Groundwater Monitoring Program – Data Validation Report

Total Phosphorus and Ortho Phosphorus

Total phosphorus and ortho phosphorus results for quarter 1 2008 are all rejected. Two separate sample delivery groups had several results (3 of 8 and 7 of 8) of ortho phosphorus greater than total phosphorus. The lab was notified of this problem and re ran one sample. Sample 5404A01 and 5404A01a (the sample duplicate) had 0.26 and 0.28 mg/L Ortho Phos and 0.12 and 0.1 mg/L Total Phos, respectively. Upon reanalysis (performed out of holding time for Ortho-Phos, and with a new precipitate present), The Ortho-Phos is below MDL and the Total Phos came in at 0.26 and 0.27mg/L, respectively. The lab was unable to determine the cause of this discrepancy. It was determined that the calibration curve utilized for the spectrophotometer was 2-200 ug/L instead of the appropriate curve for low level phosphorus, 2-50 ug/L.

Corrective Action: The lab agreed to do a new MDL study and utilize a calibration curve more suited to low level phosphorus analysis.

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>
Arsenic	SVL	\boxtimes
Cadmium	SVL	
Calcium	SVL	
Chloride	SVL	
Chromium	SVL	
Copper	SVL	
Fluoride	SVL	
Iron	SVL	
Lead	SVL	\boxtimes
Magnesium	SVL	
Manganese	SVL	\boxtimes
Mercury	SVL	
Ortho-phosphate-phosphorous	SVL	\boxtimes
Potassium	SVL	\boxtimes
Sodium	SVL	\boxtimes
Sulfate	SVL	\boxtimes
Total Dissolved Solids	SVL	\boxtimes
Total Nitrate + Nitrite	SVL	
Total phosphorus	SVL	
Zinc	SVL	
Carbonate Alkalinity (CO ₃ -)	SVL	
Bicarbonate Alkalinity (HCO ₃)	SVL	

Sampling Round: Quarter <u>1st</u> Year <u>2008</u>

(Project/Year found on front page of test report)

Laboratory Work Order #: W800302

Sample Delivery Group Submission Date: January 21, 2008

Complete Chain of Custody:

Signatures: Dates: Sample Dates: Sample Times: (Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: Sample Dates: Sample Times: Analyses: Korrige 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation X (Enter a check mark when "chain of custody report" sheet has preservative items listed at the top.)

Temperature at Delivery: 1.7°C

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: <u>91.3%</u> (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: All results within RPD acceptance limits.

Detail Checking (10% of laboratory data & 100% of Field Data): 10% on sample id 5508M01. Field data: Aquifer Sampling Data Sheet shows sample time for 5507H01 is 2:25 and mdb shows time is 14:00 (2:00).

Data Anomalies: All phosphorus and total phosphorus results rejected. See note at beginning of report.

Corrective Action: Contacted Reanette. She researched and corrected.

Groundwater Monitoring Program – Data Validation Report

Sampling Round: Quarter <u>1</u> Year <u>2008</u>

(Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>
Arsenic	SVL	\boxtimes
Cadmium	SVL	\boxtimes
Calcium	SVL	\boxtimes
Chloride	SVL	\boxtimes
Chromium	SVL	\boxtimes
Copper	SVL	\boxtimes
Fluoride	SVL	\boxtimes
Iron	SVL	\boxtimes
Lead	SVL	\boxtimes
Magnesium	SVL	\boxtimes
Manganese	SVL	\boxtimes
Mercury	SVL	\boxtimes
Ortho-phosphate-phosphorous	SVL	\boxtimes
Potassium	SVL	\boxtimes
Sodium	SVL	\boxtimes
Sulfate	SVL	\boxtimes
Total Dissolved Solids	SVL	\boxtimes
Total Nitrate + Nitrite	SVL	\boxtimes
Total phosphorus	SVL	\boxtimes
Zinc	SVL	\boxtimes
Carbonate Alkalinity (CO ₃ -)	SVL	
Bicarbonate Alkalinity (HCO ₃)	SVL	\boxtimes

Laboratory Work Order #: W800362

Sample Delivery Group Submission Date: February 12, 2008

Complete Chain of Custody:

Signatures: \square Dates: \square Sample Dates: \square Sample Times: \square (Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: Sample Dates: Sample Times: Analyses: Korrige 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation

(Enter a check mark when "chain of custody report" sheet has preservative items listed at the top.)

Temperature at Delivery: $-0.5^{\circ}C$

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: <u>91.3%</u> (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: Total phosphorus RPD (67%) outside acceptance limits. Associated results flagged J.

Detail Checking (10% of laboratory data & 100% of Field Data): 10% on sample id 6211K01. Field data: Good.

Data Anomalies: Missing samplers' signature on COC. All phosphorus and total phosphorus results rejected. See note at beginning of report.

Groundwater Monitoring Program – Data Validation Report

Sampling Round: Quarter <u>1</u> Year <u>2008</u>

(Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>
Arsenic	SVL	\boxtimes
Cadmium	SVL	\boxtimes
Calcium	SVL	\boxtimes
Chloride	SVL	\boxtimes
Chromium	SVL	\boxtimes
Copper	SVL	\boxtimes
Fluoride	SVL	\boxtimes
Iron	SVL	\boxtimes
Lead	SVL	\boxtimes
Magnesium	SVL	\boxtimes
Manganese	SVL	\boxtimes
Mercury	SVL	\boxtimes
Ortho-phosphate-phosphorous	SVL	\boxtimes
Potassium	SVL	\boxtimes
Sodium	SVL	\boxtimes
Sulfate	SVL	\boxtimes
Total Dissolved Solids	SVL	\boxtimes
Total Nitrate + Nitrite	SVL	\boxtimes
Total phosphorus	SVL	\boxtimes
Zinc	SVL	\boxtimes
Carbonate Alkalinity (CO ₃ -)	SVL	\boxtimes
Bicarbonate Alkalinity (HCO ₃)	SVL	

Laboratory Work Order #: W800374

Sample Delivery Group Submission Date: 1/25/2008

Complete Chain of Custody:

Signatures: \square Dates: \square Sample Dates: \square Sample Times: \square (Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: Sample Dates: Sample Times: Analyses: Korrige 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation \boxtimes

(Enter a check mark when "chain of custody report" sheet has preservative items listed at the top.)

Temperature at Delivery: -1.9°C

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: <u>91.3%</u> (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: Total phosphorus RPD (106%) outside acceptance limits. Associated results flagged J.

Detail Checking (10% of laboratory data & 100% of Field Data): 10% on sample id 5322A01. Field data: Good.

Data Anomalies: All phosphorus and total phosphorus results rejected. See note at beginning of report.

Groundwater Monitoring Program – Data Validation Report

Sampling Round: Quarter <u>1</u> Year <u>2008</u>

(Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>
Arsenic	SVL	\boxtimes
Cadmium	SVL	\boxtimes
Calcium	SVL	\boxtimes
Chloride	SVL	\boxtimes
Chromium	SVL	\boxtimes
Copper	SVL	\boxtimes
Fluoride	SVL	\boxtimes
Iron	SVL	\boxtimes
Lead	SVL	\boxtimes
Magnesium	SVL	\boxtimes
Manganese	SVL	\boxtimes
Mercury	SVL	\boxtimes
Ortho-phosphate-phosphorous	SVL	\boxtimes
Potassium	SVL	\boxtimes
Sodium	SVL	\boxtimes
Sulfate	SVL	\boxtimes
Total Dissolved Solids	SVL	\boxtimes
Total Nitrate + Nitrite	SVL	\boxtimes
Total phosphorus	SVL	\boxtimes
Zinc	SVL	\boxtimes
Carbonate Alkalinity (CO ₃ -)	SVL	
Bicarbonate Alkalinity (HCO ₃)	SVL	\boxtimes

Laboratory Work Order #: W800417

Sample Delivery Group Submission Date: 1/29/2008

Complete Chain of Custody:

Signatures: \bigotimes Dates: \bigotimes Sample Dates: \bigotimes Sample Times: \bigotimes (Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: Sample Dates: Sample Times: Analyses: Korrige 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation

(Enter a check mark when "chain of custody report" sheet has preservative items listed at the top.)

Temperature at Delivery: -0.2°C

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: <u>91.3%</u> (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: Zinc RPD outside acceptance limits. Associated results flagged J.

Detail Checking (10% of laboratory data & 100% of Field Data): 10% is on sample id 5518R01. Field Data: Sample ID 5324G01, date 1/29/2008 has a blank where the conductivity should be 400. Notified Reanette.

Data Anomalies:

Batch W805053 Nitrate-Nitrite MS outside acceptance limits. Associated results flagged J or UJ.

All phosphorus and total phosphorus results rejected. See note at beginning of report.

Corrective Action:Reanette put the approximate number. She'll leave the conductivity blank In the database.

Groundwater Monitoring Program – Data Validation Report

Sampling Round: Quarter <u>1</u> Year <u>2008</u>

(Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>
Arsenic	SVL	\boxtimes
Cadmium	SVL	\boxtimes
Calcium	SVL	\boxtimes
Chloride	SVL	\boxtimes
Chromium	SVL	\boxtimes
Copper	SVL	\boxtimes
Fluoride	SVL	\boxtimes
Iron	SVL	\boxtimes
Lead	SVL	\boxtimes
Magnesium	SVL	\boxtimes
Manganese	SVL	\boxtimes
Mercury	SVL	\boxtimes
Ortho-phosphate-phosphorous	SVL	\boxtimes
Potassium	SVL	\boxtimes
Sodium	SVL	\boxtimes
Sulfate	SVL	\boxtimes
Total Dissolved Solids	SVL	\boxtimes
Total Nitrate + Nitrite	SVL	\boxtimes
Total phosphorus	SVL	\boxtimes
Zinc	SVL	\boxtimes
Carbonate Alkalinity (CO ₃ -)	SVL	
Bicarbonate Alkalinity (HCO ₃)	SVL	\boxtimes

Laboratory Work Order #: W800619

Sample Delivery Group Submission Date: 2/12/2008

Complete Chain of Custody:

Signatures: \bigotimes Dates: \bigotimes Sample Dates: \bigotimes Sample Times: \bigotimes (Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: Sample Dates: Sample Times: Analyses: (Verify 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation \boxtimes

(Enter a check mark when "chain of custody report" sheet has preservative items listed at the top.)

Temperature at Delivery: 0.9°C

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: <u>91.3%</u> (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: All results within acceptance limits

Detail Checking (10% of laboratory data & 100% of Field Data): 10 % used is sample id 6330J01. Field data: Good.

Data Anomalies: Batch 807207 total phosphorus lab duplicate RPD above acceptance limits. Associated results flagged J and UJ. All phosphorus and total phosphorus results rejected. See note at beginning of report.

Groundwater Monitoring Program – Data Validation Report

Sampling Round: Quarter <u>1</u> Year <u>2008</u>

(Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>
Arsenic	SVL	\boxtimes
Cadmium	SVL	\boxtimes
Calcium	SVL	\boxtimes
Chloride	SVL	\boxtimes
Chromium	SVL	\boxtimes
Copper	SVL	\boxtimes
Fluoride	SVL	\boxtimes
Iron	SVL	\boxtimes
Lead	SVL	\boxtimes
Magnesium	SVL	\boxtimes
Manganese	SVL	\boxtimes
Mercury	SVL	\boxtimes
Ortho-phosphate-phosphorous	SVL	\boxtimes
Potassium	SVL	\boxtimes
Sodium	SVL	\boxtimes
Sulfate	SVL	\boxtimes
Total Dissolved Solids	SVL	\boxtimes
Total Nitrate + Nitrite	SVL	\boxtimes
Total phosphorus	SVL	\boxtimes
Zinc	SVL	\boxtimes
Carbonate Alkalinity (CO ₃ -)	SVL	\boxtimes
Bicarbonate Alkalinity (HCO ₃)	SVL	

Laboratory Work Order #: W800669

Sample Delivery Group Submission Date:

Complete Chain of Custody:

Signatures: \square Dates: \square Sample Dates: \square Sample Times: \square (Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: Sample Dates: Sample Times: Analyses: Korrige 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation

(Enter a check mark when "chain of custody report" sheet has preservative items listed at the top.)

Temperature at Delivery: 3.1°C

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: <u>91.3%</u> (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: All results within acceptance limits.

Detail Checking (10% of laboratory data & 100% of Field Data): 10% sample id is 5404A01. Field data: Good.

Data Anomalies: Batch 807207 total phosphorus lab duplicate RPD above acceptance limits. Associated results flagged J and UJ.

All phosphorus and total phosphorus results rejected. See note at beginning of report.

