

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Job#: <u>G005862/JPL Groundwater Monitoring</u>

Alpha Analytical Number: BMI09073103-02A Client I.D. Number: MW-24-3 Attn:David ConnerPhone:(818) 393-2808Fax:(614) 458-6641

Sampled: 07/30/09 Received: 07/31/09

Analyzed: 08/05/09

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting L | imit |
|----|--------------------------------|---------------|-----------|-------|----|-----------------------------------|---------------|-------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | µg/L |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m,p-Xylene | ND | 0.50 | µg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | µg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1.1.2.2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | μg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | μg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chloroform | ND | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | μg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | μg/L | 56 | 4-isopropyitoluene | ND | 0.50 | μg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1.2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1.2-Dibromo-3-chloropropane (DBC) |) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | μg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | μg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 2.0 | μg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1.2-Dichloroethane-d4 | 87 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 110 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 99 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | μg/L | | | | () | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Dantner

Walter Arihm

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

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Report Date Page 1 of 1



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| ANA | LYTICAL REPORT |
|------------------------------------------|-----------------------|
| Battelle Memorial Institute | Attn: David Conner |
| 3990 Old Town Ave | Phone: (818) 393-2808 |
| San Diego, CA 92110 | Fax: (614) 458-6641 |
| Job#: G005862/JPL Groundwater Monitoring | |
| Alpha Analytical Number: BMI09073103-03A | Sampled: 07/30/09 |
| Client I.D. Number: MW-24-2 | Received: 07/31/09 |
| | Analyzed: 08/05/09 |
| | |

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound C | oncentration | Reporting L | imit |
|----|--------------------------------|---------------|-----------|-------|----|------------------------------------|--------------|-------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L |
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| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | µg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chloroform | ND | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | ug/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBCP) | ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 2.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 85 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 115 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 94 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | | . , | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

8/13/09

Report Date



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ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Job#: ______G005862/JPL Groundwater Monitoring

Alpha Analytical Number: BMI09073103-04A Client I.D. Number: MW-24-1 Attn:David ConnerPhone:(818) 393-2808Fax:(614) 458-6641

Sampled: 07/30/09 Received: 07/31/09

Analyzed: 08/05/09

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting L | imit |
|----|--------------------------------|---------------|-----------|-------|----|----------------------------------|---------------|-------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1.1.1.2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | µg/L |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m.p-Xylene | ND | 0.50 | µg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | µg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND . | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2 Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chloroform | 4.0 | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBC | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | 0.93 | 0.50 | µg/L | 61 | Naphthalene | ND | 2.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 85 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 111 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 97 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | | | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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Kandy Daulmer

Walter Ainhow

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ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 G005862/JPL Groundwater Monitoring Job#:

Alpha Analytical Number: BMI09073103-05A Client I.D. Number: EB-8-7/30/09

Attn: David Conner Phone: (818) 393-2808 Fax: (614) 458-6641

Sampled: 07/30/09 Received: 07/31/09

Analyzed: 08/05/09

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting L | imit |
|----|--------------------------------|---------------|-----------|-------|----|-----------------------------------|---------------|-------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1.1.1.2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | µg/L |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | μg/L | 39 | m,p-Xylene | ND | 0.50 | µg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | µg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xvlene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
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Kanda Santner

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8/13/09

Report Date



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| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | | ND | 0.50 | µg/L | 49 | 2-Chiorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chloroform | ND | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | .,= = | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ~ ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBCI | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 2.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 87 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 113 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 99 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | ' | · · · | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Rogen Scholl

Kandy Sandner

Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

Walter Arihm Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

8/13/09





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VOC Sample Preservation Report

Work Order: BMI09073103 Project: G005862/JPL Groundwater Monitoring Alpha's Sample ID pН Client's Sample ID Matrix 2 09073103-02A MW-24-3 Aqueous 09073103-03A MW-24-2 Aqueous 2 2 09073103-04A MW-24-1 Aqueous 09073103-05A 2 EB-8-7/30/09 Aqueous 09073103-06A 2 TB-8-7/30/09 Aqueous

8/13/09 Report Date



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| Date: 13-Aug-09 | (| QC Si | ummar | y Repor | t | | | | Work Ord 0907310 | - |
|----------------------------------------------------------------|--------------------------------|-----------------------------|-------------------------|------------------------------------------------------------------|-------------------|----------------------|--------------------------|----------------------|---------------------------------------------------|------|
| Method Blank File ID: 17 Sample ID: MB-22448 Analyte | Units : mg/ L Result | Type M | Ba Run ID: IC | est Code: EF atch ID: 2244 _2_090731 <i>A</i> SpkRefVal | 18A | | Analy Prep I | Date: | 07/31/2009 12:35 07/31/2009 Val %RPD(Limit) | Qual |
| Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P | ND ND ND | 0.25 0.25 0.25 | | | | | | | | |
| Laboratory Fortified Blank | | Type L | FB Te | est Code: El | PA Me | thod 300.0 | / 9056 | | | |
| File ID: 18 Sample ID: LFB-22448 Analyte | Units : mg/L Result | PQL | Run ID: IC | atch ID: 224 4 _ 2_090731 # SpkRefVal | • | CLCL(ME) | Prep I | Date: | 07/31/2009 12:53 07/31/2009 Val %RPD(Limit) | Qual |
| Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P | 1.21 1.26 1.98 | 0.25 0.25 0.25 | 1.25 1.25 | • | 97 101 158 | 90 90 90 | 110 110 110 | | | L51 |
| Sample Matrix Spike File ID: 30 | | Type L | | est Code: Ef | | thod 300.0 | | sis Date: | 07/31/2009 16:36 | |
| Sample ID: 09073102-04ALFM Analyte | Units : mg/L Result | | | _2_090731 | | | Prep (| | 07/31/2009 Val %RPD(Limit) | Qual |
| Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P | 1.28 2.27 1.56 | PQL 0.25 0.25 0.25 | 1.25 1.25 | 0 0.9932 0 | 103 102 125 | 80 80 80 80 | 120 120 120 120 | | | M1 |
| Sample Matrix Spike Duplicate | | Type L | FMD Te | est Code: El | PA Me | thod 300.0 | / 9056 | | | |
| File ID: 31 | | | | atch ID: 2244 | | | , | | 07/31/2009 16:54 | |
| Sample ID: 09073102-04ALFMD Analyte | Units : mg/L Result | PQL | | _2_0907314 SpkRefVal | | CLCL(ME) | Prep UCL(ME) | | 07/31/2009 Val %RPD(Limit) | Qual |
| Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P | 1.29 2.21 1.56 | 0.25 0.25 0.25 | 1.25 1.25 | 0 0.9932 0 | 103 97 125 | 80 80 80 | 120 120 120 | 1.28 2.26 1.56 | 2 0.5(10) 9 2.8(10) | M1 |

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Alpha uses descriptive data qualifier flags, which could be replaced with either a DOD Q or J flag.

L51 = Analyte recovery was above acceptance limits for the LCS, but was acceptable in the MS/MSD.

M1 = Matrix spike recovery was high, the method control sample recovery was acceptable.



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| Date: 13-Aug-09 | | Ç | QC S | ummar | y Repor | t | | | | Work Ord 09073103 | |
|-----------------------------|-------------------|--------------|--------|------------|------------------------------|--------|------------|---------|------------|-----------------------------|-----|
| Method Blank File ID: 17 | ζ. | | Туре 🛚 | | est Code: El atch ID: 224 | | hod 300.0 | | vsis Date: | 07/31/2009 12:35 | |
| Sample ID: | MB-22448 | Units : mg/L | | | _2_0907314 | | | • | Date: | 07/31/200 9 | |
| Analyte | | Result | PQL | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qua |
| Sulfate (SO4) | _ | ND | 0.5 | 5 | | | | | | | |
| Laboratory F | ortified Blank | | Type L | .FB T | est Code: El | PA Met | thod 300.0 | | | | |
| File ID: 18 | | | | В | atch ID: 224 | 48B | | Analy | sis Date: | 07/31/2009 12:53 | |
| Sample ID: I | LFB-22448 | Units : mg/L | | | _2_0907314 | | | | Date: | 07/31/2009 | |
| Analyte | | Result | PQL | SpkVal | SpkRefVal | %REC | CLCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qua |
| Sulfate (SO4) | | 10.1 | 0.5 | 5 10 | | 101 | 9 0 | 110 | | | |
| Sample Matri | x Spike | | Type L | FM T | est Code: El | PA Met | thod 300.0 | / 9056 | | | |
| File ID: 30 | | | | В | atch ID: 224 | 48B | | Analy | sis Date: | 07/31/2009 16:36 | |
| Sample ID: | 09073102-04ALFM | Units : mg/L | | Run ID: IC | _2_090731 | A | | Prep | Date: | 07/31/2009 | |
| Analyte | | Result | PQL | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qua |
| Sulfate (SO4) | | 64.3 | 0.5 | 5 10 | 55.25 | 90 | 80 | 120 | | | |
| Sample Matri | x Spike Duplicate | | Type L | FMD T | est Code: El | PA Met | thod 300.0 | / 9056 | | | |
| File ID: 31 | | | | В | atch ID: 224 | 48B | | Analy | sis Date: | 07/31/2009 16:54 | |
| Sample ID: (| 09073102-04ALFMD | Units : mg/L | | Run ID: IC | _2_090731 | 4 | | Prep | Date: | 07/31/2009 | |
| Analyte | | Result | PQL | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qua |
| Sulfate (SO4) | | 65.1 | 0.8 | | | 98 | 80 | 120 | 64.2 | | |
| | | | | | | | | | | | |

Comments:



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| Date: 13-Aug-09 | | Work Order: 0907 <u>3103</u> | | | | | | | | | | |
|-----------------------------|-----------------|----------------------------------------|--------|-------------|-------|--------------------|--------|------------|--------|--------------|------------------|-----|
| Method Blank File ID: 17 | <u> </u> | | Type N | IBLK | - | est Code: EF | | thod 300.0 | | alysis Date: | 07/31/2009 12:35 | 1 |
| Sample ID: MB | -22448 | Units : mg/L | | Run ID | : IC_ | _2_090731A | 1 | | Pre | p Date: | 07/31/2009 | |
| Analyte | | Result | PQL | Spk | Val | SpkRefVal | %REC | LCL(ME) | UCL(M | E) RPDRef | Val %RPD(Limit) | Qua |
| Chloride | | ND | 0.5 | 5 | | | | | | | | |
| Laboratory Fort | ified Blank | | Type L | .FB | Те | est Code: EF | PA Met | thod 300.0 | / 9056 | | | |
| File ID: 18 | | | | | Ba | tch ID: 2244 | 18C | | Ana | alysis Date: | 07/31/2009 12:53 | |
| Sample ID: LF | 3-22448 | Units : mg/L | | Run ID | : IC_ | _2_090731 <i>A</i> | ۱ | | Pre | p Date: | 07/31/2009 | |
| Analyte | | Result | PQL | Spk' | Val | SpkRefVal | %REC | LCL(ME) | UCL(M | E) RPDRef | Val %RPD(Limit) | Qua |
| Chloride | | 4.52 | 0.5 | 5 | 5 | | 90 | 90 | 110 | | | |
| Sample Matrix S | spike | | Type L | .FM | Те | est Code: EF | PA Met | thod 300.0 | / 9056 | | | |
| File ID: 30 | | | | | Ba | tch ID: 2244 | 18C | | Ana | alysis Date: | 07/31/2009 16:36 | |
| Sample ID: 090 | 73102-04ALFM | Units : mg/L | | Run ID | : IC_ | _2_090731A | • | | Pre | p Date: | 07/31/2009 | |
| Analyte | | Result | PQL | Spk | Val | SpkRefVal | %REC | LCL(ME) | UCL(M | E) RPDRef | Val %RPD(Limit) | Qua |
| Chloride | | 27.7 | 0.5 | 5 | 5 | 23.53 | 84 | 80 | 120 | | | |
| Sample Matrix S | spike Duplicate | | Type L | .FMD | Те | est Code: EF | PA Met | thod 300.0 | / 9056 | | | |
| File ID: 31 | | | | | Ba | tch ID: 2244 | 18C | | Ana | alysis Date: | 07/31/2009 16:54 | |
| Sample ID: 090 | 73102-04ALFMD | Units : mg/L | | Run ID | : IC_ | _2_090731A | | | Pre | p Date: | 07/31/2009 | |
| Analyte | | Result | PQL | Spk | Val | SpkRefVal | %REC | LCL(ME) | UCL(M | E) RPDRef | Val %RPD(Limit) | Qua |
| Chloride | | 28 | 0.5 | | 5 | 23.53 | 89 | 80 | 120 | 27.7 | | |

Comments:



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| Date: 12-Aug-09 | QC Summary Report | | | | | | | | | Work Ord 09073103 | | |
|-----------------------------|-------------------|--------------|------|-----|------------------|--------------|--------|-----------|---------|-----------------------------|------------------|-----|
| Method Blank File ID: 44 | | | Туре | MB | | est Code: E | | hod 314.0 | | vsis Date: | 08/07/2009 00:50 | |
| Sample ID: MBL | _K-22493 | Units : µg/L | | R | | _3_090807 | | | Prep | | 08/06/2009 | |
| Analyte | | Result | PQL | | | | | LCL(ME) | UCL(ME) | RPDRef | val %RPD(Limit) | Qua |
| Perchlorate | | ND | | 1 | | | • • | | | | | |
| Laboratory Forti | ified Blank | | Туре | LFE | ι Te | est Code: E | PA Met | hod 314.0 | | | | |
| File ID: 45 | | | | | Ba | atch ID: 224 | 93 | | Analy | sis Date: | 08/07/2009 01:08 | |
| Sample ID: LFB | -22493 | Units : µg/L | | R | un ID: IC | _3_090807 | A | | Prep | Date: | 08/06/2009 | |
| Analyte | | Result | PQL | | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qua |
| Perchlorate | | 26.1 | | 2 | 25 | | 105 | 85 | 115 | | | |
| Sample Matrix S | pike | | Туре | LFN | n Te | est Code: E | PA Met | hod 314.0 | | | | |
| File ID: 49 | | | | | Ba | atch ID: 224 | 93 | | Analy | sis Date: | 08/07/2009 02:22 | |
| Sample ID: 0907 | 73103-03ALFM | Units : µg/L | | R | un ID: IC | _3_090807 | A | | Prep | Date: | 08/06/2009 | |
| Analyte | | Result | PQL | | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qua |
| Perchlorate | | 34.2 | | 2 | 25 | 10.16 | 96 | 80 | 120 | | | |
| Sample Matrix S | pike Duplicate | | Туре | LFN | ID Te | est Code: E | PA Met | hod 314.0 | | | | |
| File ID: 50 | | | | | Ba | atch ID: 224 | 93 | | Analy | sis Date: | 08/07/2009 02:40 | |
| Sample ID: 0907 | 73103-03ALFMD | Units : µg/L | | R | un ID: IC | 3_090807 | A | | Prep | Date: | 08/06/2009 | |
| Analyte | | Result | PQL | | | | | LCL(ME) | UCL(ME) | RPDRef | √al %RPD(Limit) | Qua |
| Perchlorate | | 35.7 | | 2 | 25 | 10.16 | | 80 | 120 | 34.2 | | |

Comments:



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| Date: 14-Aug-09 | QC Summary Report | Work Order: 09073103 | | | |
|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|--|--|--|
| Method Blank File ID: 081209.B\115SMPL.D\ Sample ID: MB-22456 | Type MBLK Test Code: EPA Method 200.8 Batch ID: 22456K Analysis Date: 08/12 Units : mg/L Run ID: ICP/MS_090812E Prep Date: 08/03 | 2/2009 22:48 5/2009 | | | |
| Analyte | Result PQL SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal % | RPD(Limit) Qual | | | |
| Chromium (Cr) | ND 0.005 | | | | |
| Laboratory Control Spike File ID: 081209.B\116_LCS.D\ Sample ID: LCS-22456 Analyte | Type LCS Test Code: EPA Method 200.8 Batch ID: 22456K Analysis Date: 08/12 Units : mg/L Run ID: ICP/MS_090812E Prep Date: 08/03 Result PQL SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal % | /2009 | | | |
| Chromium (Cr) | 0.0512 0.005 0.05 102 80 120 | | | | |
| Sample Matrix Spike File ID: 081209.B\120SMPL.D\ Sample ID: 09073103-03AMS Analyte | Type MS Test Code: EPA Method 200.8 Batch ID: 22456K Analysis Date: 08/12 Units : mg/L Run ID: ICP/MS_090812E Prep Date: 08/03 Result PQL SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal % | /2009 | | | |
| Chromium (Cr) | 0.051 0.005 0.05 0 102 80 120 | | | | |
| Sample Matrix Spike Duplicate File ID: 081209.B\121SMPL.D\ | Type MSD Test Code: EPA Method 200.8 Batch ID: 22456K Analysis Date: 08/12 | | | | |
| Sample ID: 09073103-03AMSD Analyte | Units : mg/L Run ID: ICP/MS_090812E Prep Date: 08/03 Result PQL SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal % | /2009 RPD(Limit) Qual | | | |
| Chromium (Cr) | 0.0488 0.005 0.05 0 98 80 120 0.05098 | 4.4(20) | | | |

Comments:



| Date: 12-Aug-09 | | (| Work Order: 09073103 | | | | | | | | |
|----------------------------------|------------------------------|--------------|--------------------------------|--------|----------------|-----------|---------|------------|--------|------------------|-----|
| Method Bla | | | Туре М | IBLK | Test Code: | | | | | | |
| File ID: 09073 | | | | | Batch ID: MS15 | W0804 | N | - | | 08/05/2009 00:27 | • |
| Sample ID: | MBLK MS15W0804N | Units : µg/L | | | MSD_15_09080 | | | Prep D | | 08/05/2009 | |
| Analyte | | Result | PQL | SpkVa | al SpkRefVal % | 6REC I | LCL(ME) | UCL(ME) I | RPDRef | /al %RPD(Limit) | Qua |
| Dichlorodifluo | | ND | 0.5 | j j | | | | | | | |
| Chloromethar | | ND | 1 | | | | | | | | |
| Vinyl chloride | | ND | 0.5 | | | | | | | | |
| Chloroethane Bromomethar | | ND ND | 0.5 1 | | | | | | | | |
| Trichlorofluor | | ND | 0.5 | | | | | | | | |
| 1,1-Dichloroel | | ND | 0.5 | | | | | | | | |
| Dichlorometha | ane | ND | | | | | | | | | |
| Freon-113 | | ND | 0.5 | | | | | | | | |
| trans-1,2-Dich | | ND | 0.5 | | | | | | | | |
| 1,1-Dichloroel | tyl ether (MTBE) | ND ND | 0.5 | | | | | | | | |
| 2-Butanone (N | | | 0.8 10 | | | | | | | | |
| cis-1,2-Dichlo | | ND | 0.5 | | | | | | | | |
| Bromochloron | | ND | 0.5 | | | | | | | | |
| Chloroform | | ND | 0.5 | | | | | | | | |
| 2,2-Dichlorop | | ND | 0.5 | | | | | | | | |
| 1,2-Dichloroet | | ND | 0.5 | | | | | | | | |
| 1,1,1-Trichloro 1,1-Dichlorop | | ND | 0.5 | | | | | | | | |
| Carbon tetrac | • | ND ND | 0.5 0.5 | | | | | | | | |
| Benzene | allonde | ND | 0.0 | | | | | | | | |
| Dibromometh | ane | ND | 0.5 | | | | | | | | |
| 1,2-Dichlorop | ropane | ND | 0.5 | | | | | | | | |
| Trichloroether | | ND | 0.5 | | | | | | | | |
| Bromodichlor | | ND | 0.5 | | | | | | | | |
| | entanone (MIBK) | ND | 2.5 | | | | | | | | |
| cis-1,3-Dichlo trans-1,3-Dich | | ND ND | 0.5 0.5 | | | | | | | | |
| 1,1,2-Trichlor | | ND | 0.5 | | | | | | | | |
| Toluene | | ND | 0.5 | - | | | | | | | |
| 1,3-Dichlorop | ropane | ND | 0.5 | | | | | | | | |
| Dibromochlor | | ND | 0.5 | ; | | | | | | | |
| 1,2-Dibromoe | | ND | | | | | | | | | |
| Tetrachloroet | | ND | 0.5 | | | | | | | | |
| 1,1,1,2-Tetrac Chlorobenzen | | ND ND | 0.8 | | | | | | | | |
| Ethylbenzene | | ND | 0.8 0.8 | | | | | | | | |
| m,p-Xylene | | ND | 0.5 | | | | | | | | |
| Bromoform | | ND | 0.5 | | | | | | | | |
| Styrene | | ND | 0.5 | 5 | | | | | | | |
| o-Xylene | -1.4 41. | ND | 0.5 | | | | | | | | |
| 1,1,2,2-Tetrac | | ND | 0.5 | | | | | | | | |
| 1,2,3-Trichlore Isopropylbenz | | ND ND | 0.5 | | | | | | | | |
| Bromobenzer | | ND | 0.0 | | | | | | | | |
| n-Propylbenzo | | ND | 0.5 | | | | | | | | |
| 4-Chlorotolue | | ND | 0.5 | 5 | | | | | | | |
| 2-Chlorotolue | | ND | 0.5 | 5 | | | | | | | |
| 1,3,5-Trimeth | - | ND | 0.5 | | | | | | | | |
| tert-Butylbenz 1,2,4-Trimeth | | ND ND | 0.5 0.5 | | | | | | | | |
| sec-Butylbenz | | ND | 0.5 | | | | | | | | |
| 1,3-Dichlorob | | ND | 0.5 | | | | | | | | |
| 1,4-Dichlorob | | ND | 0. | | | | | | | | |
| 4-Isopropyltol | | ND | 0. | | | | | | | | |
| 1,2-Dichlorob | | ND | 0. | | | | | | | | |
| n-Butylbenzer | ne 3-chloropropane (DBCP) | ND | 0. | | | | | | | | |
| 1,2-Dibromo- | | ND ND | 2. | | | | | | | | |
| Naphthalene | | | | 1 1 | | | | | | | |
| Hexachlorobu | utadiene | ND | | | | | | | | | |
| 1,2,3-Trichlor | obenzene | ND | | | | | | | | | |
| 0 40 0 1 | nloroethane-d4 | 8.77 | | | 0 | 00 | 70 | 400 | | | |
| Surr: 1,2-Dicr Surr: Toluene | | 10.9 | | | 0 | 88 109 | 70 | 130 130 | | | |



| Date: 12-Aug-09 | | (| QC Su | mmary | y Report | | | | Work Ord 0907310 | |
|--------------------------------------|---------------------------|----------------------|----------|-------------|--------------|------------|----------|--------------|---------------------|-----|
| Surr: 4-Bromof | luorobenzene | 9.66 | | 10 | <u> </u> | 97 | 70 | 130 | | |
| Laboratory (| Control Spike | | Type LC | S Te | est Code: | | | | | |
| File ID: 090731 | 138.D | | | Ba | tch ID: MS15 | W080 | 4N | Analysis Dat | e: 08/04/2009 22:57 | |
| Sample ID: | LCS MS15W0804N | Units : µg/L | F | Run ID: MS | SD_15_090804 | 4C | | Prep Date: | 08/04/2009 | |
| Analyte | | Result | PQL | | | | LCL(ME) | UCL(ME) RPDR | efVal %RPD(Limit) | Qua |
| Dichlorodifluoro | omethane | 12.4 | 1 | . 10 | | 124 | 70 | 130 | · · · · · · | |
| Chloromethane | 9 | 10.4 | 2 | 10 | | 104 | 70 | 130 | | |
| Vinyl chloride | | 9.32 | 1 | 10 | | 93 | 70 | 130 | | |
| Chloroethane | _ | 9.05 | 1 | 10 | | 91 | 70 | 130 | | |
| Bromomethane Trichlorofluoror | | 8.06 | 2 1 | 10 | | 81 | 70 70 | 130 | | |
| 1,1-Dichloroeth | | 10.6 10.5 | 1 | 10 10 | | 106 105 | 70 70 | 130 130 | | |
| Dichloromethar | | 9.71 | 2 | 10 | | 97 | 70 | 130 | | |
| trans-1,2-Dichle | | 10.9 | 1 | 10 | | 109 | 70 | 130 | | |
| | yl ether (MTBE) | 10.1 | 0.5 | 10 | - | 101 | 70 | 130 | | |
| 1,1-Dichloroeth | | 10.4 | 1 | 10 | | 104 | 70 | 130 | | |
| cis-1,2-Dichloro Bromochlorome | | 10.9 | 1 | 10 | | 109 | 70 | 130 | | |
| Chloroform | elliane | 10.5 10.4 | 1 | 10 10 | | 105 104 | 70 70 | 130 130 | | |
| 2,2-Dichloropro | opane | 9.34 | 1 | 10 | | 93 | 70 | 130 | | |
| 1,2-Dichloroeth | | 9.47 | 1 | 10 | | 95 | 70 | 130 | | |
| 1,1,1-Trichloroe | | 10.5 | 1 | 10 | 1 | 105 | 70 | 130 | | |
| 1,1-Dichloropro | • | 10.8 | 1 | 10 | | 108 | 70 | 130 | | |
| Carbon tetrachl Benzene | loride | 10.2 | 1 | 10 | | 102 | 70 | 130 | | |
| Dibromometha | ne | 10.4 9.88 | 0.5 1 | 10 10 | | 104 99 | 70 70 | 130 130 | | |
| 1,2-Dichloropro | | 10.9 | 1 | 10 | | 99 109 | 70 | 130 | | |
| Trichloroethene | e | 11.1 | 1 | 10 | | 111 | 70 | 130 | | |
| Bromodichloror | | 9.22 | 1 | 10 | | 92 | 70 | 130 | | |
| cis-1,3-Dichloro | | 9.32 | 1 | 10 | | 93 | 70 | 130 | | |
| trans-1,3-Dichlo 1,1,2-Trichloroe | | 8.48 | 1 | 10 | | 85 | 70 | 130 | | |
| Toluene | eulane | 10.2 10.3 | 1 0.5 | 10 10 | | 102 103 | 70 70 | 130 130 | | |
| 1,3-Dichloropro | pane | 10.5 | 0.5 | 10 | | 105 | 70 | 130 | | |
| Dibromochloror | methane | 9.06 | 1 | 10 | | 91 | 70 | 130 | | |
| 1,2-Dibromoeth | , , | 19.7 | 2 | 20 | | 98 | 70 | 130 | | |
| Tetrachloroethe | | 10.8 | 1 | 10 | | 108 | 70 | 130 | | |
| 1,1,1,2-Tetrach Chlorobenzene | | 10.3 | 1 | 10 | | 103 | 70 | 130 | | |
| Ethylbenzene | ; | 10.2 10.7 | 1 0.5 | 10 10 | | 102 107 | 70 70 | 130 130 | | |
| m,p-Xylene | | 11.2 | 0.5 | 10 | | 112 | 70 | 130 | | |
| Bromoform | | 8.07 | 1 | 10 | | 81 | 70 | 130 | | |
| Styrene | | 7.34 | 1 | 10 | | 73 | 70 | 130 | | |
| o-Xylene | | 10.9 | 0.5 | 10 | | 109 | 70 | 130 | | |
| 1,1,2,2-Tetrach | | 9.75 | 1 | 10 | | 98 | 70 | 130 | | |
| 1,2,3-Trichlorog Isopropylbenze | | 20.2 11.1 | 2 1 | 20 10 | | 101 111 | 70 70 | 130 130 | | |
| Bromobenzene | | 10.1 | 1 | 10 | | 101 | 70 | 130 | | |
| n-Propylbenzer | ne | 11 | 1 | 10 | | 110 | 70 | 130 | | |
| 4-Chlorotoluene | - | 10.7 | 1 | 10 | 1 | 107 | 70 | 130 | | |
| 2-Chlorotoluene | | 10.6 | 1 | 10 | | 106 | 70 | 130 | | |
| 1,3,5-Trimethyll tert-Butylbenze | | 10.6 | 1 | 10 | | 106 | 70 | 130 | | |
| 1,2,4-Trimethyl | | 10.6 10.7 | 1 1 | 10 10 | | 106 107 | 70 70 | 130 130 | | |
| sec-Butylbenze | | 10.8 | 1 | 10 | | 108 | 70 | 130 | | |
| 1,3-Dichlorober | nzene | 10.5 | 1 | 10 | | 105 | 70 | 130 | | |
| 1,4-Dichlorober | | 10 | 1 | 10 | | 100 | 70 | 130 | | |
| 4-isopropyltoiue | | 10.8 | 1 | 10 | | 108 | 70 | 130 | | |
| 1,2-Dichlorober n-Butylbenzene | | 10.1 | 1 | 10 | | 101 | 70 | 130 | | |
| | - chloropropane (DBCP) | 11.7 4 6.5 | 1 3 | 10 50 | | 117 93 | 70 70 | 130 130 | | |
| 1,2,4-Trichlorot | | 9.37 | 2 | 50 10 | | 93 94 | 70 | 130 | | |
| Naphthalene | | 8.8 | 2 | 10 | | 88 | 70 | 130 | | |
| Hexachlorobuta | | 18.7 | 2 | 20 | ! | 93 | 70 | 130 | | |
| 1,2,3-Trichlorob | | 9.15 | 2 | 10 | | 92 | 70 | 130 | | |
| Surr: 1,2-Dichlo Surr: Toluene-d | | 8.75 | | 10 | | 88 | 70 70 | 130 | | |
| | | 10.3 | | 10 | 1 | 103 | 70 | 130 130 | | |



| Date: 12-Aug-09 | (| <u>2C Sur</u> | nmary | Report | | | | Work Ord 09073103 | |
|-----------------------------------------------------|--------------|---------------|------------|-------------------|------------|----------|---------------|----------------------|----|
| Sample Matrix Spike | | Type MS | Test | t Code: | | | | | |
| File ID: 09073143.D | | | Bato | h ID: MS15 | W080 | 4N | Analysis Date | : 08/05/2009 00:50 | |
| Sample ID: 09073103-03AMS | Units : µg/L | Ru | in ID: MSC | _15_090804 | 4C | | Prep Date: | 08/05/2009 | |
| Analyte | Result | PQL | | | | LCL(ME) | UCL(ME) RPDRe | fVal %RPD(Limit) | Qu |
| Dichlorodifluoromethane | 48.9 | 2.5 | 50 | | 98 | 13 | 167 | | |
| Chloromethane | 45.3 | 2.5 | 50 50 | | 90 91 | 28 | 145 | | |
| Vinyl chloride | 48.5 | 2.5 | 50 | - | 97 | 43 | 134 | | |
| Chloroethane | 40.8 | 2.5 | 50 | | 82 | 39 | 154 | | |
| Bromomethane | 38.7 | 10 | 50 | | 77 | 19 | 176 | | |
| Trichlorofluoromethane | 49.9 | 2.5 | 50 | | 99.8 | 34 | 160 | | |
| 1,1-Dichloroethene Dichloromethane | 46.8 | 2.5 | 50 | - | 94 | 60 60 | 130 | | |
| trans-1,2-Dichloroethene | 45.5 49.9 | 10 2.5 | 50 50 | - | 91 99.8 | 68 63 | 130 130 | | |
| Methyl tert-butyl ether (MTBE) | 49.5 | 1.3 | 50 | | 99 99 | 56 | 141 | | |
| 1,1-Dichloroethane | 47.9 | 2.5 | 50 | | 96 | 61 | 130 | | |
| cis-1,2-Dichloroethene | 50.7 | 2.5 | 50 | 0 - | 101 | 70 | 130 | | |
| Bromochloromethane | 50.8 | 2.5 | 50 | | 102 | 70 | 130 | | |
| Chloroform | 47 | 2.5 | 50 | | 94 | 67 | 130 | | |
| 2,2-Dichloropropane | 41.3 | 2.5 | 50 | - | 83 | 30 | 152 | | |
| 1,2-Dichloroethane 1,1,1-Trichloroethane | 44.7 47.7 | 2.5 2.5 | 50 50 | | 89 95 | 60 59 | 135 137 | | |
| 1,1-Dichloropropene | 49.4 | 2.5 | 50 | | 99 99 | 63 | 130 | | |
| Carbon tetrachloride | 47.7 | 2.5 | 50 | | 95 | 50 | 147 | | |
| Benzene | 48.1 | 1.3 | 50 | - | 96 | 67 | 130 | | |
| Dibromomethane | 48.1 | 2.5 | 50 | 0 | 96 | 69 | 133 | | |
| 1,2-Dichloropropane | 49.9 | 2.5 | 50 | | 99.8 | 69 | 130 | | |
| Trichloroethene Bromediableremethene | 49.4 | 2.5 | 50 | - | 99 | 69 | 130 | | |
| Bromodichloromethane cis-1,3-Dichloropropene | 43.4 41.6 | 2.5 | 50 | | 87 | 66 62 | 134 130 | | |
| trans-1,3-Dichloropropene | 41.3 | 2.5 2.5 | 50 50 | - | 83 83 | 63 66 | 131 | | |
| 1,1,2-Trichloroethane | 48.7 | 2.5 | 50 | | 97 | 68 | 130 | | |
| Toluene | 47.4 | 1.3 | 50 | - | 95 | 66 | 130 | | |
| 1,3-Dichloropropane | 50.5 | 2.5 | 50 | | 101 | 70 | 130 | | |
| Dibromochloromethane | 44.2 | 2.5 | 50 | 0 | 88 | 70 | 130 | | |
| 1,2-Dibromoethane (EDB) | 96.9 | 10 | 100 | | 97 | 70 | 130 | | |
| Tetrachloroethene 1,1,1,2-Tetrachloroethane | 48.3 | 2.5 | 50 | | 97 | 61 | 134 | | |
| Chlorobenzene | 48.5 47.8 | 2.5 2.5 | 50 50 | - | 97 96 | 70 70 | 130 130 | | |
| Ethylbenzene | 48.7 | 1.3 | 50 | - | 97 | 68 | 130 | | |
| m,p-Xylene | 50.8 | 1.3 | 50 | | 102 | 64 | 130 | | |
| Bromoform | 40 | 2.5 | 50 | 0 | 80 | 64 | 138 | | |
| Styrene | 34.7 | 2.5 | 50 | 0 | 69 | 69 | 130 | | |
| | 51.3 | 1.3 | 50 | | 103 | 70 | 130 | | |
| 1,1,2,2-Tetrachloroethane 1,2,3-Trichloropropane | 52.5 | 2.5 | 50 | | 105 | 65 | 131 | | |
| Isopropylbenzene | 100 50.3 | 10 2.5 | 100 50 | | 100 101 | 70 64 | 130 138 | | |
| Bromobenzene | 46.8 | 2.5 | 50 50 | | 94 | 04 70 | 130 | | |
| n-Propylbenzene | 49.4 | 2.5 | 50 | | 99 | 66 | 132 | | |
| 4-Chlorotoluene | 49.9 | 2.5 | 50 | - | 99.8 | 70 | 130 | | |
| 2-Chlorotoluene | 49 | 2.5 | 50 | 0 | 98 | 70 | 130 | | |
| 1,3,5-Trimethylbenzene | 48.3 | 2.5 | 50 | | 97 | 66 | 136 | | |
| tert-Butylbenzene | 48 | 2.5 | 50 | | 96 | 65 | 137 | | |
| 1,2,4-Trimethylbenzene sec-Butylbenzene | 49.1 49.5 | 2.5 2.5 | 50 | | 98 99 | 65 66 | 137 134 | | |
| 1,3-Dichlorobenzene | 49.5 49.9 | 2.5 2.5 | 50 50 | | 99 99.8 | 66 70 | 134 | | |
| 1,4-Dichlorobenzene | 47.1 | 2.5 | 50 | | 94 | 70 | 130 | | |
| 4-Isopropyitoluene | 49.3 | 2.5 | 50 | | 99 | 66 | 137 | | |
| 1,2-Dichlorobenzene | 48.3 | 2.5 | 50 | | 97 | 70 | 130 | | |
| n-Butylbenzene | 53 | 2.5 | 50 | | 106 | 60 | 142 | | |
| 1,2-Dibromo-3-chloropropane (DBCP) | 237 | 15 | 250 | | 95 | 67 | 130 | | |
| 1,2,4-Trichlorobenzene Naphthalene | 43.2 | 10 | 50 | | 86 | 61 | 137 | | |
| Naphinalene Hexachlorobutadiene | 40.9 86.9 | 10 10 | 50 100 | | 82 87 | 40 61 | 167 130 | | |
| 1,2,3-Trichlorobenzene | 41.8 | 10 | 50 | | 87 84 | 61 51 | 130 | | |
| Surr: 1,2-Dichloroethane-d4 | 43.8 | .0 | 50 | | 88 | 70 | 130 | | |
| Surr: Toluene-d8 | 51.4 | | 50 | | 103 | 70 | 130 | | |
| Surr: 4-Bromofluorobenzene | 49.1 | | 50 | | 98 | 70 | 130 | | |



| Date: 12-Aug-09 | (| QC Sur | nmary | Report | t | | | | Work Ord 0907310 | |
|------------------------------------------------------------|--------------|------------|-----------|------------|------------|----------|------------|----------------|---------------------|-----|
| Sample Matrix Spike Duplicate | | Type MS | D Te: | st Code: | | | | | | |
| File ID: 09073144.D | | | Bat | ch ID: MS1 | 5W080 |)4N | Analy | sis Date: 08 | /05/2009 01:12 | |
| Sample ID: 09073103-03AMSD | Units : µg/L | R | un ID: MS | D_15_0908 | 04C | | Prep I | Date: 08/ | 05/2009 | |
| Analyte | Result | PQL | | | | LCL(ME) | UCL(ME) | RPDRefVal | %RPD(Limit) | Qua |
| Dichlorodifluoromethane | 50.1 | 2.5 | 50 | . 0 | 100 | 13 | 167 | 48.85 | 2.6(20) | |
| Chloromethane | 48.2 | 10 | 50 | 0 | 96 | 28 | 145 | 45.25 | 6.3(20) | |
| Vinyl chloride | 53.4 | 2.5 | 50 | Ő | 107 | 43 | 134 | 48.51 | 9.6(20) | |
| Chloroethane | 43.3 | 2.5 | 50 | 0 | 87 | 39 | 154 | 40.82 | 5.8(20) | |
| Bromomethane | 40.8 | 10 | 50 | 0 | 82 | 19 | 176 | 38.71 | 5.3(20) | |
| Trichlorofluoromethane | 52.9 | 2.5 | 50 | 0 | 106 | 34 | 160 | 49.91 | 5.7(20) | |
| 1,1-Dichloroethene | 48.3 | 2.5 | 50 | 0 | 97 | 60 | 130 | 46.83 | 3.0(20) | |
| Dichloromethane | 44.5 | 10 | 50 | 0 | 89 | 68 | 130 | 45.48 | 2.1(20) | |
| trans-1,2-Dichloroethene Methyl tert-butyl ether (MTBE) | 51.1 48.8 | 2.5 1.3 | 50 50 | 0 0 | 102 98 | 63 56 | 130 141 | 49.91 49.49 | 2.3(20) 1.5(20) | |
| 1,1-Dichloroethane | 48.8 | 2.5 | 50 50 | 0 | 90 95 | 61 | 130 | 45.45 | 0.5(20) | |
| cis-1,2-Dichloroethene | 48.6 | 2.5 | 50 | Ő | 97 | 70 | 130 | 50.7 | 4.2(20) | |
| Bromochloromethane | 51.5 | 2.5 | 50 | õ | 103 | 70 | 130 | 50.8 | 1.3(20) | |
| Chloroform | 48.5 | 2.5 | 50 | Ō | 97 | 67 | 130 | 47 | 3.2(20) | |
| 2,2-Dichloropropane | 42.5 | 2.5 | 50 | 0 | 85 | 30 | 152 | 41.25 | 2.9(20) | |
| 1,2-Dichloroethane | 44.7 | 2.5 | 50 | 0 | 89 | 60 | 135 | 44.7 | 0.1(20) | |
| 1,1,1-Trichloroethane | 49.7 | 2.5 | 50 | 0 | 99 | 59 | 137 | 47.67 | 4.1(20) | |
| 1,1-Dichloropropene | 49.9 | 2.5 | 50 | 0 | 99.8 | 63 | 130 | 49.35 | 1.2(20) | |
| Carbon tetrachloride | 48.6 | 2.5 | 50 | 0 | 97 | 50 | 147 | 47.7 | 1.9(20) | |
| Benzene Dibromomethane | 48.3 | 1.3 | 50 | 0 | 97 | 67 60 | 130 | 48.08 | 0.5(20) | |
| 1,2-Dichloropropane | 47.7 50.1 | 2.5 2.5 | 50 50 | 0 | 95 100 | 69 69 | 133 130 | 48.09 49.91 | 0.9(20) 0.4(20) | |
| Trichloroethene | 48.8 | 2.5 | 50 50 | 0 | 98 | 69 | 130 | 49.38 | 1.2(20) | |
| Bromodichloromethane | 42.9 | 2.5 | 50 | 0 | 86 | 66 | 134 | 43.36 | 1.2(20) | |
| cis-1,3-Dichloropropene | 40.5 | 2.5 | 50 | ŏ | 81 | 63 | 130 | 41.6 | 2.8(20) | |
| trans-1,3-Dichloropropene | 40.8 | 2.5 | 50 | Ō | 82 | 66 | 131 | 41.29 | 1.3(20) | |
| 1,1,2-Trichloroethane | 48.3 | 2.5 | 50 | 0 | 97 | 68 | 130 | 48.7 | 0.8(20) | |
| Toluene | 47.1 | 1.3 | 50 | 0 | 94 | 66 | 130 | 47.41 | 0.7(20) | |
| 1,3-Dichloropropane | 49.5 | 2.5 | 50 | 0 | 99 | 70 | 130 | 50.49 | 2.1(20) | |
| Dibromochloromethane | 44.7 | 2.5 | 50 | 0 | 89 | 70 | 130 | 44.22 | 1.0(20) | |
| 1,2-Dibromoethane (EDB) Tetrachloroethene | 94.6 | 10 | 100 | 0 | 95 98 | 70 | 130 | 96.85 | 2.3(20) | |
| 1,1,1,2-Tetrachloroethane | 48.8 48.2 | 2.5 2.5 | 50 50 | 0 0 | 98 96 | 61 70 | 134 130 | 48.32 48.5 | 1.1(20) 0.7(20) | |
| Chlorobenzene | 47.3 | 2.5 | 50 | 0 | 95 | 70 | 130 | 47.78 | 1.0(20) | |
| Ethylbenzene | 48.9 | 1.3 | 50 | ŏ | 98 | 68 | 130 | 48.71 | 0.3(20) | |
| m,p-Xylene | 50.7 | 1.3 | 50 | Ō | 101 | 64 | 130 | 50.84 | 0.3(20) | |
| Bromoform | 40.3 | 2.5 | 50 | 0 | 81 | 64 | 138 | 39.98 | 0.7(20) | |
| Styrene | 34.1 | 2.5 | 50 | 0 | 68 | 69 | 130 | 34.73 | 1.9(20) | M2 |
| o-Xylene | 51.2 | 1.3 | 50 | 0 | 102 | 70 | 130 | 51.3 | 0.2(20) | |
| 1,1,2,2-Tetrachloroethane | 50.8 | 2.5 | 50 | 0 | 102 | 65 | 131 | 52.52 | 3.3(20) | |
| 1,2,3-Trichloropropane | 98.6 | 10 | 100 | 0 | 99 | 70 | 130 | 100.1 | 1.5(20) | |
| Isopropylbenzene | 50.8 | 2.5 | 50 | 0 | 102 | 64 | 138 | 50.29 | 1.0(20) | |
| Bromobenzene n-Propylbenzene | 46.1 | 2.5 | 50 | 0 | 92 | 70 | 130 | 46.75 | 1.3(20) | |
| 4-Chlorotoluene | 51.4 50.2 | 2.5 2.5 | 50 50 | 0 0 | 103 100 | 66 70 | 132 130 | 49.39 49.91 | 4.1(20) | |
| 2-Chlorotolüene | 49.6 | 2.5 | 50 50 | 0 | 99 | 70 | 130 | 49.91 | 0.6(20) 1.3(20) | |
| 1,3,5-Trimethylbenzene | 49 | 2.5 | 50 | 0 | 98 | 66 | 136 | 48.27 | 1.5(20) | |
| tert-Butylbenzene | 48.8 | 2.5 | 50 | ŏ | 98 | 65 | 137 | 48.01 | 1.5(20) | |
| 1,2,4-Trimethylbenzene | 48.9 | 2.5 | 50 | Ō | 98 | 65 | 137 | 49.11 | 0.4(20) | |
| sec-Butylbenzene | 50.7 | 2.5 | 50 | 0 | 101 | 66 | 134 | 49.46 | 2.4(20) | |
| 1,3-Dichlorobenzene | 49.4 | 2.5 | 50 | 0 | 99 | 70 | 130 | 49.89 | 0.9(20) | |
| 1,4-Dichlorobenzene | 46.4 | 2.5 | 50 | 0 | 93 | 70 | 130 | 47.07 | 1.5(20) | |
| 4-Isopropyltoluene | 50 | 2.5 | 50 | 0 | 100 | 66 70 | 137 | 49.31 | 1.4(20) | |
| 1,2-Dichlorobenzene n-Butylbenzene | 47.8 | 2.5 | 50 | 0 | 96 100 | 70 60 | 130 | 48.25 | 0.9(20) | |
| 1,2-Dibromo-3-chloropropane (DBCP) | 54.7 238 | 2.5 15 | 50 250 | 0 0 | 109 95 | 60 67 | 142 130 | 53.04 236.5 | 3.1(20) 0.8(20) | |
| 1,2,4-Trichlorobenzene | 238 44.3 | 15 | 250 50 | 0 | 95 89 | 67 61 | 130 | 236.5 43.24 | 2.5(20) | |
| Naphthalene | 41.9 | 10 | 50 50 | 0 | 84 | 40 | 167 | 40.88 | 2.3(20) | |
| Hexachlorobutadiene | 91.1 | 10 | 100 | ŏ | 91 | 61 | 130 | 86.9 | 4.7(20) | |
| 1,2,3-Trichlorobenzene | 43.4 | 10 | 50 | Ō | 87 | 51 | 144 | 41.83 | 3.7(20) | |
| Surr: 1,2-Dichloroethane-d4 | 43.9 | | 50 | | 88 | 70 | 130 | | | |
| Surr: Toluene-d8 | 51.8 | | 50 | | 104 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 49.7 | | 50 | | 99 | 70 | 130 | | | |



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

QC Summary Report

Work Order:

09073103

Date: 12-Aug-09 Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Alpha uses descriptive data qualifier flags, which could be replaced with either a DOD Q or J flag. M2 = Matrix spike recovery was low, the method control sample recovery was acceptable.

Matrix Type: AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

| Logged in by: Chipabath (Idcox | Signature |
|--------------------------------|------------|
| Elizabeth Adcox | Print Name |
| Alpha Analytical, Inc. | Company |
| 7-31-09 1247 | Date/Time |

No security seals. Frozen ice. Temp Blank #7280 received @ 2°C. Perchlorate RL of 1.0 ug/L. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

Comments:

| - | | | | . 1 | rel: (77: | 5) 355-10 | TEL: (775) 355-1044 FAX: (775) 355-0406 | 406 | č | Rep | ort Due | Bv : 5: | 00 PM | On : 14 | Report Due By : 5:00 PM On : 14-Aug-2009 |
|-----------------------------|-------------------|-----------|------------------------------------|----------------|-----------|----------------|-------------------------------------------------------------------------------------|---------------------------|------------------------|----------|--------------------------------------------|------------------------|------------------|----------------|------------------------------------------|
| Client: | | | Report Attention | | 말 | Phone Number | ber EMail Address | ddress | | • | | e | | | Q |
| Battelle Memorial Institute | Institute | | David Conner | ier, | (81 | (818) 393-2808 | 08 x connerd@battelle.org | battelle.or | ue. | | | | | | |
| Suite C-205 | ve | | Betsy Cutie | | (61 | (614) 424-4899 | 99 x cutice@batelle.org | telle.org | | | EDD Required : Yes | red : Yes | | | |
| San Diego, CA 92110 | 2110 | | Shane Walton | ac | (61 | (614) 424-4117 | 17 x waltons@battelle.org | pattelle.org | 94 | | Sampled | Sampled by : Client | nt | | |
| PO: 218013 | | | | | | | | | | | Cooler Temp | emp | Samples Received | eceived | Date Printed |
| Client's COC #: 25738 | 738 | Job : | G005862/JPL Groundwater Monitoring | JL Grou | ndwater | Monitori | ÐL | | | | 2 | | 31-Jul-2009 | 600 | 31-Jul-2009 |
| QC Level: DS4 | = DOD QC Required | : Final F | Rpt, MBLK, In | itCal/Co | onCal da | ita, LCS, | DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates | gates | | | | | | | |
| | | |) = | : | | | | | Requested Tests | ed Tests | | | | | |
| Sample ID | Sample ID | Matr | Collection Matrix Date | NO. 0 Alpha | Alpha Sub | s TAT | 300_0(A)_W 300_0(B)_W 300_0(C)_W | 300_0(C)_W | 314_W | METALS_0 | METALS_D VOC_TIC_ | VOC_W | | Sample | Sample Remarks |
| BMI09073103-01A | MW-24-4 | Ą | 07/30/09 07:45 | - | 0 | 10 | | | | Ŷ | | | | | |
| BMI09073103-02A | MW-24-3 | Ą | 07/30/09 08:10 | сл | 0 | 10 | | | Perchlorate | ۵ | VOC by 524 VOC by 524 Criteria Criteria | VOC by 524 Criteria | | | |
| BMI09073103-03A | MW-24-2 | Ą | 07/30/09 08:45 | 10 | 0 | 10 | | | Perchlorate | ٢ | VOC by 524 VOC by 524 Criteria Criteria | VOC by 524 Criteria | | MS/MSD | MS/MSD Level IV QC |
| BMI09073103-04A | MW-24-1 | Ą | 07/30/09 09:24 | თ | 0 | 10 | NO2, NO3, NO2, NO3, NO2, NO3, PO4, SO4, CI PO4, SO4, CI | NO2, NO3, 904, SO4, CI | Perchlorate | Cr | VOC by 524 VOC by 524 Criteria Criteria | VOC by 524 Criteria | | | |
| BMI09073103-05A | EB-8-7/30/09 | Ą | 07/30/09 09:10 | сл | 0 | 10 | | | Perchlorate | ß | VOC by 524 VOC by 524 Criteria Criteria | VOC by 524 Criteria | | | |
| BMI09073103-06A | TB-8-7/30/09 | AQ | 07/30/09 00:00 | - | 0 | 10 | | | | | VOC by 524 VOC by 524 Criteria Criteria | VOC by 524 Criteria | | Reno Trip | Reno Trip Blank 6/22/09 |

Billing Information :

CHAIN-OF-CUSTODY RECORD

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778

Alpha Analytical, Inc.

Page: 1 of 1

WorkOrder : BMIS09073103

C A

| Billing Information: Name <u>GEPACS TOMPLIAS PATTELLE</u> Address <u>505 KING AVE</u> City. State, Zip <u>CoLUMBUS</u> ON 4325 | | Alpha Analytical, Inc. 255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778 Phone (775) 355-1044 Fax (775) 355-0406 | Samples Collected From Which State? AZCA XVWAF IDOROTHERF Analyses Required | h State? 25738 |
|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------|
| ، ب ای | P.O. # 218013 EMail Address | 628 So a B # dol | 20.2) | Required OC Level? |
| م ا∉¢ه | Phone # (619) 726-7311 | Fax # | | EDD / EDF? YESNO |
| Matrix* Sampled by See Key | Report Attention | Total and type of | 01- | Global ID # |
| Sampled Sampled Below Lab ID Number (Use Only) | Sample Description | See below | C | / REMARKS |
| 14571/1 AQBMI09073103-01 | MW-24-4 | 12 | X | |
| ZO- 07 | MW-24-3 | X SAN | XX | |
| | Mw - 24-2 | | X | Molmon / LEVEL TO OC |
| 40- 40- | MW-L4- | | ××× | |
| 50 - CQ | EB-8-7/30/05 | | X | EQU'P. BLANK |
| <u>1</u> | TB-8-7/10/09 | | | TAIP RIMIK |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| ADDITIONAL INSTRUCTIONS: | | | | |
| | | | | |
| Signature | Print Name | Co | Company | Date Time |
| Relinquished by | Marco Lyporo | a /NS/647 | EEC 7 | 7/1s/25/300 |
| Relinquished by | Elizabeth Eldcox | | pha 7. | 7.31.09 1247 |
| Received by | | | | |
| Relinquished by | | | | |
| Received by | | | | |
| *Key: AQ - Aqueous SO - Soil WA - Waste | te OT - Other AR - Air **: | L-Liter V-Voa S-Soil Jar | O-Orbo T-Tedlar B-Brass | P-Plastic OT-Other |

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this coc. The liability of the laboratory is limited to the amount paid for the report.



