



January 8, 2007

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Alameda County
Environmental Health

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Project No. 328-A

Mr. Keith Woodburne, R.G.
Senior Project Geologist
TRC Solutions, Inc.
1590 Solano Way, Suite A
Concord, CA 94520

Fourth Quarter 2006
Ozone Injection System O&M Report
76 Service Station No. 1871
96 MacArthur Boulevard
Oakland, California

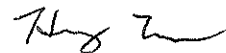
Dear Mr. Woodburne:


Environ Strategy Consultants, Inc. is pleased to submit this ozone injection system operation and maintenance (O&M) report for 76 Service Station No. 1871, located at 96 MacArthur Boulevard, Oakland, California. An ozone injection system was started on June 23, 2003 to remediate hydrocarbon-impacted groundwater.

| | |
|---|---|
| Type of Remediation System: | Ozone Injection System |
| Operation Data During: Reporting Period: Oct. 1, 2006 – Dec. 31, 2006 | Operated 95 days during the period Hours of Operation: 702 |
| System Operation Data Since Startup: June 23, 2003 | Total Hours of Operation: 10,983 |
| <p>Note: System down time occurred throughout the fourth quarter of 2006 due to tripped ozone sensor and tripped GFI.</p> | |

Environ Strategy appreciates the opportunity to be of service. If you have any questions or require additional information regarding this report, please do not hesitate to call us at (949) 581-3222.

Respectfully submitted,


Hung Tran
Staff Engineer


Jinghui Niu, P.E.
Principal Engineer



Fourth Quarter 2006 O&M Report
76 Service Station No. 1871
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Attachments: Figure - Site Plan

Table 1 - Ozone Injection - System Operation Data

Table 2 - Ozone Injection - Groundwater Monitoring Data

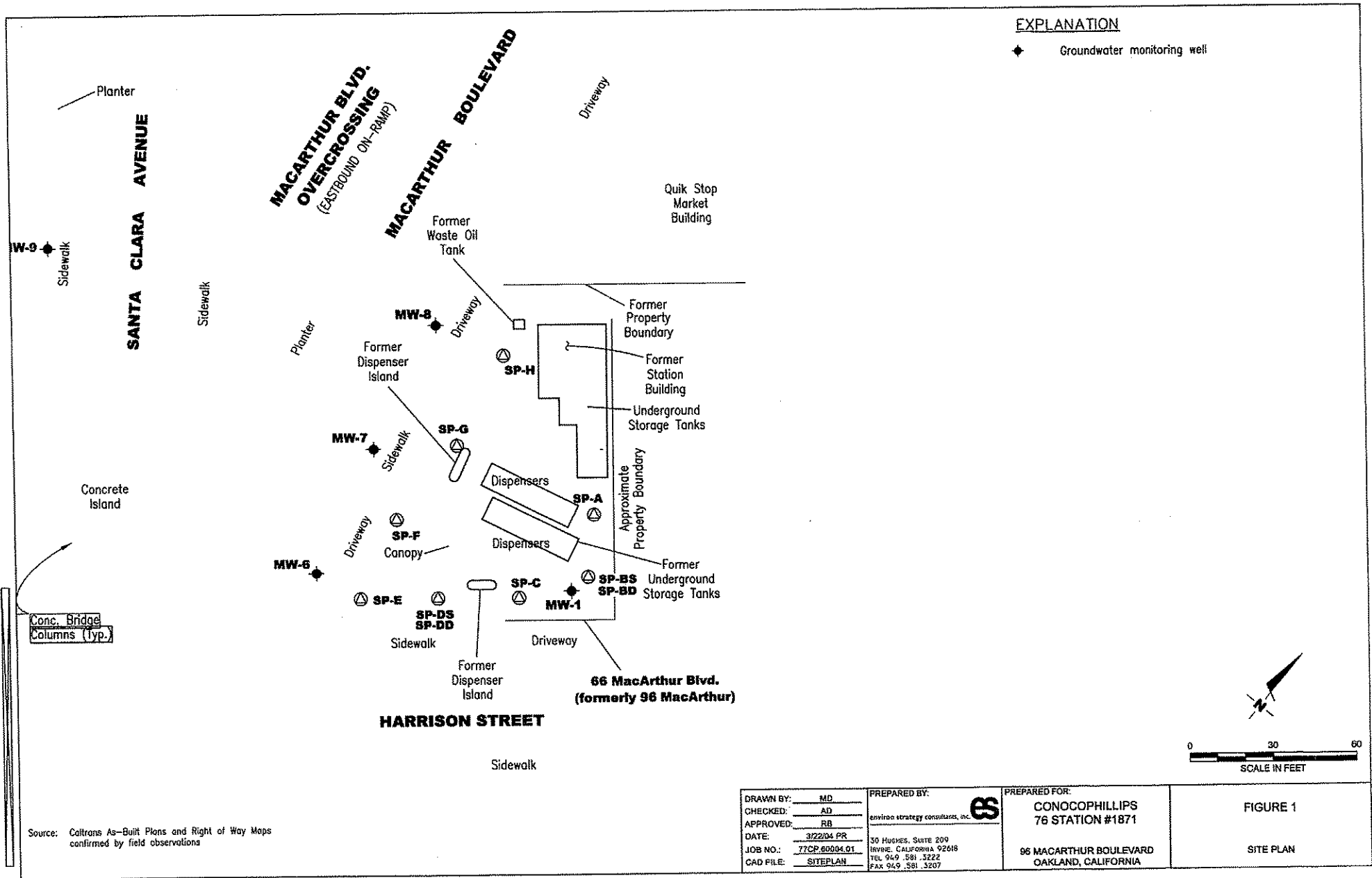
Graph 1 - MW-1 TPHg, Benzene, and MtBE Groundwater Concentrations