Sampling Round: 1 / 2008 Laboratory Work Order: W800302 (5507A04)

	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Mercury	ND	ND	0.00	0.0002	А	no qualifier
Calcium	43.6	44.1	1.14	0.04	D	no qualifier
Iron	ND	ND	0.00	0.06	А	no qualifier
Magnesium	18	18.5	2.74	0.06	D	no qualifier
Potassium	2.1	2.15	2.35	0.5	С	no qualifier
Sodium	3	3.06	1.98	0.5	D	no qualifier
Arsenic	0.00198	0.00203	2.49	0.00165	С	no qualifier
Cadmium	ND	ND	0.00	0.0002	А	no qualifier
Chromium	ND	ND	0.00	0.0025	А	no qualifier
Copper	ND	ND	0.00	0.001	А	no qualifier
Lead	ND	ND	0.00	0.001	А	no qualifier
Manganese	ND	ND	0.00	0.001	А	no qualifier
Zinc	ND	ND	0.00	0.005	А	no qualifier
Nitrate/Nitrite as N	1.27	1.25	1.59	0.02	D	no qualifier
Total Alkalinity	170	169	0.59	1	D	no qualifier
Bicarbonate	170	169	0.59	1	D	no qualifier
Carbonate	ND	ND	0.00	1	А	no qualifier
Total Dissolved Solids	220	220	0.00	10	D	no qualifier
Phosphorus	0.09	0.09	0.00	0.002	D	no qualifier
Orthophosphate as P	0.003	0.003	0.00	0.002	С	no qualifier
Fluoride	0.101	0.101	0.00	0.1	С	no qualifier
Chloride	1.81	1.82	0.55	0.2	D	no qualifier
Sulfate as SO4	15.8	15.7	0.63	0.3	D	no qualifier

	Acceptance Criteria	<u>Qualifier</u>
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J

Sampling Round: 1 / 2008 Laboratory Work Order: W800362 (6211K01)

	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Mercury	ND	ND	0.00	0.0002	А	no qualifier
Calcium	32.8	33	0.61	0.04	D	no qualifier
Iron	ND	ND	0.00	0.06	А	no qualifier
Magnesium	17.2	17.2	0.00	0.06	D	no qualifier
Potassium	2.18	2.19	0.46	0.5	С	no qualifier
Sodium	3.96	3.99	0.75	0.5	D	no qualifier
Arsenic	0.00379	0.00408	7.37	0.00165	С	no qualifier
Cadmium	ND	ND	0.00	0.0002	А	no qualifier
Chromium	ND	ND	0.00	0.0025	А	no qualifier
Copper	ND	ND	0.00	0.001	А	no qualifier
Lead	ND	ND	0.00	0.001	А	no qualifier
Manganese	ND	ND	0.00	0.001	А	no qualifier
Zinc	0.00643	0.00631	0.00	0.005	С	no qualifier
Nitrate/Nitrite as N	1.59	1.46	8.52	0.02	D	no qualifier
Total Alkalinity	134	136	1.48	1	D	no qualifier
Bicarbonate	134	136	1.48	1	D	no qualifier
Carbonate	ND	ND	0.00	1	А	no qualifier
Total Dissolved Solids	120	120	0.00	10	D	no qualifier
Phosphorus	0.01	0.02	66.67	0.002	D	qualifier
Orthophosphate as P	0.006	0.006	0.00	0.002	С	no qualifier
Fluoride	ND	ND	0.00	0.1	А	no qualifier
Chloride	5.32	5.35	0.56	0.2	D	no qualifier
Sulfate as SO4	14.5	14.6	0.69	0.3	D	no qualifier

	Acceptance Criteria	Qualifier
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J

Sampling Round: 1 / 2008 Laboratory Work Order: W800374 (5323E01)

	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Mercury	ND	ND	0.00	0.0002	А	no qualifier
Calcium	42.3	44.8	5.74	0.04	D	no qualifier
Iron	ND	ND	0.00	0.06	А	no qualifier
Magnesium	14.6	15.2	4.03	0.06	D	no qualifier
Potassium	2.44	2.6	6.35	0.5	Е	no qualifier
Sodium	7.38	7.29	1.23	0.5	D	no qualifier
Arsenic	0.00359	0.00321	11.18	0.00165	С	no qualifier
Cadmium	ND	ND	0.00	0.0002	А	no qualifier
Chromium	ND	ND	0.00	0.0025	А	no qualifier
Copper	ND	ND	0.00	0.001	А	no qualifier
Lead	ND	ND	0.00	0.001	А	no qualifier
Manganese	ND	ND	0.00	0.001	А	no qualifier
Zinc	ND	ND	0.00	0.005	А	no qualifier
Nitrate/Nitrite as N	2.36	2.45	3.74	0.02	D	no qualifier
Total Alkalinity	157	157	0.00	1	D	no qualifier
Bicarbonate	157	157	0.00	1	D	no qualifier
Carbonate	ND	ND	0.00	1	А	no qualifier
Total Dissolved Solids	230	220	4.44	10	D	no qualifier
Phosphorus	0.13	0.04	105.88	0.002	D	qualifier
Orthophosphate as P	0.01	0.011	9.52	0.002	D	no qualifier
Fluoride	ND	ND	0.00	0.1	А	no qualifier
Chloride	9.52	9.43	0.95	0.2	D	no qualifier
Sulfate as SO4	12.8	12.8	0.00	0.3	D	no qualifier

	Acceptance Criteria	Qualifier
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J

Sampling Round: 1 / 2008 Laboratory Work Order: W800417 (5427L01)

	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Mercury	ND	ND	0.00	0.0002	А	no qualifier
Calcium	45.3	46.2	1.97	0.04	D	no qualifier
Iron	ND	ND	0.00	0.06	А	no qualifier
Magnesium	16.3	16.5	1.22	0.06	D	no qualifier
Potassium	2.38	2.44	2.49	0.5	С	no qualifier
Sodium	6.44	6.5	0.93	0.5	D	no qualifier
Arsenic	0.00457	0.00439	4.02	0.00165	С	no qualifier
Cadmium	ND	ND	0.00	0.0002	А	no qualifier
Chromium	ND	ND	0.00	0.0025	А	no qualifier
Copper	0.00391	0.00369	5.79	0.001	С	no qualifier
Lead	ND	ND	0.00	0.001	А	no qualifier
Manganese	ND	ND	0.00	0.001	Α	no qualifier
Zinc	0.00549	0.0136	84.97	0.005	С	qualifier
Nitrate/Nitrite as N	2.86	2.79	2.48	0.02	D	no qualifier
Total Alkalinity	178	176	1.13	1	D	no qualifier
Bicarbonate	178	176	1.13	1	D	no qualifier
Carbonate	ND	ND	0.00	1	А	no qualifier
Total Dissolved Solids	210	200	4.88	10	D	no qualifier
Phosphorus	0.06	0.08	28.57	0.002	D	no qualifier
Orthophosphate as P	0.007	0.007	0.00	0.002	С	no qualifier
Fluoride	ND	ND	0.00	0.1	А	no qualifier
Chloride	5.6	5.6	0.00	0.2	D	no qualifier
Sulfate as SO4	12.8	12.7	0.78	0.3	D	no qualifier

	Acceptance Criteria	Qualifier
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J

Sampling Round: 1 / 2008 Laboratory Work Order: W800619 (6327N04A)

	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Mercury	ND	ND	0.00	0.0002	А	no qualifier
Calcium	34.3	33.5	2.36	0.04	D	no qualifier
Iron	ND	ND	0.00	0.06	А	no qualifier
Magnesium	20.2	20.2	0.00	0.06	D	no qualifier
Potassium	3.14	3.15	0.32	0.5	D	no qualifier
Sodium	9.51	9.83	3.31	0.5	D	no qualifier
Arsenic	0.00253	0.00196	25.39	0.00165	С	no qualifier
Cadmium	ND	ND	0.00	0.0002	А	no qualifier
Chromium	0.00479	0.00265	57.53	0.0025	С	no qualifier
Copper	ND	ND	0.00	0.001	Α	no qualifier
Lead	ND	ND	0.00	0.001	Α	no qualifier
Manganese	ND	ND	0.00	0.001	Α	no qualifier
Zinc	ND	ND	0.00	0.005	Α	no qualifier
Nitrate/Nitrite as N	2.82	3.06	8.16	0.02	D	no qualifier
Total Alkalinity	144	151	4.75	1	D	no qualifier
Bicarbonate	144	151	4.75	1	D	no qualifier
Carbonate	ND	ND	0.00	1	А	no qualifier
Total Dissolved Solids	170	170	0.00	10	D	no qualifier
Phosphorus	0.003	0.003	0.00	0.002	С	no qualifier
Orthophosphate as P	0.002	0.002	0.00	0.002	С	no qualifier
Fluoride	ND	ND	0.00	0.1	А	no qualifier
Chloride	9.66	10.6	9.28	0.2	D	no qualifier
Sulfate as SO4	17.3	18.1	4.52	0.3	D	no qualifier

	Acceptance Criteria	<u>Qualifier</u>
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J

Sampling Round: 1 / 2008 Laboratory Work Order: W800669 (5404A01)

	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Mercury	ND	ND	0.00	0.0002	А	no qualifier
Calcium	28.3	28.1	0.71	0.04	D	no qualifier
Iron	5.75	5.74	0.17	0.06	D	no qualifier
Magnesium	13.4	13.4	0.00	0.06	D	no qualifier
Potassium	5.34	5.36	0.37	0.5	D	no qualifier
Sodium	11.1	11.2	0.90	0.5	D	no qualifier
Arsenic	ND	ND	0.00	0.00165	А	no qualifier
Cadmium	ND	ND	0.00	0.0002	А	no qualifier
Chromium	ND	ND	0.00	0.0025	А	no qualifier
Copper	ND	ND	0.00	0.001	А	no qualifier
Lead	ND	ND	0.00	0.001	А	no qualifier
Manganese	0.37	0.364	1.63	0.001	D	no qualifier
Zinc	ND	ND	0.00	0.005	А	no qualifier
Nitrate/Nitrite as N	ND	ND	0.00	0.02	А	no qualifier
Total Alkalinity	136	136	0.00	1	D	no qualifier
Bicarbonate	136	136	0.00	1	D	no qualifier
Carbonate	ND	ND	0.00	1	А	no qualifier
Total Dissolved Solids	230	240	4.26	10	D	no qualifier
Phosphorus	0.12	0.1	18.18	0.002	D	no qualifier
Orthophosphate as P	0.26	0.28	7.41	0.002	D	no qualifier
Fluoride	0.294	0.291	1.03	0.1	C	no qualifier
Chloride	1.82	1.67	8.60	0.2	D	no qualifier
Sulfate as SO4	19.9	19.9	0.00	0.3	D	no qualifier

	Acceptance Criteria	Qualifier
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J

Groundwater Monitoring Program – Data Validation Report

Sampling Round: <u>Quarter 2nd</u> Year <u>2008</u>

(Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>
Arsenic	SVL	\boxtimes
Cadmium	SVL	\boxtimes
Calcium	SVL	
Chloride	SVL	\boxtimes
Chromium	SVL	\boxtimes
Copper	SVL	\boxtimes
Fluoride	SVL	\boxtimes
Iron	SVL	\boxtimes
Lead	SVL	\boxtimes
Magnesium	SVL	\boxtimes
Manganese	SVL	\boxtimes
Mercury	SVL	\boxtimes
Ortho-phosphate-phosphorous	SVL	\boxtimes
Ortho-phosphate-phosphorous	Aquatic Research	\boxtimes
Potassium	SVL	\boxtimes
Sodium	SVL	\boxtimes
Sulfate	SVL	\boxtimes
Total Dissolved Solids	SVL	\boxtimes
Total Nitrate + Nitrite	SVL	\boxtimes
Total phosphorus	SVL	\boxtimes
Total phosphorus	Aquatic Research	
Zinc	SVL	
Carbonate Alkalinity (CO ₃ -)	SVL	\boxtimes
Bicarbonate Alkalinity (HCO ₃)	SVL	

Laboratory Work Order #: W801985 (SVL), SCW001-02 (Aquatic Research)

Sample Delivery Group Submission Date: No receipt signature on COC

Complete Chain of Custody:

Signatures: Dates: Sample Dates: Sample Times: Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: Sample Dates: Sample Times: Analyses: Korify 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation \boxtimes

(Enter a check mark when "chain of custody report" sheet has preservative items listed at the top.)

