

November 23, 2005

Phyllis Beaulieu
Nunavut Water Board
Box 119
Gjoa Haven Nunavut
X0E 1J0

RE: Mitigation Monitoring Program and 'As Constructed' drawings for Fresh Water Intake Causeway in Carat Lake

In accordance with section 7 of Fisheries Authorization NU-00-0068 please find enclosed the Mitigation Monitoring report and "As Constructed" drawings for the construction of the Carat Lake freshwater intake causeway. We have submitted the initial mitigation monitoring plan and causeway 'as constructed' drawings a year in advance of the initial requirements to satisfy both Section 7 of the Authorization, as well as, address comments raised in the September 1, 2005 DFO concerning the causeway construction.

Section 7 of fisheries authorization requires the following information be reported by November 30th of every year of operation.

Section 7.-The proponent shall undertake a Mitigation Monitoring Program and will report to DFO, on or by November 30th of every year, whether works were conducted within the schedule of the proponent Plan and whether the mitigation measures outlined in the proponent plan and this authorization were followed by;

7.1 Providing a photographic record taken pre construction, during construction and post construction periods, showing all sediment control works and details of how they functioned to prevent sediment entry into the watercourse according to the approved Plan and conditions of the Authorization

7.1.1 The photographic record shall include, but not limited to, a record of existing conditions, the work phase including sediment and erosion control measures, and completed works including compensation measures, site stabilization and restoration.

7.1.2 The photographs for each pre construction, during construction and post construction time period shall be taken from the same vantage point(s), direction and angle for easy comparison.

7.1.3 All photographs shall be clearly labeled with the date, location and viewing direction. The photographic locations and viewing directions shall be indicated on a plan view drawing of the work site and clearly indexed to the photographs.

7.2 Providing details of the effectiveness of the mitigation measures in achieving objectives, as outlined in the Fish Habitat No Net Loss Plan-Jericho Project (Mainstream, 2004)

7.3 Providing details of any contingency measures that were followed in the event that mitigation measures did not function as described in the proponent plans.

7.4 Preparing and submitting “As Constructed” drawings stipulating that structures and/or works were constructed according to the approved plans, to DFO on or before November 30th of the year following the completion of that structure and/or work.

The attached report includes a timeline of construction activities; detailing sediment control measures, a photographic record, results of water quality sampling and as-built drawings of the causeway and an explanation of any deviations from the submitted plan.

We trust that the attached report will satisfy the requirements of Section 7 of Fisheries Authorization NU-00-0068. Should you have any questions do not hesitate to contact the undersigned.

Tahera Diamond Corporation

Greg Missal
Vice President, Government and Regulatory Affairs

Cc: Derrick Moggy, DFO

Report of Mitigation Monitoring Program and ‘As Constructed’ drawings for Fresh Water Intake Causeway in Carat Lake

Introduction

A freshwater water intake causeway was constructed in order to provide water for the Jericho Kimberlite processing plant and potable camp water. Construction activities took place between August 5, 2005 and September 11, 2005 when the turbidity barrier was removed. The turbidity barrier was successful at containing sediments inside the barrier during the construction of the causeway.

This report has been prepared to satisfy the requirements of Section 7 of Fisheries Authorization NU-00-0068 as listed below.

Although “As Constructed” drawings were not due until November 30th 2006. Tahera Diamond Corporation feels the inclusion of the “As Constructed” information provides for a more comprehensive report and serves to address some of the questions raised in DFO’s letter dated September 1st, 2005 titled “Follow up to the Site Visit on August 18, 2005”.

Fisheries Authorization NU-00-0068 Section 7 Requirements:

Section 7.-The proponent shall undertake a Mitigation Monitoring Program and will report to DFO, on or by November 30th of every year, whether works were conducted within the schedule of the proponent Plan and whether the mitigation measures outlined in the proponent plan and this authorization were followed by;

7.1 Providing a photographic record taken pre construction, during construction and post construction periods, showing all sediment control works and details of how they functioned to prevent sediment entry into the watercourse according to the approved Plan and conditions of the Authorization

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7.3 Providing details of any contingency measures that were followed in the event that mitigation measures did not function as described in the proponent plans.

