Protecting Our Water Environment

Metropolitan Water Reclamation District of Greater Chicago

RESEARCH AND DEVELOPMENT DEPARTMENT

REPORT NO. 08-54

TUNNEL AND RESERVOIR PLAN
THORNTON TRANSITIONAL FLOOD CONTROL RESERVOIR
WATER QUALITY MONITORING WELLS
2007 ANNUAL GROUNDWATER MONITORING REPORT

SEPTEMBER 2008

Protecting Our Water Environment

Metropolitan Water Reclamation District of Greater Chicago

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September 19, 2008

Ms. Marcia Willhite, Chief
Bureau of Water
Illinois Environmental Protection Agency
P. O. Box 19276
Springfield, IL 62794–9276

Dear Ms. Willhite:

Subject: Tunnel and Reservoir Plan, Thornton Transitional Flood Control Reservoir Water Quality Monitoring Wells, 2007 Annual Groundwater Monitoring Report

Enclosed are three copies of "Tunnel and Reservoir Plan, Thornton Transitional Flood Control Reservoir Water Quality Monitoring Wells, 2007 Annual Groundwater Monitoring Report."

Very truly yours,

Louis Kollias
Director
Research and Development

LK:HZ:lmf
Enclosures
cc w/enc: Ms. Sally K. Swanson (USEPA Region V—WC15J) (2)
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TUNNEL AND RESERVOIR PLAN
THORNTON TRANSITIONAL FLOOD CONTROL RESERVOIR
WATER QUALITY MONITORING WELLS
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Research and Development Department
Louis Kollias, Director

September 2008

TABLE OF CONTENTS

LIST OF TABLES

LIST OF TABLES (Continued)

LIST OF FIGURES

INTRODUCTION

The purpose of this report is to meet the reporting requirements of the Illinois Environmental Protection Agency (IEPA) relative to annual flood control utilization for the Thornton Transitional Flood Control Reservoir (Reservoir) for 2007. The specific informational requirements are described in the June 26, 2001, Scope of Work (SOW) for Groundwater Quality Monitoring of the Reservoir. The SOW was approved in a letter from the IEPA dated August 6, 2001.

The reporting requirements are found in Section 7 of the SOW. The requirements for the annual flood control utilization of the Reservoir shall include:

1. The year's monitoring wells sample analysis results.

2. Reservoir content grab sample results.

3. Detailed review and comparison of the monitoring well sampling analysis results, utilizing the monitoring well statistical background determinations.

Objective

The objective of collecting groundwater quality data from the four monitoring wells QT–1, QT–2, QT–3, and QT–4 and Reservoir content grab samples is to assess any possible contamination of the monitoring wells which may result from the seepage produced during the fill event for any of the parameters indicated in Table 2 of the SOW (Table 1).

Project Description

The Reservoir is in the West Lobe of the Thornton Quarry, southeast of the intersection of the Tri-State Tollway and Halsted Street in Thornton, Illinois (Figure 1). The Reservoir is the final structural measure to be implemented for the Little Calumet River Watershed under the Natural Resources Conservation Service (NRCS) Little Calumet Watershed Plan of November 1998. The Reservoir will provide 3.1 billion gallons of floodwater storage, which represents the capture of the 100-year storm event from Thorn Creek at a point just south of the Tri-State Tollway.

The project will provide flood control benefits for 21 businesses and 4,400 residences, for an average benefit of $6.8 million per year. Within the Little Calumet watershed are the communities of Blue Island, Calumet City, Dixmoor, Dolton, Glenwood, Harvey, Lansing, Phoenix, Riverdale, and South Holland, which will receive flood control benefits.

The Reservoir consists of a diversion structure at Thornton Creek, a 24-foot diameter dropshaft and 22-foot diameter conveyance tunnel to the Lower West Lobe of Thornton Quarry. The project also includes an 8-foot diameter tunnel connected to the Calumet Tunnel and Reservoir Plan System that will be utilized for Reservoir dewatering purposes only.

Field Sampling

There were three fill events at the Thornton Transitional Reservoir during the year 2007: January 5–6, 2007, April 25–26, 2007, and August 23–25, 2007.

The January diversion event began on January 5, 2007, resulting in 442 million gallons of diversion water from Thorn Creek being diverted into the Reservoir. The April diversion event began on April 25, 2007, resulting in 1.096 billion gallons of diversion water being stored in the Reservoir. The final diversion took place on August 23, 2007, resulting in 1.570 billion gallons of diversion being stored in the Reservoir.

During these fill events, in accordance with the SOW, samples were collected from the four water quality monitoring wells surrounding the Reservoir and grab samples were taken from the Reservoir. The parameters analyzed for are found in Table 2 of the SOW (Table 1).

Analytical Data Results

Tables 2 through 5, 7 through 10, and 12 through 15 contain the results of the analyses of the four water quality monitoring wells surrounding the Reservoir along with the calculated upper 95% confidence limits for the January 5–6, 2007, April 25–26, 2007, August 23–25, 2007, diversions, respectively. Tables 6, 11, and 16 contain the results of the grab samples from the Reservoir for the January 5–6, 2007, April 25–26, 2007, August 23–25, 2007, diversions, respectively.

Discussion of Results

During all three fill events, samples of both the water quality monitoring wells and the Reservoir were collected as long as there was water in the Reservoir per requirements of the SOW.

During the January 5–6, 2007, fill event, the 95 percent upper confidence limit from the background concentration was exceeded for the following parameters in the following wells: QT–1 (Table 2), chloride; QT–2 (Table 3) iron, lead, cadmium, and manganese; QT–3 (Table 4) chloride, lead, barium, cadmium, and manganese; QT–4 (Table 5) cadmium and nitrate nitrogen. There were still some elevated concentrations once the Reservoir was dry on April 19, 2007: QT–1 chloride; QT–2 iron and manganese; and QT–3 chloride and manganese.

During the April 25–26, 2007, fill event, the 95 percent upper confidence limit from the background concentration was exceeded for the following parameters in the following wells: QT–1 (Table 7) chloride and total dissolved solids; QT–2 (Table 8) iron, sulfate, cadmium, and manganese; QT–3 (Table 9) chloride; QT–4 (Table 10) sulfate. There were still some elevated concentrations once the Reservoir was dry on May 4, 2007: QT–1 chloride and total suspended solids; QT–2 manganese and sulfate; QT–3 chloride; and QT–4 sulfate.