Temperature at Delivery: <u>3.6°C</u>

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: <u>100%</u> (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: <u>All results within acceptance limits</u>

Detail Checking (10% of laboratory data & 100% of Field Data): <u>10%: Used sample id</u> <u>5213B01. Field data is good.</u>

Data Anomalies: <u>SVL</u> Arsenic and Zinc laboratory duplicate RPD outside of acceptance limits. Associated Results flagged J and UJ. Orthophosphate MS recovery below acceptance limits. Associated results flagged J and UJ. <u>Aquatic Research</u> Sample 5322FD1A should be 5322F01A

Groundwater Monitoring Program – Data Validation Report

Sampling Round: <u>Quarter 2nd</u> Year <u>2008</u>

(Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>
Arsenic	SVL	\boxtimes
Cadmium	SVL	\boxtimes
Calcium	SVL	\boxtimes
Chloride	SVL	\boxtimes
Chromium	SVL	\boxtimes
Copper	SVL	\boxtimes
Fluoride	SVL	\boxtimes
Iron	SVL	\boxtimes
Lead	SVL	\boxtimes
Magnesium	SVL	
Manganese	SVL	\boxtimes
Mercury	SVL	\boxtimes
Ortho-phosphate-phosphorous	SVL	\boxtimes
Ortho-phosphate-phosphorous	Aquatic Research	\boxtimes
Potassium	SVL	\boxtimes
Sodium	SVL	\boxtimes
Sulfate	SVL	\boxtimes
Total Dissolved Solids	SVL	\boxtimes
Total Nitrate + Nitrite	SVL	\boxtimes
Total phosphorus	SVL	\boxtimes
Total phosphorus	Aquatic Research	\boxtimes
Zinc	SVL	
Carbonate Alkalinity (CO ₃ -)	SVL	
Bicarbonate Alkalinity (HCO ₃)	SVL	

Laboratory Work Order #: W802282 (SVL), SCW001-03 (Aquatic Research)

Sample Delivery Group Submission Date: 5/23/2008

Complete Chain of Custody:

Signatures: \square Dates: \square Sample Dates: \square Sample Times: \square (Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: Sample Dates: Sample Times: Analyses: Korrige 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation \boxtimes

(Enter a check mark when "chain of custody report" sheet has preservative items listed at the top.)

Temperature at Delivery: <u>Blank</u>

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: <u>100%</u> (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: Orthophosphate (SVL) field duplicate RPD outside of control limits. Associated results flagged J.

Detail Checking (10% of laboratory data & 100% of Field Data): <u>10%: Used sample id</u> <u>6631M04.</u> Field data good.

Data Anomalies:

SVL

Fluoride MS & MSD % recovery above acceptance limits. Associated results flagged J and UJ.COC missing temperature, collector's initials, and sampler's signature.

Groundwater Monitoring Program – Data Validation Report

Sampling Round: <u>Quarter 2nd</u> Year <u>2008</u>

(Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>
Arsenic	SVL	\boxtimes
Cadmium	SVL	\boxtimes
Calcium	SVL	\boxtimes
Chloride	SVL	\boxtimes
Chromium	SVL	\boxtimes
Copper	SVL	\boxtimes
Fluoride	SVL	\boxtimes
Iron	SVL	\boxtimes
Lead	SVL	\boxtimes
Magnesium	SVL	\boxtimes
Manganese	SVL	\boxtimes
Mercury	SVL	\boxtimes
Ortho-phosphate-phosphorous	SVL	\boxtimes
Ortho-phosphate-phosphorous	Aquatic Research	\boxtimes
Potassium	SVL	\boxtimes
Sodium	SVL	\boxtimes
Sulfate	SVL	\boxtimes
Total Dissolved Solids	SVL	\boxtimes
Total Nitrate + Nitrite	SVL	\boxtimes
Total phosphorus	SVL	\boxtimes
Total phosphorus	Aquatic Research	
Zinc	SVL	
Carbonate Alkalinity (CO ₃ -)	SVL	\boxtimes
Bicarbonate Alkalinity (HCO ₃)	SVL	

Laboratory Work Order #: W802343 (SVL), SCW001-04 (Aquatic Research)

Sample Delivery Group Submission Date: <u>5/14/2008</u> *Complete Chain of Custody:*

Signatures: Dates: Sample Dates: Sample Times: (Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: Sample Dates: Sample Times: Analyses: Korrige 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation \boxtimes

(Enter a check mark when "chain of custody report" sheet has preservative items listed at the top.)

Temperature at Delivery: 5.6°C

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: <u>100%</u> (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: <u>All results within acceptance limits</u>

Detail Checking (10% of laboratory data & 100% of Field Data): 10%: Used sample id 5409C02. 1. Field data: The COC first sample name is 5409C01. The 'Aquifer Sampling Data Sheet' has 5409C02. The SVL 'analytical report for samples' shows the name is 5409C02. The Aquatic Research 'case narrative sample data' has 5409C02. 2. The SVL COC is missing collector's initials and sampler's signature. 3. Missing sample times on lab report.

Data Anomalies: <u>SVL</u> No anomalies. <u>Aquatic Research</u> No anomalies.

Groundwater Monitoring Program – Data Validation Report

Sampling Round: Quarter 2nd Year 2008 (Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>
Arsenic	SVL	\boxtimes
Cadmium	SVL	\boxtimes
Calcium	SVL	
Chloride	SVL	\boxtimes
Chromium	SVL	\boxtimes
Copper	SVL	\boxtimes
Fluoride	SVL	\boxtimes
Iron	SVL	\boxtimes
Lead	SVL	\boxtimes
Magnesium	SVL	\boxtimes
Manganese	SVL	\boxtimes
Mercury	SVL	\boxtimes
Ortho-phosphate-phosphorous	SVL	\boxtimes
Ortho-phosphate-phosphorous	Aquatic Research	\boxtimes
Potassium	SVL	\boxtimes
Sodium	SVL	\boxtimes
Sulfate	SVL	\boxtimes
Total Dissolved Solids	SVL	\boxtimes
Total Nitrate + Nitrite	SVL	\boxtimes
Total phosphorus	SVL	\boxtimes
Total phosphorus	Aquatic Research	
Zinc	SVL	
Carbonate Alkalinity (CO ₃ -)	SVL	
Bicarbonate Alkalinity (HCO ₃)	SVL	

Laboratory Work Order #: W802383 (SVL), SCW001-05 (Aquatic Research)

Sample Delivery Group Submission Date: <u>5/15/2008</u>

Complete Chain of Custody:

Signatures: \square Dates: \square Sample Dates: \square Sample Times: \square (Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: \boxtimes Sample Dates: \boxtimes Sample Times: \square Analyses: \boxtimes (Verify 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation \boxtimes

(Enter a check mark when "chain of custody report" sheet has preservative items listed at the top.)

Temperature at Delivery: <u>9.2°C</u>

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: <u>100%</u> (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: All results within acceptance limits

Detail Checking (10% of laboratory data & 100% of Field Data): 10% sample id 5311J07. Field data good.

Data Anomalies:

SVL

Lab reports samples received above control temperature. No corrective action taken because the samples were received below the temperature samples were collected at, and no samples were analyzed for volatile or semi volatile compounds. The COC is missing the sample's time, collector's initials, and sampler's signature.

MSD recovery 7% greater than acceptance limits. MS recovery was within control limits so no action was taken.

Aquatic Research No data anomalies

Groundwater Monitoring Program – Data Validation Report

Sampling Round: Quarter <u>2nd</u> Year <u>2008</u> (Project/Year found on front page of test report)

(Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>
Arsenic	SVL	\boxtimes
Cadmium	SVL	\boxtimes
Calcium	SVL	
Chloride	SVL	\boxtimes
Chromium	SVL	\boxtimes
Copper	SVL	\boxtimes
Fluoride	SVL	\boxtimes
Iron	SVL	\boxtimes
Lead	SVL	\boxtimes
Magnesium	SVL	\boxtimes
Manganese	SVL	\boxtimes
Mercury	SVL	
Ortho-phosphate-phosphorous	SVL	\boxtimes
Ortho-phosphate-phosphorous	Aquatic Research	\boxtimes
Potassium	SVL	\boxtimes
Sodium	SVL	\boxtimes
Sulfate	SVL	\boxtimes
Total Dissolved Solids	SVL	\boxtimes
Total Nitrate + Nitrite	SVL	\boxtimes
Total phosphorus	SVL	\boxtimes
Total phosphorus	Aquatic Research	\boxtimes
Zinc	SVL	
Carbonate Alkalinity (CO ₃ -)	SVL	\boxtimes
Bicarbonate Alkalinity (HCO ₃)	SVL	

Laboratory Work Order #: W802430 (SVL), SCW001-06 (Aquatic Research)

Sample Delivery Group Submission Date: 5/16/2008

Complete Chain of Custody:

Signatures: Dates: Sample Dates: Sample Times: Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: Sample Dates: Sample Times: Analyses: Korify 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation \boxtimes

(Enter a check mark when "chain of custody report" sheet has preservative items listed at the top.)

Temperature at Delivery: <u>4.2°C</u>

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: 100<u>%</u> (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: All results within acceptance limits

Detail Checking (10% of laboratory data & 100% of Field Data): For 10% used sample ID 6331J01. Field data good.

Data Anomalies: <u>SVL</u> No anomalies. <u>COC - Missing collector's initials and sampler's signatures. Missing</u> <u>sample times on lab report. Mercury analyzed outside of the hold time of 13 days.</u>

Aquatic Research No anomalies

Groundwater Monitoring Program – Data Validation Report

Sampling Round: Quarter <u>2nd</u> Year <u>2008</u> (Project/Year found on front page of test report)

(Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>
Arsenic	SVL	\boxtimes
Cadmium	SVL	\boxtimes
Calcium	SVL	\boxtimes
Chloride	SVL	\boxtimes
Chromium	SVL	\boxtimes
Copper	SVL	\boxtimes
Fluoride	SVL	\boxtimes
Iron	SVL	\boxtimes
Lead	SVL	\boxtimes
Magnesium	SVL	\boxtimes
Manganese	SVL	\boxtimes
Mercury	SVL	\boxtimes
Ortho-phosphate-phosphorous	SVL	\boxtimes
Ortho-phosphate-phosphorous	Aquatic Research	\boxtimes
Potassium	SVL	\boxtimes
Sodium	SVL	\boxtimes
Sulfate	SVL	\boxtimes
Total Dissolved Solids	SVL	\boxtimes
Total Nitrate + Nitrite	SVL	\boxtimes
Total phosphorus	SVL	\boxtimes
Total phosphorus	Aquatic Research	
Zinc	SVL	
Carbonate Alkalinity (CO ₃ -)	SVL	
Bicarbonate Alkalinity (HCO ₃)	SVL	

Laboratory Work Order #: W802541 (SVL), SCW001-07 (Aquatic Research)

Sample Delivery Group Submission Date: 5/21/2008

Complete Chain of Custody:

Signatures: Dates: Sample Dates: Sample Times: Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: Sample Dates: Sample Times: Analyses: Analyses:

Sample Preservation \boxtimes

(Enter a check mark when "chain of custody report" sheet has preservative items listed at the top.)

Temperature at Delivery: 2.0°C

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: <u>100%</u> (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: Field duplicate results for orthophosphate (Aquatic Research) outside acceptance limits. Associated results flagged J and UJ

Detail Checking (10% of laboratory data & 100% of Field Data): For 10% used sample ID 5212F01S. Field data good. Data Anomalies: <u>SVL</u> MS recovery below acceptance limits. Associated results flagged J and UJ. <u>COC -</u> <u>Missing collector's initials and sampler's signatures. Missing sample times on lab report.</u> <u>Carbonate and Bicarbonate analyzed outside of the hold time of 14 days.</u>

<u>Aquatic Research</u> No data anomalies

Sampling Round: 2 / 2008 Laboratory Work Order: W801985 (SVL) & SCW001-002 (AR)

	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Mercury	ND	ND	0.00	0.0002	Α	no qualifier
Calcium	45.3	46.1	1.75	0.04	D	no qualifier
Iron	ND	ND	0.00	0.06	А	no qualifier
Magnesium	14.8	15.1	2.01	0.06	D	no qualifier
Potassium	2.6	2.64	1.53	0.5	D	no qualifier
Sodium	8.76	8.87	1.25	0.5	D	no qualifier
Arsenic	0.00523	0.00394	28.14	0.00165	С	no qualifier
Cadmium	ND	ND	0.00	0.0002	А	no qualifier
Chromium	ND	ND	0.00	0.0025	А	no qualifier
Copper	0.00125	0.00109	13.68	0.001	С	no qualifier
Lead	ND	ND	0.00	0.001	А	no qualifier
Manganese	ND	ND	0.00	0.001	А	no qualifier
Zinc	0.012	0.0109	9.61	0.005	С	no qualifier
Nitrate/Nitrite as N	3.86	3.96	2.56	0.02	D	no qualifier
Total Alkalinity	186	187	0.54	1	D	no qualifier
Bicarbonate	186	187	0.54	1	D	no qualifier
Carbonate	ND	ND	0.00	1	А	no qualifier
Total Dissolved Solids	260	250	3.92	10	D	no qualifier
Phosphorus	0.023	0.025	8.33	0.006	С	no qualifier
Orthophosphate as P	0.022	0.024	8.70	0.002	D	no qualifier
Phosphorus (AR)	0.023	0.023	0.00	0.002	D	no qualifier
Orthophosphate as P (AR)	0.021	0.022	4.65	0.001	D	no qualifier
Fluoride	ND	ND	0.00	0.1	А	no qualifier
Chloride	15.1	14.8	2.01	0.2	D	no qualifier
Sulfate as SO4	18.2	18.2	0.00	0.3	D	no qualifier

	Acceptance Criteria	<u>Qualifier</u>
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J

Sampling Round: 2 / 2008 Laboratory Work Order: W802282 (SVL) & SCW001-003 (AR)