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Time Line of Carat Causeway Construction

This section of the report details the phases of the construction and includes a photographic record of construction progress. Figure 1 is a plan view of the construction area showing the vantage points of pictures taken during the course of construction.

Table 1 is a summary of water quality data from samples collected during construction of the causeway.

Prior to construction of the causeway in Carat Lake a sediment barrier was installed. The sediment barrier extended from the shoreline out around the construction area and tied back into the shoreline. Picture 1 shows the construction area with sediment barrier installed prior to construction commencing.



Picture 1: July 29, 2005 looking north from Carat Lake access road at sediment barrier around the construction area prior to construction

A letter “**Notification of intent to commence construction of Carat Lake freshwater intake causeway Fisheries Authorization NU-00-0068**” was faxed to Derrick Moggy Habitat Management Biologist on August 2nd, 2005 indicating Tahera Diamond Corporations intent to commence construction on August 3, 2005. The letter was followed up with a phone call to Keith Pelley on August 5, 2005.

Design drawings submitted in the detail design plan indicated a causeway with a minimum roadway surface of 5m extending 100m into Carat Lake with a widened area surrounding the pump house. Upon detail bathymetric data taken as part of the field construction the following field modification were made to the design:

- The length of the causeway was shortened to 93.6m which corresponded to the minimum length possible to insure that the intake pipe would be 0.5m off the lake bottom as well as being 2m below the design bottom of the maximum ice thickness.
- The widened area surrounding the pump house was eliminated
- The causeway width was constructed to provide a minimum 5 m maintenance roadway surface plus room for a pipeline and power cable as well as suitable safety barriers.

Figure 2 shows the as built footprint of the causeway.

During a site inspection conducted by DFO on August 18, 2005 the top dressing on the Carat Causeway was identified as a potential source of sedimentation into Carat Lake. A layer of clean rock has been added as cover material to contain and prevent erosion of the fines into Carat Lake. The cap of rock extends over the shoulder and transitions into the run of mine. See Picture 2 and Picture 3.



Picture 2: September 6, 2005 looking north on Carat lake access road, causeway capped with clean diabase.



Picture 3: September 6, 2005 looking NE along eastern edge of the causeway, close-up of clean diabase cap material.

August 5, 2005

Construction of the causeway commenced on August 5, 2005 at 15:00, at 17:27 on August 5th, 2005 hauling was stopped when it was noticed that wind had caused the curtain anchors to drag pulling the curtain float below surface at the connections between curtain segments. Twenty three loads were hauled during this period and the causeway extended 46m from the shoreline into Carat Lake. Picture 4 shows the first load of material being dumped at the causeway construction site; rock was dumped onto the shoreline and then pushed using the D9 dozer. Picture 5 shows the extent of the causeway at the end of the day August 5, 2005.



Picture 4: August 5, 2005 looking north from the end of Carat access road approximately 20m from Carat lake shoreline. The first load of material is being dumped.



Picture 5: August 5, 2005 end of the day looking north from the end of Carat access road approximately 20m from the Carat Lake shoreline, causeway extends 46m into Carat Lake.

Samples were collected at the 36 sampling points (Figure 3) at the end of the day August 5, 2005. During sample collection an area of slightly turbid water extended from the west side of the curtain where the curtain was pulled slightly below surface at the connection point between two segments of curtain. Water Quality results from the 5th were all near detection limit except for 5 samples inside the silt curtain on the east side that were slightly elevated.

August 6, 2005

Mitigations were implemented to prevent the curtain from being pulled below surface at the connections between curtain segments. Floats were attached directly to the curtain and the floats were then anchored. Picture 6 shows the black floats attached at the connections between curtain segments.



Picture 6: August 6, 2005 looking north on the Carat access road, note the black floats attached to the curtain to prevent it from being pulled below surface.

Construction commenced at 13:19 after mitigations (black floats) were implemented and was completed at 16:44. 47 loads were hauled on August 6, 2005. Inspections were conducted at 14:00 to 15:00, 16:40 to 17:30 and 18:30 to 19:30. Samples were collected at all 36 sample sites during the final inspection period of the day. Picture 7 was taken August 06, 2005, 1:24:20 PM, note the contrast of turbid water contained inside the curtain to the clear water outside.