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: 17-Aug-09

David Conner Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 (818) 393-2808

Suite C-205

CASE NARRATIVE

Project: G005862/JPL Groundwater Monitoring

| Order: BMI09080404 | | Cooler Temp: 4 °C |
|--------------------|------------------------|-------------------|
| Alpha's Sample ID | Client's Sample ID | Matrix |
| 09080404-01A | MW-22-3 | Aqueous |
| 09080404-02A | MW-22-2 | Aqueous |
| 09080404-03A | MW-22-1 | Aqueous |
| 09080404-04A | EB-9-7/31/09 | Aqueous |
| 09080404-05A | TB-9-7/31/09 | Aqueous |
| 09080404-06A | MW-12-5 | Aqueous |
| 09080404-07A | MW-12-4 | Aqueous |
| 09080404-08A | MW-12-3 | Aqueous |
| 09080404-09A | MW-12-2 | Aqueous |
| 09080404-10A | MW-12-1 | Aqueous |
| 09080404-11A | DUPE-7-3Q09 | Aqueous |
| 09080404-12A | EB-10-8/3/09 | Aqueous |
| 09080404-13A | TB-10-8/3/09 | Aqueous |
| | Manually Integrated An | alytes |
| Alpha's Sample ID | Test Reference | Analyte |
| 09080404-01A | EPA Method 314.0 | Perchlorate |
| 09080404-02A | EPA Method 314.0 | Perchlorate |
| 09080404-06A | EPA Method 314.0 | Perchlorate |
| 09080404-07A | EPA Method 314.0 | Perchlorate |
| 09080404-09A | EPA Method 314.0 | Perchlorate |
| 09080404-11A | EPA Method 314.0 | Perchlorate |

Enclosed please find the analytical results of the samples received by Alpha Analytical, Inc. under the above mentioned Work Order/Chainof-Custody.

Alpha Analytical, Inc. has a formal Quality Assurance/Quality Control program, which is designed to meet or exceed the EPA requirements. All relevant QC met quality assurance objectives for this project unless otherwise stated in the footnotes.

If you have any questions with regards to this report, please contact Randy Gardner, Project Manager, at (800) 283-1183.

Walter Hinihum Kandy Saulmer Roger Scholl

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

Per le

Alpha Analytical, Inc.

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ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Attn:David ConnerPhone:(818) 393-2808Fax:(614) 458-6641Date Received : 08/04/09

Job#: G005862/JPL Groundwater Monitoring

| | | Р | erchlorate by Ion Chromatography | | | |
|-------------------------|-----------------------------------|-------------|----------------------------------|--------------------|-----------------|------------------|
| | | | EPA Method 314.0 | | | |
| | | Parameter | Concentration | Reporting Limit | Date Sampled | Date Analyzed |
| Client ID : Lab ID : | MW-22-3 BMI09080404-01A | Perchlorate | 2.54 | 1.00 μg/L | 07/31/09 | 08/07/09 |
| Client ID : Lab ID : | MW-22-2 BMI09080404-02A | Perchlorate | 1.99 | 1.00 µg/L | 07/31/09 | 08/07/09 |
| Client ID : Lab ID : | MW-22-1 BMI09080404-03A | Perchlorate | 2.40 | 1.00 µg/L | 07/31/09 | 08/07/09 |
| Client ID : Lab ID : | EB-9-7/31/09 BMI09080404-04A | Perchlorate | ND | 1.00 µg/L | 07/31/09 | 08/07/09 |
| Client ID : Lab ID : | MW-12-5 BMI09080404-06A | Perchlorate | 1.65 | 1.00 µg/L | 08/03/09 | 08/07/09 |
| Client ID : Lab ID : | MW-12-4 BMI09080404-07A | Perchlorate | 2.71 | 1.00 μg/L | 08/03/09 | 08/07/09 |
| Client ID : Lab ID : | MW-12-3 BMI09080404-08A | Perchlorate | ND | 1.00 µg/L | 08/03/09 | 08/07/09 |
| Client ID : Lab ID : | MW-12-2 BMI09080404-09A | Perchlorate | 2.77 | 1.00 µg/L | 08/03/09 | 08/07/09 |
| Client ID : Lab ID : | MW-12-1 BMI09080404-10A | Perchlorate | 1.35 | 1.00 µg/L | 08/03/09 | 08/07/09 |
| Client ID : Lab ID : | DUPE-7-3Q09 BM109080404-11A | Perchlorate | 2.66 | 1.00 µg/L | 08/03/09 | 08/07/09 |
| Client ID : Lab ID : | EB-10-8/3/09 BMI09080404-12A | Perchlorate | ND | 1.00 µg/L | 08/03/09 | 08/07/09 |

ND = Not Detected

Roger Scholl

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

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8/17/09 Report Date



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Attn:David ConnerPhone:(818) 393-2808Fax:(614) 458-6641Date Received : 08/04/09

Job#: G005862/JPL Groundwater Monitoring

| | | | Metals by ICPMS EPA Method 200.8 | | |
|-------------------------|---------------------------------|---------------|-------------------------------------|--------------------|-------------------------------|
| | | Parameter | Concentration | Reporting Limit | Date Date Sampled Analyzed |
| Client ID : Lab ID : | MW-22-3 BMI09080404-01A | Chromium (Cr) | ND | 0.0050 mg/L | 07/31/09 08/14/09 |
| Client ID : Lab ID : | MW-22-2 BMI09080404-02A | Chromium (Cr) | ND | 0.0050 mg/L | 07/31/09 08/14/09 |
| Client ID : Lab ID : | MW-22-1 BMI09080404-03A | Chromium (Cr) | ND | 0.0050 mg/L | 07/31/09 08/14/09 |
| Client ID : Lab ID : | EB-9-7/31/09 BMI09080404-04A | Chromium (Cr) | ND | 0.0050 mg/L | 07/31/09 08/14/09 |
| Client ID : Lab ID : | MW-12-3 BMI09080404-08A | Chromium (Cr) | ND | 0.0050 mg/L | 08/03/09 08/14/09 |
| Client ID : Lab ID : | MW-12-2 BMI09080404-09A | Chromium (Cr) | ND | 0.0050 mg/L | 08/03/09 08/14/09 |
| Client ID : Lab ID : | MW-12-1 BMI09080404-10A | Chromium (Cr) | ND | 0.0050 mg/L | 08/03/09 08/14/09 |
| Client ID : Lab ID : | DUPE-7-3Q09 BMI09080404-11A | Chromium (Cr) | ND | 0.0050 mg/L | 08/03/09 08/14/09 |
| Client ID : Lab ID : | EB-10-8/3/09 BMI09080404-12A | Chromium (Cr) | ND | 0.0050 mg/L | 08/03/09 08/14/09 |

ND = Not Detected

Roger Scholl

Kandy Dantmer

Walter Hirihm

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

8/17/09

Report Date



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ANALYTICAL REPORT

393-2808 458-6641

| Battelle Memorial Institute | Attn: | David Conner |
|------------------------------------------|--------|----------------|
| 3990 Old Town Ave | Phone: | (818) 393-2808 |
| San Diego, CA 92110 | Fax: | (614) 458-6641 |
| Job#: G005862/JPL Groundwater Monitoring | | |

Tentatively Identified Compounds - Volatile Organics by GC/MS

| | | an a | | Estimated | | | |
|-------------------------|----------------------------------------|------------------------------------------|---------------|-----------|----------|----------|----------|
| | | Parameter | Estimated | Reporting | Date | Date | Date |
| | | | Concentration | Limit | Received | Sampled | Analyzed |
| Client ID : Lab ID : | MW-22-3 BMI09080404-01A | *** None Found *** | ND | 2.0 μg/L | 08/04/09 | 07/31/09 | 08/06/09 |
| Client ID : Lab ID : | MW-22-2 BMI09080404-02A | *** None Found *** | ND | 2.0 μg/L | 08/04/09 | 07/31/09 | 08/06/09 |
| Client ID : Lab ID : | MW-22-1 BMI09080404-03A | *** None Found *** | ND | 2.0 μg/L | 08/04/09 | 07/31/09 | 08/06/09 |
| Client ID : Lab ID : | EB-9-7/31/09 BMI09080404-04A | * * * None Found * * * | ND | 2.0 μg/L | 08/04/09 | 07/31/09 | 08/05/09 |
| Client ID : Lab ID : | TB-9-7/31/09 BMI09080404-05A | * * * None Found * * * | ND | 2.0 µg/L | 08/04/09 | 07/31/09 | 08/05/09 |
| Client ID : Lab ID : | MW-12-5 BMI09080404-06A | Sulfur dioxide | 2.4 | 2.0 μg/L | 08/04/09 | 08/03/09 | 08/06/09 |
| Client ID : Lab ID : | MW-12-4 BM109080404-07A | Sulfur dioxide | 6.9 | 2.0 µg/L | 08/04/09 | 08/03/09 | 08/06/09 |
| Client ID : Lab ID : | MW-12-3 BMI09080404-08A | Sulfur dioxide | 5.2 | 2.0 μg/L | 08/04/09 | 08/03/09 | 08/06/09 |
| Client ID : Lab ID : | MW-12-2 BMI09080404-09A | Sulfur dioxide | 7.1 | 2.0 μg/L | 08/04/09 | 08/03/09 | 08/06/09 |
| Client ID : Lab ID : | MW-12-1 BMI09080404-10A | * * * None Found * * * | ND | 2.0 μg/L | 08/04/09 | 08/03/09 | 08/06/09 |
| Client ID : Lab ID : | DUPE-7-3Q09 BMI09080404-11A | Sulfur dioxide | 6.2 | 2.0 μg/L | 08/04/09 | 08/03/09 | 08/06/09 |
| Client ID : Lab ID : | EB-10-8/3/09 BMI09080404-12A | *** None Found *** | ND | 2.0 µg/L | 08/04/09 | 08/03/09 | 08/05/09 |
| Client ID : Lab ID : | TB-10-8/3/09 BMI09080404-13A | * * * None Found * * * | ND | 2.0 μg/L | 08/04/09 | 08/03/09 | 08/05/09 |



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Note: Analysis conducted using EPA Method 524.2 criteria. ND = Not Detected

Roger Scholl Kandy Sanhur Dalter Hinchman, Quality Assurance Officer Roger L. Scholl, Ph.D., Laboratory Director · · Randy Gardner, Laboratory Manager · · Walter Hinchman, Quality Assurance Officer

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

8/17/09 Report Date



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| <u>AI</u> | NALYTICAL REPORT | |
|------------------------------------------|-----------------------|--|
| Battelle Memorial Institute | Attn: David Conner | |
| 3990 Old Town Ave | Phone: (818) 393-2808 | |
| San Diego, CA 92110 | Fax: (614) 458-6641 | |
| Job#: G005862/JPL Groundwater Monitoring | · · | |
| Alpha Analytical Number: BMI09080404-01A | Sampled: 07/31/09 | |
| Client I.D. Number: MW-22-3 | Received: 08/04/09 | |
| | Analyzed: 08/06/09 | |

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting L | imit |
|----|--------------------------------|---------------|-----------|-------|----|----------------------------------|---------------|-------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | μg/L |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | μg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m,p-Xylene | ND | 0.50 | μg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | µg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | μg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | μg/L | 42 | o-Xvlene | ND | 0.50 | μg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | μg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chloroform | ND | 0.50 | μg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyitoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBC | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 2.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 90 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 112 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | μg/L | 66 | Surr: 4-Bromofluorobenzene | 93 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | μg/L | | | | . , | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Rogen Scholl

Kandy Sandmer Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

Walter Ainihum

8/17/08

Report Date

Page 1 of 1

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| ANA | LYTICAL REPORT |
|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Job#: G005862/JPL Groundwater Monitoring | Attn: David Conner Phone: (818) 393-2808 Fax: (614) 458-6641 |
| Alpha Analytical Number: BMI09080404-02A Client I.D. Number: MW-22-2 | Sampled: 07/31/09 Received: 08/04/09 Analyzed: 08/06/09 |

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting Li | imit |
|----|--------------------------------|---------------|-----------|-------|----|-----------------------------------|---------------|--------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | μg/L |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | µg/L |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m,p-Xylene | ND | 0.50 | µg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | µg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | μg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | μg/L | 42 | o-Xvlene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | μg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | μg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | μg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chloroform | ND | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | NĎ | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBCI | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 2.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 92 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 112 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 91 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | | | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | Tetrachioroethene | ND | 0.50 | μg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Sandmer

Walter Arihum

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA \bullet (916) 366-9089 / Las Vegas, NV \bullet (702) 736-7522 / info@alpha-analytical.com

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8/17/08

Report Date



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| AN | NALYTICAL REPORT | |
|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--|
| Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Job#: G005862/JPL Groundwater Monitoring | Attn: David Conner Phone: (818) 393-2808 Fax: (614) 458-6641 | |
| Alpha Analytical Number: BMI09080404-03A Client I.D. Number: MW-22-1 | Sampled: 07/31/09 Received: 08/04/09 Analyzed: 08/06/09 | |

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | entration Reporting Limit | |
|----|--------------------------------|---------------|-----------|-------|----|----------------------------------|---------------|---------------------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | µg/L |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m,p-Xylene | ND | 0.50 | µg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | µg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chloroform | 0.51 | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBC | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | 0.95 | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 2.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 91 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 112 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 95 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | | | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | Tetrachloroethene | 2.0 | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Rogen Scholl

Kandy Saulmer

Walter Aridmon

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

199 8/17/08

Report Date



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

| | ANALYTICAL REPORT | |
|------------------------------------------|-----------------------|--|
| Battelle Memorial Institute | Attn: David Conner | |
| 3990 Old Town Ave | Phone: (818) 393-2808 | |
| San Diego, CA 92110 | Fax: (614) 458-6641 | |
| Job#: G005862/JPL Groundwater Monitoring | · · · | |
| Alpha Analytical Number: BMI09080404-04A | Sampled: 07/31/09 | |
| Client I.D. Number: EB-9-7/31/09 | Received: 08/04/09 | |
| | Analyzed: 08/05/09 | |

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting Li | imit |
|----|--------------------------------|---------------|-----------|-------|----|-----------------------------------|---------------|--------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | µg/L |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m,p-Xylene | ND | 0.50 | µg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | µg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xvlene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | μg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | μg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | μg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chloroform | ND | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1.3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1.4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1.2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | V ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBCI | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1.2.4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | μg/L | 61 | Naphthalene | ND | 2.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1.2.3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1.2-Dichloroethane-d4 | 86 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 113 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 98 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | a | . , | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | μg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Rogen Scholl

Walter Arihm

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.



Report Date



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ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 G005862/JPL Groundwater Monitoring Job#:

Alpha Analytical Number: BMI09080404-05A Client I.D. Number: TB-9-7/31/09

Attn: David Conner Phone: (818) 393-2808 Fax: (614) 458-6641

Sampled: 07/31/09 Received: 08/04/09 Analyzed: 08/05/09

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting Li | mit |
|----|--------------------------------|---------------|-----------|-------|----|-----------------------------------|---------------|--------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | µg/L |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m.p-Xvlene | ND | 0.50 | µg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | µg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chloroform | ND | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBCI | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 2.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 86 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 113 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 93 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | | . , | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Rogen Scholl

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

lter Arilin

8/17/08

Report Date



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

| ANALYTICAL | REPORT |
|------------|---------------|
|------------|---------------|

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Job#: G005862/JPL Groundwater Monitoring

Alpha Analytical Number: BMI09080404-06A Client I.D. Number: MW-12-5

David Conner Attn: Phone: (818) 393-2808 (614) 458-6641 Fax:

Sampled: 08/03/09 Received: 08/04/09 Analyzed: 08/06/09

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting L | Reporting Limit | |
|----|--------------------------------|---------------|-----------|-------|----|-----------------------------------|---------------|-------------|-----------------|--|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L | |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | µg/L | |
| З | Vinyl chloride | ND | 0.50 | μg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L | |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m,p-Xylene | ND | 0.50 | µg/L | |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | µg/L | |
| 6 | Trichlorofiuoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | µg/L | |
| 7 | 1,1-Dichloroethene | ND | 0.50 | μg/L | 42 | o-Xylene | ND | 0.50 | μg/L | |
| 8 | Dichloromethane | ND | 1.0 | μg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L | |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L | |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L | |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L | |
| 12 | 1,1-Dichloroethane | ND | 0.50 | μg/L | 47 | n-Propyibenzene | ND | 0.50 | µg/L | |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chiorotoluene | ND | 0.50 | µg/L | |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L | |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L | |
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| 17 | 2,2-Dichloropropane | ND | 0.50 | μg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L | |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L | |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L | |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L | |
| 21 | Carbon tetrachloride | 0.72 | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L | |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L | |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L | |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBCF | r) ND | 2.5 | µg/L | |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L | |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 2.0 | µg/L | |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L | |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L | |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 88 | (70-130) | %REC | |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 112 | (70-130) | %REC | |
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| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Santner Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

Walter Arihm

8/17/09

Report Date

Page 1 of 1

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ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Job#: G005862/JPL Groundwater Monitoring

Alpha Analytical Number: BMI09080404-07A Client I.D. Number: MW-12-4

Attn: David Conner (818) 393-2808 Phone: (614) 458-6641 Fax:

Sampled: 08/03/09 Received: 08/04/09

Analyzed: 08/06/09

Volatile Organics by GC/MS

| Compound | | Concentration | n Reporting Limit | | | Compound | Concentration | Reporting Li | Reporting Limit | |
|----------|--------------------------------|---------------|-------------------|------|----|----------------------------------|---------------|--------------|-----------------|--|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L | |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | µg/L | |
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| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m,p-Xylene | ND | 0.50 | µg/L | |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | µg/L | |
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| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xvlene | ND | 0.50 | µg/L | |
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| 9 | Freon-113 | ND | 0.50 | ug/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L | |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L | |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | μg/L | |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L | |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L | |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | ug/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L | |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L | |
| 16 | Chloroform | 0.76 | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L | |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L | |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L | |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L | |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L | |
| 21 | Carbon tetrachloride | 1.6 | 0.50 | µg/L | 56 | 4-isopropyltoluene | ND | 0.50 | µg/L | |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L | |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L | |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBC | P) ND | 2.5 | µg/L | |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L | |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 2.0 | µg/L | |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L | |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L | |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 91 | (70-130) | %REC | |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 111 | (70-130) | %REC | |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 90 | (70-130) | %REC | |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | - | | | . , | | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | μg/L | | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

lter Airihm Da

8/17/08

Report Date



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

| | ANALYTICAL REPORT |
|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Job#: G005862/JPL Groundwater Monitoring | Attn: David Conner Phone: (818) 393-2808 Fax: (614) 458-6641 |
| Alpha Analytical Number: BMI09080404-08A Client I.D. Number: MW-12-3 | Sampled: 08/03/09 Received: 08/04/09 Analyzed: 08/06/09 |

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting Li | Reporting Limit | |
|----|--------------------------------|---------------|-----------|-------|----|----------------------------------|---------------|--------------|-----------------|--|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1.1.1.2-Tetrachloroethane | ND | 0.50 | µg/L | |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chiorobenzene | ND | 0.50 | µg/L | |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L | |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m,p-Xylene | ND | 0.50 | μg/L | |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | µg/L | |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | µg/L | |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | µg/L | |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L | |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L | |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L | |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L | |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L | |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L | |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L | |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L | |
| 16 | Chloroform | ND | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L | |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L | |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L | |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L | |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L | |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L | |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L | |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L | |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBC | P) ND | 2.5 | µg/L | |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L | |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 2.0 | µg/L | |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L | |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L | |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 91 | (70-130) | %REC | |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 111 | (70-130) | %REC | |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 91 | (70-130) | %REC | |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | | | | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | | |
| 35 | Tetrachioroethene | ND | 0.50 | µg/L | | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Rogen Scholl

Kandy Saulun Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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Walter Arihm

8/17/08

Report Date

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT Battelle Memorial Institute Attn: David Conner 3990 Old Town Ave Phone: (818) 393-2808 San Diego, CA 92110 Fax: (614) 458-6641 Job#: G005862/JPL Groundwater Monitoring Alpha Analytical Number: BMI09080404-09A Sampled: 08/03/09 Client I.D. Number: MW-12-2 Received: 08/04/09 Analyzed: 08/06/09

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting Li | imit |
|----|--------------------------------|---------------|-----------|-------|----|----------------------------------|---------------|--------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1.1.1.2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | μg/L |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m.p-Xvlene | ND | 0.50 | µg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | µg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chloroform | ND | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBC | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 2.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 87 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 114 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 89 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | | . , | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | μg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Rogen Scholl

Kandy Santur Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

Walter Aridman

8/17/08 **Report Date**

Page 1 of 1



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

| | ANALYTICAL REPORT |
|------------------------------------------|-----------------------|
| Battelle Memorial Institute | Attn: David Conner |
| 3990 Old Town Ave | Phone: (818) 393-2808 |
| San Diego, CA 92110 | Fax: (614) 458-6641 |
| Job#: G005862/JPL Groundwater Monitoring | |
| Alpha Analytical Number: BMI09080404-10A | Sampled: 08/03/09 |

Client I.D. Number: MW-12-1

Received: 08/04/09

Analyzed: 08/06/09

Volatile Organics by GC/MS

| Compound | | Compound Concentration Reporting Lin | | Limit Compound | | Compound | Concentration | Reporting Limit | |
|----------|--------------------------------|--------------------------------------|------|----------------|----|----------------------------------|---------------|-----------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1.1.1.2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | µg/L |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m,p-Xylene | ND | 0.50 | µg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | μg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | μg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | μg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | μg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | μg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | μg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | μg/L | 47 | n-Propylbenzene | ND | 0.50 | μg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | μg/L | 48 | 4-Chlorotoluene | ND | 0.50 | μg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | μg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1.3.5-Trimethylbenzene | ND | 0.50 | μg/L |
| 16 | Chloroform | ND | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | μg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | μg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1.3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1.4-Dichlorobenzene | ND | 0.50 | μg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1.2-Dibromo-3-chloropropane (DBC | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | , ND | . 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 2.0 | μg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1.2.3-Trichlorobenzene | ND | 1.0 | μg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 90 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 112 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | μg/L | 66 | Surr: 4-Bromofluorobenzene | 100 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | , | (| |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Sandmer Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

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Walter Arinhm

8/17/08

Report Date



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Job#: G005862/JPL Groundwater Monitoring

Alpha Analytical Number: BMI09080404-11A Client I.D. Number: DUPE-7-3Q09

Attn: David Conner Phone: (818) 393-2808 (614) 458-6641 Fax:

Sampled: 08/03/09 Received: 08/04/09

Analyzed: 08/06/09

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting Limit | |
|----|--------------------------------|---------------|-----------|-------|----|-----------------------------------|---------------|-----------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1.1.1.2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chioromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | μg/L |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chioroethane | ND | 0.50 | µg/L | 39 | m,p-Xylene | ND | 0.50 | μg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | µg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | μg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chloroform | ND · | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBCI | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 2.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 95 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 110 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 94 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | | | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Rogen Scholl

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

Iter Arikmon Ŵ

8/17/08

Report Date



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

| | ANALYTICAL REPORT |
|------------------------------------------------------------------------------|---------------------------------------------------------------|
| Battelle Memorial Institute 3990 Old Town Ave | Attn: David Conner Phone: (818) 393-2808 |
| San Diego, CA 92110 Job#: G005862/JPL Groundwater Monitoring | Fax: (614) 458-6641 |
| Alpha Analytical Number: BMI09080404-12A Client I.D. Number: EB-10-8/3/09 | Sampled: 08/03/09 Received: 08/04/09 Analyzed: 08/05/09 |

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting Li | imit |
|----|--------------------------------|---------------|-----------|-------|----|----------------------------------|---------------|--------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | µg/L |
| 3 | Vinyl chloride | ND | 0.50 | μg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m,p-Xylene | ND | 0.50 | µg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | µg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | μg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chioroform | ND | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBC | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 2.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | μg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | μg/L | 63 | 1.2.3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 89 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 113 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | μg/L | 66 | Surr: 4-Bromofluorobenzene | 94 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | | | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | μg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | μg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Rogen Scholl

Kandy Saulner

Walter Aridmon

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.



Report Date



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| ANALYTICAL REPORT | | | | | | | |
|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|
| Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Job#: G005862/JPL Groundwater Monitoring | Attn: David Conner Phone: (818) 393-2808 Fax: (614) 458-6641 | | | | | | |
| Alpha Analytical Number: BMI09080404-13A Client I.D. Number: TB-10-8/3/09 | Sampled: 08/03/09 Received: 08/04/09 Analyzed: 08/05/09 | | | | | | |

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting Li | imit |
|----|--------------------------------|---------------|-----------|-------|----|----------------------------------|---------------|--------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | μg/L |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m,p-Xylene | ND | 0.50 | μg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | µg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | μg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | μg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | μg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | μg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propvibenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | μg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | μg/L |
| 16 | Chloroform | ND | 0.50 | µg/L | 51 | tert-Butvibenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | μg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | μg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1.3-Dichlorobenzene | ND | 0.50 | μg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | μg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBC | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 2.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 85 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 112 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 94 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | 1 | , | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Sandmer Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

Walter Arihm

8/17/08

Report Date

Page 1 of 1

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VOC Sample Preservation Report

Work Order: BMI09080404

Project: G005862/JPL Groundwater Monitoring

| Alpha's Sample ID | Client's Sample ID | Matrix | pH | |
|-------------------|--------------------|---------|----|--|
| 09080404-01A | MW-22-3 | Aqueous | 2 | |
| 09080404-02A | MW-22-2 | Aqueous | 2 | |
| 09080404-03A | MW-22-1 | Aqueous | 2 | |
| 09080404-04A | EB-9-7/31/09 | Aqueous | 2 | |
| 09080404-05A | TB-9-7/31/09 | Aqueous | 2 | |
| 09080404-06A | MW-12-5 | Aqueous | 2 | |
| 09080404-07A | MW-12-4 | Aqueous | 2 | |
| 09080404-08A | MW-12-3 | Aqueous | 2 | |
| 09080404-09A | MW-12-2 | Aqueous | 2 | |
| 09080404-10A | MW-12-1 | Aqueous | 2 | |
| 09080404-11A | DUPE-7-3009 | Aqueous | 2 | |
| 09080404-12A | EB-10-8/3/09 | Aqueous | 2 | |
| 09080404-13A | TB-10-8/3/09 | Aqueous | 2 | |



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| Date: 14-Aug-09 | (| QC S | Sum | mar | y Repor | t | | | | Work Ord 09080404 | |
|-------------------------------|--------------|------|------|-----------------|-----------------------------|--------|------------|-----------|---------|-----------------------------|-----|
| Method Blank File ID: 44 | | Туре | MBLI | | est Code: E atch ID: 224 | | thod 314.0 | | s Date: | 08/07/2009 00:50 | |
| Sample ID: MBLK-22493 | Units : µg/L | | | | _3_090807/ | | | Prep Da | | 08/06/2009 | |
| Analyte | Result | PQL | 5 | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) F | RPDRef | Val %RPD(Limit) | Qua |
| Perchlorate | ND | | 1 | | | | | | | | |
| Laboratory Fortified Blank | | Туре | LFB | Te | est Code: E | PA Met | thod 314.0 | | | | |
| File ID: 45 | | | | Ba | atch ID: 224 | 93 | | Analysi | s Date: | 08/07/2009 01:08 | |
| Sample ID: LFB-22493 | Units : µg/L | | Rur | 1 ID: IC | _3_090807/ | A | | Prep Da | ate: | 08/06/2009 | |
| Analyte | Result | PQL | S | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) F | RPDRef | Val %RPD(Limit) | Qua |
| Perchlorate | 26.1 | | 2 | 25 | | 105 | 85 | 115 | | | |
| Sample Matrix Spike | | Туре | LFM | Te | est Code: E | PA Met | thod 314.0 | | | | |
| File ID: 49 | | | | Ba | atch ID: 224 | 93 | | Analysi | s Date: | 08/07/2009 02:22 | |
| Sample ID: 09073103-03ALFM | Units : µg/L | | Rur | n ID: IC | _3_090807/ | 4 | | Prep Da | ate: | 08/06/2009 | |
| Analyte | Result | PQL | S | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) R | RPDRef | Val %RPD(Limit) | Qua |
| Perchlorate | 34.2 | | 2 | 25 | 10.16 | 96 | 80 | 120 | | | |
| Sample Matrix Spike Duplicate | | Туре | LFM |) Те | est Code: E | PA Met | thod 314.0 | | | · · · · · · | |
| File ID: 50 | | | | Ba | atch ID: 224 | 93 | | Analysi | s Date: | 08/07/2009 02:40 | |
| Sample ID: 09073103-03ALFMD | Units : µg/L | | Rur | n ID: IC | _3_090807/ | A | | Prep Da | ate: | 08/06/2009 | |
| Analyte | Result | PQL | S | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) R | RPDRef | val %RPD(Limit) | Qua |
| Perchlorate | 35.7 | | 2 | 25 | 10.16 | 102 | 80 | 120 | 34.2 | | |
| | | | | | | | | | | | |

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



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| Date: 18-Aug-09 | (|)C S | ummar | y Repor | t | | | | Work Ord 0908040 | |
|---------------------------------------------------------------------------------------------|--------------------------------|--------|---------------------------------------|-------------------------------------------------------------------------------|------------|------------|---------|---------------------|---------------------------------------------------|------|
| Method Blank File ID: 081309.B\087SMPL.D\ Sample ID: MB-22512 | Units : mg/ L | Туре I | B | est Code: El atch ID: 225 P/MS_0908 | 12K | thod 200.8 | , | vsis Date: Date: | 08/13/2009 22:44 08/10/2009 | |
| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | C LCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qua |
| Chromium (Cr) | ND | 0.00 | 5 | | | | | | | |
| Laboratory Control Spike File ID: 081309.B\088_LCS.D\ Sample ID: LCS-22512 Analyte | Units : mg/ L Result | Type I | Ba Run ID: IC | est Code: El atch ID: 225 : P/MS_0908 SpkRefVal | 12K 13C | | Prep | Date: | 08/13/2009 22:49 08/10/2009 Val %RPD(Limit) | Qual |
| Chromium (Cr) | 0.0457 | 0.00 | · · · · · · · · · · · · · · · · · · · | • | 91 | 80 | 120 | | ····· | |
| Sample Matrix Spike File ID: 081309.B\092SMPL.D\ Sample ID: 09080502-03AMS Analyte | Units : mg/L Result | Type I | B Run ID: IC | est Code: El atch ID: 225 P/MS_0908 SpkRefVal | 12K 13C | | Prep | Date: | 08/13/2009 23:12 08/10/2009 Val %RPD(Limit) | Qual |
| Chromium (Cr) | 0.0531 | 0.00 | - | | 106 | 80 | 120 | | | |
| Sample Matrix Spike Duplicate File ID: 081309.B\093SMPL.D\ Sample ID: 09080502-03AMSD | Units : mg/L | Type I | B Run ID: IC | est Code: El atch ID: 225 P/MS_0908 | 12K 13C | | Prep | Date: | 08/13/2009 23:17 08/10/2009 | |
| Analyte | Result | PQL | | | | | | | Val %RPD(Limit) | Qua |
| Chromium (Cr) | 0.0618 | 0.00 | 5 0.05 | 0 | 124 | 80 | 120 | 0.053 | 13 15.1(20) | M1 |

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Alpha uses descriptive data qualifier flags, which could be replaced with either a DOD Q or J flag.

M1 = Matrix spike recovery was high, the method control sample recovery was acceptable.



| Method Blank Type MSLK Tet Code: File ID: 000551 D Bath ID: MSI 500605 Analysis Date: 080/52009 21: Sample ID: MBLK M315W0805N Units : µpL Run ID: MSD_15 (000035) Prep Date: 080/52009 21: Analy do Result PQL SpkVal SpkTerVar %/REC LCL(ME) UCL(ME) (PDRerVar %/RPD(Lumit) Definordiffucornethane ND 0.5 Trichlorofilosomethane ND 1 Chioromethane ND 0.5 Trichlorofilosomethane ND 0.5 Dicharomethane ND 0.5 Trichlorofilosomethane ND 0.5 Dicharomethane ND 0.5 Trichlorofilosomethane ND 0.5 Dicharomethane ND 0.5 Trichlorofilosomethane ND 0.5 Statistic (KEK) ND 10 Cel-32/Dichlorofitane ND 0.5 Z-Dichlorofitane ND 0.5 Trichlorofitane ND 0.5 Z-Dichlorofitane ND 0.5 Trichlorofitane ND 0.5 Z-Dichlorofitane | Date: 14-Aug-09 | | (| QC S | ummary Report | | | Work Orde 09080404 | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------------------|------|--------|---------------|--------|----------------|------------------------------|------|
| Sample D: MELK MS15W0605N Units: uptL Result POL SpkVal SpkRetVal %REC LCL(ME) UCL(ME) RPDRetVal %RPD(Limit) Dehondifiuoromethane ND 0.5 <th></th> <th></th> <th></th> <th>Туре М</th> <th></th> <th>V0805N</th> <th>Analysis Date:</th> <th>08/05/2009 21:11</th> <th></th> | | | | Туре М | | V0805N | Analysis Date: | 08/05/2009 21:11 | |
| Dickloadiliscronethane ND 0.5 Chloradi ND 0.5 Chloradi ND 0.5 Bronnethane ND 0.5 Bronnethane ND 0.5 Dichloradicuromethane ND 0.5 1.1-Dichloradicuromethane ND 0.5 Dichloradicuromethane ND 0.5 1.1-Dichloradicuromethane ND 0.5 1.1-Dichloradiane ND 0.5 1.1-Dichloradiane ND 0.5 1.1-Dichloradiane ND 0.5 2Butanose (MEK) ND 0.5 1.2-Dichloradiane ND 0.5 Dibromochloradice ND 0.5 1.2-Dichloradiane ND 0.5 Dibromochloradiane | | MBLK MS15W0805N | | POL | | | • | | Qual |
| Chidomethane ND 1 Vink dholide ND 0.5 Chidorethane ND 0.5 Bromonethane ND 0.5 Trichlorothuomethane ND 0.5 Freider 113 ND 0.5 2-Butomethane ND 0.5 2-Butomethane ND 0.5 2-Butomethane ND 0.5 2-Dichorophysic ND 0.5 1.1.1-Tichorophysic ND 0.5 1.2-Dichorop | | romethane | | | | | | | |
| Chicoschane ND 0.5 Brommelhane ND 0.5 1.1-Dichicoromethane ND 0.5 Dichoromethane ND 0.5 trans.1.2-Dichicorethene ND 0.5 trans.1.2-Dichicorethene ND 0.5 trans.1.2-Dichicorethene ND 0.5 action of MEKI ND 0.5 2-Butmone (MEK) ND 0.5 2-Butmone (MEK) ND 0.5 2-Dichicorethene ND 0.5 1.1.1-Tichicorethane ND 0.5 1.2.Dichicoropropene ND 0.5 1.2.Dichicoropropene | | | | | | | | | |
| Bromoshane ND 1 Tichlorducomeshane ND 0.5 1.1.5Lbickorothane ND 0.5 Tichlorducomeshane ND 0.5 Tarsel.2-Diktorothane ND 0.5 Mathyl terbudyl terb | | | | | | | | | |
| Trichloronethane ND 0.5 Jochloromethane ND 1 Freen-113 ND 0.5 trans 1.2-bichloroethane ND 0.5 trans 1.2-bichloroethane ND 0.5 2-bichloroethane ND 0.5 2-bichloroethane ND 0.5 Statanore (MKK) ND 10 C4-1.2-bichloroethane ND 0.5 Bromochloromethane ND 0.5 Chionoform ND 0.5 Chionoform ND 0.5 Carbon tetrachloride ND 0.5 Carbon tetrach | | | | | | | | | |
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| n-Propylbenzene ND 0.5 4-Chlorotoluene ND 0.5 2-Chlorotoluene ND 0.5 1,3,5-Trimethylbenzene ND 0.5 tert-Butylbenzene ND 0.5 tert-Butylbenzene ND 0.5 sec-Butylbenzene ND 0.5 1,3-Dichlorobenzene ND 0.5 1,3-Dichlorobenzene ND 0.5 1,4-Dichlorobenzene ND 0.5 1,2-Uichlorobenzene ND 0.5 1,2-Dichlorobenzene ND 0.5 1,2-Dichlorobenzene ND 0.5 1,2-Dichlorobenzene ND 0.5 1,2-Dichlorobenzene ND 0.5 n-Butylbenzene ND 0.5 n-Butylbenzene ND 0.5 1,2-Dichlorobenzene ND 0.5 1,2-4-Trichlorobenzene ND 1 Naphthalene ND 1 | | | | | | | | | |
| 2-ChlorotolueneND0.51,3,5-TrimethylbenzeneND0.5tert-ButylbenzeneND0.51,2,4-TrimethylbenzeneND0.5sec-ButylbenzeneND0.51,3-DichlorobenzeneND0.51,4-DichlorobenzeneND0.51,2-UichlorobenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND0.51,2,4-TrichlorobenzeneND0.51,2,4-TrichlorobenzeneND0.51,2,4-TrichlorobenzeneND0.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND1 | | | ND | | | | | | |
| 1,3,5-TrimethylbenzeneND0.5tert-ButylbenzeneND0.51,2,4-TrimethylbenzeneND0.5sec-ButylbenzeneND0.51,3-DichlorobenzeneND0.51,4-DichlorobenzeneND0.54-IsopropyltolueneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND1 | | | | | | | | | |
| tert-ButylbenzeneND0.51,2,4-TrimethylbenzeneND0.5sec-ButylbenzeneND0.51,3-DichlorobenzeneND0.51,4-DichlorobenzeneND0.54-IsopropyltolueneND0.51,2-DichlorobenzeneND0.5n-ButylbenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND1 | | | | | | | | | |
| 1,2,4-TrimethylbenzeneND0.5sec-ButylbenzeneND0.51,3-DichlorobenzeneND0.51,4-DichlorobenzeneND0.54-IsopropyltolueneND0.51,2-DichlorobenzeneND0.51,2-DichlorobenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND1 | - | | | | | | | | |
| 1,3-DichlorobenzeneND0.51,4-DichlorobenzeneND0.54-IsopropyltolueneND0.51,2-DichlorobenzeneND0.5n-ButylbenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND1 | 1,2,4-Trimethy | /lbenzene | | | | | | | |
| 1,4-DichlorobenzeneND0.54-IsopropyltolueneND0.51,2-DichlorobenzeneND0.5n-ButylbenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND1 | - | | | | | | | | |
| 4-IsopropyltolueneND0.51,2-DichlorobenzeneND0.5n-ButylbenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND1 | | | | | | | | | |
| 1,2-DichlorobenzeneND0.5n-ButylbenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND1 | | | | | | | | | |
| n-ButylbenzeneND0.51,2-Dibromo-3-chloropropane (DBCP)ND2.51,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND1 | | | | | | | | | |
| 1,2,4-TrichlorobenzeneND1NaphthaleneND1HexachlorobutadieneND1 | | | ND | 0.5 | | | | | |
| Naphthalene ND 1 Hexachlorobutadiene ND 1 | | | | | | | | | |
| Hexachlorobutadiene ND 1 | | Duenzene | | | | | | | |
| | • | tadiene | | | | | | | |
| | 1,2,3-Trichloro | obenzene | ND | 1 | | | | | |
| Surr: 1,2-Dichloroethane-d4 8.72 10 87 70 130 | | | | | | | | | |
| Surr: Toluene-d8 10.9 10 109 70 130 | ourr: 10luene- | -00 | 10.9 | | 10 1 | 09 70 | 130 | | |



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Alpha Analytical, Inc.

| Date: 14-Aug-09 | (| QC Sun | nmary | Report | | | Work Order: 09080404 |
|------------------------------------------------------------------------------|------------------------|------------|----------|-------------------------------------|----------|---------------------|------------------------------------------|
| Surr: 4-Bromofluorobenzene | 9.44 | | 10 | 94 | 70 | 130 | |
| Laboratory Control Spike File ID: 09080527.D Sample ID: LCS MS15W0805N | | Type LCS | Bat | st Code: tch ID: MS15W080 | 5N | Analysis Prep Da | Date: 08/05/2009 19:42 te: 08/05/2009 |
| Analyte | Units : µg/L Result | | | D_15_090805B SokRefVal %REC | LCL(ME) | • | PDRefVal %RPD(Limit) Qual |
| Dichlorodifluoromethane | 12.9 | 1 | 10 | 129 | 70 | 130 | |
| Chloromethane | 9.27 | 2 | 10 | 93 | 70 | 130 | |
| Vinyl chloride | 9.8 | 1 | 10 | 98 | 70 | 130 | |
| Chloroethane Bromomethane | 9.75 | 1 | 10 | 98 85 | 70 | 130 130 | |
| Trichlorofluoromethane | 8.54 12.5 | 2 1 | 10 10 | 125 | 70 70 | 130 | |
| 1,1-Dichloroethene | 11 | 1 | 10 | 110 | 70 | 130 | |
| Dichloromethane | 9.31 | 2 | 10 | 93 | 70 | 130 | |
| trans-1,2-Dichloroethene | 10.9 | 1 | 10 | 109 | 70 | 130 | |
| Methyl tert-butyl ether (MTBE) 1,1-Dichloroethane | 9.52 10 | 0.5 1 | 10 10 | 95 100 | 70 70 | 130 130 | |
| cis-1,2-Dichloroethene | 10.7 | 1 | 10 | 100 | 70 | 130 | |
| Bromochloromethane | 10.9 | 1 | 10 | 109 | 70 | 130 | |
| Chloroform | 10.4 | 1 | 10 | 104 | 70 | 130 | |
| 2,2-Dichloropropane | 10.4 | 1 | 10 | 104 | 70 | 130 | |
| 1,2-Dichloroethane 1,1,1-Trichloroethane | 9.69 | 1 | 10 | 97 | 70 70 | 130 130 | |
| 1,1-Dichloropropene | 11.4 11.1 | 1 1 | 10 10 | 114 111 | 70 | 130 | |
| Carbon tetrachloride | 11.5 | 1 | 10 | 115 | 70 | 130 | |
| Benzene | 9.97 | 0.5 | 10 | 99.7 | 70 | 130 | |
| Dibromomethane | 9.87 | 1 | 10 | 99 | 70 | 130 | |
| 1,2-Dichloropropane Trichloroethene | 9.98 | 1 | 10 | 99.8 | 70 | 130 | |
| Bromodichloromethane | 11.1 9.28 | 1 1 | 10 10 | 111 93 | 70 70 | 130 130 | |
| cis-1,3-Dichloropropene | 9.01 | 1 | 10 | 90 | 70 | 130 | |
| trans-1,3-Dichloropropene | 8.81 | 1 | 10 | 88 | 70 | 130 | |
| 1,1,2-Trichloroethane | 9.79 | 1 | 10 | 98 | 70 | 130 | |
| | 10.3 | 0.5 | 10 | 103 | 70 | 130 | |
| 1,3-Dichloropropane Dibromochloromethane | 10.1 9.57 | 1 1 | 10 10 | 101 96 | 70 70 | 130 130 | |
| 1,2-Dibromoethane (EDB) | 19.7 | 2 | 20 | 98 98 | 70 | 130 | |
| Tetrachloroethene | 11.8 | 1 | 10 | 118 | 70 | 130 | |
| 1,1,1,2-Tetrachloroethane | 11 | 1 | 10 | 110 | 70 | 130 | |
| Chlorobenzene | 10.3 | 1 | 10 | 103 | 70 | 130 | |
| Ethylbenzene m,p-Xylene | 10.8 11.5 | 0.5 0.5 | 10 10 | 108 115 | 70 70 | 130 130 | |
| Bromoform | 8.72 | 0.5 | 10 | 87 | 70 | 130 | |
| Styrene | 7.48 | 1 | 10 | 75 | 70 | 130 | |
| o-Xylene | 11.3 | 0.5 | 10 | 113 | 70 | 130 | |
| 1,1,2,2-Tetrachloroethane | 10.3 | 1 | 10 | 103 | 70 | 130 | |
| 1,2,3-Trichloropropane Isopropylbenzene | 20.7 10.9 | 2 1 | 20 10 | 103 109 | 70 70 | 130 130 | |
| Bromobenzene | 9.8 | 1 | 10 | 98 | 70 | 130 | |
| n-Propylbenzene | 10.9 | 1 | 10 | 109 | 70 | 130 | |
| 4-Chlorotoluene | 10.5 | 1 | 10 | 105 | 70 | 130 | |
| 2-Chlorotoluene 1,3,5-Trimethylbenzene | 10.4 | 1 | 10 | 104 | 70 | 130 | |
| tert-Butylbenzene | 10.4 10.5 | 1 1 | 10 10 | 104 105 | 70 70 | 130 130 | |
| 1,2,4-Trimethylbenzene | 10.5 | 1 | 10 | 105 | 70 | 130 | |
| sec-Butylbenzene | 11 | 1 | 10 | 110 | 70 | 130 | |
| 1,3-Dichlorobenzene | 10.5 | 1 | 10 | 105 | 70 | 130 | |
| 1,4-Dichlorobenzene 4-Isopropyltoluene | 10.2 | 1 | 10 | 102 | 70 | 130 | |
| 1,2-Dichlorobenzene | 10.8 10.2 | 1 | 10 10 | 108 102 | 70 70 | 130 130 | |
| n-Butylbenzene | 11.7 | 1 | 10 | 102 | 70 | 130 | |
| 1,2-Dibromo-3-chloropropane (DBCP) | 45.6 | 3 | 50 | 91 | 70 | 130 | |
| 1,2,4-Trichlorobenzene | 9.85 | 2 | 10 | 99 | 70 | 130 | |
| Naphthalene Hexachlorobutadiene | 8.72 | 2 | 10 | 87 | 70 | 130 | |
| 1,2,3-Trichlorobenzene | 20.2 9.42 | 2 2 | 20 10 | 101 94 | 70 70 | 130 130 | |
| Surr: 1,2-Dichloroethane-d4 | 8.92 | 2 | 10 | 94 89 | 70 | 130 | |
| Surr: Toluene-d8 | 10.4 | | 10 | 104 | 70 | 130 | |
| Surr: 4-Bromofluorobenzene | 9.45 | | 10 | 95 | 70 | 130 | |



12.70

Alpha Analytical, Inc.

| Sample Matrix Spike File ID: 09080532.D Sample ID: 09080404-08AMS Analyte | | Туре М | S T | est Code: | | | | | - |
|------------------------------------------------------------------------------------|--------------|------------|-----------|----------------------|------------|----------|----------------|------------------|-----|
| Sample ID: 09080404-08AMS | | | | | | | | | |
| • | | | Ba | atch ID: MS 1 | 15W080 |)5N | Analysis Date: | 08/05/2009 21:33 | |
| Analyte | Units : µg/L | | Run ID: M | SD_15_090 | 805B | | Prep Date: | 08/05/2009 | |
| | Result | PQL | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) RPDRef | Val %RPD(Limit) | Qua |
| Dichlorodifluoromethane | 56 | 2.5 | 50 | 0 | 112 | 13 | 167 | | |
| Chloromethane | 41.8 | 10 | 50 | Ő | 84 | 28 | 145 | | |
| Vinyl chloride | 54.2 | 2.5 | 50 | 0 | 108 | 43 | 134 | | |
| Chloroethane | 45.1 | 2.5 | 50 | 0 | 90 | 39 | 154 | | |
| Bromomethane | 40.1 | 10 | 50 | 0 | 80 | 19 | 176 | | |
| Trichlorofluoromethane 1,1-Dichloroethene | 61.8 | 2.5 | 50 | 0 | 124 | 34 | 160 | | |
| Dichloromethane | 51.6 42.7 | 2.5 10 | 50 50 | 0 | 103 85 | 60 68 | 130 130 | | |
| trans-1,2-Dichloroethene | 52.1 | 2.5 | 50 | 0 | 104 | 63 | 130 | | |
| Methyl tert-butyl ether (MTBE) | 46.2 | 1.3 | 50 | Ő | 92 | 56 | 141 | | |
| 1,1-Dichloroethane | 46.4 | 2.5 | 50 | Ō | 93 | 61 | 130 | | |
| cis-1,2-Dichloroethene | 50.6 | 2.5 | 50 | 0 | 101 | 70 | 130 | | |
| Bromochloromethane | 50.4 | 2.5 | 50 | 0 | 101 | 70 | 130 | | |
| Chloroform | 49.5 | 2.5 | 50 | 0 | 99 | 67 | 130 | | |
| 2,2-Dichloropropane | 45 | 2.5 | 50 | 0 | 90 | 30 | 152 | | |
| 1,2-Dichloroethane 1,1,1-Trichloroethane | 46.9 55.4 | 2.5 | 50 | 0 | 94 111 | 60 59 | 135 137 | | |
| 1,1-Dichloropropene | 55.4 51.7 | 2.5 2.5 | 50 50 | 0 | 111 | 59 63 | 137 | | |
| Carbon tetrachloride | 54.8 | 2.5 | 50 | 0 | 110 | 50 | 147 | | |
| Benzene | 46.7 | 1.3 | 50 | Ő | 93 | 67 | 130 | | |
| Dibromomethane | 47.5 | 2.5 | 50 | 0 | 95 | 69 | 133 | | |
| 1,2-Dichloropropane | 45 | 2.5 | 50 | 0 | 90 | 69 | 130 | | |
| Trichloroethene | 52.9 | 2.5 | 50 | 0 | 106 | 69 | 130 | | |
| Bromodichloromethane | 43.7 | 2.5 | 50 | 0 | 87 | 66 | 134 | | |
| cis-1,3-Dichloropropene trans-1,3-Dichloropropene | 39.1 | 2.5 | 50 | 0 | 78 | 63 | 130 | | |
| 1,1,2-Trichloroethane | 39.5 46.4 | 2.5 2.5 | 50 50 | 0 | 79 93 | 66 68 | 131 130 | | |
| Toluene | 40.4 | 1.3 | 50 50 | 0 | 93 94 | 66 | 130 | | |
| 1,3-Dichloropropane | 46.4 | 2.5 | 50 | 0 | 93 | 70 | 130 | | |
| Dibromochloromethane | 44.8 | 2.5 | 50 | ō | 90 | 70 | 130 | | |
| 1,2-Dibromoethane (EDB) | 93.1 | 10 | 100 | 0 | 93 | 70 | 130 | | |
| Tetrachloroethene | 54.6 | 2.5 | 50 | 0 | 109 | 61 | 134 | | |
| 1,1,1,2-Tetrachloroethane | 49.7 | 2.5 | 50 | 0 | 99 | 70 | 130 | | |
| Chlorobenzene Ethylbenzene | 47.4 | 2.5 | 50 | 0 | 95 | 70 | 130 | | |
| m,p-Xylene | 49.5 52.1 | 1.3 1.3 | 50 50 | 0 | 99 104 | 68 64 | 130 130 | | |
| Bromoform | 40.8 | 2.5 | 50 | 0 | 82 | 64 | 138 | | |
| Styrene | 34.5 | 2.5 | 50 | ő | 69 | 69 | 130 | | |
| o-Xylene | 51.6 | 1.3 | 50 | Ō | 103 | 70 | 130 | | |
| 1,1,2,2-Tetrachloroethane | 49.1 | 2.5 | 50 | 0 | 98 | 65 | 131 | | |
| 1,2,3-Trichloropropane | 97.1 | 10 | 100 | 0 | 97 | 70 | 130 | | |
| sópropylbenzene Bromobenzene | 50.2 | 2.5 | 50 | 0 | 100 | 64 | 138 | | |
| n-Propylbenzene | 44.1 49.9 | 2.5 | 50 | 0 | 88 | 70 | 130 | | |
| 4-Chlorotoluene | 49.9 | 2.5 2.5 | 50 50 | 0 0 | 99.7 98 | 66 70 | 132 130 | | |
| 2-Chlorotoluene | 47.8 | 2.5 | 50 | 0 | 96 | 70 | 130 | | |
| 1,3,5-Trimethylbenzene | 47.4 | 2.5 | 50 | ő | 95 | 66 | 136 | | |
| ert-Butylbenzene | 49 | 2.5 | 50 | Ō | 98 | 65 | 137 | | |
| 1,2,4-Trimethylbenzene | 47.8 | 2.5 | 50 | 0 | 96 | 65 | 137 | | |
| sec-Butylbenzene | 50.5 | 2.5 | 50 | 0 | 101 | 66 | 134 | | |
| 1,3-Dichlorobenzene 1,4-Dichlorobenzene | 48.1 | 2.5 | 50 | 0 | 96 | 70 | 130 | | |
| 1-Isopropyitoluene | 46.1 50.6 | 2.5 | 50 | 0 | 92 | 70 | 130 | | |
| 1,2-Dichlorobenzene | 46.6 | 2.5 2.5 | 50 50 | 0 | 101 93 | 66 70 | 137 130 | | |
| n-Butylbenzene | 53.3 | 2.5 | 50 | 0 | 93 107 | 60 | 142 | | |
| 1,2-Dibromo-3-chloropropane (DBCP) | 211 | 15 | 250 | 0 | 85 | 67 | 130 | | |
| 1,2,4-Trichlorobenzene | 41.7 | 10 | 50 | Ő | 83 | 61 | 137 | | |
| Naphthalene | 35.7 | 10 | 50 | Ō | 71 | 40 | 167 | | |
| | 94.5 | 10 | 100 | 0 | 95 | 61 | 130 | | |
| 1,2,3-Trichlorobenzene | 39.9 | 10 | 50 | 0 | 80 | 51 | 144 | | |
| Surr: 1,2-Dichloroethane-d4 Surr: Toluene-d8 | 46.6 | | 50 | | 93 | 70 | 130 | | |
| Surr: 4-Bromofluorobenzene | 51.9 47.5 | | 50 50 | | 104 95 | 70 70 | 130 130 | | |