During the August 23–25, 2007, fill event, the 95 percent upper confidence limit from the background concentration was exceeded for the following parameters in the following wells: QT–1 (Table 12) chloride, chromium, manganese, and nitrate nitrogen; QT–2 (Table 13) iron, barium, fluoride, and manganese; QT–3 (Table 14) chloride, mercury, sulfate, fluoride, and manganese; QT–4 (Table 15) mercury, barium, and fluoride. There were still some elevated concentrations once the Reservoir was dry on October 30, 2007: QT–1 chloride and manganese and QT–3 chloride and manganese. However, chloride and manganese concentrations in the reservoir were never above the 95 percentile upper confidence limit for these parameters for either well.

TABLE 1: LIST OF PARAMETERS TO BE ANALYZED ACCORDING TO TABLE 2 FROM THE IEPA'S SCOPE OF WORK

Arsenic	Ammonia
Boron	Barium
Chloride	Cadmium
Copper	Chromium
Fecal Coliform	Cyanide
Iron	Fluoride
Lead	Manganese
Mercury	Nickel
Phenols	Silver
Sulfate	Temperature
Total Dissolved Solids	Nitrate

Biochemical Oxygen Demand (5-day and 21-day)

TABLE 2: PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN WATER QUALITY MONITORING WELL QT–1 DURING THE JANUARY 5–6, 2007, FILL EVENT

	Table 2 (SOW) Parameters											
Date	Arsenic (mg/L)	Boron (mg/L)	Chloride (mg/L)	Copper (mg/L)	Fecal Coliform (cfu/100 mL)	Iron (mg/L)	Lead (mg/L)	Mercury (µg/L)	Phenols (µg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Ammonia Nitrogen (mg/L)
1/11/07	<0.002	0.239	764	0.004	<1	27.56	0.008	<0.05	3	406	2,060	0.31
1/18/07	<0.002	0.236	757	0.015	<1	22.94	0.010	<0.05	2	355	1,682	0.32
4/19/07	<0.002	0.240	755	<0.003	<1	26.59	0.002	<0.05	4	355	2,146	0.52
Revised 95% Upper Confidence Limit	0.003	NA	552	0.018	NA	47.61	0.015	0.15	NA	489	2,279	NA
Excursion	No	NA	Yes	No	NA	No	No	No	NA	No	No	NA

TABLE 2 (Continued): PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN WATER QUALITY MONITORING WELL QT–1 DURING THE JANUARY 5–6, 2007, FILL EVENT

	Table 2 (SOW) Parameters											
Date	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cyanide (mg/L)	Fluoride (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Silver (mg/L)	Temperature °C	Nitrate Nitrogen (mg/L)	BOD_5 (mg/L)	BOD_{21} (mg/L)
1/11/07	0.0820	<0.0004	<0.004	<0.003	0.39	0.0835	<0.002	<0.0008	9	<0.005	0	2
1/18/07	0.0858	<0.0004	<0.004	<0.003	0.38	0.0911	<0.002	<0.0008	9	<0.005	4	2
4/19/07	0.0790	<0.0004	<0.004	<0.003	0.37	0.0880	<0.002	<0.0008	12	<0.005	0	2
Revised 95% Upper Confidence Limit	0.0963	0.0012	0.005	*	0.57	0.1460	NA	*	NA	0.024	NA	NA
Excursion	No	No	No	No	No	No	NA	No	NA	No	NA	NA

NA—not applicable.
No = concentration did not exceed 95 percent upper confidence limit; Yes = concentration exceeded 95 percent upper confidence limit.
*Background value was below detection limit, 95 percent upper confidence limit could not be determined.

TABLE 3: PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN WATER QUALITY MONITORING WELL QT–2 DURING THE JANUARY 5–6, 2007, FILL EVENT

	Table 2 (SOW) Parameters											
Date	Arsenic (mg/L)	Boron (mg/L)	Chloride (mg/L)	Copper (mg/L)	Fecal Coliform (cfu/100 mL)	Iron (mg/L)	Lead (mg/L)	Mercury (µg/L)	Phenols (µg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Ammonia Nitrogen (mg/L)
1/11/07	<0.002	0.310	227	<0.003	<1	1.13	0.003	<0.05	<2	566	1,448	0.93
1/18/07	<0.002	0.306	228	<0.003	<1	6.08	0.035	<0.05	2	467	1,320	0.79
4/19/07	<0.002	0.256	202	0.003	<1	10.33	0.001	<0.05	3	594	1,588	0.48
Revised 95% Upper Confidence Limit	0.006	NA	420	0.027	NA	4.50	0.015	0.23	NA	718	2,485	NA
Excursion	No	NA	No	No	NA	Yes	Yes	No	NA	No	No	NA

TABLE 3 (Continued): PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN WATER QUALITY MONITORING WELL QT–2 DURING THE JANUARY 5–6, 2007, FILL EVENT

	Table 2 (SOW) Parameters											
Date	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cyanide (mg/L)	Fluoride (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Silver (mg/L)	Temperature °C	Nitrate Nitrogen (mg/L)	BOD_5 (mg/L)	BOD_{21} (mg/L)
1/11/07	0.0474	<0.0004	<0.004	<0.003	0.29	0.0209	0.022	<0.0008	10	0.078	0	6
1/18/07	0.0479	0.0022	<0.004	<0.003	0.30	0.1388	0.055	<0.0008	10	0.158	4	4
4/19/07	0.0427	<0.0004	<0.004	<0.003	0.27	0.1607	0.041	<0.0008	13	0.028	0	3
Revised 95% Upper Confidence Limit	0.0742	0.0012	0.007	*	0.35	0.0574	NA	*	NA	4.416	NA	NA
Excursion	No	Yes	No	No	No	Yes	NA	No	NA	No	NA	NA

NA—not applicable.
No = concentration did not exceed 95 percent upper confidence limit; Yes = concentration exceeded 95 percent upper confidence limit.
*Background value was below detection limit, 95 percent upper confidence limit could not be determined.

