2018	station checked online.
Fri Oct 26, 2018	16:11:54	jm	10/26/2018	station checked online.
Sat Oct 27, 2018	03:13:07			Automatic time sync
Mon Oct 29, 2018	08:04:21	jm	10/29/2018	station checked online.
Tue Oct 30, 2018	08:48:29	jm	10/30/2018	station checked online.
Wed Oct 31, 2018	07:48:46	jm	10/31/2018	station checked online.

Operator Logs for Lockhart C1604

Date	Time (CST)	Operator	Visit Date	Log Entry 10/01/2018 -- 11/01/2018 Lockhart C1604 (48_055_1604)
Tue Oct 02, 2018	03:13:09			Automatic time sync
Tue Oct 02, 2018	07:27:46	jm	10/02/2018	checked status online.
Wed Oct 03, 2018	09:49:25	jm	10/03/2018	status checked on line. communications LST. power to trailer checked ok, tech dispatched.
Wed Oct 03, 2018	10:46:56			Entered station to reset modem. station temperature 72F. power cycled modem, signal light now green. All parameters OK. Left safe and secure. NC/jrm
Thu Oct 04, 2018	08:08:34	jm	10/04/2018	checked status online. still LST. site running, but has phone line issue.
Thu Oct 04, 2018	15:52:02			Entered station to resolve dead signal and inspect modem. Found AC off and not working. Station Temp 96F. Modem signal lights green but not transmitting data. reseated SIM card in modem and power-cycled. all lights returned to green. made log entry and left site safe and secure. will contact AC repairman. NC/JRM
Fri Oct 05, 2018	07:51:00	jm	10/05/2018	checked status online, station communications are down.
Mon Oct 08, 2018	07:05:21	jm	10/08/2018	station status checked on line. station communications out.
Tue Oct 09, 2018	08:36:56	jm	10/09/2018	Station checked online. no comms AT&T issue.
Tue Oct 09, 2018	11:18:03			Entered station to conduct PMI 04-014. changed particulate filter,checked all parameters on ozone unit,All ok. tried to reset modem again. still no readings yet all lights green. AC still out of order. station temp 83F. Left site safe and secure. NC/JRM
Tue Oct 09, 2018	11:41:06			Made contact with ATT while on site. SIM card was reset remotely, seems to be functioning. removing the modem to send in for prograsm check. JRM/NC
Wed Oct 10, 2018	07:41:02	jm	10/10/2018	status checked on line.
Thu Oct 11, 2018	07:54:53	jm	10/11/2018	status checked online. no comms at site. TCEQ needs to reprogram modem.
Thu Oct 11, 2018	14:15:45			Entered station to download data from 10-1-18 00:00 to present to send to TCEQ. JRM / Nc
Fri Oct 12, 2018	10:01:13	jm	10/12/2018	status checked online. no comms, data set sent to TCEQ for ingest 10-11-18.
Mon Oct 15, 2018	08:31:13	jm	10/15/2018	station checked online.
Mon Oct 15, 2018	08:31:28	jm	10/15/2018	no coms from site
Tue Oct 16, 2018	09:45:48	jm	10/16/2018	station checked online. no comms at site.