Date:

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

QC Summary Report

Work Order: 09080404

| Date: 14-Aug-09 | (| QC Su | mmar | y Repor | t | | | | Work Orde 09080404 | |
|------------------------------------------------------|--------------|------------|-----------|-------------|--------------|----------|------------|----------------|-----------------------|------|
| Sample Matrix Spike Duplicate | | Type MS | SD Te | est Code: | | | | | | _ |
| File ID: 09080533.D | | , | | atch ID: MS | 15W080 | 05N | Analy | sis Date: 0 | 8/05/2009 21:56 | |
| Sample ID: 09080404-08AMSD | Units : µg/L | F | Run ID: M | SD_15_090 | 805 B | | Prep | Date: 0 | 8/05/2009 | |
| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRefVa | I %RPD(Limit) | Qual |
| Dichlorodifluoromethane | 53.8 | 2.5 | 50 | 0 | 108 | 13 | 167 | 55.96 | 3.9(20) | |
| Chloromethane | 45 | 10 | 50 | 0 | 90 | 28 | 145 | 41.76 | 7.5(20) | |
| Vinyl chloride Chloroethane | 56.4 46.2 | 2.5 2.5 | 50 50 | 0 | 113 92 | 43 39 | 134 154 | 54.24 45.09 | 3.9(20) 2.4(20) | |
| Bromomethane | 40.2 | 2.5 | 50 | 0 | 92 92 | 39 19 | 176 | 40.14 | 13.4(20) | |
| Trichlorofluoromethane | 61.4 | 2.5 | 50 | Ō | 123 | 34 | 160 | 61.75 | 0.6(20) | |
| 1,1-Dichloroethene | 51 | 2.5 | 50 | 0 | 102 | 60 | 130 | 51.59 | 1.1(20) | |
| Dichloromethane trans-1,2-Dichloroethene | 45.7 | 10 | 50 | 0 | 91 | 68 | 130 | 42.67 | 6.8(20) | |
| Methyl tert-butyl ether (MTBE) | 52.9 50.6 | 2.5 1.3 | 50 50 | 0 | 106 101 | 63 56 | 130 141 | 52.08 46.24 | 1.5(20) 9.1(20) | |
| 1,1-Dichloroethane | 48.7 | 2.5 | 50 | 0 | 97 | 61 | 130 | 46.39 | 4.9(20) | |
| cis-1,2-Dichloroethene | 52.4 | 2.5 | 50 | 0 | 105 | 70 | 130 | 50.59 | 3.5(20) | |
| Bromochloromethane | 54.8 | 2.5 | 50 | 0 | 110 | 70 | 130 | 50.44 | 8.3(20) | |
| Chloroform 2,2-Dichloropropane | 50.5 45.8 | 2.5 2.5 | 50 50 | 0 | 101 92 | 67 30 | 130 152 | 49.49 44.97 | 2.0(20) 1.8(20) | |
| 1,2-Dichloroethane | 49 | 2.5 | 50 | 0 | 98 | 60 | 132 | 46.86 | 4.4(20) | |
| 1,1,1-Trichloroethane | 55.3 | 2.5 | 50 | Ō | 111 | 59 | 137 | 55.36 | 0.1(20) | |
| 1,1-Dichloropropene | 52.4 | 2.5 | 50 | 0 | 105 | 63 | 130 | 51.66 | 1.4(20) | |
| Carbon tetrachloride Benzene | 55.8 | 2.5 | 50 | 0 | <u></u> 112 | 50 67 | 147 | 54.77 | 1.8(20) | |
| Dibromomethane | 48.1 50.3 | 1.3 2.5 | 50 50 | 0 | 96 101 | 67 69 | 130 133 | 46.69 47.45 | 3.0(20) 5.9(20) | |
| 1,2-Dichloropropane | 48.7 | 2.5 | 50 | 0 | 97 | 69 | 130 | 44.95 | 8.1(20) | |
| Trichloroethene | 54 | 2.5 | 50 | 0 | 108 | 69 | 130 | 52.89 | 2.2(20) | |
| Bromodichloromethane | 46.4 | 2.5 | 50 | 0 | 93 | 66 | 134 | 43.73 | 5.8(20) | |
| cis-1,3-Dichloropropene trans-1,3-Dichloropropene | 41.5 43.4 | 2.5 2.5 | 50 50 | 0 | 83 87 | 63 66 | 130 131 | 39.1 39.5 | 5.9(20) 9.5(20) | |
| 1,1,2-Trichloroethane | - 50.9 | 2.5 | 50 | 0 | 102 | 68 | 130 | 46.4 | 9.2(20) | |
| Toluêne | 48.1 | 1.3 | 50 | Ő | 96 | 66 | 130 | 46.99 | 2.3(20) | |
| 1,3-Dichloropropane | 49.4 | 2.5 | 50 | 0 | 99 | 70 | 130 | 46.38 | 6.2(20) | |
| Dibromochloromethane 1,2-Dibromoethane (EDB) | 47.7 99.4 | 2.5 | 50 | 0 | 95 | 70 | 130 | 44.84 | 6.1(20) | |
| Tetrachloroethene | 99.4 53.4 | 10 2.5 | 100 50 | 0 | 99 107 | 70 61 | 130 134 | 93.06 54.55 | 6.6(20) 2.1(20) | |
| 1,1,1,2-Tetrachloroethane | 53.5 | 2.5 | 50 | 0 | 107 | 70 | 130 | 49.72 | 7.2(20) | |
| Chlorobenzene | 48.9 | 2.5 | 50 | 0 | 98 | 70 | 130 | 47.42 | 3.0(20) | |
| Ethylbenzene m,p-Xylene | 50.2 | 1.3 | 50 | 0 | 100 | 68 | 130 | 49.53 | 1.3(20) | |
| Bromoform | 53 43.9 | 1.3 2.5 | 50 50 | 0 | 106 88 | 64 64 | 130 138 | 52.05 40.83 | 1.9(20) 7.3(20) | |
| Styrene | 35.6 | 2.5 | 50 50 | . 0 | 71 | 69 | 130 | 40.03 34.47 | 3.3(20) | |
| o-Xylene | 53.7 | 1.3 | 50 | 0 | 107 | 70 | 130 | 51.64 | 3.9(20) | |
| 1,1,2,2-Tetrachloroethane | 52.5 | 2.5 | 50 | 0 | 105 | 65 | 131 | 49.09 | 6.6(20) | |
| 1,2,3-Trichloropropane Isopropylbenzene | 104 | 10 | 100 | 0 | 104 | 70 | 130 | 97.12 | 6.9(20) | |
| Bromobenzene | 49.7 45.6 | 2.5 2.5 | 50 50 | 0 0 | 99 91 | 64 70 | 138 130 | 50.22 44.07 | 1.1(20) 3.4(20) | |
| n-Propylbenzene | 49.6 | 2.5 | 50 | Ő | 99 | 66 | 132 | 49.86 | 0.5(20) | |
| 4-Chlorotoluene | 49.5 | 2.5 | 50 | 0 | 99 | 70 | 130 | 49.21 | 0.6(20) | |
| 2-Chlorotoluene 1,3,5-Trimethylbenzene | 48.2 | 2.5 | 50 | 0 | 96 | 70 | 130 | 47.84 | 0.7(20) | |
| tert-Butylbenzene | 47.4 48.5 | 2.5 2.5 | 50 50 | 0 | 95 97 | 66 65 | 136 137 | 47.39 48.97 | 0.0(20) 1.0(20) | |
| 1,2,4-Trimethylbenzene | 48 | 2.5 | 50 | 0 | 96 | 65 | 137 | 47.76 | 0.4(20) | |
| sec-Butylbenzene | 49.6 | 2.5 | 50 | 0 | 99 | 66 | 134 | 50.47 | 1.7(20) | |
| 1,3-Dichlorobenzene | 49.4 | 2.5 | 50 | 0 | 99 | 70 | 130 | 48.1 | 2.6(20) | |
| 1,4-Dichlorobenzene 4-Isopropyltoluene | 47.8 49.9 | 2.5 2.5 | 50 50 | 0 | 96 99.8 | 70 66 | 130 137 | 46.11 50.57 | 3.5(20) 1.4(20) | |
| 1,2-Dichlorobenzene | 48.2 | 2.5 | 50 | 0 | 99.0 96 | 70 | 137 | 46.6 | 3.4(20) | |
| n-Butylbenzene | 52.7 | 2.5 | 50 | Ő | 105 | 60 | 142 | 53.3 | 1.2(20) | |
| 1,2-Dibromo-3-chloropropane (DBCP) | 234 | 15 | 250 | 0 | 94 | 67 | 130 | 211.5 | 10.3(20) | |
| 1,2,4-Trichlorobenzene Naphthalene | 44 39.4 | 10 | 50 | 0 | 88 70 | 61 | 137 | 41.69 | 5.4(20) | |
| Hexachlorobutadiene | 39.4 93.9 | 10 10 | 50 100 | 0 | 79 94 | 40 61 | 167 130 | 35.68 94.51 | 10.0(20) 0.7(20) | |
| 1,2,3-Trichlorobenzene | 42.4 | 10 | 50 | 0 | 85 | 51 | 144 | 39.91 | 6.1(20) | |
| Surr: 1,2-Dichloroethane-d4 | 45.7 | | 50 | | 91 | 70 | 130 | | | |
| Surr: Toluene-d8 Surr: 4-Bromofluorobenzene | 51.8 46.7 | | 50 | | 104 | 70 | 130 | | | |
| | 40.7 | | 50 | | 93 | 70 | 130 | | | |



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: 14-Aug-09

QC Summary Report

Work Order: 09080404

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

| 8409 1154 | Alpha Analytical, Inc. | dcox | cth H | lizabeth | 77 | | X | Udicex | 5 | luputh | Logged in by: |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|--------------------------------|------------------------------------------------------------|-----------------------------|------------------------------------|-------------|---------------------------------------------------------------------------------------|-----------------------------------|
| Date/11me | Company | - | | | -1 | | | | |) | |
| | | - | | - | | | | | cim | | |
| ssible (I.E.: MS/MSD). : | No security seals. Frozen ice. Temp Blank #7650 received @ 4°C. Perchlorate RL of 1.0 ug/L. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). : | Samples should | Level IV QC. | L of 1.0 ug/L.] | hlorate R | 4°C. Perc | ceived @ | Blank #7650 re | e. Temp | No security seals. Frozen ic | Comments: |
| | | VOC by 524 Criteria | VOC by 524 VOC by 524 Criteria Criteria | Perchlorate Cr | | 0 10 | <u> </u> | 08/03/09 09:58 | Ą | MW-12-1 | BMI09080404-10A |
| | | VOC by 524 Criteria | VOC by 524 VOC by 524 Criteria Criteria | Perchlorate Cr | | 0 10 | ග | 08/03/09 09:25 | Ą | MW-12-2 | |
| MS/MSD | | VOC by 524 Criteria | VOC by 524 Criteria | Perchlorate Cr | | 0 10 | 10 | 08/03/09 08:48 | AQ | MW-12-3 | BM109080404-08A |
| Level IV QC | | VOC by 524 Criteria | VOC by 524 Criteria | Perchlorate | | 0 10 | 4 | 08/03/09 08:12 | AQ | MW-12-4 | BMI09080404-07A |
| | | VOC by 524 Criteria | VOC by 524 Criteria | Perchlorate | | 0 10 | 4 | 08/03/09 07:49 | AQ | MW-12-5 | BMI09080404-06A |
| Reno Trip Blank 6/22/09 | | VOC by 524 Criteria | VOC by 524 Criteria | | 0 | 0 10 | د | 07/31/09 00:00 | Â | TB-9-7/31/09 | BMI09080404-05A |
| | | VOC by 524 Criteria | VOC by 524 Criteria | Perchlorate Cr | | 0 10 | රා | 07/31/09 08:12 | Â | EB-9-7/31/09 | BM109080404-04A |
| | | VOC by 524 Criteria | VOC by 524 Criteria | Perchiorate Cr | | 0 10 | රා | 07/31/09 08:24 | Ą | MW-22-1 | |
| | | VOC by 524 Criteria | VOC by 524 VOC by 524 Criteria Criteria | Perchlorate Cr | | 0 | රා | 07/31/09 07:58 | Å | MW-22-2 | 1 |
| | | VOC by 524 Criteria | VOC by 524 Criteria | Perchlorate Cr | | 0 10 | - თ | 07/31/09 07:37 | Ą | MW-22-3 | |
| Sample Remarks | | Requested Tests | _D VOC_TIC_ | 314_W METALS_D W | | 3otties Sub TAT | No. of Bottles Alpha Sub | ollection Date | C Matrix | Client Sample ID | Alpha Sample ID |
| | | | ırrogates | MSD With Su | -CS, MS/ | àl data, l | al/ConC | rt, MBLK, InitC | Final Rp | = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates | QC Level: DS4 |
| Received Date Printed -2009 04-Aug-2009 | <u>Cooler Temp</u> Samples Received 4 °C 04-Aug-2009 | | | | nitoring | vater Mo | Ground | G005862/JPL Groundwater Monitoring | Job : 0 | 25743, 25752 | PO: 218013 Client's COC #: 257 |
| | Sampled by : Client | | waltons@battelle.org | x walton | (614) 424-4117 | (614) 4: | | Shane Walton | | :110 | San Diego, CA 92110 |
| | EDD Required : Yes | | cutiee@batelle.org | x cutiee | (614) 424-4899 | (614) 4; | Band in | Betsy Cutie | -), | đ | Suite C-205 |
| | | | connerd@battelle.org | x conner | (818) 393-2808 | (818) 3 | | David Conner | H | Institute | Battelle Memorial Institute |
| | | | EMail Address | EMa | Phone Number | Phone | 2 | Report Attention | | | Client: |
| 09080404 On : 18-Aug-2009 | WorkOrder : BMIS09080404 Report Due By : 5:00 PM On : 18-Aug-2009 | 78 | InC. ada 89431-57 15-0406 | Alpha Analytical, Inc. 255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778 TEL: (775) 355-1044 FAX: (775) 355-0406 | 1 Ana e, Suite 21 5-1044 | Alpha Ans endale Avenue, Suite 2 TEL: (775) 355-1044 | 5 Glenda TEL | 2 | | | - |
| Page: 1 of 2 | C.A | ORD | REC | CHAIN-OF-CUSTODY RECO | CUS | OF- | I. | CHA | | | Billing Information : |

Matrix Type: AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

| B | |
|---|--|
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CHAIN-OF-CUSTODY RECORD

Page: 2 of 2

| | | CH | AIN | -OF | -CI | CHAIN-OF-CUSTODY RECO | DY I | RECO | ORD | C.A | Page: | Page: Z of Z |
|------------------------------------------------------------------------------------------------------|-----------|----------------------------------------------------|-----------------|------------------|------------------|---------------------------------------------------------|--------------------|--------------------------------------------|------------------------|-------------------------------------------------|-----------------------|-----------------------------------------------------|
| | | | | Alp | ha Ai | Alpha Analytical, Inc. | cal, In | : | | WorkOrder · BMIS09080404 | RMIS000804 | 104 |
| | | | 255 Gler | idale Ave | mue, Sui | 255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778 | ks, Nevada | 1 89431-577 | 78 | | | |
| - | | | T | EL: (775) |) 355-10- | TEL: (775) 355-1044 FAX: (775) 355-0406 | (775) 355-(|)406 | | Report Due By : 5:00 PM On : 18-Aug-2009 | :00 PM On : 1 | 18-Aug-2009 |
| Client: | | Report Attention | ntion | Pho | Phone Number | ber | EMail Address | ddress | | | | |
| Battelle Memorial Institute | | David Conner | a. | (818 | (818) 393-2808 x | x 80 | connerd@ | connerd@battelle.org | U. | | | |
| 3990 Old Lown Ave Suite C-205 | | Betsy Cutie | | (614 | (614) 424-4899 x | x 66 | cutiee@batelle.org | atelle.org | | EDD Required : Yes | S | |
| San Diego, CA 92110 | | Shane Walton | n | (614 | (614) 424-4117 x | 17 x | waltons@ | waltons@battelle.org | | Sampled by : Client | ent | |
| PO: 218013 | | | | | | | | | | Cooler Temp | Samples Received | Date Printed |
| Client's COC #: 25743, 25752 | : qof | G005862/JPL Groundwater Monitoring | L Groun | ıdwater f | Monitori | ng | | | | 4°C | 04-Aug-2009 | 04-Aug-2009 |
| QC Level : DS4 = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates | : Final R | pt, MBLK, Ini | tCal/Co | nCal dat | a, LCS, | MS/MSD | With Surro | ogates | | | | |
| | | | | | | | | | Requested Tests | d Tests | | |
| Alpha Client Sample ID Sample ID | Matri | Collection No. of Bottles Matrix Date Alpha Sub | No. of Alpha | ' Bottles Sub | TAT | 314_W | METALS_D VOC_TIC_ | VOC_TIC_ | VOC_W | | Saml | Sample Remarks |
| BMI09080404-11A DUPE-7-3Q09 | AQ | 08/03/09 00:00 | თ | 0 | 10 | Perchlorate | ç | VOC by 524 VOC by 524 Criteria Criteria | VOC by 524 Criteria | | 1 HCI voa an air t | 1 HCl voa received contains an air bubble > 6mm. |
| BMI09080404-12A EB-10-8/3/09 | AQ | 08/03/09 09:41 | თ | 0 | 10 | Perchlorate | ç | VOC by 524 VOC by 524 Criteria Criteria | VOC by 524 Criteria | | | |
| BMI09080404-13A TB-10-8/3/09 | Â | 08/03/09 00:00 | | 0 | 10 | | | VOC by 524 VOC by 524 Criteria Criteria | VOC by 524 Criteria | | Reno Tri | Reno Trip Blank 6/22/09 |

Comments: No security scals. Frozen ice. Temp Blank #7650 received @ 4°C. Perchlorate RL of 1.0 ug/L. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :



Matrix Type: AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

| Billing Information: Name <u>GENALD TOMPKING BATTECLE</u> Address 505 KUNG ALT | | Alpha Analytical, Inc. Samilytical, Inc. 255 Glendale Avenue, Suite 21 AZ - Sparks, Nevada 89431-5778 ID | Samples Collected From Which State? AZCANVWAI IDOROTHERI | Fage # / of / |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------|
| te, Zip | | (775) 355-1044 75) 355-0406 | Analyses Required | |
| Client Name BATTELLE / DAVID LOWNER | Po. # 218013 | Job# G 305 862 | 1 CEC | |
| GARES WAY TOWN AVE. (-255 | EMail Address | | (20) (20) (34) | |
| SAN DIEGO, CA GLIIS | (619) 726 - 7311 | | | EDD/EDF? YES NO |
| Sampled Sampled Refew Lab ID Number 1.01/fice.1 | Sample Description | TAT Field containers | | Global ID # |
| BMTN90804 | MW-22-3 | m VP/5 | | |
| | MW | | \times | |
| -03 | | ×. | × × | |
| S12 - CX | 1 EB-9-7/31/29 | X | × × | FOUR BLANK |
| | | | | |
| | JTB-9- 7/31/09 | | | TRIP BLOWE |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| ADDITIONAL INSTRUCTIONS: | | | | |
| Signature | Print Name | Com | Company | Date Time |
| Relinquished by | MARCO MENDON | · /NSIGHT | GEC 8/3 | CEZ/ 30/ |
| Relinquished by | Elizabeth Aldrox | x (Jep | 84 | hall by- |
| Received by | | | | |
| Relinquished by | | | | |
| Received by | | | | |
| *Key: AQ - Aqueous SO - Soil WA - Waste OT - Other AR - Air **: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis | <pre>ste OT - Other AR - Air ** c reported unless other arrangements are n</pre> | **: L-Liter V-Voa S-Soil Jar O-() made. Hazardous samples will be returned : | O-Orbo T-Tedlar B-Brass I ed to client or disposed of at client expense | P-Plastic OT-Other se. The report for the analysis |

of the above samples is applicable only to those samples received by the laboratory with this coc. The liability of the laboratory is limited to the amount paid for the report.

| Billing Information: Name CELLAND TOMPENDS BATTELLE Address 505 KING AVE | | I, Inc. Suite 21 5778 | Samples Collected From Which State? AZCA_XNVWA IDOROTHERF | State? 25752 Page # of |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|-----------------------------------------------------------------------------|------------------------------------------------------------------------|--------------------------------------------------------|
| (асимви), OH | L(320) Phone Fax (7 | Phone (775) 355-1044 Fax (775) 355-0406 | Analyses Required | |
| Client Name BATTELLE DAVID LOWNER | 510812 # OP | Job# 6005862 | 2) | Required QC Level? |
| . MUCT C- | EMail Address | | 200 | - = ① v |
| , CA 9211 | Phone # 726 - 7311 | Fax # | | EDD / EDF? YES NO |
| e Key | <u> </u> | Total and type of | Lei | Giobal ID # |
| Satispied Satispied Below Lab ID Number (Use Only) | Sample Description | See below | | REMARKS |
| 1- 04 12/18 64-1 | 0 MW-12-5 | - - - | × | |
| 5007 | M٣. | 1 ve /4 × | × | LEVEL TO WC |
| | 8 MW-12-3 | | ×× | MS/MSD |
| 20- 20- | MW-12-2 | $\times 5/A$ | ×× | |
| 0/- |) MW - 12 - 1 | × | × × | |
| -// | DUPE - 7 - 3009 | × | X | DUPLICATE |
| °/- | 2 EB-10-8/3/09 | | XX | |
| | 3-13-10-8/3/09 | | | THIP RIANK |
| | C | | | |
| | | | | |
| AUDITIONAL INSTRUCTIONS: | | | | |
| Signature | Print Name | Cor | Company | Date Time |
| Relinquished by | MARCO MENDORA | M INSIGHT | tec inc 8/ | 052/ 220 |
| Relinquished by | Klizabeth Hdco | | oha 8.4 | 107 1154 |
| Received by | | | | |
| Relinquished by | | | | |
| Received by | | | | |
| *Key: AQ - Aqueous SO - Soil WA - Waste OT - Other AR - Air **: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis | iste OT - Other AR - Air **: are reported unless other arrangements are m | **: L-Liter V-Voa S-Soil Jar O. made. Hazardous samples will be returned | O-Orbo T-Tedlar B-Brass ed to client or disposed of at client exper | P-Plastic OT-Other nse. The report for the analysis |

of the above samples is applicable only to those samples received by the laboratory with this coc. The liability of the laboratory is limited to the amount paid for the report.



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: 17-Aug-09

David Conner Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 (818) 393-2808

Suite C-205

CASE NARRATIVE

Project: G005862/JPL Groundwater Monitoring

| Order: BMI09080502 | | Cooler Temp: 4 °C |
|--------------------|-----------------------|-------------------|
| Alpha's Sample ID | Client's Sample ID | Matrix |
| 09080502-01A | MW-25-5 | Aqueous |
| 09080502-02A | MW-25-4 | Aqueous |
| 09080502-03A | MW-25-3 | Aqueous |
| 09080502-04A | MW-25-2 | Aqueous |
| 09080502-05A | MW-25-1 | Aqueous |
| 09080502-06A | EB-11-8/4/09 | Aqueous |
| 09080502-07A | TB-11-8/4/09 | Aqueous |
| 09080502-08A | MW-26-2 | Aqueous |
| 09080502-09A | MW-26-1 | Aqueous |
| | Manually Integrated A | nalytes |
| Alpha's Sample ID | Test Reference | Analyte |
| 09080502-02A | EPA Method 314.0 | Perchlorate |
| 09080502-03A | EPA Method 314.0 | Perchlorate |
| 09080502-04A | EPA Method 314.0 | Perchlorate |
| 09080502-05A | EPA Method 314.0 | Perchlorate |
| 09080502-09A | EPA Method 314.0 | Perchlorate |

Enclosed please find the analytical results of the samples received by Alpha Analytical, Inc. under the above mentioned Work Order/Chainof-Custody.

Alpha Analytical, Inc. has a formal Quality Assurance/Quality Control program, which is designed to meet or exceed the EPA requirements. All relevant QC met quality assurance objectives for this project unless otherwise stated in the footnotes.

If you have any questions with regards to this report, please contact Randy Gardner, Project Manager, at (800) 283-1183.

Walter Acrim Kandy Saulman Roger Scholl

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.



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ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Attn:David ConnerPhone:(818) 393-2808Fax:(614) 458-6641Date Received : 08/05/09

Job#: G005862/JPL Groundwater Monitoring

| | Perchlorate by Ion Chromatography EPA Method 314.0 | | | | | | |
|---------------|-------------------------------------------------------|-------------|---------------|--------------------|-----------------|------------------|--|
| | | Parameter | Concentration | Reporting Limit | Date Sampled | Date Analyzed | |
| Client ID : N | 1W-25-5 | | | | | | |
| Lab ID : B | MI09080502-01A | Perchlorate | ND | 1.00 µg/L | 08/04/09 | 08/06/09 | |
| | 1W-25-4 BM109080502-02A | Perchlorate | 7.43 | 1.00 μg/L | 08/04/09 | 08/06/09 | |
| Client ID : N | 1W-25-3 | | | | | | |
| Lab ID : B | M109080502-03A | Perchlorate | 9.11 | 1.00 µg/L | 08/04/09 | 08/06/09 | |
| | 1W-25-2 3MI09080502-04A | Perchlorate | 13.1 | 1.00 µg/L | 08/04/09 | 08/06/09 | |
| Client ID : N | 4W-25-1 | | | | | | |
| Lab ID : B | M109080502-05A | Perchlorate | 9.54 | 1.00 µg/L | 08/04/09 | 08/06/09 | |
| | C B-11-8/4/09 SM109080502-06A | Perchlorate | ND | 1.00 μg/L | 08/04/09 | 08/06/09 | |
| Client ID : N | 1W-26-2 | | | | | | |
| Lab ID : B | MI09080502-08A | Perchlorate | ND | 1.00 µg/L | 08/04/09 | 08/06/09 | |
| | 1W-26-1 BM109080502-09A | Perchlorate | 2.09 | 1.00 μg/L | 08/04/09 | 08/06/09 | |

ND = Not Detected

Roger Scholl

Kandy Dantmer

Walter Hindman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

8/18/09 Report Date



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ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110

David Conner Attn: Phone: (818) 393-2808 (614) 458-6641 Fax: Date Received : 08/05/09

Job#: G005862/JPL Groundwater Monitoring

| | Metals by ICPMS EPA Method 200.8 | | | | | | | |
|-------------------------|-------------------------------------|---------------|---------------|--------------------|-----------------|------------------|--|--|
| | | Parameter | Concentration | Reporting Limit | Date Sampled | Date Analyzed | | |
| Client ID : Lab ID : | MW-25-5 BMI09080502-01A | Chromium (Cr) | ND | 0.0050 mg/L | 08/04/09 | 08/13/09 | | |
| Client ID : Lab ID : | MW-25-4 BMI09080502-02A | Chromium (Cr) | ND | 0.0050 mg/L | 08/04/09 | 08/13/09 | | |
| Client ID : Lab ID : | MW-25-3 BMI09080502-03A | Chromium (Cr) | ND | 0.0050 mg/L | 08/04/09 | 08/13/09 | | |
| Client ID : Lab ID : | MW-25-2 BMI09080502-04A | Chromium (Cr) | ND | 0.0050 mg/L | 08/04/09 | 08/13/09 | | |
| Client ID : Lab ID : | MW-25-1 BMI09080502-05A | Chromium (Cr) | ND | 0.0050 mg/L | 08/04/09 | 08/13/09 | | |
| Client ID : Lab ID : | EB-11-8/4/09 BMI09080502-06A | Chromium (Cr) | ND | 0.0050 mg/L | 08/04/09 | 08/13/09 | | |
| Client ID : Lab ID : | MW-26-2 BMI09080502-08A | Chromium (Cr) | ND | 0.0050 mg/L | 08/04/09 | 08/13/09 | | |
| Client ID : Lab ID : | MW-26-1 BMI09080502-09A | Chromium (Cr) | ND | 0.0050 mg/L | 08/04/09 | 08/13/09 | | |

ND = Not Detected

Roger Scholl

Kandy

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

8/18/09 **Report Date**



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

Battelle Memorial Institute Attn: David Conner 3990 Old Town Ave Phone: (818) 393-2808 San Diego, CA 92110 Fax: (614) 458-6641 Job#: G005862/JPL Groundwater Monitoring

Tentatively Identified Compounds - Volatile Organics by GC/MS

| | | | | Estimated | | 1.1. B 1077 W | |
|-------------------------|----------------------------------------|------------------------|---------------|-----------|----------|---------------|----------|
| | | Parameter | Estimated | Reporting | Date | Date | Date |
| | | | Concentration | Limit | Received | Sampled | Analyzed |
| Client ID : Lab ID : | MW-25-5 BMI09080502-01A | Sulfur dioxide | 48 | 2.0 μg/L | 08/05/09 | 08/04/09 | 08/14/09 |
| Client ID : Lab ID : | MW-25-4 BMI09080502-02A | Sulfur dioxide | 2.5 | 2.0 μg/L | 08/05/09 | 08/04/09 | 08/14/09 |
| Client ID : Lab ID : | MW-25-3 BMI09080502-03A | * * * None Found * * * | ND | 2.0 μg/L | 08/05/09 | 08/04/09 | 08/14/09 |
| Client ID : Lab ID : | MW-25-2 BMI09080502-04A | * * * None Found * * * | ND | 2.0 μg/L | 08/05/09 | 08/04/09 | 08/14/09 |
| Client ID : Lab ID : | MW-25-1 BMI09080502-05A | * * * None Found * * * | ND | 2.0 μg/L | 08/05/09 | 08/04/09 | 08/15/09 |
| Client ID : Lab ID : | EB-11-8/4/09 BMI09080502-06A | * * * None Found * * * | ND | 2.0 μg/L | 08/05/09 | 08/04/09 | 08/14/09 |
| Client ID : Lab ID : | TB-11-8/4/09 BMI09080502-07A | * * * None Found * * * | ND | 2.0 µg/L | 08/05/09 | 08/04/09 | 08/07/09 |
| Client ID : Lab ID : | MW-26-2 BMI09080502-08A | * * * None Found * * * | ND | 2.0 µg/L | 08/05/09 | 08/04/09 | 08/15/09 |
| Client ID : Lab ID : | MW-26-1 BMI09080502-09A | * * * None Found * * * | ND | 2.0 µg/L | 08/05/09 | 08/04/09 | 08/15/09 |

Note: Analysis conducted using EPA Method 524.2 criteria. ND = Not Detected

Roger Scholl

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

8/18/09

Report Date

Page 1 of 1

Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.



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ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Job#: G005862/JPL Groundwater Monitoring

Alpha Analytical Number: BMI09080502-01A Client I.D. Number: MW-25-5 Attn:David ConnerPhone:(818) 393-2808Fax:(614) 458-6641

Sampled: 08/04/09 Received: 08/05/09 Analyzed: 08/14/09

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting Limit | |
|----|--------------------------------|---------------|-----------|-------|----|----------------------------------|---------------|-----------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | μg/L | 37 | Chlorobenzene | ND | 0.50 | μg/L |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m,p-Xylene | ND | 0.50 | µg/L |
| 5 | Bromomethane | ND | 1.0 | μg/L | 40 | Bromoform | ND | 0.50 | μg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | μg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | μg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | μg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | μg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | μg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chloroform | ND | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | μg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | μg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | μg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | μg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | μg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | μg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | μg/L |
| 22 | Benzene | ND | 0.50 | μg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | μg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBC | P) ND | 2.5 | μg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 2.0 | μg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | μg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 109 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 98 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 90 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | μg/L | | | | | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Rogen Scholl

Kandy Sandmer

Walter A

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.



Report Date Page 1 of 1



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

| Battelle Memorial Institute | Attn: David Conner | | |
|------------------------------------------|-----------------------|--|--|
| 3990 Old Town Ave | Phone: (818) 393-2808 | | |
| San Diego, CA 92110 | Fax: (614) 458-6641 | | |
| Job#: G005862/JPL Groundwater Monitoring | · · · | | |
| Alpha Analytical Number: BMI09080502-02A | Sampled: 08/04/09 | | |
| Client I.D. Number: MW-25-4 | Received: 08/05/09 | | |

Analyzed: 08/14/09

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting Li | mit |
|----|--------------------------------|---------------|-----------|-------|----|----------------------------------|---------------|--------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | µg/L |
| з | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m,p-Xylene | ND | 0.50 | μg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | μg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | μg/L |
| 8 | Dichloromethane | ND | 1.0 | μg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | μg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | μg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chloroform | ND | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBC | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthaiene | ND | 2.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 106 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 101 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 86 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | | | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Rogen Scholl

Kundg Danlmer

Walter Acrihan

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

8/18/09

Report Date

Page 1 of 1



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

| Battelle Memorial Institute |
|------------------------------------------|
| 3990 Old Town Ave |
| San Diego, CA 92110 |
| Job#: G005862/JPL Groundwater Monitoring |
| |

Alpha Analytical Number: BMI09080502-03A Client I.D. Number: MW-25-3

| Attn: | David Conner |
|--------|----------------|
| Phone: | (818) 393-2808 |
| Fax: | (614) 458-6641 |

Sampled: 08/04/09 Received: 08/05/09

Analyzed: 08/14/09

| Volatile | Organics | bv | GC/MS |
|-----------|----------|----|---------|
| · oracine | organieo | 0, | 00,1110 |

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Re | porting Li | mit |
|----|--------------------------------|---------------|-----------|-------|----|-----------------------------------|---------------|-----|------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | μg/L | 37 | Chlorobenzene | ND | | 0.50 | µg/L |
| З | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m,p-Xylene | ND | | 0.50 | µg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | | 0.50 | µg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | | 0.50 | µg/L |
| 16 | Chloroform | ND | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | | 0.50 | μg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | μg/L | 59 | 1,2-Dibromo-3-chloropropane (DBCF | P) ND | | 2.5 | μg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | | 2.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | | 1.0 | μg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 188 | S55 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 92 | | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | μg/L | 66 | Surr: 4-Bromofluorobenzene | 76 | | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | μg/L | | | | | | |
| 33 | Dibromochloromethane | ND | 0.50 | μg/L | | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | μg/L | | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | μg/L | | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

S55 = Surrogate recovery was above laboratory acceptance limits.

ND = Not Detected

Roger Scholl

Kandy Sandner

Walter Hiridman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

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255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

| Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Job#: G005862/JPL Groundwater Monitoring | Attn: David Conner Phone: (818) 393-2808 Fax: (614) 458-6641 |
|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Alpha Analytical Number: BMI09080502-04A | Sampled: 08/04/09 |
| Client I.D. Number: MW-25-2 | Received: 08/05/09 |

Volatile Organics by GC/MS

Analyzed: 08/14/09

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting L | imit |
|----|--------------------------------|---------------|-----------|-------|----|----------------------------------|---------------|-------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | μg/L | 37 | Chlorobenzene | ND | 0.50 | μg/L |
| З | Vinyl chloride | ND | 0.50 | μg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | μg/L | 39 | m,p-Xylene | ND | 0.50 | μg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | μg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | μg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | μg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | μg/L |
| 16 | Chloroform | ND | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | μg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | μg/L | 56 | 4-Isopropyitoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | μg/L | 59 | 1,2-Dibromo-3-chloropropane (DBC | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 2.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | μg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 106 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | μg/L | 65 | Surr: Toluene-d8 | 101 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 88 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | I. | · · · | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Danlmen

Walter Hirihm

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

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8/18/09

Report Date Page 1 of 1



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Job#: G005862/JPL Groundwater Monitoring

Alpha Analytical Number: BMI09080502-05A Client I.D. Number: MW-25-1 Attn: David Conner Phone: (818) 393-2808 Fax: (614) 458-6641

Sampled: 08/04/09 Received: 08/05/09 Analyzed: 08/15/09

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting L | imit |
|----|--------------------------------|---------------|-----------|-------|----|----------------------------------|---------------|-------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | µg/L |
| З | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | μg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m,p-Xylene | ND | 0.50 | µg/L |
| 5 | Bromomethane | ND | 1.0 | μg/L | 40 | Bromoform | ND | 0.50 | μg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | μg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | μg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | μg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | μg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | μg/L | 45 | Isopropylbenzene | ND | 0.50 | μg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | μg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | μα/L | 47 | n-Propylbenzene | ND | 0.50 | μg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | μg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | μg/L |
| 15 | Bromochloromethane | ND | 0.50 | μα/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | μg/L |
| 16 | Chloroform | 0.62 | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | μg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | μg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | μg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | μg/L | 53 | sec-Butylbenzene | ND | 0.50 | μg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | μg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | μg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | μg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | μg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | μg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | μg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | μg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBC | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | 1.2 | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 2.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | μg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 111 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | μg/L | 65 | Surr: Toluene-d8 | 101 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 87 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | · | | |
| 33 | Dibromochloromethane | ND | 0.50 | μg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | μg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Walter A

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

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Report Date Page 1 of 1



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Job#: G005862/JPL Groundwater Monitoring

Alpha Analytical Number: BMI09080502-06A Client I.D. Number: EB-11-8/4/09 Attn: David Conner Phone: (818) 393-2808 Fax: (614) 458-6641

Sampled: 08/04/09

Received: 08/05/09 Analyzed: 08/14/09

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting Li | mit |
|----|--------------------------------|---------------|-----------|-------|----|----------------------------------|---------------|--------------|-------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | μg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | μg/L | 37 | Chlorobenzene | ND | 0.50 | µg/L |
| з | Vinyl chłoride | ND | 0.50 | μg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | μg/L | 39 | m,p-Xylene | ND | 0.50 | μg/L |
| 5 | Bromomethane | ND | 1.0 | μg/L | 40 | Bromoform | ND | 0.50 | µg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | μg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | μg/L | 42 | o-Xylene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | μg/L |
| 16 | Chioroform | ND | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | _µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | μg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | μg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBC | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 2.0 | μg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 104 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 100 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 92 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | | | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Santur

lter 4

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

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8/18/09

Report Date Page 1 of 1



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

| Battelle Memorial Institute | Attn: 1 |
|------------------------------------------|----------|
| 3990 Old Town Ave | Phone: (|
| San Diego, CA 92110 | Fax: (|
| Job#: G005862/JPL Groundwater Monitoring | |
| Alpha Analytical Number: BMI09080502-074 | Sample |

Alpha Analytical Number: BMI09080502-07A Client I.D. Number: TB-11-8/4/09

| Attn: | David Conner |
|--------|----------------|
| Phone: | (818) 393-2808 |
| Fax: | (614) 458-6641 |

Sampled: 08/04/09 Received: 08/05/09 Analyzed: 08/07/09

Volatile Organics by GC/MS

| | | | | | | · · · · · · · · · · · · · · · · · · · | | | |
|----|--------------------------------|-----------------|-----------|-------|----|---------------------------------------|---------------|-------------|------|
| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting L | imit |
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | µg/L |
| з | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m,p-Xylene | ND | 0.50 | µg/L |
| 5 | Bromomethane | ND | 1.0 | μg/L | 40 | Bromoform | ND | 0.50 | µg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chloroform | ND | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | μg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBC | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 2.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 75 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 122 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 100 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | μg/L | | | | | |
| 33 | Dibromochloromethane | [·] ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | μg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | μg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Dandmer

Walter Arihm

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

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Report Date Page 1 of 1



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

| Battelle Memorial Institute |
|------------------------------------------|
| 3990 Old Town Ave |
| San Diego, CA 92110 |
| Job#: G005862/JPL Groundwater Monitoring |

Alpha Analytical Number: BMI09080502-08A Client I.D. Number: MW-26-2

| Attn: | David Conner |
|--------|----------------|
| Phone: | (818) 393-2808 |
| Fax: | (614) 458-6641 |
| | |

Sampled: 08/04/09 Received: 08/05/09

Analyzed: 08/15/09

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting L | imit |
|----|--------------------------------|---------------|-----------|-------|----|-----------------------------------|---------------|-------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | • ND | 1.0 | μg/L | 37 | Chlorobenzene | ND | 0.50 | µg/L |
| 3 | Vinyl chloride | ND | 0.50 | μg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | μg/L | 39 | m,p-Xylene | ND | 0.50 | µg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | µg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | μg/L | 42 | o-Xylene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | μg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | μg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | μg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | μg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochioromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chloroform | ND | 0.50 | μg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | μg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | μg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | μg/L | 59 | 1,2-Dibromo-3-chloropropane (DBCI | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 2.0 | µg/Ľ |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | μg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | μg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 110 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 100 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 86 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | | | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | μg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Rogen Scholl

Kandy Sandmer

Walter Aridner

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

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Report Date Page 1 of 1



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

| Battelle Memorial Institute | Attn: David Conner |
|------------------------------------------|-----------------------|
| 3990 Old Town Ave | Phone: (818) 393-2808 |
| San Diego, CA 92110 | Fax: (614) 458-6641 |
| Job#: G005862/JPL Groundwater Monitoring | |
| Alpha Analytical Number: BMI09080502-09A | Sampled: 08/04/09 |
| Client I.D. Number: MW-26-1 | Received: 08/05/09 |
| | Analyzed: 08/15/09 |

Volatile Organics by GC/MS

| | _ | | | | | | | | |
|----|--------------------------------|---------------|-----------|-------|----|----------------------------------|---------------|--------------|------|
| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting Li | imit |
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | μg/L | 37 | Chlorobenzene | ND | 0.50 | µg/L |
| 3 | Vinyl chloride | ND | 0.50 | μg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | μg/L | 39 | m,p-Xylene | ND | 0.50 | µg/L |
| 5 | Bromomethane | ND | 1.0 | μg/L | 40 | Bromoform | ND | 0.50 | μg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | μg/L | 41 | Styrene | ND | 0.50 | μg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | μg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | μg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | μg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | isopropylbenzene | ND | 0.50 | μg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | μg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | μg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | μg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | μg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | μg/L |
| 16 | Chloroform | ND | 0.50 | μg/L | 51 | tert-Butylbenzene | ND | 0.50 | μg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | μg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | μg/L | 53 | sec-Butylbenzene | ND | 0.50 | μg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | μg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | μg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | μg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBC | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 2.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | μg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | μg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 106 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | μg/L | 65 | Surr: Toluene-d8 | 101 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | μg/L | 66 | Surr: 4-Bromofluorobenzene | 88 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | μg/L | | | | | |
| 33 | Dibromochloromethane | ND | 0.50 | μg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | μg/L | | | | | |
| 35 | Tetrachloroethene | 0.53 | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Sandmer Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

lter Acrihan Wa

8/18/09

Report Date

Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

Page 1 of 1



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

VOC Sample Preservation Report

Work Order: BMI09080502

Project: G005862/JPL Groundwater Monitoring

| Alpha's Sample ID | Client's Sample ID | Matrix | рН | |
|-------------------|--------------------|---------|----|--|
| 09080502-01A | MW-25-5 | Aqueous | 2 | |
| 09080502-02A | MW-25-4 | Aqueous | 2 | |
| 09080502-03A | MW-25-3 | Aqueous | 2 | |
| 09080502-04A | MW-25-2 | Aqueous | 2 | |
| 09080502-05A | MW-25-1 | Aqueous | 2 | |
| 09080502-06A | EB-11-8/4/09 | Aqueous | 2 | |
| 09080502-07A | TB-11-8/4/09 | Aqueous | 2 | |
| 09080502-08A | MW-26-2 | Aqueous | 2 | |
| 09080502-09A | MW-26-1 | Aqueous | 2 | |

8/18/09 Report Date



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

| Date: 17-Aug-09 | | QC Sumr | nary Report | | | Work Orde 09080502 | |
|---------------------------------|---------------------------------|------------------|------------------------------------------------|--------------|---------------------------------------|-----------------------------------------------|------|
| Method Blank File ID: 14 | | Type MBLK | Batch ID: 22492 | lethod 314.0 | | 08/06/2009 15:38 | |
| Sample ID: MB-2 Analyte | 2492 Units : μ Result | | ID: IC_3_090806A kVal_SpkRefVal %RE | EC LCL(ME) | Prep Date: JCL(ME) RPDRef | 08/06/2009 Val %RPD(Limit) | Qual |
| Perchlorate | ND | 1 | | , | · · · · · · · · · · · · · · · · · · · | | |
| Laboratory Fortif | ied Blank | Type L FB | Test Code: EPA M Batch ID: 22492 | lethod 314.0 | Analysis Date: | 08/06/2009 15:56 | |
| Sample ID: LFB-; Analyte | 22492 Units : µ Result | | ID: I C_3_090806A kVal_SpkRefVal %RE | EC LCL(ME) | Prep Date: JCL(ME) RPDRef | 08/06/2009 Val %RPD(Limit) | Qual |
| Perchiorate | 24.8 | 2 | 25 99 | 9 85 | 115 | | |
| Sample Matrix Sp File ID: 35 | ike | Type LFM | Test Code: EPA M Batch ID: 22492 | lethod 314.0 | Analysis Date: | 08/06/2009 22:04 | |
| Sample ID: 09080 Analyte | 0502-03ALFM Units : µ Result | | ID: I C_3_090806A kVal_SpkRefVal %RE | EC LCL(ME) | Prep Date: UCL(ME) RPDRef | 08/06/2009 Val %RPD(L imit) | Qual |
| Perchlorate | 34.4 | 2 | 25 9.105 10 | 1 80 | 120 | | |
| Sample Matrix Sp File ID: 36 | ike Duplicate | Type LFMD | Test Code: EPA M Batch ID: 22492 | lethod 314.0 | Analysis Date: | 08/06/2009 22:22 | |
| Sample ID: 0908 | 0502-03ALFMD Units : µ | g/L Run | ID: IC_3_090806A | | Prep Date: | 08/06/2009 | |
| Analyte | Result | PQL Sp | kVal SpkRefVal %R | EC LCL(ME) | UCL(ME) RPDRef | Val %RPD(Limit) | Qual |
| Perchlorate | 34.7 | 2 | 25 9.105 10 | 2 80 | 120 34.4 | 3 0.8(15) | |

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



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| Date: 17-Aug-09 | (| QC S | ummar | y Repor | t | | | | Work Ord 09080502 | |
|---------------------------------------------------------------------------------------------|-------------------------------|-------------|--------------------------|----------------------------------------------------------------------|------------|-----------------|----------------|---------------------|---------------------------------------------------|------------|
| Method Blank File ID: 081309.B\087SMPL.D\ Sample ID: MB-22512 | Units : mg/L | Type I | Ba | est Code: El atch ID: 225 P/MS_0908 | 12K | thod 200.8 | | /sis Date: Date: | 08/13/2009 22:44 08/10/2009 | |
| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qua |
| Chromium (Cr) | ND | 0.00 | 5 | | | | | | | |
| Laboratory Control Spike File ID: 081309.B\088_LCS.D\ Sample ID: LCS-22512 Analyte | Units : mg/L Result | Type I | Ba Run ID: I C | est Code: El atch ID: 225 P/MS_0908 SpkRefVal | 12K 13C | | Prep | Date: | 08/13/2009 22:49 08/10/2009 Val %RPD(Limit) | Qual |
| Chromium (Cr) | 0.0457 | 0.00 | 5 0.05 | | 91 | 80 | 120 | | | |
| Sample Matrix Spike File ID: 081309.B\092SMPL.D\ Sample ID: 09080502-03AMS Analyte | Units : mg/L Result | Type I | Ba Run ID: IC | est Code: El atch ID: 225 P/MS_0908 SpkRefVal | 12K 13C | | Prep | Date: | 08/13/2009 23:12 08/10/2009 Val %RPD(Limit) | Qual |
| Chromium (Cr) | 0.0531 | 0.00 | | | 106 | 80 | 120 | | | |
| Sample Matrix Spike Duplicate File ID: 081309.B\093SMPL.D\ Sample ID: 09080502-03AMSD | Units : mg/L | | Ba Run ID: IC | est Code: El atch ID: 225 P/MS_0908 | 12K 13C | | Prep | Date: | 08/13/2009 23:17 08/10/2009 | |
| Analyte Chromium (Cr) | Result 0.0618 | PQL 0.00 | | SpkRefVal 0 | | 5 LCL(ME) 80 | UCL(ME) 120 | 0.053 | Val %RPD(Limit) 13 15.1(20) | Qual M1 |

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Alpha uses descriptive data qualifier flags, which could be replaced with either a DOD Q or J flag.