TABLE 4: PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN WATER QUALITY MONITORING WELL QT–3 DURING THE JANUARY 5–6, 2007, FILL EVENT

	Table 2 (SOW) Parameters											
Date	Arsenic (mg/L)	Boron (mg/L)	Chloride (mg/L)	Copper (mg/L)	Fecal Coliform (cfu/100 mL)	Iron (mg/L)	Lead (mg/L)	Mercury (µg/L)	Phenols (µg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Ammonia Nitrogen (mg/L)
1/11/2007	<0.002	0.247	264	<0.003	<1	15.05	0.004	<0.05	2	170	1,040	0.26
1/18/2007	<0.002	0.238	263	<0.003	<1	13.21	0.017	<0.05	2	169	880	0.28
4/19/07	<0.002	0.229	228	<0.003	<1	13.53	0.004	<0.05	2	86	842	0.35
Revised 95% Upper Confidence Limit	*	NA	180	0.022	NA	30.59	0.012	0.06	NA	224	1,270	NA
Excursion	No	NA	Yes	No	NA	No	Yes	No	NA	No	No	NA

TABLE 4 (Continued): PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN WATER QUALITY MONITORING WELL QT–3 DURING THE JANUARY 5–6, 2007, FILL EVENT

	Table 2 (SOW) Parameters											
Date	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cyanide (mg/L)	Fluoride (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Silver (mg/L)	Temperature °C	Nitrate Nitrogen (mg/L)	BOD_5 (mg/L)	BOD_{21} (mg/L)
1/11/2007	0.2470	<0.0004	<0.004	<0.003	0.27	0.1771	<0.002	<0.0008	10	<0.005	0	3
1/18/2007	0.0608	0.0080	<0.004	<0.003	0.26	0.2353	0.002	<0.0008	10	<0.005	0	2
4/19/07	0.0275	<0.0004	0.003	<0.003	0.17	0.4036	0.003	<0.0008	13	<0.005	0	2
Revised 95% Upper Confidence Limit	0.1000	0.0060	0.007	*	0.38	0.1793	NA	0.0196	NA	0.331	NA	NA
Excursion	Yes	Yes	No	No	No	Yes	NA	No	NA	No	NA	NA

NA—not applicable.
No = concentration did not exceed 95 percent upper confidence limit; Yes = concentration exceeded 95 percent upper confidence limit.
*Background value was below detection limit, 95 percent upper confidence limit could not be determined.

TABLE 5: PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN WATER QUALITY MONITORING WELL QT–4 DURING THE JANUARY 5–6, 2007, FILL EVENT

	Table 2 (SOW) Parameters											
Date	Arsenic (mg/L)	Boron (mg/L)	Chloride (mg/L)	Copper (mg/L)	Fecal Coliform (cfu/100 mL)	Iron (mg/L)	Lead (mg/L)	Mercury (µg/L)	Phenols (µg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Ammonia Nitrogen (mg/L)
1/11/07	<0.002	0.375	368	<0.003	<1	20.09	0.007	<0.05	2	262	1,280	0.36
1/18/07	<0.002	0.372	359	<0.003	<1	8.86	0.008	<0.05	<2	257	1,380	0.36
4/19/07	<0.002	0.312	448	<0.003	<1	22.32	0.003	<0.05	4	258	1,488	0.50
Revised 95% Upper Confidence Limit	*	NA	611	0.007	NA	31.51	0.024	0.07	NA	300	1,873	NA
Excursion	No	NA	No	No	NA	No	No	No	NA	No	No	NA

TABLE 5 (Continued): PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN WATER QUALITY MONITORING WELL QT–4 DURING THE JANUARY 5–6, 2007, FILL EVENT

	Table 2 (SOW) Parameters											
Date	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cyanide (mg/L)	Fluoride (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Silver (mg/L)	Temperature °C	Nitrate Nitrogen (mg/L)	BOD_5 (mg/L)	BOD_{21} (mg/L)
1/11/07	0.0894	<0.0004	<0.004	<0.003	0.26	0.1461	<0.002	<0.0008	10	<0.005	0	3
1/18/07	0.0866	0.0050	<0.004	<0.003	0.20	0.1208	<0.002	<0.0008	10	0.924	0	2
4/19/07	0.0962	<0.0004	<0.004	<0.003	0.25	0.1262	0.002	<0.0008	13	<0.005	0	3
Revised 95% Upper Confidence Limit	0.1576	0.0009	0.074	*	0.37	0.2332	NA	0.0043	NA	0.262	NA	NA
Excursion	No	Yes	No	No	No	No	NA	No	NA	Yes	NA	NA

NA—not applicable.
No = concentration did not exceed 95 percent upper confidence limit; Yes = concentration exceeded 95 percent upper confidence limit.
*Background value was below detection limit, 95 percent upper confidence limit could not be determined.

TABLE 6: PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN THORNTON TRANSITIONAL RESERVOIR DURING THE JANUARY 5–6, 2007, FILL EVENT

	Table 2 (SOW) Parameters											
Date	Arsenic (mg/L)	Boron (mg/L)	Chloride (mg/L)	Copper (mg/L)	Fecal Coliform (cfu/100 mL)	Iron (mg/L)	Lead (mg/L)	Mercury (µg/L)	Phenols (µg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Ammonia Nitrogen (mg/L)
1/6/07	<0.002	0.067	37	0.007	14,000	5.85	<0.002	<0.05	<2	53	240	0.14
1/11/07	<0.002	0.092	58	0.006	570	5.11	0.009	<0.05	<2	73	300	0.15
1/18/07	Reservoir could not be sampled*											

TABLE 6 (Continued): PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN THORNTON TRANSITIONAL RESERVOIR DURING THE JANUARY 5–6, 2007, FILL EVENT

	Table 2 (SOW) Parameters											
Date	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cyanide (mg/L)	Fluoride (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Silver (mg/L)	Temperature °C	Nitrate Nitrogen (mg/L)	BOD_5 (mg/L)	BOD_{21} (mg/L)
1/6/07	0.0403	<0.0004	<0.004	<0.003	0.19	0.0790	0.008	<0.0008	4	0.524	4	8
1/11/07	0.0416	<0.0004	0.006	<0.003	0.20	0.0574	0.009	<0.0008	4	0.924	4	7
1/18/07	Reservoir could not be sampled*											

*Reservoir dry.