Graph 2 - MW-7 TPHg, Benzene, and MtBE Groundwater Concentrations

Appendix A – Field Notes

cc: Shelby Lathrop, ConocoPhillips Company (electronic copy)

Figure



Tables

Table 1
Ozone Injection - System Operation Data
 76 Service Station No. 1871
 96 MacArthur Blvd., Oakland, California
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| Date | Notes | OZONE SPARGE SYSTEM | | | | | OZ-1 | OZ-2 | OZ-3 | OZ-4 | OZ-5 | OZ-6 | OZ-7 | OZ-8 | OZ-9 | OZ-10 | |
|-----------------------------|-------|------------------------|-----------|-------------------|----------------------|--------------------------|----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | System Status (On/Off) | | Hourmeter Reading | Period Online Factor | Cumulative Online Factor | Ozone Injected (lbs) | Pressure (psi) | Pressure (psi) | Pressure (psi) | Pressure (psi) | Pressure (psi) | Pressure (psi) | Pressure (psi) | Pressure (psi) | Pressure (psi) | Pressure (psi) |
| | | Arrival | Departure | | | | | | | | | | | | | | |
| 6/23/03 | | On | On | 8807.26 | -- | 0.95 | -- | 20 | 18 | 19 | 20 | 21 | 23 | 20 | 26 | 14 | 26 |
| 7/16/03 | | Off | On | 8850.46 | 0.09 | 0.95 | 0.39 | 27 | 18 | 31 | 40 | 28 | 29 | 31 | 38 | 24 | 25 |
| 8/30/03 | | On | On | 9180.61 | 0.35 | 0.95 | 2.97 | 17 | 15 | 17 | 19 | 19 | 19 | 20 | 26 | 19 | 26 |
| 9/18/03 | | On | On | 9327.43 | 0.37 | 0.95 | 1.32 | 13.5 | 14.7 | 17.0 | 16.3 | 16.0 | 19.7 | 16.8 | 19.8 | 15.7 | 20 |
| 10/16/03 | | On | On | -- | -- | 0.95 | -- | 27.0 | 19.5 | 40.8 | 39.0 | 40.8 | 38.5 | 34.2 | 46.4 | 24.2 | 39.8 |
| 11/17/03 | | On | On | 9696.55 | 0.29 | 0.95 | -- | 11.0 | 20.0 | 17.0 | 18.0 | 17.5 | 17.0 | 16.0 | 21.0 | 51.0 | 22.0 |
| 12/5/03 | | On | On | 9804.98 | 0.29 | 0.95 | 0.98 | 33.0 | 21.0 | 44.0 | 40.0 | 43.0 | 39.0 | 33.5 | 44.0 | 26.0 | 33.0 |
| 1/16/04 | | On | On | 10471.28 | 0.76 | 0.95 | 6.00 | 12.5 | 11.0 | 18.5 | 16.5 | 17.5 | 17.0 | 16.0 | 20.0 | 16.0 | 20.0 |
| 2/3/04 | | On | On | 10727.69 | 0.68 | 0.95 | 2.31 | 12.3 | 11.5 | 18.2 | 16.5 | 18.2 | 17.3 | 16.0 | 19.0 | 16.0 | 18.2 |
| 3/24/04 | | On | On | 11424.95 | 0.60 | 0.95 | 6.26 | 31.0 | 18.3 | 37.5 | 26.0 | 34.0 | 33.2 | 32.3 | 41.5 | 23.0 | 31.0 |
| 4/14/04 | | On | On | 11676.10 | 0.57 | 0.95 | 2.28 | 32.0 | 19.0 | 38.7 | 26.0 | 37.7 | 37.1 | 32.8 | 41.8 | 23.8 | 29.5 |
| 4/15/04 | a | On | On | 11685.29 | 0.44 | 0.95 | 0.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 4/16/04 | a | On | On | 11693.80 | 0.41 | 0.95 | 0.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 4/19/04 | a | On | On | 11742.90 | 0.78 | 0.95 | 0.44 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 4/23/04 | a | On | On | 11773.10 | 0.36 | 0.95 | 0.27 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 5/4/04 | | Off | On | 11837.70 | 0.28 | 0.95 | 0.58 | 32.2 | 20.5 | 39.4 | 36.2 | 38.1 | 32.0 | 33.5 | 60.0 | 25.8 | 33.1 |
| 5/11/04 | | On | On | 11950.51 | 0.77 | 0.95 | 1.02 | 32.5 | 20.0 | 38.5 | 29.8 | 38.8 | 39.5 | 34.8 | 60.0 | 23.5 | 35.9 |
| 6/14/04 | b,c | On | On | 12464.64 | 0.72 | 0.95 | 4.63 | 20.0 | 21.0 | 38.8 | 27.2 | 37.0 | 38.2 | 35.2 | 60.0 | 24.0 | 32.1 |
| 7/29/04 | d | On | On | 844.62 | 0.99 | 0.95 | 7.60 | 22 | 15 | -- | 26 | 35 | 34 | 35 | -- | 25 | 33 |
| 8/12/04 | e | On | On | 1075.97 | 0.98 | 0.95 | 2.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 9/10/04 | | On | On | 1490.23 | 0.85 | 0.95 | 3.73 | 32 | 32 | 33 | 33 | 21 | 24 | 30 | 20 | 26 | 30 |
| 10/5/04 | | On | On | 1868.83 | 0.90 | 0.95 | 3.41 | 31 | 32 | 33 | 31 | 22 | 23 | 31 | 21 | 26 | 28 |
| 11/5/04 | | On | On | 2360.80 | 0.93 | 0.95 | 4.43 | 22 | 26 | 12 | 18 | 12 | 22 | 30 | 32 | 26 | 22 |
| 12/2/04 | f | Off | Off | 2802.02 | 0.97 | 0.95 | 3.97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1/13/05 | | Off | On | 2802.07 | 0.00 | 0.95 | 0.00 | 23 | 27 | 15 | 20 | 15 | 23 | 31 | 34 | 28 | 25 |
