

Protecting Our Water Environment

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Metropolitan Water Reclamation District of Greater Chicago

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TUNNEL AND RESERVOIR PLAN
CALUMET TUNNEL SYSTEM
2006 ANNUAL GROUNDWATER MONITORING REPORT

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INTRODUCTION

This report contains 2006 data for the TARP Calumet Tunnel System compiled from the

January 26, 2006, April 20, 2006, June 15, 2006, August 23, 2006, or November 2, 2006, because

TABLE 1: SUMMARY STATISTICS OF THE 2006 DATA FOR THE WATER QUALITY MONITORING WELLS IN THE CALUMET TUNNEL SYSTEM: WELLS QC-1, QC-2, QC-2.1, QC-2.2, AND QC-3

Parameter		Well Number				
		QC-1	QC-2	QC-2.1	QC-2.2	QC-3
Cl, mg/L	Minimum	62	34	14	13	12
	Mean	69	36	14	20	17
	Maximum	72	38	14	31	23
	Std. Dev.	4	2	0	10	6
	Median	70	37	14	15	16
	Coeff. Var.	6	4	0	50	33
Cond., µmhos/cm	Minimum	330	254	356	251	345
	Mean	933	452	356	420	448
	Maximum	1177	583	356	559	650
	Std. Dev.	311	150	0	156	175
	Median	1003	521	356	450	349
	Coeff. Var.	33	33	0	37	39
FC, ¹ cfu/100 mL	Minimum	1	1	1	1	1
	Geo. Mean	1	108	1	1	1
	Maximum	4	6000	1	1	1
	Geo. Std. Dev.	1	20	0	0	0
	Median	1	213	1	1	1
	Coeff. Var.	97	19	0	0	0
Hard., as CaCO ₃ , mg/L	Minimum	503	87	46	48	65
	Mean	538	92	46	52	67
	Maximum	566	97	46	57	70
	Std. Dev.	23	4	0	5	3
	Median	542	91	46	52	66
	Coeff. Var.	4	4	0	9	4
NH ₄ ⁺ -N, mg/L	Minimum	0.24	0.27	0.34	0.03	0.35
	Mean	0.28	0.51	0.34	0.24	0.38
	Maximum	0.31	0.73	0.34	0.44	0.41
	Std. Dev.	0.03	0.17	0.00	0.21	0.03
	Median	0.29	0.51	0.34	0.25	0.37
	Coeff. Var.	11.32	34.20	0.00	85.49	8.11

TABLE 2: SUMMARY STATISTICS OF THE 2006 DATA FOR THE WATER QUALITY MONITORING WELLS IN THE CALUMET TUNNEL SYSTEM: WELLS QC-4, QC-5, QC-6, QC-7, AND QC-9

Parameter	Well Number				
	QC-4	QC-5	QC-6	QC-7	QC-9
Cl, Minimum	1	24	14	2	1

TABLE 2 (Continued): SUMMARY STATISTICS OF THE 2006 DATA FOR THE WATER QUALITY MONITORING WELLS IN THE CALUMET TUNNEL SYSTEM: WELLS QC-4, QC-5, QC-6, QC-7, AND QC-9

Parameter		Well Number				
		QC-4	QC-5	QC-6	QC-7	QC-9
pH	Minimum	7.7	7.5	7.4	8.5	7.4
	Mean	8.4	8.3	8.3	8.6	7.8
	Maximum	8.8	8.8	8.8	8.6	8.3
	Std. Dev.	0.6	0.7	0.8	0.1	0.5
	Median	8.8	8.6	8.7	8.6	7.6
	Coeff. Var.	7.5	8.4	9.4	0.7	6.1
SO ₄ , mg/L	Minimum	14	5	10	1	30
	Mean	16	6	11	2	31
	Maximum	18	7	12	2	32
	Std. Dev.	2	1	1	1	1
	Median	15	6	11	2	31
	Coeff. Var.	13	17	9	35	3
TDS, mg/L	Minimum	428	570	482	410	312
	Mean	435	578	487	453	345
	Maximum	442	588	494	512	364
	Std. Dev.	7	9	6	53	28
	Median	436	576	486	438	358
	Coeff. Var.	2	2	1	12	8
TOC, mg/L	Minimum	0.4	0.8	1.1	1.1	0.8
	Mean	0.5	0.9	1.2	1.2	0.8
	Maximum	0.5	1.2	1.2	1.4	0.8
	Std. Dev.	0.1	0.2	0.1	0.2	0.0
	Median	0.5	0.8	1.2	1.2	0.8
	Coeff. Var.	12.4	24.7	4.9	12.4	0.0