M1 = Matrix spike recovery was high, the method control sample recovery was acceptable.



| Date: 18-Aug-09 | (| QC Si | ummary Report | | Work Orde 09080502 | |
|--------------------------------------------------------|--------------|------------|-------------------------------------------------------|------------|------------------------------|------|
| Method Blank File ID: 09081411.D | | Туре N | Batch ID: MS15W0814M | - | 08/14/2009 15:40 | |
| Sample ID: MBLK MS15W0814M Analyte | Units : µg/L | | Run ID: MSD_15_090814A SpkVal SpkRefVal %REC LCL(I | Prep Date: | 08/14/2009 | Qual |
| Dichlorodifluoromethane | Result | PQL | | | | Qual |
| Chloromethane | ND ND | 0.5 1 | | | | |
| Vinyl chloride | ND | 0.5 | | | | |
| Chloroethane | ND | 0.5 | | | | |
| Bromomethane | ND | 1 | | | | |
| Trichlorofluoromethane | ND ND | 0.5 0.5 | | | | |
| Dichloromethane | ND | 0.5 | | | | |
| Freon-113 | ND | 0.5 | | | | |
| trans-1,2-Dichloroethene | ND | 0.5 | | | | |
| Methyl tert-butyl ether (MTBE) 1,1-Dichloroethane | ND | 0.5 | | | | |
| 2-Butanone (MEK) | ND ND | 0.5 10 | | | | |
| cis-1,2-Dichloroethene | ND | 0.5 | | | | |
| Bromochloromethane | ND | 0.5 | | | | |
| Chloroform | ND | 0.5 | | | | |
| 2,2-Dichloropropane 1,2-Dichloroethane | ND ND | 0.5 0.5 | | | | |
| 1,1,1-Trichloroethane | ND | 0.5 | | | | |
| 1,1-Dichloropropene | ND | 0.5 | | | | |
| Carbon tetrachloride | ND | 0.5 | | | | |
| Benzene Dibromomethane | ND ND | 0.5 0.5 | | | | |
| 1,2-Dichloropropane | ND | 0.5 | | | | |
| Trichloroethene | ND | 0.5 | | | | |
| Bromodichloromethane | ND | 0.5 | | | | |
| 4-Methyl-2-pentanone (MIBK) cis-1,3-Dichloropropene | ND ND | 2.5 | | | | |
| trans-1,3-Dichloropropene | ND | 0.5 0.5 | | | | |
| 1,1,2-Trichloroethane | ND | 0.5 | | | | |
| Toluene | ND | 0.5 | | | | |
| 1,3-Dichloropropane Dibromochloromethane | ND ND | 0.5 | | | | |
| 1,2-Dibromoethane (EDB) | ND | 0.5 1 | | | | |
| Tetrachloroethene | ND | 0.5 | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.5 | | | | |
| Chlorobenzene | ND | 0.5 | | | | |
| Ethylbenzene m,p-Xylene | ND ND | 0.5 0.5 | | | | |
| Bromoform | ND | 0.5 | | | | |
| Styrene | ND | 0.5 | | | | |
| o-Xylene | ND | 0.5 | | | | |
| 1,1,2,2-Tetrachloroethane 1,2,3-Trichloropropane | ND ND | 0.5 1 | | | | |
| Isopropylbenzene | ND | 0.5 | | | | |
| Bromobenzene | ND | 0.5 | | | | |
| n-Propylbenzene | ND | 0.5 | | | | |
| 4-Chlorotoluene 2-Chlorotoluene | ND ND | 0.5 0.5 | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.5 | | | | |
| tert-Butylbenzene | ND | 0.5 | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.5 | | | | |
| sec-Butylbenzene 1,3-Dichlorobenzene | ND ND | 0.5 | | | | |
| 1,4-Dichlorobenzene | ND | 0.5 0.5 | | | | |
| 4-isopropyltoluene | ND | 0.5 | | | | |
| 1,2-Dichlorobenzene | ND | 0.5 | | | | |
| n-Butylbenzene 1,2-Dibromo-3-chloropropane (DBCP) | ND | 0.5 | | | | |
| 1,2,4-Trichlorobenzene | ND ND | 2.5 1 | | | | |
| Naphthalene | ND | 1 | | | | |
| Hexachlorobutadiene | ND | 1 | | | | |
| 1,2,3-Trichlorobenzene | ND | 1 | 10 100 7 | 100 | | |
| Surr: 1,2-Dichloroethane-d4 Surr: Toluene-d8 | 10.3 10 | | 10 103 70 10 100 70 | | | |
| | IU | | 10 100 70 | , 100 | | |



| Sum - H-Borndilucrobenzone 6.93 10 89 70 130 Laboratory Control Spike File 10: 060408D Type LCS Test Code: Batch ID: MSTSW0814M Analysis Date: 06/14/2009 14:16 Sample ID: LCS MSTSW0814M Units: ygL Run ID: MSD. 15_00014A Prop Date:: 06/14/2009 14:16 Analyte Result ID: MSD. 15_00014A File Code: Status POL Status POL Status Code: 14:17 Code: 14:17 Code: 14:17 POL Status Code: 14:17 Code: 14:17 </th <th>Date: 18-Aug-09</th> <th>(</th> <th>QC Sun</th> <th>nmary R</th> <th>eport</th> <th></th> <th></th> <th>Work Ord 09080502</th> <th></th> | Date: 18-Aug-09 | (| QC Sun | nmary R | eport | | | Work Ord 09080502 | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------|----------|-------------|---------------|--------|-----------------|-----------------------------|-----|
| Fiel D: 00091408.D Each ID: MST.Y00914M Analysic Date: 001/02009 14:1242009 Analysic LCS MSTSW00914M POL SpkVal SpkV | Surr: 4-Bromofluorobenzene | 8.93 | | 10 | 89 | 70 | 130 | | |
| Analysis Result POL SpxMail SpxRerVal %REC LCL(ME) UCL(ME) PPDRerVal %RPD(Limit) Dichlorodiflucromethane 12.5 1 10 12.6 70 130 Uning charing 11.2 1 10 12.7 130 Disconserbane 11.2 1 10 12.7 130 Disconserbane 12.2 10 132.7 130 130 Trichloroflucromethane 12.2 10 166.7 130 130 Dichloromethane 10.8 2 10 166.7 130 130 Dichloromethane 11.4 1 10 114.7 70 130 Dichloromethane 10.8 2 10 116.7 70 130 Dichloromethane 10.7 1 10 117.7 130 130 Dichloromethane 11.2 1 10 117.7 130 130 Dichloromethane 11.2 1 10 117.7 130 130 | | | Type LCS | | | IM | Analysis Da | te: 08/14/2009 14:16 | |
| Dicksondilucronethane 125 1 10 125 70 130 Viny Idholide 11.4 1 10 114 70 130 Viny Idholide 11.4 1 10 114 70 130 Bromomethane 13.2 2 10 132 70 130(130) Tichlorothoromethane 12 1 10 110 70 130 Dichoromethane 10.6 2 10 132 70 130 Dichoromethane 11.4 1 10 114 70 130 Dichoromethane 11.2 1 10 114 70 130 Itals 1.2 Dichloroethane 11.2 1 10 112 70 130 L2-Dichloroptane 12.5 1 10 112 70 130 L2-Dichloroptane 11.2 10 112 70 130 L2-Dichloroptane 11.2 10 112 70 <th>Sample ID: LCS MS15W0814M</th> <th>Units : µg/L</th> <th>Ru</th> <th>un ID: MSD_</th> <th>15_090814A</th> <th></th> <th>Prep Date:</th> <th>08/14/2009</th> <th></th> | Sample ID: LCS MS15W0814M | Units : µg/L | Ru | un ID: MSD_ | 15_090814A | | Prep Date: | 08/14/2009 | |
| Chlocmethane 10.8 2 10 108 70 130 Chlocestane 11.4 10 112 70 130 Ernomethane 13.2 2 10 112 70 130 Trichicordhuromethane 12 1 10 120 70 130 Linchicordhuromethane 11 1 10 100 70 130 Linchicordhuromethane 11.4 1 10 114 70 130 Linchicordhuromethane 11.4 1 10 114 70 130 Linchicordhuromethane 11.4 1 10 114 70 130 Linchicordhuromethane 11.5 10 116 70 130 Linchicordhuromethane 11.5 1 10 117 70 130 Linchicordhane 11.2 1 10 117 70 130 Linchicordhane 11.5 1 10 117 | Analyte | Result | PQL | SpkVal Spk | RefVal %REC I | LCL(ME | E) UCL(ME) RPDF | RefVal %RPD(Limit) | Qua |
| Chiloromethane Chiloromethane 10.4 10 112 70 130 Chiloredtane 11.2 1 10 112 70 130 Erronmethane 12.2 1 10 120 70 130(130) Trichicorducionethane 12.2 10 106 70 130 Dichicoramethane 10.4 10 10 70 130 Dichicoramethane 10.4 10 100 70 130 Chiloromethane 10.4 10 112 10 102 70 130 Chiloroform 10.6 1 10 114 70 130 L'ADchiloroptethane 11.5 1 10 115 70 130 L'ADchiloroptethane 11.5 1 10 117 70 130 L'ADchiloroptethane 11.5 1 10 117 70 130 L'ADchiloroptethane 11.5 1 10 111 70 <td>Dichlorodifluoromethane</td> <td>12.5</td> <td>1</td> <td>10</td> <td>125</td> <td>70</td> <td>130</td> <td></td> <td></td> | Dichlorodifluoromethane | 12.5 | 1 | 10 | 125 | 70 | 130 | | |
| Chicoethane 11.2 1 10 112 70 130 Trichioofluoromethane 12 1 10 120 70 130 1.1.Ochioromethane 11 1 10 100 70 130 Dichforomethane 10.6 2 10 106 70 130 Trichiorofethane 11.4 10 110 70 130 Trichiorofethane 11.2 1 10 112 70 130 Calcorofethane 11.2 1 10 112 70 130 Calcorofethane 11.2 1 10 116 70 130 Calcorofethane 11.2 1 10 112 70 130 Calcorofethane 10.7 1 10 117 70 130 Calcorofethane 11.2 1 10 111 70 130 L2-Dichoromethane 11.2 1 10 111 70 | | | 2 | 10 | | | | | |
| Bromomethane 13.2 2 10 13.2 70 1300 1.1-Dichlorosthene 11 1 10 10 70 130 1.1-Dichlorosthene 11 1 10 10 70 130 trans-1.2-Dichlorosthene 11.4 1 10 114 70 130 trans-1.2-Dichlorosthene 11.4 1 10 114 70 130 cist-2.2-Dichlorosthene 11.2 10 112 70 130 cist-2.2-Dichlorosthene 12.2 10 105 70 130 2.2-Dichlorosthene 11.2 10 112 70 130 1.1-Dichlorosthene 11.2 10 112 70 130 1.1.1-Trichlorosthene 11.2 10 112 70 130 1.1.1 10 111 70 130 130 1.1.2 10 112 70 130 130 1.1.2 10 | • | | | | | | | | |
| Thichicrofusion effane 12 1 10 120 70 130 Dichicromethane 16 2 10 106 70 130 Trais 12-Dichicroethane 114 1 10 114 70 130 Metry terbudy ether (MTBE) 11 0.5 10 110 70 130 Cis 12-Dichicroethane 11.2 1 10 112 70 130 Cis 12-Dichicroethane 12.5 1 10 126 70 130 Chicroform 16.6 1 10 106 70 130 12-Dichicroethane 11.7 10 117 70 130 12-Dichicroprogene 11.2 10 112 70 130 11-Dichicroprogene 11.1 10 111 70 130 12-Dichicroprogene 11.1 10 111 70 130 12-Dichicroprogene 11.1 10 111 70 130 <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td>L51</td> | | | | - | | | | | L51 |
| 1.1-Dichloroethene 11 1 10 70 130 Uchloroethene 11.4 1 10 114 70 130 trans.1.2-Dichloroethene 11.9 11 0.5 10 110 70 130 1.1-Dichloroethane 11.2 10 112 70 130 Bromochloromethane 11.4 1 10 114 70 130 2.2-Dichloroethane 12.5 1 10 125 70 130 2.2-Dichloroethane 11.5 1 10 117 70 130 2.2-Dichloroethane 11.2 10 117 70 130 1.1.1-Dichloroethane 11.2 10 117 70 130 2.2-Dichloroethane 11.1 10 117 70 130 1.1.1-Dichloroethane 11.2 10 112 70 130 Dioroomethane 11.2 10 111 70 130 Dioroomethane 11.2 10 112 70 130 Dioroome | | | | | | | | | LUT |
| Dichloromethane 106 2 10 146 10 147 70 130 Methy Iderburyl ether UNPERD 11 0.5 10 100 70 130 1.1-Dichloroethane 11.2 1 0 114 70 130 Chiotoform 10.6 1 0 114 70 130 Chiotoform 10.6 1 0 114 70 130 Chiotoform 10.6 1 0 116 70 130 1.2-Dichloroethane 11.5 10 115 70 130 1.1-Dichloroptopane 11.2 1 0 117 70 130 1.1-Dichloroptopane 11.1 1 0 111 70 130 1.2-Dichloroptopane 11.1 1 0 111 70 130 1.2-Dichloroptopane 11.2 1 0 112 70 130 1.2-Dichloroptopane 10.4 1 | | | | - | | | | | |
| trans-1.2-Dichlorosthene 11.4 1 10 114 70 130 1.1-Dichlorosthane 10.9 1 0 109 70 130 5:1-2-Dichlorosthane 11.4 1 0 114 70 130 Bromochloromethane 11.4 1 0 114 70 130 2.2-Dichlorosthane 12.5 1 0 125 70 130 2.2-Dichlorosthane 11.5 1 0 117 70 130 1.1-Dichlorosthane 11.2 10 117 70 130 2.2-Dichlorosthane 11.2 10 117 70 130 Carbon tetrachloride 11.7 1 0 117 70 130 Carbon tetrachloride 11.1 10 111 70 130 130 Dibromoreshane 11.1 10 111 70 130 130 Dibromoreshane 11.1 10 111 70 130 130 L2-Dichloropropene 10.2 10 102 </td <td>,</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | , | | | | | | | | |
| 1,1-Dichloroethane 10,9 1 10 109 70 130 Bromochloromethane 11,4 1 10 114 70 130 Bromochloromethane 12,5 1 10 126 70 130 2.2-Dichloropropane 12,5 1 10 125 70 130 1.1.1-Trichloroethane 11,2 10 112 70 130 Carbon tetrachloride 11,7 1 10 117 70 130 Dibromomethane 11,2 10 112 70 130 Dibromotethane 11,1 10 111 70 130 Dibromotethane 11,1 10 111 70 130 Trichloroethane 11,1 10 111 70 130 Trichloroethane 10,4 10 104 70 130 Trichloroethane 10,2 10 102 70 130 1,3-Dichloropropane 10,2 10 104 70 130 1,1-2-Trichloroethane | | | | | | | | | |
| cis-1.2-Dichloroethane 11.2 1 10 11.4 70 130 Chloroform 10.6 10 106 70 130 Chloroform 10.6 10 106 70 130 1.2-Dichloropropane 12.5 10 10.7 70 130 1.2-Dichloropropane 11.2 10 11.7 70 130 1.1-Dichloropropane 11.2 10 11.7 70 130 Cahon tetraknolide 11.7 10 11.7 70 130 Benzene 11.1 10 111 70 130 12-Dichloropropane 11.1 10 111 70 130 12-Dichloropropane 11.1 10 111 70 130 1.2-Dichloropropane 11.1 10 112 70 130 Chaon tetrakene 11.2 10 104 70 130 I-1.3-Dichloropropane 10.2 10 104 70 | | | 0.5 | | | | | | |
| Bromochloromethane 11.4 1 10 11.4 70 130 2.2-Dichloropropane 12.5 1 10 125 130 2.2-Dichloropropane 12.5 1 10 125 70 130 1.1-Trichloroethane 11.5 1 10 115 70 130 Carbon tetrachloride 11.7 1 10 112 70 130 Carbon tetrachloride 11.7 1 0 112 70 130 Dibromomethane 11.1 0 111 70 130 Dibromomethane 11.2 1 0 112 70 130 L2-Dichloropropene 11.1 10 111 70 130 14 L3-Dichloropropene 10.2 10 102 70 130 Tarkin-Josoftenane 10.2 10 102 70 130 L2-Dichloropropene 10.2 10 102 70 130 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<> | | | | | | | | | |
| Chloroform 10.6 1 10 106 70 130 2.2-Dichloroporpane 12.5 1 10 107 70 130 1.2-Dichloroporpane 11.5 1 10 107 70 130 1.1-Dichloroporpane 11.2 1 10 112 70 130 Carbon tetrachloride 11.7 1 10 117 70 130 Dibromomethane 11.1 1.5 10 111 70 130 1.2-Dichloropropane 11.1 10 111 70 130 1.2-Dichloropropane 11.1 10 111 70 130 1.2-Dichloropropane 10.2 1 10 112 70 130 1.2-Dichloropropane 10.2 1 10 102 70 130 1.2-Dichloropropane 10.2 10 104 70 130 1.12-Tichloropropane 10.2 10 104 70 1 | | | • | | | | | | |
| 2.2-Dichloropopane 12.5 1 10 125 10 126 130 1.1-Dichloropopane 11.5 10 115 10 112 70 130 Carbon tetrachloride 11.7 10 117 70 130 Carbon tetrachloride 11.7 10 117 70 130 Dibromorethane 11.1 0.5 10 111 70 130 Dibromorethane 11.1 10 111 70 130 Tickloroptopane 11.1 10 111 70 130 Dibromorethane 11.2 10 112 70 130 Tickloroptopene 10.2 10 102 70 130 Tarsh-3.Dichloroptopene 10.2 10 104 70 130 1.2-Tickhoroptenane 9.95 1 10 104 70 130 Toluene 10.4 0.5 10 104 70 130 L2-Dioromochhane (EDB) 22.3 2 20 111 70 130 | | | | | | | | | |
| 1.2-Dichloroberhane 10.7 1 10 107 70 130 1.1-Dichloropropene 11.2 10 112 70 130 1.1-Dichloropropene 11.2 10 117 70 130 Carbon tetrachonide 11.1 0.5 10 111 70 130 Dibromomethane 11.2 1 10 112 70 130 Dibromomethane 11.1 1 10 111 70 130 Trichloroptopane 11.1 1 10 111 70 130 Trichloroptopene 10.2 1 10 104 70 130 Toluere 10.4 1 10 104 70 130 1.3-Dichloropropene 10.2 1 10 104 70 130 Dibromochhane (EDB) 22.3 2 20 111 70 130 Dibromochhane (EDB) 22.3 2 20 111 70 130 1.2-Dithoropthane 10.2 0.5 10 104 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | | | |
| 1,1-Tichkhoroefhane 11.5 1 10 115 70 130 Carbon tetrachkoride 11.7 1 10 117 70 130 Carbon tetrachkoride 11.1 10 117 70 130 Dibromorethane 11.2 10 112 70 130 Dibromorethane 11.1 10 112 70 130 Dibromorethane 11.1 10 112 70 130 Grondochhoroenthane 11.1 10 112 70 130 Trichkoroethane 10.2 10 102 70 130 trans: 13-Dichkoropropene 10.2 10 104 70 130 Tolkene 10.4 0.5 10 104 70 130 Tolkene 10.2 1 10 102 70 130 Dibromochkoromethane (EDB) 2.2.3 2.0 1111 70 130 L2-Diorbonethane (EDB) 2.3.2 2.0 111 70 130 Dibromochkoromethane 10.8< | | | - | | | | | | |
| Carbon tetrachloride 11.7 1 10 117 70 130 Dibromomethane 11.2 1 0 111 70 130 1.2-Dichloropropane 11.1 1 10 111 70 130 Tichloroethene 11 1 10 111 70 130 Bromodichloromethane 11.1 1 10 112 70 130 Si-3.Dichloropropene 10.2 1 10 102 70 130 Toluene 10.4 0.5 10 104 70 130 Dibromochloromethane 9.95 1 10 102 70 130 1.2-Ditorhorethane (EDB) 22.3 2 20 111 70 130 1.2-Ditorhorethane (EDB) 22.3 2 20 111 70 130 1.1.1.2-Tetrachloroethane 10.8 10 108 70 130 1.1.1.2-Tetrachloroethane 10.4 0.5 10 107 130 Diorbenzene 10.7 0.5 <td< td=""><td></td><td></td><td>-</td><td></td><td></td><td>70</td><td></td><td></td><td></td></td<> | | | - | | | 70 | | | |
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| Trichtoroethane 11 1 10 110 70 130 Bromodichhormethane 11.1 1 10 111 70 130 trans-1.3-Dichloropropene 10.2 1 10 102 70 130 Toluene 10.4 1 10 104 70 130 Toluene 10.4 10 104 70 130 Dibromochloroptane 9.5 1 10 102 70 130 L2-Dibromochloromethane 9.55 1 10 102 70 130 L2-Dibromochloromethane 11.2 10 108 70 130 L2-Dibromochloromethane 11.2 10 108 70 130 L1.1.2-Tetrachioroethane 10.8 10 108 70 130 L1.1.2-Tetrachioroethane 10.2 0.5 10 104 70 130 Styrene 0.4 0.5 10 107 70 130 Styrene 9.66 10 97 70 130 | | | | | | | | | |
| cis1.3-Dichloropropene 11.1 1 10 111 70 130 trans-1.3-Dichloropropene 10.2 1 10 104 70 130 Toluene 10.4 1 10 104 70 130 J.2-Dichloropropane 10.2 1 10 104 70 130 Dibromochloromethane 9.95 1 10 102 70 130 J.2-Dichomothane (EDB) 22.3 2 20 111 70 130 Tetrachloroethane 11.2 1 10 108 70 130 Chiorobenzene 10.1 10 101 70 130 Ethylbenzene 10.2 0.5 10 104 70 130 Styrene 10.7 0.5 10 104 70 130 o-Xylene 10.7 0.5 10 107 70 130 J.2.3-Trichloropropane 9.84 1 10 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | | | |
| trans-13-Dichloropropene10.211010.2701301,1.2-Trichloroethane10.4110104701301.3-Dichloropropane10.2110104701301.3-Dichloropropane10.211010070130Dibromochhane (EDB)22.3220111701301.2-Dibromoethane (EDB)22.322011170130Tetrachloroethane10.811010870130Chlorobenzene10.111010170130Ethylbenzene10.20.51010270130Bromoform9.131109170130Styrene8.521108570130Styrene9.66110770130Lasoropylbenzene19.22209670130Styrene9.841109970130J.2-Zhrichloropropane9.841109970130Stromelybenzene9.971109970130J.3-Strinkhoropropane9.871109970130J.2-Zhrichloropropane9.881109970130J.3-Strinkhoropropane9.871109970130J.3-Trinkhoropropane9.871109570< | | 11.2 | 1 | 10 | 112 | 70 | 130 | | |
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| Isopropylbenzene9.841109870130Bromobenzene9.881109970130n-Propylbenzene9.9711099.7701304-Chlorotoluene9.9111099701302-Chlorotoluene9.8711099701302-Chlorotoluene9.8711095701302-Chlorotoluene9.5411095701301,3,5-Trimethylbenzene9.531109570130tert-Butylbenzene9.611096701301,3-Dichlorobenzene9.611096701301,3-Dichlorobenzene9.7911098701301,4-Dichlorobenzene9.7911096701301,4-Dichlorobenzene9.5511096701301,2-Dichlorobenzene9.5511095701301,2-Dichlorobenzene9.5511095701301,2-Dibromo-3-chloropropane (DBCP)48.735097701301,2,4-Trichlorobenzene9.7521098701301,2,4-Trichlorobenzene9.7521096701301,2,3-Trichlorobenzene9.412109470130 | | | | | | | | | |
| Bromobenzene9.881109970130n-Propylbenzene9.9711099.7701304-Chlorotoluene9.9111099701302-Chlorotoluene9.8711099701301,3,5-Trimethylbenzene9.5411095701301,2,4-Trimethylbenzene9.5311095701301,2,4-Trimethylbenzene9.611096701301,3-Dichlorobenzene9.9911096701301,3-Dichlorobenzene9.9911096701301,4-Dichlorobenzene9.7911098701301,2-Dichlorobenzene9.5511095701301,2-Dichlorobenzene9.4511095701301,2-Dichlorobenzene9.7511095701301,2-Dichlorobenzene9.7511095701301,2-Dibromo-3-chloropropane (DBCP)48.735097701301,2,4-Trichlorobenzene9.7521098701301,2,4-Trichlorobenzene9.7521097701301,2,3-Trichlorobenzene9.7521098701301,2,3-Trichlorobenzene9.412109470130 | | | | | | | | | |
| n-Propylbenzene9.9711099.7701304-Chlorotoluene9.9111099701302-Chlorotoluene9.8711099701301,3,5-Trimethylbenzene9.541109570130tert-Butylbenzene9.5311095701301,2,4-Trimethylbenzene9.611096701301,2,4-Trimethylbenzene9.611096701301,2,4-Trimethylbenzene9.611096701301,3-Dichlorobenzene9.9911098701301,4-Dichlorobenzene9.7911098701301,4-Dichlorobenzene9.5911095701301,2-Dichlorobenzene9.5511095701301,2-Dichlorobenzene9.5511095701301,2-Dichlorobenzene9.5511095701301,2-Dibromo-3-chloropropane (DBCP)48.735097701301,2,4-Trichlorobenzene9.7521098701301,2,4-Trichlorobenzene9.7521098701301,2,3-Trichlorobenzene9.412109470130 | | | | | | | | | |
| 4-Chlorotoluene9.9111099701302-Chlorotoluene9.8711099701301,3,5-Trimethylbenzene9.541109570130tert-Butylbenzene9.5311095701301,2,4-Trimethylbenzene9.2111092701301,2,4-Trimethylbenzene9.611096701301,3-Dichlorobenzene9.9911099.9701301,4-Dichlorobenzene9.7911098701301,4-Dichlorobenzene9.5911095701301,2-Dichlorobenzene9.4511095701301,2-Dichlorobenzene9.5911095701301,2-Dichlorobenzene9.5511095701301,2-Dichlorobenzene9.5511095701301,2-Dichlorobenzene9.5511095701301,2-Dibromo-3-chloropropane (DBCP)48.735097701301,2,4-Trichlorobenzene9.7521098701301,2,3-Trichlorobutadiene19.322096701301,2,3-Trichlorobenzene9.412109470130 | | | | | | | | | |
| 1,3,5-Trimethylbenzene9,541109570130tert-Butylbenzene9,5311095701301,2,4-Trimethylbenzene9,211109270130sec-Butylbenzene9,611096701301,3-Dichlorobenzene9,9911099,9701301,4-Dichlorobenzene9,7911098701301,4-Dichlorobenzene9,5911096701301,2-Dichlorobenzene9,5911095701301,2-Dichlorobenzene9,5511095701301,2-Dibromo-3-chloropropane (DBCP)48.735097701301,2,4-Trichlorobenzene9,752109870130Naphthalene9,7521098701301,2,3-Trichlorobenzene9,412109470130 | 4-Chlorotoluene | | | | | | | | |
| tert-Butylbenzene9.5311095701301,2,4-Trimethylbenzene9.211109270130sec-Butylbenzene9.611096701301,3-Dichlorobenzene9.9911099.9701301,4-Dichlorobenzene9.7911098701301,4-Dichlorobenzene9.5911096701304-Isopropyltoluene9.5911095701301,2-Dichlorobenzene9.4511095701301,2-Dibromo-3-chloropropane (DBCP)48.735097701301,2,4-Trichlorobenzene9.752109770130Naphthalene9.7521098701301,2,3-Trichlorobenzene9.412109470130 | | | 1 | | | | | | |
| 1,2,4-Trimethylbenzene9,211109270130sec-Butylbenzene9,611096701301,3-Dichlorobenzene9,9911099,9701301,4-Dichlorobenzene9,7911098701304-Isopropyltoluene9,5911096701301,2-Dichlorobenzene9,451109570130n-Butylbenzene9,511095701301,2-Dibromo-3-chloropropane (DBCP)48.735097701301,2,4-Trichlorobenzene9,722109770130Naphthalene9,752109870130Hexachlorobutadiene19,322096701301,2,3-Trichlorobenzene9,412109470130 | | | | | | | | | |
| sec-Butylbenzene 9.6 1 10 96 70 130 1,3-Dichlorobenzene 9.99 1 10 99.9 70 130 1,4-Dichlorobenzene 9.79 1 10 98 70 130 4-Isopropyltoluene 9.59 1 10 96 70 130 1,2-Dichlorobenzene 9.45 1 10 95 70 130 n-Butylbenzene 9.5 1 10 95 70 130 1,2-Dibromo-3-chloropropane (DBCP) 48.7 3 50 97 70 130 1,2,4-Trichlorobenzene 9.72 2 10 97 70 130 Naphthalene 9.75 2 10 98 70 130 Hexachlorobutadiene 19.3 2 20 96 70 130 1,2,3-Trichlorobenzene 9.41 2 10 94 70 130 | | | | | | | | | |
| 1,3-Dichlorobenzene9.9911099.9701301,4-Dichlorobenzene9.7911098701304-Isopropyltoluene9.5911096701301,2-Dichlorobenzene9.451109570130n-Butylbenzene9.511095701301,2-Dibromo-3-chloropropane (DBCP)48.735097701301,2,4-Trichlorobenzene9.722109770130Naphthalene9.752109870130Hexachlorobutadiene19.322096701301,2,3-Trichlorobenzene9.412109470130 | | | | - | | | | | |
| 1,4-Dichlorobenzene9.7911098701304-Isopropyltoluene9.5911096701301,2-Dichlorobenzene9.451109570130n-Butylbenzene9.511095701301,2-Dibromo-3-chloropropane (DBCP)48.735097701301,2,4-Trichlorobenzene9.722109770130Naphthalene9.752109870130Hexachlorobutadiene19.322096701301,2,3-Trichlorobenzene9.412109470130 | | | | | | | | | |
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| 1,2-Dibromo-3-chloropropane (DBCP)48.735097701301,2,4-Trichlorobenzene9.722109770130Naphthalene9.752109870130Hexachlorobutadiene19.322096701301,2,3-Trichlorobenzene9.412109470130 | | | | | | | | | |
| 1,2,4-Trichlorobenzene9.722109770130Naphthalene9.752109870130Hexachlorobutadiene19.322096701301,2,3-Trichlorobenzene9.412109470130 | | | | | | | | | |
| Naphthalene9.752109870130Hexachlorobutadiene19.322096701301,2,3-Trichlorobenzene9.412109470130 | | | | | | | | | |
| Hexachlorobutadiene 19.3 2 20 96 70 130 1,2,3-Trichlorobenzene 9.41 2 10 94 70 130 | | | | | | | | | |
| 1,2,3-Trichlorobenzene 9.41 2 10 94 70 130 | • | | | | | | | | |
| Surr: 1.2-Dichloroethane-d4 0.07 to 0.07 to 10.07 | | | | | | | | | |
| | Surr: 1,2-Dichloroethane-d4 | 9.97 | | 10 | 99.7 | 70 | 130 | | |
| Surr: Toluene-d8 10 10 100 70 130 Surr: 4-Bromofluorobenzene 9.75 10 98 70 130 | | | | | | | | | |
| Surr: 4-Bromofluorobenzene 9.75 10 98 70 130 | Sun. 4-DIOMONUOIODENZENE | 9.75 | | 10 | 98 | 70 | 130 | | |

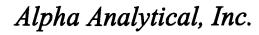


| Date: 18-Aug-09 | (| QC St | ımmary | v Report | | | | Work Ord 09080502 | |
|-------------------------------------------------|---------------------|------------|------------|--------------|-------------------|----------|------------|-----------------------------|------|
| Sample Matrix Spike | | Туре М | S Te | st Code: | | | | , | |
| File ID: 09081414.D | | | Ba | tch ID: MS15 | 5W08 ⁻ | 14M | Analysis I | Date: 08/14/2009 16:47 | |
| Sample ID: 09080502-03AMS | Units : µg/L | | Run ID: MS | D_15_09081 | 14 A | | Prep Date | e: 08/14/2009 | |
| Analyte | Result | PQL | SpkVal | SpkRefVal % | %REC | LCL(ME) | UCL(ME) RP | DRefVal %RPD(Limit) | Qual |
| Dichlorodifluoromethane | 47.3 | 2.5 | 50 | 0 | 95 | 13 | 167 | | |
| Chloromethane | 53.6 | 10 | 50 | 0 | 107 | 28 | 145 | | |
| Vinyl chloride Chloroethane | 59.7 53.4 | 2.5 2.5 | 50 50 | 0 0 | 119 107 | 43 39 | 134 154 | | |
| Bromomethane | 62.3 | 2.5 | 50 50 | 0 | 125 | 19 | 176 | | |
| Trichlorofluoromethane | 56.7 | 2.5 | 50 | 0 | 113 | 34 | 160 | | |
| 1,1-Dichloroethene | 50.2 | 2.5 | 50 | 0 | 100 | 60 | 130 | | |
| Dichloromethane trans-1,2-Dichloroethene | 51.4 52.4 | 10 2.5 | 50 50 | 0 0 | 103 105 | 68 63 | 130 130 | | |
| Methyl tert-butyl ether (MTBE) | 56.9 | 1.3 | 50 | Ő | 114 | 56 | 141 | | |
| 1,1-Dichloroethane | 51.4 | 2.5 | 50 | 0 | 103 | 61 | 130 | | |
| cis-1,2-Dichloroethene | 53.1 | 2.5 | 50 | 0 | 106 | 70 | 130 | | |
| Bromochloromethane Chloroform | 56.6 50.5 | 2.5 2.5 | 50 50 | 0 0 | 113 101 | 70 67 | 130 130 | | |
| 2,2-Dichloropropane | 55.5 | 2.5 | 50 50 | 0 | 111 | 30 | 152 | | |
| 1,2-Dichloroethane | 52.8 | 2.5 | 50 | Ō | 106 | 60 | 135 | | |
| 1,1,1-Trichloroethane | 53.4 | 2.5 | 50 | 0 | 107 | 59 | 137 | | |
| 1,1-Dichloropropene Carbon tetrachloride | 51.5 | 2.5 | 50 | 0 | 103 | 63 | 130 | | |
| Benzene | 53.9 52.2 | 2.5 1.3 | 50 50 | 0 0 | 108 104 | 50 67 | 147 130 | | |
| Dibromomethane | 56.6 | 2.5 | 50 | 0 | 113 | 69 | 133 | | |
| 1,2-Dichloropropane | 53.1 | 2.5 | 50 | Ō | 106 | 69 | 130 | | |
| Trichloroethene | 50.7 | 2.5 | 50 | 0 | 101 | 69 | 130 | | |
| Bromodichloromethane cis-1,3-Dichloropropene | 54.3 | 2.5 | 50 | 0 | 109 | 66 67 | 134 | | |
| trans-1,3-Dichloropropene | 53 49.7 | 2.5 2.5 | 50 50 | 0 0 | 106 99 | 63 66 | 130 131 | | |
| 1,1,2-Trichloroethane | 53.5 | 2.5 | 50 50 | 0 | 107 | 68 | 130 | | |
| Toluene | 47.9 | 1.3 | 50 | 0 | 96 | 66 | 130 | | |
| 1,3-Dichloropropane | 50.6 | 2.5 | 50 | 0 | 101 | 70 | 130 | | |
| Dibromochloromethane 1,2-Dibromoethane (EDB) | 48.8 110 | 2.5 10 | 50 100 | 0 0 | 98 110 | 70 70 | 130 130 | | |
| Tetrachloroethene | 49.6 | 2.5 | 100 50 | 0 | 99 | 61 | 130 | | |
| 1,1,1,2-Tetrachloroethane | 52.5 | 2.5 | 50 | õ | 105 | 70 | 130 | | |
| Chlorobenzene | 47.9 | 2.5 | 50 | 0 | 96 | 70 | 130 | | |
| Ethylbenzene m,p-Xylene | 47.1 | 1.3 | 50 | 0 | 94 | 68 | 130 | | |
| Bromoform | 48.5 46.3 | 1.3 2.5 | 50 50 | 0 0 | 97 93 | 64 64 | 130 138 | | |
| Styrene | 40.1 | 2.5 | 50 | õ | 80 | 69 | 130 | | |
| o-Xylene | 49.9 | 1.3 | 50 | 0 | 99.8 | 70 | 130 | | |
| 1,1,2,2-Tetrachloroethane | 50.2 | 2.5 | 50 | 0 | 100 | 65 | 131 | | |
| 1,2,3-Trichloropropane Isopropylbenzene | 97.4 45.1 | 10 2.5 | 100 50 | 0 0 | 97 90 | 70 64 | 130 138 | | |
| Bromobenzene | 48.2 | 2.5 | 50 50 | Ő | 96 | 70 | 130 | | |
| n-Propylbenzene | 45.8 | 2.5 | 50 | Ō | 92 | 66 | 132 | | |
| 4-Chlorotoluene | 46.7 | 2.5 | 50 | 0 | 93 | 70 | 130 | | |
| 2-Chlorotoluene 1,3,5-Trimethylbenzene | 46 | 2.5 | 50 | 0 | 92 89 | 70 | 130 | | |
| tert-Butylbenzene | 44.6 44.3 | 2.5 2.5 | 50 50 | 0 0 | 89 89 | 66 65 | 136 137 | | |
| 1,2,4-Trimethylbenzene | 43.6 | 2.5 | 50 | ŏ | 87 | 65 | 137 | | |
| sec-Butylbenzene | 44.5 | 2.5 | 50 | 0 | 89 | 66 | 134 | | |
| 1,3-Dichlorobenzene 1.4-Dichlorobenzene | 48.1 | 2.5 | 50 | 0 | 96 | 70 | 130 | | |
| 4-Isopropyltoluene | 47.4 45 | 2.5 2.5 | 50 50 | 0 0 | 95 90 | 70 66 | 130 137 | | |
| 1,2-Dichlorobenzene | 46.8 | 2.5 | 50 | 0 | 94 | 70 | 130 | | |
| n-Butylbenzene | 44.3 | 2.5 | 50 | Ō | 89 | 60 | 142 | | |
| 1,2-Dibromo-3-chloropropane (DBCP) | 252 | 15 | 250 | 0 | 101 | 67 | 130 | | |
| 1,2,4-Trichlorobenzene Naphthalene | 49.5 51.4 | 10 | 50 50 | 0 | 99 102 | 61 | 137 167 | | |
| Hexachlorobutadiene | 51.4 90.8 | 10 10 | 50 100 | 0 0 | 103 91 | 40 61 | 167 | | |
| 1,2,3-Trichlorobenzene | 49.1 | 10 | 50 | 0 0 | 98 | 51 | 144 | | |
| Surr: 1,2-Dichloroethane-d4 | 50.4 | | 50 | | 101 | 70 | 130 | | |
| Surr: Toluene-d8 | 48.8 | | 50 | | 98 | 70 | 130 | | |
| Surr: 4-Bromofluorobenzene | 48 | | 50 | | 96 | 70 | 130 | | |



Alpha Analytical, Inc.

| Date: 18-Aug-09 | (| QC Sun | nmary | Report | | | | | Work Ord 09080502 | |
|------------------------------------------------------|---------------------|------------|-----------|-------------------|------------|----------|------------|----------------|-----------------------------|------|
| Sample Matrix Spike Duplicate | | Type MSC |) Test | t Code: | | | | | | |
| File ID: 09081415.D | | | Bato | h ID: MS15 | W0814N | 1 | Analys | is Date: 08 | /14/2009 17:09 | |
| Sample ID: 09080502-03AMSD | Units : µg/L | | | _15_09081 | | | Prep D | | /14/200 9 | |
| Analyte | Result | PQL | SpkVal S | pkRefVal % | REC LO | CL(ME) | UCL(ME) | RPDRefVal | %RPD(Limit) | Qual |
| Dichlorodifluoromethane | 46.1 | 2.5 | 50 | 0 | 92 | 13 | 167 | 47.27 | 2.4(20) | |
| Chloromethane | 54.1 | 10 | 50 | | 108 | 28 | 145 | 53.57 | 1.0(20) | |
| Vinyl chloride | 56.2 | 2.5 | 50 | - | 112 | 43 | 134 | 59.71 | 6.0(20) | |
| Chloroethane Bromomethane | 50.8 | 2.5 | 50 | - | 102 | 39 10 | 154 176 | 53.43 62.33 | 5.1(20) 2.3(20) | |
| Trichlorofluoromethane | 60.9 53.4 | 10 2.5 | 50 50 | | 122 107 | 19 34 | 160 | 56.71 | 6.0(20) | |
| 1,1-Dichloroethene | 47.3 | 2.5 | 50 50 | | 95 | 60 | 130 | 50.16 | 5.9(20) | |
| Dichloromethane | 50.8 | 10 | 50 | | 102 | 68 | 130 | 51.43 | 1.2(20) | |
| trans-1,2-Dichloroethene | 49.3 | 2.5 | 50 | - | 99 | 63 | 130 | 52.41 | 6.1(20) | |
| Methyl tert-butyl ether (MTBE) | 58 | 1.3 | 50 | | 116 | 56 | 141 | 56.91 | 2.0(20) | |
| 1,1-Dichloroethane cis-1,2-Dichloroethene | 49.7 53 | 2.5 2.5 | 50 50 | - | 99 106 | 61 70 | 130 130 | 51.36 53.1 | 3.3(20) 0.1(20) | |
| Bromochloromethane | 55.7 | 2.5 2.5 | 50 50 | - | 100 | 70 | 130 | 56.57 | 1.5(20) | |
| Chloroform | 49.4 | 2.5 | 50 | | 99 | 67 | 130 | 50.54 | 2.3(20) | |
| 2,2-Dichloropropane | 52.3 | 2.5 | 50 | - | 105 | 30 | 152 | 55.48 | 5.8(20) | |
| 1,2-Dichloroethane | 52.2 | 2.5 | 50 | | 104 | 60 | 135 | 52.84 | 1.2(20) | |
| 1,1,1-Trichloroethane | 51 | 2.5 | 50 | | 102 | 59 | 137 | 53.39 | 4.7(20) | |
| 1,1-Dichloropropene Carbon tetrachloride | 49.1 51.2 | 2.5 | 50 | | 98 102 | 63 50 | 130 147 | 51.47 53.88 | 4.7(20) 4.9(20) | |
| Benzene | 51.3 50.5 | 2.5 1.3 | 50 50 | - | 103 101 | 50 67 | 130 | 53.88 52.22 | 3.4(20) | |
| Dibromomethane | 57 | 2.5 | 50 | - | 114 | 69 | 133 | 56.64 | 0.6(20) | |
| 1,2-Dichloropropane | 53.2 | 2.5 | 50 | | 106 | 69 | 130 | 53.09 | 0.2(20) | |
| Trichloroethene | 48 | 2.5 | 50 | 0 | 96 | 69 | 130 | 50.65 | 5.5(20) | |
| Bromodichloromethane | 54.1 | 2.5 | 50 | - | 108 | 66 | 134 | 54.3 | 0.4(20) | |
| cis-1,3-Dichloropropene trans-1,3-Dichloropropene | 52.3 | 2.5 | 50 | - | 105 | 63 60 | 130 | 52.98 | 1.4(20) | |
| 1,1,2-Trichloroethane | 49.2 52.6 | 2.5 2.5 | 50 50 | | 98 105 | 66 68 | 131 130 | 49.69 53.47 | 1.1(20) 1.7(20) | |
| Toluene | 45.5 | 1.3 | 50 50 | | 91 | 66 | 130 | 47.89 | 5.2(20) | |
| 1,3-Dichloropropane | 50.5 | 2.5 | 50 | | 101 | 70 | 130 | 50.56 | 0.2(20) | |
| Dibromochloromethane | 48.6 | 2.5 | 50 | 0 | 97 | 70 | 130 | 48.75 | 0.3(20) | |
| 1,2-Dibromoethane (EDB) | 111 | 10 | 100 | - | 111 | 70 | 130 | 109.6 | 1.7(20) | |
| Tetrachloroethene | 47 | 2.5 | 50 | | 94 | 61 70 | 134 | 49.64 | 5.4(20) | |
| 1,1,1,2-Tetrachloroethane Chlorobenzene | 51 45.7 | 2.5 2.5 | 50 50 | - | 102 91 | 70 70 | 130 130 | 52.53 47.94 | 3.0(20) 4.8(20) | |
| Ethylbenzene | 44.9 | 1.3 | 50 50 | | 90 | 68 | 130 | 47.06 | 4.8(20) | |
| m,p-Xylene | 45.6 | 1.3 | 50 | | 91 | 64 | 130 | 48.51 | 6.3(20) | |
| Bromoform | 45.7 | 2.5 | 50 | | 91 | 64 | 138 | 46.28 | 1.2(20) | |
| Styrene | 38.4 | 2.5 | 50 | | 77 | 69 | 130 | 40.13 | 4.4(20) | |
| o-Xylene 1,1,2,2-Tetrachloroethane | 47.7 | 1.3 | 50 | | 95 102 | 70 65 | 130 131 | 49.88 50.22 | 4.4(20) 1.2(20) | |
| 1,2,3-Trichloropropane | 50.8 98.5 | 2.5 10 | 50 100 | | 98 | 05 70 | 130 | 97.35 | 1.1(20) | |
| Isopropylbenzene | 42.4 | 2.5 | 50 | | 85 | 64 | 138 | 45.11 | 6.1(20) | |
| Bromobenzene | 46.2 | 2.5 | 50 | | 92 | 70 | 130 | 48.18 | 4.1(20) | |
| n-Propylbenzene | 43 | 2.5 | 50 | | 86 | 66 | 132 | 45.81 | 6.4(20) | |
| 4-Chlorotoluene 2-Chlorotoluene | 44.5 | 2.5 | 50 | | 89 | 70 | 130 | 46.73 | 4.8(20) | |
| 1,3,5-Trimethylbenzene | 43.8 41.9 | 2.5 2.5 | 50 50 | | 88 84 | 70 66 | 130 136 | 45.95 44.58 | 4.8(20) 6.3(20) | |
| tert-Butylbenzene | 41.5 | 2.5 | 50 | | 83 | 65 | 137 | 44.26 | 6.5(20) | |
| 1,2,4-Trimethylbenzene | 41.2 | 2.5 | 50 | | 82 | 65 | 137 | 43.57 | 5.5(20) | |
| sec-Butylbenzene | 41.9 | 2.5 | 50 | 0 | 84 | 66 | 134 | 44.47 | 6.1(20) | |
| 1,3-Dichlorobenzene | 45.7 | 2.5 | 50 | | 91 | 70 | 130 | 48.12 | 5.2(20) | |
| 1,4-Dichlorobenzene 4-Isopropyltoluene | 45.2 | 2.5 | 50 | - | 90 84 | 70 66 | 130 137 | 47.37 45.02 | 4.6(20) 7.3(20) | |
| 1,2-Dichlorobenzene | 41.8 45.4 | 2.5 2.5 | 50 50 | | 84 91 | 66 70 | 137 | 45.02 46.84 | 3.1(20) | |
| n-Butylbenzene | 42.2 | 2.5 | 50 50 | | 84 | 60 | 142 | 44.28 | 4.9(20) | |
| 1,2-Dibromo-3-chloropropane (DBCP) | 258 | 15 | 250 | | 103 | 67 | 130 | 251.5 | 2.7(20) | |
| 1,2,4-Trichlorobenzene | 48.7 | 10 | 50 | 0 | 97 | 61 | 137 | 49.48 | 1.6(20) | |
| Naphthalene | 51.5 | 10 | 50 | | 103 | 40 | 167 | 51.4 | 0.1(20) | |
| Hexachlorobutadiene 1,2,3-Trichlorobenzene | 86.6 | 10 | 100 | | 87 | 61 | 130 | 90.8 | 4.7(20) | |
| Surr: 1,2-Dichloroethane-d4 | 48.8 52.1 | 10 | 50 50 | | 98 104 | 51 70 | 144 130 | 49.07 | 0.5(20) | |
| Surr: Toluene-d8 | 47.7 | | 50 50 | | 95 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 47.7 | | 50 | | 95 | 70 | 130 | | | |
| | 71.1 | | 50 | | | | 100 | | | |





255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

QC Summary Report

Work Order: 09080502

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Alpha uses descriptive data qualifier flags, which could be replaced with either a DOD Q or J flag.

R58 = MS/MSD RPD exceeded the laboratory control limit.

L51 = Analyte recovery was above acceptance limits for the LCS, but was acceptable in the MS/MSD.

R5 = MS/MSD RPD exceeded the laboratory control limit. Recovery met acceptance criteria.

Date: 18-Aug-09 Comments:

Matrix Type: AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

| Logged in by: Ulnaketh Udcax | Signature |
|------------------------------|------------|
| Elizabeth Eldcox | Print Name |
| Alpha Analytical, Inc. | Company |
| 85.59 9:46 | Date/Time |

Comments: No security seals. Frozen ice. Temp Blank #7197 received @ 4°C. Perchlorate RL of 1.0 ug/L. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). :

| - | | | | 4 | 2667 | 1 226 10 | 11 EAV. / | 336/366 | TEL: (1775) 355 1044 EAV: (775) 355 0406 | | Report Due By : 5:00 PM On : 19-Aug-2009 |
|-----------------------------|---------------------------------------------------------------------------------------|-------------|------------------------------------|----------------------|-----------------------------|----------------|-------------------------|---------------|------------------------------------------|------------------------|-------------------------------------------|
| Client: | | | Report Attention | | Pho | Phone Number | Phone Number EMail Addr | EMail / | EMail Address | | |
| Battelle Memorial Institute | Institute | | David Conner | 9 | 818) | (818) 393-2808 | x 80 | connerd(| connerd@battelle.org | | |
| 3990 Old Town Ave | ve | | Refev Cutie | | (617 | (614) 474-4800 | | cutiee@l | cutiee@hatelle.org | | EDD Required : Yes |
| Suite C-205 | | | | | | | 11 | | a | | |
| San Diego, CA 92110 | 2110 | | Shane Walton | ĭ | (614 | (614) 424-4117 | 17 x | waltons@ | waltons@battelle.org | UQ. | Sampled by : Client |
| PO: 218013 | | | | | | | | | | | Cooler Temp Samples Received Date Printed |
| Client's COC #: 24115 | 115 | Job : | G005862/JPL Groundwater Monitoring | ² L Grour | ndwater I | Monitori | рŋ | | | | |
| QC Level: DS4 | = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates | I : Final R | pt, MBLK, In | itCal/Co | nCal dat | a, LCS, | MS/MSD \ | Vith Surr | ogates | | |
| | - - - | | | | | | | | | Requested Tests | d Tests |
| Alpha Sample ID | Client Sample ID | Matrix | Collection ix Date | No. of Alpha | No. of Bottles Alpha Sub | TAT | 314_W | METALS_D W | | VOC_W | Pampa Domarka |
| | | | | , abut | - | | | | | | |
| BMI09080502-01A | MW-25-5 | AQ | 08/04/09 07:57 | თ | 0 | 10 | Perchlorate | Ŷ | VOC by 524 Criteria | VOC by 524 Criteria | |
| BMI09080502-02A | MW-25-4 | A | 08/04/09 08:23 | თ | 0 | 10 | Perchlorate | Ŷ | VOC by 524 Criteria | VOC by 524 Criteria | |
| BMI09080502-03A | MW-25-3 | Q | 08/04/09 08:59 | 10 | 0 | 10 | Perchlorate | Ŷ | VOC by 524 Criteria | VOC by 524 Criteria | MS/MSD |
| BM109080502-04A | MW-25-2 | AQ | 08/04/09 09:25 | ы | 0 | 10 | Perchlorate | Ŷ | VOC by 524 Criteria | VOC by 524 Criteria | |
| BMI09080502-05A | MW-25-1 | AQ | 08/04/09 09:50 | თ | 0 | 10 | Perchlorate | ç | VOC by 524 Criteria | VOC by 524 Criteria | |
| BMI09080502-06A | EB-11-8/4/09 | AQ | 08/04/09 09:37 | сı | 0 | 10 | Perchlorate | ç | VOC by 524 Criteria | VOC by 524 Criteria | |
| BMI09080502-07A | TB-11-8/4/09 | AQ | 08/04/09 00:00 | - | 0 | 10 | | | VOC by 524 Criteria | VOC by 524 Criteria | Reno Trip Blank 6/22/09 |
| BMI09080502-08A | MW-26-2 | AQ | 08/04/09 11:16 | с л | 0 | 10 | Perchlorate | Ç | VOC by 524 Criteria | VOC by 524 Criteria | |
| BMI09080502-09A | MW-26-1 | AQ | 08/04/09 11:35 | თ | 0 | 10 | Perchlorate | Cr | VOC by 524 Criteria | VOC by 524 Criteria | |

CHAIN-OF-CUSTODY RECORD

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778

Alpha Analytical, Inc.

Billing Information :

Page: 1 of 1

WorkOrder : BMIS09080502

C A

| | | • | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| Billing Information: Name CaE ICALD TO MPKINS/BATTERE | | Alpha Analytical, Inc. AZ 255 Glendale Avenue, Suite 21 ID | AZ CONNECTED From Which Stater AZ CA VV WA Pace ID OR OTHER Pace | Page # / of / |
| Address <u>5.25 Kinks</u> Ave City, State, Zip <u>Calum Gus</u> , <u>att 43201</u> Phone Number Fax | | | nalys | |
| TELLE /DAVID CONNER | EMail Address | 600582 | | Required QC Level? |
| City State Zip City State Zip CAN DI EGS (A 92/13 | Phone # 726 - 7311 [Fax # | | | EDD / EDF? YES NO |
| Sampled by | | <u> </u> | | Global ID # |
| Sampled Sampled Below Lab ID Number (Use Only) | Sample Description | TAT Field "See below | | REMARKS |
| 757 844 AQ BMI0908050201 | MW-25-5 | Norm nols X | ×× | |
| 823 1 1 | MW-25-4 | - - - | ×× | |
| | MW-25-3 | × cl/a | XX | molmoo |
| | MW-25-2 | 1 VP/5 X | XX | |
| 50- -05 | MW-25-1 | | × | |
| -M- | ER-11-S/w/ne | X | × × | En no Riade |
| | | | | |
| | TR-11-8/4/09 | $X = \frac{1}{2} \sqrt{2}$ | | TRUP BLANK |
| | | | | |
| | | | | |
| ADDITIONAL INSTRUCTIONS: | | | | |
| | | | | |
| Signature | Print Name | | | Date Time |
| Received by | MARCO MENDURA | INSIGHT | EEC XI | |
| Relinquished by | Flizebeth Flox | dry (rub | ла- О. | 0.5.0/ 1.70 |
| Received by | | | | |
| Relinquished by | | | | |
| Received by | | | | |
| *Key: AQ - Aqueous SO - Soil WA - Waste OT - Other AR - Air **: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this coc. The liability of the laboratory is limited to the amount paid for the report. | OT - Other AR - Air **: L-Liter reported unless other arrangements are made. H is received by the laboratory with this coc. The lia | r V-Voa S-Soil Jar O Hazardous samples will be returne iability of the laboratory is limited to | O-Orbo T-Tedlar B-Brass red to client or disposed of at client expen to the amount paid for the report. | P-Plastic OT-Other se. The report for the analysis |
| of the above samples is applicable only to those samples received by the laboratory with this coc. The labolity of the laboratory is limited to the amount baild for the report. | is received by the laboratory with this coc. The li | lability of the laboratory is limited to | the amount paid for the report. | |

| Billing Information: Name (-(-)CPL> TOMPKINS | Alpha An 255 Giendale Sparks, Neva | I, Inc. Suite 21 5778 Suite 21 Suite 21 S | I From Which State? 026290 NV WA Page # of |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| le, Zip <u>COLUM (2015, c</u> umber Fax | 3 2 Ø j Fax (775) 355-1044 Fax (775) 355-0406 | | Analyses Required |
| Client Name ANIN CONNET | P.O.# 218013 Job # | 10,005-362 AN 3/0/ | Required QC Level? |
| 12 ravi | EMail Address | | / / I II (ÎI) IV |
| 1 | Phone #/9-726-7311 Fax # | - | EDD/EDF? YES NO |
| Nimbor | Report Attention | Tot | Global ID # |
| | | | A REMARKS |
| | NAL-26 - 1 | | |
| | | | |
| | | | |
| | | | |
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| | | | |
| | | | |
| | | | |
| | | | |
| ADDITIONAL INSTRUCTIONS: | | | |
| | | | - |
| Signature | Print Name | Company | Date Time |
| Received by 1 th 41 1 A man | Lizzh U Char | Insight CEC | 1/1/10 00-2'8 |
| Relinquished by | Variation 1 112 - Variation | | |
| Received by | | | |
| Relinquished by | | | |
| Received by | | | |
| *Key: AQ - Aqueous SO - Soil WA - Waste NOTE: Samples are discarded 60 days after results are in of the above samples is applicable only to those samples | te OT - Other AR - Air **: L-Liter e reported unless other arrangements are made. Hat as received by the laboratory with this coc. The list | *Key: AQ - Aqueous SO - Soil WA - Waste OT - Other AR - Air **: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this con The liability of the laboratory is limited to the amount paid for the report | B-Brass P-Plastic OT-Other lof at client expense. The report for the analysis |
| of the above samples is applicable only to those sample | es received by the laboratory with this coc. The lia | of the above samples is applicable only to mose samples received by the laboratory with this coc. The liability of the laboratory is limited to the amount paid for the report. | ne report. |



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: 18-Aug-09

David Conner Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 (818) 393-2808

Suite C-205

CASE NARRATIVE

| oject: ork Order: | G005862/JPL Grou BMI09080602 | undwater Monitoring | Cooler Temp: 4 °C | |
|----------------------|---------------------------------|------------------------|-------------------|--|
| Alpha's | Sample ID | Client's Sample ID | Matrix | |
| 09080 | 0602-01A | MW-7 | Aqueous | |
| 09080 |)602-02A | MW-16 | Aqueous | |
| 09080 | 0602-03A | TB-12-8/5/09 | Aqueous | |
| | | Manually Integrated An | alytes | |
| <u>Alpha's Sar</u> | mple ID | Test Reference | Analyte | |

NONE

Enclosed please find the analytical results of the samples received by Alpha Analytical, Inc. under the above mentioned Work Order/Chainof-Custody.