	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Mercury	ND	ND	0.00	0.0002	А	no qualifier
Calcium	32.1	32.3	0.62	0.04	D	no qualifier
Iron	ND	ND	0.00	0.06	А	no qualifier
Magnesium	13.2	13.5	2.25	0.06	D	no qualifier
Potassium	1.88	1.91	1.58	0.5	С	no qualifier
Sodium	3.09	3.13	1.29	0.5	D	no qualifier
Arsenic	0.0052	0.0044	16.67	0.00165	С	no qualifier
Cadmium	ND	ND	0.00	0.0002	А	no qualifier
Chromium	ND	ND	0.00	0.0025	А	no qualifier
Copper	ND	ND	0.00	0.001	А	no qualifier
Lead	ND	ND	0.00	0.001	А	no qualifier
Manganese	ND	ND	0.00	0.001	А	no qualifier
Zinc	ND	ND	0.00	0.005	А	no qualifier
Nitrate/Nitrite as N	2.41	2.41	0.00	0.02	D	no qualifier
Total Alkalinity	141	142	0.71	1	D	no qualifier
Bicarbonate	141	142	0.71	1	D	no qualifier
Carbonate	ND	ND	0.00	1	А	no qualifier
Total Dissolved Solids	180	180	0.00	10	D	no qualifier
Phosphorus	0.006	ND	0.00	0.006	В	no qualifier
Orthophosphate as P	0.005	0.008	46.15	0.002	С	qualifier
Phosphorus (AR)	0.003	0.004	28.57	0.002	С	no qualifier
Orthophosphate as P (AR)	0.003	0.003	0.00	0.001	С	no qualifier
Fluoride	ND	ND	0.00	0.1	А	no qualifier
Chloride	2.24	2.24	0.00	0.2	D	no qualifier
Sulfate as SO4	13.4	13.6	1.48	0.3	D	no qualifier

	Acceptance Criteria	Qualifier
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J

Sampling Round: 2 / 2008 Laboratory Work Order: W802343 (SVL) & SCW001-004 (AR)

	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Mercury	ND	ND	0.00	0.0002	Α	no qualifier
Calcium	25.9	25.9	0.00	0.04	D	no qualifier
Iron	ND	ND	0.00	0.06	А	no qualifier
Magnesium	7.78	7.79	0.13	0.06	D	no qualifier
Potassium	1.53	1.53	0.00	0.5	С	no qualifier
Sodium	2.98	3.04	1.99	0.5	D	no qualifier
Arsenic	0.00237	0.00295	21.80	0.00165	С	no qualifier
Cadmium	ND	ND	0.00	0.0002	А	no qualifier
Chromium	ND	ND	0.00	0.0025	А	no qualifier
Copper	ND	ND	0.00	0.001	А	no qualifier
Lead	ND	ND	0.00	0.001	А	no qualifier
Manganese	ND	ND	0.00	0.001	А	no qualifier
Zinc	ND	ND	0.00	0.005	А	no qualifier
Nitrate/Nitrite as N	1.1	1.13	2.69	0.02	D	no qualifier
Total Alkalinity	93.7	95.3	1.69	1	D	no qualifier
Bicarbonate	93.7	95.3	1.69	1	D	no qualifier
Carbonate	ND	ND	0.00	1	А	no qualifier
Total Dissolved Solids	120	110	8.70	10	D	no qualifier
Phosphorus	0.014	0.011	24.00	0.006	С	no qualifier
Orthophosphate as P	0.007	0.008	13.33	0.002	С	no qualifier
Phosphorus (AR)	0.007	0.007	0.00	0.002	С	no qualifier
Orthophosphate as P (AR)	0.005	0.005	0.00	0.001	D	no qualifier
Fluoride	ND	ND	0.00	0.1	А	no qualifier
Chloride	3.89	3.93	1.02	0.2	D	no qualifier
Sulfate as SO4	10.2	10.2	0.00	0.3	D	no qualifier

	Acceptance Criteria	Qualifier
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J

Sampling Round: 2 / 2008 Laboratory Work Order: W802383 (SVL) & SCW001-005 (AR)

	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Mercury	ND	ND	0.00	0.0002	А	no qualifier
Calcium	36.1	35.9	0.56	0.04	D	no qualifier
Iron	ND	ND	0.00	0.06	А	no qualifier
Magnesium	12.4	12.4	0.00	0.06	D	no qualifier
Potassium	2.27	2.27	0.00	0.5	С	no qualifier
Sodium	5.39	5.36	0.56	0.5	D	no qualifier
Arsenic	0.00237	0.00177	28.99	0.00165	С	no qualifier
Cadmium	ND	ND	0.00	0.0002	А	no qualifier
Chromium	ND	ND	0.00	0.0025	А	no qualifier
Copper	ND	ND	0.00	0.001	А	no qualifier
Lead	ND	ND	0.00	0.001	А	no qualifier
Manganese	ND	ND	0.00	0.001	А	no qualifier
Zinc	ND	ND	0.00	0.005	А	no qualifier
Nitrate/Nitrite as N	1.65	1.6	3.08	0.02	D	no qualifier
Total Alkalinity	120	119	0.84	1	D	no qualifier
Bicarbonate	120	119	0.84	1	D	no qualifier
Carbonate	ND	ND	0.00	1	А	no qualifier
Total Dissolved Solids	170	160	6.06	10	D	no qualifier
Phosphorus	0.01	0.011	9.52	0.006	С	no qualifier
Orthophosphate as P	0.006	0.006	0.00	0.002	С	no qualifier
Phosphorus (AR)	0.007	0.007	0.00	0.002	С	no qualifier
Orthophosphate as P (AR)	0.007	0.007	0.00	0.001	D	no qualifier
Fluoride	ND	ND	0.00	0.1	А	no qualifier
Chloride	7.74	7.76	0.26	0.2	D	no qualifier
Sulfate as SO4	13	12.9	0.77	0.3	D	no qualifier

	Acceptance Criteria	Qualifier
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J

Sampling Round: 2 / 2008 Laboratory Work Order: W802430 (SVL) & SCW001-006 (AR)

	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Mercury	ND	ND	0.00	0.0002	А	no qualifier
Calcium	34.5	34.1	1.17	0.04	D	no qualifier
Iron	ND	ND	0.00	0.06	А	no qualifier
Magnesium	22.3	21.9	1.81	0.06	D	no qualifier
Potassium	3.53	3.42	3.17	0.5	D	no qualifier
Sodium	9.05	8.91	1.56	0.5	D	no qualifier
Arsenic	ND	0.00247	0.00	0.00165	В	no qualifier
Cadmium	ND	ND	0.00	0.0002	А	no qualifier
Chromium	ND	ND	0.00	0.0025	А	no qualifier
Copper	ND	ND	0.00	0.001	А	no qualifier
Lead	ND	ND	0.00	0.001	А	no qualifier
Manganese	ND	ND	0.00	0.001	А	no qualifier
Zinc	ND	ND	0.00	0.005	А	no qualifier
Nitrate/Nitrite as N	1.93	1.89	2.09	0.02	D	no qualifier
Total Alkalinity	150	150	0.00	1	D	no qualifier
Bicarbonate	150	150	0.00	1	D	no qualifier
Carbonate	ND	ND	0.00	1	А	no qualifier
Total Dissolved Solids	180	180	0.00	10	D	no qualifier
Phosphorus	ND	ND	0.00	0.006	А	no qualifier
Orthophosphate as P	ND	ND	0.00	0.002	А	no qualifier
Phosphorus (AR)	0.002	0.002	0.00	0.002	С	no qualifier
Orthophosphate as P (AR)	0.003	0.002	40.00	0.001	С	no qualifier
Fluoride	0.122	0.114	6.78	0.1	С	no qualifier
Chloride	6.66	6.76	1.49	0.2	D	no qualifier
Sulfate as SO4	20.6	20.7	0.48	0.3	D	no qualifier

	Acceptance Criteria	Qualifier
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J
Sampling Round: 2 / 2008 Laboratory Work Order: W802541 (SVL) & SCW001-007 (AR)

	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Mercury	ND	ND	0.00	0.0002	А	no qualifier
Calcium	30.8	31	0.65	0.04	D	no qualifier
Iron	ND	ND	0.00	0.06	А	no qualifier
Magnesium	16.8	17	1.18	0.06	D	no qualifier
Potassium	2.26	2.28	0.88	0.5	С	no qualifier
Sodium	4.1	4.13	0.73	0.5	D	no qualifier
Arsenic	0.00432	0.00343	22.97	0.00165	С	no qualifier
Cadmium	ND	ND	0.00	0.0002	А	no qualifier
Chromium	ND	ND	0.00	0.0025	А	no qualifier
Copper	ND	ND	0.00	0.001	А	no qualifier
Lead	ND	ND	0.00	0.001	А	no qualifier
Manganese	ND	ND	0.00	0.001	А	no qualifier
Zinc	0.00992	0.00672	38.46	0.005	С	no qualifier
Nitrate/Nitrite as N	1.58	1.54	2.56	0.02	D	no qualifier
Total Alkalinity	141	137	2.88	1	D	no qualifier
Bicarbonate	141	137	2.88	1	D	no qualifier
Carbonate	ND	ND	0.00	1	А	no qualifier
Total Dissolved Solids	140	140	0.00	10	D	no qualifier
Phosphorus	0.008	0.007	13.33	0.006	С	no qualifier
Orthophosphate as P	0.005	0.004	22.22	0.002	С	no qualifier
Phosphorus (AR)	0.004	0.004	0.00	0.002	С	no qualifier
Orthophosphate as P (AR)	ND	0.003	0.00	0.001	В	qualifier
Fluoride	0.112	0.112	0.00	0.1	С	no qualifier
Chloride	5.71	5.72	0.17	0.2	D	no qualifier
Sulfate as SO4	15.9	15.9	0.00	0.3	D	no qualifier

	Acceptance Criteria	<u>Qualifier</u>
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J

Groundwater Monitoring Program – Data Validation Report

Sampling Round: Quarter 3rd Year 2008

(Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>
Arsenic	SVL	\boxtimes
Cadmium	SVL	\boxtimes
Calcium	SVL	
Chloride	SVL	\boxtimes
Chromium	SVL	\boxtimes
Copper	SVL	\boxtimes
Fluoride	SVL	\boxtimes
Iron	SVL	\boxtimes
Lead	SVL	\boxtimes
Magnesium	SVL	\boxtimes
Manganese	SVL	\boxtimes
Mercury	SVL	\boxtimes
Ortho-phosphate-phosphorous	SVL	\boxtimes
Ortho-phosphate-phosphorous	Aquatic Research	\boxtimes
Potassium	SVL	\boxtimes
Sodium	SVL	\boxtimes
Sulfate	SVL	\boxtimes
Total Dissolved Solids	SVL	\boxtimes
Total Nitrate + Nitrite	SVL	\boxtimes
Total phosphorus	SVL	\boxtimes
Total phosphorus	Aquatic Research	
Zinc	SVL	
Carbonate Alkalinity (CO ₃ -)	SVL	\boxtimes
Bicarbonate Alkalinity (HCO ₃)	SVL	

Laboratory Work Order #: W804278 (SVL) & SCW001-10 (AR)

Sample Delivery Group Submission Date: 7/30/2008

Complete Chain of Custody:

Signatures: * Dates: ** Sample Dates: Sample Times: Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: \boxtimes Sample Dates: \boxtimes Sample Times: \boxtimes Analyses: \boxtimes (Verify 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation \boxtimes

Temperature at Delivery: <u>No entry.</u>

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: <u>100%</u> (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: All results within acceptance limits.

Detail Checking (10% of laboratory data & 100% of Field Data): 10% completed 5324G01. <u>SVL:</u> COC: No temperature entered. No individual analyzed times on lab report. <u>Aquatic Research:</u> **Sample date missing, *sampler and recorder names missing.

Data Anomalies: <u>SVL</u> Orthophosphate – Lab duplicate outside acceptance limits and matrix spike recovery below acceptance limits; associated results flagged J & UJ. <u>Aquatic Research</u> No data anomalies

Corrective Action:

Groundwater Monitoring Program – Data Validation Report

Sampling Round: <u>Quarter 3rd</u> Year <u>2008</u>

(Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>
Arsenic	SVL	\boxtimes
Cadmium	SVL	\boxtimes
Calcium	SVL	\boxtimes
Chloride	SVL	\boxtimes
Chromium	SVL	\boxtimes
Copper	SVL	\boxtimes
Fluoride	SVL	\boxtimes
Iron	SVL	\boxtimes
Lead	SVL	\boxtimes
Magnesium	SVL	\boxtimes
Manganese	SVL	\boxtimes
Mercury	SVL	\boxtimes
Ortho-phosphate-phosphorous	SVL	\boxtimes
Ortho-phosphate-phosphorous	Aquatic Research	***Unknown
Potassium	SVL	\boxtimes
Sodium	SVL	\boxtimes
Sulfate	SVL	\boxtimes
Total Dissolved Solids	SVL	\boxtimes
Total Nitrate + Nitrite	SVL	\boxtimes
Total phosphorus	SVL	\boxtimes
Total phosphorus	Aquatic Research	***Unknown
Zinc	SVL	
Carbonate Alkalinity (\overline{CO}_{3} -)	SVL	
Bicarbonate Alkalinity (HCO ₃)	SVL	

Laboratory Work Order #: W804594 (SVL) & SCW001-12 (AR)

Sample Delivery Group Submission Date: 08/12/2008

Complete Chain of Custody:

Signatures: * Dates: ** Sample Dates: Sample Times: (Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: Sample Dates: Sample Times: Analyses: Korrige 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation \boxtimes

Temperature at Delivery: 1.2°C

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: 100% (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: All results within acceptance limits

Detail Checking (10% of laboratory data & 100% of Field Data): 10% completed 6631M07 <u>SVL:</u> COC: *Sampler signature missing. **No individual analyzed times on lab report. <u>**Aquatic Research:</u> **Sample date missing, *sampler and recorder names missing. ***No individual analyzed times on lab report.