¹For purposes of statistical evaluation, fecal coliform values less than 1 were set equal to 1.

TABLE 3: SUMMARY STATISTICS OF THE 2006 DATA FOR THE WATER QUALITY MONITORING WELLS IN THE CALUMET TUNNEL SYSTEM: WELLS QC-10 THROUGH QC-14

Parameter		Well Number				
		QC-10	QC-11	QC-12	QC-13	QC-14
Cl, mg/L	Minimum	29	23	23	42	87
	Mean	33	28	33	43	95
	Maximum	37	36	38	45	103
	Std. Dev.	4	7	8	2	8
	Median	32	24	37	43	94
	Coeff. Var.	12	26	26	4	8
Cond., µmhos/cm	Minimum	369	312	526	334	442
	Mean	460	370	1031	515	780
	Maximum	621	454	1441	670	969
	Std. Dev.	140	74	465	169	294
	Median	390	345	1125	540	930
	Coeff. Var.	30	20	45	33	38
FC, ¹ cfu/100 mL	Minimum	1	1	1	1	1
	Geo. Mean	1	1	1	1	1
	Maximum	1	1	1	1	1
	Geo. Std. Dev.	0	0	0	0	0
	Median	1	1	1	1	1
	Coeff. Var.	0	0	0	0	0
Hard., as CaCO ₃ , mg/L	Minimum	11	20	229	36	111
	Mean	11	21	232	37	114
	Maximum	12	21	236	38	117
	Std. Dev.	1	1	4	1	3
	Median	11	21	230	36	115
	Coeff. Var.	5	3	2	3	3
NH ₄ ⁺ -N, mg/L	Minimum	0.02	0.06	0.23	0.11	0.13
	Mean	0.07	0.08	0.27	0.16	0.15
	Maximum	0.12	0.10	0.29	0.19	0.19
	Std. Dev.	0.05	0.02	0.03	0.04	0.03
	Median	0.07	0.08	0.28	0.18	0.14
	Coeff. Var.	71.43	25.00	12.05	27.24	20.96

TABLE 4: SUMMARY STATISTICS OF THE 2006 DATA FOR THE WATER QUALITY MONITORING WELLS IN THE CALUMET TUNNEL SYSTEM: WELLS QC-15 THROUGH QC-19

Parameter		Well Number				
		QC-15	QC-16	QC-17	QC-18	QC-19
Cl, mg/L	Minimum	21	22	14	2	1
	Mean	22	24	16	7	3
	Maximum	22	26	20	10	5
	Std. Dev.	1	2	3	4	2
	Median	22	23	15	8	2

TABLE 4 (Continued): SUMMARY STATISTICS OF THE 2006 DATA FOR THE WATER QUALITY MONITORING WELLS IN THE CALUMET TUNNEL SYSTEM:
WELLS QC-15 THROUGH QC-19

Parameter	Well Number				
	QC-15	QC-16	QC-17	QC-18	QC-19

TABLE 5: SUMMARY STATISTICS OF THE 2006 DATA FOR THE WATER QUALITY MONITORING WELLS IN THE CALUMET TUNNEL SYSTEM: WELLS QC-20 THROUGH QC-24