| 2/25/05 | g | Off | Off | 2802.42 | 0.00 | 0.94 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3/8/05 | h,i | Off | Off | 2802.42 | 0.00 | 0.94 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 4/5/05 | i | Off | Off | 2802.42 | 0.00 | 0.94 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 5/4/05 | j | Off | On | 2802.49 | 0.00 | 0.94 | 0.00 | 14 | 11 | 16 | 12 | 20 | 27 | 25 | 29 | 25 | 31 |
| 6/2/05 | k | On | On | 3407.97 | 1.00 | 0.94 | 5.45 | 35 | 25 | Off | 40 | 41 | 36 | 35 | 34 | 27 | 25 |
| 7/7/05 | k,l,m | On | On | 4067.42 | 1.29 | 0.94 | 5.94 | 31 | 23 | Off | 30 | Off | 26 | 32 | 28 | 25 | Off |
| 8/26/05 | n | On | On | 4665.98 | 0.81 | 0.94 | 5.39 | 13 | 13 | Off | 14 | Off | 13 | 12 | 12 | 13 | Off |
| 9/23/05 | o | On | On | 4947.97 | 0.69 | 0.94 | 2.54 | 16 | 15 | Off | Off | Off | 16 | 16 | 16 | 16 | Off |
| 10/23/05 | p | On | On | 5264.28 | 0.72 | 0.94 | 2.85 | 16 | 16 | Off | Off | Off | 16 | 16 | 16 | 16 | Off |
| 11/11/05 | q,r | On | Off | 0.90 | -- | 0.94 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11/15/05 | s | Off | On | 0.90 | 0.00 | 0.94 | 0.00 | 35 | 16 | 16 | 22 | 23 | 18 | 23 | 23 | 23 | 24 |
| 12/6/05 | t | Off | On | 2.49 | 0.01 | 0.94 | 0.01 | 22 | 20 | 19 | 24 | 24 | 22 | 26 | 23 | 24 | 25 |
| 1/4/06 | u | Off | On | 6 | 0.01 | 0.94 | 0.03 | 20 | 20 | 18 | 17 | 23 | 20 | 25 | 19 | 22 | 20 |
| 1/18/06 | u | Off | On | 203 | 0.96 | 0.94 | 1.77 | 22 | 19 | 19 | 20 | 19 | 18 | 21 | 22 | 22 | 23 |
| 2/1/06 | v | Off | On | 316 | 0.55 | 0.94 | 1.02 | 20 | 20 | 18 | 22 | 22 | 18 | 23 | 23 | 22 | 25 |
| 2/15/06 | v | Off | On | 344 | 0.14 | 0.94 | 0.25 | 20 | 19 | 18 | 17 | 19 | 20 | 23 | 19 | 22 | 20 |
| 3/1/06 | v | Off | On | 417 | 0.35 | 0.94 | 0.66 | 21 | 20 | 19 | 19 | 21 | 17 | 24 | 23 | 21 | 21 |
| 3/16/06 | u | Off | On | 501 | 0.38 | 0.94 | 0.76 | 20 | 19 | 18 | 17 | 19 | 20 | 23 | 20 | 22 | 20 |
| 3/29/06 | u | Off | On | 560 | 0.31 | 0.94 | 0.53 | 20 | 20 | 19 | 19 | 20 | 21 | 25 | 21 | 22 | 21 |
| 4/16/06 | u | Off | On | 624 | 0.24 | 0.94 | 0.58 | 20 | 19 | 18 | 17 | 19 | 20 | 23 | 20 | 23 | 21 |
| 4/25/06 | u | Off | On | 718 | 0.71 | 0.94 | 0.85 | 20 | 20 | 19 | 18 | 20 | 22 | 24 | 21 | 22 | 20 |
| 5/9/06 | u | Off | On | 776 | 0.28 | 0.94 | 0.52 | 20 | 19 | 19 | 17 | 19 | 21 | 22 | 20 | 22 | 20 |
| 5/23/06 | u | Off | On | 834 | 0.28 | 0.94 | 0.52 | 19 | 20 | 18 | 18 | 20 | 20 | 23 | 20 | 23 | 21 |
| 6/6/06 | u | Off | On | 1042 | 1.01 | 0.94 | 1.87 | 20 | 19 | 18 | 17 | 19 | 20 | 23 | 20 | 22 | 20 |
| 6/20/06 | w | Off | On | 1206 | 0.80 | 0.94 | 1.48 | 19 | 20 | 18 | 18 | 19 | 20 | 25 | 21 | 23 | 21 |
| 7/7/06 | x | Off | Off | 1313 | 0.43 | 0.94 | 0.96 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 7/28/06 | y | Off | On | 1313 | 0.00 | 0.94 | 0.00 | 19 | 17 | 16 | 19 | 24 | 17 | 22 | 19 | 21 | 23 |
| 8/15/06 | u | Off | On | 1616 | 1.15 | 0.94 | 2.73 | 19 | 17 | 17 | 16 | 19 | 19 | 23 | 19 | 21 | 21 |
| 8/29/06 | u | Off | On | 1801 | 0.90 | 0.94 | 1.67 | 19 | 19 | 17 | 17 | 21 | 18 | 21 | 19 | 22 | 23 |
| 9/12/06 | u | Off | On | 2022 | 1.07 | 0.94 | 1.99 | 23 | 19 | 17 | 16 | 19 | 19 | 25 | 19 | 22 | 21 |
| 9/22/06 | u | Off | On | 2204 | 1.24 | 0.94 | 1.64 | 21 | 21 | 19 | 20 | 23 | 21 | 26 | 23 | 25 | 27 |
| 10/4/06 | u | Off | On | 2313 | 0.62 | 0.94 | 0.98 | 18 | 18 | 17 | 18 | 18 | 18 | 25 | 23 | 22 | 21 |
| 10/18/06 | u | Off | On | 2401 | 0.43 | 0.94 | 0.79 | 20 | 19 | 17 | 16 | 18 | 19 | 20 | 20 | 21 | 27 |
| 10/31/06 | w | Off | On | 2516 | 0.60 | 0.94 | 1.04 | 22 | 20 | 19 | 20 | 19 | 19 | 23 | 21 | 25 | 23 |
| 11/14/06 | u | Off | On | 2636 | 0.58 | 0.94 | 1.08 | 18 | 18 | 17 | 17 | 18 | 18 | 22 | 24 | 22 | 24 |
| 11/28/06 | u | Off | On | 2744 | 0.52 | 0.94 | 0.97 | 20 | 20 | 19 | 20 | 22 | 21 | 25 | 25 | 22 | 23 |
| 12/14/06 | u | Off | On | 2801 | 0.24 | 0.94 | 0.51 | 19 | 19 | 18 | 18 | 19 | 19 | 22 | 22 | 23 | 22 |
| 12/26/06 | u | Off | On | 2906 | 0.60 | 0.94 | 0.95 | 20 | 20 | 19 | 20 | 21 | 20 | 25 | 25 | 20 | 24 |
| Spurge time per cycle (min) | | | | | | | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |

| | |
|---|---|
| Reporting Period: Fourth Quarter 2006 (10/01/06 to 12/31/06) | |
| Total Hours Operational: 10,983 | |
| Total Pounds Ozone Injected: 99 | |
| Period Hours Operational: 702 | |
| Period Percent Operational: 31% | |
| Period Pounds Ozone Injected: 6.32 | |
| Definitions: | |
| psi | Pounds per square inch |
| -- | Data not available |
| NA | Not applicable |
| lbs | Pounds |
| Notes: | |
| | System cycles through program 18 times per day, for 53% utilization |
| a | Troubleshooting time counter |
| b | Hourmeter replaced |
| c | Solenoid 8 has high pressure, taken offline |
| d | Solenoid 3 leaking, taken off line |
| e | Pressures not properly recorded |
| f | Ozone generator hose ruptured on effluent side to solenoid manifold. No Readings. |
| g | System down due to bad GFI |
| h | New GFI was installed. |
| i | Fan in compressor broken and tubing from compressor to manifold needs to be replaced. System left off until repairs made. |
| j | Installed new motor fan and manifold fittings, restarted system. |
| k | OZ-3 turned off due to high pressure of over 60 psi. |
| l | OZ-5 too brittle. Left off until lines are replaced. |
| m | OZ-10 turned off due to leak in secondary containment |
| n | Hourmeter reading not correct, will check next visit |
| o | Hourmeter not working properly. |
| p | Pressure gauge stuck at 16 psi. |
| q | New hourmeter, panel fan, and GFCI installed |
| r | Fuse blown in ozone generator, system left off |
| s | Replaced tubing to all wells and replaced ozone generator circuit board and pressure gauge |
| t | System down due to tripped GFI; foam on door may have been pressing reset button. Foam removed. |
| u | Ozone sensor tripped; system restarted. |
| v | Rainbird meter malfunction. |
| w | System down time due to tripped GFI; system restarted. |
| x | System off due to bad compressor. |
| y | Compressor repaired; system restarted. |