Alpha Analytical, Inc. has a formal Quality Assurance/Quality Control program, which is designed to meet or exceed the EPA requirements. All relevant QC met quality assurance objectives for this project unless otherwise stated in the footnotes.

If you have any questions with regards to this report, please contact Randy Gardner, Project Manager, at (800) 283-1183.

Walter Acrihan Roger Scholl Kandy Saulmer

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110
 Attn:
 David Conner

 Phone:
 (818) 393-2808

 Fax:
 (614) 458-6641

 Date Received : 08/06/09

Job#: G005862/JPL Groundwater Monitoring

| Anions by IC EPA Method 300.0 / 9056 | | | | | | | | | |
|-----------------------------------------|----------------------|---------------|--------------------|------------------------|-------------------------|--|--|--|--|
| | Parameter | Concentration | Reporting Limit | Date / Time Sampled | Date / Time Analyzed | | | | |
| Client ID : MW-7 | Nitrite (NO2) - N | ND | 0.25 mg/L | 08/05/09 08:41 | 08/06/09 16:08 | | | | |
| Lab ID : BMI09080602-01A | Nitrate (NO3) - N | 1.3 | 0.25 mg/L | 08/05/09 08:41 | 08/06/09 16:08 | | | | |
| Lab ID . BIVI109080002-01A | Phosphate, ortho - P | ND | 0.25 mg/L | 08/05/09 08:41 | 08/06/09 16:08 | | | | |
| Client ID : MW-16 | Nitrite (NO2) - N | ND | 0.25 mg/L | 08/05/09 10:29 | 08/06/09 16:26 | | | | |
| Lab ID : BMI09080602-02A | Nitrate (NO3) - N | 1.3 | 0.25 mg/L | 08/05/09 10:29 | 08/06/09 16:26 | | | | |
| Lau ID . DIVI109080602-02A | Phosphate, ortho - P | ND | 0.25 mg/L | 08/05/09 10:29 | 08/06/09 16:26 | | | | |

ND = Not Detected

Roger Scholl

Kandy Dandmer

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8/19/09

Report Date



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ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110

38.

 Attn:
 David Conner

 Phone:
 (818) 393-2808

 Fax:
 (614) 458-6641

 Date Received : 08/06/09

Job#: G005862/JPL Groundwater Monitoring

| Anions by IC EPA Method 300.0 / 9056 | | | | | | | | |
|-----------------------------------------|-----------------|---------------|---------------|--------------------|------------------------------|--|--|--|
| | | Parameter | Concentration | Reporting Limit | Date Date Sampled Analyze | | | |
| Client ID : 1 | MW-7 | | | | | | | |
| Lab ID : 1 | BMI09080602-01A | Chloride | 85 | 0.50 mg/L | 08/05/09 08/06/09 | | | |
| | | Sulfate (SO4) | 50 | 0.50 mg/L | 08/05/09 08/06/09 | | | |
| Client ID : 1 | MW-16 | | | | | | | |
| Lab ID : 1 | BMI09080602-02A | Chloride | 80 | 0.50 mg/L | 08/05/09 08/06/09 | | | |
| | | Sulfate (SO4) | 50 | 0.50 mg/L | 08/05/09 08/06/09 | | | |

Roger Scholl

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Walter Arihm

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 (614) 458-6641

 Date Received : 08/06/09

Job#: G005862/JPL Groundwater Monitoring

| | | Perchlorate by Ion Chromatography EPA Method 314.0 | | |
|-----------------------------------------------|-------------|-------------------------------------------------------|--------------------|-------------------------------|
| | Parameter | Concentration | Reporting Limit | Date Date Sampled Analyzed |
| Client ID : MW-7 Lab ID : BMI09080602-01A | Perchlorate | ND | 1.00 µg/L | 08/05/09 08/07/09 |
| Client ID : MW-16 Lab ID : BMI09080602-02A | Perchlorate | ND | 1.00 µg/L | 08/05/09 08/07/09 |

ND = Not Detected

Roger Scholl

Kandy Santur

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Aff

8/19/09 Report Date

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

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ANALYTICAL REPORT

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 Attn:
 David Conner

 Phone:
 (818) 393-2808

 Fax:
 (614) 458-6641

 Date Received : 08/06/09

Job#: G005862/JPL Groundwater Monitoring

| | | Metals by ICPMS EPA Method 200.8 | | |
|----------------------------------------------------|-------------------|-------------------------------------|--------------------|-------------------------------|
| | Parameter | Concentration | Reporting Limit | Date Date Sampled Analyzed |
| Client ID : MW-7 Lab ID : BMI09080602-0 | 01A Chromium (Cr) | 0.011 | 0.0050 mg/L | 08/05/09 08/14/09 |
| Client ID : MW-16 Lab ID : BMI09080602-(|)2A Chromium (Cr) | 0.016 | 0.0050 mg/L | 08/05/09 08/14/09 |

Roger Scholl

lter Arihm

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8/19/09

Report Date



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ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Job#: G005862/JPL Groundwater Monitoring Attn: David Conner Phone: (818) 393-2808 Fax: (614) 458-6641

Tentatively Identified Compounds - Volatile Organics by GC/MS

| | | | | Estimated | | | |
|-------------------------|----------------------------------------|--------------------|---------------|--------------|-------------|----------|-----------|
| | | Parameter | Estimated | Reporting | Date | Date | Date |
| | | | Concentration | Limit | Received | Sampled | Analyzed |
| Client ID : Lab ID : | MW-7 BMI09080602-01A | *** None Found *** | ND | 2.0 μg/L | 08/06/09 | 08/05/09 | 08/14/09 |
| Client ID : | MW-16 | | | 10 | | | |
| Lab ID : | BMI09080602-02A | *** None Found *** | ND | 2.0 μg/L | 08/06/09 | 08/05/09 | 08/14/09 |
| Client ID : Lab ID : | TB-12-8/5/09 BMI09080602-03A | *** \ | | 2 2 1 | 0.0/0.5/0.0 | 00/05/00 | 00/11/000 |
| Lau ID . | DIMI09060002-03A | *** None Found *** | ND | 2.0 µg/L | 08/06/09 | 08/05/09 | 08/14/09 |

Note: Analysis conducted using EPA Method 524.2 criteria. ND = Not Detected

Rogen Scholl Kandg Sandmer

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8/19/09

Report Date



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ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Job#: G005862/JPL Groundwater Monitoring

Alpha Analytical Number: BMI09080602-01A Client I.D. Number: MW-7 Attn:David ConnerPhone:(818) 393-2808Fax:(614) 458-6641

Sampled: 08/05/09 Received: 08/06/09

Analyzed: 08/14/09

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting L | imit |
|----|--------------------------------|---------------|-----------|-------|----|----------------------------------|---------------|-------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1.1.1.2-Tetrachloroethane | ND | 0.50 | μg/L |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | µg/L |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m,p-Xylene | ND | 0.50 | µg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | μg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Stvrene | ND | 0.50 | μg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xvlene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | | ND | 0.50 | μg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | μg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | μg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | μg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chloroform | 4.4 | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBC | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | 2.8 | 0.50 | µg/L | 61 | Naphthalene | ND | 1.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 109 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 99 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 91 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | , | | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Dandmer

Walter Amilian

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

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Report Date



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ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Job#: G005862/JPL Groundwater Monitoring

Alpha Analytical Number: BMI09080602-02A Client I.D. Number: MW-16 Attn:David ConnerPhone:(818) 393-2808Fax:(614) 458-6641

Sampled: 08/05/09 Received: 08/06/09

Analyzed: 08/14/09

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting L | imit |
|----|---------------------------------------|---------------|-----------|-------|----|----------------------------------|---------------|-------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1.1.1.2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | µg/L |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | μg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m,p-Xylene | ND | 0.50 | µg/L |
| 5 | Bromomethane | ND | 1.0 | μg/L | 40 | Bromoform | 8.1 | 0.50 | μg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chloroform | 3.2 | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | 1.6 | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | · · · · · · · · · · · · · · · · · · · | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBC | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | 5.1 | 0.50 | µg/L | 61 | Naphthalene | ND | 1.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 106 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 99 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 89 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | | . , | |
| 33 | Dibromochloromethane | 7.8 | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Saulman

Walter Arihm

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8/19/09 Report Date



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ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Job#: G005862/JPL Groundwater Monitoring

Alpha Analytical Number: BMI09080602-03A Client I.D. Number: TB-12-8/5/09

David Conner Attn: Phone: (818) 393-2808 (614) 458-6641 Fax:

Sampled: 08/05/09 Received: 08/06/09

Analyzed: 08/14/09

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting Li | mit |
|----|--------------------------------|---------------|-----------|-------|----|----------------------------------|---------------|--------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | µg/L |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m,p-Xylene | ND | 0.50 | µg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | µg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xvlene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chloroform | ND | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBC | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 1.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 105 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 100 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 92 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | | | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Santur

Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

Walter Arihm Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

8/19/09

Report Date



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VOC Sample Preservation Report

Work Order: BMI09080602

Project: G005862/JPL Groundwater Monitoring

| Alpha's Sample ID | Client's Sample ID | Matrix | рН | |
|-------------------|--------------------|---------|----|--|
| 09080602-01A | MW-7 | Aqueous | 2 | |
| 09080602-02A | MW-16 | Aqueous | 2 | |
| 09080602-03A | TB-12-8/5/09 | Aqueous | 2 | |



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| Date: 18-Aug-09 | (| QC Su | ımmar | y Repor | t | | | | Work Orde 09080602 | |
|----------------------------------------------------------------|-------------------------------|----------------------|-------------------------|----------------------------------------------------------|------------------|----------------|--------------------------|------------------------|-----------------------------------------------------------------|------|
| Method Blank File ID: 17 Sample ID: MB-22491 Analyte | Units : mg/L Result | Type MI | Ba Run ID: IC | est Code: EF Itch ID: 2249 _2_090806A SpkRefVal | 91A | | Analy Prep I | Date: | 08/06/2009 15:12 08/06/2009 Val %RPD(Limit) | Qual |
| Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P | ND ND ND | 0.25 0.25 0.25 | | | | | | | | |
| Laboratory Fortified Blank | | Type LF | •в те | est Code: EF | PA Me | thod 300.0 | / 9056 | | | |
| File ID: 18 Sample ID: LFB-22491 Analyte | Units : mg/L Result | PQL | Run ID: IC | atch ID: 2249 _2_090806A _SpkBefVal | | | Prep | Date: | 08/06/2009 15:31 08/06/2009 Val %RPD(Limit) | Qual |
| Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P | 1.21 1.24 1.24 | 0.25 0.25 0.25 | 1.25 1.25 1.25 | opiniorun | 97 99.6 99 | 90 90 90 | 110 110 110 110 | | | |
| Sample Matrix Spike | | Type LF | -M Te | est Code: EF | A Met | thod 300.0 | / 9056 | | | |
| File ID: 24 | | | Ba | atch ID: 2249 | 91A | | Analy | sis Date: | 08/06/2009 17:22 | |
| Sample ID: 09080602-02ALFM | Units : mg/L | | | _2_090806A | | | Prep | | 08/06/2009 | |
| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | CLCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qual |
| Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P | 1.29 2.5 1.24 | 0.25 0.25 0.25 | 1.25 1.25 1.25 | 0 1.346 0 | 104 92 99 | 80 80 80 | 120 120 120 | | | |
| Sample Matrix Spike Duplicate | | Type LF | MD Te | est Code: EF | A Me | thod 300.0 | / 9056 | | | |
| File ID: 25 | | | Ba | atch ID: 2249 | 91A | | Analy | sis Date: | 08/06/2009 17:40 | |
| Sample ID: 09080602-02ALFMD | Units : mg/L | I | Run ID: IC | _2_090806A | • | | Prep | Date: | 08/06/2009 | |
| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | CLCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qual |
| Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P | 1.39 2.52 1.03 | 0.25 0.25 0.25 | 1.25 1.25 1.25 | 0 1.346 0 | 111 94 82 | 80 80 80 | 120 120 120 | 1.299 2.490 1.24 | 6 0.8(10) | R5 |

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Alpha uses descriptive data qualifier flags, which could be replaced with either a DOD Q or J flag. $P_{2} = M_{2}^{2} (M_{2}^{2}) P_{2}^{2}$

R5 = MS/MSD RPD exceeded the laboratory control limit. Recovery met acceptance criteria.



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| Date: 18-Aug-09 | QC Summary Report | Work Order: 09080602 |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| Method Blank File ID: 17 | Type MBLK Test Code: EPA Method 300.0 / 9056 Batch ID: 22491B Analysis Date: 00 | |
| Sample ID: MB-22491 Analyte | Units : mg/L Run ID: IC_2_090806A Prep Date: 08 Result PQL SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal | 3/06/2009 %RPD(Limit) Qua |
| Sulfate (SO4) | ND 0.5 | _ |
| Laboratory Fortified Blank File ID: 18 | Type LFBTest Code: EPA Method 300.0 / 9056Batch ID: 22491BAnalysis Date: 0 | 8/06/2009 15:31 |
| Sample ID: LFB-22491 Analyte | Units : mg/L Run ID: IC_2_090806A Prep Date: 08 Result PQL SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal | 3/06/2009 %RPD(Limit) Qua |
| Sulfate (SO4) | 10.3 0.5 10 103 90 110 | |
| Sample Matrix Spike File ID: 24 | Type LFMTest Code: EPA Method 300.0 / 9056Batch ID: 22491BAnalysis Date: 0 | 8/06/2009 17:22 |
| Sample ID: 09080602-02ALFM Analyte | I Units : mg/L Run ID: IC_2_090806A Prep Date: 08 Result PQL SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal | 3/06/2009 %RPD(Limit) Qua |
| Sulfate (SO4) | 58.1 0.5 10 49.52 85 80 120 | |
| Sample Matrix Spike Duplica File ID: 25 | te Type LFMD Test Code: EPA Method 300.0 / 9056 Batch ID: 22491B Analysis Date: 00 | 8/06/2009 17:40 |
| Sample ID: 09080602-02ALFM | ID Units : mg/L Run ID: IC_2_090806A Prep Date: 08 | 3/06/2009 |
| Analyte | Result PQL SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal | %RPD(Limit) Qua |
| Sulfate (SO4) | 59.1 0.5 10 49.52 96 80 120 58.06 | 1.8(10) |

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



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| Date: 18-Aug-09 | (| QC S | ummar | y Repor | t | | | | Work Orde 09080602 | |
|-------------------------------|--------------|--------|---------------|---------------|--------|------------|---------|-----------|-----------------------|-----|
| Method Blank | | Type N | | est Code: EF | PA Met | hod 300.0 | / 9056 | | | |
| File ID: 17 | | | Ba | atch ID: 2249 | 1C | | Analy | sis Date: | 08/06/2009 15:12 | |
| Sample ID: MB-22491 | Units : mg/L | | Run ID: IC | _2_090806A | | | Prep | Date: | 08/06/2009 | |
| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qua |
| Chloride | ND | 0.5 | 5 | | | | | | | |
| Laboratory Fortified Blank | | Type L | . FB T | est Code: EF | 'A Met | thod 300.0 | / 9056 | | | |
| File ID: 18 | | | Ba | atch ID: 2249 | 1C | | Analy | sis Date: | 08/06/2009 15:31 | |
| Sample ID: LFB-22491 | Units : mg/L | | Run ID: IC | _2_090806A | | | Prep | Date: | 08/06/2009 | |
| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qua |
| Chloride | 4.56 | 0.5 | 5 5 | | 91 | 90 | 110 | | | |
| Sample Matrix Spike | | Type L | .FM To | est Code: EF | PA Met | thod 300.0 | / 9056 | | | |
| File ID: 24 | | | Ba | atch ID: 2249 | 1C | | Analy | sis Date: | 08/06/2009 17:22 | |
| Sample ID: 09080602-02ALFM | Units : mg/L | | Run ID: IC | _2_090806A | | | Prep | Date: | 08/06/2009 | |
| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qua |
| Chloride | 82 | 0.5 | 5 5 | 80.06 | 39 | 80 | 120 | | | M2 |
| Sample Matrix Spike Duplicate | | Type L | FMD T | est Code: EF | A Met | hod 300.0 | / 9056 | | | |
| File ID: 25 | | | Ba | atch ID: 2249 | 1C | | Analy | sis Date: | 08/06/2009 17:40 | |
| Sample ID: 09080602-02ALFMD | Units : mg/L | | Run ID: IC | _2_090806A | | | Prep | Date: | 08/06/2009 | |
| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qua |
| Chloride | 83.3 | 0.5 | | 80.06 | 65 | 80 | 120 | 82.0 | | M2 |
| | | | | | | | | | | |

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Alpha uses descriptive data qualifier flags, which could be replaced with either a DOD Q or J flag.

M2 = Matrix spike recovery was low, the method control sample recovery was acceptable.



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| Date: 18-Aug-09 | | QC S | umma | ry Repo | t | | | | Work Ord 09080602 | |
|----------------------------------------|---------------------|--------|---------|-------------------------------|------|------------|---------|-----------|-----------------------------|-----|
| Method Blank File ID: 44 | | Type I | | Test Code: E Batch ID: 224 | | thod 314.0 | Analys | sis Date: | 08/07/2009 00:50 | |
| Sample ID: MBLK-2249 | 3 Units : μg/L | | Run ID: | IC_3_090807 | A | | Prep [| Date: | 08/06/2009 | |
| Analyte | Result | PQL | SpkVa | al SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qua |
| Perchlorate | ND | | 1 | | | | | | | |
| Laboratory Fortified BI File ID: 45 | ank | Type I | | Test Code: E Batch ID: 224 | | thod 314.0 | Analy | sis Dater | 08/07/2009 01:08 | |
| Sample ID: LFB-22493 | Units : µg/L | | | IC_3_090807 | | | Prep [| | 08/06/2009 | |
| Analyte | Result | PQL | | | | LCL(ME) | | | Val %RPD(Limit) | Qua |
| Perchlorate | 26.1 | | | 5 | 105 | 85 | 115 | | | |
| Sample Matrix Spike File ID: 49 | | Type I | | Test Code: E Batch ID: 224 | | thod 314.0 | Analy | sis Date: | 08/07/2009 02:22 | |
| Sample ID: 09073103-0 | SALFM Units : µa/L | | | IC 3_090807 | | | Prep [| | 08/06/2009 | |
| Analyte | Result | PQL | | | | LCL(ME) | | | Val %RPD(Limit) | Qua |
| Perchlorate | 34.2 | | | 5 10.16 | | 80 | 120 | | <u></u> | |
| Sample Matrix Spike D File ID: 50 | ıplicate | Type I | | Test Code: E Batch ID: 224 | | thod 314.0 | Analys | sis Date: | 08/07/2009 02:40 | _ |
| Sample ID: 09073103-0 | BALFMD Units : µa/L | | | IC_3_090807 | | | Prep [| | 08/06/2009 | |
| Analyte | Result | PQL | | | | LCL(ME) | | | Val %RPD(Limit) | Qua |
| Perchlorate | 35.7 | | | 5 10.16 | | 80 | 120 | 34.2 | | |

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



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| Date: 18-Aug-09 | (| QC S | ummar | y Report | , | | | | Work Ord 0908060 | |
|---------------------------------------------------------------------------------------------|-------------------------------|-------------|------------------|---------------------------------------------|----------|------------|---------|-----------------|---------------------------------------------------|-----|
| Method Blank File ID: 081309.B\087SMPL.D\ | | Type I | | est Code: EP atch ID: 2251 | | thod 200.8 | | · | 08/13/2009 22:44 | |
| Sample ID: MB-22512 | Units : mg/L | | | P/MS_09081 | | | | Date: | 08/10/2009 | 0 |
| Analyte Chromium (Cr) | Result ND | PQL 0.00 | | SpkRefVal | %REC | C LCL(ME) | UCL(ME) | RPDRet | Val %RPD(Limit) | Qua |
| Laboratory Control Spike File ID: 081309.B\088_LCS.D\ | | Type L | | est Code: EP atch ID: 2251 | | thod 200.8 | Analy | /sis Date: | 08/13/2009 22:49 | |
| Sample ID: LCS-22512 Analyte | Units : mg/L Result | PQL | | P/MS_09081 SpkRefVal | | CLCL(ME) | • | Date: RPDRef | 08/10/2009 Val %RPD(Limit) | Qua |
| Chromium (Cr) | 0.0457 | 0.00 | 5 0.05 | | 91 | 80 | 120 | | | |
| Sample Matrix Spike File ID: 081309.B\092SMPL.D\ Sample ID: 09080502-03AMS Analyte | Units : mg/L Result | Type I | Ba Run ID: IC | est Code: EP atch ID: 2251 P/MS_09081 | 2K 3C | | Prep | Date: | 08/13/2009 23:12 08/10/2009 Val %RPD(Limit) | Qua |
| Chromium (Cr) | 0.0531 | 0.00 | | | 106 | 80 | 120 | | | |
| Sample Matrix Spike Duplicate File ID: 081309.B\093SMPL.D\ | ···· | Туре I | | est Code: EP atch ID: 2251 | | thod 200.8 | Analy | /sis Date: | 08/13/2009 23:17 | |
| Sample ID: 09080502-03AMSD | Units : mg/L | | Run ID: IC | P/MS_09081 | 3C | | Prep | Date: | 08/10/2009 | |
| Analyte | Result | PQL | SpkVal | SpkRefVal S | %REC | CLCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qua |
| Chromium (Cr) | 0.0618 | 0.00 | 5 0.05 | 0 | 124 | 80 | 120 | 0.053 | 13 15.1(20) | M1 |
| | | | | | | | | | | |

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Alpha uses descriptive data qualifier flags, which could be replaced with either a DOD Q or J flag.

M1 = Matrix spike recovery was high, the method control sample recovery was acceptable.



| Date: 18-Aug-09 | 4.14.14 | (| QC Su | mmary Rep | ort | | | Work Orde 09080602 | |
|----------------------------------|----------------------------|--------------|------------|------------------|-----------|-----------|--------------|-----------------------|---|
| Method Bla | | | Туре МІ | BLK Test Code: | | | | | |
| File ID: 09081 | I411.D | | | Batch ID: N | IS15W0814 | M | | 08/14/2009 15:40 | |
| Sample ID: | MBLK MS15W0814M | Units : µg/L | I | Run ID: MSD_15_0 | | | Prep Date: | 08/14/2009 | |
| Analyte | | Result | PQL | SpkVal SpkRefV | al %REC L | CL(ME) UC | L(ME) RPDRef | Vat %RPD(Limit) | Q |
| Dichlorodifluo | | ND | 0.5 | | | | | | |
| Chloromethan | | ND | 1 | | | | | | |
| Vinyl chloride Chloroethane | | ND | 0.5 | | | | | | |
| Bromomethar | | ND ND | 0.5 1 | | | | | | |
| richlorofluor | | ND | 0.5 | | | | | | |
| ,1-Dichloroet | thene | ND | 0.5 | | | | | | |
| Dichlorometha | ane | ND | 1 | | | | | | |
| Freon-113 | | ND | 0.5 | | | | | | |
| rans-1,2-Dich | tyl ether (MTBE) | ND ND | 0.5 0.5 | | | | | | |
| 1,1-Dichloroet | | ND | 0.5 | | | | | | |
| 2-Butanone (N | | ND | 10 | | | | | | |
| cis-1,2-Dichlo | | ND | 0.5 | | | | | | |
| Bromochloron | nethane | ND | 0.5 | | | | | | |
| Chloroform 2,2-Dichloropi | ronane | ND ND | 0.5 0.5 | | | | | | |
| 1,2-Dichloroet | | ND | 0.5 | | | | | | |
| 1,1,1-Trichlor | | ND | 0.5 | | | | | | |
| 1,1-Dichloropi | ropene | ND | 0.5 | | | | | | |
| Carbon tetrac | hloride | ND | 0.5 | | | | | | |
| Benzene | | ND | 0.5 | | | | | | |
| Dibromometh 1,2-Dichloropi | | ND ND | 0.5 0.5 | | | | | | |
| Frichloroether | - | ND | 0.5 | | | | | | |
| Bromodichlor | | ND | 0.5 | | | | | | |
| | ntanone (MIBK) | ND | 2.5 | | | | | | |
| cis-1,3-Dichlo | | ND | 0.5 | | | | | | |
| rans-1,3-Dich 1,1,2-Trichlord | | ND | 0.5 | | | | | | |
| Toluene | Jethane | ND ND | 0.5 0.5 | | | | | | |
| 1,3-Dichlorop | ropane | ND | 0.5 | | | | | | |
| Dibromochlor | • | ND | 0.5 | | | | | | |
| 1,2-Dibromoe | . , | ND | 1 | | | | | | |
| Tetrachloroeth | | ND | 0.5 | | | | | | |
| 1,1,1,2-Tetrac Chlorobenzen | | ND ND | 0.5 | | | | | | |
| Ethylbenzene | | ND | 0.5 0.5 | | | | | | |
| n,p-Xylene | | ND | 0.5 | | | | | | |
| Bromoform | | ND | 0.5 | | | | | | |
| Styrene | | ND | 0.5 | | | | | | |
| o-Xylene | | ND | 0.5 | | | | | | |
| 1,1,2,2-Tetrac 1,2,3-Trichlor | | ND ND | 0.5 | | | | | | |
| sopropylbenz | | ND | 1 0.5 | | | | | | |
| Bromobenzen | | ND | 0.5 | | | | | | |
| n-Propylbenze | | ND | 0.5 | | | | | | |
| 4-Chlorotolue | | ND | 0.5 | | | | | | |
| 2-Chlorotolue 1,3,5-Trimeth | | ND | 0.5 | | | | | | |
| ert-Butylbenz | | ND ND | 0.5 0.5 | | | | | | |
| 1,2,4-Trimeth | | ND | 0.5 | | | | | | |
| sec-Butylbenz | | ND | 0.5 | | | | | | |
| 1,3-Dichlorob | | ND | 0.5 | | | | | | |
| 4-Dichlorob | | ND | 0.5 | | | | | | |
| 1-Isopropyltol | | ND | 0.5 | | | | | | |
| 1,2-Dichlorob 1-Butylbenzer | | ND ND | 0.5 0.5 | | | | | | |
| | 3-chloropropane (DBCP) | ND | 0.5 2.5 | | | | | | |
| 1,2,4-Trichlor | | ND | 2.5 | | | | | | |
| Naphthalene | | ND | 1 | | | | | | |
| Hexachlorobu | | ND | 1 | | | | | | |
| 1,2,3-Trichlor | obenzene Iloroethane-d4 | ND | 1 | | 100 | 70 | 100 | | |
| | NO DELITATE U4 | 10.3 | | 10 | 103 | 70 | 130 | | |



| Date: 18-Aug-09 | (| QC Sun | nmary Re | eport | | | Work Ord 09080602 | |
|-------------------------------------------------|--------------|----------|-------------|---------------|----------|--------------|-----------------------------|-----|
| Surr: 4-Bromofluorobenzene | 8.93 | | 10 | 89 | 70 | 130 | | |
| Laboratory Control Spike File ID: 09081408.D | | Type LCS | |): MS15W0814 | M | | Date: 08/14/2009 14:16 | |
| Sample ID: LCS MS15W0814M | Units : µg/L | | n ID: MSD_1 | | | Prep Date | | - |
| Analyte | Result | PQL | SpkVal SpkF | lefVal %REC L | |) UCL(ME) RP | DRefVal %RPD(Limit) | Qua |
| Dichlorodifluoromethane | 12.5 | 1 | 10 | 125 | 70 | 130 | | |
| Chloromethane | 10.8 | 2 | 10 | 108 | 70 | 130 | | |
| Vinyl chloride Chloroethane | 11.4 11.2 | 1 | 10 10 | 114 112 | 70 70 | 130 130 | | |
| Bromomethane | 13.2 | 2 | 10 | 132 | 70 | 130(130) | | L51 |
| Trichlorofluoromethane | 12 | 1 | 10 | 120 | 70 | 130 | | |
| 1,1-Dichloroethene | 11 | 1 | 10 | 110 | 70 | 130 | | |
| Dichloromethane | 10.6 | 2 | 10 | 106 | 70 | 130 | | |
| trans-1,2-Dichloroethene | 11.4 | 1 | 10 | 114 | 70 | 130 | | |
| Methyl tert-butyl ether (MTBE) | 11 | 0.5 | 10 | 110 | 70 | 130 | | |
| 1,1-Dichloroethane cis-1,2-Dichloroethene | 10.9 | 1 | 10 | 109 | 70 | 130 | | |
| Bromochloromethane | 11.2 11.4 | 1 | 10 10 | 112 114 | 70 70 | 130 130 | | |
| Chloroform | 10.6 | 1 | 10 | 106 | 70 | 130 | | |
| 2,2-Dichloropropane | 12.5 | 1 | 10 | 125 | 70 | 130 | | |
| 1,2-Dichloroethane | 10.7 | 1 | 10 | 107 | 70 | 130 | | |
| 1,1,1-Trichloroethane | 11.5 | 1 | 10 | 115 | 70 | 130 | | |
| 1,1-Dichloropropene | 11.2 | 1 | 10 | 112 | 70 | 130 | | |
| Carbon tetrachloride | 11.7 | 1 | 10 | 117 | 70 | 130 | | |
| Benzene Dibromomethane | 11.1 | 0.5 | 10 | 111 | 70 | 130 | | |
| 1,2-Dichloropropane | 11.2 11.1 | 1 | 10 10 | 112 111 | 70 70 | 130 130 | | |
| Trichloroethene | 11 | 1 | 10 | 110 | 70 | 130 | | |
| Bromodichloromethane | 11.2 | 1 | 10 | 112 | 70 | 130 | | |
| cis-1,3-Dichloropropene | 11.1 | 1 | 10 | 111 | 70 | 130 | | |
| trans-1,3-Dichloropropene | 10.2 | 1 | 10 | 102 | 70 | 130 | | |
| 1,1,2-Trichloroethane | 10.4 | 1 | 10 | 104 | 70 | 130 | | |
| Toluene 1,3-Dichloropropane | 10.4 | 0.5 | 10 | 104 | 70 | 130 | | |
| Dibromochloromethane | 10.2 9.95 | 1 | 10 10 | 102 100 | 70 70 | 130 130 | | |
| 1,2-Dibromoethane (EDB) | 22.3 | 2 | 20 | 100 | 70 | 130 | | |
| Tetrachloroethene | 10.8 | 1 | 10 | 108 | 70 | 130 | | |
| 1,1,1,2-Tetrachloroethane | 11.2 | 1 | 10 | 112 | 70 | 130 | | |
| Chlorobenzene | 10.1 | 1 | 10 | 101 | 70 | 130 | | |
| Ethylbenzene | 10.2 | 0.5 | 10 | 102 | 70 | 130 | | |
| m,p-Xylene Bromoform | 10.4 9.13 | 0.5 1 | 10 | 104 91 | 70 70 | 130 130 | | |
| Styrene | 8.52 | 1 | 10 10 | 85 | 70 | 130 | | |
| o-Xylene | 10.7 | 0.5 | 10 | 107 | 70 | 130 | | |
| 1,1,2,2-Tetrachloroethane | 9.66 | 1 | 10 | 97 | 70 | 130 | | |
| 1,2,3-Trichloropropane | 19.2 | 2 | 20 | 96 | 70 | 130 | | |
| Isopropylbenzene | 9.84 | 1 | 10 | 98 | 70 | 130 | | |
| Bromobenzene n-Propylbenzene | 9.88 | 1 | 10 | 99 | 70 | 130 | | |
| 4-Chlorotoluene | 9.97 9.91 | 1 | 10 10 | 99.7 99 | 70 70 | 130 130 | | |
| 2-Chlorotoluene | 9,87 | 1 | 10 | 99 | 70 | 130 | | |
| 1,3,5-Trimethylbenzene | 9.54 | 1 | 10 | 95 | 70 | 130 | | |
| tert-Butylbenzene | 9.53 | 1 | 10 | 95 | 70 | 130 | | |
| 1,2,4-Trimethylbenzene | 9.21 | 1 | 10 | 92 | 70 | 130 | | |
| sec-Butylbenzene | 9.6 | 1 | 10 | 96 | 70 | 130 | | |
| 1,3-Dichlorobenzene 1,4-Dichlorobenzene | 9.99 9.79 | 1 | 10 10 | 99.9 98 | 70 70 | 130 130 | | |
| 4-Isopropyltoluene | 9.59 | 1 | 10 | 96 | 70 | 130 | | |
| 1,2-Dichlorobenzene | 9.45 | 1 | 10 | 95 | 70 | 130 | | |
| n-Butylbenzene | 9.5 | 1 | 10 | 95 | 70 | 130 | | |
| 1,2-Dibromo-3-chloropropane (DBCP) | 48.7 | 3 | 50 | 97 | 70 | 130 | | |
| 1,2,4-Trichlorobenzene | 9.72 | 2 | 10 | 97 | 70 | 130 | | |
| Naphthalene Hexachlorobutadiona | 9.75 | 2 | 10 | 98 | 70 | 130 | | |
| Hexachlorobutadiene 1,2,3-Trichlorobenzene | 19.3 | 2 | 20 | 96 | 70 70 | 130 | | |
| Surr: 1,2-Dichloroethane-d4 | 9.41 9.97 | 2 | 10 10 | 94 99.7 | 70 70 | 130 130 | | |
| - | 9.97 10 | | 10 | | | | | |
| Surr: Toluene-d8 | 10 | | 10 | 100 | 70 | 130 | | |



| Date: 18-Aug-09 | (| QC St | ımmar | y Repor | t | <u></u> | | | Work Ord 09080602 | |
|-------------------------------------------------|--------------|------------|-----------|--------------------------|------------|----------|------------|-------|-----------------------------|-----|
| Sample Matrix Spike | | Туре М | | est Code: _ | | | | | | |
| File ID: 09081412.D | | | Ba | atch ID: MS [.] | 15W08 | 14M | • | | 08/14/2009 16:02 | |
| Sample ID: 09080602-02AMS | Units : µg/L | | Run ID: M | SD_15_090 | 814A | | Prep Dat | e: | 08/14/2009 | |
| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | CLCL(ME) | UCL(ME) RP | DRefV | al %RPD(Limit) | Qua |
| Dichlorodifluoromethane | 43.8 | 2.5 | 50 | 0 | 88 | 13 | 167 | | | |
| Chloromethane | 43 .5 | 10 | 50 | 0 | 87 | 28 | 145 | | | |
| Vinyl chloride | 44.2 | 2.5 | 50 | 0 | 88 | 43 | 134 | | | |
| Chloroethane Bromomethane | 46.9 | 2.5 | 50 | 0 | 94 | 39 | 154 | | | |
| Trichlorofluoromethane | 49.9 47.3 | 10 2.5 | 50 50 | 0 | 99.8 95 | 19 34 | 176 160 | | | |
| 1,1-Dichloroethene | 44.4 | 2.5 | 50 50 | 0 | 95 89 | 60 | 130 | | | |
| Dichloromethane | 46.7 | 10 | 50 | Ő | 93 | 68 | 130 | | | |
| trans-1,2-Dichloroethene | 47.1 | 2.5 | 50 | 0 | 94 | 63 | 130 | | | |
| Methyl tert-butyl ether (MTBE) | 51.7 | 1.3 | 50 | 0 | 103 | 56 | 141 | | | |
| 1,1-Dichloroethane | 46.8 | 2.5 | 50 | 0 | 94 | 61 | 130 | | | |
| cis-1,2-Dichloroethene | 49.7 | 2.5 | 50 | 0 | 99 | 70 | 130 | | | |
| Bromochloromethane Chloroform | 52.1 49.6 | 2.5 | 50 | 0 | 104 93 | 70 67 | 130 130 | | | |
| 2,2-Dichloropropane | 33.6 | 2.5 2.5 | 50 50 | 3.23 0 | 93 67 | 30 | 152 | | | |
| 1,2-Dichloroethane | 49 | 2.5 | 50 | 0 | 98 | 60 | 135 | | | |
| 1,1,1-Trichloroethane | 47.6 | 2.5 | 50 | Ō | 95 | 59 | 137 | | | |
| 1,1-Dichloropropene | 46.4 | 2.5 | 50 | 0 | 93 | 63 | 130 | | | |
| Carbon tetrachloride | 49 | 2.5 | 50 | 1.56 | 95 | 50 | 147 | | | |
| Benzene | 47.8 | 1.3 | 50 | 0 | 96 | 67 | 130 | | | |
| Dibromomethane 1,2-Dichloropropane | 51.8 48.7 | 2.5 2.5 | 50 50 | 0 | 104 97 | 69 69 | 133 130 | | | |
| Trichloroethene | 46.7 | 2.5 | 50 50 | 0 | 92 | 69 | 130 | | | |
| Bromodichloromethane | 54.8 | 2.5 | 50 | 5.05 | 99 | 66 | 134 | | | |
| cis-1,3-Dichloropropene | 43.9 | 2.5 | 50 | 0 | 88 | 63 | 130 | | | |
| trans-1,3-Dichloropropene | 41.8 | 2.5 | 50 | 0 | 84 | 66 | 131 | | 4 | |
| 1,1,2-Trichloroethane | 48.4 | 2.5 | 50 | 0 | 97 | 68 | 130 | | | |
| Toluene | 43.5 | 1.3 | 50 | 0 | 87 | 66 70 | 130 | | | |
| 1,3-Dichloropropane Dibromochloromethane | 46.4 52 | 2.5 | 50 50 | 0 7.81 | 93 88 | 70 70 | 130 130 | | | |
| 1,2-Dibromoethane (EDB) | 99.8 | 2.5 10 | 100 | 1.81 | 99.8 | 70 | 130 | | | |
| Tetrachloroethene | 43.5 | 2.5 | 50 | 0 | 87 | 61 | 134 | | | |
| 1,1,1,2-Tetrachloroethane | 47.7 | 2.5 | 50 | 0 | 95 | 70 | 130 | | | |
| Chlorobenzene | 43.3 | 2.5 | 50 | 0 | 87 | 70 | 130 | | | |
| Ethylbenzene | 42.4 | 1.3 | 50 | 0 | 85 | 68 | 130 | | | |
| m,p-Xylene | 43.9 | 1.3 | 50 | 0 | 88 | 64 | 130 | | | |
| Bromoform Styrene | 48.1 35.8 | 2.5 | 50 | 8.14 | 80 72 | 64 60 | 138 130 | | | |
| o-Xylene | 45.1 | 2.5 1.3 | 50 50 | 0 0 | 90 | 69 70 | 130 | | | |
| 1,1,2,2-Tetrachloroethane | 45.5 | 2.5 | 50 | 0 | 91 | 65 | 131 | | | |
| 1,2,3-Trichloropropane | 89.3 | 10 | 100 | 0 | 89 | 70 | 130 | | | |
| Isopropylbenzene | 40.2 | 2.5 | 50 | 0 | 80 | 64 | 138 | | | |
| Bromobenzene | 43.4 | 2.5 | 50 | 0 | 87 | 70 | 130 | | | |
| n-Propylbenzene | 40.1 | 2.5 | 50 | 0 | 80 | 66 | 132 | | | |
| 4-Chlorotoluene 2-Chlorotoluene | 41.6 41.5 | 2.5 | 50 | 0 | 83 83 | 70 70 | 130 130 | | | |
| 1,3,5-Trimethylbenzene | 39.6 | 2.5 2.5 | 50 50 | 0 | 83 79 | 66 | 136 | | | |
| tert-Butylbenzene | 39.8 | 2.5 | 50 | 0 | 80 | 65 | 137 | | | |
| 1,2,4-Trimethylbenzene | 38.7 | 2.5 | 50 | 0 | 77 | 65 | 137 | | | |
| sec-Butylbenzene | 39.2 | 2.5 | 50 | 0 | 78 | 66 | 134 | | | |
| 1,3-Dichlorobenzene | 42.3 | 2.5 | 50 | 0 | 85 | 70 | 130 | | | |
| 1,4-Dichlorobenzene | 42.1 | 2.5 | 50 | 0 | 84 | 70 | 130 | | | |
| 4-Isopropyltoluene 1.2-Dichlorobenzene | 39.2 | 2.5 | 50 | 0 | 78 | 66 70 | 137 | | | |
| n-Butylbenzene | 42.3 38.1 | 2.5 2.5 | 50 50 | 0 | 85 76 | 70 60 | 130 142 | | | |
| 1,2-Dibromo-3-chloropropane (DBCP) | 228 | 2.5 15 | 250 | 0 | 76 91 | 60 67 | 130 | | | |
| 1,2,4-Trichlorobenzene | 43.7 | 10 | 250 50 | 0 | 87 | 61 | 130 | | | |
| Naphthalene | 47.1 | 10 | 50 | Ő | 94 | 40 | 167 | | | |
| Hexachlorobutadiene | 77.5 | 10 | 100 | 0 | 78 | 61 | 130 | | | |
| 1,2,3-Trichlorobenzene | 44.4 | 10 | 50 | 0 | 89 | 51 | 144 | | | |
| Surr: 1,2-Dichloroethane-d4 Surr: Toluene-d8 | 50.5 | | 50 | | 101 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 48.8 47.7 | | 50 50 | | 98 95 | 70 70 | 130 130 | | | |
| Contra Distriction (Denzene | 41.1 | | 50 | | 90 | 70 | 130 | | | |



| Date: 18-Aug-09 | (| QC Si | ummary | Repor | t | | | | Work Or 0908060 | |
|-------------------------------------------------------|--------------|------------|------------|-------------|-----------|----------|------------|----------------|---------------------------|------------|
| Sample Matrix Spike Duplicate | | Туре М | | st Code: | | | | | | |
| File ID: 09081413.D | | | Ba | tch ID: MS1 | 5W081 | 4M | - | | 3/14/2009 16:24 | 1 |
| Sample ID: 09080602-02AMSD | Units : µg/L | | Run ID: MS | D_15_0908 | 514A | | Prep [| Date: 08 | /14/2009 | |
| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRefVal | %RPD(Limit) | Qual |
| Dichlorodifluoromethane | 38.7 | 2.5 | 50 | 0 | 77 | 13 | 167 | 47.27 | 20.0(20) | R5 |
| Chloromethane | 38 | 10 | 50 | 0 | 76 | 28 | 145 | 53.57 | 34.0(20) | R5 |
| Vinyl chloride | 39.7 | 2.5 | | 0 | 79 | 43 | 134 | 59.71 | 40.3(20) | R5 |
| Chloroethane | 41.9 | 2.5 | | 0 | 84 | 39 | 154 | 53.43 | 24.3(20) | R5 |
| Bromomethane | 49.3 | 10 | | 0 | 99 | 19 | 176 | 62.33 | 23.3(20) | R58 |
| Trichlorofluoromethane | 44.3 | 2.5 | | 0 | 89 | 34 | 160 | 56.71 | 24.5(20) | R5 |
| 1,1-Dichloroethene | 40.8 | 2.5 | | 0 | 82 | 60 | 130 | 50.16 | 20.5(20) | R5 |
| Dichloromethane | 45 | 10 | 50 50 | 0 | 90 | 68 | 130 | 51.43 | 13.3(20) | 110 |
| trans-1,2-Dichloroethene | 43.8 | 2.5 | | Ő | 88 | 63 | 130 | 52.41 | 18.0(20) | |
| Methyl tert-butyl ether (MTBE) | 53.2 | 1.3 | 50 | Õ | 106 | 56 | 141 | 56.91 | 6.7(20) | |
| 1,1-Dichloroethane | 44.1 | 2.5 | 50 | 0 | 88 | 61 | 130 | 51.36 | 15.3(20) | |
| cis-1,2-Dichloroethene | 47.4 | 2.5 | | 0 | 95 | 70 | 130 | 53.1 | 11.4(20) | |
| Bromochloromethane | 52.6 | 2.5 | | 0 | 105 | 70 | 130 | 56.57 | 7.3(20) | |
| Chloroform 2,2-Dichloropropane | 46.9 | 2.5 | | 3.23 | 87 61 | 67 20 | 130 | 50.54 | 7.6(20) 58.6(20) | R5 |
| 1,2-Dichloroethane | 30.3 | 2.5 | | 0 | | 30 60 | 152 | 55.48 52.84 | 58.6(20) 8.5(20) | cn |
| 1,1,1-Trichloroethane | 48.5 43.9 | 2.5 2.5 | | 0 | 97 88 | 60 59 | 135 137 | 52.84 53.39 | 8.5(20) 19.5(20) | |
| 1,1-Dichloropropene | 43.9 | 2.5 | | 0 | 84 | 63 | 130 | 51.47 | 20.3(20) | R5 |
| Carbon tetrachloride | 45.4 | 2.5 | | 1.56 | 88 | 50 | 147 | 53.88 | 17.1(20) | |
| Benzene | 45 | 1.3 | 50 | 0 | 90 | 67 | 130 | 52.22 | 14.8(20) | |
| Dibromomethane | 51.9 | 2.5 | | Õ | 104 | 69 | 133 | 56.64 | 8.7(20) | |
| 1,2-Dichloropropane | 47.1 | 2.5 | 50 | 0 | 94 | 69 | 130 | 53.09 | 12.1(20) | |
| Trichloroethene | 42.6 | 2.5 | | 0 | 85 | 69 | 130 | 50.65 | 17.3(20) | |
| Bromodichloromethane | 54 | 2.5 | | 5.05 | 98 | 66 | 134 | 54.3 | 0.6(20) | |
| cis-1,3-Dichloropropene trans-1,3-Dichloropropene | 43.8 | 2.5 | | 0 | 88 | 63 66 | 130 131 | 52.98 49.69 | 18.9(20) 17.6(20) | |
| 1,1,2-Trichloroethane | 41.6 49.5 | 2.5 2.5 | 50 50 | 0 | 83 99 | 68 | 130 | 49.89 53.47 | 7.8(20) | |
| Toluene | 40.9 | 1.3 | 50 | Ő | 82 | 66 | 130 | 47.89 | 15.8(20) | |
| 1,3-Dichloropropane | 47.3 | 2.5 | 50 | õ | 95 | 70 | 130 | 50.56 | 6.6(20) | |
| Dibromochloromethane | 53.4 | 2.5 | 50 | 7.81 | 91 | 70 | 130 | 48.75 | 9.1(20) | |
| 1,2-Dibromoethane (EDB) | 103 | 10 | 100 | 0 | 103 | 70 | 130 | 109.6 | 6.0(20) | |
| Tetrachloroethene | 40.4 | 2.5 | 50 | 0 | 81 | 61 | 134 | 49.64 | 20.6(20) | R 5 |
| 1,1,1,2-Tetrachloroethane | 47 | 2.5 | 50 | 0 | 94 | 70 | 130 | 52.53 | 11.1(20) | |
| Chlorobenzene Ethylbenzene | 42 | 2.5 | 50 | 0 | 84 | 70 | 130 | 47.94 | 13.1(20) | |
| m.p-Xylene | 40.1 40.7 | 1.3 1.3 | 50 50 | 0 0 | 80 81 | 68 64 | 130 130 | 47.06 48.51 | 15.9(20) 17.6(20) | |
| Bromoform | 51.6 | 2.5 | 50 | 8.14 | 87 | 64 | 138 | 46.28 | 10.9(20) | |
| Styrene | 34.6 | 2.5 | 50 | 0 | 69 | 69 | 130 | 40.13 | 14.9(20) | |
| o-Xylene | 43.3 | 1.3 | 50 | 0 | 87 | 70 | 130 | 49.88 | 14.1(20) | |
| 1,1,2,2-Tetrachloroethane | 47.1 | 2.5 | 50 | 0 | 94 | 65 | 131 | 50.22 | 6.4(20) | |
| 1,2,3-Trichloropropane Isopropylbenzene | 92 | 10 | 100 | 0 | 92 | 70 | 130 | 97.35 | 5.6(20) | |
| Bromobenzene | 37.8 42.9 | 2.5 2.5 | 50 50 | 0 0 | 76 86 | 64 70 | 138 130 | 45.11 48.18 | 17.6(20) 11.6(20) | |
| n-Propylbenzene | 37.9 | 2.5 | 50 | 0 | 76 | 66 | 132 | 45.81 | 18.9(20) | |
| 4-Chlorotoluene | 39.5 | 2.5 | 50 | õ | 79 | 70 | 130 | 46.73 | 16.7(20) | |
| 2-Chlorotoluene | 39.6 | 2.5 | 50 | 0 | 79 | 70 | 130 | 45.95 | 14.9(20) | |
| 1,3,5-Trimethylbenzene | 37.4 | 2.5 | 50 | 0 | 75 | 66 | 136 | 44.58 | 17.6(20) | |
| tert-Butylbenzene | 37.2 | 2.5 | 50 | 0 | 74 | 65 | 137 | 44.26 | 17.3(20) | |
| 1,2,4-Trimethylbenzene sec-Butylbenzene | 36.8 | 2.5 | 50 | 0 | 74 | 65 65 | 137 | 43.57 | 16.7(20) | |
| 1,3-Dichlorobenzene | 37 41.2 | 2.5 2.5 | 50 50 | 0 0 | 74 82 | 66 70 | 134 130 | 44.47 48.12 | 18.3(20) 15.6(20) | |
| 1,4-Dichlorobenzene | 40.8 | 2.5 | 50 | 0 | 82 | 70 | 130 | 47.37 | 14.8(20) | |
| 4-isopropyltoluene | 36.6 | 2.5 | 50 | õ | 73 | 66 | 137 | 45.02 | 20.7(20) | R5 |
| 1,2-Dichlorobenzene | 41.8 | 2.5 | 50 | 0 | 84 | 70 | 130 | 46.84 | 11.4(20) | |
| n-Butylbenzene | 34.7 | 2.5 | 50 | õ | 69 | 60 | 142 | 44.28 | 24.2(20) | R5 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 239 | 15 | 250 | 0 | 96 | 67 | 130 | 251.5 | 5.1(20) | |
| 1,2,4-Trichlorobenzene | 44.5 | 10 | 50 | õ | 89 | 61 | 137 | 49.48 | 10.7(20) | |
| Naphthalene | 49.1 | 10 | 50 | 0 | 98 | 40 | 167 | 51.4 | 4.5(20) | |
| Hexachlorobutadiene | 76 | 10 | 100 | 0 | 76 | 61 | 130 | 90.8 | 17.8(20) | |
| 1,2,3-Trichlorobenzene Surr: 1,2-Dichloroethane-d4 | 47.2 | 10 | 50 | 0 | 94 | 51 | 144 | 49.07 | 3.8(20) | |
| Surr: Toluene-d8 | 51 49 | | 50 50 | | 102 98 | 70 70 | 130 130 | | | |
| | 43 | | 50 | | 30 | 10 | 130 | | | |



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

QC Summary Report

Work Order: 09080602

Date: 18-Aug-09 Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Alpha uses descriptive data qualifier flags, which could be replaced with either a DOD Q or J flag.

R58 = MS/MSD RPD exceeded the laboratory control limit.

L51 = Analyte recovery was above acceptance limits for the LCS, but was acceptable in the MS/MSD.

R5 = MS/MSD RPD exceeded the laboratory control limit. Recovery met acceptance criteria.