Picture 7: August 6, 2005 looking north from Carat lake shoreline on the west edge of the silt curtain.

August 7, 2005

Prior to construction on August 7th, 2005 floats were readjusted to prevent escape of any suspended sediment. Construction commenced at 09:00 and was completed at 17:00, 34 loads were hauled to the jetty. Inspections were conducted at 10:00 to 10:30, 12:30 to 13:00, 14:30 to 14:45, and 18:30 to 18:50. Wind speeds were increasing throughout the day eventually reaching speeds gusting to 50 km/h. The high winds caused the sediment curtain anchors to drag; the curtain piled up against east side of causeway and ballooned out to the west. Sediment continued to be contained within the curtain. Picture 8 shows the curtain piled up on east side of causeway and ballooning out to the west. Containment of sediments inside the sediment curtain can be observed.



Picture 8: August 8, 2005 looking north along Carat lake access road. The effects of the high winds can be observed with the curtain ballooned out to the west side of the causeway.

Samples were not collected on August 7, 2005 as a result of the high winds resulting in three foot white caps making it too dangerous for boat work.

August 8, 2005

There was no construction on August 8, 2005. The focus of activities was repositioning of silt curtain after movement from high winds to ensure containment around the end of the jetty during the intake pipe installation. Samples were collected from the 36 sampling locations. Picture 9 was taken after the repositioning of the sediment curtain.



Picture 9: August 9, 2005 looking north along Carat lake access road. The sediment curtain has been repositioned to allow containment around the intake pipe during installation.

In addition to work conducted on the curtain the boom of the excavator to be used for the intake pipe installation was steamed to remove any grease. Picture 10 and Picture 11 show the cleaned boom of the 5130 excavator.



Picture 10: August 8, 2005 cleaned boom of the 5130 excavator.



Picture 11: August 8, 2005 cleaned boom of the 5130 excavator.

August 9, 2005

Construction activities on August 9, 2005 focused on installation of the intake pipe. Construction started at 11:57 and was completed at 16:26. Activities included seating of the intake pipe followed by 9 loads of run of mine to cover and secure the intake pipe within the causeway. Picture 12 shows the intake pipe being lifted for placement in the causeway. Picture 13 shows the intake pipe after placement in the causeway. Samples were collected at all 36 stations on August 9, 2005.



Picture 12: August 9, 2005 looking NW at the end of the Carat causeway access road. The 345 excavator is lifting the intake pipe for placement in the causeway.



Picture 13: August 9, 2005 looking east from a boat 5130 excavator has placed intake pipe into causeway.

August 10, 2005

There was no construction activity conducted.

August 11, 2005

There was no construction activity conducted.

August 12, 2005

There was no construction activity conducted on August 12, 2005. Clark Builders welders worked on preparing the vertical section of the intake pipe for attachment to the pump house. Samples were collected to monitor turbidity levels. Inspections were conducted from 17:00 to 18:00. Picture 14 shows the extent of the causeway prior to application of the second lift of material to bring the causeway to final grade.



Picture 14: August 12, 2005 looking north from the causeway access road. Welder working on intake pipe.

August 13, 2005

Application of the second lift of run of mine as well as capping with 2" crush to provide a road surface commenced on August 13. Construction activities occurred for the entire day. 26 loads of material were placed on the causeway. Inspections were conducted from 11:00 to 12:00. Wind speed increased throughout the day with gusts up to 70 km/h. The high wind speeds prevented collection of samples. Picture 15 shows the 345 excavator placing run of mine material on the causeway.



Picture 15: August 13, 2005 looking north from the causeway access road approximately 50m from Carat shoreline. The 345 works at placing the second lift of run of mine on the causeway.

