DRINKING WATER SURVEILLANCE PROGRAM

DELHI WATER SUPPLY SYSTEM

REPORT FOR 1991 AND 1992

Ontario

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DELHI WATER SUPPLY SYSTEM

DRINKING WATER SURVEILLANCE PROGRAM

REPORT FOR 1991 AND 1992

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EXECUTIVE SUMMARY

DRINKING WATER SURVEILLANCE PROGRAM

DELHI WATER SUPPLY SYSTEM
1991 AND 1992 REPORT

The Drinking Water Surveillance Program (DWSP) for Ontario is a monitoring program providing immediate, reliable, current information on drinking water quality. The DWSP officially began in April 1986 and is designed to include all municipal supplies in Ontario. In 1991, 96 supplies and in 1992, 109 supplies were being monitored.

The Delhi water supply system includes two raw water sources. A spring supply and a conventional water treatment plant which treats water from the North Creek/Lehman Dam. The plant uses a conventional treatment process consisting of coagulation, flocculation, sedimentation, filtration with pressure filters, fluoridation and disinfection. This plant has a rated capacity of 4.54 x 1000 m^3/day. The spring source is an artesian spring which feeds a pond and flows into two open air concrete settling tanks. The water is disinfected, fluoridated and is pumped directly into the distribution system. The Delhi spring facility supplies about 25% of the total demand of the system and has a maximum pumping capacity of 0.84 x 1000 m^3/day . Treated water from the two sources mix in the distribution. The Delhi water supply system serves a population of approximately 4,100.

Water at the plant, the spring and two locations in the distribution system was sampled for the presence of approximately 180 parameters. Parameters were divided into the following groups: bacteriological, inorganic and physical (laboratory chemistry, field chemistry and metals), organic (chloroaromatics, chlorophenols, pesticides and PCB, phenolics, polyaromatic hydrocarbons and volatiles) and radiological (radionuclides). Most laboratory analyses were conducted at the Ministry of the Environment and Energy facilities in Rexdale, Ontario. Radionuclides were analyzed by the Ministry of Labour.

Table A is a summary of all results by group.

No known health related guidelines were exceeded.

The Delhi water treatment plant and spring supply, for the sample years 1991 and 1992, produced acceptable quality water and this was maintained in the distribution system.

As of July 1993, use of the spring supply was discontinued (due to trichloroethylene contamination) as recommended by the Medical Officer of Health for the area.

TABLE A
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI SUPPLY SYSTEM

SUMMARY TABLE BY SCAN

A POSITIVE VALUE DENOTES THAT THE RESULT IS GREATER THAN THE STATISTICAL LIMIT OF DETECTION AND IS QUANTIFIABLE
A '.' INDICATES THAT NO SAMPLE WAS TAKEN

SCAN	TREATMENT PLANT RAW TESTS	POSITIVE	%POSITIVE	SPRING RAW TESTS	POSITIVE	%POSITIVE	TREATMENT PLANT TREATED TESTS	POSITIVE	%POSITIVE	SPRING TREATED TESTS	POSITIVE	%POSITIVE
BACTERIOLOGICAL	35	32	91	30	19	63	12	9	75	10	7	70
CHEMISTRY (FIELD)	34	31	91	28	28	100	96	96	100	78	76	97
CHEMISTRY (LABORATORY)	402	376	93	356	293	82	386	309	80	360	272	75
METALS	408	174	42	360	103	28	408	170	41	360	107	29
CHLOROAROMATICS	168	0	0	147	0	0	168	0	0	147	0	0
CHLOROPHENOLS	12	0	0	12	0	0	6	0	0	12	0	0
PESTICIDES AND PCB	405	0	0	365	0	0	418	4	0	378	0	0
PHENOLICS	17	4	23	15	0	0	16	0	0	15	0	0
POLYAROMATIC HYDROCARBONS	116	0	0	99	0	0	116	0	0	99	0	0
SPECIFIC PESTICIDES	57	0	0	58	0	0	51	0	0	58	0	0
VOLATILES	503	0	0	472	30	6	441	47	10	472	88	18
RADIONUCLIDES	28	5	17	28	6	21	28	6	21	21	3	14
TOTAL	2,185	622		1,970	479		2,146	641		2,010	553	

TABLE A
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI SUPPLY SYSTEM

SUMMARY TABLE BY SCAN

A POSITIVE VALUE DENOTES THAT THE RESULT IS GREATER THAN THE STATISTICAL LIMIT OF DETECTION AND IS QUANTIFIABLE
A '.' INDICATES THAT NO SAMPLE WAS TAKEN