TABLE 7: PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN WATER QUALITY MONITORING WELL QT–1 DURING THE APRIL 25–26, 2007, FILL EVENT

Table 2 (SOW) Parameters												
Date	Arsenic (mg/L)	Boron (mg/L)	Chloride (mg/L)	Copper (mg/L)	Fecal Coliform (cfu/100 mL)	Iron (mg/L)	Lead (mg/L)	Mercury (µg/L)	Phenols (µg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Ammonia Nitrogen (mg/L)
5/3/07	<0.002	0.243	778	0.003	<1	26.67	<0.002	<0.05	6	322	2,074	0.31
5/10/07	<0.002	0.270	744	0.004	<1	14.37	0.007	<0.05	4	394	2,286	0.31
Revised 95% Upper Confidence Limit	0.003	NA	552	0.018	NA	47.61	0.015	0.15	NA	489	2,279	NA
Excursion	No	NA	Yes	No	NA	No	No	No	NA	No	Yes	NA

TABLE 7 (Continued): PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN WATER QUALITY MONITORING WELL QT–1 DURING THE APRIL 25–26, 2007, FILL EVENT

	Table 2 (SOW) Parameters											
Date	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cyanide (mg/L)	Fluoride (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Silver (mg/L)	Temperature °C	Nitrate Nitrogen (mg/L)	BOD_5 (mg/L)	BOD_{21} (mg/L)
5/3/07	0.0794	<0.0004	<0.004	<0.003	0.26	0.0937	<0.002	<0.0008	13	<0.005	0	1
5/10/07	0.0861	<0.0004	<0.004	<0.003	0.41	0.0603	0.002	<0.0008	13	<0.005	0	1
Revised 95% Upper Confidence Limit	0.0963	0.0012	0.005	*	0.57	0.1460	NA	*	NA	0.024	NA	NA
Excursion	No	No	No	No	No	No	NA	No	NA	No	NA	NA

NA—not applicable.
No = concentration did not exceed 95 percent upper confidence limit; Yes = concentration exceeded 95 percent upper confidence limit.
*Background value was below detection limit, 95 percent upper confidence limit could not be determined.

TABLE 8: PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN WATER QUALITY MONITORING WELL QT–2 DURING THE APRIL 25–26, 2007, FILL EVENT

	Table 2 (SOW) Parameters											
Date	Arsenic (mg/L)	Boron (mg/L)	Chloride (mg/L)	Copper (mg/L)	Fecal Coliform (cfu/100 mL)	Iron (mg/L)	Lead (mg/L)	Mercury (µg/L)	Phenols (µg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Ammonia Nitrogen (mg/L)
5/3/07	<0.002	0.130	98	<0.003	<1	8.12	<0.002	<0.05	4	395	1,230	0.05
5/10/07	<0.002	0.220	138	<0.003	<1	3.30	0.002	<0.05	2	807	1,850	0.14
Revised 95% Upper Confidence Limit	0.006	NA	420	0.027	NA	4.50	0.015	0.23	NA	718	2,485	NA
Excursion	No	NA	No	No	NA	Yes	No	No	NA	Yes	No	NA

TABLE 8 (Continued): PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN WATER QUALITY MONITORING WELL QT–2 DURING THE APRIL 25–26, 2007, FILL EVENT

	Table 2 (SOW) Parameters											
Date	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cyanide (mg/L)	Fluoride (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Silver (mg/L)	Temperature °C	Nitrate Nitrogen (mg/L)	BOD_5 (mg/L)	BOD_{21} (mg/L)
5/3/07	0.0239	<0.0004	<0.004	<0.003	0.26	0.2549	0.0147	<0.0008	14	0.672	0	2
5/10/07	0.0359	<0.0004	<0.004	<0.003	0.28	0.1381	0.0490	<0.0008	14	0.046	0	2
Revised 95% Upper Confidence Limit	0.0742	0.0012	0.007	*	0.35	0.0574	NA	*	NA	4.416	NA	NA
Excursion	No	Yes	No	No	No	Yes	NA	No	NA	No	NA	NA

NA—not applicable.
No = concentration did not exceed 95 percent upper confidence limit; Yes = concentration exceeded 95 percent upper confidence limit.
*Background value was below detection limit, 95 percent upper confidence limit could not be determined.

TABLE 9: PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN WATER QUALITY MONITORING WELL QT–3 DURING THE APRIL 25–26, 2007, FILL EVENT

	Table 2 (SOW) Parameters											
Date	Arsenic (mg/L)	Boron (mg/L)	Chloride (mg/L)	Copper (mg/L)	Fecal Coliform (cfu/100 mL)	Iron (mg/L)	Lead (mg/L)	Mercury (µg/L)	Phenols (µg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Ammonia Nitrogen (mg/L)
5/3/07	<0.002	0.236	264	<0.003	<1	11.61	<0.002	<0.05	7	167	1,050	0.28
5/10/07	<0.002	0.236	247	<0.003	<1	9.65	0.004	<0.05	3	214	1,094	0.29
Revised 95% Upper Confidence Limit	*	NA	180	0.022	NA	30.59	0.012	0.06	NA	224	1,270	NA
Excursion	No	NA	Yes	No	NA	No	No	No	NA	No	No	NA

TABLE 9 (Continued): PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN WATER QUALITY MONITORING WELL QT–3 DURING THE APRIL 25–26, 2007, FILL EVENT

	Table 2 (SOW) Parameters											
Date	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cyanide (mg/L)	Fluoride (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Silver (mg/L)	Temperature °C	Nitrate Nitrogen (mg/L)	BOD_5 (mg/L)	BOD_{21} (mg/L)
5/3/07	0.0660	<0.0004	<0.004	<0.003	0.25	0.1037	<0.002	<0.0008	12	0.028	0	3
5/10/07	0.0655	<0.0004	<0.004	<0.003	0.25	0.1291	<0.002	<0.0008	13	<0.005	0	1
Revised 95% Upper Confidence Limit	0.100	0.006	0.007	*	0.38	0.1793	NA	0.0196	NA	0.331	NA	NA
Excursion	No	No	No	No	No	No	NA	No	NA	No	NA	NA

NA—not applicable.
No = concentration did not exceed 95 percent upper confidence limit; Yes = concentration exceeded 95 percent upper confidence limit.
*Background value was below detection limit, 95 percent upper confidence limit could not be determined.