August 14, 2004

Construction activities occurred from 7:00 to 12:00 and consisted of the completion of the application of the 2" crush material to complete the road surface suitable for vehicle access. Winds from the previous day resulted in the sediment curtain being pushed up against the eastern and northern edges of the causeway. Movement of the curtain did not effect containment of sediments. Inspections were conducted from 10:00 to 11:30. Only 23 samples were collected as a result of windy conditions making sampling from the boat dangerous. Picture 16 shows the 345 working at placing the 2" crush on the causeway.



Picture 16: August 14, 2005 looking north down the causeway access road. The 345 works at placing 2" crush on the surface of the causeway.

August 15, 2005

The pump house was transported to the causeway and placed over the intake pipe. There was no placement of construction fill conducted. Samples were collected and adjustments made to the floats on the sediment curtain. Picture 17 is an aerial picture of the causeway looking towards the south from above Carat Lake. The unclad pump house is visible positioned at the end of the causeway.



Picture 17: August 15, 2005 aerial photo looking south from above Carat Lake. The pump house is in position at the end of the causeway.

September 4, 2005

Final Widening of the causeway roadway was done to provide the minimum safe access. During this time clean diabase was used to cover the 2" road surface material that extended over the sides that were identified by DFO as a potential source of sediment. Samples were collected from sampling sites within and around the construction area.

September 5, 2005

Trim work along the length of the causeway was completed as well as application of the diabase cap material. This ended the rock placement activities.

September 10, 2005

Samples were collected to ensure Turbidity and TSS levels had returned to normal background levels.