SCAN	DIST. SYSTEM MAIN ST TESTS	POSITIVE	%POSITIVE	DIST. SYSTEM IMPERIAL ST TESTS	POSITIVE	%POSITIVE
BACTERIOLOGICAL	11	6	54	13	10	76
CHEMISTRY (FIELD)	138	121	87	149	131	87
CHEMISTRY (LABORATORY)	588	515	87	630	553	87
METALS	644	266	41	690	296	42
CHLOROAROMATICS	126	0	0	147	0	0
PESTICIDES AND PCB	199	0	0	235	0	0
POLYAROMATIC HYDROCARBONS	99	0	0	116	0	0
SPECIFIC PESTICIDES	3	0	0	4	0	0
VOLATILES	412	60	14	441	65	14
TOTAL	2,220	968		2,425	1,055	

DRINKING WATER SURVEILLANCE PROGRAM

DELHI WATER SUPPLY SYSTEM
1991 AND 1992 REPORT

INTRODUCTION

The Drinking Water Surveillance Program (DWSP) for Ontario is a monitoring program providing immediate, reliable, current information on drinking water quality. The DWSP officially began in April 1986 and is designed to include all municipal supplies in Ontario. In 1991, 96 supplies and in 1992, 109 supplies were being monitored.

Appendix A has a full description of the DWSP.

The DWSP was initiated for the Delhi water plant in February of 1990. A previous DWSP annual report was published for 1990.

PLANT DESCRIPTION

The Delhi water supply system includes two raw water sources. A spring supply and a conventional water treatment plant which treats water from the North Creek/Lehman Dam. The plant uses a conventional treatment process consisting of coagulation, flocculation, sedimentation, filtration with pressure filters, fluoridation and disinfection. This plant has a rated capacity of 4.54 x 1000 m^3/day. The spring source is an artesian spring which feeds a pond and flows into two open air concrete settling tanks. The water is disinfected, fluoridated and is pumped directly into the distribution system. The Delhi spring facility supplies about 25% of the total demand of the system and has a maximum pumping capacity of 0.84 x 1000 m^3/day. Treated water from the two sources mix in the distribution. The Delhi water supply system serves a population of approximately 4,100.

No sample day flows were reported for this sampling period.

General plant information is presented in Table 1 and a schematic of plant processes, chemical addition points and sampling locations in Figure 1.

SAMPLING AND ANALYSES

Stringent DWSP sampling protocols were followed to ensure that all samples were collected in a uniform manner (see Appendix B).

Sample lines in the plant and at the spring were flushed prior to sampling to ensure that the water obtained was indicative of its origin and not residual water standing in the sample line.

Attempts were made to capture the same block of water at each sampling point in the plant by taking the retention time into consideration. Retention time was calculated by dividing the volume of water between two sampling points by sample day flow. For example, if it was determined that retention time within the plant was five hours, then there would be a five hour interval between the raw and treated sampling. Similarly, if it was estimated that it took approximately one day for the water to travel from the plant to the distribution system site, this site would be sampled one day after the treated water from the plant.

To obtain a representative raw water sample, free from any added chemicals, at plants which used chlorine for zebra mussel control, the operator was required to turn off the chlorine feed to the mouth of the intake and allow enough time for the chlorinated water to clear from the intake works.

Plant operating personnel routinely analyzed parameters for process control (Table 2).

At all distribution system locations, two types of samples were obtained, a standing and a free flow. The standing sample consisted of water that had been in the household plumbing and service connection for a minimum of six hours. These samples were used to make an assessment of the change in the levels of inorganic compounds and metals due to leaching from, or deposition on, the plumbing system. The only analyses carried out on the standing samples, therefore, were laboratory chemistry and metals. The free flow sample represented fresh water from the distribution system main, since the sample tap was flushed for five minutes prior to sampling.

Water at the plant, the spring and two locations in the distribution system was sampled for the presence of approximately 180 parameters. Parameters were divided into the following groups: bacteriological, inorganic and physical (laboratory chemistry, field chemistry and metals), organic (chloroaromatics, chlorophenols, pesticides and PCB, phenolics, polyaromatic hydrocarbons and volatiles) and radiological (radionuclides). Most laboratory analyses were conducted at the Ministry of the Environment and Energy facilities in Rexdale, Ontario. Radionuclides were analyzed by the Ministry of Labour.

RESULTS

Field measurements were recorded on the day of sampling and were entered onto the DWSP database as submitted by plant personnel.

Table 3 contains information on delay time between the raw and treated water sampling, flow rate, and treatment chemical dosages.

Table 4 is a summary of all results by parameter and by water type. If a parameter was not detected, the total number of negative sample results is given. In contrast, if a parameter was detected at any location, the detailed results for all samples are provided.