Data Anomalies: <u>SVL</u> Total Phosphorus - Matrix spike recovery greater than upper control limit; associated positively identified results flagged J, ND not affected. <u>Aquatic Research</u> No data anomalies

Corrective Action:

Groundwater Monitoring Program – Data Validation Report

Sampling Round: <u>Quarter 3rd</u> Year <u>2008</u>

(Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>
Arsenic	SVL	\boxtimes
Cadmium	SVL	\boxtimes
Calcium	SVL	\boxtimes
Chloride	SVL	\boxtimes
Chromium	SVL	\boxtimes
Copper	SVL	\boxtimes
Fluoride	SVL	\boxtimes
Iron	SVL	\boxtimes
Lead	SVL	\boxtimes
Magnesium	SVL	\boxtimes
Manganese	SVL	\boxtimes
Mercury	SVL	\boxtimes
Ortho-phosphate-phosphorous	SVL	\boxtimes
Ortho-phosphate-phosphorous	Aquatic Research	\boxtimes
Potassium	SVL	\boxtimes
Sodium	SVL	\boxtimes
Sulfate	SVL	\boxtimes
Total Dissolved Solids	SVL	\boxtimes
Total Nitrate + Nitrite	SVL	\boxtimes
Total phosphorus	SVL	\boxtimes
Total phosphorus	Aquatic Research	
Zinc	SVL	
Carbonate Alkalinity (CO ₃ -)	SVL	\boxtimes
Bicarbonate Alkalinity (HCO ₃)	SVL	

Laboratory Work Order #: W804626 (SVL) & SCW001-11 (AR)

Sample Delivery Group Submission Date: 08/13/2008

Complete Chain of Custody:

Signatures: * Dates: ** Sample Dates: Sample Times: Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: \boxtimes Sample Dates: \boxtimes Sample Times: \boxtimes Analyses: \boxtimes (Verify 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation \boxtimes

Temperature at Delivery: 1.8°C

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: <u>100%</u> (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: All results within acceptance limits

Detail Checking (10% of laboratory data & 100% of Field Data): 10% completed 5404A01. <u>SVL:</u> COC: *Sampler's signature blank. No individual analyzed times on lab report. <u>Aquatic Research:</u> COC: **Sampling date, *sampler and recorder name fields blank.

Data Anomalies: <u>SVL</u> Chloride and Sulfate – Lab duplicate RPD outside acceptance limits; associated results flagged J & UJ.

Aquatic Research No data anomalies.

Corrective Action: <u>SVL added individual analyzed times to subsequent lab reports.</u>

Groundwater Monitoring Program – Data Validation Report

Sampling Round: <u>Quarter 3rd</u> Year <u>2008</u>

(Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>
Arsenic	SVL	\boxtimes
Cadmium	SVL	\boxtimes
Calcium	SVL	
Chloride	SVL	\boxtimes
Chromium	SVL	\boxtimes
Copper	SVL	\boxtimes
Fluoride	SVL	\boxtimes
Iron	SVL	\boxtimes
Lead	SVL	\boxtimes
Magnesium	SVL	\boxtimes
Manganese	SVL	\boxtimes
Mercury	SVL	\boxtimes
Ortho-phosphate-phosphorous	SVL	\boxtimes
Ortho-phosphate-phosphorous	Aquatic Research	*Unknown
Potassium	SVL	\boxtimes
Sodium	SVL	\boxtimes
Sulfate	SVL	\boxtimes
Total Dissolved Solids	SVL	\boxtimes
Total Nitrate + Nitrite	SVL	\boxtimes
Total phosphorus	SVL	\boxtimes
Total phosphorus	Aquatic Research	*Unknown
Zinc	SVL	
Carbonate Alkalinity (CO ₃ -)	SVL	\boxtimes
Bicarbonate Alkalinity (HCO ₃)	SVL	

Laboratory Work Order #: W804677 (SVL) & SCW001-13 (AR)

Sample Delivery Group Submission Date: 08/14/2008

Complete Chain of Custody:

Signatures: ** Dates: Sample Dates: Sample Times: Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: *** Sample Dates: Sample Times: Analyses: (Verify 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation \boxtimes

Temperature at Delivery: 3.2°C

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: 100% (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: Arsenic and Manganese results outside acceptance limits; associated results flagged J.

Detail Checking (10% of laboratory data & 100% of Field Data): <u>SVL</u>: COC **sampler's signature missing. ***Lab report has one sample name listed as 5322E01, COC shows 5323E01 field report shows 5323E01. <u>Aquatic Research</u>: **Samplers and recorders signature missing. *No individual analyzed times on lab report.

Data Anomalies: Arsenic at 0.00188 mg/L and TDS at 18 mg/L found in blank. Calcium at 0.216 mg/L, Magnesium at 0.060 mg/L and TDS at 16 mg/L found in equipment blank.

<u>SVL</u> No anomalies. <u>Aquatic Research</u> No anomalies.

Corrective Action: Determined correct sample ID as 5323E01, corrected lab report.

Groundwater Monitoring Program – Data Validation Report

Sampling Round: <u>Quarter 3rd</u> Year <u>2008</u>

(Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>
Arsenic	SVL	\boxtimes
Cadmium	SVL	\boxtimes
Calcium	SVL	\boxtimes
Chloride	SVL	\boxtimes
Chromium	SVL	\boxtimes
Copper	SVL	\boxtimes
Fluoride	SVL	\boxtimes
Iron	SVL	\boxtimes
Lead	SVL	\boxtimes
Magnesium	SVL	\boxtimes
Manganese	SVL	\boxtimes
Mercury	SVL	\boxtimes
Ortho-phosphate-phosphorous	SVL	\boxtimes
Ortho-phosphate-phosphorous	Aquatic Research	\boxtimes
Potassium	SVL	\boxtimes
Sodium	SVL	\boxtimes
Sulfate	SVL	\boxtimes
Total Dissolved Solids	SVL	\boxtimes
Total Nitrate + Nitrite	SVL	\boxtimes
Total phosphorus	SVL	\boxtimes
Total phosphorus	Aquatic Research	
Zinc	SVL	
Carbonate Alkalinity (CO ₃ -)	SVL	\boxtimes
Bicarbonate Alkalinity (HCO ₃)	SVL	

Laboratory Work Order #: W804724 (SVL) & SCW001-14(AR)

Sample Delivery Group Submission Date: 08/15/2008

Complete Chain of Custody:

Signatures: * Dates: Sample Dates: Sample Times: (Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: \boxtimes Sample Dates: \boxtimes Sample Times: \boxtimes Analyses: \boxtimes (Verify 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation \boxtimes

Temperature at Delivery: 4.8°C

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: 100% (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: Arsenic results outside acceptance limits; associated results flagged J

Detail Checking (10% of laboratory data & 100% of Field Data): 10% completed 6328H01. <u>*SVL:</u> COC: Sampler signature missing. <u>*Aquatic Research:</u> COC: Sampler and recorder name fields blank.

Data Anomalies: <u>SVL</u> Arsenic – Lab duplicate data outside acceptance limits; associated data flagged J & UJ <u>Aquatic Research</u> No anomalies

Corrective Action:

Sampling Round: 3 / 2008 Laboratory Work Order: W804278 (SVL) & SCW001-10 (AR)

Sample: 5312H01	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Mercury	ND	ND	0.00	0.0002	А	no qualifier
Calcium	40	39.9	0.25	0.04	D	no qualifier
Iron	ND	ND	0.00	0.06	А	no qualifier
Magnesium	15.4	15.3	0.65	0.06	D	no qualifier
Potassium	2.26	2.25	0.44	0.5	С	no qualifier
Sodium	4.64	4.64	0.00	0.5	D	no qualifier
Arsenic	0.00528	0.00417	23.49	0.00165	С	no qualifier
Cadmium	ND	ND	0.00	0.0002	А	no qualifier
Chromium	ND	ND	0.00	0.0025	А	no qualifier
Copper	ND	ND	0.00	0.001	А	no qualifier
Lead	ND	ND	0.00	0.001	А	no qualifier
Manganese	ND	ND	0.00	0.001	А	no qualifier
Zinc	ND	0.01	0.00	0.005	В	no qualifier
Nitrate/Nitrite as N	2.53	2.39	5.69	0.02	D	no qualifier
Total Alkalinity	153	154	0.65	1	D	no qualifier
Bicarbonate	153	154	0.65	1	D	no qualifier
Carbonate	ND	ND	0.00	1	А	no qualifier
Total Dissolved Solids	190	190	0.00	10	D	no qualifier
Phosphorus	0.018	0.017	5.71	0.006	С	no qualifier
Orthophosphate as P	0.017	0.017	0.00	0.002	D	no qualifier
Phosphorus (AR)	0.016	0.017	6.06	0.002	D	no qualifier
Orthophosphate as P (AR)	0.015	0.015	0.00	0.001	D	no qualifier
Fluoride	ND	ND	0.00	0.1	Α	no qualifier
Chloride	4.65	4.65	0.00	0.2	D	no qualifier
Sulfate as SO4	15.1	15.2	0.66	0.3	D	no qualifier

	Acceptance Criteria	Qualifier
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J

Sampling Round: 3 / 2008 Laboratory Work Order: W804594 (SVL) & SCW001-12 (AR)

Sample: 6524R01	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Mercury	ND	ND	0.00	0.0002	А	no qualifier
Calcium	36.7	37.2	1.35	0.04	D	no qualifier
Iron	ND	ND	0.00	0.06	А	no qualifier
Magnesium	14.6	14.8	1.36	0.06	D	no qualifier
Potassium	2.08	2.13	2.38	0.5	С	no qualifier
Sodium	3.17	3.22	1.56	0.5	D	no qualifier
Arsenic	0.00241	0.00265	9.49	0.00165	С	no qualifier
Cadmium	ND	ND	0.00	0.0002	А	no qualifier
Chromium	ND	ND	0.00	0.0025	А	no qualifier
Copper	ND	ND	0.00	0.001	А	no qualifier
Lead	ND	ND	0.00	0.001	А	no qualifier
Manganese	ND	ND	0.00	0.001	А	no qualifier
Zinc	ND	ND	0.00	0.005	А	no qualifier
Nitrate/Nitrite as N	2.37	2.21	6.99	0.02	D	no qualifier
Total Alkalinity	168	174	3.51	1	D	no qualifier
Bicarbonate	168	174	3.51	1	D	no qualifier
Carbonate	ND	ND	0.00	1	А	no qualifier
Total Dissolved Solids	170	170	0.00	10	D	no qualifier
Phosphorus	ND	ND	0.00	0.006	А	no qualifier
Orthophosphate as P	ND	ND	0.00	0.002	А	no qualifier
Phosphorus (AR)	0.005	0.005	0.00	0.002	С	no qualifier
Orthophosphate as P (AR)	0.003	0.003	0.00	0.001	С	no qualifier
Fluoride	ND	ND	0.00	0.1	А	no qualifier
Chloride	2.01	2.03	0.99	0.2	D	no qualifier
Sulfate as SO4	11.9	12	0.84	0.3	D	no qualifier

	Acceptance Criteria	Qualifier
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J

Sampling Round: 3 / 2008 Laboratory Work Order: W804626 (SVL) & SCW001-11 (AR)

Sample: 5417R02	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Mercury	ND	ND	0.00	0.0002	Α	no qualifier
Calcium	26.5	27.6	4.07	0.04	D	no qualifier
Iron	ND	ND	0.00	0.06	А	no qualifier
Magnesium	8.49	9.01	5.94	0.06	D	no qualifier
Potassium	1.6	1.85	14.49	0.5	С	no qualifier
Sodium	2.69	2.89	7.17	0.5	D	no qualifier
Arsenic	0.00264	0.0029	9.39	0.00165	С	no qualifier
Cadmium	ND	ND	0.00	0.0002	А	no qualifier
Chromium	ND	ND	0.00	0.0025	А	no qualifier
Copper	ND	ND	0.00	0.001	А	no qualifier
Lead	ND	ND	0.00	0.001	А	no qualifier
Manganese	0.00105	ND	0.00	0.001	В	no qualifier
Zinc	ND	ND	0.00	0.005	А	no qualifier
Nitrate/Nitrite as N	1.07	1.12	4.57	0.02	D	no qualifier
Total Alkalinity	109	109	0.00	1	D	no qualifier
Bicarbonate	109	109	0.00	1	D	no qualifier
Carbonate	ND	ND	0.00	1	А	no qualifier
Total Dissolved Solids	120	120	0.00	10	D	no qualifier
Phosphorus	0.008	0.008	0.00	0.006	С	no qualifier
Orthophosphate as P	0.004	0.004	0.00	0.002	С	no qualifier
Phosphorus (AR)	0.007	0.007	0.00	0.002	С	no qualifier
Orthophosphate as P (AR)	0.005	0.005	0.00	0.001	D	no qualifier
Fluoride	0.111	0.117	5.26	0.1	С	no qualifier
Chloride	3.56	3.78	5.99	0.2	D	no qualifier
Sulfate as SO4	6.99	7.49	6.91	0.3	D	no qualifier