Wed Oct 17, 2018	10:12:12	jm	10/17/2018	site status check online. site comms down waiting on modem repair.
Thu Oct 18, 2018	09:56:00	jm	10/18/2018	site status checked online. no coms at site modem at tceq for reprogramming. previous data provided not loaded into database.
Fri Oct 19, 2018	08:24:08	jm	10/19/2018	site checked online.
Mon Oct 22, 2018	09:22:59	jm	10/22/2018	station checked online. communications should come up today.
Mon Oct 22, 2018	13:23:30			Entered station to replace modem, conduct 5pt calibration, and perform PMI 04-014. Plugged in modem, all lights green, backlog data successfully transferred online. commenced monthly 5-pt manual calibration on O3 unit 49i capcog SN 006733 with calibrator unit 165C-45919-275 next calibration due 6-7-19. Placed O3 unit into Q code. 400 set = 401.3 ppb. 300 set = 299.9 ppb. 200 set = 200.7 ppb. 070 set = 070.2 ppb. 000 set = 000.05 ppb. calibration completed satisfacory. all parameters OK. Changed particulate filter. placed unit back in K code. Left station safe and secure. NC/jrm
Tue Oct 23, 2018	03:13:09			Automatic time sync
Tue Oct 23, 2018	07:31:06	jm	10/23/2018	station checked online.
Wed Oct 24, 2018	08:08:31	jm	10/24/2018	station checked online.
Thu Oct 25, 2018	09:12:12	jm	10/25/2018	station checked online.
Fri Oct 26, 2018	16:12:17	jm	10/26/2018	station checked online.
Sat Oct 27, 2018	03:13:07			Automatic time sync
Mon Oct 29, 2018	08:04:30	jm	10/29/2018	station checked online.
Tue Oct 30, 2018	08:48:35	jm	10/30/2018	station checked online.
Wed Oct 31, 2018	07:48:40	jm	10/31/2018	station checked online.

Operator Logs for CAPCOG San Marcos Staples Road C1675

Date	Time (CST)	Operator	Visit Date	Log Entry 10/01/2018 -- 11/01/2018 CAPCOG San Marcos Staples Road C1675 (48_209_1675)
Tue Oct 02, 2018	03:43:38			Automatic time sync
Tue Oct 02, 2018	07:27:58	jm	10/02/2018	checked status online.
Wed Oct 03, 2018	09:49:44	jm	10/03/2018	status checked on line.
Thu Oct 04, 2018	08:08:50	jm	10/04/2018	checked status online
Fri Oct 05, 2018	07:51:11	jm	10/05/2018	checked status online
Sat Oct 06, 2018	03:43:41			Automatic time sync
Mon Oct 08, 2018	07:05:30	jm	10/08/2018	station status checked on line.
Tue Oct 09, 2018	03:43:38			Automatic time sync
Tue Oct 09, 2018	08:37:05	jm	10/09/2018	Station checked online.
Tue Oct 09, 2018	15:11:52			Entered station to conduct PMI 04-014. changed particulate filter,checked all parameters on ozone unit, All ok. Left site safe and secure. NC/jrm

Wed Oct 10, 2018	07:41:14	jm	10/10/2018	status checked on line.
Thu Oct 11, 2018	07:55:03	jm	10/11/2018	status checked online.
Fri Oct 12, 2018	10:01:25	jm	10/12/2018	status checked online.
Sat Oct 13, 2018	03:43:38			Automatic time sync
Mon Oct 15, 2018	08:31:51	jm	10/15/2018	station checked online.
Tue Oct 16, 2018	03:43:38			Automatic time sync
Tue Oct 16, 2018	09:46:01	jm	10/16/2018	station checked online.
Wed Oct 17, 2018	10:12:21	jm	10/17/2018	site status check online.
Thu Oct 18, 2018	09:57:00	jm	10/18/2018	site status checked online.
Fri Oct 19, 2018	08:24:18	jm	10/19/2018	site checked online.
Sat Oct 20, 2018	03:43:39			Automatic time sync
Mon Oct 22, 2018	09:23:08	jm	10/22/2018	station checked online.
Tue Oct 23, 2018	03:43:38			Automatic time sync
Tue Oct 23, 2018	07:31:18	jm	10/23/2018	station checked online.
Wed Oct 24, 2018	08:08:47	jm	10/24/2018	station checked online.
Thu Oct 25, 2018	09:12:21	jm	10/25/2018	station checked online.
Thu Oct 25, 2018	12:03:08			Entered station to perform PMI 04-014 and conduct monthly 5-pt manual calibration on O3 unit 49i SN 006523 with calibrator unit 165C-45919-275 next calibration due 6-7-19. Placed O3 unit into Q code. 400 set = 401.9 ppb. 300 set = 299.1 ppb. 200 set = 200.5 ppb. 070 set = 70.0 ppb. 000 set = 000.1 ppb. calibration completed satisfactory. all parameters OK. Changed particulate filter. placed unit back in K code. Left station safe and secure. NC/jrm.
Fri Oct 26, 2018	16:12:27	jm	10/26/2018	station checked online.
Sat Oct 27, 2018	03:43:38			Automatic time sync
Mon Oct 29, 2018	08:04:47	jm	10/29/2018	station checked online.
Tue Oct 30, 2018	03:43:39			Automatic time sync
Tue Oct 30, 2018	08:48:45	jm	10/30/2018	station checked online.
Wed Oct 31, 2018	07:48:33	jm	10/31/2018	station checked online.