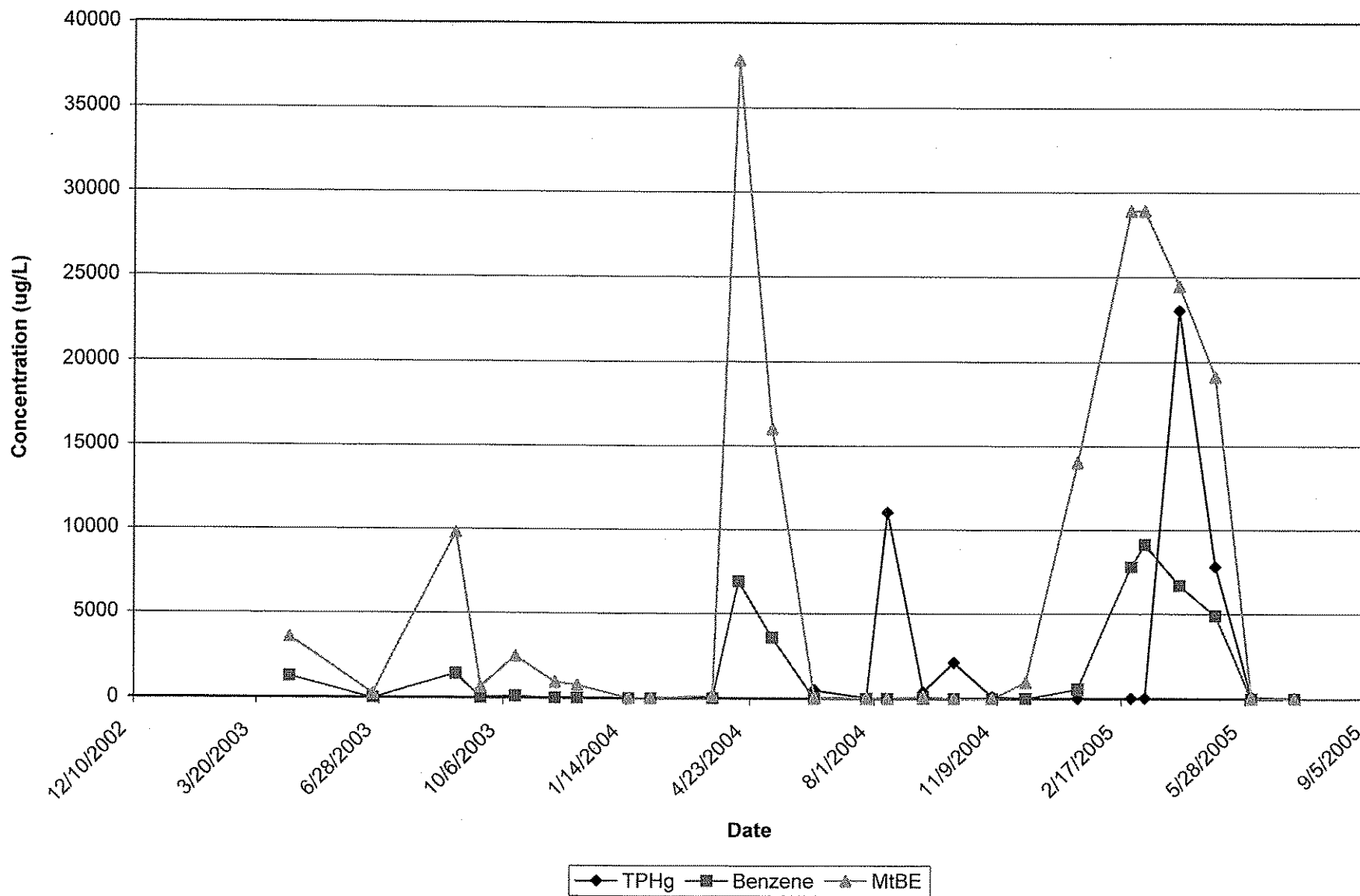
Table 2
Ozone Injection - Groundwater Monitoring Data
 76 Service Station No. 1871
 96 MacArthur Blvd., Oakland, California