Parameter		Well Number				
		QC-20 ¹	QC-21	QC-22	QC-23	QC-24
Cl, mg/L	Minimum	—	14	14	18	27
	Mean	—	18	14	20	27
	Maximum	—	24	15	21	28
	Std. Dev.	—	5	1	2	1
	Median	—	17	14	20	27
	Coeff. Var.	—	28	4	8	2
Cond., µmhos/cm	Minimum	—	314	259	346	258
	Mean	—	455	342	475	553
	Maximum	—	571	385	549	993
	Std. Dev.	—	130	72	112	389
	Median	—	480	383	530	407
	Coeff. Var.	—	29	21	24	70
FC, ² cfu/100 mL	Minimum	—	1	1	1	1
	Geo. Mean	—	1	1	1	1
	Maximum	—	1	1	1	1
	Geo. Std. Dev.	—	0	0	0	0
	Median	—	1	1	1	1
	Coeff. Var.	—	0	0	0	0
Hard., as CaCO ₃ , mg/L	Minimum	—	12	25	6	11
	Mean	—	17	26	6	12
	Maximum	—	26	27	6	12
	Std. Dev.	—	8	1	0	1
	Median	—	13	26	6	12
	Coeff. Var.	—	46	4	0	5
NH ₄ ⁺ -N, mg/L	Minimum	—	0.03	0.10	0.03	0.07
	Mean	—	0.07	0.18	0.09	0.11
	Maximum	—	0.15	0.32	0.21	0.18
	Std. Dev.	—	0.07	0.12	0.10	0.06
	Median	—	0.03	0.13	0.04	0.08
	Coeff. Var.	—	98.97	65.07	108.39	55.30

TABLE 5 (Continued): SUMMARY STATISTICS OF THE 2006 DATA FOR THE WATER QUALITY MONITORING WELLS IN THE CALUMET TUNNEL SYSTEM: WELLS QC-20 THROUGH QC-24

Parameter	Well Number					
	QC-20 ¹	QC-21	QC-22	QC-23	QC-24	
pH	Minimum	—	7.6	7.7	7.9	7.9
	Mean	—	8.2	8.2	8.7	8.4
	Maximum	—	8.8	8.6	9.5	9.0
	Std. Dev.	—	0.6	0.5	0.8	0.6
	Median	—	8.3	8.2	8.6	8.3
	Coeff. Var.	—	7.3	5.5	9.3	6.6
SO ₄ , ³ mg/L	Minimum	—	0.4	2	1	0.4
	Mean	—	6.8	2	1	0.9
	Maximum	—	19.0	3	1	2.0
	Std. Dev.	—	10.6	1	0	0.9
	Median	—	1.0	2	1	0.4
	Coeff. Var.	—	155.4	25	0	99.0
TDS, mg/L	Minimum	—	346	256	342	256
	Mean	—	367	269	363	271
	Maximum	—	380	278	380	298
	Std. Dev.	—	19	11	19	23
	Median	—	376	272	366	260
	Coeff. Var.	—	5	4	5	9
TOC, ⁴ mg/L	Minimum	—	0.8	0.5	0.2	0.2
	Mean	—	2.8	0.9	0.3	0.3
	Maximum	—	6.7	1.2	0.4	0.5
	Std. Dev.	—	3.4	0.4	0.1	0.2
	Median	—	1.0	1.1	0.3	0.3
	Coeff. Var.	—	118.2	40.6	33.3	45.8

¹No samples were obtained, the well was dry during 2006.

²For purposes of statistical evaluation, fecal coliform values less than 1 were set equal to 1.

³For purposes of statistical evaluation, SO₄ values less than 0.4 (the detection limit) were set equal to 0.4.

⁴For purposes of statistical evaluation, TOC values less than 0.2 (the detection limit) were set equal to 0.2.