TABLE 10: PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN WATER QUALITY MONITORING WELL QT–4 DURING THE APRIL 25–26, 2007, FILL EVENT

	Table 2 (SOW) Parameters											
Date	Arsenic (mg/L)	Boron (mg/L)	Chloride (mg/L)	Copper (mg/L)	Fecal Coliform (cfu/100 mL)	Iron (mg/L)	Lead (mg/L)	Mercury (µg/L)	Phenols (µg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Ammonia Nitrogen (mg/L)
5/3/07	<0.002	0.340	419	<0.003	<1	21.98	<0.002	<0.05	7	237	1,480	0.38
5/10/07	<0.002	0.366	390	<0.003	<1	14.96	0.004	0.05	4	303	1,488	0.37
Revised 95% Upper Confidence Limit	*	NA	611	0.073	NA	31.51	0.024	0.07	NA	300	1,873	NA
Excursion	No	NA	No	No	NA	No	No	No	NA	Yes	No	NA

TABLE 10 (Continued): PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN WATER QUALITY MONITORING WELL QT–4 DURING THE APRIL 25–26, 2007, FILL EVENT

	Table 2 (SOW) Parameters											
Date	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cyanide (mg/L)	Fluoride (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Silver (mg/L)	Temperature °C	Nitrate Nitrogen (mg/L)	BOD_5 (mg/L)	BOD_{21} (mg/L)
5/3/07	0.0955	<0.0004	<0.004	<0.003	0.27	0.1489	<0.002	<0.0008	12	0.043	0	2
5/10/07	0.0989	<0.0004	<0.004	<0.003	0.27	0.1075	<0.002	<0.0008	12	<0.005	0	1
Revised 95% Upper Confidence Limit	0.1576	0.0009	0.074	*	0.37	0.2332	NA	0.0043	NA	0.262	NA	NA
Excursion	No	No	No	No	No	No	NA	No	NA	No	NA	NA

NA—not applicable.
No = concentration did not exceed 95 percent upper confidence limit; Yes = concentration exceeded 95 percent upper confidence limit.
*Background value was below detection limit, 95 percent upper confidence limit could not be determined.

TABLE 11: PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN THORNTON TRANSITIONAL RESERVOIR DURING THE APRIL 25–26, 2007, FILL EVENT

	Table 2 (SOW) Parameters											
Date	Arsenic (mg/L)	Boron (mg/L)	Chloride (mg/L)	Copper (mg/L)	Fecal Coliform (cfu/100 mL)	Iron (mg/L)	Lead (mg/L)	Mercury (µg/L)	Phenols (µg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Ammonia Nitrogen (mg/L)
4/27/07	<0.002	0.086	41	0.004	9	2.51	0.009	<0.05	1	44	196	0.12
5/3/07	<0.002	0.110	60	<0.003	9	1.70	0.008	0.20	1	97	280	0.08

TABLE 11 (Continued): PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN THORNTON TRANSITIONAL RESERVOIR DURING THE APRIL 25–26, 2007, FILL EVENT

	Table 2 (SOW) Parameters											
Date	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cyanide (mg/L)	Fluoride (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Silver (mg/L)	Temperature °C	Nitrate Nitrogen (mg/L)	BOD_5 (mg/L)	BOD_{21} (mg/L)
4/27/07	0.0271	<0.0004	<0.004	<0.003	0.21	0.0388	0.006	<0.0008	16	1.044	4	7
5/3/07	0.0272	<0.0004	<0.004	<0.003	0.26	0.0201	0.009	<0.0008	16	1.305	7	14

TABLE 12: PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN WATER QUALITY MONITORING WELL QT–1 DURING THE AUGUST 23–25, 2007, FILL EVENTS

	Table 2 (SOW) Parameters											
Date	Arsenic (mg/L)	Boron (mg/L)	Chloride (mg/L)	Copper (mg/L)	Fecal Coliform (cfu/100 mL)	Iron (mg/L)	Lead (mg/L)	Mercury (µg/L)	Phenols (µg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Ammonia Nitrogen (mg/L)
8/30/07	<0.002	0.229	733	<0.003	<1	27.27	<0.002	0.05	<2	347	435	0.40
9/13/07	<0.002	0.285	738	0.003	<1	19.14	0.006	<0.05	2	361	2,162	0.34
9/20/07	<0.002	0.265	438	<0.003	<1	22.71	0.006	<0.05	3	375	2,200	0.33
9/27/07	<0.002	0.242	482	<0.003	<1	29.35	0.008	<0.05	4	410	2,154	0.25
10/4/07	<0.002	0.272	511	<0.003	<1	19.71	<0.002	<0.05	3	401	2,152	0.44
10/11/07	<0.002	0.272	714	<0.003	<1	22.99	0.006	<0.05	4	447	2,088	0.30
10/18/07	<0.002	0.244	581	<0.003	<1	20.67	0.003	<0.05	<2	443	2,208	0.34
10/25/07	<0.002	0.278	762	<0.003	<1	16.23	0.005	<0.05	4	348	2,216	0.32
Revised 95% Upper Confidence Limit	0.003	NA	552	0.018	NA	47.61	0.015	0.15	NA	489	2,279	NA
Excursion	No	NA	Yes	No	NA	No	No	No	NA	No	No	NA

TABLE 12 (Continued): PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN WATER QUALITY MONITORING WELL QT–1 DURING THE AUGUST 23–25, 2007, FILL EVENTS

	Table 2 (SOW) Parameters											
Date	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cyanide (mg/L)	Fluoride (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Silver (mg/L)	Temperature °C	Nitrate Nitrogen (mg/L)	BOD_5 (mg/L)	BOD_{21} (mg/L)
8/30/07	0.0761	<0.0004	<0.004	<0.003	0.42	0.1128	<0.002	<0.0008	14	0.026	0	1
9/13/07	0.0813	<0.0004	<0.004	<0.003	0.39	0.0777	<0.002	<0.0008	13	0.010	7	3
9/20/07	0.0814	<0.0004	<0.004	<0.003	0.41	0.1035	<0.002	<0.0008	14	0.021	0	2
9/27/07	0.0800	<0.0004	0.005	<0.003	0.39	0.1286	<0.002	<0.0008	13	0.016	0	3
10/4/07	0.0793	<0.0004	<0.004	<0.003	0.28	0.0893	<0.002	<0.0008	13	0.011	0	3
10/11/07	0.0839	<0.0004	<0.004	<0.003	0.33	0.1152	<0.002	<0.0008	12	1.484	0	1
10/18/07	0.0829	<0.0004	<0.004	<0.003	0.29	0.1125	<0.002	<0.0008	14	0.009	0	4
10/25/07	0.0656	<0.0004	<0.004	<0.003	0.35	0.4514	<0.002	<0.0008	12	<0.005	0	4
Revised 95% Upper Confidence Limit	0.0963	0.0012	0.005	*	0.57	0.1460	NA	*	NA	0.024	NA	NA
Excursion	No	No	Yes	No	No	Yes	NA	No	NA	Yes	NA	NA

NA—not applicable.
No = concentration did not exceed 95 percent upper confidence limit; Yes = concentration exceeded 95 percent upper confidence limit.
*Background value was below detection limit, 95 percent upper confidence limit could not be determined.