Note: If the sample result is ND and the duplicate has a result, use the MRL	If both sample and field duplicate is ND, relative % difference is 0.	
	Acceptance Criteria	Qualifier
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J

Sampling Round: 3 / 2008 Laboratory Work Order: W804677 (SVL) & SCW001-13 (AR)

Sample: 5310Q01	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Mercury	ND	ND	0.00	0.0002	А	no qualifier
Calcium	29.5	29.1	1.37	0.04	D	no qualifier
Iron	0.653	0.495	27.53	0.06	D	no qualifier
Magnesium	10.1	10.1	0.00	0.06	D	no qualifier
Potassium	1.87	1.85	1.08	0.5	С	no qualifier
Sodium	3.73	3.68	1.35	0.5	D	no qualifier
Arsenic	0.00349	0.00525	40.27	0.00165	С	qualifier
Cadmium	ND	ND	0.00	0.0002	А	no qualifier
Chromium	ND	ND	0.00	0.0025	А	no qualifier
Copper	ND	ND	0.00	0.001	А	no qualifier
Lead	ND	ND	0.00	0.001	А	no qualifier
Manganese	0.0188	0.0263	33.26	0.001	D	qualifier
Zinc	ND	ND	0.00	0.005	А	no qualifier
Nitrate/Nitrite as N	1.19	1.2	0.84	0.02	D	no qualifier
Total Alkalinity	116	119	2.55	1	D	no qualifier
Bicarbonate	116	119	2.55	1	D	no qualifier
Carbonate	ND	ND	0.00	1	А	no qualifier
Total Dissolved Solids	140	140	0.00	10	D	no qualifier
Phosphorus	ND	ND	0.00	0.006	А	no qualifier
Orthophosphate as P	ND	ND	0.00	0.002	А	no qualifier
Phosphorus (AR)	0.003	0.004	28.57	0.002	С	no qualifier
Orthophosphate as P (AR)	0.002	0.002	0.00	0.001	С	no qualifier
Fluoride	ND	ND	0.00	0.1	Α	no qualifier
Chloride	4.39	4.42	0.68	0.2	D	no qualifier
Sulfate as SO4	11.3	11.1	1.79	0.3	D	no qualifier

	Acceptance Criteria	<u>Qualifier</u>
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J

Sampling Round: 3 / 2008 Laboratory Work Order: W804724 (SVL) & SCW001-14 (AR)

Sample: 6211K01	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Mercury	ND	ND	0.00	0.0002	Α	no qualifier
Calcium	32.2	34.1	5.73	0.04	D	no qualifier
Iron	ND	ND	0.00	0.06	А	no qualifier
Magnesium	17.2	17.6	2.30	0.06	D	no qualifier
Potassium	2.15	2.41	11.40	0.5	С	no qualifier
Sodium	4.09	4.39	7.08	0.5	D	no qualifier
Arsenic	0.00291	0.00659	77.47	0.00165	С	qualifier
Cadmium	ND	ND	0.00	0.0002	А	no qualifier
Chromium	ND	ND	0.00	0.0025	А	no qualifier
Copper	ND	ND	0.00	0.001	А	no qualifier
Lead	ND	ND	0.00	0.001	А	no qualifier
Manganese	ND	ND	0.00	0.001	А	no qualifier
Zinc	ND	ND	0.00	0.005	А	no qualifier
Nitrate/Nitrite as N	1.58	1.63	3.12	0.02	D	no qualifier
Total Alkalinity	141	141	0.00	1	D	no qualifier
Bicarbonate	141	141	0.00	1	D	no qualifier
Carbonate	ND	ND	0.00	1	А	no qualifier
Total Dissolved Solids	160	160	0.00	10	D	no qualifier
Phosphorus	ND	0.006	0.00	0.006	В	no qualifier
Orthophosphate as P	0.006	0.005	18.18	0.002	С	no qualifier
Phosphorus (AR)	0.005	0.005	0.00	0.002	С	no qualifier
Orthophosphate as P (AR)	0.004	0.005	22.22	0.001	E	no qualifier
Fluoride	ND	ND	0.00	0.1	А	no qualifier
Chloride	5.59	5.7	1.95	0.2	D	no qualifier
Sulfate as SO4	17.5	17.8	1.70	0.3	D	no qualifier

Note. If the sample result is ND and the duplicate has a result, use the MRL	. If both sample and held duplicate is ND, felative % difference is 0.	
	Acceptance Criteria	Qualifier
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J

Groundwater Monitoring Program – Data Validation Report

Sampling Round: Quarter 4th Year 2008

(Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>
Arsenic	SVL	\boxtimes
Cadmium	SVL	\boxtimes
Calcium	SVL	\boxtimes
Chloride	SVL	\boxtimes
Chromium	SVL	\boxtimes
Copper	SVL	\boxtimes
Fluoride	SVL	\boxtimes
Iron	SVL	\boxtimes
Lead	SVL	\boxtimes
Magnesium	SVL	\boxtimes
Manganese	SVL	\boxtimes
Mercury	SVL	\boxtimes
Ortho-phosphate-phosphorous	SVL	\boxtimes
Ortho-phosphate-phosphorous	Aquatic Research	\boxtimes
Potassium	SVL	\boxtimes
Sodium	SVL	\boxtimes
Sulfate	SVL	\boxtimes
Total Dissolved Solids	SVL	\boxtimes
Total Nitrate + Nitrite	SVL	\boxtimes
Total phosphorus	SVL	\boxtimes
Total phosphorus	Aquatic Research	
Zinc	SVL	
Carbonate Alkalinity (CO ₃ -)	SVL	\boxtimes
Bicarbonate Alkalinity (HCO ₃)	SVL	

Laboratory Work Order #: W8J0529 (SVL) & SCW001-17 (AR)

Sample Delivery Group Submission Date: 10/22/2008

Complete Chain of Custody:

Signatures: Dates: Sample Dates: Sample Times: Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: Sample Dates: Sample Times: Analyses: (Verify 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation \boxtimes

Temperature at Delivery: 1.8°C

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: 100% (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: TDS results outside acceptance limits; associated results flagged J

Detail Checking (10% of laboratory data & 100% of Field Data): 10% completed 5213B01. <u>SVL</u>: Sampler signature missing on COC. See note 'H6' for samples 5427L01 carbonate and bicarbonate on lab report. <u>Aquatic Research</u>: No individual sample times on lab report to match to the COC.

Data Anomalies: <u>SVL</u> No data anomalies

Aquatic Research No data anomalies

Corrective Action:

Groundwater Monitoring Program – Data Validation Report

Sampling Round: <u>Quarter 4th</u> Year <u>2008</u>

(Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>
Arsenic	SVL	\boxtimes
Cadmium	SVL	\boxtimes
Calcium	SVL	\boxtimes
Chloride	SVL	
Chromium	SVL	
Copper	SVL	
Fluoride	SVL	
Iron	SVL	\boxtimes
Lead	SVL	
Magnesium	SVL	
Manganese	SVL	
Mercury	SVL	
Ortho-phosphate-phosphorous	SVL	\boxtimes
Ortho-phosphate-phosphorous	Aquatic Research	
Potassium	SVL	
Sodium	SVL	
Sulfate	SVL	
Total Dissolved Solids	SVL	
Total Nitrate + Nitrite	SVL	
Total phosphorus	SVL	
Total phosphorus	Aquatic Research	
Zinc	SVL	
Carbonate Alkalinity (CO ₃ -)	SVL	
Bicarbonate Alkalinity (HCO ₃)	SVL	

Laboratory Work Order #: W8K0021 (SVL) & SCW001-18

Sample Delivery Group Submission Date: 11/04/2008

Complete Chain of Custody:

Signatures: Dates: Sample Dates: Sample Times: Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: Sample Dates: Sample Times: * Analyses: Korrige 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation \boxtimes

Temperature at Delivery: 2.4°C

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: 100% (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: <u>AR orthophosphate results outside acceptance limits; associated</u> results flagged J.

Detail Checking (10% of laboratory data & 100% of Field Data): 10% Completed W8K0021.

<u>SVL</u>: Sample #5508M02 (ID 11137) sample depth on the Aquifer Sampling Data Sheet is 69.5, in the InorganicsWaterQuality2000 database it is 39.5.

Aquatic Research: *No individual sample times on lab report to match to the COC.

Data Anomalies: <u>SVL</u> Arsenic lab duplicate outside acceptance limits; associated results flagged J & UJ <u>Aquatic Research</u> No data anomalies

Corrective Action: <u>Reanette corrected the sample depth for sample #5508M02</u>.

Groundwater Monitoring Program – Data Validation Report

Sampling Round: Quarter 4th Year 2008

(Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>
Arsenic	SVL	\boxtimes
Cadmium	SVL	
Calcium	SVL	
Chloride	SVL	
Chromium	SVL	\boxtimes
Copper	SVL	\boxtimes
Fluoride	SVL	\boxtimes
Iron	SVL	\boxtimes
Lead	SVL	\boxtimes
Magnesium	SVL	\boxtimes
Manganese	SVL	\boxtimes
Mercury	SVL	\boxtimes
Ortho-phosphate-phosphorous	SVL	\boxtimes
Ortho-phosphate-phosphorous	Aquatic Research	*□
Potassium	SVL	\boxtimes
Sodium	SVL	\boxtimes
Sulfate	SVL	\boxtimes
Total Dissolved Solids	SVL	\boxtimes
Total Nitrate + Nitrite	SVL	\boxtimes
Total phosphorus	SVL	\boxtimes
Total phosphorus	Aquatic Research	
Zinc	SVL	
Carbonate Alkalinity (CO ₃ -)	SVL	
Bicarbonate Alkalinity (HCO ₃)	SVL	

Laboratory Work Order #: W8K0054 (SVL) & SCW001-19 (AR)

Sample Delivery Group Submission Date: 11/5/2008

Complete Chain of Custody:

Signatures: ** Dates: **** Sample Dates: Sample Times: (Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: Sample Dates: Sample Times: *** Analyses: Kerify 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation

Temperature at Delivery: 1.8°C

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: <u>100%</u> (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: All results within acceptance limits

Detail Checking (10% of laboratory data & 100% of Field Data): 10% completed 5411R03. <u>SVL</u>: <u>Aquatic Research</u>: *Orthophosphate (SRP) hold time is over on the following samples: 5409C02, 5411R03, 5411R04, 6436N01. COC - ***No individual sample times on lab report to match COC; **missing sampler and recorder signatures; ****missing sampling date.

Data Anomalies: <u>SVL</u> No anomalies. <u>Aquatic Research</u> No data anomalies.

Corrective Action:

Groundwater Monitoring Program – Data Validation Report

Sampling Round: Quarter 4th Year 2008

(Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>
Arsenic	SVL	\boxtimes
Cadmium	SVL	\boxtimes
Calcium	SVL	\boxtimes
Chloride	SVL	\boxtimes
Chromium	SVL	\boxtimes
Copper	SVL	\boxtimes
Fluoride	SVL	\boxtimes
Iron	SVL	\boxtimes
Lead	SVL	\boxtimes
Magnesium	SVL	\boxtimes
Manganese	SVL	\boxtimes
Mercury	SVL	\boxtimes
Ortho-phosphate-phosphorous	SVL	\boxtimes
Ortho-phosphate-phosphorous	Aquatic Research	\boxtimes
Potassium	SVL	\boxtimes
Sodium	SVL	\boxtimes
Sulfate	SVL	\boxtimes
Total Dissolved Solids	SVL	\boxtimes
Total Nitrate + Nitrite	SVL	\boxtimes
Total phosphorus	SVL	\boxtimes
Total phosphorus	Aquatic Research	
Zinc	SVL	
Carbonate Alkalinity (CO ₃ -)	SVL	
Bicarbonate Alkalinity (HCO ₃)	SVL	

Laboratory Work Order #: W8K0096 (SVL) & SCW001-20 (AR)

Sample Delivery Group Submission Date: 11/6/2008 (SVL) and 11/7/2008 (Aquatic Research)

Complete Chain of Custody:

Signatures: * Dates: Sample Dates: Sample Times: (Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: Sample Dates: Sample Times: ** Analyses: Kerify 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation \boxtimes

Temperature at Delivery: 1.8°C

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: 100% (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: Manganese results outside acceptance limits; associated results flagged J

Detail Checking (10% of laboratory data & 100% of Field Data): 10% completed 5322A01.