Matrix Type: AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

| Logged in by: Chyploth Adcox Elizabeth Adcox Alpha Analytical, Inc. 8-10-09 1/15 | | 1 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------|
| are Print Name Comp Odcox Elizabeth Adcox Alpha Analy | Logged in by: | |
| are Print Name Comp Odcox Elizabeth Adcox Alpha Analy | Cenpbeth | |
| Print Name Comp izabeth Adcox Alpha Analy | adcox | Signature |
| d Cox Alpha Analy | izab | Print N |
| $\begin{array}{c} \text{Company} & \text{Date/Time} \\ \text{Alpha Analytical, Inc.} & 8 \cdot (0 \cdot 0 \ 1 1 \cdot 5 \cdot 5$ | | ame |
| Date/Time 8-6-09 1/15 | Alpha Analytical, Inc. | Company |
| | 21/1 60.01.8 | Date/Time |

No security seals. Frozen ice, Temp Blank #7833 received @ 4°C. Perchlorate RL of 1.0 ug/L. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD).:

Comments:

| San Diego, CA 92110 | 92110 | | Shane Walton | ă | (614 | (614) 424-4117 x | 17 x | waltons@ | waltons@battelle.org | | | Sampleo | Sampled by : Client | ent | |
|------------------------------|---------------------------------------------------------------------------------------|-----------|----------------------------------------------------|---------------------------------|----------------|------------------|-----------------------------------------------------------------------------------|---------------------------|---------------------------|------------------------|---------------|--------------------------------------------|------------------------|------------------|-------------------------|
| PO: 218013 | | | | | | | | | | | | Cooler Temp | | Samples Received | Date Printed |
| Client's COC #: 25740 | 5740 | : qof | Job : G005862/JPL Groundwater Monitoring | L Groun | dwater N | Monitori | рŋ | | | | | 4 | 4°C | 06-Aug-2009 | 06-Aug-2009 |
| QC Level: DS4 | = DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates | : Final R | tpt, MBLK, In | itCal/Cor | nCal data | a, LCS, | MS/MSD V | Nith Surro | gates | | | | | | |
| | | | | | | | | | | Requested Tests | ed Tests | | | | |
| Alpha Sample ID | Client Sample ID | Matr | Collection No. of Bottles Matrix Date Alpha Sub | No. of Bottles Alpha Sub TAT | Bottles Sub | | 300_0(A)_W 300_0(B)_W 300_0(C)_W | 300_0(B)_W | 300_0(C)_W | 314_W | METALS_D W | 314_W METALS_D VOC_TIC_ VOC_W | VOC_W | Samp | Sample Remarks |
| BMI09080602-01A | MW-7 | AQ | 08/05/09 08:41 | თ | 0 | 10 | NO2, NO3, NO2, NO3, NO2, NO3, PO4, SO4, CI PO4, SO4, CI PO4, SO4, CI | NO2, NO3, PO4, SO4, CI | NO2, NO3, PO4, SO4, CI | Perchlorate | Ç, | VOC by 524 VOC by 524 Criteria Criteria | VOC by 524 Criteria | | |
| BMI09080602-02A MW-16 | MW-16 | AQ | 08/05/09 10:29 | 10 | 0 | 10 | NO2, NO3, NO2, NO3, NO2, NO3, PO4, SO4, CI PO4, SO4, CI PO4, SO4, CI PO4, SO4, CI | NO2, NO3, PO4, SO4, CI | NO2, NO3, PO4, SO4, CI | Perchlorate | Ŷ | VOC by 524 VOC by 524 Criteria Criteria | VOC by 524 Criteria | | MS/MSD |
| BMI09080602-03A TB-12-8/5/09 | TB-12-8/5/09 | Ą | 08/05/09 | <u>د</u> | o | 10 | | | | | | VOC by 524 VOC by 524 Criteria Criteria | VOC by 524 Criteria | Reno Tri | Reno Trip Blank 6/22/09 |

Client: Battelle Memorial Institute Suite C-205 3990 Old Town Ave Report Attention Betsy Cutie David Conner CHAIN-OF-CUSTODY RECORD 255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778 TEL: (775) 355-1044 FAX: (775) 355-0406 Alpha Analytical, Inc. Phone Number (614) 424-4899 x (818) 393-2808 x cutiee@batelle.org connerd@battelle.org EMail Address Report Due By : 5:00 PM On : 20-Aug-2009 WorkOrder : BMIS09080602 EDD Required : Yes C A

Page: 1 of 1

Billing Information :

| Billing Information: Name <u>Genals</u> Tompking Iso Address <u>Sos Icines Ave</u> City, State, Zip <u>Columber of 43</u> Phone Number Fax | Alpha Analytical, Inc. 255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778 Phone (775) 355-1044 Fax (775) 355-0406 | Samples Collected From W AZ CA NV ID OR OTHER Analyses Requi |) ³ age | 25740 ; <u># 1 or 1</u> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|--------------------|----------------------------|
| Client Name SATTELLE DAVID CONNER Address 3990 CLD TOWN AND CONNER | PO. # 218013 Job # | 2005862 | Requ | Required QC Level? |
| s ca 921 | Phone # 726-7311 Fax# | | EDD / EDF? YES | |
| Matrix* Sampled by See Key Lab ID Nui Below | Report Attention Sample Description | TAT Field "See below | Giobal ID # | REMARKS |
| 841 85/5 A& BMT09080602-01 | Mw-7 | 15/ JN | | |
| ζΩ. | D MW-16 | | Mshsz | ¢ |
| .03 | 3 TB-12-8/5/09 | | Traine | Rearle |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| ADDITIONAL INSTRUCTIONS: | | | | |
| Signature | Print Name | Company | Date | Time |
| Relinquished by | MARCO MENZONA | INSIGHT EEC | 8/5/09 | 1300 |
| Received by Clapbeth (Ldcox | Elizabeth Adax | . (Llpha | 8.6.09 | 1115 |
| Received by Relinquished by | | | | |
| Received by | | | | |
| *Key: AQ - Aqueous SO - Soil WA - Waste | ste OT_Other AD_Air **: 1_Liter | V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass | on D Diantin | |

of the above samples is applicable only to those samples received by the laboratory with this coc. The liability of the laboratory is limited to the amount paid for the report.



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: 19-Aug-09

David Conner Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 (818) 393-2808

Suite C-205

CASE NARRATIVE

| Project: | G005862/JPL Gro | undwater Monitoring | | |
|-------------------|-----------------|---------------------|--------------|---------------------|
| Work Order: | BMI09080703 | 7 | Cooler Temp: | 4 °C |
| Alpha's | Sample ID | Client's Sample ID | Matrix | |
| 09080 |)703-01A | MW-13 | Aqueous | |
| 09080 |)703-02A | MW-8 | Aqueous | |
| 09080 |)703-03A | MW-6 | Aqueous | |
| 09080 |)703-04A | TB-13-8/6/09 | Aqueous | |
| | | Manually Integrat | ed Analytes | i internetion de la |
| <u>Alpha's Sa</u> | mple ID | Test Reference | | Analyte |
| 0908070 | 03-01A | EPA Method 314.0 | | Perchlorate |
| 0908070 | 03-02A | EPA Method 314.0 | | Perchlorate |
| 0908070 | 03-03A | EPA Method 314.0 | | Perchlorate |

Enclosed please find the analytical results of the samples received by Alpha Analytical, Inc. under the above mentioned Work Order/Chainof-Custody.

Alpha Analytical, Inc. has a formal Quality Assurance/Quality Control program, which is designed to meet or exceed the EPA requirements. All relevant QC met quality assurance objectives for this project unless otherwise stated in the footnotes.

If you have any questions with regards to this report, please contact Randy Gardner, Project Manager, at (800) 283-1183.

Walter Airidmon Kandy Sandmer Roger Scholl

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110
 Attn:
 David Conner

 Phone:
 (818) 393-2808

 Fax:
 (614) 458-6641

 Date Received : 08/07/09

Job#: G005862/JPL Groundwater Monitoring

| | | Anions by IC 1ethod 300.0 / 9056 | | د | |
|--------------------------|----------------------|-------------------------------------|--------------------|------------------------|-------------------------|
| | Parameter | Concentration | Reporting Limit | Date / Time Sampled | Date / Time Analyzed |
| Client ID : MW-13 | Nitrite (NO2) - N | ND | 0.25 mg/L | 08/06/09 08:26 | 08/07/09 12:30 |
| Lab ID : BMI09080703-01A | Nitrate (NO3) - N | 6.7 | 0.25 mg/L | 08/06/09 08:26 | 08/07/09 12:30 |
| Lab 1D : BM109080703-01A | Phosphate, ortho - P | ND | 0.25 mg/L | 08/06/09 08:26 | 08/07/09 12:30 |
| Client ID : MW-8 | Nitrite (NO2) - N | ND | 0.25 mg/L | 08/06/09 10:10 | 08/07/09 12:48 |
| | Nitrate (NO3) - N | 3.7 | 0.25 mg/L | 08/06/09 10:10 | 08/07/09 12:48 |
| Lab ID : BMI09080703-02A | Phosphate, ortho - P | ND | 0.25 mg/L | 08/06/09 10:10 | 08/07/09 12:48 |

ND = Not Detected

Roger Scholl

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

8/20/09 Report Date



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110

 Attn:
 David Conner

 Phone:
 (818) 393-2808

 Fax:
 (614) 458-6641

 Date Received : 08/07/09

Job#: G005862/JPL Groundwater Monitoring

| | Anions by IC EPA Method 300.0 / 9056 | | | | | | | | | |
|------------------|-----------------------------------------|-------|---------------|--------------------|-----------------|------------------|--|--|--|--|
| | Parat | neter | Concentration | Reporting Limit | Date Sampled | Date Analyzed | | | | |
| Client ID : MW-1 | 3 | | | | | | | | | |
| Lab ID : BMI09 | 080703-01A Chloride | | 37 | 0.50 mg/L | 08/06/09 | 08/07/09 | | | | |
| | Sulfate (SO4 |) | 53 | 0.50 mg/L | 08/06/09 | 08/07/09 | | | | |
| Client ID : MW-8 | | | | | | | | | | |
| Lab ID : BMI09 | 080703-02A Chloride | | 39 | 0.50 mg/L | 08/06/09 | 08/07/09 | | | | |
| | Sulfate (SO4 |) | 77 | 0.50 mg/L | 08/06/09 | 08/07/09 | | | | |

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Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

8/20/09

Report Date



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ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110
 Attn:
 David Conner

 Phone:
 (818) 393-2808

 Fax:
 (614) 458-6641

 Date Received : 08/07/09

Job#: G005862/JPL Groundwater Monitoring

| |] | Perchlorate by Ion Chromatography EPA Method 314.0 | | |
|-----------------------------------------------|-------------|-------------------------------------------------------|--------------------|-------------------------------|
| | Parameter | Concentration | Reporting Limit | Date Date Sampled Analyzed |
| Client ID : MW-13 Lab ID : BM109080703-01A | Perchlorate | 1,110 | 100 μg/L | 08/06/09 08/07/09 |
| Client ID : MW-8 Lab ID : BM109080703-02A | Perchlorate | 186 | 10.0 μg/L | 08/06/09 08/07/09 |
| Client ID : MW-6 Lab ID : BMI09080703-03A | Perchlorate | 2.26 | 1.00 μg/L | 08/06/09 08/07/09 |

Roger Scholl Kandy Sandner

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Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

8/20/09 Report Date



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ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110

 Attn:
 David Conner

 Phone:
 (818) 393-2808

 Fax:
 (614) 458-6641

 Date Received : 08/07/09

Job#: G005862/JPL Groundwater Monitoring

| | Metals by ICPMS EPA Method 200.8 | | | | | | | | | | |
|-------------------------|-------------------------------------|---------------|---------------|--------------------|-------------------------------|--|--|--|--|--|--|
| | | Parameter | Concentration | Reporting Limit | Date Date Sampled Analyzed | | | | | | |
| Client ID : Lab ID : | MW-13 BMI09080703-01A | Chromium (Cr) | 0.031 | 0.0050 mg/L | 08/06/09 08/13/09 | | | | | | |
| Client ID : Lab ID : | MW-8 BMI09080703-02A | Chromium (Cr) | 0.0053 | 0.0050 mg/L | 08/06/09 08/13/09 | | | | | | |
| Client ID : Lab ID : | MW-6 BMI09080703-03A | Chromium (Cr) | 0.048 | 0.0050 mg/L | 08/06/09 08/13/09 | | | | | | |

Roger Scholl Walter Aridman Kandy Santan

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

8/20/09

Report Date



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ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Job#: G005862/JPL Groundwater Monitoring Attn: David Conner Phone: (818) 393-2808 Fax: (614) 458-6641

Tentatively Identified Compounds - Volatile Organics by GC/MS

| | | Parameter | Estimated Concentration | Estimated Reporting Limit | Date Received | Date Sampled | Date Analyzed |
|-------------------------|---------------------------------|------------------------|----------------------------|---------------------------------|------------------|-----------------|------------------|
| | | | Concentration | Linit | 10001700 | Sumpice | i iluiy2eu |
| Client ID : Lab ID : | MW-13 BMI09080703-01A | *** None Found *** | ND | 2.0 μg/L | 08/07/09 | 08/06/09 | 08/14/09 |
| Client ID : Lab ID : | MW-8 BMI09080703-02A | *** None Found *** | ND | 2.0 μg/L | 08/07/09 | 08/06/09 | 08/14/09 |
| Client ID : Lab ID : | MW-6 BMI09080703-03A | * * * None Found * * * | ND | 2.0 μg/L | 08/07/09 | 08/06/09 | 08/14/09 |
| Client ID : Lab ID : | TB-13-8/6/09 BMI09080703-04A | * * * None Found * * * | ND | 2.0 μg/L | 08/07/09 | 08/06/09 | 08/14/09 |

Note: Analysis conducted using EPA Method 524.2 criteria. ND = Not Detected

Roger Scholl Kandy Sandmer

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Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

8/20/09

Report Date Page 1 of 1



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 G005862/JPL Groundwater Monitoring Job#:

Alpha Analytical Number: BMI09080703-01A Client I.D. Number: MW-13

David Conner Attn: (818) 393-2808 Phone: (614) 458-6641 Fax:

Sampled: 08/06/09 Received: 08/07/09

Analyzed: 08/14/09

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting Li | mit |
|----|--------------------------------|---------------|-----------|-------|----|-----------------------------------|---------------|--------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | μg/L |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m,p-Xylene | ND | 0.50 | μg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | µg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | μg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachioroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chloroform | 2.4 | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBCI | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | 1.0 | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 1.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 110 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 101 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 90 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | | | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Sarlan

Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

Walter Aridmon Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

8/20/09

Report Date



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

| ANAL | YTICAL REPORT |
|------------------------------------------|-----------------------|
| Battelle Memorial Institute | Attn: David Conner |
| 3990 Old Town Ave | Phone: (818) 393-2808 |
| San Diego, CA 92110 | Fax: (614) 458-6641 |
| Job#: G005862/JPL Groundwater Monitoring | |
| Alpha Analytical Number: BMI09080703-02A | Sampled: 08/06/09 |
| Client I.D. Number: MW-8 | Received: 08/07/09 |
| | Analyzed: 08/14/09 |
| | |

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting Li | imit |
|----|--------------------------------|---------------|-----------|-------|----|-----------------------------------|---------------|--------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | µg/L |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m,p-Xylene | ND | 0.50 | µg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | µg/L |
| 6 | Trichlorofluoromethane | 1.3 | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | ug/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chloroform | 0.64 | 0.50 | µg/L | 51 | tert-Butvibenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butvibenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1.3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBCI | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | 0.60 | 0.50 | µg/L | 61 | Naphthalene | ND | 1.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1.2.3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 104 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 101 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 91 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | 1 | , , , | |
| 33 | Dibromochloromethane | 0.60 | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Rogen Scholl

Kandy Douton

Walter Airihan Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

8/20/09

Report Date

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ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Job#: G005862/JPL Groundwater Monitoring

Alpha Analytical Number: BMI09080703-03A Client I.D. Number: MW-6

Attn: David Conner Phone: (818) 393-2808 Fax: (614) 458-6641

Sampled: 08/06/09 Received: 08/07/09

Analyzed: 08/14/09

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting L | imit |
|----|--------------------------------|---------------|-----------|-------|----|----------------------------------|---------------|-------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | µg/L |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m,p-Xylene | ND | 0.50 | µg/L |
| 5 | Bromomethane | ND | 1.0 | μg/L | 40 | Bromoform | ND | 0.50 | µg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloroproparie | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | μg/L |
| 16 | Chloroform | ND | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBC | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | 2.4 | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 1.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 108 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 103 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | μg/L | 66 | Surr: 4-Bromofluorobenzene | 89 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | , | . , | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | Tetrachloroethene | 1.2 | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Sandman

Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

Walter Arihm Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Waiter Hinchman, Quality Assurance Officer

8/20/09

Report Date



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ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 G005862/JPL Groundwater Monitoring Job#:

Alpha Analytical Number: BMI09080703-04A Client I.D. Number: TB-13-8/6/09

David Conner Attn: Phone: (818) 393-2808 (614) 458-6641 Fax:

Sampled: 08/06/09 Received: 08/07/09

Analyzed: 08/14/09

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting Li | imit |
|----|--------------------------------|---------------|-----------|-------|----|----------------------------------|---------------|--------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1.1.1.2-Tetrachloroethane | ND | 0.50 | μg/L |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | μg/L |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m.p-Xylene | ND | 0.50 | μg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | µg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | μg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chloroform | ND | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | μg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBC | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 1.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 106 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 100 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzerie | 89 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | | | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

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8/20/09 **Report Date**



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VOC Sample Preservation Report

Work Order: BMI09080703

Project: G005862/JPL Groundwater Monitoring

| Alpha's Sample ID | Client's Sample ID | Matrix | рН | |
|-------------------|--------------------|---------|----|--|
| 09080703-01A | MW-13 | Aqueous | 2 | |
| 09080703-02A | MW-8 | Aqueous | 2 | |
| 09080703-03A | MW-6 | Aqueous | 2 | |
| 09080703-04A | TB-13-8/6/09 | Aqueous | 2 | |

•



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| Date: 18-Aug-09 | (| QC Si | ummar | y Repor | t | | | | Work Ord 09080703 | |
|----------------------------------------------------------------|-------------------------------|----------------------|------------------|------------------------------------------------------------------------------|-----------------|----------------|-------------------|----------------------|---------------------------------------------------|------|
| Method Blank File ID: 17 Sample ID: MB-22498 Analyte | Units : mg/L Result | Type M | Ba Run ID: IC | est Code: El atch ID: 224 _ 2_090807 SpkRefVal | 98A | | Analy Prep | Date: | 08/07/2009 11:34 08/07/2009 Val %RPD(Limit) | Qual |
| Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P | ND ND ND | 0.25 0.25 0.25 | | | | | | | | |
| Laboratory Fortified Blank | | Type L | FB Te | est Code: El | PA Me | thod 300.0 | / 9056 | | | |
| File ID: 18 Sample ID: LFB-22498 | Units : mg/L | | | atch ID: 2249 | | | Analy Prep | | 08/07/2009 11:53 08/07/2009 | |
| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qual |
| Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P | 1.16 1.37 1.14 | 0.25 0.25 0.25 | 1.25 | | 93 110 91 | 90 90 90 | 110 110 110 | | | |
| Sample Matrix Spike | | Type L | FM Te | est Code: El | PA Me | thod 300.0 | / 9056 | | | |
| File ID: 29 | | | Ba | atch ID: 224 | A86 | | Analy | sis Date: | 08/07/2009 15:16 | |
| Sample ID: 09080703-01ALFM | Units : mg/L | | - | _2_090807# | | | Prep | | 08/07/2009 | |
| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qual |
| Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P | 1.12 7.8 1.33 | 0.25 0.25 0.25 | 1.25 | 0 6.689 0 | 89 89 106 | 80 80 80 | 120 120 120 | | | |
| Sample Matrix Spike Duplicate | | Type L | FMD Te | est Code: El | PA Me | thod 300.0 | / 9056 | | | |
| File ID: 30 | | | Ba | atch ID: 2249 | 98A | | Analy | sis Date: | 08/07/2009 15:35 | |
| Sample ID: 09080703-01ALFMD | Units : mg/L | | | _2_090807# | | | Prep | | 08/07/2009 | |
| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | CLCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qual |
| Nitrite (NO2) - N Nitrate (NO3) - N Phosphate, ortho - P | 1.37 7.92 1.21 | 0.25 0.25 0.25 | 1.25 | 0 6.689 0 | 109 99 97 | 80 80 80 | 120 120 120 | 1.11 7.80 1.32 | 3 1.5(10) | R5 |

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Alpha uses descriptive data qualifier flags, which could be replaced with either a DOD Q or J flag.

R5 = MS/MSD RPD exceeded the laboratory control limit. Recovery met acceptance criteria.



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| Date: | | QC Summary Report | | | | | | | | Work Order: 09080703 | |
|----------------------------|--------------------|-------------------|--------|------------------|-------------------------------|--------|------------|---------|------------|----------------------|-----|
| Method Blan File ID: 17 | k | | Type N | | Fest Code: E Batch ID: 224 | | thod 300.0 | | /sis Date: | 08/07/2009 11:34 | |
| Sample ID: | MB-22498 | Units : mg/L | | Run ID: I | C_2_090807 | Ά | | Prep | Date: | 08/07/2009 | |
| Analyte | | Result | PQL | SpkVa | I SpkRefVa | I %REC | C LCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qua |
| Sulfate (SO4) | | ND | 0.5 | 5 | | | | | | | |
| Laboratory F | Fortified Blank | | Type L | FB - | Fest Code: E | EPA Me | thod 300.0 | / 9056 | | | |
| File ID: 18 | | | | E | Batch ID: 224 | 198B | | Analy | sis Date: | 08/07/2009 11:53 | |
| Sample ID: | LFB-22498 | Units : mg/L | | Run ID: I | C_2_090807 | Ά | | Prep | Date: | 08/07/2009 | |
| Analyte | | Result | PQL | SpkVa | I SpkRefVa | I %REC | C LCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qua |
| Sulfate (SO4) | | 10.2 | 0.5 | 5 10 |) | 102 | 90 | 110 | | | |
| Sample Matr | ix Spike | | Type L | .FM ⁻ | Fest Code: E | EPA Me | thod 300.0 | / 9056 | | | |
| File ID: 29 | | | | E | Batch ID: 224 | 498B | | Anaiy | sis Date: | 08/07/2009 15:16 | |
| Sample ID: | 09080703-01ALFM | Units : mg/L | | Run ID: I | C_2_090807 | Ά | | Prep | Date: | 08/07/2009 | |
| Analyte | | Result | PQL | SpkVa | I SpkRefVa | I %REC | C LCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qua |
| Sulfate (SO4) | | 62.2 | 0.5 | 5 10 |) 53.12 | 2 90 | 80 | 120 | | | |
| Sample Matr | ix Spike Duplicate | | Type L | .FMD | Fest Code: E | EPA Me | thod 300.0 | / 9056 | | | |
| File ID: 30 | | | | E | Batch ID: 22 | 498B | | Analy | sis Date: | 08/07/2009 15:35 | |
| Sample ID: | 09080703-01ALFMD | Units : mg/L | | Run ID: I | C_2_090807 | Ά | | Prep | Date: | 08/07/2009 | |
| Analyte | | Result | PQL | SpkVa | I SpkRefVa | I %REC | LCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qua |
| Sulfate (SO4) | | 62.7 | 0.5 | | | | 80 | 120 | 62.1 | | |

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



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| Date: 18-Aug-09 | QC Summary Report | | | | | | | | | Work Order: 09080703 | | |
|-------------------------------------------|---------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------|--------|--------|-----------------------------|----------|--------------------|------------------|-----------------------------|---------------------------------------------------|-----|
| Method Blan File ID: 17 | Type MBLK Test Code: EPA Method 300.0 / 9056 Batch ID: 22498C Analysis Date: | | | | | | | : 08/07/2009 11:34 | | | | |
| Sample ID: | MB-22498 | Units : mg/L | | Run ID |): IC_ | 2_090807A | . | | Prep | Date: | 08/07/2009 | |
| Analyte | | Result | PQL | Spk | Val | SpkRefVal | %REC | LCL(ME) | UCL(ME |) RPDRef | Val %RPD(Limit) | Qua |
| Chloride | | ND | 0. | 5 | | | | | | | | |
| Laboratory Fortified Blank File ID: 18 | | | Type LFB | | | Test Code: EPA Method 300.0 | | | | unia Data | 00/07/0000 11:53 | |
| Sample ID: Analyte | LFB-22498 | Units : mg/L Result | PQL | |): IC_ | 2_090807A | | | Prep | , Date: | 08/07/2009 11:53 08/07/2009 Val %RPD(Limit) | Qua |
| Chloride | | 4.48 | 0.1 | | 5 | opkitervar | 90 | 90 | 110 | | | |
| Sample Matrix Spike File ID: 29 | | | Test Code: EPA Method 300.0 / Batch ID: 22498C | | | | | ysis Date: | 08/07/2009 15:16 | | | |
| Sample ID: | 09080703-01ALFM | Units : mg/L | | Run IC |): IC_ | 2_090807A | | | Prep | Date: | 08/07/2009 | |
| Analyte | | Result | PQL | Spk | Val 3 | SpkRefVal | %REC | LCL(ME) | UCL(ME |) RPDRef | Val %RPD(Limit) | Qua |
| Chloride | | 40.6 | 0. | 5 | 5 | 37.13 | 69 | 80 | 120 | | | M2 |
| | rix Spike Duplicate | | Type LFMD Test Code: EPA Method 300.0 / 9056 | | | | | | | | | |
| File ID: 30 | | | | | Bat | tch ID: 2249 | 8C | | Anal | ysis Date: | 08/07/2009 15:35 | |
| Sample ID: | 09080703-01ALFMD | Units : mg/L | | Run ID |): IC_ | 2_090807 <i>A</i> | 1 | | Prep | Date: | 08/07/2009 | |
| Analyte | | Result | PQL | Spk | Val 🗄 | SpkRefVal | %REC | LCL(ME) | UCL(ME |) RPDRef | Val %RPD(Limit) | Qua |
| Chloride | | 41.3 | 0. | 5 | 5 | 37.13 | 83 | 80 | 120 | 40.5 | 7 1.7(10) | |

Comments:

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Alpha uses descriptive data qualifier flags, which could be replaced with either a DOD Q or J flag.

M2 = Matrix spike recovery was low, the method control sample recovery was acceptable.



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| Date: 19-Aug-09 | (| QC S | Sum | mar | y Repor | t | | | | Work Ord 09080703 | |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|---------------|------------------------------|--------|-----------|---------|-----------|-----------------------------|-----|
| Method Blank File ID: 14 | . <u>1948</u> - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 | Туре | MBLK | | est Code: El atch ID: 224 | | hod 314.0 | | sis Date: | 08/07/2009 11:00 | |
| Sample ID: MB-22496 | Units : µg/L | | Run | ID: IC | _3_090807 | 3 | | Prep | Date: | 08/07/2009 | |
| Analyte | Result | PQL | | | | | LCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qua |
| Perchlorate | ND | | 1 | | | | | | | | |
| Laboratory Fortified Blank | | Туре | LFB | Τe | est Code: El | PA Met | hod 314.0 | | | 14.2.4.100 m v | |
| File ID: 15 | | | | Ba | atch ID: 224 | 96 | | Analy | sis Date: | 08/07/2009 11:18 | |
| Sample ID: LFB-22496 | Units : µg/L | | Run | ID: IC | _3_0908076 | 3 | | Prep | Date: | 08/07/2009 | |
| Analyte | Result | PQL | S | okVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qua |
| Perchlorate | 25.7 | | 2 | 25 | | 103 | 85 | 115 | | | |
| Sample Matrix Spike | <u></u> | Туре | LFM | Τe | est Code: El | PA Met | hod 314.0 | | | | |
| File ID: 28 | | | | Ba | atch ID: 224 | 96 | | Analy | sis Date: | 08/07/2009 15:17 | |
| Sample ID: 09080703-01ALFM | Units : µg/L | | Run | ID: IC | _3_090807 | 3 | | Prep | Date: | 08/07/2009 | |
| Analyte | Result | PQL | S | okVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qua |
| Perchlorate | 3780 | 20 | 00 | 2500 | 1113 | 107 | 80 | 120 | | | |
| Sample Matrix Spike Duplicate | | Туре | LFMD | Τe | est Code: El | PA Met | hod 314.0 | | | | |
| File ID: 29 | | | | Ba | atch ID: 224 | 96 | | Analy | sis Date: | 08/07/2009 15:36 | |
| Sample ID: 09080703-01ALFMD | Units : µg/L | | Run | ID: IC | _3_090807E | 3 | | Prep | Date: | 08/07/2009 | |
| Analyte | Result | PQL | S | okVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qua |
| Perchlorate | 3700 | 20 | 00 | 2500 | 1113 | 104 | 80 | 120 | 377 | 7 2.0(15) | |
| | | | | | | | | | | | |

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



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| Date: 19-Aug-09 | (| QC S | ummar | y Repor | t | | | | Work Ord 09080703 | |
|---------------------------------------------------------------|--------------|--------|------------|-----------------------------|--------------|------------|---------|------------|-----------------------------|------|
| Method Blank File ID: 081309.B\052SMPL.D\ | | Type I | | est Code: E atch ID: 225 | | thod 200.8 | | sis Date: | 08/13/2009 19:24 | |
| Sample ID: MB-22542 | Ųnits : mg/L | | Run ID: IC | CP/MS_0908 | 13B | | Prep | Date: | 08/13/2009 | |
| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | CLCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qual |
| Chromium (Cr) | ND | 0.00 | 5 | | | | | | | |
| Laboratory Control Spike File ID: 081309.B\053_LCS.D\ | | Туре І | | est Code: E atch ID: 225 | | thod 200.8 | | sis Date: | 08/13/2009 19:30 | |
| Sample ID: LCS-22542 | Units : mg/L | | Run ID: IC | CP/MS_0908 | 13B | | Prep | Date: | 08/13/2009 | |
| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | CLCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qual |
| Chromium (Cr) | 0.0571 | 0.00 | 5 0.05 | | 1 1 4 | 80 | 120 | | | |
| Sample Matrix Spike File iD: 081309.B\057SMPL.D\ | | Type I | | est Code: E atch ID: 225 | | thod 200.8 | | sis Date: | 08/13/2009 19:52 | |
| Sample ID: 09080703-01AMS | Units : mg/L | | Run ID: IC | CP/MS_0908 | 13B | | Prep | Date: | 08/13/2009 | |
| Analyte | Result | PQL | SpkVal | | %REC | CLCL(ME) | UCL(ME) | RPDRef | val %RPD(Limit) | Qual |
| Chromium (Cr) | 0.0776 | 0.00 | 5 0.05 | 0.03121 | 93 | 80 | 120 | | | |
| Sample Matrix Spike Duplicate File ID: 081309.B\058SMPL.D\ | | Type I | - | est Code: E | | thod 200.8 | | vsis Date: | 08/13/2009 19:58 | |
| Sample ID: 09080703-01AMSD | Units : mg/L | | _ | CP/MS_0908 | | | | Date: | 08/13/2009 | |
| Analyte | Result | PQL | | | | CLCL(ME) | | | val %RPD(Limit) | Qual |
| Chromium (Cr) | 0.0789 | 0.00 | | | 95 | 80 | 120 | 0.077 | | |

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



| 19-Aug-09 | (| <u>2C Sumn</u> | nary Report | | Work Order: 09080703 | | |
|-------------------------------------------------------------------|--------------|---------------------------|---------------------------------------------------------|------------------------------|--------------------------------|----|--|
| Method Blank File ID: 09081411.D Sample ID: MBLK MS15W0814M | Units : µg/L | Type MBLK Run I | Test Code: Batch ID: MS15W0814M D: MSD_15_090814A | Analysis Date: Prep Date: | 08/14/2009 15:40 08/14/2009 | | |
| Analyte | Result | PQL Spl | <pre></pre> | E) UCL(ME) RPDRef | √al %RPD(Limit) | Qu | |
| Dichlorodifluoromethane | ND | 0.5 | | | | | |
| Chloromethane | ND | 1 | | | | | |
| Vinyl chloride | ND | 0.5 | | | | | |
| Chloroethane | ND | 0.5 | | | | | |
| Bromomethane | ND | 1 | | | | | |
| Trichlorofluoromethane | ND | 0.5 | | | | | |
| 1,1-Dichloroethene | ND | 0.5 | | | | | |
| Dichloromethane | ND | 1 | | | | | |
| Freon-113 trans-1,2-Dichloroethene | ND ND | 0.5 0.5 | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 0.5 | | | | | |
| 1,1-Dichloroethane | ND | 0.5 | | | | | |
| 2-Butanone (MEK) | ND | 10 | | | | | |
| cis-1,2-Dichloroethene | ND | 0.5 | | | | | |
| Bromochloromethane | ND | 0.5 | | | | | |
| Chloroform | ND | 0.5 | | | | | |
| 2,2-Dichloropropane | ND | 0.5 | | | | | |
| 1,2-Dichloroethane | ND | 0.5 | | | | | |
| 1,1,1-Trichloroethane 1,1-Dichloropropene | ND | 0.5 | | | | | |
| Carbon tetrachloride | ND | 0.5 | | | | | |
| Benzene | ND ND | 0.5 0.5 | | | | | |
| Dibromomethane | ND | 0.5 | | | | | |
| 1,2-Dichloropropane | ND | 0.5 | | | | | |
| Trichloroethene | ND | 0.5 | | | | | |
| Bromodichloromethane | ND | 0.5 | | | | | |
| 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | | | | | |
| cis-1,3-Dichloropropene | ND | 0.5 | | | | | |
| trans-1,3-Dichloropropene | ND | 0.5 | | | | | |
| 1,1,2-Trichloroethane | ND | 0.5 | | | | | |
| Toluene | ND | 0.5 | | | | | |
| 1,3-Dichloropropane Dibromochloromethane | ND | 0.5 | | | | | |
| 1,2-Dibromoethane (EDB) | ND ND | 0.5 1 | | | | | |
| Tetrachloroethene | ND | 0.5 | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.5 | | | | | |
| Chlorobenzene | ND | 0.5 | | | | | |
| Ethylbenzene | ND | 0.5 | | | | | |
| m,p-Xylene | ND | 0.5 | | | | | |
| Bromoform | ND | 0.5 | | | | | |
| Styrene | ND | 0.5 | | | | | |
| o-Xylene | ND | 0.5 | | | | | |
| 1,1,2,2-Tetrachloroethane 1,2,3-Trichloropropane | ND | 0.5 | | | | | |
| Isopropylbenzene | ND ND | 0.5 | | | | | |
| Bromobenzene | ND | 0.5 | | | | | |
| n-Propylbenzene | ND | 0.5 | | | | | |
| 4-Chlorotoluene | ND | 0.5 | | | | | |
| 2-Chlorotoluene | ND | 0.5 | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.5 | | | | | |
| tert-Butylbenzene | ND | 0.5 | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.5 | | | | | |
| sec-Butylbenzene | ND | 0.5 | | | | | |
| 1,3-Dichlorobenzene 1,4-Dichlorobenzene | ND | 0.5 | | | | | |
| 4-isopropyitoluene | ND ND | 0.5 | | | | | |
| 1,2-Dichlorobenzene | ND ND | 0.5 0.5 | | | | | |
| n-Butylbenzene | ND | 0.5 | | | | | |
| 1,2-Dibromo-3-chloropropane (DBCP) | ND | 2.5 | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1 | | | | | |
| Naphthalene | ND | 1 | | | | | |
| Hexachlorobutadiene | ND | 1 | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1 | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10.3 | | 10 103 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10 100 70 | 130 | | | |



| Date: 19-Aug-09 | (| QC Sumn | nary Rep | ort | | ······································ | Work Ord 09080703 | |
|-------------------------------------------------|---------------|------------|---------------------------|-------------|----------|----------------------------------------|-----------------------------|------|
| Surr: 4-Bromofluorobenzene | 8.93 | | 10 | 89 | 70 | 130 | | |
| Laboratory Control Spike File ID: 09081408.D | | Type LCS | Test Code: Batch ID: N | S15W081 | 4M | | : 08/14/2009 14:16 | |
| Sample ID: LCS MS15W0814M | Units : µg/L | | D: MSD_15_0 | | | Prep Date: | 08/14/2009 | Qual |
| Analyte | Result | | | | |) UCL(ME) RPDRe | | Qual |
| Dichlorodifluoromethane Chloromethane | 12.5 10.8 | 1 2 | 10 10 | 125 108 | 70 70 | 130 130 | | |
| Vinyl chloride | 11.4 | 2 | 10 | 114 | 70 | 130 | | |
| Chloroethane | 11.2 | 1 | 10 | 112 | 70 | 130 | | |
| Bromomethane | 13.2 | 2 | 10 | 132 | 70 | 130(130) | | L51 |
| Trichlorofluoromethane | 12 | 1 | 10 | 120 | 70 | 130 | | |
| 1,1-Dichloroethene | 11 | 1 | 10 | 110 | 70 | 130 | | |
| Dichloromethane trans-1,2-Dichloroethene | 10.6 11.4 | 2 | 10 | 106 | 70 70 | 130 130 | | |
| Methyl tert-butyl ether (MTBE) | 11.4 | 1 0.5 | 10 10 | 114 110 | 70 | 130 | | |
| 1,1-Dichloroethane | 10.9 | 0.0 | 10 | 109 | 70 | 130 | | |
| cis-1,2-Dichloroethene | 11.2 | 1 | 10 | 112 | 70 | 130 | | |
| Bromochloromethane | 11.4 | 1 | 10 | 114 | 70 | 130 | | |
| Chloroform | 10.6 | 1 | 10 | 106 | 70 | 130 | | |
| 2,2-Dichloropropane 1,2-Dichloroethane | 12.5 10.7 | 1 1 | 10 10 | 125 107 | 70 70 | 130 130 | | |
| 1,1,1-Trichloroethane | 11.5 | 1 | 10 | 115 | 70 | 130 | | |
| 1,1-Dichloropropene | 11.2 | 1 | 10 | 112 | 70 | 130 | | |
| Carbon tetrachloride | 11.7 | 1 | 10 | 117 | 70 | 130 | | |
| Benzene | 11.1 | 0.5 | 10 | 111 | 70 | 130 | | |
| Dibromomethane 1,2-Dichloropropane | 11.2 | 1 | 10 | 112 | 70 | 130 130 | | |
| Trichloroethene | 11.1 11 | 1 1 | 10 10 | 111 110 | 70 70 | 130 | | |
| Bromodichloromethane | 11.2 | 1 | 10 | 112 | 70 | 130 | | |
| cis-1,3-Dichloropropene | 11.1 | 1 | 10 | 111 | 70 | 130 | | |
| trans-1,3-Dichloropropene | 10.2 | 1 | 10 | 102 | 70 | 130 | | |
| 1,1,2-Trichloroethane | 10.4 | · 1 | 10 | 104 | 70 | 130 | | |
| Toluene 1,3-Dichloropropane | 10.4 | 0.5 | 10 | 104 102 | 70 70 | 130 | | |
| Dibromochloromethane | 10.2 9.95 | 1 1 | 10 10 | 102 | 70 70 | 130 130 | | |
| 1,2-Dibromoethane (EDB) | 22.3 | 2 | 20 | 111 | 70 | 130 | | |
| Tetrachloroethene | 10.8 | 1 | 10 | 108 | 70 | 130 | | |
| 1,1,1,2-Tetrachloroethane | 11.2 | 1 | 10 | 112 | 70 | 130 | | |
| Chlorobenzene | 10.1 | 1 | 10 | 101 | 70 70 | 130 | | |
| Ethylbenzene m,p-Xylene | 10.2 10.4 | 0.5 0.5 | 10 10 | 102 104 | 70 70 | 130 130 | | |
| Bromoform | 9.13 | 0.5 | 10 | 91 | 70 | 130 | | |
| Styrene | 8.52 | 1 | 10 | 85 | 70 | 130 | | |
| o-Xylene | 10.7 | 0.5 | 10 | 107 | 70 | 130 | | |
| 1,1,2,2-Tetrachloroethane | 9.66 | 1 | 10 | 97 | 70 | 130 | | |
| 1,2,3-Trichloropropane Isopropylbenzene | 19.2 9.84 | 2 1 | 20 10 | 96 98 | 70 70 | 130 130 | | |
| Bromobenzene | 9.88 | 1 | 10 | 98 99 | 70 | 130 | | |
| n-Propylbenzene | 9.97 | 1 | 10 | 99.7 | 70 | 130 | | |
| 4-Chlorotoluene | 9.91 | 1 | 10 | 99 | 70 | 130 | | |
| 2-Chlorotoluene | 9.87 | 1 | 10 | 99 | 70 | 130 | | |
| 1,3,5-Trimethylbenzene tert-Butylbenzene | 9.54 | 1 | 10 | 95 | 70 70 | 130 | | |
| 1,2,4-Trimethylbenzene | 9.53 9.21 | 1 1 | 10 10 | 95 92 | 70 70 | 130 130 | | |
| sec-Butylbenzene | 9.6 | 1 | 10 | 96 | 70 | 130 | | |
| 1,3-Dichlorobenzene | 9.99 | 1 | 10 | 99.9 | 70 | 130 | | |
| 1,4-Dichlorobenzene | 9.79 | 1 | 10 | 98 | 70 | 130 | | |
| 4-Isopropyltoluene | 9.59 | 1 | 10 | 96 | 70 70 | 130 | | |
| 1,2-Dichlorobenzene n-Butylbenzene | . 9.45 9.5 | 1 | 10 10 | 95 95 | 70 70 | 130 130 | | |
| 1,2-Dibromo-3-chloropropane (DBCP) | 9.5 48.7 | 3 | 10 50 | 95 97 | 70 70 | 130 | | |
| 1,2,4-Trichlorobenzene | 9.72 | 2 | 10 | 97 | 70 | 130 | | |
| Naphthalene | 9.75 | 2 | 10 | 98 | 70 | 130 | | |
| Hexachlorobutadiene | 19.3 | 2 | 20 | 96 | 70 | 130 | | |
| 1,2,3-Trichlorobenzene | 9.41 | 2 | 10 | 94 | 70 | 130 | | |
| Surr: 1,2-Dichloroethane-d4 Surr: Toluene-d8 | 9.97 10 | | 10 10 | 99.7 100 | 70 70 | 130 130 | | |
| Surr: 4-Bromofluorobenzene | 9.75 | | 10 | 98 | 70 | 130 | | |
| · · · · · · | | | | | | | | |



| Date: 19-Aug-09 | (| QC Su | immary | Report | - | | | Work Orde 09080703 | |
|------------------------------------------------------|--------------|------------|-----------|-------------|----------------|----------|--------------|------------------------------|------|
| Sample Matrix Spike | | Туре М | S Te | st Code: | | | | | |
| File ID: 09081414.D | | | Ba | tch ID: MS1 | 5W081 | 4M | Analysis Da | ate: 08/14/2009 16:47 | |
| Sample ID: 09080502-03AMS | Units:µg/L | 1 | | D_15_0908 | | | Prep Date: | 08/14/2009 | |
| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) RPDI | RefVal %RPD(Limit) | Qual |
| Dichlorodifluoromethane | 47.3 | 2.5 | 50 | 0 | 95 | 13 | 167 | | |
| Chloromethane Vinyl chloride | 53.6 59.7 | 10 | 50 | 0 | 107 | 28 43 | 145 134 | | |
| Chloroethane | 53.4 | 2.5 2.5 | 50 50 | 0 0 | 119 107 | 43 39 | 154 | | |
| Bromomethane | 62.3 | 10 | 50 | ŏ | 125 | 19 | 176 | | |
| Trichlorofluoromethane | 56.7 | 2.5 | 50 | 0 | 113 | 34 | 160 | | |
| 1,1-Dichloroethene Dichloromethane | 50.2 | 2.5 | 50 | 0 | 100 | 60 | 130 | | |
| trans-1,2-Dichloroethene | 51.4 52.4 | 10 2.5 | 50 50 | 0 0 | 103 105 | 68 63 | 130 130 | | |
| Methyl tert-butyl ether (MTBE) | 56.9 | 1.3 | 50 | õ | 114 | 56 | 141 | | |
| 1,1-Dichloroethane | 51.4 | 2.5 | 50 | 0 | 103 | 61 | 130 | | |
| cis-1,2-Dichloroethene | 53.1 | 2.5 | 50 | 0 | 106 | 70 | 130 | | |
| Bromochloromethane Chloroform | 56.6 50.5 | 2.5 2.5 | 50 50 | 0 0 | 113 101 | 70 67 | 130 130 | | |
| 2,2-Dichloropropane | 55.5 | 2.5 2.5 | 50 50 | 0 | 111 | 30 | 152 | | |
| 1,2-Dichloroethane | 52.8 | 2.5 | 50 | õ | 106 | 60 | 135 | | |
| 1,1,1-Trichloroethane | 53.4 | 2.5 | 50 | 0 | 107 | 59 | 137 | | |
| 1,1-Dichloropropene | 51.5 | 2.5 | 50 | 0 | 103 | 63 | 130 | | |
| Carbon tetrachloride Benzene | 53.9 52.2 | 2.5 1.3 | 50 50 | 0 0 | 108 104 | 50 67 | 147 130 | | |
| Dibromomethane | 56.6 | 2.5 | 50 50 | 0 | 113 | 69 | 133 | | |
| 1,2-Dichloropropane | 53.1 | 2.5 | 50 | Ō | 106 | 69 | 130 | | |
| Trichloroethene | 50.7 | 2.5 | 50 | 0 | 101 | 69 | 130 | | |
| Bromodichloromethane | 54.3 | 2.5 | 50 | 0 | 109 | 66 | 134 | | |
| cis-1,3-Dichloropropene trans-1,3-Dichloropropene | 53 49.7 | 2.5 2.5 | 50 50 | 0 0 | 106 99 | 63 66 | 130 131 | | |
| 1,1,2-Trichloroethane | 53.5 | 2.5 | 50 | ŏ | 107 | 68 | 130 | | |
| Toluene | 47.9 | 1.3 | 50 | 0 | 96 | 66 | 130 | | |
| 1,3-Dichloropropane | 50.6 | 2.5 | 50 | 0 | 101 | 70 | 130 | | |
| Dibromochloromethane 1,2-Dibromoethane (EDB) | 48.8 110 | 2.5 10 | 50 100 | 0 | 98 110 | 70 70 | 130 130 | | |
| Tetrachloroethene | 49.6 | 2.5 | 50 | 0 | 99 | 61 | 134 | | |
| 1,1,1,2-Tetrachloroethane | 52.5 | 2.5 | 50 | Ō | 105 | 70 | 130 | | |
| Chlorobenzene | 47.9 | 2.5 | 50 | 0 | 96 | 70 | 130 | | |
| Ethylbenzene m.p-Xylene | 47.1 48.5 | 1.3 | 50 | 0 0 | 94 97 | 68 64 | 130 130 | | |
| Bromoform | 46.3 | 1.3 2.5 | 50 50 | 0 | 93 | 64 64 | 138 | | |
| Styrene | 40.1 | 2.5 | 50 | õ | 80 | 69 | 130 | | |
| o-Xylene | 49.9 | 1.3 | 50 | 0 | 99.8 | 70 | 130 | | |
| 1,1,2,2-Tetrachloroethane | 50.2 | 2.5 | 50 | 0 | 100 | 65 | 131 | | |
| 1,2,3-Trichloropropane Isopropylbenzene | 97.4 45.1 | 10 2.5 | 100 50 | 0 0 | 97 90 | 70 64 | 130 138 | | |
| Bromobenzene | 48.2 | 2.5 | 50 | Ő | 96 | 70 | 130 | | |
| n-Propylbenzene | 45.8 | 2.5 | 50 | Ō | 92 | 66 | 132 | | |
| 4-Chlorotoluene | 46.7 | 2.5 | 50 | 0 | 93 | 70 | 130 | | |
| 2-Chlorotoluene 1,3,5-Trimethylbenzene | 46 44.6 | 2.5 2.5 | 50 50 | 0 0 | 92 89 | 70 66 | 130 136 | | |
| tert-Butylbenzene | 44.3 | 2.5 | 50 50 | 0 | 89 | 65 | 130 | | |
| 1,2,4-Trimethylbenzene | 43.6 | 2.5 | 50 | õ | 87 | 65 | 137 | | |
| sec-Butylbenzene | 44.5 | 2.5 | 50 | 0 | 8 9 | 66 | 134 | | |
| 1,3-Dichlorobenzene 1,4-Dichlorobenzene | 48.1 | 2.5 | 50 | 0 | 96 05 | 70 | 130 | | |
| 4-Isopropyltoluene | 47.4 45 | 2.5 2.5 | 50 50 | 0 0 | 95 90 | 70 66 | 130 137 | | |
| 1,2-Dichlorobenzene | 46.8 | 2.5 | 50 | õ | 94 | 70 | 130 | | |
| n-Butylbenzene | 44.3 | 2.5 | 50 | 0 | 89 | 60 | 142 | | |
| 1,2-Dibromo-3-chloropropane (DBCP) | 252 | 15 | 250 | 0 | 101 | 67 | 130 | | |
| 1,2,4-Trichlorobenzene Naphthalene | 49.5 51.4 | 10 10 | 50 50 | 0 | 99 103 | 61 40 | 137 167 | | |
| Hexachlorobutadiene | 90.8 | 10 | 100 | 0 | 103 91 | 40 61 | 130 | | |
| 1,2,3-Trichlorobenzene | 49.1 | 10 | 50 | õ | 98 | 51 | 144 | | |
| Surr: 1,2-Dichloroethane-d4 | 50.4 | | 50 | | 101 | 70 | 130 | | |
| Surr: Toluene-d8 Surr: 4-Bromofluorobenzene | 48.8 48 | | 50 50 | | 98 96 | 70 70 | 130 130 | | |
| | 40 | | 50 | | 30 | 10 | 100 | | |



| Date: 19-Aug-09 | (| QC Sun | nmary | Report | | | | | Work Ord 09080703 | |
|-------------------------------------------------------|--------------|------------|------------------|--------------|----------------|------------|-------------|----------------|----------------------|------|
| Sample Matrix Spike Duplicate | | Type MSC |) Te | st Code: | | | | | | |
| File ID: 09081415.D | | | Bat | tch ID: MS15 | 5 W08 1 | 4 M | Analys | is Date: 08 | /14/2009 17:09 | |
| Sample ID: 09080502-03AMSD | Units : µg/L | Ru | in ID: MS | D_15_09081 | 14 A | | Prep D | ate: 08/ | 14/2009 | |
| Analyte | Result | PQL | SpkVal \$ | SpkRefVal % | %REC | LCL(ME) | UCL(ME) F | RPDRefVal | %RPD(Limit) | Qual |
| Dichlorodifluoromethane | 46.1 | 2.5 | 50 | 0 | 92 | 13 | 16 7 | 47.27 | 2.4(20) | |
| Chloromethane | 54.1 | 10 | 50 | 0 | 108 | 28 | 145 | 53.57 | 1.0(20) | |
| Vinyl chloride Chloroethane | 56.2 50.8 | 2.5 2.5 | 50 50 | 0 0 | 112 102 | 43 39 | 134 154 | 59.71 53.43 | 6.0(20) 5.1(20) | |
| Bromomethane | 60.9 | 2.5 | 50 | 0 | 122 | 19 | 176 | 62.33 | 2.3(20) | |
| Trichlorofluoromethane | 53.4 | 2.5 | 50 | | 107 | 34 | 160 | 56.71 | 6.0(20) | |
| 1,1-Dichloroethene | 47.3 | 2.5 | 50 | 0 | 95 | 60 | 130 | 50.16 | 5.9(20) | |
| Dichloromethane trans-1,2-Dichloroethene | 50.8 | 10 | 50 | 0 | 102 | 68 62 | 130 | 51.43 | 1.2(20) | |
| Methyl tert-butyl ether (MTBE) | 49.3 58 | 2.5 1.3 | 50 50 | 0 0 | 99 116 | 63 56 | 130 141 | 52.41 56.91 | 6.1(20) 2.0(20) | |
| 1,1-Dichloroethane | 49.7 | 2.5 | 50 | Ő | 99 | 61 | 130 | 51.36 | 3.3(20) | |
| cis-1,2-Dichloroethene | 53 | 2.5 | 50 | 0 | 106 | 70 | 130 | 53.1 | 0.1(20) | |
| Bromochloromethane | 55.7 | 2.5 | 50 | 0 | 111 | 70 | 130 | 56.57 | 1.5(20) | |
| Chloroform 2,2-Dichloropropane | 49.4 52.3 | 2.5 2.5 | 50 50 | 0 0 | 99 105 | 67 30 | 130 152 | 50.54 55.48 | 2.3(20) 5.8(20) | |
| 1,2-Dichloroethane | 52.3 | 2.5 2.5 | 50 50 | 0 | 105 | 30 60 | 135 | 55.46 52.84 | 1.2(20) | |
| 1,1,1-Trichloroethane | 51 | 2.5 | 50 | Ő | 102 | 59 | 137 | 53.39 | 4.7(20) | |
| 1,1-Dichloropropene | 49.1 | 2.5 | 50 | 0 | 98 | 63 | 130 | 51.47 | 4.7(20) | |
| Carbon tetrachloride | 51.3 | 2.5 | 50 | 0 | 103 | 50 | 147 | 53.88 | 4.9(20) | |
| Benzene Dibromomethane | 50.5 57 | 1.3 2.5 | 50 | 0 | 101 114 | 67 69 | 130 133 | 52.22 56.64 | 3.4(20) 0.6(20) | |
| 1,2-Dichloropropane | 53.2 | 2.5 | 50 50 | 0 | 106 | 69 69 | 133 | 53.09 | 0.2(20) | |
| Trichloroethene | 48 | 2.5 | 50 | Ő | 96 | 69 | 130 | 50.65 | 5.5(20) | |
| Bromodichloromethane | 54.1 | 2.5 | 50 | 0 | 108 | 66 | 134 | 54.3 | 0.4(20) | |
| cis-1,3-Dichloropropene | 52.3 | 2.5 | 50 | 0 | 105 | 63 | 130 | 52.98 | 1.4(20) | |
| trans-1,3-Dichloropropene 1,1,2-Trichloroethane | 49.2 52.6 | 2.5 2.5 | 50 50 | 0 0 | 98 105 | 66 68 | 131 130 | 49.69 53.47 | 1.1(20) 1.7(20) | |
| Toluene | 45.5 | 2.5 | 50 50 | 0 | 91 | 66 | 130 | 47.89 | 5.2(20) | |
| 1,3-Dichloropropane | 50.5 | 2.5 | 50 | Ō | 101 | 70 | 130 | 50.56 | 0.2(20) | |
| Dibromochloromethane | 48.6 | 2.5 | 50 | 0 | 97 | 70 | 130 | 48.75 | 0.3(20) | |
| 1,2-Dibromoethane (EDB) | 111 | 10 | 100 | | 111 | 70 | 130 | 109.6 | 1.7(20) | |
| Tetrachloroethene 1,1,2-Tetrachloroethane | 47 51 | 2.5 2.5 | 50 50 | 0 0 | 94 102 | 61 70 | 134 130 | 49.64 52.53 | 5.4(20) 3.0(20) | |
| Chlorobenzene | 45.7 | 2.5 | 50 | 0 0 | 91 | 70 | 130 | 47.94 | 4.8(20) | |
| Ethylbenzene | 44.9 | 1.3 | 50 | Ō | 90 | 68 | 130 | 47.06 | 4.8(20) | |
| m,p-Xylene | 45.6 | 1.3 | 50 | 0 | 91 | 64 | 130 | 48.51 | 6.3(20) | |
| Bromoform Styrene | 45.7 | 2.5 | 50 | 0 | 91 77 | 64 60 | 138 130 | 46.28 40.13 | 1.2(20) | |
| o-Xylene | 38.4 47.7 | 2.5 1.3 | 50 50 | 0 | 95 | 69 70 | 130 | 40.13 | 4.4(20) 4.4(20) | |
| 1,1,2,2-Tetrachloroethane | 50.8 | 2.5 | 50 | - | 102 | 65 | 131 | 50.22 | 1.2(20) | |
| 1,2,3-Trichloropropane | 98.5 | 10 | 100 | 0 | 98 | 70 | 130 | 97.35 | 1.1(20) | |
| Isopropylbenzene | 42.4 | 2.5 | 50 | 0 | 85 | 64 | 138 | 45.11 | 6.1(20) | |
| Bromobenzene n-Propylbenzene | 46.2 43 | 2.5 2.5 | 50 50 | 0 0 | 92 86 | 70 66 | 130 132 | 48.18 45.81 | 4.1(20) 6.4(20) | |
| 4-Chlorotoluene | 44.5 | 2.5 | 50 | 0 | 89 | 70 | 132 | 46.73 | 4.8(20) | |
| 2-Chlorotoluene | 43.8 | 2.5 | 50 | Ő | 88 | 70 | 130 | 45.95 | 4.8(20) | |
| 1,3,5-Trimethylbenzene | 41.9 | 2.5 | 50 | 0 | 84 | 66 | 136 | 44.58 | 6.3(20) | |
| tert-Butylbenzene | 41.5 | 2.5 | 50 | 0 | 83 | 65 | 137 | 44.26 | 6.5(20) | |
| 1,2,4-Trimethylbenzene sec-Butylbenzene | 41.2 41.9 | 2.5 2.5 | 50 50 | 0 0 | 82 84 | 65 66 | 137 134 | 43.57 44.47 | 5.5(20) 6.1(20) | |
| 1,3-Dichlorobenzene | 45.7 | 2.5 | 50 | 0 | 91 | 70 | 130 | 48.12 | 5.2(20) | |
| 1,4-Dichlorobenzene | 45.2 | 2.5 | 50 | Ō | 90 | 70 | 130 | 47.37 | 4.6(20) | |
| 4-Isopropyltoluene | 41.8 | 2.5 | 50 | 0 | 84 | 66 | 137 | 45.02 | 7.3(20) | |
| 1,2-Dichlorobenzene n-Butylbenzene | 45.4 42.2 | 2.5 | 50 50 | 0 | 91 84 | 70 60 | 130 142 | 46.84 44.28 | 3.1(20) 4.9(20) | |
| 1,2-Dibromo-3-chloropropane (DBCP) | 42.2 258 | 2.5 15 | 50 250 | 0 0 | 84 103 | 60 67 | 142 | 44.28 251.5 | 4.9(20) 2.7(20) | |
| 1,2,4-Trichlorobenzene | 48.7 | 10 | 50 | 0 | 97 | 61 | 137 | 49.48 | 1.6(20) | |
| Naphthalene | 51.5 | 10 | 50 | Ō | 103 | 40 | 167 | 51.4 | 0.1(20) | |
| Hexachlorobutadiene | 86.6 | 10 | 100 | 0 | 87 | 61 | 130 | 90.8 | 4.7(20) | |
| 1,2,3-Trichlorobenzene Surr: 1,2-Dichloroethane-d4 | 48.8 52.1 | 10 | 50 50 | 0 | 98 104 | 51 70 | 144 130 | 49.07 | 0.5(20) | |
| Surr: Toluene-d8 | 52.1 47.7 | | 50 50 | | 104 95 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 47.7 | | 50 | | 95 | 70 | 130 | | | |
| | | | | | | | | | | |



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

QC Summary Report

Work Order: 09080703

19-Aug-09 Comments:

Date:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Alpha uses descriptive data qualifier flags, which could be replaced with either a DOD Q or J flag.