Positive denotes that the result is greater than the statistical limit of detection established by the Ministry of the Environment and Energy laboratory staff and is quantifiable. Trace (<T) denotes that the level measured is greater than the lowest value detectable by the method but lies so close to the detection limit that it cannot be confidently quantified.

Table 5 lists all parameters analyzed in the DWSP.

Associated guidelines and detection limits are also supplied on Tables 4 and 5. Parameters are listed alphabetically within each scan.

DISCUSSION

GENERAL

Water quality was judged by comparison with the Ontario Drinking Water Objectives publication (ODWOs). When an Ontario Drinking Water Objective (ODWO) was not available, guidelines/limits from other agencies were used. These guidelines were obtained from the Parameter Listing System database.

The guidelines are evaluated on the results from the free flowing samples. Standing samples in the distribution system can show elevated concentrations in certain metals if the water is corrosive or if the standing time is excessive. Flushing the tap until the water achieves the coolest temperature will ensure that the water used for consumption will contain minimum concentrations of metals.

IN REPORTS FOR MIXED SUPPLIES WITH BOTH GROUND WATER AND SURFACE WATER SOURCES WHERE:

- **SURFACE WATER RECEIVES FULL TREATMENT;**
- **TREATMENT OF GROUND WATER CAN BE LIMITED TO DISINFECTION;**
- **WELLS CAN FEED INTO THE DISTRIBUTION SYSTEM INDEPENDENTLY; AND**

- **TREATED SAMPLES FOR GROUND WATER SOURCES, WHEN AVAILABLE,ARE TAKEN FROM RESERVOIRS;**

THIS SECTION WILL DISCUSS:

- **RESULTS FROM TREATED AND DISTRIBUTED WATERS;**
- **RESULTS FROM RAW GROUND WATER SOURCES THAT FEED DIRECTLY INTO THE DISTRIBUTION SYSTEM;**
- **THOSE PARAMETERS WITH CONCENTRATIONS ABOVE GUIDELINE VALUES; AND**
- **POSITIVE ORGANIC PARAMETERS DETECTED.**

In this report comments are combined for all sample locations for each parameter discussed. The water in the distribution system is a mixture from two sources.

BACTERIOLOGICAL

Guidelines for bacteriological sampling and testing of a supply are developed to maintain a proper supervision of its bacteriological quality. Routine monitoring programs usually require that multiple samples be collected in a given system. Full interpretation of bacteriological quality cannot be made on the basis of single samples. Standard plate count was the only bacteriological analysis conducted on the treated and distributed water.

Standard plate count is a test used to supplement routine analysis for coliform bacteria. The limit for standard plate count (at 35°C after 48 hours) in the ODWOs is 500 counts/mL (based on a geometric mean of 5 or more samples). DWSP bacteriological analysis of treated and distributed water was limited to standard plate count.

Standard plate count (membrane filtration) exceeded the ODWO Aesthetic Objective of 500 counts/mL in 20 of 46 treated and distributed water samples with a maximum reported value of >2,400 counts/mL.

INORGANIC & PHYSICAL

CHEMISTRY (FIELD)

It is desirable that the temperature of drinking water be less than 15°C. The palatability of water is enhanced by its coolness. A temperature below 15°C will tend to reduce the growth of nuisance organisms and hence minimize associated taste, colour, odour and corrosion problems. The temperature of delivered water may increase in the distribution system due to the warming effect of soil in late summer and fall and/or as a result of higher temperatures in the source water.

Field temperature exceeded the ODWO Aesthetic Objective of 15°C in 6 of 58 treated and distributed water samples with a maximum reported value of 18.0°C.

Colour in drinking water may be due to the presence of natural or synthetic substances as well as certain metallic ions. Colour is measured in Hazen units (HZU).

Colour exceeded the ODWO Aesthetic Objective of 5 HZU in 7 of 60 treated and distributed water samples with a maximum reported value of 9.0 HZU.

Elevated conductivity is often associated with high hardness levels.

Conductivity exceeded the European Economic Community Aesthetic Guideline Level of 400 umho/cm in all 60 treated and distributed water samples with a maximum reported value of 712 umho/cm.

Where fluoridation is practiced the recommended concentration is 1.2 mg/L and deviation from this optimum should not exceed + or - 0.2 mg/L. In the summer of 1992 the ODWO Maximum Acceptable Concentration for fluoride was lowered from 2.4 mg/L to 1.5 mg/L. Naturally occurring fluoride should not exceed 2.4 mg/L. The Medical Officer of Health should be notified of any exceedances.