TABLE 6 (Continued): SUMMARY STATISTICS OF THE 2006 DATA FOR THE WATER
QUALITY MONITORING WELLS IN THE CALUMET TUNNEL SYSTEM:
WELLS QC-25 THROUGH QC-29

TABLE 7: SUMMARY STATISTICS OF THE 2006 DATA FOR THE WATER QUALITY MONITORING WELLS IN THE CALUMET TUNNEL SYSTEM: WELLS QC-30 THROUGH QC-34

Parameter		Well Number				
		QC-30	QC-31	QC-32 ¹	QC-33 ¹	QC-34 ¹
Cl, mg/L	Minimum	10	17	—	—	—
	Mean	16	18	—	—	—
	Maximum	19	18	—	—	—
	Std. Dev.	3	0	—	—	—
	Median	16	18	—	—	—
	Coeff. Var.	19	2	—	—	—
Cond., µmhos/cm	Minimum	250	318	—	—	—
	Mean	502	688	—	—	—
	Maximum	648	913	—	—	—
	Std. Dev.	174	245	—	—	—
	Median	596	810	—	—	—
	Coeff. Var.	35	36	—	—	—
FC, ² cfu/100 mL	Minimum	1	1	—	—	—
	Geo. Mean	2	1	—	—	—
	Maximum	49	1	—	—	—
	Geo. Std. Dev.	19	0	—	—	—
	Median	1	1	—	—	—
	Coeff. Var.	804	0	—	—	—
Hard., as CaCO ₃ , mg/L	Minimum	55	219	—	—	—
	Mean	56	230	—	—	—
	Maximum	57	238	—	—	—
	Std. Dev.	1	8	—	—	—
	Median	56	232	—	—	—
	Coeff. Var.	2	3	—	—	—
NH ₄ ⁺ -N, ³ mg/L	Minimum	0.02	0.78	—	—	—
	Mean	0.14	0.86	—	—	—
	Maximum	0.27	0.94	—	—	—
	Std. Dev.	0.11	0.07	—	—	—
	Median	0.15	0.85	—	—	—
	Coeff. Var.	79.29	7.59	—	—	—

TABLE 7 (Continued): SUMMARY STATISTICS OF THE 2006 DATA FOR THE WATER QUALITY MONITORING WELLS IN THE CALUMET TUNNEL SYSTEM:
WELLS QC-30 THROUGH QC-34

Parameter	Well Number				
	QC-30	QC-31	QC-32 ¹	QC-33 ¹	QC-34 ¹

TABLE 8: SUMMARY STATISTICS OF THE 2006 DATA FOR THE WATER QUALITY MONITORING WELLS IN THE CALUMET TUNNEL SYSTEM: WELLS QC-35 THROUGH QC-37

Parameter		Well Number		
		QC-35 ¹	QC-36 ¹	QC-37
Cl, mg/L	Minimum	—	—	25
	Mean	—	—	25
	Maximum	—	—	25
	Std. Dev.	—	—	0
	Median	—	—	25
	Coeff. Var.	—	—	0
Cond., µmhos/cm	Minimum	—	—	710
	Mean	—	—	710
	Maximum	—	—	710
	Std. Dev.	—	—	0
	Median	—	—	710
	Coeff. Var.	—	—	0
FC, ² cfu/100 mL	Minimum	—	—	1
	Geo. Mean	—	—	1
	Maximum	—	—	1
	Geo. Std. Dev.	—	—	0
	Median	—	—	1
	Coeff. Var.	—	—	0
Hard., as CaCO ₃ , mg/L	Minimum	—	—	22
	Mean	—	—	22
	Maximum	—	—	22
	Std. Dev.	—	—	0
	Median	—	—	22
	Coeff. Var.	—	—	0
NH ₄ ⁺ -N, mg/L	Minimum	—	—	0.12
	Mean	—	—	0.12
	Maximum	—	—	0.12
	Std. Dev.	—	—	0.00
	Median	—	—	0.12
	Coeff. Var.	—	—	0.00