TABLE 13: PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN WATER QUALITY MONITORING WELL QT–2 DURING THE AUGUST 23–25, 2007, FILL EVENTS

	Table 2 (SOW) Parameters											
Date	Arsenic (mg/L)	Boron (mg/L)	Chloride (mg/L)	Copper (mg/L)	Fecal Coliform (cfu/100 mL)	Iron (mg/L)	Lead (mg/L)	Mercury (µg/L)	Phenols (µg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Ammonia Nitrogen (mg/L)
8/30/07	<0.002	0.143	133	<0.003	1	8.34	<0.002	0.06	<2	470	1,260	0.06
9/13/07	<0.002	0.208	153	<0.003	<1	3.73	0.004	<0.05	<2	212	1,478	0.08
9/20/07	<0.002	0.207	137	<0.003	<1	3.79	0.008	<0.05	2	582	1,348	0.09
9/27/07	<0.002	0.181	121	<0.003	1	3.59	0.006	<0.05	3	551	1,112	0.03
10/4/07	<0.002	0.195	101	<0.003	<1	2.55	<0.002	<0.05	<2	515	954	0.07
10/11/07	<0.002	0.175	102	<0.003	<1	2.09	0.005	<0.05	<2	412	894	0.05
10/18/07	<0.002	0.181	108	<0.003	<1	1.93	0.005	<0.05	<2	516	988	0.18
10/25/07	<0.002	0.194	109	<0.003	<1	2.84	0.003	<0.05	2	509	1,092	0.10
Revised 95% Upper Confidence Limit	0.006	NA	420	0.027	NA	4.50	0.015	0.23	NA	718	2,485	NA
Excursion	No	NA	No	No	NA	Yes	No	No	NA	No	No	NA

TABLE 13 (Continued): PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN WATER QUALITY MONITORING WELL QT–2 DURING THE AUGUST 23–25, 2007, FILL EVENTS

	Table 2 (SOW) Parameters											
Date	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cyanide (mg/L)	Fluoride (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Silver (mg/L)	Temperature °C	Nitrate Nitrogen (mg/L)	BOD_5 (mg/L)	BOD_{21} (mg/L)
8/30/07	0.0249	<0.0004	<0.004	<0.003	0.40	0.2467	0.036	<0.0008	16	0.052	0	2
9/13/07	0.0329	<0.0004	<0.004	<0.003	0.31	0.1005	0.031	<0.0008	15	0.017	0	3
9/20/07	0.0317	<0.0004	<0.004	<0.003	0.34	0.0835	0.031	<0.0008	16	0.036	0	2
9/27/07	0.1810	<0.0004	<0.004	<0.003	0.35	0.0993	0.023	<0.0008	15	0.017	0	2
10/4/07	0.0269	<0.0004	<0.004	<0.003	0.24	0.0786	0.018	<0.0008	15	0.028	0	2
10/11/07	0.0262	<0.0004	<0.004	<0.003	0.25	0.0523	0.018	<0.0008	15	0.020	0	1
10/18/07	0.0280	<0.0004	<0.004	<0.003	0.24	0.0460	0.018	<0.0008	20	0.024	0	3
10/25/07	0.0322	<0.0004	<0.004	<0.003	0.22	0.0485	0.021	<0.0008	15	0.006	0	4
Revised 95% Upper Confidence Limit	0.0742	0.0012	0.007	*	0.35	0.0574	NA	*	NA	4.416	NA	NA
Excursion	Yes	No	No	No	Yes	Yes	NA	No	NA	No	NA	NA

NA—not applicable.
No = concentration did not exceed 95 percent upper confidence limit; Yes = concentration exceeded 95 percent upper confidence limit.
*Background value was below detection limit, 95 percent upper confidence limit could not be determined.

TABLE 14: PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN WATER QUALITY MONITORING WELL QT–3 DURING THE AUGUST 23–25, 2007, FILL EVENTS

	Table 2 (SOW) Parameters											
Date	Arsenic (mg/L)	Boron (mg/L)	Chloride (mg/L)	Copper (mg/L)	Fecal Coliform (cfu/100 mL)	Iron (mg/L)	Lead (mg/L)	Mercury (µg/L)	Phenols (µg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Ammonia Nitrogen (mg/L)
8/30/07	<0.002	0.225	258	<0.003	<1	10.45	<0.002	0.09	<2	175	1,092	0.32
9/13/07	<0.002	0.260	254	<0.003	<1	14.43	0.007	<0.05	2	182	1,122	0.31
9/20/07	<0.002	0.245	234	<0.003	<1	18.38	0.007	<0.05	3	182	1,078	0.32
9/27/07	<0.002	0.204	248	<0.003	<1	21.57	0.006	<0.05	4	209	1,070	0.21
10/4/07	<0.002	0.224	249	<0.003	<1	12.19	<0.002	<0.05	3	238	1,144	0.41
10/11/07	<0.002	0.199	248	<0.003	<1	21.73	0.006	<0.05	4	245	1,116	0.30
10/18/07	<0.002	0.224	255	<0.003	<1	19.36	0.002	<0.05	<2	260	1,154	0.33
10/25/07	<0.002	0.227	261	<0.003	<1	20.06	0.006	<0.05	<2	221	1,138	0.30
Revised 95% Upper Confidence Limit	*	NA	180	0.022	NA	30.59	0.012	0.06	NA	224	1,270	NA
Excursion	No	NA	Yes	No	NA	No	No	Yes	NA	Yes	No	NA

TABLE 14 (Continued): PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN WATER QUALITY MONITORING WELL QT–3 DURING THE AUGUST 23–25, 2007, FILL EVENTS