Prior to 1992, fluoride exceeded the ODWO Operational Guideline of 1.4 mg/L in 3 of 60 treated and distributed water samples with a maximum reported value of 1.52 mg/L.

The ODWOs indicate that a hardness level of between 80 and 100 mg/L as calcium carbonate for domestic waters provides an acceptable balance between corrosion and encrustation. Water supplies with a hardness greater than 200 mg/L are considered poor and possess a tendency to form scale deposits and result in excessive soap consumption.

Hardness exceeded the ODWO Recommended Operational Guideline of 80-100 mg/L with values greater than 200 mg/L in all 60 treated and distributed water samples with a maximum reported value of 420 mg/L.

Turbidity in water is caused by the presence of suspended matter such as clay, silt, colloidal particles, plankton and other microscopic organisms. The most important potential health effect of turbidity is its interference with disinfection in the treatment plant and the maintenance of a chlorine residual. The ODWO Maximum Acceptable Concentration for turbidity is 1.0 Formazin Turbidity Unit (FTU) and applies to the water leaving the treatment facility.

Turbidity exceeded the ODWO Maximum Acceptable Concentration of 1.0 FTU in 5 of 16 plant treated water samples with a maximum reported value of 2.4 FTU. The results were not confirmed by the corresponding and more reliable field turbidity results.

METALS

At present, there is no evidence that aluminum is physiologically harmful and no health limit for drinking water has been specified. The measure of aluminum in treated water is important to measure the efficiency of the treatment process. The ODWOs indicate that a useful guideline is to maintain a residual below 100 ug/L as aluminum in the water leaving the plant to avoid problems in the distribution system.

Aluminum exceeded the ODWO Recommended Operational Guideline of 100 ug/L in 16 of 17 plant treated water samples and 6 of 29 distributed water samples with a maximum reported value of 620 ug/L.

ORGANIC

CHLOROAROMATICS

The results of the chloroaromatic scan showed that none were detected.

CHLOROPHENOLS

The results of the chlorophenol scan showed that none were detected.

PESTICIDES AND PCB

Hexachlorocyclopentadiene was found at a positive level in 4 of 31 treated and distributed water samples analyzed. The maximum observed level was 200 ng/L. This was below the United States Environmental Protection Agency Ambient Water Quality Criteria of 206,000 ng/L.

PHENOLICS

The results of the phenolic test showed that none were detected above trace levels.

POLYAROMATIC HYDROCARBONS

The results of the polyaromatic hydrocarbon scan showed that none were detected.

SPECIFIC PESTICIDES

The results of the specific pesticide scan showed that none were detected.

VOLATILES

The detection of benzene, ethylbenzene, toluene and xylenes at low, trace levels may be a laboratory artifact derived from the analytical methodology. Trace levels of styrene are considered to be laboratory artifacts resulting from the sample shipping containers.

1,1,1-Trichloroethane was found at positive levels in 12 spring treated water samples and 13 of 29 distributed water samples analyzed. The maximum observed level was 0.8 ug/L. This was below the United States Environmental Protection Agency Maximum Contaminant Level of 200 ug/L.

Trichloroethylene was found at positive levels in all 16 spring treated water samples and 21 of 29 distributed water samples analyzed. The maximum observed level was 33.5 ug/L. This was below the ODWO Maximum Acceptable Concentration of 50 ug/L.

Tetrachloroethylene was detected at trace levels in all 16 spring treated water samples and at trace levels in many distribution samples. The ODWO Maximum Acceptable Concentration is 65 ug/L.

Trihalomethanes (THMs) are produced during the water treatment process and will always occur in chlorinated waters. THMs are comprised of chloroform, chlorodibromomethane and dichlorobromomethane. Bromoform occurs occasionally. Results are reported for the individual compounds as well as for total THMs. Only total THM results are discussed. Starting in 1991, samples from the distribution system were quenched with sodium thiosulphate to stop the further production of THMs in the sample bottle. This provided a more representative estimation of the THMs consumed in tap water.

Total trihalomethanes were found at positive levels in 49 of 60 treated plant, spring and distributed water samples analyzed. The maximum observed level was 141.6 ug/L. This was below the ODWO Maximum Acceptable Concentration of 350 ug/L.

RADIOLOGICAL

RADIONUCLIDES

There are more than 200 radionuclides, some of which occur naturally and others which originate from the activities of society. The radionuclides currently of greater interest from a health view-point are tritium, strontium-90, iodine-131, cesium-137 and radium-226. The gross beta and gross alpha determinations are suitable for preliminary screening except for tritium which must be measured separately. Radionuclides are measured in becquerels per litre (Bq/L). No results were above the available guidelines.