Operator Logs for CAPCOG Hutto College Street C6602

Date	Time (CST)	Operator	Visit Date	Log Entry
				10/01/2018 -- 11/01/2018 CAPCOG Hutto College Street C6602 (48_491_6602)
Tue Oct 02, 2018	03:13:09			Automatic time sync
Tue Oct 02, 2018	07:28:14	jm	10/02/2018	checked status online.
Wed Oct 03, 2018	09:57:08	jm	10/03/2018	status checked online, communications lost, power to site being checked.
Wed Oct 03, 2018	12:34:06			Entered station to resolve LST signal. trailer had been unplugged. plugged trailer back in. all units back up and running. station temp 92F. Purged condensation from sample line. Left site safe and secure. NC/jrm
Thu Oct 04, 2018	08:09:01	jm	10/04/2018	checked status online

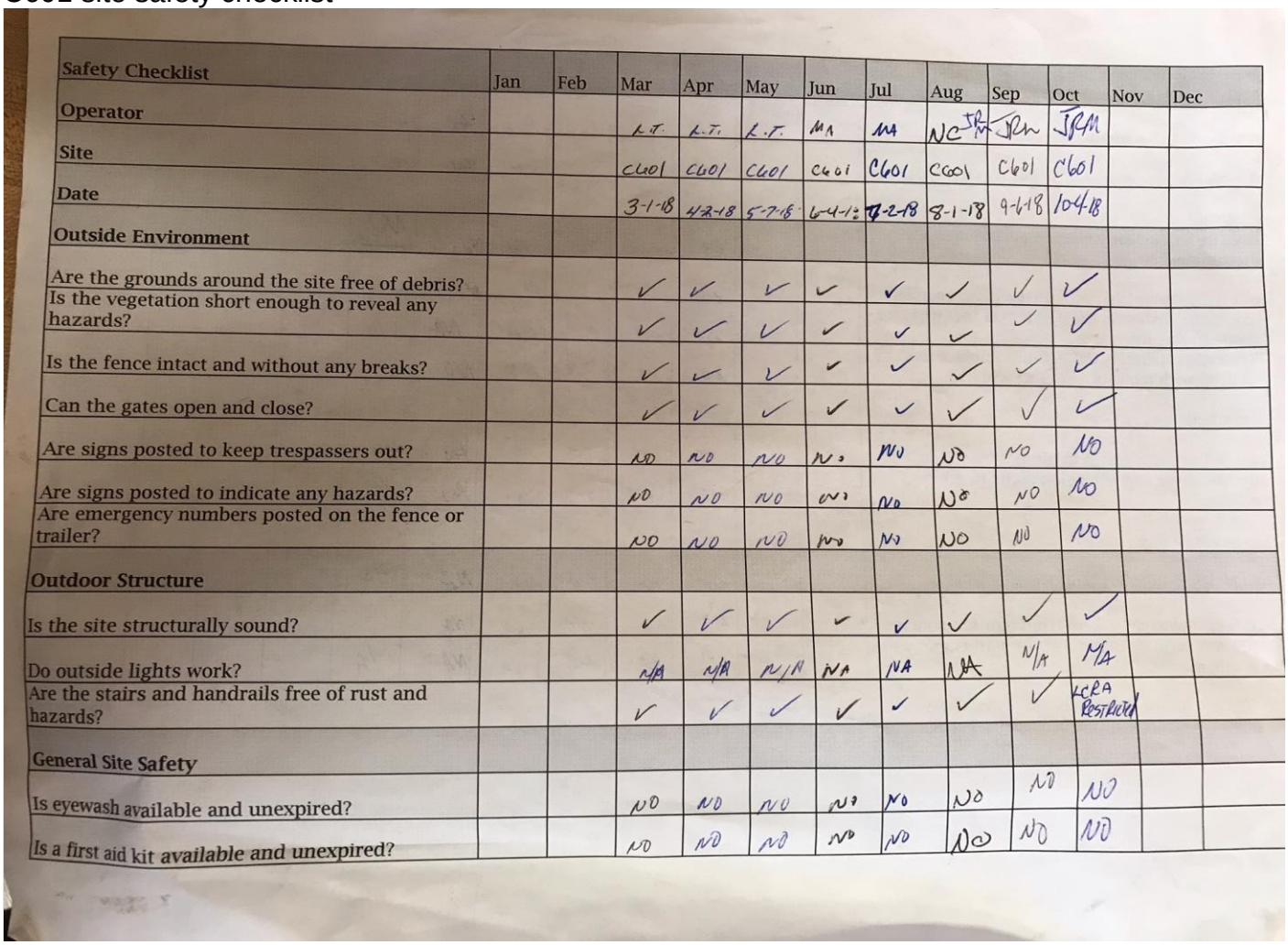
Fri Oct 05, 2018	07:51:19	jm	10/05/2018	checked status online
Sat Oct 06, 2018	03:13:08			Automatic time sync
Mon Oct 08, 2018	07:05:46	jm	10/08/2018	station status checked on line.
Tue Oct 09, 2018	03:13:08			Automatic time sync
Tue Oct 09, 2018	08:37:15	jm	10/09/2018	Station checked online.
Wed Oct 10, 2018	07:41:25	jm	10/10/2018	status checked on line.
Wed Oct 10, 2018	14:02:36			Entered station to conduct PMI 04-014. station temperature at 66F. moved and restarted space heater. purged condensation from sample line. changed particulate filter, checked all parameters on ozone unit, All ok. Left site safe and secure. NC/jrm
Thu Oct 11, 2018	07:55:23	jm	10/11/2018	status checked online.
Fri Oct 12, 2018	10:01:51	jm	10/12/2018	status checked online.
Sat Oct 13, 2018	03:13:08			Automatic time sync
Mon Oct 15, 2018	08:32:15	jm	10/15/2018	station checked online.
Tue Oct 16, 2018	03:13:08			Automatic time sync