<u>SVL</u>: Aquifer Sampling Data Sheet is incomplete – missing data for samples 5312C01, 5311J05, AND 5311J07.

<u>Aquatic Research</u>: *Recorder signature missing. **No individual sample times on lab report to match COC

Data Anomalies: <u>SVL</u> Iron – Lab duplicate RPD outside acceptance limits; associated results flagged J & UJ <u>Aquatic Research</u> No anomalies.

Corrective Action: Completed the Aquifer Sampling Data Sheet.

Groundwater Monitoring Program – Data Validation Report

Sampling Round: Quarter 4th Year 2008

(Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>
Arsenic	SVL	\boxtimes
Cadmium	SVL	\boxtimes
Calcium	SVL	\boxtimes
Chloride	SVL	\boxtimes
Chromium	SVL	\boxtimes
Copper	SVL	\boxtimes
Fluoride	SVL	\boxtimes
Iron	SVL	\boxtimes
Lead	SVL	\boxtimes
Magnesium	SVL	\boxtimes
Manganese	SVL	\boxtimes
Mercury	SVL	\boxtimes
Ortho-phosphate-phosphorous	SVL	\boxtimes
Ortho-phosphate-phosphorous	Aquatic Research	\boxtimes
Potassium	SVL	\boxtimes
Sodium	SVL	\boxtimes
Sulfate	SVL	\boxtimes
Total Dissolved Solids	SVL	\boxtimes
Total Nitrate + Nitrite	SVL	\boxtimes
Total phosphorus	SVL	\boxtimes
Total phosphorus	Aquatic Research	
Zinc	SVL	
Carbonate Alkalinity (CO ₃ -)	SVL	
Bicarbonate Alkalinity (HCO ₃)	SVL	

Laboratory Work Order #: W8K0125 (SVL) & SCW001-21(AR)

Sample Delivery Group Submission Date: 11/07/2008

Complete Chain of Custody:

Signatures: * Dates: ** Sample Dates: Sample Times: (Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: Sample Dates: ** Sample Times: *** Analyses: (Verify 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation \boxtimes

Temperature at Delivery: ***

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: 100% (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: All results within acceptance limits

Detail Checking (10% of laboratory data & 100% of Field Data): 10% completed 6330J01. <u>SVL</u>: COC *sampler signature and ***temperature missing. <u>Aquatic Research</u>: *Relinquish signature, **date, and time missing on COC. ****No individual sample times on lab report to match COC

Data Anomalies: <u>SVL</u> No anomalies <u>Aquatic Research</u> No anomalies

Corrective Action:

Sampling Round: 4 / 2008 Laboratory Work Order: W8J0529 (SVL) & SCW001-17 (AR)

Sample: 5427L01	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Mercury	ND	ND	0.00	0.0002	А	no qualifier
Calcium	47.5	45.3	4.74	0.04	D	no qualifier
Iron	ND	ND	0.00	0.06	А	no qualifier
Magnesium	17.3	16.5	4.73	0.06	D	no qualifier
Potassium	2.62	2.5	4.69	0.5	D	no qualifier
Sodium	7.02	6.72	4.37	0.5	D	no qualifier
Arsenic	0.00386	0.00358	7.53	0.00165	С	no qualifier
Cadmium	ND	ND	0.00	0.0002	А	no qualifier
Chromium	ND	ND	0.00	0.0025	А	no qualifier
Copper	0.00114	ND	0.00	0.001	В	no qualifier
Lead	ND	ND	0.00	0.001	А	no qualifier
Manganese	ND	ND	0.00	0.001	А	no qualifier
Zinc	ND	ND	0.00	0.005	А	no qualifier
Nitrate/Nitrite as N	2.89	2.92	1.03	0.02	D	no qualifier
Total Alkalinity	194	191	1.56	1	D	no qualifier
Bicarbonate	194	191	1.56	1	D	no qualifier
Carbonate	ND	ND	0.00	1	А	no qualifier
Total Dissolved Solids	210	110	62.50	10	D	qualifier
Phosphorus	0.007	0.008	13.33	0.006	С	no qualifier
Orthophosphate as P	0.005	0.005	0.00	0.002	С	no qualifier
Phosphorus (AR)	0.007	0.007	0.00	0.002	С	no qualifier
Orthophosphate as P (AR)	0.006	0.006	0.00	0.001	D	no qualifier
Fluoride	ND	ND	0.00	0.1	А	no qualifier
Chloride	6.97	6.97	0.00	0.2	D	no qualifier
Sulfate as SO4	15.1	15.1	0.00	0.3	D	no qualifier

	Acceptance Criteria	Qualifier
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J

Sampling Round: 4 / 2008 Laboratory Work Order: W8K0021 (SVL) & SCW001-18 (AR)

Sample: 6524R01	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Mercury	ND	ND	0.00	0.0002	А	no qualifier
Calcium	30.4	29.3	3.69	0.04	D	no qualifier
Iron	ND	ND	0.00	0.06	А	no qualifier
Magnesium	12.8	12.3	3.98	0.06	D	no qualifier
Potassium	1.8	1.72	4.55	0.5	С	no qualifier
Sodium	3.06	2.9	5.37	0.5	D	no qualifier
Arsenic	0.00551	0.0057	3.39	0.00165	С	no qualifier
Cadmium	ND	ND	0.00	0.0002	А	no qualifier
Chromium	ND	ND	0.00	0.0025	А	no qualifier
Copper	ND	ND	0.00	0.001	А	no qualifier
Lead	ND	ND	0.00	0.001	А	no qualifier
Manganese	ND	ND	0.00	0.001	А	no qualifier
Zinc	ND	ND	0.00	0.005	А	no qualifier
Nitrate/Nitrite as N	1.55	1.61	3.80	0.02	D	no qualifier
Total Alkalinity	146	148	1.36	1	D	no qualifier
Bicarbonate	146	148	1.36	1	D	no qualifier
Carbonate	ND	ND	0.00	1	А	no qualifier
Total Dissolved Solids	140	140	0.00	10	D	no qualifier
Phosphorus	ND	ND	0.00	0.006	А	no qualifier
Orthophosphate as P	ND	ND	0.00	0.002	А	no qualifier
Phosphorus (AR)	0.004	0.006	40.00	0.002	С	no qualifier
Orthophosphate as P (AR)	0.001	0.003	100.00	0.001	С	qualifier
Fluoride	ND	ND	0.00	0.1	А	no qualifier
Chloride	2.2	2.22	0.90	0.2	D	no qualifier
Sulfate as SO4	8.76	8.81	0.57	0.3	D	no qualifier

	Acceptance Criteria	<u>Qualifier</u>
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J

Sampling Round: 4 / 2008 Laboratory Work Order: W8K0054 (SVL) & SCW001-19 (AR)

Sample: 5417R02	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Mercury	ND	ND	0.00	0.0002	Α	no qualifier
Calcium	27.2	27.7	1.82	0.04	D	no qualifier
Iron	ND	ND	0.00	0.06	А	no qualifier
Magnesium	8.42	8.57	1.77	0.06	D	no qualifier
Potassium	1.56	1.59	1.90	0.5	С	no qualifier
Sodium	2.72	2.75	1.10	0.5	D	no qualifier
Arsenic	0.00329	0.00453	31.71	0.00165	С	no qualifier
Cadmium	ND	ND	0.00	0.0002	А	no qualifier
Chromium	ND	ND	0.00	0.0025	А	no qualifier
Copper	ND	ND	0.00	0.001	А	no qualifier
Lead	ND	ND	0.00	0.001	А	no qualifier
Manganese	0.00207	0.00176	16.19	0.001	С	no qualifier
Zinc	ND	ND	0.00	0.005	А	no qualifier
Nitrate/Nitrite as N	0.991	0.987	0.40	0.02	D	no qualifier
Total Alkalinity	102	102	0.00	1	D	no qualifier
Bicarbonate	102	102	0.00	1	D	no qualifier
Carbonate	ND	ND	0.00	1	А	no qualifier
Total Dissolved Solids	100	100	0.00	10	D	no qualifier
Phosphorus	0.006	0.007	15.38	0.006	С	no qualifier
Orthophosphate as P	0.006	0.006	0.00	0.002	С	no qualifier
Phosphorus (AR)	0.01	0.009	10.53	0.002	Е	no qualifier
Orthophosphate as P (AR)	0.007	0.008	13.33	0.001	D	no qualifier
Fluoride	ND	ND	0.00	0.1	А	no qualifier
Chloride	3.64	3.65	0.27	0.2	D	no qualifier
Sulfate as SO4	8.38	8.44	0.71	0.3	D	no qualifier

note. If the sample result is ND and the dupicate has a result, use the Mixe	. If both sample and held duplicate is 10, relative % difference is 0.	
	Acceptance Criteria	Qualifier
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J

Sampling Round: 4 / 2008 Laboratory Work Order: W8K0096 (SVL) & SCW001-20 (AR)

Sample: 5310Q01	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Mercury	ND	ND	0.00	0.0002	А	no qualifier
Calcium	24.1	23.6	2.10	0.04	D	no qualifier
Iron	0.698	0.46	41.11	0.06	D	qualifier
Magnesium	8.55	8.31	2.85	0.06	D	no qualifier
Potassium	1.54	1.52	1.31	0.5	С	no qualifier
Sodium	2.91	2.85	2.08	0.5	D	no qualifier
Arsenic	0.00253	0.00255	0.79	0.00165	С	no qualifier
Cadmium	ND	ND	0.00	0.0002	А	no qualifier
Chromium	ND	ND	0.00	0.0025	А	no qualifier
Copper	ND	ND	0.00	0.001	А	no qualifier
Lead	ND	ND	0.00	0.001	А	no qualifier
Manganese	0.0356	0.0261	30.79	0.001	D	qualifier
Zinc	ND	ND	0.00	0.005	А	no qualifier
Nitrate/Nitrite as N	0.931	0.933	0.21	0.02	D	no qualifier
Total Alkalinity	104	104	0.00	1	D	no qualifier
Bicarbonate	104	104	0.00	1	D	no qualifier
Carbonate	ND	ND	0.00	1	А	no qualifier
Total Dissolved Solids	120	120	0.00	10	D	no qualifier
Phosphorus	0.006	0.006	0.00	0.006	С	no qualifier
Orthophosphate as P	ND	ND	0.00	0.002	А	no qualifier
Phosphorus (AR)	0.003	0.003	0.00	0.002	С	no qualifier
Orthophosphate as P (AR)	0.002	0.001	66.67	0.001	С	no qualifier
Fluoride	ND	ND	0.00	0.1	А	no qualifier
Chloride	3.51	3.47	1.15	0.2	D	no qualifier
Sulfate as SO4	8.57	8.5	0.82	0.3	D	no qualifier

	Acceptance Criteria	Qualifier
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J

Sampling Round: 4 / 2008 Laboratory Work Order: W8K0125 (SVL) & SCW001-21 (AR)

Sample: 6327N04	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Mercury	ND	ND	0.00	0.0002	Α	no qualifier
Calcium	35.6	33.3	6.68	0.04	D	no qualifier
Iron	ND	ND	0.00	0.06	А	no qualifier
Magnesium	22	20.7	6.09	0.06	D	no qualifier
Potassium	3.15	2.97	5.88	0.5	D	no qualifier
Sodium	8.97	8.51	5.26	0.5	D	no qualifier
Arsenic	ND	0.00189	0.00	0.00165	В	no qualifier
Cadmium	ND	ND	0.00	0.0002	А	no qualifier
Chromium	ND	ND	0.00	0.0025	А	no qualifier
Copper	ND	ND	0.00	0.001	А	no qualifier
Lead	ND	ND	0.00	0.001	А	no qualifier
Manganese	ND	ND	0.00	0.001	А	no qualifier
Zinc	ND	ND	0.00	0.005	А	no qualifier
Nitrate/Nitrite as N	2.1	2.07	1.44	0.02	D	no qualifier
Total Alkalinity	163	165	1.22	1	D	no qualifier
Bicarbonate	163	165	1.22	1	D	no qualifier
Carbonate	ND	ND	0.00	1	А	no qualifier
Total Dissolved Solids	200	200	0.00	10	D	no qualifier
Phosphorus	ND	ND	0.00	0.006	А	no qualifier
Orthophosphate as P	ND	ND	0.00	0.002	А	no qualifier
Phosphorus (AR)	0.002	0.003	40.00	0.002	С	no qualifier
Orthophosphate as P (AR)	0.001	0.001	0.00	0.001	С	no qualifier
Fluoride	0.142	0.142	0.00	0.1	С	no qualifier
Chloride	8.36	8.48	1.43	0.2	D	no qualifier
Sulfate as SO4	17.4	17.6	1.14	0.3	D	no qualifier

	Acceptance Criteria	<u>Qualifier</u>
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J

Groundwater Monitoring Program – Data Validation Report

Sampling Round: Monthly Phosphorus Year 2008 (Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>		
Ortho-phosphate-phosphorous	SVL	\boxtimes		
Ortho-phosphate-phosphorous	Aquatic Research	\boxtimes		
Total phosphorus	SVL	\boxtimes		
Total phosphorus	Aquatic Research	\boxtimes		

Laboratory Work Order #: W801668 (SVL), SCW001-01 (Aquatic Research)

Sample Delivery Group Submission Date: 4/16/2008

Complete Chain of Custody:

Signatures: * Dates: ** Sample Dates: ** Sample Times: **

Chain of Custody Matches Lab Report:

Sample Names: ** Sample Dates: ** Sample Times: ** Analyses: **

Sample Preservation (Enter a check mark when "chain of custody report" sheet has preservative items listed at the top.)