| Date | Notes | Monitoring Well: MW-1 | | | | | | | | Monitoring Well: MW-7 | | | | | | | |
|------------|-------|-----------------------|-----------|-------------|----------------|----------------|----------------------|------------------------|-------------|-----------------------|-----------|-------------|----------------|----------------|----------------------|------------------------|-------------|
| | | ORP (mV) | DO (mg/l) | TPHg (µg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Xylenes (total) (µg/L) | MIBE (µg/L) | ORP (mV) | DO (mg/l) | TPHg (µg/L) | Benzene (µg/L) | Toluene (µg/L) | Ethyl-benzene (µg/L) | Xylenes (total) (µg/L) | MIBE (µg/L) |
| 4/16/2003 | a | NM | NM | 510 | 57 | 0.62 | 29 | 61 | 160 | NM | NM | <25,000 | <250 | <250 | <250 | <500 | 37,000 |
| 6/23/2003 | a | NM | NM | 75 | <0.50 | <0.50 | <0.50 | 5.3 | 12 | NM | NM | 20,000 | 260 | <0.50 | <0.50 | <1.0 | 20,000 |
| 8/29/2003 | a | NM | NM | 11,000 | 64 | <10 | 330 | 1,400 | 440 | NM | NM | <10,000 | <100 | <100 | <100 | <200 | 24,000 |
| 9/18/2003 | | NM | NM | 390 | 2.3 | <0.50 | 3.6 | 31 | 30 | NM | NM | -- | -- | -- | -- | -- | -- |
| 10/16/2003 | | NM | NM | 2,100 | 6.0 | <0.50 | 24.0 | 120 | 110 | NM | NM | -- | -- | -- | -- | -- | -- |
| 11/17/2003 | | NM | NM | 130 | 0.51 | <0.50 | 2.1 | 7.9 | 43 | NM | NM | 16,000 | <130 | <130 | <130 | <250 | 17,000 |
| 12/5/2003 | | NM | NM | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 36 | NM | NM | 12,000 | <100 | <100 | <100 | <200 | 19,000 |
| 1/16/2004 | b | NM | NM | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <2.0 | NM | NM | 17,000 | 160 | 270 | <130 | <250 | 19,000 |
| 2/3/2004 | | 238 | NM | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <2.0 | 72 | NM | 10,000 | <25 | <25 | <25 | <50 | 15,000 |
| 3/24/2004 | b | 169 | NM | 55 | <0.50 | <0.50 | 0.80 | 2.9 | 7.8 | 56 | NM | 13,000 | <100 | <100 | <100 | <200 | 15,000 |
| 4/14/2004 | b | 0.4 | NM | 23,000 | 310 | 10 | 590 | 2400 | 1700 | 42 | NM | 9,000 | <50 | <50 | <50 | <100 | 11,000 |
| 5/11/2004 | | c | NM | 7,800 | 160 | <10 | 170 | 700 | 720 | -3 | NM | 8,300 | <50 | <50 | <50 | <100 | 11,000 |
| 6/14/2004 | | 20 | 5.25 | 110 | <0.50 | <0.50 | 1.0 | 6.4 | 3.4 | 35 | 1.45 | <5,000 | <50 | <50 | <50 | <100 | 6,500 |
| 7/26/2004 | | NM | NM | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 3.2 | NM | NM | <5,000 | <50 | <50 | <50 | <100 | 3,100 |
| 8/12/2004 | | 171 | 0.07 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 0.80 | 117 | 0.06 | 2,100 | <10 | <10 | <10 | <20 | 2,700 |
| 9/10/2004 | | 180 | 0.08 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 5.7 | 122 | 0.07 | 3,100 | <13 | <13 | <13 | <25 | 4,400 |
| 10/5/2004 | | 175 | 0.09 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | 117 | 0.08 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 7.1 |
| 11/5/2004 | d | 117 | 0.05 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 0.89 | 210 | 0.06 | 50 | <0.50 | <0.50 | <0.50 | <1.0 | 1.1 |
| 12/2/2004 | | 109 | 0.03 | 83 | 0.83 | <0.50 | <0.50 | 1.2 | 44 | 214 | 0.03 | 180 | 1.6 | <0.50 | 66 | 4.5 | 51 |
| 1/13/2005 | | 105 | 0.04 | 1,100 | 26 | 1.2 | 2.10 | 70 | 630 | 201 | 0.05 | 1,000 | 25 | 1 | 1.9 | 68 | 460 |
| 2/25/2005 | c,f | -- | 2.67 | 24,000 | 350 | 10 | 820 | 2,200 | 1,300 | 21 | 2.05 | 680 | <2.0 | <2.0 | 2.3 | 58 | 2,500 |
| 3/8/2005 | g | -35 | 4.43 | 23,000 | 410 | <10 | 1,100 | 2,300 | 1,300 | NR | NR | -- | -- | -- | -- | -- | -- |
| 4/5/2005 | | -30 | 4.56 | 34,000 | 300 | <10 | 910 | 2,000 | 1,100 | 135 | 6.53 | <5,000 | <50 | <50 | <50 | <1.00 | 19,000 |
| 5/4/2005 | | -59 | 2.40 | 26,000 | 220 | 7.4 | 790 | 2,100 | 860 | -24 | 1.13 | <2,000 | <0.50 | <0.50 | <0.50 | <1.0 | 7,100 |
| 6/2/2005 | | -20 | 7.34 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 3.5 | -12 | 1.01 | 3500 | <0.50 | <0.50 | <0.50 | <1.0 | 4,000 |
| 7/7/2005 | i,j | 142 | 7.42 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 0.61 | 154 | 1.40 | 5000 | <0.50 | <0.50 | <0.50 | <1.0 | 8,900 |
| 9/23/2005 | | 16 | 7.77 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | 56 | 1.39 | <500 | <5.0 | <5.0 | <5.0 | <10 | 1,900 |
| 10/23/2005 | | 154 | 7.13 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 0.56 | 191 | 1.59 | <250 | <2.5 | <2.5 | <2.5 | <5 | 680 |
| 11/1/2005 | k | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