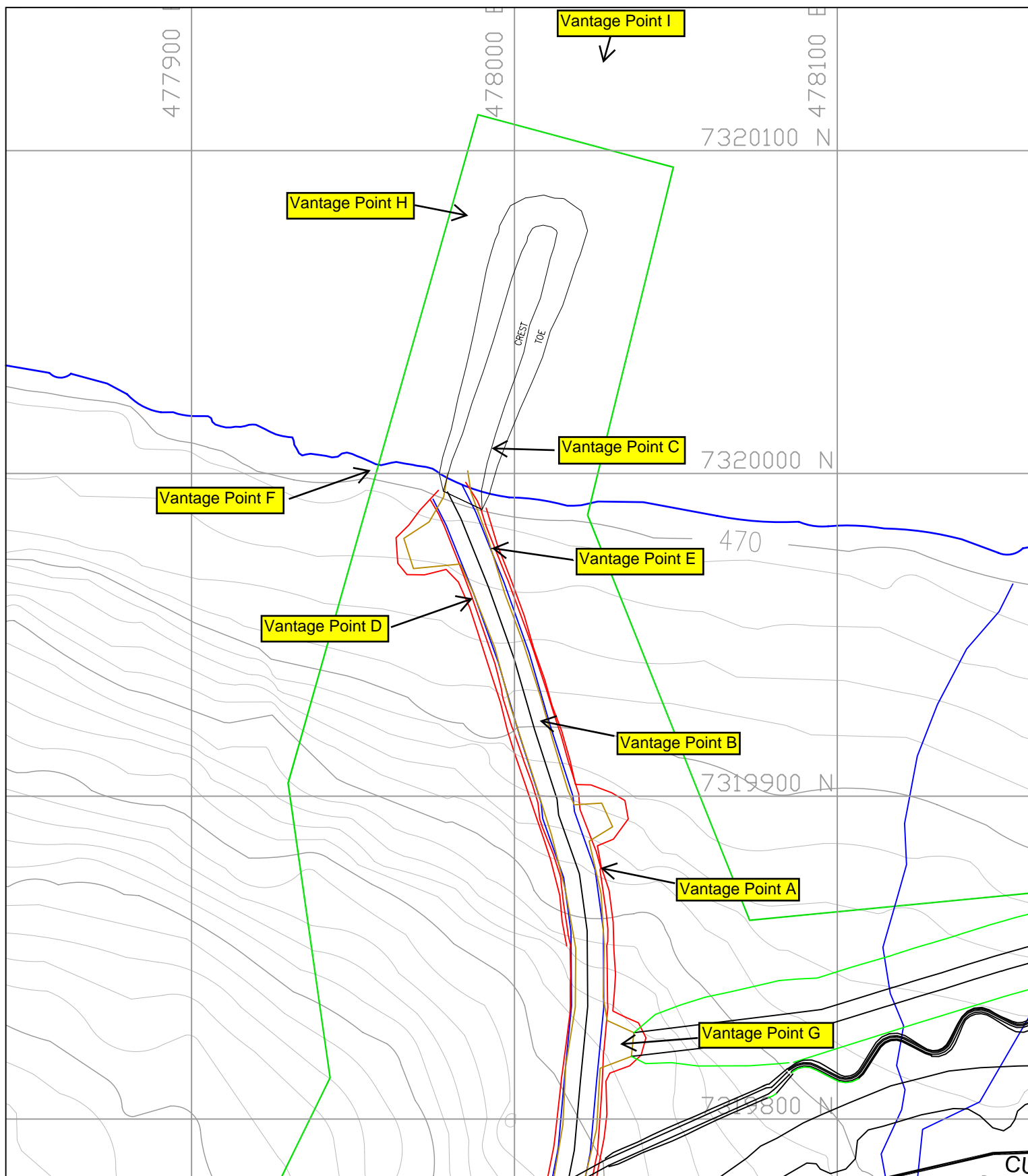
September 11, 2005

The turbidity barrier was removed prior to the onset of ice cover on Carat Lake.

Summary

Construction started August 5th and was concluded on September 11th with the removal of the turbidity barrier. The curtain was effective in containing migration of sediments that arose during the course of construction. All monitoring data indicated that water quality data outside the curtain remained at background levels. Final as constructed drawings of the causeway