L51 = Analyte recovery was above acceptance limits for the LCS, but was acceptable in the MS/MSD.

Matrix Type: AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

| |] | |
|------------------------|-----------|--|
| Logged in by: | | |
| Clinpte | | |
| th advox | Signature | |
| Elizabeth | Print P | |
| Adcox | lame | |
| Alpha Analytical, Inc. | Company | |
| 8-7-09 1035 | Date/Time | |

No security seals. Frozen ice. Temp Blank #5041 received @ 4°C. Perchlorate RL of 1.0 ug/L. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD) :

Comments:

| | CHAIN-O | CHAIN-OF-CUSTODY RECORD | | Page: 1 of 1 |
|-------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------|-------------------------|
| | All | Alpha Analytical, Inc. | WorkOrder : BMIS09080703 | 080703 |
| _ | 200 Ulendale A TEL: (7) | 253 Giendale Avenue, Suite 21 Sparks, Nevada 89431-5778 TEL: (775) 355-1044 FAX: (775) 355-0406 | Report Due By : 5:00 PM On : 21-Aug-2009 |)n : 21-Aug-2009 |
| Client: | Report Attention Pt | Phone Number EMail Address | | |
| Battelle Memorial Institute | David Conner (8 | (818) 393-2808 x connerd@battelle.org | | |
| 3990 Old Town Ave Suite C-205 | Betsy Cutie (6 | (614) 424-4899 x cutiee@batelle.org | EDD Required : Yes | |
| San Diego, CA 92110 | Shane Walton (6 | (614) 424-4117 x waltons@battelle.org | Sampled by : Client | |
| PO: 218013 | | | Cooler Temp Samples Received | ceived Date Printed |
| Client's COC #: 24144 | Job : G005862/JPL Groundwater Monitoring | r Monitoring | 4 °C 07-Aug-2009 | 009 07-Aug-2009 |
| QC Level : DS4 = DOD QC | DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates | ata, LCS, MS/MSD With Surrogates | | - |
| | | | ted Tests | |
| Alpha Client Sample ID Sample ID | Collection No. of Bottles Matrix Date Alpha Sub | 300_0(A)_W 300_0(B)_W 300_0(C)_W TAT | 314_W METALS_D VOC_TIC_ VOC_W | Sample Remarks |
| BMI09080703-01A MW-13 | AQ 08/06/09 5 0 08:26 | 10 NO2, NO3, NO2, NO3, NO2, NO3, Perc PO4, SO4, CI PO4, SO4, CI PO4, SO4, CI | Perchlorate Cr VOC by 524 VOC by 524 Criteria | |
| BMI09080703-02A MW-8 | AQ 08/06/09 5 0 10:10 | 10 NO2, NO3, NO2, NO3, NO2, NO3, Perc PO4, SO4, CI PO4, SO4, CI PO4, SO4, CI | Perchlorate Cr VOC by 524 VOC by 524 Criteria | |
| BM109080703-03A MW-6 | AQ 08/06/09 5 0 11:58 | 10 Perc | Perchlorate Cr VOC by 524 VOC by 524 Criteria | |
| BMI09080703-04A TB-13-8/6/09 | AQ 08/06/09 1 0 | 10 | VOC by 524 VOC by 524 R | Reno Trip Blank 6/22/09 |

Billing Information :

| | - Alpha Ar 255 Glendale | Alpha Analytical, Inc. Az 255 Glendale Avenue, Suite 21 ID | AZ CA X NV WA Pag | Page # / of / |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------------------------|
| Address <u>505 KING AVE</u> City, State, Zip <u>CULUMほんら, att 432a1</u> Phone Number Fax | | | Analys | |
| ID GNNER | P.O. # 2 / 80/3 Job # | * 4-02-862 | 1 1 2 2 C 2 2 2 | Der Le |
| 2 OLD TOWN AVE (-20) | - | | ~Z = (z | / I II (III) IV |
| Co Co 92110 | Phone # | | | EDD / EDF7 YES NO |
| Matrix* Sampled by | rt Attention | Total and type of | N K Strand / | Global ID # |
| Sampled Sampled See Ney Lab ID Number (Use Only) | Sample Description | TAT Fild ** See below | | REMARKS |
| BMT0908070301 | MW-13 | | × × × × | |
| .02 | $\mathcal{M} \mathcal{W} - \mathcal{Y}$ | | ∧ × × × | |
| 1/58 | | | X | |
| | | | | |
| <u>- +0+</u> -0+ - | TB-13-8/6/09 | × 1/1 | | TRUP BLANK |
| | - | | | |
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| | | | - | |
| | | | | |
| | | | | |
| | | | | |
| ADDITIONAL INSTRUCTIONS: | | | | |
| Signature | Print Name | | Company | Date Time |
| Relinquished by | MARCO MENDIA | (NSIGMT | SEC 8 | 8/6/09 1400 |
| Received by Charles the Adrex 4 | Hizabuth Hacax | | (Ilpha 8 | 8-7-09 1035 |
| Relinquished by | | | | |
| Received by | | | | |
| Relinquished by | | | - | |
| Received by | | | | |
| *Key: AQ - Aqueous SO - Soil WA - Waste OT - Other AR - Air **: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis | OT - Other AR - Air **: L-Liter orted unless other arrangements are made. H | er V-Voa S-Soil Jar Hazardous samples will be returr | O-Orbo T-Tedlar B-Brass ned to client or disposed of at client exp | P-Plastic OT-Other oense. The report for the analysis |
| of the above samples is applicable only to those samples received by the laboratory with this coc. The liability of the laboratory is limited to the amount paid for the report. | ceived by the laboratory with this coc. The l | liability of the laboratory is limited | to the amount paid for the report. | |



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: 25-Aug-09

David Conner Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 (818) 393-2808

Suite C-205

CASE NARRATIVE

| Project: | G005862/JPL | Groundwater Monitoring | | |
|-------------------|-------------|------------------------|-------------------|--|
| Work Order: | BMI09081341 | | Cooler Temp: 4 °C | |
| Alpha's | s Sample ID | Client's Sample ID | Matrix | |
| 0908 | 1341-01A | MW -10 | Aqueous | |
| 0908 | 1341-02A | MW-15 | Aqueous | |
| 0908 | 1341-03A | TB-14-8/7/09 | Aqueous | |
| 0908 | 1341-04A | SB-1-3Q09 | Aqueous | |
| 0908 | 1341-05A | MW-5 | Aqueous | |
| 0908 | 1341-06A | TB-15 8/12/09 | Aqueous | |
| | | Manually Integrat | ed Analytes | |
| <u>Alpha's Sa</u> | mple ID | Test Reference | Analyte | |
| 090813 | 4I-01A | EPA Method 314.0 | Perchlorate | |
| 090813 | 4I-05A | EPA Method 314.0 | Perchlorate | |

Enclosed please find the analytical results of the samples received by Alpha Analytical, Inc. under the above mentioned Work Order/Chainof-Custody.

Alpha Analytical, Inc. has a formal Quality Assurance/Quality Control program, which is designed to meet or exceed the EPA requirements. All relevant QC met quality assurance objectives for this project unless otherwise stated in the footnotes.

If you have any questions with regards to this report, please contact Randy Gardner, Project Manager, at (800) 283-1183.

Walter Arihm Roger Scholl Kandy Saulman



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110

David Conner Attn: Phone: (818) 393-2808 Fax: (614) 458-6641 Date Received: 08/13/09

Job#: G005862/JPL Groundwater Monitoring

| | | | Perchlorate by Ion Chromatography EPA Method 314.0 | | |
|-------------------------|-------------------------------------|-------------|-------------------------------------------------------|--------------------|-------------------------------|
| | | Parameter | Concentration | Reporting Limit | Date Date Sampled Analyzed |
| Client ID : Lab ID : | MW-10 BMI09081341-01A | Perchlorate | 2.70 | 1.00 μg/L | 08/07/09 08/13/09 |
| Client ID : Lab ID : | SB-1-3Q09 BMI09081341-04A | Perchlorate | ND | 1.00 μg/L | 08/07/09 08/13/09 |
| Client ID : Lab ID : | MW-5 BMI09081341-05A | Perchlorate | 3.36 | 1.00 μg/L | 08/12/09 08/13/09 |

ND = Not Detected

Kandy Saulmer Roger Scholl

Dalter Arihm

Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

gf

8/26/09 **Report Date**



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110
 Attn:
 David Conner

 Phone:
 (818) 393-2808

 Fax:
 (614) 458-6641

 Date Received : 08/13/09

Job#: G005862/JPL Groundwater Monitoring

| | | | Metals by ICPMS EPA Method 200.8 | | |
|-------------------------|--------------------------------------|---------------|-------------------------------------|--------------------|-------------------------------|
| | | Parameter | Concentration | Reporting Limit | Date Date Sampled Analyzed |
| Client ID : Lab ID : | MW-10 BMI09081341-01A | Chromium (Cr) | 0.0066 | 0.0050 mg/L | 08/07/09 08/13/09 |
| Client ID : Lab ID : | MW-15 BMI09081341-02A | Chromium (Cr) | ND | 0.0050 mg/L | 08/07/09 08/13/09 |
| Client ID : Lab ID : | S B-1-3Q09 BMI09081341-04A | Chromium (Cr) | ND | 0.0050 mg/L | 08/07/09 08/13/09 |
| Client ID : Lab ID : | MW-5 BMI09081341-05A | Chromium (Cr) | ND | 0.0050 mg/L | 08/12/09 08/13/09 |

ND = Not Detected

Roger Scholl Kandy Sandmer

Dalter Arihm

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

Report Date



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ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Job#: G005862/JPL Groundwater Monitoring

Attn: David Conner Phone: (818) 393-2808 Fax: (614) 458-6641

Tentatively Identified Compounds - Volatile Organics by GC/MS

| | | | | Estimated | | | |
|-------------------------|-----------------------------------------|------------------------------|---------------|-----------|----------|----------|----------|
| | | Parameter | Estimated | Reporting | Date | Date | Date |
| | | | Concentration | Limit | Received | Sampled | Analyzed |
| Client ID : Lab ID : | MW-10 BMI09081341-01A | *** None Found *** | ND | 2.0 μg/L | 08/13/09 | 08/07/09 | 08/14/09 |
| Client ID : Lab ID : | TB-14-8/7/09 BMI09081341-03A | * * * None Found * * * | ND | 2.0 μg/L | 08/13/09 | 08/07/09 | 08/14/09 |
| Client ID : Lab ID : | SB-1-3Q09 BMI09081341-04A | Tertiary Butyl Alcohol (TBA) | 12 | 10 μg/L | 08/13/09 | 08/07/09 | 08/14/09 |
| Client ID : Lab ID : | MW-5 BMI09081341-05A | * * * None Found * * * | ND | 2.0 μg/L | 08/13/09 | 08/12/09 | 08/14/09 |
| Client ID : Lab ID : | TB-15 8/12/09 BMI09081341-06A | *** None Found *** | ND | 2.0 µg/L | 08/13/09 | 08/12/09 | 08/14/09 |

Note: Analysis conducted using EPA Method 524.2 criteria. ND = Not Detected

Roger Scholl

Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

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Dalter Arihm Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

8/26/09

Report Date

Page 1 of 1



Battelle Memorial Institute

Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT Attn: David Conner Phone: Fax:

3990 Old Town Ave San Diego, CA 92110 Job#: G005862/JPL Groundwater Monitoring

Alpha Analytical Number: BMI09081341-01A Client I.D. Number: MW-10

(818) 393-2808 (614) 458-6641

Sampled: 08/07/09 Received: 08/13/09 Analyzed: 08/14/09

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting Li | imit |
|----|--------------------------------|---------------|-----------|-------|----|----------------------------------|-----------------|--------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | µg/L |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | μg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m.p-Xvlene | ⁻ ND | 0.50 | µg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | µg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chloroform | 0.51 | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBC | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | 2.3 | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 1.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1.2-Dichloroethar:e-d4 | 110 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 101 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 90 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | 1 | . , | |
| 33 | Dibromochloromethane | ND | 0.50 | μg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | μg/L | | | | | |
| 35 | Tetrachloroethene | 0.85 | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Saulmer

Walter Arithm

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

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Report Date Page 1 of 1



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Job#: G005862/JPL Groundwater Monitoring

Alpha Analytical Number: BMI09081341-03A Client I.D. Number: TB-14-8/7/09
 Attn:
 David Conner

 Phone:
 (818) 393-2808

 Fax:
 (614) 458-6641

Sampled: 08/07/09 Received: 08/13/09

Analyzed: 08/14/09

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting L | .imit |
|----|--------------------------------|---------------|-----------|--------------|----|-----------------------------------|---------------|--------------|-------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | · · · · · · | |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 0.50 | |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | | r y - |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m,p-Xylene | ND | 0.50 | µg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 0.50 | µg/L |
| 6 | Trichiorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xvlene | ND | 0.50 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 1.0 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | | 0.50 | µg/L |
| 16 | Chioroform | ND | 0.50 | µg/L | 51 | tert-Butylbenzene | ND ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | _ | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | μg/L | 54 | 1,3-Dichlorobenzene | | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1.4-Dichlorobenzene | ND ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBCF | ND ND | 0.50 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | , | 2.5 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 1.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | | 64 | Surr: 1,2-Dichloroethane-d4 | 105 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 99 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 92 | (70-130) | %REC |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L uα/I | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L ́ | | | | | |
| | | | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Danlaur.

lter Arihm

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

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Report Date

Page 1 of 1



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Job#: G005862/JPL Groundwater Monitoring

Alpha Analytical Number: BMI09081341-04A Client I.D. Number: SB-1-3Q09 Attn:David ConnerPhone:(818) 393-2808Fax:(614) 458-6641

Sampled: 08/07/09 Received: 08/13/09

Analyzed: 08/14/09

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting Li | mit |
|----|--------------------------------|---------------|-----------|-------|----|----------------------------------|---------------|--------------|------|
| 1 | Dichlorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | µg/L |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m,p-Xylene | ND | 0.50 | µg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | μg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chloroform | ND | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBC | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 1.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 105 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 100 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 89 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | | | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Rogen Scholl

Kandy Sandner

Dalter Aridman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

8/26/09

Report Date

Page 1 of 1



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Job#: G005862/JPL Groundwater Monitoring

Alpha Analytical Number: BMI09081341-05A Client I.D. Number: MW-5

Attn: David Conner (818) 393-2808 Phone: (614) 458-6641 Fax:

Sampled: 08/12/09 Received: 08/13/09

Analyzed: 08/14/09

Volatile Organics by GC/MS

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting Li | imit |
|----|--------------------------------|---------------|-----------|-------|----|----------------------------------|---------------|--------------|------|
| 1 | Dichiorodifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | µg/L | 37 | Chlorobenzene | ND | 0.50 | μg/L |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chioroethane | ND | 0.50 | µg/L | 39 | m.p-Xvlene | ND | 0.50 | μg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | µg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | µg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chloroform | ND | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | µg/L | 53 | sec-Butybenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1.3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | µg/L | 59 | 1,2-Dibromo-3-chloropropane (DBC | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | μg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 1.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | · 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | μg/L | 63 | 1.2.3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1.2-Dichloroethane-d4 | 106 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 103 | (70-130) | %REC |
| 31 | Toluene | ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 89 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | 1 | . , | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Roger Scholl

Kandy Saulner Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer

Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

Walter Ainihum

8/26/09

Report Date

Page 1 of 1



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

Volatile Organics by GC/MS

Battelle Memorial Institute 3990 Old Town Ave San Diego, CA 92110 Job#: G005862/JPL Groundwater Monitoring

Alpha Analytical Number: BMI09081341-06A Client I.D. Number: TB-15 8/12/09
 Attn:
 David Conner

 Phone:
 (818) 393-2808

 Fax:
 (614) 458-6641

Sampled: 08/12/09 Received: 08/13/09

Analyzed: 08/14/09

| | Compound | Concentration | Reporting | Limit | | Compound | Concentration | Reporting Li | imit |
|----|--------------------------------|---------------|-----------|--------------|----|----------------------------------|---------------|--------------|------|
| 1 | Dichloredifluoromethane | ND | 0.50 | µg/L | 36 | 1,1,1,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 2 | Chloromethane | ND | 1.0 | μg/L | 37 | Chlorobenzene | ND | 0.50 | µg/L |
| 3 | Vinyl chloride | ND | 0.50 | µg/L | 38 | Ethylbenzene | ND | 0.50 | µg/L |
| 4 | Chloroethane | ND | 0.50 | µg/L | 39 | m.p-Xylene | ND | 0.50 | µg/L |
| 5 | Bromomethane | ND | 1.0 | µg/L | 40 | Bromoform | ND | 0.50 | µg/L |
| 6 | Trichlorofluoromethane | ND | 0.50 | µg/L | 41 | Styrene | ND | 0.50 | µg/L |
| 7 | 1,1-Dichloroethene | ND | 0.50 | µg/L | 42 | o-Xylene | ND | 0.50 | µg/L |
| 8 | Dichloromethane | ND | 1.0 | µg/L | 43 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L |
| 9 | Freon-113 | ND | 0.50 | µg/L | 44 | 1,2,3-Trichloropropane | ND | 1.0 | µg/L |
| 10 | trans-1,2-Dichloroethene | ND | 0.50 | µg/L | 45 | Isopropylbenzene | ND | 0.50 | µg/L |
| 11 | Methyl tert-butyl ether (MTBE) | ND | 0.50 | µg/L | 46 | Bromobenzene | ND | 0.50 | µg/L |
| 12 | 1,1-Dichloroethane | ND | 0.50 | µg/L | 47 | n-Propylbenzene | ND | 0.50 | µg/L |
| 13 | 2-Butanone (MEK) | ND | 10 | μg/L | 48 | 4-Chlorotoluene | ND | 0.50 | µg/L |
| 14 | cis-1,2-Dichloroethene | ND | 0.50 | µg/L | 49 | 2-Chlorotoluene | ND | 0.50 | µg/L |
| 15 | Bromochloromethane | ND | 0.50 | µg/L | 50 | 1,3,5-Trimethylbenzene | ND | 0.50 | µg/L |
| 16 | Chloroform | ND | 0.50 | µg/L | 51 | tert-Butylbenzene | ND | 0.50 | µg/L |
| 17 | 2,2-Dichloropropane | ND | 0.50 | µg/L | 52 | 1,2,4-Trimethylbenzene | ND | 0.50 | µg/L |
| 18 | 1,2-Dichloroethane | ND | 0.50 | μ <u>ς</u> L | 53 | sec-Butylbenzene | ND | 0.50 | µg/L |
| 19 | 1,1,1-Trichloroethane | ND | 0.50 | µg/L | 54 | 1,3-Dichlorobenzene | ND | 0.50 | µg/L |
| 20 | 1,1-Dichloropropene | ND | 0.50 | µg/L | 55 | 1,4-Dichlorobenzene | ND | 0.50 | µg/L |
| 21 | Carbon tetrachloride | ND | 0.50 | µg/L | 56 | 4-Isopropyltoluene | ND | 0.50 | µg/L |
| 22 | Benzene | ND | 0.50 | µg/L | 57 | 1,2-Dichlorobenzene | ND | 0.50 | µg/L |
| 23 | Dibromomethane | ND | 0.50 | µg/L | 58 | n-Butylbenzene | ND | 0.50 | µg/L |
| 24 | 1,2-Dichloropropane | ND | 0.50 | μg/L | 59 | 1,2-Dibromo-3-chloropropane (DBC | P) ND | 2.5 | µg/L |
| 25 | Trichloroethene | ND | 0.50 | µg/L | 60 | 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L |
| 26 | Bromodichloromethane | ND | 0.50 | µg/L | 61 | Naphthalene | ND | 1.0 | µg/L |
| 27 | 4-Methyl-2-pentanone (MIBK) | ND | 2.5 | µg/L | 62 | Hexachlorobutadiene | ND | 1.0 | µg/L |
| 28 | cis-1,3-Dichloropropene | ND | 0.50 | µg/L | 63 | 1,2,3-Trichlorobenzene | ND | 1.0 | µg/L |
| 29 | trans-1,3-Dichloropropene | ND | 0.50 | µg/L | 64 | Surr: 1,2-Dichloroethane-d4 | 102 | (70-130) | %REC |
| 30 | 1,1,2-Trichloroethane | ND | 0.50 | µg/L | 65 | Surr: Toluene-d8 | 101 | (70-130) | %REC |
| 31 | Toluene | · ND | 0.50 | µg/L | 66 | Surr: 4-Bromofluorobenzene | 90 | (70-130) | %REC |
| 32 | 1,3-Dichloropropane | ND | 0.50 | µg/L | | | | | |
| 33 | Dibromochloromethane | ND | 0.50 | µg/L | | | | | |
| 34 | 1,2-Dibromoethane (EDB) | ND | 1.0 | µg/L | | | | | |
| 35 | Tetrachloroethene | ND | 0.50 | µg/L | | | | | |

Note: Analysis conducted using EPA Method 524.2 criteria.

ND = Not Detected

Rogen Scholl

Kanda Sandmer

Walter Arm

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

PS

8/26/09 **Report Date**

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255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

VOC Sample Preservation Report

Work Order: BMI09081341

Project: G005862/JPL Groundwater Monitoring

| Alpha's Sample ID | Client's Sample ID | Matrix | pH | |
|-------------------|--------------------|---------|----|--|
| 09081341-01A | MW-10 | Aqueous | 2 | |
| 09081341-03A | TB-14-8/7/09 | Aqueous | 2 | |
| 09081341-04A | SB-1-3Q09 | Aqueous | 2 | |
| 09081341-05A | MW-5 | Aqueous | 2 | |
| 09081341-06A | TB-15 8/12/09 | Aqueous | 2 | |



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| Date: 24-Aug-09 | (| QC S | Sum | mary | Repor | t | | | | Work Ord 09081341 | |
|----------------------------------------------|-------------------------------|------|------|-----------|--------------------------------------------|-----|------------|---------------------|---------|-------------------------------|-----|
| Method Blank File ID: 14 | | Туре | | Ba | st Code: El tch ID: 225 4 | 47 | thod 314.0 | Analysi | | 08/13/2009 16:15 | |
| Sample ID: MB-22547 Analyte | Units : µg/L Result | PQL | | | 3_090813 SokRefVal | | LCL(ME) | Prep D UCL(ME) F | | 08/13/2009 √al %RPD(Limit) | Qua |
| Perchlorate | ND | | 1 | | | | , | | | | |
| Laboratory Fortified Blank File ID: 15 | | Туре | | Ba | st Code: El tch ID: 225 | 47 | thod 314.0 | Analysi | | 08/13/2009 16:33 | |
| Sample ID: LFB-22547 Analyte | Units : µg/L Result | PQL | | - | _ 3_090813 SpkRefVal | | CLCL(ME) | Prep D UCL(ME) F | | 08/13/2009 √al %RPD(Limit) | Qua |
| Perchlorate | 25.1 | | 2 | 25 | | 101 | 85 | 115 | | | |
| Sample Matrix Spike File ID: 18 | | Туре | LFM | _ | st Code: El tch ID: 2254 | | thod 314.0 | | s Date: | 08/13/2009 17:29 | |
| Sample ID: 09081303-05ALFM Analyte | Units : µg/L Result | PQL | | | _ 3_090813 # SpkRefVal | | CLCL(ME) | Prep D UCL(ME) F | | 08/13/2009 /al %RPD(Limit) | Qua |
| Perchlorate | 22.7 | | 2 | 25 | 0 | 91 | 80 | 120 | | | |
| Sample Matrix Spike Duplicate File ID: 19 | | Туре | LFMC | | st Code: El | | thod 314.0 | | s Date: | 08/13/2009 17:47 | |
| Sample ID: 09081303-05ALFMD Analyte | Units : µg/L Result | PQL | | n ID: IC_ | 3_0908134 | • | CLCL(ME) | Prep D | ate: | 08/13/2009 /al %RPD(Limit) | Qua |
| Perchlorate | 24.4 | | 2 | 25 | 0 | 98 | 80 | 120 | 22.7 | | |

Comments:

der +

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

| Date: 20-Aug-09 | Q | C S | ummar | y Repor | t | | | | Work Orde 09081341 | |
|------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------|--------------------------|--------------------------------------------------------|-----------|------------|---------|------------|-----------------------------------------------------------------|------|
| Method Blank File ID: 081309.B\052SMPL.D\ Sample ID: MB-22542 | Units : mg/L | Гуре М | Ba Run ID: IC | est Code: El atch ID: 2254 P/MS_0908 | 42 13A | | Prep | Date: | 08/13/2009 19:24 08/13/2009 | |
| Analyte | Result | PQL | | SpkRefVal | %REC | CLCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Qual |
| Chromium (Cr) | ND | 0.005 | 5 | | | | | | | |
| Laboratory Control Spike File ID: 081309.B\053_LCS.D\ Sample ID: LCS-22542 Analyte | - Units : mg/L Result | Fype L PQL | Ba Run ID: I C | est Code: El atch ID: 225 P/MS_0908 SpkRefVal | 42 13A | | Prep | Date: | 08/13/2009 19:30 08/13/2009 Val %RPD(Limit) | Qual |
| Chromium (Cr) | 0.0571 | 0.005 | | | 114 | 85 | 115 | | | |
| Sample Matrix Spike File ID: 081309.B\057SMPL.D\ Sample ID: 09080703-01AMS Analyte | Units : mg/L Result | Fype N PQL | Ba Run ID: IC | est Code: El atch ID: 225 P/MS_0908 SpkRefVal | 42 13A | | Prep | Date: | 08/13/2009 19:52 08/13/2009 Val %RPD(Limit) | Qual |
| Chromium (Cr) | 0.0776 | 0.005 | | 0.03121 | 93 | 70 | 130 | | · · · · · · · · · · · · · · · · · · · | |
| Sample Matrix Spike Duplicate File ID: 081309.B\058SMPL.D\ | | Гуре М | | est Code: El atch ID: 225 | | thod 200.8 | Analy | /sis Date: | 08/13/2009 19:58 | |
| Sample ID: 09080703-01AMSD | Units : mg/L | | Run ID: IC | P/MS_0908 | 13A | | Prep | Date: | 08/13/2009 | |
| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | CLCL(ME) | UCL(ME) | RPDRef | Val %RPD(Limit) | Quai |
| Chromium (Cr) | 0.0789 | 0.005 | 5 0.05 | 0.03121 | 95 | 70 | 130 | 0.077 | 59 1.6(20) | |

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



| Date: 22-Aug-09 | | (| QC Si | ummary Repor | t | · · · · · · · · · · · · · · · · · | Work Orde 09081341 | |
|----------------------------------|------------------------|--------------|------------|---------------------|------------------|-----------------------------------|-----------------------|------|
| Method Bla | nk | | Type M | BLK Test Code: | | | | |
| File ID: 09081 | 411.D | | | Batch ID: MS1 | 5W0814M | Analysis Da | te: 08/14/2009 15:40 | |
| Sample ID: | MBLK MS15W0814M | Units : µg/L | | Run ID: MSD_15_0908 | | Prep Date: | 08/14/2009 | |
| Analyte | | Result | PQL | SpkVal SpkRefVal | %REC LCL(ME | E) UCL(ME) RPDF | RefVal %RPD(Limit) | Qual |
| Dichlorodifluo | - | ND | 0.5 | | | | | |
| Chloromethan | e | ND | 1 | | | | | |
| Vinyl chloride Chloroethane | | ND ND | 0.5 0.5 | | | | | |
| Bromomethar | e | ND | 0.5 | | | | | |
| Trichlorofluor | | ND | 0.5 | | | | | |
| 1,1-Dichloroet | | ND | 0.5 | | | | | |
| Dichlorometha Freon-113 | | ND ND | 1 0.5 | | | | | |
| trans-1,2-Dich | | ND | 0.5 | | | | | |
| | tyl ether (MTBE) | ND | 0.5 | | | | | |
| 1,1-Dichloroet 2-Butanone (N | | ND | 0.5 | | | | | |
| cis-1,2-Dichlo | | ND ND | 10 0.5 | | | | | |
| Bromochloron | | ND | 0.5 | | | | | |
| Chloroform | • • | ND | 0.5 | | | | | |
| 2,2-Dichlorop | | ND | 0.5 | | | | | |
| 1,2-Dichloroet | | ND ND | 0.5 | | | | | |
| 1,1-Dichlorop | | ND | 0.5 | | | | | |
| Carbon tetrac | hloride | ND | 0.5 | | | | | |
| Benzene | | ND | 0.5 | | | | | |
| Dibromometha 1,2-Dichloropr | | ND ND | 0.5 0.5 | | | | | |
| Trichloroether | | ND | 0.5 | | | | | |
| Bromodichloro | | ND | 0.5 | | | | | |
| | ntanone (MIBK) | ND | 2.5 | | | | | |
| cis-1,3-Dichlo trans-1,3-Dich | | ND ND | 0.5 0.5 | | | | | |
| 1,1,2-Trichlord | | ND | 0.5 | | | | | |
| Toluene | | ND | 0.5 | | | | | |
| 1,3-Dichlorop | • | ND | 0.5 | | | | | |
| Dibromochlore 1,2-Dibromoe | | ND ND | 0.5 1 | | | | | |
| Tetrachloroeth | . , | ND | 0.5 | | | | | |
| 1,1,1,2-Tetrac | | ND | 0.5 | | | | | |
| Chlorobenzen | e | ND | 0.5 | | | | | |
| Ethylbenzene m,p-Xylene | | ND ND | 0.5 | | | | | |
| Bromoform | | ND | 0.5 0.5 | | | | | |
| Styrene | | ND | 0.5 | | | | | |
| o-Xylene | | ND | 0.5 | | | | | |
| 1,1,2,2-Tetrac 1,2,3-Trichlor | | ND ND | 0.5 | | | | | |
| Isopropylbenz | | ND | 1 0.5 | | | | | |
| Bromobenzen | e | ND | 0.5 | | | | | |
| n-Propylbenze | | ND | 0.5 | | | | | |
| 4-Chlorotoluer 2-Chlorotoluer | | ND ND | 0.5 | | | | | |
| 1,3,5-Trimethy | | ND | 0.5 0.5 | | | | | |
| tert-Butylbenz | | ND | 0.5 | | | | | |
| 1,2,4-Trimethy | | ND | 0.5 | | | | | |
| sec-Butylbenz 1,3-Dichlorobe | | ND | 0.5 | | | | | |
| 1,4-Dichlorobe | | ND ND | 0.5 0.5 | | | | | |
| 4-Isopropyltol | | ND | 0.5 | | | | | |
| 1,2-Dichlorobe | | ND | 0.5 | | | | | |
| n-Butylbenzer | | ND | 0.5 | | | | | |
| 1,2-Dibromo-3 | B-chloropropane (DBCP) | ND ND | 2.5 1 | | | | | |
| Naphthalene | | ND | 1 | | | | | |
| Hexachlorobu | | ND | 1 | | | | | |
| 1,2,3-Trichlord | | ND | 1 | | 400 70 | 100 | | |
| Surr: 1,2-Dich Surr: Toluene | | 10.3 10 | | 10 10 | 103 70 100 70 | 130 130 | | |
| Sun. Toluelle | 00 | 10 | | IU | 100 70 | 130 | | |



| Sur: 4 Bromofluorobenzene 8.93 10 89 70 130 Laboratory Control Spike Type LCS Test Code: | ler: 1 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| File ID: 09081408.0 Units: µg/L Batch ID: M\$15W0814M Analysis Date: 08/14/2009 14:1 Sample ID: LCS M\$15W0814M Units: µg/L Fun ID: M\$0 15,00814A Prep Date: 08/14/2009 Analyte Result POL SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal %RPD(LUINE) 08/14/2009 Dichroomethane 12.5 1 10 12.5 70 130 Ohoromethane 11.2 1 10 112.2 70 130 Tothoromethane 12.5 70 130 Dichroomethane 11.2 1 10 112.2 70 130 Tothoromethane 1.1.2 1.1.0 10.7 130 Tothoromethane < | |
| Analyte Result POL SptVal SptVal <th> 3</th> | 3 |
| Dichlorodiffuoromethane 12.5 1 10 125 70 130 Ohloromethane 10.8 2 10 109 70 130 Ohloromethane 11.2 1 10 114 70 130 Chloroethane 13.2 2 10 132 70 130 Dichlorodifuoromethane 13.2 2 10 132 70 130 Dichloroethane 11 1 10 100 70 130 Dichloroethane 11.4 1 11 10 114 70 130 I.1-Dichloroethane 11.4 1 110 70 130 130 I.1-Dichloroethane 11.2 1 0 114 70 130 I.1-Dichloroethane 11.2 1 110 116 70 130 I.1-Dichloroethane 11.2 1 10 117 70 130 I.2-Dichloroptopane 12.5 1< | 0 |
| Chicomethane 10.8 2 10 108 70 130 Vinvi choride 11.4 1 10 114 70 130 Bromomethane 13.2 2 10 132 70 130(130) Trichlorofitomethane 11 1 10 110 70 130 1.1-Dichloroethane 11 1 10 110 70 130 Dichloromethane 10.6 2 10 14 70 130 Dichloromethane 11.4 1 10 110 70 130 Dichloromethane 11.4 1 10 114 70 130 Itans-12-Dichloroethane 10.9 1 10 114 70 130 Itans-12-Dichloroethane 10.6 1 10 114 70 130 2.2-Dichloroethane 10.7 1 10 115 70 130 1.2-Dichloroptopane 11.2 1 1 | Qua |
| Vinvi chloride 11.4 1 10 114 70 130 Chloroethane 11.2 1 10 112 70 130(130) Trichloroflucromethane 12 1 10 120 70 130(130) Trichloroethane 11 1 10 170 70 130 Dichloroethane 10.6 2 10 106 70 130 Methyl tert-butyl ether (MTBE) 11 0.5 10 110 70 130 1.1-Dichloroethane 10.9 1 10 109 70 130 is1.2-Dichloroethane 11.4 10 114 70 130 is1.2-Dichloroethane 12.5 10 106 70 130 1.2-Dichloroethane 12.5 10 115 70 130 1.2-Dichloroeroethane 11.5 10 117 70 130 1.2-Dichloroeroethane 11.2 10 117 70 130 <td></td> | |
| Brommethane 13.2 2 10 132 70 130(130) Trichtorofluoronethane 12 1 10 120 70 130 J-Dichtoroethane 11 1 10 110 70 130 Dichtoroethane 10.6 2 10 106 70 130 Attams-1.2-Dichtoroethane 11.4 10 114 70 130 1.1-Dichtoroethane 10.9 1 10 109 70 130 ois-1.2-Dichtoroethane 11.2 1 10 112 70 130 Bromochioromethane 11.2 1 10 112 70 130 1.2-Dichtoropethane 12.5 1 10 112 70 130 1.2-Dichtoropethane 11.5 1 10 117 70 130 1.1-Dichtoropethane 11.2 1 10 117 70 130 1.2-Dichtoropropane 11.2 1 | |
| Trichlorofluoromethane 12 1 10 120 70 130 1,1-Dichloroethane 11 1 10 10 70 130 trans-1,2-Dichloroethane 11.4 1 10 106 70 130 trans-1,2-Dichloroethane 10.9 1 0 109 70 130 trans-1,2-Dichloroethane 10.9 10 109 70 130 stroncelitoroethane 11.4 1 10 114 70 130 Bromochloroethane 11.4 1 10 114 70 130 2,2-Dichloroethane 10.6 1 10 116 70 130 1,2-Dichloroethane 10.7 1 10 127 70 130 1,1-Dichloroethane 11.2 1 10 117 70 130 1,2-Dichloroethane 11.2 1 10 117 70 130 1,2-Dichloroethane 11.1 10 | |
| 1.1-Dichloroethene 11 1 10 100 70 130 Dichloromethane 10.6 2 10 106 70 130 Methyl tert-bulyl ether (MTBE) 11 0.5 10 110 70 130 J-Dichloroethane 10.9 1 10 109 70 130 cis-1.2-Dichloroethane 11.2 1 10 114 70 130 Bromochloroethane 11.4 1 10 114 70 130 Chloroform 10.6 1 10 116 70 130 2.2-Dichloroptopane 12.5 1 10 117 70 130 1.1-Dichloroptopane 11.2 1 0 117 70 130 1.1-Dichloroptopane 11.2 1 0 117 70 130 1.1-Dichloroptopane 11.2 1 0 117 70 130 Dibromomethane 11.2 1 0 117 70 130 1.2-Dichloropropene 11.1 | L51 |
| Dickhoromethane 10.6 2 10 106 70 130 trans-1,2-Dickhoroethane 11.4 1 10 114 70 130 hethvi ter-butvi ether (MTBE) 11 0.5 10 109 70 130 1,1-Dickhoroethane 10.9 1 10 112 70 130 Bromochloromethane 11.4 1 10 114 70 130 Chloroform 10.6 1 10 114 70 130 Chloroform 10.6 1 10 115 70 130 2.2-Dichloroethane 10.7 1 10 115 70 130 1.1-Trichloroethane 11.5 1 10 115 70 130 1.1-Dichloropropane 11.1 10 111 70 130 Carbon tetrachloride 11.7 1 10 111 70 130 Dibromomethane 11.2 1 10 111 70 130 Carbon tetrachloride 11.1 10 | |
| trans-12-Dichloroethene11.411011470130Methyl ert-bulyl ether (MTBE)110.510109701301.1-Dichloroethane10.911011270130cis-1.2-Dichloroethane11.411011470130Bromochloromethane11.411011470130Chloroform10.6110106701302.2-Dichloroptopane12.5110105701301.2-Dichloroothane11.7110117701301.1-Dichloroothane11.2110112701301.1-Dichloroothane11.211011270130Carbon tetrachloride11.711011770130Dibromomethane11.2110112701301.2-Dichloroorpopane11.1110111701301.2-Dichloroorpopane11.1110111701301.2-Dichloroorpopane10.2110112701301.2-Dichloroorpopene10.2110112701301.2-Dichloroorpopene10.2110112701301.2-Dichloroorpopene10.2110102701301.2-Dichloroorpopene10.2110102701301.2-Dichlo | |
| 1,1-Dichloroethane 10,9 1 10 109 70 130 cis-1,2-Dichloroethane 11,2 1 10 114 70 130 Bromochloromethane 11,4 1 10 114 70 130 Chloroform 10,6 1 10 106 70 130 2.2-Dichloropropane 12,5 1 10 127 70 130 1,1-Dichloropropane 11,2 1 10 115 70 130 1,1-Dichloropropene 11,2 1 10 117 70 130 Carbon tetrachloride 11,7 1 10 117 70 130 Dibromomethane 11,2 1 10 112 70 130 Dibromotheme 11 1 10 111 70 130 1,2-Dichloropropane 11,1 1 10 111 70 130 1,2-Dichloropropane 11,1 1 10 112 70 130 1,2-Dichloropropane 10,2 1 | |
| cis-12-Dichloroethane 11.2 1 10 112 70 130 Bromochloromethane 11.4 1 10 114 70 130 2.2-Dichloropropane 12.5 1 10 125 70 130 2.2-Dichloroethane 10.7 1 10 115 70 130 1.1-Trichloroethane 11.5 1 10 112 70 130 1.1-Trichloroethane 11.2 1 10 112 70 130 1.1-Trichloroethane 11.2 1 10 117 70 130 1.1-Trichloroethane 11.2 1 10 117 70 130 Dibromomethane 11.2 1 10 112 70 130 Dibromomethane 11.1 1 10 111 70 130 Carbon tetrachloride 11.1 1 10 112 70 130 Trichloroethane 10.2 1 10 112 70 130 I_2-Dichloropropane 10.2 | |
| Bromochloromethane 11.4 1 10 114 70 130 Chloroform 10.6 1 10 106 70 130 2.2-Dichloropropane 12.5 1 10 125 70 130 1.2-Dichloropthane 10.7 1 10 107 70 130 1.1-Trichloropthane 11.5 1 10 115 70 130 Carbon tetrachloride 11.7 1 10 117 70 130 Dibromomethane 11.2 1 10 117 70 130 1.2-Dichloropropane 11.1 0 111 70 130 1.2-Dichloropropane 11.1 10 111 70 130 1.2-Dichloropropene 11.1 10 111 70 130 1.2-Dichloropropene 10.2 1 10 104 70 130 1.2-Trichloroethane 10.2 1 10 104 70 | |
| Chloroform 10.6 1 10 106 70 130 2.2-Dichloropropane 12.5 1 10 125 70 130 1.2-Dichloroethane 10.7 1 10 177 70 130 1.1-Trichloroethane 11.5 1 10 115 70 130 1.1-Dichloropropene 11.2 10 112 70 130 Carbon tetrachloride 11.7 1 10 117 70 130 Dibromomethane 11.2 10 111 70 130 Dibromomethane 11.1 10 111 70 130 Dibromomethane 11.1 10 111 70 130 Cis-1.3-Dichloropropene 11.1 10 111 70 130 Gronodichloromethane 10.2 1 10 112 70 130 cis-1.3-Dichloropropane 10.2 1 10 102 70 130 <t< td=""><td></td></t<> | |
| 2.2-Dichloropropane 12.5 1 10 125 70 130 1.2-Dichloroethane 10.7 1 10 107 70 130 1.1.1-Trichloroethane 11.5 1 10 115 70 130 1.1-Dichloroptopene 11.2 1 10 112 70 130 Carbon tetrachloride 11.7 1 10 117 70 130 Benzene 11.1 0.5 10 111 70 130 Dibromomethane 11.2 1 10 112 70 130 Trichloroethene 11.1 10 111 70 130 Bromodichloropropane 11.1 10 111 70 130 Ircans-1,3-Dichloropropene 10.4 10 102 70 130 Irtans-1,3-Dichloropropene 10.4 10 104 70 130 Irlans-1,3-Dichloropropene 10.2 10 102 70 130 I,1,2-Trichloroethane 9.95 1 10 104 70 </td <td></td> | |
| 1,1-Trichloroethane 11.5 1 10 115 70 130 1,1-Dichloropropene 11.2 1 10 112 70 130 Carbon tetrachloride 11.7 1 10 117 70 130 Benzene 11.1 0.5 10 111 70 130 Dibromomethane 11.2 1 10 112 70 130 1.2-Dichloropropane 11.1 10 111 70 130 Trichloroethene 11 10 111 70 130 Bromodichloromethane 11.2 1 10 112 70 130 trans-1,3-Dichloropropene 10.2 1 10 112 70 130 trans-1,3-Dichloropropene 10.2 1 10 102 70 130 1,3-Dichloropropene 10.2 1 10 104 70 130 1,3-Dichloropropane 10.2 1 10 104 70 130 1,2-Dibromothane (EDB) 22.3 2 2 | |
| 1.1-Dichloropropene 11.2 1 10 112 70 130 Carbon tetrachloride 11.7 1 10 117 70 130 Benzene 11.1 0.5 10 111 70 130 Dibromomethane 11.2 1 10 111 70 130 1.2-Dichloropropane 11.1 1 10 111 70 130 Trichloroethene 11.1 1 10 111 70 130 Bromodichloromethane 11.2 1 10 111 70 130 cis-1,3-Dichloropropene 10.2 1 10 111 70 130 trans-1,3-Dichloropropene 10.4 1 10 104 70 130 1,1.2-Trichloroethane 10.4 0.5 10 104 70 130 1,2-Dibromoethane (EDB) 22.3 2 20 111 70 130 1,2-Dibromoethane 10.2 1 10 102 70 130 1,2-Dibromoethane 10. | |
| Carbon tetrachloride 11.7 1 10 117 70 130 Benzne 11.1 0.5 10 111 70 130 Dibromomethane 11.2 1 10 112 70 130 Dibromomethane 11.1 10 111 70 130 Trichloroptopane 11 1 10 110 70 130 Bromodichloromethane 11.2 1 10 112 70 130 cis-1,3-Dichloroptopene 11.1 10 111 70 130 trans-1,3-Dichloroptopene 10.2 100 102 70 130 1,2-Dichloroptopene 10.4 1 10 104 70 130 1,3-Dichloroptopane 10.4 0.5 10 104 70 130 1,3-Dichloroptopane 10.2 1 10 102 70 130 1,2-Dibromochlaromethane 9.95 1 10 100 70 130 1,2-Dichloroptopane 10.8 1 10 10 | |
| Benzene 11.1 0.5 10 111 70 130 Dibromomethane 11.2 1 10 112 70 130 1,2-Dichloropropane 11.1 1 10 111 70 130 Trichloroethene 11 1 10 111 70 130 Bromodichloromethane 11.2 1 10 112 70 130 trans-1,3-Dichloropropene 11.1 1 10 111 70 130 trans-1,3-Dichloropropene 10.2 1 10 102 70 130 trans-1,3-Dichloropropene 10.4 10 104 70 130 trans-1,3-Dichloropropane 10.2 1 10 104 70 130 J.1,2-Trichloroethane 10.2 1 10 100 70 130 J.2-Dibromoethane (EDB) 22.3 2 20 111 70 130 J.1,1,2-Tetrachloroethane 10.8 <t< td=""><td></td></t<> | |
| 1,2-Dichloropropane 11.1 1 10 111 70 130 Trichloroethene 11 1 10 110 70 130 Bromodichloromethane 11.2 1 10 112 70 130 cis-1,3-Dichloropropene 11.1 1 10 111 70 130 trans-1,3-Dichloropropene 10.2 1 10 102 70 130 1,1,2-Trichloroethane 10.4 1 10 104 70 130 Toluene 10.4 0.5 10 104 70 130 1,2-Dibromoethane (EDB) 22.3 2 20 111 70 130 1,2-Dibromoethane (EDB) 22.3 2 20 111 70 130 1,1,1,2-Tetrachloroethane 11.2 1 10 108 70 130 1,1,1,2-Tetrachloroethane 11.2 1 10 111 70 130 1,1,1,2-Tetrachloroethane 10.1 1 10 101 70 130 1,1,1,2-Tetr | |
| Trichloroethene1111011070130Bromodichloromethane11.211011270130cis-1,3-Dichloropropene11.111011170130trans-1,3-Dichloropropene10.211010270130trans-1,3-Dichloropropene10.411010470130Toluene10.40.51010470130Toluene10.2110102701301,3-Dichloropropane10.211010270130Dibromoethane (EDB)22.3220111701301,2-Dibromoethane (EDB)22.3220111701301,1,1,2-Tetrachloroethane10.1110108701301,1,1,2-Tetrachloroethane10.1110101701301,1,1,2-Tetrachloroethane10.20.510102701301,1,1,2-Tetrachloroethane10.20.510102701301,1,2,2-Tetrachloroethane10.40.51010470130Bromoform9,131109170130Bromoform9,131109170130Styrene8,5211085701301,2,3-Trichloroethane9,6611097701301,2,3-Trichloroethane | |
| Bromodichloromethane11.211011270130cis-1,3-Dichloropropene11.111011170130trans-1,3-Dichloropropene10.2110102701301,1,2-Trichloroethane10.411010470130Toluene10.4110104701301,3-Dichloropropane10.211010270130Dibromochloromethane9.95110100701301,2-Dibromoethane (EDB)22.3220111701301,2-Dibromoethane11.2110108701301,1,1,2-Tetrachloroethane11.2110112701301,1,1,2-Tetrachloroethane10.111010170130Chlorobenzene10.111010170130Ethylbenzene10.40.51010470130m,p-Xylene10.40.51010470130Bromoform9.131109170130Styrene8.521108570130-Xylene10.70.510107701301,1,2,2-Tetrachloroethane9.6611097701301,2,3-Trichloropropane9.22209670130I,2,3-Trichloropropane9.841< | |
| cis-1,3-Dichloropropene 11.1 1 10 111 70 130 trans-1,3-Dichloropropene 10.2 1 10 102 70 130 1,1_2-Trichloroethane 10.4 1 10 104 70 130 Toluene 10.4 0.5 10 104 70 130 1,3-Dichloropropane 10.2 1 10 102 70 130 1,3-Dichloropropane 10.2 1 10 102 70 130 1,2-Dibromoethane (EDB) 22.3 2 20 111 70 130 1,2-Dibromoethane (EDB) 22.3 2 20 111 70 130 1,1,2-Tetrachloroethane 11.2 1 10 108 70 130 1,1,1,2-Tetrachloroethane 10.1 1 10 101 70 130 Chlorobenzene 10.1 1 10 101 70 130 m.p-Xylene 10.4 0.5 10 104 70 130 Bromoform 9.1 | |
| trans-1,3-Dichloropropene10.2110102701301,1,2-Trichloroethane10.411010470130Toluene10.40.510104701301,3-Dichloropropane10.211010270130Dibromochloromethane9.95110100701301,2-Dibromoethane (EDB)22.3220111701301,1,1,2-Tetrachloroethane10.8110108701301,1,1,2-Tetrachloroethane10.111010170130Chlorobenzene10.111010170130Ethvlbenzene10.20.51010270130Bromoform9.131109170130Styrene8.521108570130o-Xylene10.70.510107701301,1,2,2-Tetrachloroethane9.66109770130styrene8.521108570130o-Xylene10.70.510107701301,2,2-Tetrachloroethane9.661097701301,2,3-Trichloropropane9.841109870130 | |
| Toluene10.40.510104701301,3-Dichloropropane10.211010270130Dibromochloromethane9.95110100701301,2-Dibromoethane (EDB)22.322011170130Tetrachloroethane10.8110108701301,1,1,2-Tetrachloroethane11.211011270130Chlorobenzene10.111010170130Ethylbenzene10.20.51010270130Bromoform9.131109170130Styrene8.521108570130o-Xylene10.70.510107701301,1,2,2-Tetrachloroethane9.661109770130styrene9.6611097701301,2,3-Trichloropropane9.841109870130 | |
| 1,3-Dichloropropane10.211010270130Dibromochloromethane9.95110100701301,2-Dibromoethane (EDB)22.322011170130Tetrachloroethane10.8110108701301,1,1,2-Tetrachloroethane11.211011270130Chlorobenzene10.111010170130Ethylbenzene10.20.51010270130m,p-Xylene10.40.51010470130Bromoform9.131109170130Styrene8.521108570130o-Xylene10.70.510107701301,1,2,2-Tetrachloroethane9.6611097701301,2,3-Trichloropropane19.22209670130Isopropylbenzene9.841109870130 | |
| Dibromochloromethane9.95110100701301,2-Dibromoethane (EDB)22.322011170130Tetrachloroethane10.8110108701301,1,1,2-Tetrachloroethane11.211011270130Chlorobenzene10.111010170130Ethylbenzene10.20.51010270130m,p-Xylene10.40.51010470130Bromoform9.131109170130Styrene8.521108570130o-Xylene10.70.510107701301,1,2,2-Tetrachloroethane9.6611097701301,2,3-Trichloropropane19.22209670130Isopropylbenzene9.841109870130 | |
| 1.2-Dibromoethane (EDB)22.322011170130Tetrachloroethene10.8110108701301,1,1,2-Tetrachloroethane11.211011270130Chlorobenzene10.111010170130Ethylbenzene10.20.51010270130m,p-Xylene10.40.51010470130Bromoform9.131109170130Styrene8.521108570130o-Xylene10.70.510107701301,1,2,2-Tetrachloroethane9.6611097701301,2,3-Trichloropropane19.22209670130Isopropylbenzene9.841109870130 | |
| Tetrachloroethene10.8110108701301,1,1,2-Tetrachloroethane11.211011270130Chlorobenzene10.111010170130Ethylbenzene10.20.51010270130m,p-Xylene10.40.51010470130Bromoform9.131109170130Styrene8.521108570130o-Xylene10.70.510107701301,1,2,2-Tetrachloroethane9.6611097701301,2,3-Trichloropropane19.22209670130Isopropylbenzene9.841109870130 | |
| Chlorobenzene10.111010170130Ethylbenzene10.20.51010270130m,p-Xylene10.40.51010470130Bromoform9.131109170130Styrene8.521108570130o-Xylene10.70.510107701301,1,2,2-Tetrachloroethane9.6611097701301,2,3-Trichloropropane19.22209670130Isopropylbenzene9.841109870130 | |
| Ethylbenzene10.20.51010270130m,p-Xylene10.40.51010470130Bromoform9.131109170130Styrene8.521108570130o-Xylene10.70.510107701301,1,2,2-Tetrachloroethane9.6611097701301,2,3-Trichloropropane19.22209670130Isopropylbenzene9.841109870130 | |
| m.p-Xylene10.40.51010470130Bromoform9.131109170130Styrene8.521108570130o-Xylene10.70.510107701301,1,2,2-Tetrachloroethane9.6611097701301,2,3-Trichloropropane19.22209670130Isopropylbenzene9.841109870130 | |
| Bromoform9.131109170130Styrene8.521108570130o-Xylene10.70.510107701301,1,2,2-Tetrachloroethane9.6611097701301,2,3-Trichloropropane19.22209670130Isopropylbenzene9.841109870130 | |
| Styrene8.521108570130o-Xylene10.70.510107701301,1,2,2-Tetrachloroethane9.6611097701301,2,3-Trichloropropane19.22209670130Isopropylbenzene9.841109870130 | |
| 1,1,2,2-Tetrachloroethane9.6611097701301,2,3-Trichloropropane19.22209670130Isopropylbenzene9.841109870130 | |
| 1,2,3-Trichloropropane19.22209670130Isopropylbenzene9.841109870130 | |
| Isopropylbenzene 9.84 1 10 98 70 130 | |
| | |
| Bromobenzene 9.88 1 10 99 70 130 | |
| n-Propylbenzene 9.97 1 10 99.7 70 130 | |
| 4-Chlorotoluene 9.91 1 10 99 70 130 | |
| 2-Chlorotoluene 9.87 1 10 99 70 130 1,3,5-Trimethylbenzene 9.54 1 10 95 70 130 | |
| tert-Butylbenzene 9.53 1 10 95 70 130 | |
| 1,2,4-Trimethylbenzene 9.21 1 10 92 70 130 | |
| sec-Butylbenzene 9.6 1 10 96 70 130 | |
| 1,3-Dichlorobenzene 9.99 1 10 99.9 70 130 1,4-Dichlorobenzene 9.79 1 10 98 70 130 | |
| 1,4-Dichlorobenzene 9.79 1 10 98 70 130 4-Isopropyltoluene 9.59 1 10 96 70 130 | |
| 1,2-Dichlorobenzene 9.45 1 10 95 70 130 | |
| n-Butylbenzene 9.5 1 10 95 70 130 | |
| 1,2-Dibromo-3-chloropropane (DBCP) 48.7 3 50 97 70 130 | |
| 1,2,4-Trichlorobenzene9.722109770130Naphthalene9.752109870130 | |
| Naphthalene 9.75 2 10 98 70 130 Hexachlorobutadiene 19.3 2 20 96 70 130 | |
| 1,2,3-Trichlorobenzene 9.41 2 10 94 70 130 | |
| Surr: 1,2-Dichloroethane-d4 9.97 10 99.7 70 130 | |
| Surr: Toluene-d8 10 10 100 70 130 | |
| Surr: 4-Bromofluorobenzene 9.75 10 98 70 130 | |