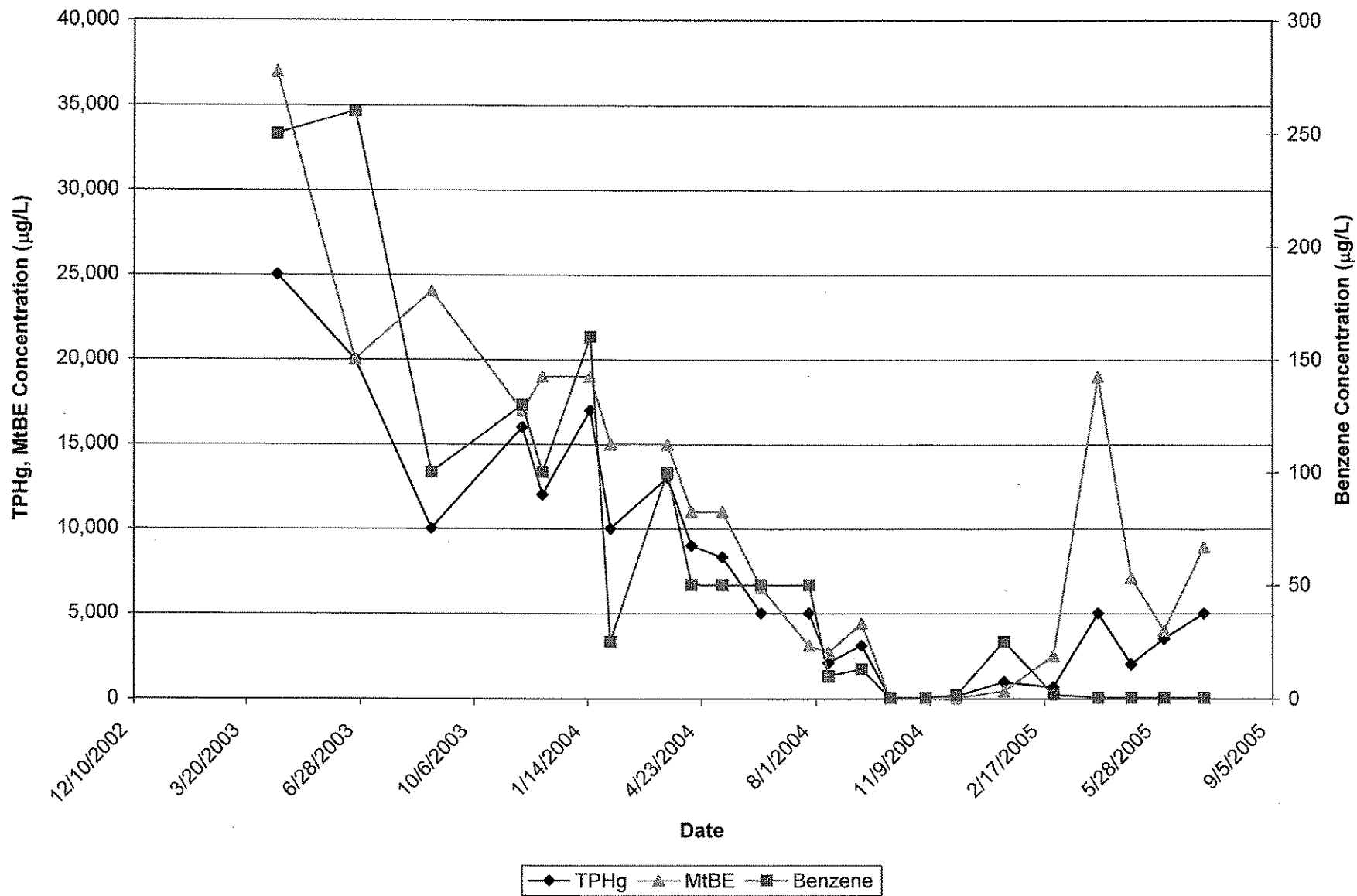
| | |
|--|--|
| <p>Definitions:</p> <p>TPHg = Total petroleum hydrocarbons as gasoline MIBE = Methyl tert-butyl ether µg/L = Micrograms per liter</p> <p>ORP = Oxidation Reduction Potential DO = Dissolved Oxygen mV = Millivolts mg/l = Milligrams per liter</p> | <p>Notes:</p> <p>-- Data not available NM Not Measured a Sampled by Gettler-Ryan, Inc. b Hydrocarbon in gasoline range does not match laboratory gasoline standard. c ORP reading under the range d Quantity of unknown hydrocarbon(s) in sample based on gasoline. e Data not available at time of reporting f MW-7 Estimated value of MIBE; concentration exceeded the calibration of analysis g Car parked on MW-7. h Data not available at time of reporting i Siloxane peaks were found in the sample which are not believed to be gasoline related. If they were to be quantified as gasoline, the concentration would be 58 µg/L. (MW-1). j The concentration reported reflect(s) individual or discrete unidentified peaks not matching a typical fuel pattern. (MW-1) k Sampling discontinued at the request of ConocoPhillips</p> |
|--|--|

Graphs

Graph 1
MW-1 TPHg, Benzene, and MtBE Groundwater Concentrations
 76 Service Station No. 1871
 96 MacArthur Blvd., Oakland, California



Graph 2
MW-7 TPHg, Benzene, and MtBE Groundwater Concentrations
 76 Service Station No. 1871
 96 MacArthur Blvd., Oakland, California