	Table 2 (SOW) Parameters											
Date	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cyanide (mg/L)	Fluoride (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Silver (mg/L)	Temperature °C	Nitrate Nitrogen (mg/L)	BOD_5 (mg/L)	BOD_{21} (mg/L)
8/30/07	0.0615	<0.0004	<0.004	<0.003	0.34	0.0876	<0.002	<0.0008	14	0.019	0	1
9/13/07	0.0661	<0.0004	<0.004	<0.003	0.55	0.1475	<0.002	<0.0008	12	<0.005	0	3
9/20/07	0.0729	<0.0004	<0.004	<0.003	0.29	0.1857	<0.002	<0.0008	15	0.038	0	3
9/27/07	0.0695	<0.0004	<0.004	<0.003	0.37	0.2362	<0.002	<0.0008	12	0.018	0	3
10/4/07	0.0699	<0.0004	<0.004	<0.003	0.20	0.2175	0.002	<0.0008	12	<0.005	0	3
10/11/07	0.0751	<0.0004	<0.004	<0.003	0.18	0.2292	<0.002	<0.0008	12	0.015	0	3
10/18/07	0.0706	<0.0004	<0.004	<0.003	0.21	0.2064	<0.002	<0.0008	13	0.007	0	3
10/25/07	0.0701	<0.0004	<0.004	<0.003	0.29	0.2478	<0.002	<0.0008	12	<0.005	0	3
Revised 95% Upper Confidence Limit	0.100	0.006	0.007	*	0.38	0.1793	NA	0.0196	NA	0.331	NA	NA
Excursion	No	No	No	No	Yes	Yes	NA	No	NA	No	NA	NA

NA—not applicable.
No = concentration did not exceed 95 percent upper confidence limit; Yes = concentration exceeded 95 percent upper confidence limit.
*Background value was below detection limit, 95 percent upper confidence limit could not be determined.

TABLE 15: PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN WATER QUALITY MONITORING WELL QT–4 DURING THE AUGUST 23–25, 2007, FILL EVENTS

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	Table 2 (SOW) Parameters											
Date	Arsenic (mg/L)	Boron (mg/L)	Chloride (mg/L)	Copper (mg/L)	Fecal Coliform (cfu/100 mL)	Iron (mg/L)	Lead (mg/L)	Mercury (µg/L)	Phenols (µg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Ammonia Nitrogen (mg/L)
8/30/07	<0.002	0.299	426	<0.003	<1	20.86	<0.002	0.08	2	228	1,492	0.38
9/13/07	<0.002	0.368	394	<0.003	<1	16.37	0.004	<0.05	2	255	1,480	0.38
9/20/07	<0.002	0.389	394	<0.003	<1	17.45	0.005	<0.05	3	271	1,486	0.40
9/27/07	<0.002	0.400	400	<0.003	<1	5.51	0.005	<0.05	4	285	1,432	0.32
10/4/07	<0.002	0.368	414	<0.003	<1	16.60	<0.002	<0.05	2	287	1,460	0.48
10/11/07	<0.002	0.368	413	<0.003	<1	19.92	0.004	<0.05	3	299	1,480	0.39
10/18/07	<0.002	0.368	435	<0.003	<1	15.77	0.004	<0.05	<2	277	1,520	0.41
10/25/07	<0.002	0.413	435	<0.003	1	1.15	0.002	<0.05	<2	286	1,562	0.40
Revised 95% Upper Confidence Limit	*	NA	611	0.073	NA	31.51	0.024	0.07	NA	300	1,873	NA
Excursion	No	NA	No	No	NA	No	No	Yes	NA	No	No	NA

TABLE 15 (Continued): PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN WATER QUALITY MONITORING WELL QT–4 DURING THE AUGUST 23–25, 2007, FILL EVENTS

	Table 2 (SOW) Parameters											
Date	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cyanide (mg/L)	Fluoride (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Silver (mg/L)	Temperature °C	Nitrate Nitrogen (mg/L)	BOD_5 (mg/L)	BOD_{21} (mg/L)
8/30/07	0.2990	<0.0004	<0.004	<0.003	0.32	0.1208	<0.002	<0.0008	15	<0.005	0	2
9/13/07	0.0925	<0.0004	<0.004	<0.003	0.28	0.1078	<0.002	<0.0008	14	<0.005	3	3
9/20/07	0.1000	<0.0004	<0.004	<0.003	0.30	0.1524	<0.002	<0.0008	15	0.015	0	3
9/27/07	0.0961	<0.0004	<0.004	<0.003	0.40	0.0900	<0.002	<0.0008	15	0.018	0	3
10/4/07	0.0940	<0.0004	<0.004	<0.003	0.19	0.1395	<0.002	<0.0008	14	<0.005	0	3
10/11/07	0.0997	<0.0004	<0.004	<0.003	0.19	0.2000	<0.002	<0.0008	13	0.027	0	3
10/18/07	0.0973	<0.0004	<0.004	<0.003	0.22	0.1670	0.004	<0.0008	16	0.008	0	3
10/25/07	0.0985	<0.0004	<0.004	<0.003	0.26	0.0575	<0.002	<0.0008	14	<0.005	0	4
Revised 95% Upper Confidence Limit	0.1576	0.0009	0.074	*	0.37	0.2332	NA	0.0043	NA	0.262	NA	NA
Excursion	Yes	No	No	No	Yes	No	NA	No	NA	No	NA	NA

NA—not applicable.
No = concentration did not exceed 95 percent upper confidence limit; Yes = concentration exceeded 95 percent upper confidence limit.
*Background value was below detection limit, 95 percent upper confidence limit could not be determined.