are provided in the summary. The causeway was constructed in a safe and environmentally sound fashion in general accordance with the submitted and approved design.

Figures



Notes:

- Vantage Point A: Pictures 1, 6 and 16
- Vantage Point B: Pictures 2 and 9
- Vantage Point C: Picture 3
- Vantage Point D: Picture 4, 12 and 14
- Vantage Point E: Picture 5 and 15
- Vantage Point F: Picture 7

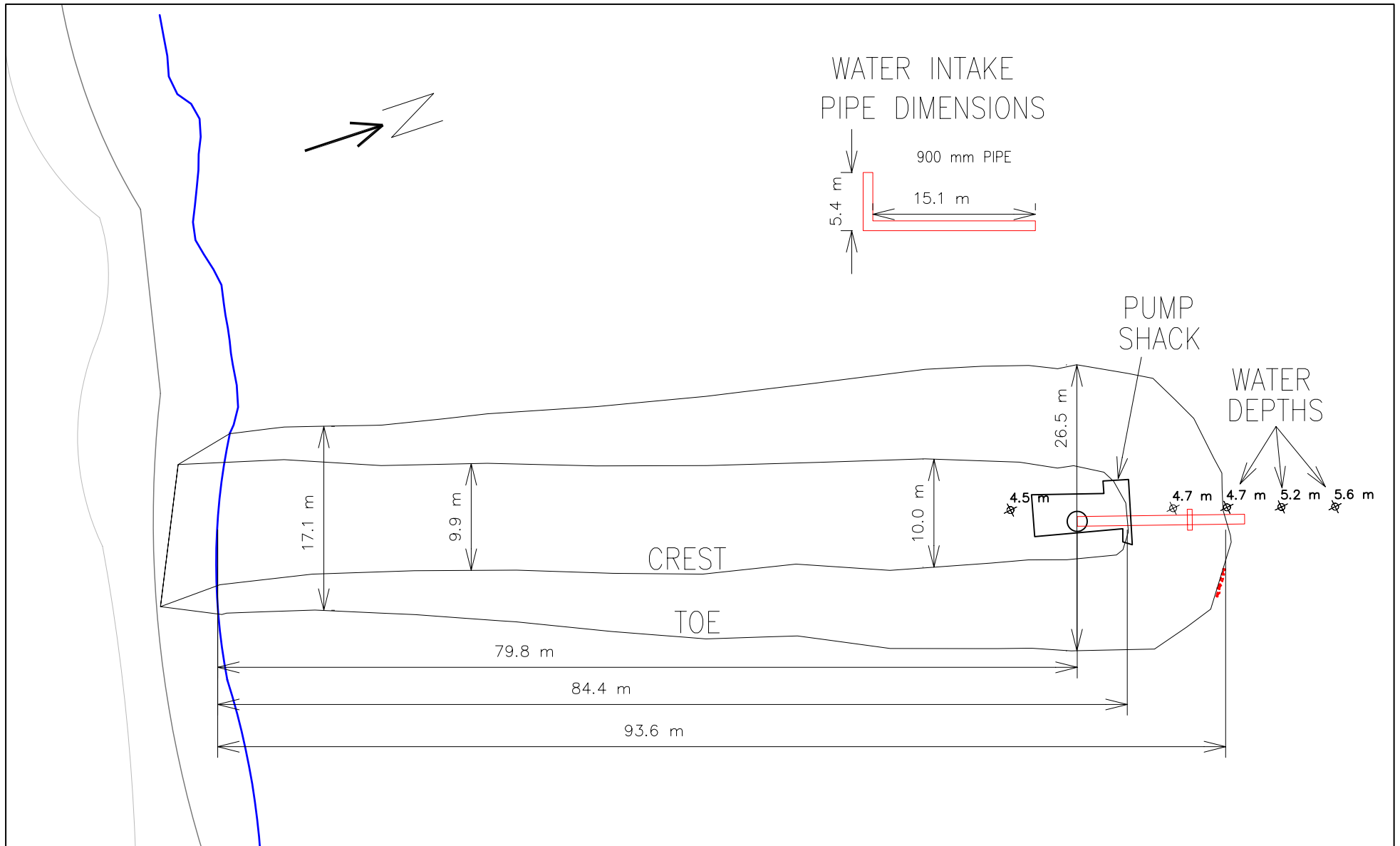
- Vantage Point G: Picture 8
- Vantage Point H: Picture 13
- Vantage Point I: Picture 17