Appendix A
Field Notes

ConocoPhillips Ozone Injection System Data

 Station No. T 1871

 City: OAKLAND

| Date | Notes/ Date Sampled | Status ON/OFF | Cycles/ Day | Hour Meter | Well ID: <u>OZ-1</u> | | | | Well ID: <u>OZ-2</u> | | | | Well ID: <u>OZ-3</u> | | | |
|-----------|------------------------|------------------|----------------|---------------|----------------------|---------------|-------------------|--------------------|----------------------|---------------|-------------------|--------------------|----------------------|---------------|-------------------|--------------------|
| | | | | | Pressure (psi) | Temp. (°F) | Run Time (min) | Flowrate (acfm) | Pressure (psi) | Temp. (°F) | Run Time (min) | Flowrate (acfm) | Pressure (psi) | Temp. (°F) | Run Time (min) | Flowrate (acfm) |
| 4 Oct 06 | A | off / on | 18 | 2313 | 18 | | 7 | | 18 | | 7 | | 17 | | 7 | |
| 18 Oct 06 | A | off / on | 18 | 2401 | 20 | | 7 | | 19 | | 7 | | 17 | | 7 | |
| 31 Oct 06 | E | off / on | 18 | 2516 | 22 | | 7 | | 20 | | 7 | | 19 | | 7 | |
| 14 Nov 06 | A | off / on | 18 | 2636 | 18 | | 7 | | 18 | | 7 | | 17 | | 7 | |
| 28 Nov 06 | A | off / on | 18 | 2744 | 20 | | 7 | | 20 | | 7 | | 19 | | 7 | |
| 14 Dec 06 | A | off / on | 18 | 2801 | 19 | | 7 | | 19 | | 7 | | 18 | | 7 | |
| 26 Dec 06 | A | off / on | 18 | 2906 | 20 | | 7 | | 20 | | 7 | | 19 | | 7 | |

| Date | Well ID: <u>OZ-4</u> | | | | Well ID: <u>OZ-5</u> | | | | Well ID: <u>OZ-6</u> | | | | Well ID: <u>OZ-7</u> | | | |
|-----------|----------------------|---------------|-------------------|--------------------|----------------------|---------------|-------------------|--------------------|----------------------|---------------|-------------------|--------------------|----------------------|---------------|-------------------|--------------------|
| | Pressure (psi) | Temp. (°F) | Run Time (min) | Flowrate (acfm) | Pressure (psi) | Temp. (°F) | Run Time (min) | Flowrate (acfm) | Pressure (psi) | Temp. (°F) | Run Time (min) | Flowrate (acfm) | Pressure (psi) | Temp. (°F) | Run Time (min) | Flowrate (acfm) |
| 4 Oct 06 | 18 | | 7 | | 18 | | 7 | | 18 | | 7 | | 25 | | 7 | |
| 18 Oct 06 | 16 | | 7 | | 18 | | 7 | | 19 | | 7 | | 20 | | 7 | |
| 31 Oct 06 | 20 | | 7 | | 19 | | 7 | | 19 | | 7 | | 23 | | 7 | |
| 14 Nov 06 | 17 | | 7 | | 18 | | 7 | | 18 | | 7 | | 22 | | 7 | |
| 28 Nov 06 | 20 | | 7 | | 22 | | 7 | | 21 | | 7 | | 25 | | 7 | |
| 14 Dec 06 | 18 | | 7 | | 19 | | 7 | | 19 | | 7 | | 22 | | 7 | |
| 26 Dec 06 | 20 | | 7 | | 21 | | 7 | | 20 | | 7 | | 25 | | 7 | |

| Date | Well ID: <u>OZ-8</u> | | | | Well ID: <u>OZ-9</u> | | | | Well ID: <u>OZ-10</u> | | | | Well ID: | | | |
|-----------|----------------------|---------------|-------------------|--------------------|----------------------|---------------|-------------------|--------------------|-----------------------|---------------|-------------------|--------------------|-------------------|---------------|-------------------|--------------------|
| | Pressure (psi) | Temp. (°F) | Run Time (min) | Flowrate (acfm) | Pressure (psi) | Temp. (°F) | Run Time (min) | Flowrate (acfm) | Pressure (psi) | Temp. (°F) | Run Time (min) | Flowrate (acfm) | Pressure (psi) | Temp. (°F) | Run Time (min) | Flowrate (acfm) |
| 4 Oct 06 | 23 | | 7 | | 22 | | 7 | | 21 | | 7 | | | | | |
| 18 Oct 06 | 20 | | 7 | | 21 | | 7 | | 27 | | 7 | | | | | |
| 31 Oct 06 | 21 | | 7 | | 25 | | 7 | | 23 | | 7 | | | | | |
| 14 Nov 06 | 24 | | 7 | | 22 | | 7 | | 24 | | 7 | | | | | |
| 28 Nov 06 | 25 | | 7 | | 22 | | 7 | | 23 | | 7 | | | | | |
| 14 Dec 06 | 22 | | 7 | | 23 | | 7 | | 22 | | 7 | | | | | |
| 26 Dec 06 | 25 | | 7 | | 20 | | 7 | | 24 | | 7 | | | | | |

Ozone Injection System Maintenance and Inspection Log

| Date | Check Hose Fittings Valves | Measure Blower Running Amperage | Check Electrical Fittings and Controller Operation | Adjust Controller Program | Particle Filter Inspect/ Replace | Check Flow Pressure Assembly | Check Well Head Connect | Test all Safety Override Systems |
|-----------|-------------------------------------|--|---|---------------------------------|---|---------------------------------------|----------------------------------|---|
| 31 Oct 06 | OK | — | OK | — | OK | OK | OK | OK |
| 28 Nov 06 | OK | — | OK | — | OK | OK | OK | OK |
| 26 Dec 06 | OK | — | OK | — | OK | OK | OK | OK |

Comments: _____

Notes: A = System down-breaker thrown

B = Hour meter malfunction

C = New hour meter installed

D = Rainbird meter malfunction

E = GFI Tripped

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