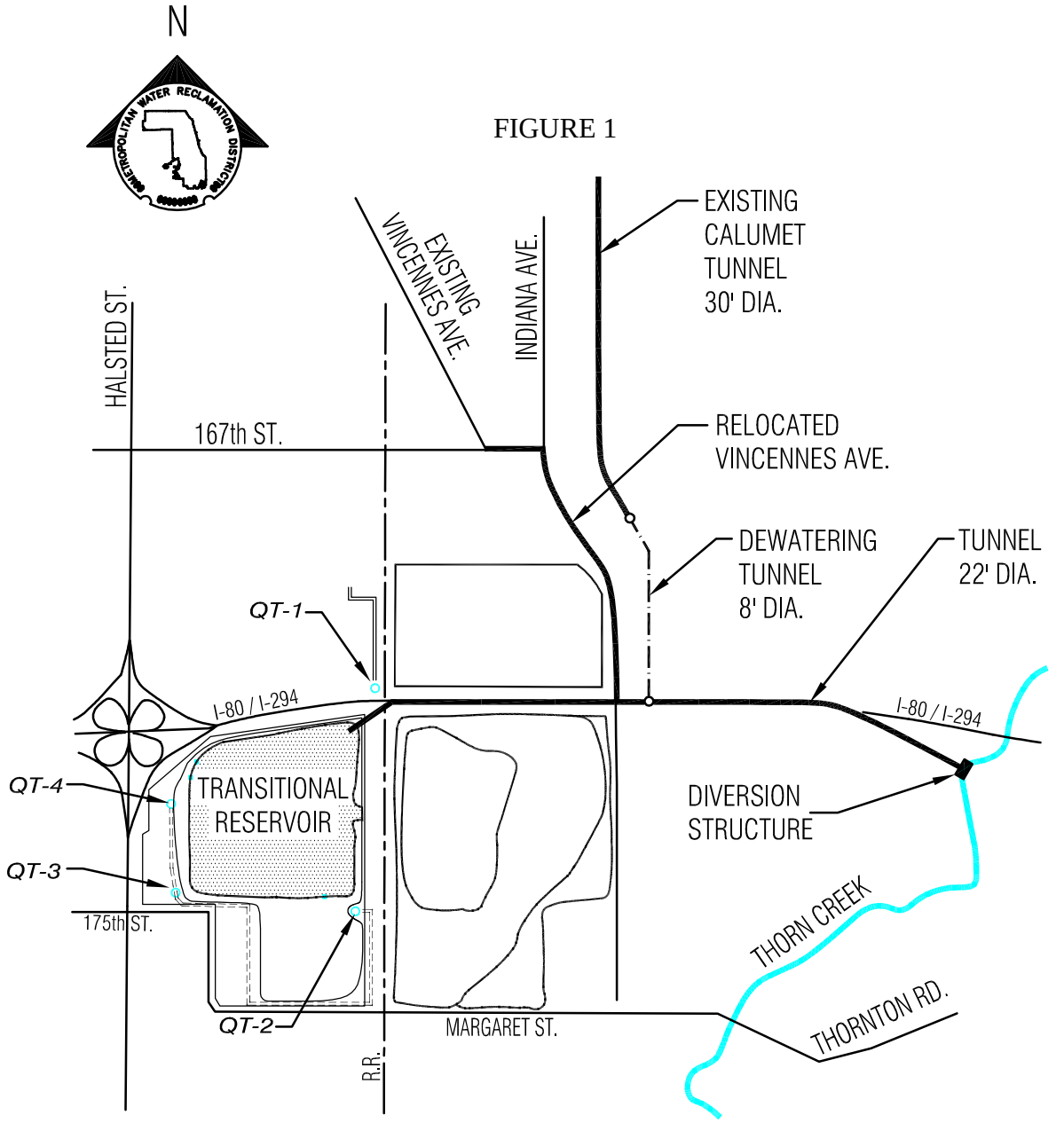
TABLE 16: PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN THORNTON TRANSITIONAL RESERVOIR DURING THE AUGUST 23–25, 2007, FILL EVENT

	Table 2 (SOW) Parameters											
Date	Arsenic (mg/L)	Boron (mg/L)	Chloride (mg/L)	Copper (mg/L)	Fecal Coliform (cfu/100 mL)	Iron (mg/L)	Lead (mg/L)	Mercury (µg/L)	Phenols (µg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Ammonia Nitrogen (mg/L)
8/27/07	<0.002	0.066	34	<0.003	280	1.66	0.003	0.08	<2	40	230	0.24
9/4/07	<0.002	0.079	41	<0.003	20	0.88	0.002	<0.05	2	52	370	0.06
9/10/07	<0.002	0.102	43	<0.003	490	0.48	0.011	<0.05	2	69	242	0.06
9/17/07	<0.002	0.117	45	<0.003	<10	0.33	0.004	<0.05	<2	84	310	0.10
9/24/07	<0.002	0.129	53	0.003	30	0.24	0.004	<0.05	<2	97	282	0.02
10/2/07	<0.002	0.169	56	0.008	<10	0.40	0.002	<0.05	<2	87	336	0.05
10/9/07	<0.002	0.176	58	0.003	30	0.21	0.004	<0.05	<2	104	350	0.16
10/17/07	<0.002	0.133	61	<0.003	20	0.13	0.003	<0.05	<2	129	390	0.04
10/23/07	<0.002	0.141	66	<0.003	9	0.23	0.004	<0.05	<2	146	378	<0.01

TABLE 16 (Continued): PARAMETERS FROM TABLE 2 OF IEPA'S SOW IN THORNTON TRANSITIONAL RESERVOIR DURING THE AUGUST 23–25, 2007, FILL EVENT

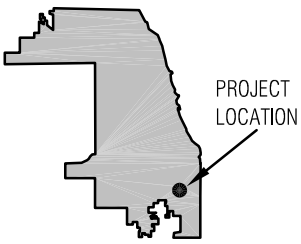
	Table 2 (SOW) Parameters											
Date	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cyanide (mg/L)	Fluoride (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Silver (mg/L)	Temperature °C	Nitrate Nitrogen (mg/L)	BOD_5 (mg/L)	BOD_{21} (mg/L)
8/27/07	0.0233	<0.0004	<0.004	<0.003	0.61	0.0237	0.005	<0.0008	22	0.869	0	5
9/4/07	0.0194	<0.0004	<0.004	<0.003	0.37	0.0096	0.005	<0.0008	22	0.808	0	4
9/10/07	0.0222	0.0020	0.003	<0.003	0.45	0.0064	0.009	<0.0008	23	0.565	0	8
9/17/07	0.0214	<0.0004	<0.004	<0.003	0.28	0.0218	0.004	<0.0008	22	0.085	0	5
9/24/07	0.1290	<0.0004	<0.004	<0.003	0.29	0.0141	0.015	<0.0008	21	0.014	12	7
10/2/07	0.0237	<0.0004	<0.004	<0.003	0.39	0.0480	0.055	<0.0008	19	0.013	6	0
10/9/07	0.0222	<0.0004	<0.004	<0.003	0.18	0.0183	0.007	<0.0008	18	<0.005	0	8
10/17/07	0.0207	<0.0004	<0.004	<0.003	0.19	0.0276	0.005	0.0110	16	<0.005	3	9
10/23/07	0.0223	<0.0004	<0.004	<0.003	0.22	0.0310	0.006	<0.0008	16	0.013	0	8

FIGURE 1



LOCATION MAP
Scale: NTS

MWRD SERVICE AREA



LEGEND

- Monitoring Well
- New Access Road
- Existing Access Road (to be improved)

THORNTON TRANSITIONAL RESERVOIR
MONITORING WELL LOCATIONS

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO
ENGINEERING DEPARTMENT
11-03 PLANNING JJK

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