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Diamond Corporation

FIGURE 1 PLAN VIEW
PHOTOGRAPHIC VANTAGE
POINTS

Nov 21, 2005

SCALE: NTS



Notes:

Causeway as built rev 2.

Causeway footprint 2021 m².

Water depths shown are from typical summer water surface at 469.8 m ASL.

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PIT:

Figure 2: Causeway as
constructed drawings

Oct 13, 2005

SCALE: 1:500

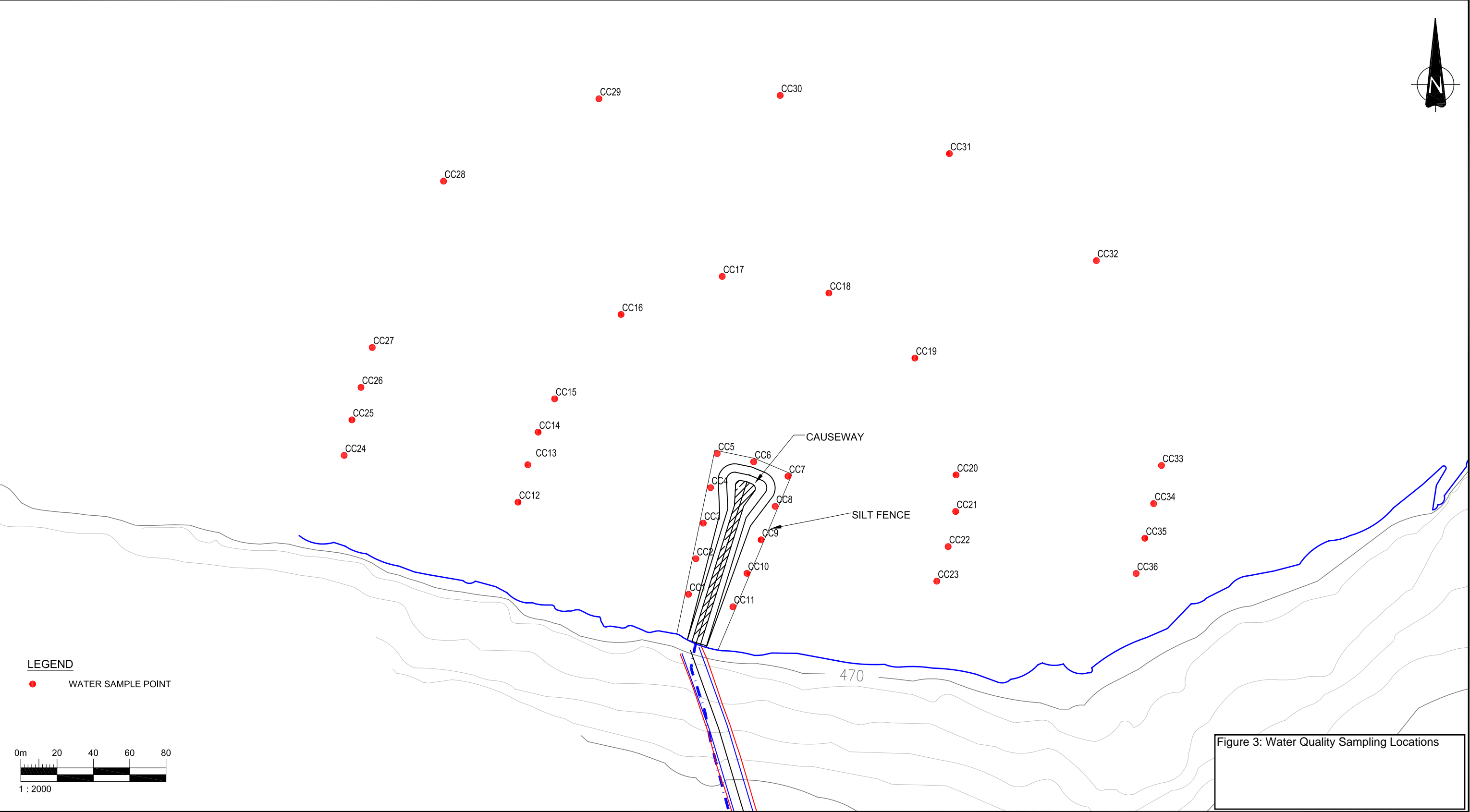


Figure 3: Water Quality Sampling Locations

	CLIENT LOGO <small>\\fs-jerico\GIS\Projects\2005\Jerico\TSS\TSS.dwg - Tahera, Jerico Plot 02\TSS.dwg, 02/05/05</small>	CLIENT: TAHERA DIAMOND CORPORATION		DWN BY: BWS	PROJECT JERICO DIAMOND PROJECT		DATE: JULY 2005
				CHK'D BY: BO			PROJECT NO: VE51295
		AMEC Earth & Environmental 2227 Douglas Road, Burnaby, B.C. V5C 5A9 Tel. (604) 294-3811 Fax. (604) 294-4664		DATUM: UNKNOWN	TITLE TURBIDITY/TSS SAMPLE LOCATION MAP		REV. NO.: A
				PROJECTION: UTM Zone 12 SCALE: AS SHOWN			FIGURE No. -

Tables

Location	Parameter	Value	Unit
River A	pH	7.2	-
	Temperature	15.5	°C
	Dissolved Oxygen	8.5	mg/L
	Turbidity	1.2	NTU
Lake B	pH	8.1	-
	Temperature	22.3	°C
	Dissolved Oxygen	6.8	mg/L
	Turbidity	0.8	NTU
Spring C	pH	6.5	-
	Temperature	10.1	°C
	Dissolved Oxygen	9.2	mg/L
	Turbidity	0.3	NTU

Carat Causeway Construction-Water Quality Sampling

Turbidity (NTU)