CONCLUSIONS

The sample locations in the distribution were influenced to a greater or lessor extent by both sources of supply, probably due to variations in flow patterns.

No known health related guidelines were exceeded.

The Delhi water treatment plant, for the sample years 1991 and 1992, produced acceptable quality water and this was maintained in the distribution system.

As of July 1993, use of the spring supply was discontinued (due to trichloroethylene contamination) as recommended by the Medical Officer of Health for the area.

FIGURE 1

DELHI WATER TREATMENT PLANT

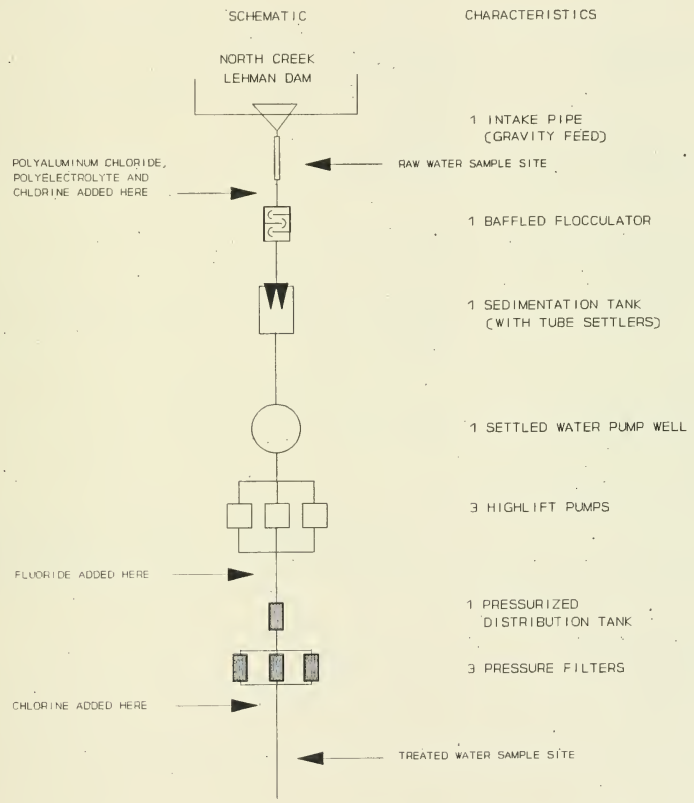

TABLE 1

DRINKING WATER SURVEILLANCE PROGRAM

PLANT GENERAL REPORT

PLANT NAME:	DELHI WTP AND SPRING SUPPLY
WORKS #:	220000415
UTM #:	17S398704744300
DISTRICT:	SIMCOE
REGION:	WEST CENTRAL
DISTRICT OFFICER:	J. PERCY
SUPERINTENDENT:	JAMES WALKER
ADDRESS:	70 TOWN CENTRE DRIVE TOWNSEND, ONTARIO N0A 1S0 519-587-4911
MUNICIPALITY:	HALDIMAND-NORFOLK REGION
AUTHORITY:	MUNICIPAL

PLANT INFORMATION

PLANT VOLUME:	0.278	(X 1000 M3)
DESIGN CAPACITY:	5.430	(X 1000 M3/DAY)
RATED CAPACITY:	4.540	(X 1000 M3/DAY)
MAXIMUM PUMPING CAPACITY OF SPRING SUPPLY:	0.840	(X 1000 M3/DAY)

MUNICIPALITY	POPULATION
DELHI	4,100

TABLE 2
DRINKING WATER SURVEILLANCE PROGRAM
IN-PLANT MONITORING
DELHI WATER TREATMENT PLANT

PARAMETER	LOCATION	FREQUENCY
FREE CHLORINE RESIDUAL	RAW	DAILY
	TREATED	DAILY
	CLEAR WELL	DAILY
TOTAL CHLORINE RESIDUAL	TREATED	DAILY
	CLEAR WELL	DAILY
FLUORIDE	TREATED	DAILY
TURBIDITY	TREATED	CONTINUOUS

DELHI SPRING SUPPLY

PARAMETER	LOCATION	FREQUENCY
FREE CHLORINE RESIDUAL	TREATED	DAILY
FLUORIDE	TREATED	DAILY

TABLE 3
DRINKING WATER SURVEILLANCE PROGRAM DELHI WTP SAMPLE DAY CONDITIONS
AND TREATMENT CHEMICAL DOSAGES FOR 1991 AND 1992

