

Appendix C
Table C-1
Operational Data
Union Boulevard Oxygen Injection System
Operations, Maintenance and Monitoring Program
Bay Shore/Brightwaters Former MGP Site
Operational Unit No. 3 (OU-3)

Weight of Oxygen Injected through Q1 2009
4,432 lbs

	Operational Days	Oxygen Injected Per Month (Lbs)
Month 1	Apr-09 30	122
Month 2	May-09 31	132
Month 3	Jun-09 30	118
Total Operational Days In Q2 2009		91
Total Oxygen in Q2 2009 (Lbs)		371.77
Running Total Through Q2 2009 (Lbs)		4,803.77

Notes:

SCFH (M) = Measured flow rate
 SCFH (C*) = Flow rate converted for oxygen
 CV/D (V) = Volume of oxygen injected
 PSI (M) = Measured pressure
 PSia (P) = Pressure converted to atmospheric pressure.
 n = PV/RT = Mass of Oxygen
 Temperature = Degrees Rankine
 R = Constant (0.73)

		4/23/2009							5/29/2009							6/22/2009						
		O2%							95							95						
		R							10.73							10.73						
		Temp R (T)							530							530						
	Depth	SCFH (M)	SCFH (C*)	CF/D (V)	PSI (M)	PSia (P)	n=PV/RT lbs O2	SCFH (M)	SCFH (C*)	CF/D (V)	PSI (M)	PSia (P)	n=PV/RT lbs O2	SCFH (M)	SCFH (C*)	CF/D (V)	PSI (M)	PSia (P)	n=PV/RT lbs O2			
		Injection Bank 1																				
	Point 1	-	34	38.329	76.658	6.0	20.7	0.265	32	36.074	72.149	6	20.7	0.249	33	37.648	75.297	6.5	21.2	0.267		
	Point 2	-	34	38.329	76.658	6.0	20.7	0.265	32	36.074	72.149	6.0	20.7	0.249	33	37.648	75.297	6.5	21.2	0.267		
	Point 3	-	34	38.329	76.658	6.0	20.7	0.265	31	34.947	69.894	6.0	20.7	0.242	32	36.508	73.015	6.5	21.2	0.259		
	Point 4	-	34	38.789	77.579	6.5	21.2	0.275	32	36.508	73.015	6.5	21.2	0.259	32	36.508	73.015	6.5	21.2	0.259		
	Point 5	-	34	38.329	76.658	6.0	20.7	0.265	31	34.947	69.894	6.0	20.7	0.242	32	36.508	73.015	6.5	21.2	0.259		
	Point 6	-	32	36.508	73.015	6.5	21.2	0.259	32	36.508	73.015	6.5	21.2	0.259	31	35.781	71.563	7.0	21.7	0.259		
	Point 7	-	30	34.627	69.254	7.0	21.7	0.251	46	53.400	106.800	7.3	21.95	0.392	30	34.627	69.254	7.0	21.7	0.251		
	Point 8	-	36	41.553	83.105	7.0	21.7	0.301	33	38.309	76.617	7.3	21.95	0.281	30	34.627	69.254	7.0	21.7	0.251		
Total Oxygen Injected per Day (LBS)		2.146							2.172							2.071						
Injection Bank 2																						
	Point 9	-	30	33.820	67.640	6.0	20.7	0.234	40	45.634	91.269	6.5	21.2	0.323	27	30.803	61.607	6.5	21.2	0.218		
	Point 10	-	30	34.226	68.452	6.5	21.2	0.242	31	35.367	70.733	6.5	21.2	0.251	28	32.319	64.637	7.0	21.7	0.234		
	Point 11	-	32	35.636	71.272	5.5	20.2	0.241	33	36.976	73.953	5.8	20.45	0.253	30	33.820	67.640	6.0	20.7	0.234		
	Point 12	-	30	33.820	67.640	6.0	20.7	0.234	31	35.158	70.315	6.3	20.95	0.246	29	33.085	66.170	6.5	21.2	0.234		
	Point 13	-	32	35.636	71.272	5.5	20.2	0.241	32	35.856	71.712	5.8	20.45	0.245	30	34.023	68.047	6.3	20.95	0.238		
	Point 14	-	34	37.863	75.727	5.5	20.2	0.256	31	34.735	69.471	5.8	20.45	0.237	29	32.692	65.385	6.0	20.7	0.226		
	Point 15	-	32	35.636	71.272	5.5	20.2	0.241	36	40.091	80.181	5.5	20.2	0.271	32	36.074	72.149	6.0	20.7	0.249		
	Point 16	-	30	33.409	66.818	5.5	20.2	0.225	33	36.750	73.500	5.5	20.2	0.248	31	34.947	69.894	6.0	20.7	0.242		
Total Oxygen Injected per Day (LBS)		1.913							2.073							1.876						
System Total Per Day (LBS)		4.06							4.25							3.95						

System Operating Specs

Total of 2 injection banks
 Oxygen is injected for 10 minutes during each injection cycle
 Each Injection bank operates for 12 injection cycles per day
 Each injection point injects oxygen for 120 min per day (10 min per cycle * 12 Cycles)

Example

Bank 1 starts at 7AM
 Bank 1 finishes injection at 710AM
 System is recharging 710AM to 800AM
 Bank 2 starts injection at 800AM
 Bank 2 finishes injection at 810AM
 System is recharging 810AM to 900AM
 Bank 1 starts injection at 900AM
 Bank 1 finishes injection at 910AM
 System is recharging from 910AM to 10AM
 Bank 2 starts injection at 10AM

(Keep repeating cycle for course of day)