Temperature at Delivery: ***

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: 100<u>%</u> (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: all results within acceptance limits

Detail Checking (10% of laboratory data & 100% of Field Data): 100% data check completed.

<u>SVL</u>: *Sampler signature missing on COC. ***Temperature missing. All other COC fields ok. Database has the DTW and sample depth for SVL (21) entered in Aquatic Research (22) fields from the Aquifer Sampling Data sheet for samples 6631M07, 5411R03, and 5311J05.

Aquatic Research: **No COC found at this time.
Data Anomalies: <u>SVL</u> No anomalies <u>Aquatic Research</u> No anomalies

Corrective Action: <u>Corrected the database DTW and sample depth for identified samples</u> <u>above.</u>

Groundwater Monitoring Program – Data Validation Report

Sampling Round: Monthly Phosphorus Year 2008 (Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>
Ortho-phosphate-phosphorous	SVL	\boxtimes
Ortho-phosphate-phosphorous	Aquatic Research	Unknown
Total phosphorus	SVL	\boxtimes
Total phosphorus	Aquatic Research	Unknown

Laboratory Work Order #: W803069 (SVL), SCW001-08 (Aquatic Research)

Sample Delivery Group Submission Date: 6/11/2008

Complete Chain of Custody:

Signatures: * Dates: Sample Dates: Sample Times: (Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: Sample Dates: Sample Times: *** Analyses: (Verify 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation (Enter a check mark when "chain of custody report" sheet has preservative items listed at the top.)

Temperature at Delivery: **

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: 100<u>%</u> (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: all results within acceptance limits

Detail Checking (10% of laboratory data & 100% of Field Data): 100% data check completed.

<u>SVL</u>: *Samplers signature and **temperature missing on COC. ***No sample times on lab report.

<u>Aquatic Research</u>: *Samplers and recorders signatures missing on COC. ***No sample times on lab report.

Data Anomalies: <u>SVL</u> No anomalies <u>Aquatic Research</u> Field Blank had concentration of 0.005 mg/L Total P and Ortho P

Corrective Action:

Groundwater Monitoring Program – Data Validation Report

Sampling Round: Monthly Phosphorus Year 2008 (Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range Hold Time Table.doc		
Ortho-phosphate-phosphorous	SVL	\boxtimes		
Ortho-phosphate-phosphorous	Aquatic Research	\boxtimes		
Total phosphorus	SVL	\boxtimes		
Total phosphorus	Aquatic Research	\boxtimes		

Laboratory Work Order #: W803712 (SVL), SCW001-09 (Aquatic Research)

Sample Delivery Group Submission Date: July 8, 2008

Complete Chain of Custody:

Signatures: * Dates: Sample Dates: Sample Times: (Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: Sample Dates: Sample Times: Analyses: Korrige 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation (Enter a check mark when "chain of custody report" sheet has preservative items listed at the top.)

Temperature at Delivery:

Data Quality Review (Blank, LCS, MS/MSD, Duplicates): Completeness: 100<u>%</u> (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: all results within acceptance limits

Detail Checking (10% of laboratory data & 100% of Field Data): Completed. <u>SVL:</u> No temperature entry. <u>Aquatic Research</u>: COC: *recorder name blank.

Data Anomalies: <u>SVL</u> No anomalies <u>Aquatic Research</u> No anomalies Corrective Action:

Groundwater Monitoring Program – Data Validation Report

Sampling Round: Monthly Phosphorus Year 2008 (Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>		
Ortho-phosphate-phosphorous	SVL	*		
Ortho-phosphate-phosphorous	Aquatic Research	****Unknown		
Total phosphorus	SVL	\boxtimes		
Total phosphorus	Aquatic Research	****Unknown		

Laboratory Work Order #: <u>W8I0065 (SVL)</u>, <u>SCW001-15 (Aquatic Research)</u>

Sample Delivery Group Submission Date: 09/10/2008

Complete Chain of Custody:

Signatures: * Dates: Sample Dates: Sample Times: ** (Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: *** Sample Dates: Sample Times: Analyses: (Verify 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation X (Enter a check mark when "chain of custody report" sheet has preservative items listed at the top.)

Temperature at Delivery: 9.6°C

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: 100<u>%</u> (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: all results within acceptance limits

Detail Checking (10% of laboratory data & 100% of Field Data): <u>SVL</u>

** Two samples for Ortho P have hold times outside the limit: 6211J01S and 6306P01S. No received time; *no sampler's signature; ***sample name on COC is 5310Q01, on lab report, data sheet, and sample bottle it is 5310Q01A. Aquatic Research

****No individual analyzed times on lab report.

Data Anomalies: <u>SVL</u> No anomalies <u>Aquatic Research</u> No anomalies Corrective Action: _____

Groundwater Monitoring Program – Data Validation Report

Sampling Round: Monthly Phosphorus Year 2008 (Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>
Ortho-phosphate-phosphorous	SVL	\boxtimes
Ortho-phosphate-phosphorous	Aquatic Research	\boxtimes
Total phosphorus	SVL	\boxtimes
Total phosphorus	Aquatic Research	\boxtimes

Laboratory Work Order #: <u>W8J0357 (SVL)</u>, <u>SCW001-16 (Aquatic Research)</u>

Sample Delivery Group Submission Date:

Complete Chain of Custody:

Signatures: ** Dates: Sample Dates: Sample Times: (Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: Sample Dates: Sample Times: * Analyses: Korify 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation X (Enter a check mark when "chain of custody report" sheet has preservative items listed at the top.)

Temperature at Delivery: Missing.

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: 100<u>%</u> (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: all results within acceptance limits

Detail Checking (10% of laboratory data & 100% of Field Data): 100% completed. <u>SVL</u>: Database does not have the conductivity entered from the Aquifer Sampling Data Sheet.

<u>Aquatic Research</u>: *No individual analyzed times on lab report. **Recorder signature missing on COC.

Data Anomalies:

<u>SVL</u>

Orthophosphate – Lab duplicate RPD outside control limit; associated results flagged J & UJ Aquatic Research

No anomalies

Corrective Action:

Groundwater Monitoring Program – Data Validation Report

Sampling Round: Monthly Phosphorus Year 2008 (Project/Year found on front page of test report)

Analyte	Laboratory	Within Hold Time Range <u>Hold Time Table.doc</u>
Ortho-phosphate-phosphorous	SVL	\boxtimes
Ortho-phosphate-phosphorous	Aquatic Research	\boxtimes
Total phosphorus	SVL	\square
Total phosphorus	Aquatic Research	\square

Laboratory Work Order #: <u>W8L0200 (SVL)</u>, <u>SCW001-22 (Aquatic Research)</u>

Sample Delivery Group Submission Date: 12/10/2008

Complete Chain of Custody:

Signatures: * Dates: Sample Dates: Sample Times: (Verify Chain of Custody fields above are complete)

Chain of Custody Matches Lab Report:

Sample Names: Sample Dates: Sample Times: ** Analyses: (Verify 'Analytical Report for Samples' page match 'Chain of Custody' page)

Sample Preservation (Enter a check mark when "chain of custody report" sheet has preservative items listed at the top.)

Temperature at Delivery: ***

Data Quality Review (Blank, LCS, MS/MSD, Duplicates):

Completeness: 100<u>%</u> (Used by Mike and Reanette. Sample times # of analytes & # rejected)

Field Duplicate RPD: all results within acceptance limits

Detail Checking (10% of laboratory data & 100% of Field Data): 100% completed. <u>SVL</u>: *Sampler signature and ***temperature missing on COC. <u>Aquatic Research</u>: *Sampler and recorder signatures missing on COC. **No individual analyzed times on lab report

Data Anomalies: <u>SVL</u>

Orthophosphate – matrix spike results not within acceptance limits; associated results flagged J & UJ <u>Aquatic Research</u> No anomalies Corrective Action: _____

Sampling Round: Monthly Phosphorus Laboratory Work Order: W801668 (SVL) & SCW001-001 (AR)

	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Phosphorus	ND	ND	#VALUE!	0.006	А	no qualifier
Orthophosphate as P	0.005	0.005	0.00	0.002	С	no qualifier
Phosphorus (AR)	0.005	0.005	0.00	0.002	С	no qualifier
Orthophosphate as P (AR)	0.004	0.004	0.00	0.001	С	no qualifier

Note: If the sample result is ND and the duplicate has a result, use the MRL. If both sample and field duplicate is ND, relative % difference is 0.

	Acceptance Criteria	<u>Qualifier</u>
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J

Sampling Round: Monthly Phosphorus Laboratory Work Order: W803069 (SVL) & SCW001-008 (AR)

	Sample Result	Field Duplicate Result	RPD
Phosphorus	0.006	0.006	0.00

Phosphorus	0.006	0.006	0.00	0.006	С	no qualifier
Orthophosphate as P	0.003	0.003	0.00	0.002	С	no qualifier
Phosphorus (AR)	0.003	0.005	50.00	0.002	С	no qualifier
Orthophosphate as P (AR)	0.001	0.002	66.67	0.001	С	no qualifier

MRL

Case

Note: If the sample result is ND and the duplicate has a result, use the MRL. If both sample and field duplicate is ND, relative % difference is 0.

	Acceptance Criteria	<u>Qualifier</u>
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J

Sampling Round: Monthly Phosphorus Laboratory Work Order: W803712 (SVL) & SCW001-09 (AR)

Sample: 5310Q01a	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Phosphorus	ND	ND	0.00	0.006	А	no qualifier
Orthophosphate as P	0.003	0.003	0.00	0.002	С	no qualifier
Phosphorus (AR)	0.003	0.003	0.00	0.002	С	no qualifier
Orthophosphate as P (AR)	0.002	0.002	0.00	0.001	С	no qualifier

Note: If the sample result is ND and the duplicate has a result, use the MRL. If both sample and field duplicate is ND, relative % difference is 0.

	Acceptance Criteria	<u>Qualifier</u>
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J
Sampling Round: Monthly Phosphorus		

Laboratory Work Order: W8I0065 (SVL) & SCW001-15 (AR)

Sample: 5310Q01A	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Phosphorus	ND	0.008	0.00	0.006	В	no qualifier
Orthophosphate as P	0.003	ND	0.00	0.002	В	no qualifier
Phosphorus (AR)	0.003	0.003	0.00	0.002	С	no qualifier
Orthophosphate as P (AR)	0.002	0.002	0.00	0.001	С	no qualifier

Note: If the sample result is ND and the duplicate has a result, use the MRL. If both sample and field duplicate is ND, relative % difference is 0.

	Acceptance Criteria	<u>Qualifier</u>
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J

Sampling Round: Monthly Phosphorus Laboratory Work Order: W8J0357 (SVL) & SCW001-16 (AR)

SAMPLE: 4310Q01	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Phosphorus	ND	ND	0.00	0.006	А	no qualifier
Orthophosphate as P	0.003	0.003	0.00	0.002	С	no qualifier
Phosphorus (AR)	0.004	0.004	0.00	0.002	С	no qualifier
Orthophosphate as P (AR)	0.003	0.003	0.00	0.001	С	no qualifier

Note: If the sample result is ND and the duplicate has a result, use the MRL. If both sample and field duplicate is ND, relative % difference is 0.

	Acceptance Criteria	<u>Qualifier</u>
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J
Sampling Round: Monthly Phosphorus		

Laboratory Work Order: W8L0200 (SVL) & SCW001-22 (AR)

	Sample Result	Field Duplicate Result	RPD	MRL	Case	
Phosphorus	ND	ND	0.00	0.006	А	no qualifier
Orthophosphate as P	0.004	ND	0.00	0.002	В	no qualifier
Phosphorus (AR)	0.006	0.005	18.18	0.002	С	no qualifier

Note: If the sample result is ND and the duplicate has a result, use the MRL. If both sample and field duplicate is ND, relative % difference is 0.

	Acceptance Criteria	<u>Qualifier</u>
case A - both results are ND	no qualifier	
case B - one result is ND	absolute difference between result and MRL less than MRL	J
case C - results are less than 5x MRL	absolute difference of results less than MRL	J
case D - results are greater than or equal to 5x MRL	relative percent difference less than 30%	J
case E - one result is less than 5x MRL and one result is greater than or equal to 5x MRL	relative percent difference less than 30%	J