DATE	DELAY * TIME(HRS)	FLOW (1000M3)	PRE CHLORINATION CHLORINE	COAGULATION POLYALUMINUM CHLORIDE	FLUORIDATION HYDROFLUOSILICIC ACID	POST CHLORINATION CHLORINE
91 JAN 08	.00	.000	4.80	8.93	1.75	.97
91 FEB 05	.00	.000	5.01	9.33	2.76	.93
91 MAR 05	.00	.000	4.92	8.69	2.68	.94
91 APR 03	.00	.000	4.81	12.99	2.70	.96
91 MAY 07	.00	.000	4.73	11.24	2.75	.96
91 JUN 04	.00	.000	4.64	9.29	2.85	.95
91 JUL 03	.00	.000	4.20	11.57	2.57	.75
91 AUG 06	.00	.000	3.17	3.94	1.32	.97
91 SEP 04	.00	.000	5.95	4.76	3.00	1.31
91 OCT 08	.00	.000	5.02	4.79	2.86	.98
91 NOV 05	.00	.000	.	3.38	.40	.
92 JAN 07	.00	.000	4.11	2.87	1.94	.57
92 MAR 03	.00	.000	3.11	6.20	1.07	.86
92 MAY 04	.00	.000	2.75	5.41	1.26	.62
92 JUL 07	.00	.000	2.77	4.81	1.49	.96
92 SEP 08	.00	.000	4.00	6.00	1.00	1.00
92 NOV 03	.00	.000	4.95	4.56	2.80	1.27

* THE DELAY TIME BETWEEN THE RAW AND TREATED WATER SAMPLING, SHOULD ESTIMATE THE RETENTION TIME.

DRINKING WATER SURVEILLANCE PROGRAM DELHI DPRING SUPPLY SAMPLE DAY CONDITIONS
AND TREATMENT CHEMICAL DOSAGES FOR 1991 AND 1992

DATE	DELAY * TIME(HRS)	FLOW (1000M3)	PRE CHLORINATION CHLORINE	FLUORIDATION HYDROFLUOSILICIC ACID
91 AUG 07	.00	.000	1.87	1.70
92 MAR 02	.00	.000	1.50	1.49
92 MAY 05	.00	.000	1.49	1.13
92 SEP 09	.00	.000	1.00	1.00

KEY TO TABLE 4 and 5

A ONTARIO DRINKING WATER OBJECTIVES (ODWO)
1. Maximum Acceptable Concentration (MAC)
1+. MAC for Total Trihalomethanes
2. Interim Maximum Acceptable Concentration (IMAC)
3. Aesthetic Objective (AO)
3*. AO for Total Xylenes
4. Recommended Operational Guideline
5. Health Related Guidance Value

B HEALTH & WELFARE CANADA (H&W)
1. Maximum Acceptable Concentration (MAC)
2. Proposed MAC
3. Interim MAC
4. Aesthetic Objective (AO)

C WORLD HEALTH ORGANIZATION (WHO)
1. Guideline Value (GV)
2. Tentative GV
3. Aesthetic GV

D US ENVIRONMENTAL PROTECTION AGENCY (EPA)
1. Maximum Contaminant Level (MCL)
2. Suggested No-Adverse Effect Level (SNAEL)
3. Lifetime Health Advisory
4. EPA Ambient Water Quality Criteria

F EUROPEAN ECONOMIC COMMUNITY (EEC)
1. Health Related Guideline Level
2. Aesthetic Guideline Level
3. Maximum Admissable Concentration (MADC)

G CALIFORNIA STATE DEPARTMENT OF HEALTH-GUIDELINE VALUE

I NEW YORK STATE AMBIENT WATER GUIDELINE

N/A NONE AVAILABLE

LABORATORY RESULTS, REMARK DESCRIPTIONS

.	No Sample Taken
BDL	Below Minimum Measurement Amount
<T	Greater Than Detection Limit But Not Confident (SEE INTERPRETATION OF RESULTS ABOVE)
>	Results Are Greater Than The Upper Limit
<=>	Approximate Result
!48	No Data: Sample Age Exceeded 48 Hours
!AR	No Data: No Numeric Results
!AW	No Data: Analysis Withdrawn
!BT	No Data: Sample Broken In Transit
!CS	No Data: Contamination Suspected
!EF	No Data: Laboratory Equipment Failure
!IR	No Data: Insufficient Sample
!IS	No Data: Insufficient Sample
!LA	No Data: Laboratory Accident
!NP	No Data: No Procedure
!NR	No Data: Sample Not Received
!OP	No Data: Obscured Plate
!PE	No Data: Procedure Error: Sample Discarded
!PR	No Data: Preservative Required
!QU	No Data: Quality Control Unacceptable
!RE	No Data: Received Empty
!RO	No Data: No Numeric Results
!SM	No Data: Sample Missing
!SS	No Data: Sample Improperly Preserved
!U	No Data: Sample Unsuitable For Analysis
!UB	No Data: Bottle Broken
!UN	No Data: Result Unreliable