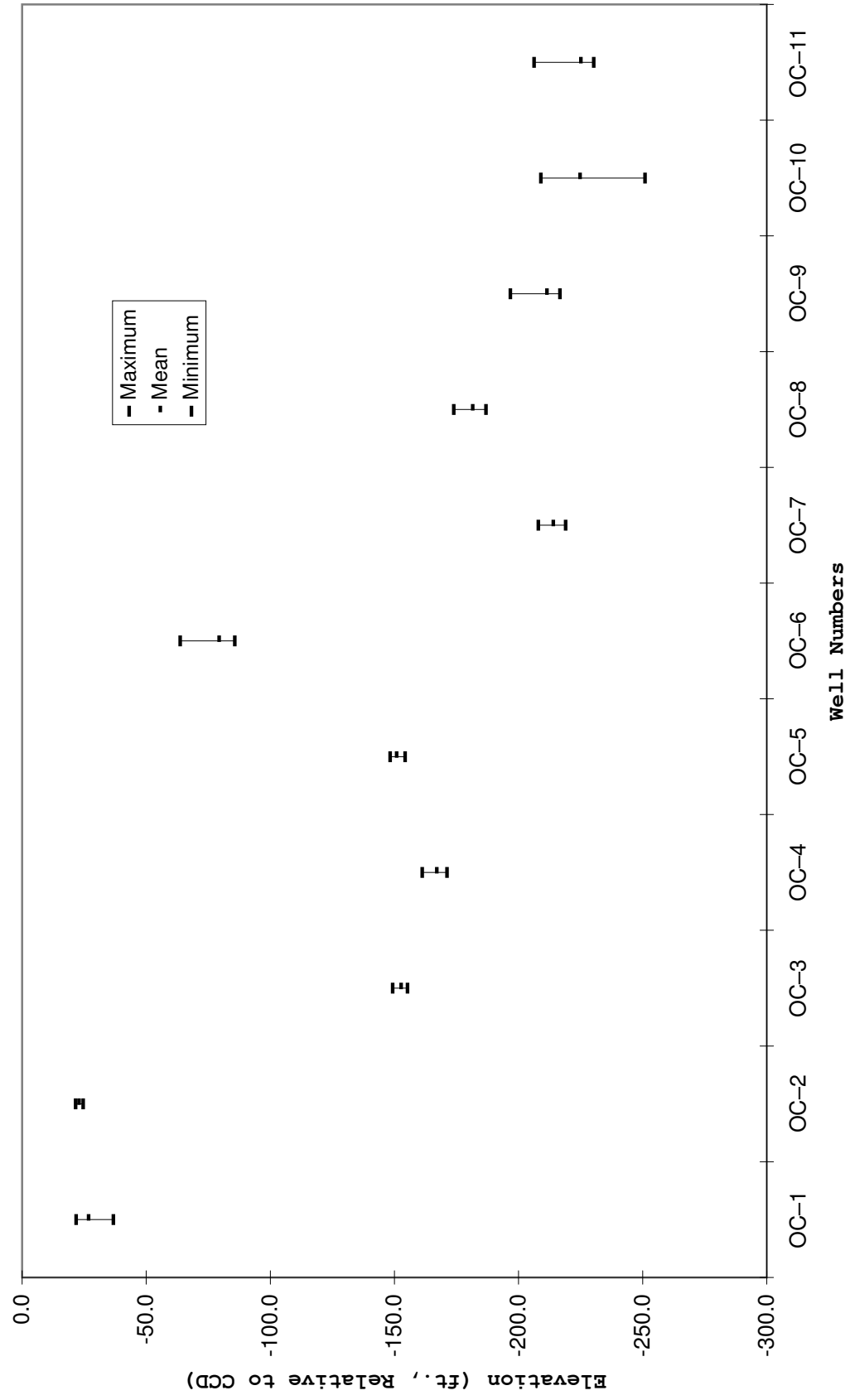
TABLE 8 (Continued): SUMMARY STATISTICS OF THE 2006 DATA FOR THE WATER QUALITY MONITORING WELLS IN THE CALUMET TUNNEL SYSTEM:
WELLS QC-35 THROUGH QC-37