Tue Oct 16, 2018	09:46:18	jm	10/16/2018	station checked online.
Wed Oct 17, 2018	10:12:54	jm	10/17/2018	site status check online. site comms down tech dispatched.
Wed Oct 17, 2018	12:49:22			Entered station to address LST signal issue. Trailer had been unplugged. Plugged trailer back in. all units back up and running Station temp 66F. Also power-cycled modem. Turned up space heater. All other parameters OK. left site safe and secure. NC/jrm
Thu Oct 18, 2018	09:57:57	jm	10/18/2018	site status checked online.
Fri Oct 19, 2018	08:26:39	jm	10/19/2018	site checked online.
Sat Oct 20, 2018	03:13:07			Automatic time sync
Mon Oct 22, 2018	09:23:23	jm	10/22/2018	station checked online.
Tue Oct 23, 2018	03:13:10			Automatic time sync
Tue Oct 23, 2018	07:31:38	jm	10/23/2018	station checked online.
Wed Oct 24, 2018	08:08:59	jm	10/24/2018	station checked online.
Wed Oct 24, 2018	17:11:41			Entered station to perform PMI 04-014 and conduct monthly 5-pt manual calibration on O3 unit teledyne 400e capcog sn 006270 with calibrator unit 165C-45919-275 next calibration due 6-7-19. Placed O3 unit into Q code. 400 set = 400.7 ppb. 300 set = 300.3 ppb. 200 set = 199.6 ppb. 070 set = 070.1 ppb. 000 set = 000.2 ppb. calibration completed satisfacory. all parameters OK. Changed particulate filter. placed unit back in K code. adjusted space heater. Left station safe and secure. NC/jrm
Thu Oct 25, 2018	09:12:37	jm	10/25/2018	station checked online.
Fri Oct 26, 2018	16:12:39	jm	10/26/2018	station checked online.
Mon Oct 29, 2018	08:04:55	jm	10/29/2018	station checked online.
Tue Oct 30, 2018	08:48:55	jm	10/30/2018	station checked online.
Wed Oct 31, 2018	07:48:25	jm	10/31/2018	station checked online.