!UR	No Data: Unpreserved Sample Required
A	Approximate Value
A3C	Approximate, Total Count Exceeded 300 Colonies
A>	Approximate Value, Exceeded Normal Range
APS	Additional Peak, Less Than, Not Priority Pollutant
ARO	Additional Information In Laboratory Report
CRO	Calculated Result Only
NAF	Not All Required Tests Found
RID	Ioncal Calculated on Incomplete Data Set
RMP	P and M-Xylene Not Separated
RRR	Result Obtained by Repeat Analysis
RRV	Rerun Verification
SFA	Sample Filtered: Filtrate Analyzed
SIL	Sample Incorrectly Labelled
SPS	Several Peaks, Small, Not Priority Pollutant
U48	Unreliable: Sample Age Exceeded 48 Hours
UAL	Unreliable: Sample Age Exceeded Limit
UAU	Unreliable: Sample Age Unknown
UCS	Unreliable: Contamination Suspected
WSD	Wrong Sample Description On Bottle

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
BACTERIOLOGICAL								
FECAL COLIFORM MF (CT/100ML)			DET'N LIMIT = 0		GUIDELINE = 0 (A1)			
1991 JAN	10	3	.	.	.	.	.	.
1991 FEB	28	BDL	.	.	.	.	.	.
1991 MAR	34	0	.	.	.	.	.	.
1991 APR	14	0	.	.	.	.	.	.
1991 MAY	2	6	.	.	.	.	.	.
1991 JUN	8	20	.	.	.	.	.	.
1991 JUL	24	.	.	.	.	.	.	.
1991 SEP	6	90	.	.	.	.	.	.
1991 OCT	8	36	.	.	.	.	.	.
1992 MAR	6	.	.	.	.	.	.	.
1992 SEP	10	0	.	.	.	.	.	.
1992 NOV	15	0	.	.	.	.	.	.
STANDRD PLATE CNT MF (CT/ML)			DET'N LIMIT = 0		GUIDELINE = 500 (A3)			
1991 JAN	.	.	12	24	2 <=>	.	19	.
1991 FEB	.	.	11	5 <=>	0 <=>	.	6 <=>	.
1991 MAR	.	.	42	3 <=>	4 <=>	.	5 <=>	.
1991 APR	.	.	3 <=>	0 <=>	2400 >	.	23	.
1991 MAY	.	.	17	1060	2400 >	.	30	.
1991 JUN	.	.	2400 >	2400 >	1600	.	420	.
1991 JUL	.	.	2400 >	.	225	.	390	.
1991 AUG	.	.	.	.	.	.	2400 >	.
1991 SEP	.	.	1900	2400 >	1700	.	2400 >	.
1991 OCT	.	.	2400 >	360	9 <=>	.	1700	.
1991 NOV	.	.	.	.	5 <=>	.	2400 >	.
1992 MAR	.	.	3 <=>	.	.	.	.	.
1992 JUL	.	.	.	.	2400 >	.	.	.
1992 SEP	.	.	2400 >	2400 >	.	.	550 A3C	.
1992 NOV	.	.	3 <=>	1100 A3C	.	.	5 <=>	.
TOTAL COLIFORM MF (CT/100ML)			DET'N LIMIT = 0		GUIDELINE = 5/100ML (A1)			
1991 JAN	5100	100 <=>	.	.	.	.	.	.
1991 FEB	560 A3C	120 <=>	.	.	.	.	.	.
1991 MAR	3400	200 A3C	.	.	.	.	.	.
1991 APR	540	67 <=>	.	.	.	.	.	.
1991 MAY	240 A3C	200 <=>	.	.	.	.	.	.
1991 JUN	100 <=>	70 <=>	.	.	.	.	.	.
1991 JUL	30 <=>	.	.	.	.	.	.	.
1991 SEP	100 <=>	200 A3C	.	.	.	.	.	.
1991 OCT	130 A3C	50 <=>	.	.	.	.	.	.
1992 MAR	260	.	.	.	.	.	.	.
1992 SEP	10P	32 A3C	.	.	.	.	.	.
1992 NOV	120 A3C	12 A3C	.	.	.	.	.	.