| Date: 22-Aug-09 | (| QC Su | mmar | y Repor | t | | | Work Ord 0908134 | |
|------------------------------------------------------|---------------|------------|------------|--------------|------------|----------|--------------|----------------------|----|
| Sample Matrix Spike | | Type MS | i Te | est Code: | | | | | |
| File ID: 09081412.D | | | Ba | atch ID: MS1 | I 5W081 | 4M | Analysis Da | te: 08/14/2009 16:02 | 1 |
| Sample ID: 09080602-02AMS | Units : µg/L | F | Run ID: MS | SD_15_090 | 814A | | Prep Date: | 08/14/2009 | |
| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) RPDF | RefVal %RPD(Limit) | Qu |
| Dichlorodifluoromethane | 43.8 | 2.5 | 50 | 0 | 88 | 13 | 167 | | |
| Chloromethane | 43.5 | 10 | 50 | Ō | 87 | 28 | 145 | | |
| Vinyl chloride | 44.2 | 2.5 | 50 | 0 | 88 | 43 | 134 | | |
| Chloroethane Bromomethane | 46.9 | 2.5 | 50 | 0 | 94 | 39 | 154 176 | | |
| Trichlorofluoromethane | 49.9 47.3 | 10 2.5 | 50 50 | 0 | 99.8 95 | 19 34 | 160 | | |
| 1,1-Dichloroethene | 44.4 | 2.5 | 50 | 0 | 89 | 60 | 130 | | |
| Dichloromethane | 46.7 | 10 | 50 | 0 | 93 | 68 | 130 | | |
| trans-1,2-Dichloroethene | 47.1 | 2.5 | 50 | 0 | 94 | 63 | 130 | | |
| Methyl tert-butyl ether (MTBE) 1,1-Dichloroethane | 51.7 | 1.3 | 50 | 0 | 103 | 56 | 141 | | |
| cis-1,2-Dichloroethene | 46.8 49.7 | 2.5 2.5 | 50 50 | 0 | 94 99 | 61 70 | 130 130 | | |
| Bromochloromethane | 52.1 | 2.5 | 50 | 0 | 104 | 70 | 130 | | |
| Chloroform | 49.6 | 2.5 | 50 | 3.23 | 93 | 67 | 130 | | |
| 2,2-Dichloropropane | 33.6 | 2.5 | 50 | 0 | 67 | 30 | 152 | | |
| 1,2-Dichloroethane 1,1,1-Trichloroethane | 49 | 2.5 | 50 | 0 | 98 05 | 60 50 | 135 137 | | |
| 1,1-Dichloropropene | 47.6 46.4 | 2.5 2.5 | 50 50 | 0 | 95 93 | 59 63 | 137 | | |
| Carbon tetrachloride | 49 | 2.5 | 50 50 | 1.56 | 95 95 | 50 | 147 | | |
| Benzene | 47.8 | 1.3 | 50 | 0 | 96 | 67 | 130 | | |
| Dibromomethane | 51.8 | 2.5 | 50 | 0 | 104 | 69 | 133 | | |
| 1,2-Dichloropropane | 48.7 | 2.5 | 50 | 0 | 97 | 69 | 130 | | |
| Trichloroethene Bromodichloromethane | 46.1 54.8 | 2.5 2.5 | 50 50 | 0 5.05 | 92 99 | 69 66 | 130 134 | | |
| cis-1,3-Dichloropropene | 43.9 | 2.5 | 50 50 | 5.05 | 33 88 | 63 | 130 | | |
| trans-1,3-Dichloropropene | 41.8 | 2.5 | 50 | õ | 84 | 66 | 131 | | |
| 1,1,2-Trichloroethane | 48.4 | 2.5 | 50 | 0 | 97 | 68 | 130 | | |
| Toluene 1,3-Dichloropropane | 43.5 | 1.3 | 50 | 0 | 87 | 66 | 130 | | |
| Dibromochloromethane | 46.4 52 | 2.5 2.5 | 50 50 | 0 7.81 | 93 88 | 70 70 | 130 130 | | |
| 1,2-Dibromoethane (EDB) | 99.8 | 10 | 100 | 7.01 | 99.8 | 70 | 130 | | |
| Tetrachloroethene | 43.5 | 2.5 | 50 | 0 | 87 | 61 | 134 | | |
| 1,1,1,2-Tetrachloroethane | 47.7 | 2.5 | 50 | 0 | 95 | 70 | 130 | | |
| Chlorobenzene Ethylbenzene | 43.3 | 2.5 | 50 | 0 | 87 05 | 70 | 130 | | |
| m,p-Xylene | 42.4 43.9 | 1.3 1.3 | 50 50 | 0 | 85 88 | 68 64 | 130 130 | | |
| Bromoform | 48.1 | 2.5 | 50 | 8.14 | 80 | 64 | 138 | | |
| Styrene | 35.8 | 2.5 | 50 | 0 | 72 | 69 | 130 | | |
| o-Xylene | 45.1 | 1.3 | 50 | 0 | 90 | 70 | 130 | | |
| 1,1,2,2-Tetrachloroethane 1,2,3-Trichloropropane | 45.5 | 2.5 | 50 | 0 | 91 89 | 65 | 131 | | |
| Isopropylbenzene | 89.3 40.2 | 10 2.5 | 100 50 | 0 | 89 80 | 70 64 | 130 138 | | |
| Bromobenzene | 43.4 | 2.5 | 50 | 0 | 87 | 70 | 130 | | |
| n-Propylbenzene | 40.1 | 2.5 | 50 | 0 | 80 | 66 | 132 | | |
| 4-Chlorotoluene | 41.6 | 2.5 | 50 | 0 | 83 | 70 | 130 | | |
| 2-Chlorotoluene 1,3,5-Trimethylbenzene | 41.5 | 2.5 | 50 | 0 | 83 | 70 66 | 130 | | |
| tert-Butylbenzene | 39.6 39.8 | 2.5 2.5 | 50 50 | 0 | 79 80 | 66 65 | 136 137 | | |
| 1,2,4-Trimethylbenzene | 38.7 | 2.5 | 50 | 0 | 77 | 65 | 137 | | |
| sec-Butylbenzene | 39.2 | 2.5 | 50 | 0 | 78 | 66 | 134 | | |
| 1,3-Dichlorobenzene | 42.3 | 2.5 | 50 | 0 | 85 | 70 | 130 | | |
| 1,4-Dichlorobenzene 4-Isopropyltoluene | 42.1 | 2.5 | 50 | 0 | 84 79 | 70 66 | 130 | | |
| 1,2-Dichlorobenzene | 39.2 42.3 | 2.5 2.5 | 50 50 | 0 0 | 78 85 | 66 70 | 137 130 | | |
| n-Butylbenzene | 38.1 | 2.5 | 50 | 0 | 76 | 60 | 142 | | |
| 1,2-Dibromo-3-chloropropane (DBCP) | 228 | 15 | 250 | Ő | 91 | 67 | 130 | | |
| 1,2,4-Trichlorobenzene | 43.7 | 10 | 50 | 0 | 87 | 61 | 137 | | |
| Naphthalene Hexachlorobutadiene | 47.1 | 10 | 50 | 0 | 94 | 40 | 167 | | |
| 1,2,3-Trichlorobenzene | 77.5 44.4 | 10 10 | 100 50 | 0 | 78 89 | 61 51 | 130 144 | | |
| Surr: 1,2-Dichloroethane-d4 | 50 <i>.</i> 5 | 10 | 50 50 | 0 | 101 | 70 | 130 | | |
| Surr: Toluene-d8 | 48.8 | | 50 | | 98 | 70 | 130 | | |
| Surr: 4-Bromofluorobenzene | 47.7 | | 50 | | 95 | 70 | 130 | | |



| 22-Aug-09 | (| <u> 2C S</u> i | ummary | Report | t | | | | Work Ord 0908134 | |
|------------------------------------------------------|--------------|----------------|------------|-------------|----------------------|----------|------------|----------------|----------------------|------------|
| Sample Matrix Spike Duplicate | | Туре М | | st Code: | | | | | | |
| File ID: 09081413.D | | | Bat | tch ID: MS1 | 5W081 | 4M | Analys | sis Date: 08 | /14/2009 16:24 | 1 |
| Sample ID: 09080602-02AMSD | Units : µg/L | | Run ID: MS | D_15_0908 | 14A | | Prep [| Date: 08 | /14/2009 | |
| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRefVal | %RPD(Limit) | Qua |
| Dichlorodifluoromethane | 38.7 | 2.5 | 50 | 0 | 77 | 13 | 167 | 47.27 | 20.0(20) | R5 |
| Chloromethane | 38 | 10 | 50 | 0 | 76 | 28 | 145 | 53.57 | 34.0(20) | R5 |
| Vinyl chloride | 39.7 | 2.5 | 50 | 0 | 79 | 43 | 134 | 59.71 | 40.3(20) | R5 |
| Chloroethane | 41.9 | 2.5 | 50 | 0 | 84 | 39 | 154 | 53.43 | 24.3(20) | R5 |
| Bromomethane | 49.3 | 10 | 50 | 0 | 99 | 19 | 176 | 62.33 | 23.3(20) | R58 |
| Trichlorofluoromethane | 44.3 | 2.5 | 50 | 0 | 89 | 34 | 160 | 56.71 | 24.5(20) | R5 |
| 1,1-Dichloroethene | 40.8 | 2.5 | 50 | 0 | 82 | 60 | 130 | 50.16 | 20.5(20) | R5 |
| Dichloromethane | 45 | 10 | | 0 | 90 | 68 | 130 | 51.43 | 13.3(20) | |
| trans-1,2-Dichloroethene | 43.8 | 2.5 | | 0 | 88 | 63 | 130 | 52.41 | 18.0(20) | |
| Methyl tert-butyl ether (MTBE) 1,1-Dichloroethane | 53.2 44.1 | 1.3 2.5 | 50 50 | 0 0 | 106 88 | 56 61 | 141 130 | 56.91 51.36 | 6.7(20) 15.3(20) | |
| cis-1,2-Dichloroethene | 47.4 | 2.5 | | 0 | 95 | 70 | 130 | 53.1 | 11.4(20) | |
| Bromochloromethane | 52.6 | 2.5 | 50 | ŏ | 105 | 70 | 130 | 56.57 | 7.3(20) | |
| Chloroform | 46.9 | 2.5 | 50 | 3.23 | 87 | 67 | 130 | 50.54 | 7.6(20) | |
| 2,2-Dichloropropane | 30.3 | 2.5 | 50 | 0 | 61 | 30 | 152 | 55.48 | 58.6(20) | R5 |
| 1,2-Dichloroethane | 48.5 | 2.5 | 50 | 0 | 97 | 60 | 135 | 52.84 | 8.5(20) | |
| 1,1,1-Trichloroethane 1,1-Dichloropropene | 43.9 | 2.5 | 50 | 0 | 88 | 59 62 | 137 | 53.39 | 19.5(20) | R5 |
| | 42 | 2.5 | | 0 | 84 | 63 | 130 | 51.47 | 20.3(20) | нэ |
| Carbon tetrachloride Benzene | 45.4 45 | 2.5 1.3 | 50 50 | 1.56 0 | 88 90 | 50 67 | 147 130 | 53.88 52.22 | 17.1(20) 14.8(20) | |
| Dibromomethane | 45 51.9 | 2.5 | 50 50 | 0 | 90 104 | 69 | 133 | 56.64 | 8.7(20) | |
| 1,2-Dichloropropane | 47.1 | 2.5 | 50 | ő | 94 | 69 | 130 | 53.09 | 12.1(20) | |
| Trichloroethene | 42.6 | 2.5 | | 0 | 85 | 69 | 130 | 50.65 | 17.3(20) | |
| Bromodichloromethane | 54 | 2.5 | 50 | 5.05 | 98 | 66 | 134 | 54.3 | 0.6(20) | |
| cis-1,3-Dichloropropene | 43.8 | 2.5 | | 0 | 88 | 63 | 130 | 52.98 | 18.9(20) | |
| trans-1,3-Dichloropropene 1,1,2-Trichloroethane | 41.6 49.5 | 2.5 2.5 | 50 50 | 0 0 | 83 99 | 66 68 | 131 130 | 49.69 53.47 | 17.6(20) 7.8(20) | |
| Toluene | 40.9 | 1.3 | 50 | 0 | 82 | 66 | 130 | 47.89 | 15.8(20) | |
| 1,3-Dichloropropane | 47.3 | 2.5 | 50 | Õ | 95 | 70 | 130 | 50.56 | 6.6(20) | |
| Dibromochloromethane | 53.4 | 2.5 | | 7.81 | 91 | 70 | 130 | 48.75 | 9.1(20) | |
| 1,2-Dibromoethane (EDB) | 103 | 10 | 100 | 0 | 103 | 70 | 130 | 109.6 | 6.0(20) | D - |
| Tetrachloroethene | 40.4 | 2.5 | | 0 | 81 | 61 | 134 | 49.64 | 20.6(20) | R5 |
| 1,1,1,2-Tetrachloroethane Chlorobenzene | 47 42 | 2.5 2.5 | - | 0 0 | 94 84 | 70 70 | 130 130 | 52.53 47.94 | 11.1(20) 13.1(20) | |
| Ethylbenzene | 42 | 2.5 | 50 50 | 0 | 84 80 | 68 | 130 | 47.94 | 15.9(20) | |
| m,p-Xylene | 40.7 | 1.3 | 50 | õ | 81 | 64 | 130 | 48.51 | 17.6(20) | |
| Bromoform | 51.6 | 2.5 | 50 | 8.14 | 87 | 64 | 138 | 46.28 | 10.9(20) | |
| Styrene | 34.6 | 2.5 | 50 | 0 | 69 | 69 | 130 | 40.13 | 14.9(20) | |
| o-Xylene 1,1,2,2-Tetrachloroethane | 43.3 | 1.3 | 50 | 0 | 87 | 70 | 130 | 49.88 | 14.1(20) | |
| 1,2,3-Trichloropropane | 47.1 92 | 2.5 10 | 50 100 | 0 0 | 94 92 | 65 70 | 131 130 | 50.22 97.35 | 6.4(20) 5.6(20) | |
| Isopropylbenzene | 37.8 | 2.5 | 50 | 0 | 76 | 64 | 138 | 45.11 | 17.6(20) | |
| Bromobenzene | 42.9 | 2.5 | | Ō | 86 | 70 | 130 | 48.18 | 11.6(20) | |
| n-Propylbenzene | 37.9 | 2.5 | 50 | 0 | 76 | 66 | 132 | 45.81 | 18.9(20) | |
| 4-Chlorotoluene 2-Chlorotoluene | 39.5 | 2.5 | | 0 | 79 | 70 | 130 | 46.73 | 16.7(20) | |
| 1,3,5-Trimethylbenzene | 39.6 37.4 | 2.5 2.5 | 50 50 | 0 0 | 7 9 75 | 70 66 | 130 136 | 45.95 44.58 | 14.9(20) 17.6(20) | |
| tert-Butylbenzene | 37.2 | 2.5 | 50 50 | 0 | 74 | 65 | 137 | 44.26 | 17.3(20) | |
| 1,2,4-Trimethylbenzene | 36.8 | 2.5 | 50 | ŏ | 74 | 65 | 137 | 43.57 | 16.7(20) | |
| sec-Butylbenzene | 37 | 2.5 | 50 | 0 | 74 | 66 | 134 | 44.47 | 18.3(20) | |
| 1,3-Dichlorobenzene | 41.2 | 2.5 | 50 | 0 | 82 | 70 | 130 | 48.12 | 15.6(20) | |
| 1,4-Dichlorobenzene | 40.8 | 2.5 | 50 | 0 | 82 | 70 | 130 | 47.37 | 14.8(20) | DE |
| 4-Isopropyltoluene | 36.6 | 2.5 | 50 | 0 | 73 | 66 70 | 137 | 45.02 | 20.7(20) | R5 |
| 1,2-Dichlorobenzene n-Butylbenzene | 41.8 34 7 | 2.5 | 50 50 | 0 | 84 69 | 70 60 | 130 142 | 46.84 | 11.4(20) 24 2(20) | R5 |
| 1,2-Dibromo-3-chloropropane (DBCP) | 34.7 | 2.5 | 50 | 0 | 69 06 | 60 67 | 142 | 44.28 | 24.2(20) 5 1(20) | пð |
| 1,2,4-Trichlorobenzene | 239 44.5 | 15 10 | 250 50 | 0 0 | 96 89 | 67 61 | 130 137 | 251.5 49.48 | 5.1(20) 10.7(20) | |
| Naphthalene | 49.1 | 10 | 50 | 0 | 98 | 40 | 167 | 51.4 | 4.5(20) | |
| Hexachlorobutadiene | 76 | 10 | 100 | Õ | 76 | 61 | 130 | 90.8 | 17.8(20) | |
| 1,2,3-Trichlorobenzene | 47.2 | 10 | 50 | 0 | 94 | 51 | 144 | 49.07 | 3.8(20) | |
| Surr: 1,2-Dichloroethane-d4 | 51 | | 50 | | 102 | 70 | 130 | | | |
| Surr: Toluene-d8 Surr: 4-Bromofluorobenzene | 49 47.6 | | 50 50 | | 98 95 | 70 70 | 130 130 | | | |



255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

QC Summary Report

Work Order: 09081341

22-Aug-09 Comments:

Date:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Alpha uses descriptive data qualifier flags, which could be replaced with either a DOD Q or J flag.

R58 = MS/MSD RPD exceeded the laboratory control limit.

L51 = Analyte recovery was above acceptance limits for the LCS, but was acceptable in the MS/MSD.

R5 = MS/MSD RPD exceeded the laboratory control limit. Recovery met acceptance criteria.

| Billing Information : | | | CH/ | E | -OF | -CU | ISTO | DY F | CHAIN-OF-CUSTODY RECO | ORD | C.A | Page: 1 of 1 | 1 of 1 |
|------------------------------|-------------------------------------------------------------------------------------|---------|------------------------------------|----------|------------------|--------------------------------|-----------------------|--------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|----------------------------------------|------------------|-------------------------|
| - | | | 2 | 55 Glen | Alph dale Ave | 1a Ai nue, Suit | nalytic e 21 Spart | Alpha Analytical, Inc. ale Avenue, Suite 21 Sparks, Nevada 8 | Alpha Analytical, Inc. 255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778 | | WorkOrder : BMIS09081341 | MIS0908134 | 41 7- A 110-00 |
| Client: | | 71 | Report Attention | - I , | 3L: (775) Pho | (775) 355-1044 Phone Number | 4 FAX:(| TEL: (775) 355-1044 FAX: (775) 355-0406 Phone Number EMail Address | 406 Idress | | Report Due By : S:00 PM On : 27-Aug-09 | | /-Aug-Uy |
| Battelle Memorial Institute | ıte | | David Conner | | (818 | (818) 393-2808 | x 80 | connerd@) | connerd@battelle.org | | | | |
| 3990 Old Town Ave | | | Betsy Cutie | | (614 | (614) 424-4899 x | x 66 | cutiee@batelle.org | telle.org | | EDD Required : Yes | | |
| San Diego, CA 92110 | | | Shane Walton | - | (614 | (614) 424-4117 x | 17 x | waltons@battelle.org | pattelle.org | | Sampled by : Client | It | |
| PO: 218013 | | | | | | | | | | | Cooler Temp | Samples Received | <u>Date Printed</u> |
| Client's COC #: 25741/25742 | 742 Job : | | G005862/JPL Groundwater Monitoring | . Groun | dwater N | Aonitorir | Ð | | | | 4 °C | 13-Aug-09 | 13-Aug-09 |
| QC Level : DS4 = D | DOD QC Required : Final Rpt, MBLK, InitCal/ConCal data, LCS, MS/MSD With Surrogates | ıal Rpt | t, MBLK, Init | Cal/Cor | ıCal dat | a, LCS, | MS/MSD V | Nith Surro | gates | | | | |
| | | | | | | | | | | Requested Tests | ests | | |
| | | | on | No. of | No. of Bottles | | 314_W | METALS_D VOC_TIC_ | | VOC_W | | | |
| Sample ID Samp | Sample ID | Matrix | Matrix Date | Alpha | Alpha Sub TAT | TAT | | | | | | Sample | Sample Remarks |
| BMI09081341-01A MW-10 | | Ą | 08/07/09 07:27 | 5 | 0 | 10 | Perchlorate | ទ | VOC by 524 VOC by 524 Criteria Criteria | VOC by 524 Criteria | | | |
| BMI09081341-02A MW-15 | | AQ | 08/07/09 08:33 | د | 0 | 10 | | Cr | | | | | |
| BMI09081341-03A TB-14 | TB-14-8/7/09 | AQ | 08/07/09 00:00 | <u>د</u> | 0 | 10 | | | VOC by 524 Criteria | VOC by 524 Criteria | | Reno Trip | Reno Trip Blank 6/22/09 |
| BMI09081341-04A SB-1-3Q09 | | AQ | 08/07/09 09:12 | ປາ | 0 | 10 | Perchlorate | ç | VOC by 524 VOC by 524 Criteria Criteria | VOC by 524 Criteria | | | |

Comments: No security seals. Frozen ice. Temp Blank #7771 received @ 4°C. Perchlorate RL of 1.0 ug/L. Level IV QC. Samples should be used as the control spike sample if possible (I.E.: MS/MSD). : BMI09081341-06A

TB-15 8/12/09

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08/12/09 00:00

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08/12/09 07:32

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Perchlorate

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VOC by 524 VOC by 524 Criteria Criteria

VOC by 524 Criteria Criteria

Reno Trip Blank 6/22/09

BMI09081341-05A MW-5



The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. Matrix Type: AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

| Billing Information: Name <u>GEMALD TS NPENS</u> BATTELLE Address <u>505 King Ave</u> City, State, Zip <u>CS King Ave</u> Fax | | cal, Inc. e, Suite 21 31-5778 144 | Samples Collected From Which State? AZCA_XVVWAF IDOROTHERF Analyses Required | State? 25741 Page # <u>1</u> of <u>1</u> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-----------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------|
| US TOWN AVE. C-105 | s s | Job # C 005 86 2 | 42) (22) (3140) | Required QC Level? |
| BIECS CA 92113 Matrix Sampled by | Phone #) 726-7311 Report Attention | <u>а</u> , | "0.4" (cc | EDD / EDF? YES NO |
| <u>a</u> | Sample Description | TAT Field ** See below | | REMARKS |
| 727 8/1/2 AQ BM109081341-01 | MW-10 | VP 15 | × × | |
| ₹0 20- | MW-15 | e / 1 | × | |
| -03 | 78-14-817 bg | × /, × | | TRIP BLANK |
| 40- 1 211 P | 513-1-3009 | 1 VP /5 X | | Source BLANK |
| | | | | |
| | | · · · | | |
| | | | | |
| ADDITIONAL INSTRUCTIONS: | | | | |
| Signature | Print Name | Company | | Date Time |
| | to MEN | 1/2 SIGNT | - ~ | 5 1 |
| Relinquished by | | w propries | | |
| Received by | | | | |
| Relinquished by | | | | |
| Received by | | | | |
| *Key: AQ - Aqueous SO - Soil WA - Waste OT - Other AR - Air **: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis | OT - Other AR - Air **: L-Liter | Liter V-Voa S-Soil Jar O-C 3. Hazardous samples will be returned t | O-Orbo T-Tedlar B-Brass ed to client or disposed of at client expen | P-Plastic OT-Other Ise. The report for the analysis |

of the above samples is applicable only to those samples received by the laboratory with this coc. The liability of the laboratory is limited to the amount paid for the report.

| Name <u>GENALS TOMPICIUS</u> <u>BATTELLE</u> Address <u>505 ICINC AVE</u> City, State, Zip <u>Columbus</u> on <u>43201</u> Phone Number Fax | | 255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778 Phone (775) 355-1044 Fax (775) 355-0406 | ID OR OT Analyses F | WA Page Required / | # of |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------|----------------------------------|----------------------|
| | | | | | |
| E DAVID LONNER | PO.# <u> 名(</u> な / 3 EMail Address | 228500 # gor | 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | / / / Requ | Required QC Level? |
| a 9211 | Phone #> 726-7311 | Fax # | (52 (6) (3) | EDD / EDF? YES | YES NO |
| Matrix* Sampled by See Key | on | Total and type of | | Global ID # | |
| Sampled Sampled Below Lab ID Number (Use Only) | Sample Description | TAT Field ** See below | | / / / REN | REMARKS |
| 732 1/25 Au Bm109081341-05 | MW-5 | | | | |
| | MW-6 | | XXX | | A |
| | TB-15- 8/12/05 | Norm V/1 | ~ | The | BLAUK |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | - | | | |
| ADDITIONAL INSTRUCTIONS: | | | | | |
| | | а «Маст | | | |
| Signature | Print Name | | Company | Date | Time |
| Relinquished by | MARCO MENOUS | INSIGH | I GEC | 8/12/29 | د م1/ |
| Received by Hillian Collasa Relinquished by | hatricia Edr | nosa A | (pha | 8/13/09 | G5:C1 |
| Received by | | | | | |
| Relinquished by | | | | | |
| Received by | | | | | |
| *Key: AQ - Aqueous SO - Soil WA - Waste | • OT - Other AR - Air | **: L-Liter V-Voa S-Soil Jar | lar O-Orbo T-Tedlar | B-Brass P-Plastic | OT-Other |
| NOTE: Satilples are discarded of days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed or at client expense. The report or the analysis of the above samples is applicable only to those samples received by the laboratory with this coc. The liability of the laboratory is limited to the amount naid for the report. | reported unless other arrangements an | made. Hazardous samples will p | e returned to client or disposed c | of at client expense. The repo | ort for the analysis |



(805) 526-7270 fax

CAS SR #P0902483

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LABORATORY REPORT

July 27, 2009

David Conner Battelle 3990 Old Town Ave., Suite C-205 San Diego, CA 92110

RE: JPL GW Mon 3Q09 / G486090

Dear David:

Enclosed are the results of the samples submitted to our laboratory on July 22, 2009. For your reference, these analyses have been assigned our service request number P0902483.

All analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein. Your report contains <u>23</u> pages.

Columbia Analytical Services, Inc. is certified by the California Department of Health Services, NELAP Laboratory Certificate No. 02115CA; Arizona Department of Health Services, Certificate No. AZ0694; Florida Department of Health, NELAP Certification E871020; New Jersey Department of Environmental Protection, NELAP Laboratory Certification ID #CA009; New York State Department of Health, NELAP NY Lab ID No: 11221; Oregon Environmental Laboratory Accreditation Program, NELAP ID: CA20007; The American Industrial Hygiene Association, Laboratory #101661; Department of the Navy (NFESC); Pennsylvania Registration No. 68-03307; TX Commission of Environmental Quality, NELAP ID T104704413-08-TX. Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact me for information corresponding to a particular certification.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

Columbia Analytical Services, Inc.

Quelest

Sue Anderson Project Manager

Page 1 of <u>23</u>



Client: Battelle Project: JPL GW Mon 3Q09 / G486090 CAS Project No:

(805) 526-7270 fax

P0902483

CASE NARRATIVE

The samples were received intact under chain of custody on July 22, 2009 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Hexavalent Chromium by EPA Method 7196A

No anomalies were encountered during this analysis.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for utilization of less than the complete report.

SAMPLE CROSS-REFERENCE

| SAMPLE # | CLIENT SAMPLE ID | DATE | TIME |
|--------------|------------------|---------|-------|
| P0902483-001 | MW-14-3 | 7/22/09 | 08:50 |
| P0902483-002 | MW-14-2 | 7/22/09 | 09:20 |
| P0902483-003 | MW-14-1 | 7/22/09 | 10:15 |
| P0902483-004 | DUPE-2-3Q09 | 7/22/09 | 00:00 |
| P0902483-005 | EB-2-7/22/09 | 7/22/09 | 09:40 |

Columbia Analytical Services, Inc.

Acronyms

| CA LUFT | California DHS LUFT Method |
|------------|-------------------------------------------------------------------------------|
| ASTM | American Society for Testing and Materials |
| BTEX | Benzene/Toluene/Ethylbenzene/Xylenes |
| CAS Number | Chemical Abstract Service Registry Number |
| CFC | Chlorofluorocarbon |
| CRDL | Contract Required Detection Limit |
| DLCS | Duplicate Laboratory Control Sample |
| DMS | Duplicate Matrix Spike |
| DOH or DHS | Department of Health Services |
| EPA | U.S. Environmental Protection Agency |
| GC | Gas Chromatography |
| GC/MS | Gas Chromatography/Mass Spectrometry |
| IC | Ion Chromatography |
| ICB | Initial Calibration Blank |
| ICV | Initial Calibration Verification |
| LCS | Laboratory Control Sample |
| LUFT | Leaking Underground Fuel Tank |
| M | Modified Method |
| MDL MDI | Method Detection Limit |
| MRL | Method Reporting Limit |
| MS | Matrix Spike |
| MTBE | Methyl <i>tert</i> -Butyl Ether |
| NA | Not Applicable Not Calculated |
| NC | |
| ND NTU | None Detected at or above the Method Reporting/Detection Limit (MRL/MDL) |
| | Nephelometric Turbidity Units Parts Per Billion |
| ppb | Parts Per Million |
| ppm PQL | Practical Quantitation Limit |
| OA/QC | Quality Assurance/Quality Control |
| RCRA | Resource Conservation and Recovery Act |
| RPD | Relative Percent Difference |
| SIM | Selected Ion Monitoring |
| SM | Standard Methods for the Examination of Water and Wastewater, 19th Ed., 1995. |
| SW | Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW-846, |
| 5 | Third Edition, 1986 and as amended by Updates 1, II, IIA, and IIB. |
| TDS | Total Dissolved Solids |
| ТРН | Total Petroleum Hydrocarbons |
| TSS | Total Suspended Solids |
| TTLC | Total Threshold Limit Concentration |
| VOA | Volatile Organic Analyte(s) |
| VOC | Volatile Organic Compound(s) |
| | · · · · · · · · · · · · · · · · · · · |

Qualifiers

| U | The compound | was analyzed for | r, but was not detected | ("Non-detect") at or above the MRL/MDL | <i></i> |
|---|--------------|------------------|-------------------------|----------------------------------------|---------|
| | | | | | |

- J The result is an estimated concentration that is less than the MRL (PQL), but greater than or equal to the MDL.
- **B** Analyte detected in the method blank above MRL (PQL).
- E Estimated; result based on response which exceeded the instrument calibration range.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- **D** The reported result is from a dilution.
- X See case narrative.

Page 1 of Water & Soil - Chain of Custody Record & Analytical Service Request

| Analytical 26 Services ^{mc} 5i | 2655 Park Center Drive, Suite A Simi Valley, California 93065 | Suite A 3065 | | | | 9 | | | | | | |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------|------------------------|----------------------------------|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|--------------------------|---------------------------------|-----------------------|---------|-----------------------------------|------------|
| | Phone (805) 526-7161 Fax (805) 526-7270 | | Requested Turn 1 Day (100%) 2 | urnaround T) 2 Day (75% | around Time in Business Days (Surcharges) please circle Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day - Standard | Days (Sur 1 Day (35%) | charges) pl 5 Day (25 | ease circle %) 10 Day | - Standard | PPSE | BAS Project No. 98 | <u>م</u> |
| Company Name & Address (Reporting Information) | sporting Information) | Project Name | me | | | Analys | s Method a | Analysis Method and/or Analytes | ytes | CAS C | CAS Conta ct. | |
| RATELLE | | 1 | | | | | Pres | Preservative Code | 0 | | Preservative Key | Key |
| 1900 FID TIM | MO TAN AVE. C-WI | JPL | GW NUN | N 3009 | | | 0 | | | | | e |
| | | Project Number | imber | | (pəı | | | | | | | |
| DAN VIEGO, CA | | きてい | 0609 | | | | | | | | 2 HNO3 | HNO3 |
| Proiect Manager | | P.O. # / Bil | P.O. # / Billing Information | u | q) | | ~ | | | | | |
| | 120 | 214319 | / BATT | E L L | acte | | 9 | · · · · ., | | | | 7n Acetate |
| د | × × | <i>.</i> | Ger | TOMPRINS | Sontr Sontr | SW/ | 61 | | | | | Asc Acid |
| 1126-2211 | | 505 K | م مراجع (ن) م | AVE OU HIDOI | genate 08 35 08 35 | 09 sc | L) | | | | | er |
| | | Sampler (Print & Sign) | | 10.201 | 8015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B 015B | |) <u>+</u> | | | | | |
| Client Sample ID | Laboratory Date ID Number Collected | Time Collected | Matrix | Number of Containers | Volatile Org 524 □ 826 BTEX 8021 TPH Gas 8 BTEX 8021 TPH Diesel | 525 □ 827 Semi-Volati | I h | | | | Remarks | |
| MW-14-3 | 7/22/25 | 05-5 | 3 | 1 | - - | ; | | | | | | |
| MW-14-2 | | | | | | | | | | | | |
| MW-14-1 | | 1015 | | | | | | | | | | |
| | | | | | | | | | | | | |
| DUPE- 2 -3009 | |) | | | | | X | | | | DuPLICATIE | ١., |
| | | | | | | | | | | | 1 | |
| EB- 2- 7/22/09 | | 940 | | | | | | | | | EDUP. BI | BLANK |
| | | | | | | | | | | | | |
| | | | | | | | 2 | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | / | | | | |
| | | | | | | | | | | | | |
| | | | | | | + | + | | | | | |
| Report Tier Levels - please select Tier 1 - (Results/Default if not specified) | | ata Validation | Package) 10% | Surcharge | MRL required Yes / No | ed Yes / No | | EDD req | EDD required Yes / No | Projec | Project Requirements (MRLs, QAPP) | QAPP) |
| Tier II - (Results + QC) | | ent specified) | Tier V - (client specified) |) | WDL / POL | MDL / PQL / J required Yes / No | es / No | Type: | | | | . <u></u> |
| Relinquished by: (Signature) | all a | 2 | ,5 Time: (0 ² | Received by: (Signature) | Signatôre) | | | | pate: 7. 7 Timel | 60 | | |
| Relinquished by: (Signatane) | 5 | -1999: L/c | Time: 14 | H Received by: (Signature) | Signature) | | E - | | Bayer 1/1, 6 Timper C | S Coole | Cooler / Blank / Ice / No Ice | |
| linquished by-(Signature) | | / Date: / | Time: | Received by: (Signature) | Signature | N | | | Dáte: { Time: | Tempe | Temperature | ° |

Columbia Analytical Services, Inc. Chain of Custody Report

Client:BattelleProject:JPL GW Mon 3Q09/G486090

Service Request: P0902483

| Bottle ID | Tests | Date | Time | Sample Location / User | Disposed On |
|-----------------|-------|---------|------|------------------------|-------------|
| P0902483-001.01 | | | | | |
| | 7196A | | | | |
| | | 7/22/09 | 1148 | SMO / SSTAPLES | |
| | | 7/22/09 | 1149 | P-37 / SSTAPLES | |
| | | 7/22/09 | 1225 | In Lab / SANDERSON | |
| | | 7/22/09 | 1440 | P-37 / SANDERSON | · |
| P0902483-002.01 | | | | | |
| | 7196A | | | | |
| | | 7/22/09 | 1148 | SMO / SSTAPLES | |
| | | 7/22/09 | 1149 | P-37 / SSTAPLES | |
| | | 7/22/09 | 1225 | In Lab / SANDERSON | |
| | | 7/22/09 | 1440 | P-37 / SANDERSON | |
| P0902483-003.01 | | | | | |
| | 7196A | | | | |
| | | 7/22/09 | 1148 | SMO / SSTAPLES | |
| | | 7/22/09 | 1149 | P-37 / SSTAPLES | |
| | | 7/22/09 | 1225 | In Lab / SANDERSON | |
| | | 7/22/09 | 1440 | P-37 / SANDERSON | |
| P0902483-004.01 | | | | | |
| | 7196A | | | | |
| | | 7/22/09 | 1148 | SMO / SSTAPLES | |
| | | 7/22/09 | 1149 | P-37 / SSTAPLES | |
| | | 7/22/09 | 1225 | In Lab / SANDERSON | |
| | | 7/22/09 | 1440 | P-37 / SANDERSON | |
| P0902483-005.01 | | | | | |
| | 7196A | | | | |
| | | 7/22/09 | 1148 | SMO / SSTAPLES | |
| | | 7/22/09 | 1149 | P-37 / SSTAPLES | |
| | | 7/22/09 | 1225 | In Lab / SANDERSON | |
| | | 7/22/09 | 1440 | P-37 / SANDERSON | |

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Columbia Analytical Services, Inc.

| Sample | Acceptance | Check Form |
|--------|------------|------------|

| | Battelle | | | | | Work order: | P0902483 | | | |
|------------|--------------------|--------------------------|-------------------|----------------------|-------------------|--------------------------|--------------------|-----------------------|------------|--------------|
| | | 3Q09 / G486090 | | | | | | | | |
| · · | s) received on: | | | - | Date opened: | | by: | SSTAI | | |
| | | samples received by CAS | | | | | | | indication | 1 of |
| compliance | or nonconformity. | Thernal preservation and | pH will only be a | evaluated either at | the request of th | ne client and/or as re | quired by the meth | od/SOP. <u>Yes</u> | <u>No</u> | <u>N/A</u> |
| 1 | Were sample | containers properly r | narked with cl | ient sample ID | ? | | | \mathbf{X} | | |
| 2 | - | upplied by CAS? | | r . | | | | \mathbf{X} | | |
| 3 | | ontainers arrive in go | od condition? | | | | | \mathbf{X} | | |
| 4 | Was a chain-o | of-custody provided? | | | | | | \mathbf{X} | | |
| 5 | Was the chain | -of-custody properly | completed? | | | | | \mathbf{X} | | |
| 6 | | ontainer labels and/or | | th custody pap | ers? | | | \times | | |
| 7 | Was sample v | olume received adequ | uate for analys | is? | | | | \mathbf{X} | | |
| 8 | Are samples w | vithin specified holdin | g times? | | | | | \mathbf{X} | | |
| 9 | Was proper te | mperature (thermal j | preservation) o | of cooler at rec | eipt adhered t | to? | | \mathbf{X} | | |
| | C | ooler Temperature | | °C Blank 7 | Cemperature | 3 | °C | | | |
| 10 | Was a trip bla | nk received? | | - | | | | | | × |
| | Trip blank su | upplied by CAS: | | | | | _ | | | |
| 11 | Were custody | seals on outside of co | ooler/Box? | | | | | | × | |
| | Location of a | seal(s)? | . | | | | _Sealing Lid? | | | × |
| | Were signatu | ire and date included | ? | | | | | | | \times |
| | Were seals in | ntact? | | | | | | | | \mathbf{X} |
| | Were custody | seals on outside of sa | mple container | r? | | | | | \times | |
| | Location of s | seal(s)? | | | | | _Sealing Lid? | | | \mathbf{X} |
| | Were signatu | are and date included | ? | | | | | | | \mathbf{X} |
| | Were seals in | ntact? | | | | | | | | \mathbf{X} |
| 12 | Do containers | have appropriate pre | servation, acc | cording to meth | nod/SOP or C | lient specified in | formation? | × | | |
| | Is there a clier | nt indication that the s | submitted samp | ples are pH p | reserved? | | | | | X |
| | Were <u>VOA vi</u> | ials checked for prese | ence/absence o | f air bubbles? | | | | | | \times |
| | Does the clien | nt/method/SOP requir | e that the analy | yst check the s | ample pH and | l <u>if necessary</u> al | ter it? | | | \times |
| 13 | Tubes: | Are the tubes cap | ped and intact | ? | | | | | | X |
| | | Do they contain n | noisture? | | | | | | | X |
| 14 | Badges: | Are the badges p | roperly capped | d and intact? | | | | | | \mathbf{X} |
| | | Are dual bed badg | ges separated a | nd individuall | y capped and | intact? | | | | \mathbf{X} |
| Lab S | Sample ID | Container | Required | Received | Adjusted | VOA Headspace | Receip | ot / Pres | ervatior | 1 |
| | | Description | pH * | pH | pH | (Presence/Absence) | | Commer | | |
| P0902483 | 3-001.01 | 125mL Plastic NP | | | | | | | | |
| P0902483 | | 125mL Plastic NP | | | | | | | | |
| P0902483 | | 125mL Plastic NP | | | | | | | | |
| P0902483 | | 125mL Plastic NP | | | | | 1 | | | |
| P0902483 | 5-005.01 | 125mL Plastic NP | | | | | | | | |

Explain any discrepancies: (include lab sample ID numbers):

*Required pH: Phenols/COD/NH3/TOC/TOX/NO3+NO2/TKN/T.PHOS, H2SO4 (pH<2); Metals, HNO3 (pH<2); CN (NaOH or NaOH/Asc Acid) (pH>12); Diss. Sulfide_NaOH (pH>12); T. Sulfide_NaOH/ZnAc (pH>12) Diss. Sulfide_NaOH (pH>12); T. Sulfide_NaOH/ZnAc (pH>14) Diss. Sulfide_NaOH (pH>14); T. Sulfide_NaOH (pH>14) Diss. Sulfide_NaOH (pH>14); T. Sulfide_NaOH (pH>14); T 7

DIVIDER SHEET

ANALYTICAL DATA FOR

Hexavalent Chromium

ANALYSIS

Analytical Report

Client : Battelle **Project Name :** JPL GW Mon 3Q09 Project Number: G486090 Sample Matrix : WATER

Service Request: P0902483 Date Collected : 07/22/09 Date Received : 07/22/09

Chromium, Hexavalent

Prep Method : None Analysis Method: 7196A Test Notes :

Units : mg/L (ppm) Basis : NA

| Sample Name | Lab Code | PQL | MDL | Dilution Factor | Date Extracted | Date/Time Analyzed | Result | Result Notes |
|--------------|--------------|-------|-------|--------------------|-------------------|-----------------------|--------|-----------------|
| MW-14-3 | P0902483-001 | 0.010 | 0.003 | 1 | NA | 07/22/09 13:40 | ND | |
| MW-14-2 | P0902483-002 | 0.010 | 0.003 | 1 | NA | 07/22/09 13:40 | ND | |
| MW-14-1 | P0902483-003 | 0.010 | 0.003 | 1 | NA | 07/22/09 13:40 | ND | |
| DUPE-2-3Q09 | P0902483-004 | 0.010 | 0.003 | 1 | NA | 07/22/09 13:40 | ND | |
| EB-2-7/22/09 | P0902483-005 | 0.010 | 0.003 | 1 | NA | 07/22/09 13:40 | ND | |
| Method Blank | P0902483-MB | 0.010 | 0.003 | 1 | NA | 07/22/09 13:40 | ND | |
| | | | | | | | | |

Approved By

Kare Rya Date: 7/23/09

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Report By:SAnderson

QA/QC Report

Client: Battelle **Project:** JPL GW Mon 3Q09 / G486090 Service Request: P0902483 **Date Analyzed:** 07/22/09

| Title: | Initial and Continuing Calibration Blank (ICB and CCB) Summary |
|----------|----------------------------------------------------------------|
| Analyte: | Chromium, Hexavalent |
| Method: | 7196A |
| Units: | mg/L (ppm) |

| Sample Name | PQL | MDL | Result |
|-------------|-------|-------|--------|
| ICB | 0.010 | 0.003 | ND |
| CCB1 | 0.010 | 0.003 | ND |

Approved By: _ ICCBMDL/120594

Kaler Rya Date: 7/23/69

QA/QC Report

Client:BattelleProject:JPL GW Mon 3Q09 / G486090

Service Request: P0902483 **Date Analyzed:** 07/22/09

| Title: | Initial and Continuing Calibration Verification (ICV and CCV) Summary |
|----------|-----------------------------------------------------------------------|
| Analyte: | Chromium, Hexavalent |
| Method: | 7196A |
| Units: | mg/L (ppm) |

| Sample Name | True Value | Result | Percent Recovery | Acceptance Criteria |
|-------------|---------------|--------|---------------------|------------------------|
| ICV | 0.0579 | 0.0560 | 97 | 90-110 |
| CCV1 | 0.0579 | 0.0550 | 95 | 90-110 |

Approved By: ____ CCV1A/120594

Karen Rya

QA/QC Report

| Client : Project Name : Project Number : Sample Matrix : | Battelle JPL GW Mon 3Q09 G486090 WATER | | | Date Date Date J | e Reques Collecteo Receiveo Extracteo Analyzeo | l: NA l: NA l: NA | | |
|-------------------------------------------------------------------|-------------------------------------------------|----------------|---------------------------------------|------------------------|------------------------------------------------------------|-------------------------|------------------------------------------|--------|
| | | | ory Control Sampl Inorganic Parame | e Summary | Anaryzeu | I. 077227 | V7 | |
| Sample Name : Lab Code : Test Notes : | Laboratory Control Sample P0902483-LCS | | | | Unit Basi | U | (ppm) | |
| | | Buon | Analysis | | | Percent | CAS Percent Recovery Acceptance | Result |
| Analyte | | Prep Method | Analysis Method | True Value | Result | | Limits | Notes |
| Chromium, Hexaval | ent | None | 7196A | 0.0400 | 0.0395 | 99 | 86-114 | |

| Approved By | Kau | Rua | Date : | 7/23/09 | |
|-------------|-------------------------------------------|-----|--------|---------|--|
| | <u>, , , , , , , , , , , , , , , , , </u> | 0 | | | |

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