Parameter	Well Number		
	QC-35 ¹	QC-36 ¹	QC-37
pH	Minimum	—	8.1
	Mean	—	8.1
	Maximum	—	8.1
	Std. Dev.	—	0.0
	Median	—	8.1
	Coeff. Var.	—	0.0
SO ₄ , mg/L	Minimum	—	121
	Mean	—	121
	Maximum	—	121
	Std. Dev.	—	0
	Median	—	121
	Coeff. Var.	—	0
TDS, mg/L	Minimum	—	1050
	Mean	—	1050
	Maximum	—	1050
	Std. Dev.	—	0
	Median	—	1050
	Coeff. Var.	—	0
TOC, mg/L	Minimum	—	4.5
	Mean	—	4.5
	Maximum	—	4.5
	Std. Dev.	—	0.0
	Median	—	5.0
	Coeff. Var.	—	0.0

¹No samples were obtained, the well was dry during 2006.

²For purposes of statistical evaluation, fecal coliform values less than 1 were set equal to 1.

FIGURE 1: 2006 MINIMUM, MEAN, AND MAXIMUM WATER LEVEL ELEVATIONS FOR THE CALUMET TUNNEL SYSTEM OBSERVATION WELLS



APPENDIX AI

LOCATION MAP OF GROUNDWATER OBSERVATION WELLS
OC-1 THROUGH OC-11
IN THE CALUMET TUNNEL SYSTEM

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APPENDIX AII

2006 GROUNDWATER LEVEL ELEVATION DATA
FOR OBSERVATION WELLS OC-1 THROUGH OC-11
IN THE CALUMET TUNNEL SYSTEM

TABLE AII-1: 2006 GROUNDWATER LEVEL ELEVATION* DATA FOR OBSERVATION

APPENDIX AIII

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APPENDIX AIV

2006 GROUNDWATER QUALITY DATA FOR MONITORING WELLS
QC-1, QC-2, QC-2.1, QC-2.2, QC-3 THROUGH QC-7, AND QC-9 THROUGH QC-37
IN THE CALUMET TUNNEL SYSTEM

TABLE AIV-1: 2006 pH, CONDUCTIVITY, TEMPERATURE, HARDNESS, AMMONIA NITROGEN, AND CHLORIDE DATA FOR WATER QUALITY MONITORING WELLS QC-1, QC-2, QC-2.1, QC-2.2, QC-3 THROUGH QC-7, AND QC-9 THROUGH QC-37 IN THE CALUMET TUNNEL SYSTEM

Well	Date of Sampling	pH ¹	Cond. ¹ µmhos/cm	Temp. °C	Hard. as CaCO ₃ mg/L	NH ₄ ⁺ -N mg/L	Cl mg/L
QC-1	3/2/06	7.2	330	11	503	0.24	62
QC-1	3/30/06	7.5	993	13	555	0.26	66
QC-1	4/13/06	7.4	1177	13	566	0.31	68
QC-1	9/28/06	7.7	925	13	520	0.31	71
QC-1	10/26/06	7.4	1012	12	539	0.26	72
QC-1	12/7/06	7.9	1160	11	545	0.31	72
QC-2	3/2/06	7.1	254	12	87	0.41	35
QC-2	3/30/06	8.2	485	13	96	0.40	34
QC-2	4/13/06	7.6	583	14	97	0.27	36
QC-2	7/20/06	7.5	272	14	92	0.62	37
QC-2	9/28/06	8.1	558	14	89	0.61	38
QC-2	10/26/06	8.5	557	12	90	0.73	38
QC-2.1	3/2/06	7.2	356	11	46	0.34	14
QC-2.1	3/30/06			Well could not be sampled			
QC-2.1	4/13/06			Well could not be sampled			
QC-2.2	3/2/06	7.3	251	11	57	0.44	31
QC-2.2	3/30/06	8.2	450	13	48	0.25	13
QC-2.2	4/13/06	7.5	559	14	52	0.03	15
QC-3	5/18/06	7.4	349	12	70	0.41	16
QC-3	8/31/06	8.4	650	14	66	0.37	23
QC-3	11/9/06	7.9	345	13	65	0.35	12
QC-4	5/18/06	7.7	353	12	11	0.14	10
QC-4	8/31/06	8.8	697	15	11	0.06	1
QC-4	11/9/06	8.8	386	12	10	0.11	10
QC-5	5/18/06	7.5	477	12	10	0.13	25
QC-5	8/31/06	8.6	962	15	10	0.10	25
QC-5	11/9/06	8.8	558	13	10	0.07	24