Attachment 3: CAPCOG 5 pt. calibration results*.

CAPCOG 5 pt. Calibration Results for October 2018																
Site	Calibration Date	0 ppb check	% out	DQO met	70 ppb check	% out	DQO met	200 ppb check	% out	DQO met	300 ppb check	% out	DQO met	400 ppb check	% out	DQO met
C601	10/25/2018	0.3	0.1	yes	70.5	0.7	yes	200.5	0.2	yes	299.0	-0.3	yes	398.0	-0.5	yes
C614	10/23/2018	0.1	0.0	yes	69.5	-0.7	yes	200.1	0.0	yes	298.8	-0.4	yes	400.7	0.2	yes
C684	10/22/2018	0.2	0.0	yes	70.0	0.0	yes	200.0	0.0	yes	297.7	-0.8	yes	399.8	-0.1	yes
C690	10/24/2018	1.4	0.3	yes	70.3	0.4	yes	201.4	0.7	yes	301.7	0.6	yes	400.1	0.0	yes
C1603	10/23/2018	0.1	0.0	yes	70.0	0.0	yes	200.1	0.0	yes	300.0	0.0	yes	399.7	-0.1	yes
C1604	10/22/2018	0.1	0.0	yes	70.2	0.3	yes	200.7	0.3	yes	299.9	0.0	yes	401.3	0.3	yes
C1675	10/25/2018	0.1	0.0	yes	70.0	0.0	yes	200.5	0.2	yes	299.1	-0.3	yes	401.9	0.5	yes
C6602	10/24/2018	0.2	0.0	yes	70.1	0.1	yes	199.6	-0.2	yes	300.3	0.1	yes	400.7	0.2	yes

This table shows the percentage of error of the machine from the known source.
The following guide is representative of the TCEQ/EPA quality standards
<3% outstanding; <5% excellent; <7% good; >7% DQO not met. **None of the data was more than 5% out, and that is due to normal machine linearity imperfections.
In all cases we are able to maintain < 1% error for the most accurate data possible.

C601 site safety checklist



Safety Checklist	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Operator			L.T.	L.T.	L.T.	MA	MA	NC JPM	JPM	JPM		
Site			C601	C601	C601	C601	C601	C601	C601	C601		
Date			3-1-18	4-2-18	5-7-18	6-4-18	7-2-18	8-1-18	9-6-18	10-4-18		
Outside Environment												
Are the grounds around the site free of debris?			✓	✓	✓	✓	✓	✓	✓	✓		
Is the vegetation short enough to reveal any hazards?			✓	✓	✓	✓	✓	✓	✓	✓		
Is the fence intact and without any breaks?			✓	✓	✓	✓	✓	✓	✓	✓		
Can the gates open and close?			✓	✓	✓	✓	✓	✓	✓	✓		
Are signs posted to keep trespassers out?			NO	NO	NO	NO	NO	NO	NO	NO		
Are signs posted to indicate any hazards?			NO	NO	NO	NO	NO	NO	NO	NO		
Are emergency numbers posted on the fence or trailer?			NO	NO	NO	NO	NO	NO	NO	NO		
Outdoor Structure												
Is the site structurally sound?			✓	✓	✓	✓	✓	✓	✓	✓		
Do outside lights work?			N/A	N/A	N/A	NA	NA	NA	N/A	N/A		
Are the stairs and handrails free of rust and hazards?			✓	✓	✓	✓	✓	✓	✓	LCRA RESTRICTED		
General Site Safety												
Is eyewash available and unexpired?			NO	NO	NO	NO	NO	NO	NO	NO		
Is a first aid kit available and unexpired?			NO	NO	NO	NO	NO	NO	NO	NO		