Collect Date		Units	CC01	CC02	CC03	CC04	CC05	CC06	CC07	CC08	CC09	CC10	CC11	CC12	CC13	CC14	CC15	CC16	CC17	CC18	CC19	CC20	CC21	CC22	CC23	CC24	CC25	CC26	CC27	CC28	CC29	CC30	CC31	CC32	CC33	CC34	CC35	CC36	
	7/30/2005	NTU		1	2	2	3	2	2	1	2	2	2	2	2	2	2	2	2	3	2	2	2	2	2	2	2	2	2	1	2	1	2	2	2	1	2	1	
	8/5/2005	NTU	8	8	9	9	8	9	9	8	5	7	3	5	5	2	2	1	1	1	2	1	1	1	2	2	2	1	1	1	1	2	2	1	1	1	1	2	
	8/6/2005	NTU	11	36	13	14	14	14	11	19	16	14	12	1	1	2	1	2	1	1	5	2	1	1	2	1	1	1	1	1	2	3	2	3	1	2	1	1	
	8/8/2005	NTU	3	3	3	4	5	5	2	2	2	2	2	3	1	3	3	3	4	4	2	4	3	3	3	3	3	4	3	2	3	4	4	3	3	3	3	3	
	8/9/2005	NTU	3	3	3	3	3	3	4	5	5	6	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	3	2	2	2	2	2	2	
	8/12/2005	NTU	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	8/14/2005	NTU										2	2	2	2	2					2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
	8/15/2005	NTU	1.14	1.09	1.27	1.05	1.19	0.98	1.14	1.08	1.11	1.05	1.16	1.03	1.04	0.99	1.06	1.01	1.07	1.03	1.10	1.14	1.08	1.18	1.04	1.09	1.06	1.18	1.07	1.04	1.15	1.07	1.08	1.06	1.08	1.14		1.15	
	9/4/2005	NTU	3	2	4	4	4	1	2	3	3	3	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	2	
	9/5/2005	NTU	1	1	1	1	1	1	10	9	11	15	13	1	1	1	1	1	1	1	<1		1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1
	9/10/2005	NTU	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	<1		1	1	1	1	1	1	1	1	1	1	
Average			3.68	5.81	3.93	4.1	4.32	3.9	4.41	5.11	4.81	5	4.01	1.91	1.82	1.82	1.61	1.6	1.71	1.7	1.83	1.83	1.64	1.56	1.64	1.64	1.64	1.65	1.64	1.37	1.65	1.82	1.92	1.82	1.55	1.56	2	1.65	
Count			9	10	10	10	10	10	10	10	10	11	11	11	11	11	10	10	10	10	10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	10	11	
Maximum			11	36	13	14	14	14	11	19	16	15	13	5	5	3	3	3	3	4	4	5	4	3	3	3	3	3	4	3	2	3	4	4	3	3	3	3	

Total Suspended Solids @105°C (mg/L)

	Collect Date	Units	CC01	CC02	CC03	CC04	CC05	CC06	CC07	CC08	CC09	CC10	CC11	CC12	CC13	CC14	CC15	CC16	CC17	CC18	CC19	CC20	CC21	CC22	CC23	CC24	CC25	CC26	CC27	CC28	CC29	CC30	CC31	CC32	CC33	CC34	CC35	CC36
	7/30/2005	mg/L		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	8/5/2005	mg/L	<2		<2	<2		2	2		3	2	2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	8/6/2005	mg/L		5	22	6	7	6	4	5	8	8	6	9	<2	<2	<2	<2	<2	<2	2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	
	8/8/2005	mg/L		2	<2	<2		3	6	5	<2	<2	<2	<2	<2	<2	<2	<2	<2	2	2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	
	8/9/2005	mg/L	<2	<2	<2	<2	<2	<2	<2		3	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	
	8/12/2005	mg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	
	8/14/2005	mg/L										<2	<2	<2	<2	<2					<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2		
	8/15/2005	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	3.2	<3.0	<3.0	<3.0	3.9	<3.0	5.2	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	
	9/4/2005	mg/L	2	<2	<2	<2	3	<2	<2		2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	
	9/5/2005	mg/L	<2	<2	<2	<2	<2	<2		3	4	3	4	4	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	
	9/10/2005	mg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	
Average			2.4	4.1	2.5	2.7	3	2.6	2.5	3.1	2.8	2.6	3	2.1	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2	2.1	
Count			9	10	10	10	10	10	10	10	10	11	11	11	11	11	10	10	10	10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	10	11	
Maximum			5	22	6	7	6	5	5	8	8	6	9	3	5.2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	