TABLE AIV-1 (Continued): 2006 pH, CONDUCTIVITY, TEMPERATURE, HARDNESS, AMMONIA NITROGEN, AND CHLORIDE DATA FOR WATER QUALITY MONITORING WELLS QC-1, QC-2, QC-2.1, QC-2.2, QC-3 THROUGH QC-7, AND QC-9 THROUGH QC-37 IN THE CALUMET TUNNEL SYSTEM

Well	Date of Sampling	pH ¹	Cond. ¹ μmhos/cm	Temp. °C	Hard. as CaCO ₃ mg/L	NH ₄ ⁺ -N mg/L	Cl mg/L
QC-30	6/15/06	8.4	593	15	57	0.21	17
QC-30	8/24/06	7.6	311	12	55	0.02	10
QC-30	9/21/06	7.5	250	12	55	0.24	19
QC-31	1/26/06	7.6	913	12	230	0.91	18
QC-31	3/9/06	7.5	837	12	234	0.78	18
QC-31	4/19/06	7.5	819	13	238	0.94	17
QC-31	6/15/06	7.8	800	16	235	0.89	18
QC-31	8/24/06	7.5	440	13	219	0.81	18
QC-31	9/21/06	7.7	318	12	221	0.81	18
QC-32	1/26/06						
QC-32	3/9/06						
QC-32	4/18/06						
QC-32	6/15/06						
QC-32	8/24/06						
QC-32	11/2/06						
QC-33	1/12/06						
QC-33	3/9/06						
QC-33	4/18/06						
QC-33	6/15/06						
QC-33	9/21/06						
QC-33	11/2/06						
QC-34	4/20/06						
QC-34	3/9/06						
QC-34	4/20/06						
QC-34	6/15/06						
QC-34	9/21/06						
QC-34	11/2/06						
QC-35	1/26/06						
QC-35	3/9/06						

TABLE AIV-2 (Continued): 2006 SULFATE, TOTAL ORGANIC CARBON, TOTAL DISSOLVED SOLIDS, FECAL COLIFORM, WATER ELEVATION, AND RECHARGE DATA FOR WATER QUALITY MONITORING WELLS QC-1, QC-2, QC-2.1, QC-2.2, QC-3 THROUGH QC-7, AND QC-9 THROUGH QC-37 IN THE CALUMET TUNNEL SYSTEM

Well	Date of Sampling	SO ₄ mg/L	TOC mg/L	TDS mg/L	FC ¹ cfu/100 mL	Water Elevation ² Feet	Recharge ³ Hours
QC-6	5/18/06	10	1.2	486	<1	-206	<48
QC-6	8/31/06	11	1.1	494	<1	-207	<48
QC-6	11/9/06	12	1.2	482	<1	-201	<48
QC-7	5/17/06	2	1.1	438	<1	-178	<48
QC-7	8/31/06	2	1.4	512	<1	-163	<48
QC-7	11/9/06	1	1.2	410	<1	-175	<48
QC-9	1/12/06	31	0.8	358	<1	-239	<48
QC-9	5/17/06	30	0.8	312	<1	-246	<48
QC-9	7/20/06	32	0.8	364	<1	-247	<48
QC-10	5/24/06	1	0.4	436	<1	-220	<4
QC-10	8/23/06	1	0.3	390	<1	-223	<4
QC-10	11/30/06	1	0.4	348	<1	-209	<4
QC-11	1/5/06	2	0.3	280	<1	-219	<4
QC-11	5/24/06	1	0.4	286	<1	-220	<4
QC-11	8/23/06	<0.4	0.2	292	<1	-221	<4
QC-12	1/5/06	394	0.5	962	<1	-243	<4
QC-12	5/24/06	382	0.5	956	<1	-239	<4
QC-12	8/23/06	405	0.5	5s			

(16878869(s))0.47869(2277(.)-0.378(0)9.06272(6)9.06226()-3016.24(1)-0.956417()-3417(.)-0.479431(5)-0.956

TABLE AIV-2 (Continued): 2006 SULFATE, TOTAL ORGANIC CARBON,
TOTAL DISSOLVED SOLIDS, FECAL COLIFORM, WATER ELEVATION, AND
RECHARGE DATA FOR WATER QUALITY MONITORING WELLS
QC-1, QC-2, QC-2.1, QC-2.2, QC-3 THROUGH QC-7, AND QC-9 THROUGH QC-37
IN THE CALUMET TUNNEL SYSTEM

Well	Date of Sampling	SO ₄ mg/L	TOC mg/L	TDS mg/L	FC ¹ cfu/100 mL	Water Elevation ² Feet	Recharge ³ Hours
QC-15	3/9/06	2	0.9	372	<1	-229	<48
QC-15	7/27/06	<0.4	0.8	344	<1	-225	<48
QC-15	9/28/06	<0.4	0.8	292	<1	-221	<48
QC-16	1/12/06	60	0.5	572	<1	-214	<48
QC-16	8/31/06	59	0.6	588	<1	-254	<48
QC-16	11/9/06	67	0.6	530	<1	-254	<48
QC-17	6/8/06	164	0.6	530	<1	-160	<48
QC-17	7/27/06	192	0.6	500	<1	-157	<48
QC-17	12/7/06	191	0.7	578	5	-130	<48
QC-18	3/9/06	42	0.4	362	<1	-207	<48
QC-18	7/27/06	35	0.4	388	<1	-205	<48
QC-18	10/26/06	39	0.3	390	<1	-212	<48
QC-19	5/25/06	167	0.5	474	<1	-115	<48
QC-19	8/31/06	171	0.5	500	<1	-98	<48
QC-19	11/9/06	173	0.6	492	<1	-109	<48
QC-20	1/12/06			Well could not be sampled			
QC-20	3/1/06			Well could not be sampled			
QC-20	4/3/06			Well could not be sampled			
QC-21	5/25/06	1	1.0	346	<1	-266	<48
QC-21	8/17/06	<0.4	0.8	376	<1	-267	<48
QC-21	11/9/06	19	6.7	380	<1	-266	<48
QC-22	5/25/06	2	1.1	278	<1	-264	<48
QC-22	8/17/06	2	0.5	256	<1	-265	<48
QC-22	11/9/06	3	1.2	272	<1	-235	<48

TABLE AIV-2 (Continued): 2006 SULFATE, TOTAL ORGANIC CARBON,

TABLE AIV-2 (Continued): 2006 SULFATE, TOTAL ORGANIC CARBON,
TOTAL DISSOLVED SOLIDS, FECAL COLIFORM, WATER ELEVATION, AND
RECHARGE DATA FOR WATER QUALITY MONITORING WELLS
QC-1, QC-2, QC-2.1, QC-2.2, QC-3 THROUGH QC-7, AND QC-9 THROUGH QC-37
IN THE CALUMET TUNNEL SYSTEM

Date of	SO ₄	Water
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