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
	BACTERIOLOGICAL							
T COLIFORM BCKGRD	MF (CT/100ML)		DET'N LIMIT = 0		GUIDELINE = N/A			
1991 JAN	7200	17100	.	.	.	.	.	.
1991 FEB	6400 A3C	1480	.	.	.	.	.	.
1991 MAR	17000	8000 A3C	.	.	.	.	.	.
1991 APR	3600	5683 A3C	.	.	.	.	.	.
1991 MAY	5800 A3C	24000	.	.	.	.	.	.
1991 JUN	90000 A3C	11000 A3C	.	.	.	.	.	.
1991 JUL	24000 >	.	.	.	.	.	.	.
1991 SEP	70000 A3C	5700 A3C	.	.	.	.	.	.
1991 OCT	24000 >	7000 A3C	.	.	.	.	.	.
1992 MAR	490	.	.	.	.	.	.	.
1992 SEP	9600 >	9600 >	.	.	.	.	.	.
1992 NOV	6500 A3C	2440 A3C	.	.	.	.	.	.

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
CHEMISTRY (FIELD)								
FLD CHLORINE (COMB) (MG/L)			DET'N LIMIT = 0		GUIDELINE = N/A			
1991 JAN	.000	.	.600	.100	.000	.000	.900	.000
1991 FEB	.	.	.300	.200	.200	.000	.400	.200
1991 MAR	.	.	.200	.100	.400	.200	.200	.200
1991 APR	.	.	.200	.300	.200	.000	.200	.000
1991 MAY	.	.	.200	.200	.000	.000	.200	.000
1991 JUN	.	.	.400	.200	.000	.000	.000	.000
1991 JUL	.	.	.300	.000	.200	.000	.200	.000
1991 AUG	.	.	.300	.400	.	.	.200	.000
1991 SEP	.	.	.200	.300	.000	.000	.000	.000
1991 OCT	.	.	.400	.300	.000	.000	.400	.000
1991 NOV	.	.	.300	.000	.400	.000	.000	.200
1992 JAN	.	.	.300	.400	.000	.000	.200	.000
1992 MAR	.	.	.300	.400	.200	.000	.	.
1992 MAY	.	.	.300	.200	.	.	.000	.000
1992 JUL	.	.	.200	.	.300	.300	.	.
1992 SEP	.	.	.100	.150	.	.	.000	.000
1992 NOV	.	.	.100	.200	1.700	1.100	.000	.000
FLD CHLORINE FREE (MG/L)			DET'N LIMIT = 0		GUIDELINE = N/A			
1991 JAN	.000	.	1.100	.900	.700	.500	.900	.100
1991 FEB	.	.	1.600	1.100	.900	.500	.700	.100
1991 MAR	.	.	.500	.900	.300	1.100	.500	.100
1991 APR	.	.	1.700	1.000	.500	.700	.500	.500
1991 MAY	.	.	1.500	.700	.300	.100	.700	.100
1991 JUN	.	.	1.300	.900	.300	.300	.700	.100
1991 JUL	.	.	1.000	1.000	.900	.900	.500	.100
1991 AUG	.	.	1.500	1.100	.	.	.700	.100
1991 SEP	.	.	1.500	1.000	1.100	.500	.100	.100
1991 OCT	.	.	1.200	1.000	1.300	1.100	.300	.100
1991 NOV	.	.	1.100	1.000	1.300	.100	.300	.100
1992 JAN	.	.	1.000	1.500	.300	.300	1.300	.100
1992 MAR	.	.	1.600	1.300	.900	1.100	.	.
1992 MAY	.	.	1.000	.900	.	.	.100	.100
1992 JUL	.	.	1.000	.	.100	.100	.	.
1992 SEP	.	.	.900	.800	.	.	.700	.100
1992 NOV	.	.	1.700	.900	1.700	1.000	.900	.100

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
CHEMISTRY (FIELD)								
FLD CHLORINE (TOTAL) (MG/L)			DET'N LIMIT = 0		GUIDELINE = N/A			
1991 JAN	.000	.	1.700	1.000	.700	.500	.	.100
1991 FEB	.	.	1.900	1.300	1.100	.500	1.100	.300
1991 MAR	.	.	.700	1.000	.700	1.300	.700	.300
1991 APR	.	.	1.900	1.300	.700	.700	.700	.500
1991 MAY	.	.	1.700	.900	.300	.100	.900	.100
1991 JUN	.	.	1.700	1.100	.300	.300	.700	.100
1991 JUL	.	.	1.300	1.000	1.100	.900	.700	.100
1991 AUG	.	.	1.800	1.500	.	.	.900	.100
1991 SEP	.	.	1.700	1.300	1.100	.500	.100	.100
1991 OCT	.	.	1.600	1.300	1.300	1.100	.700	.100
1991 NOV	.	.	1.400	1.000	1.700	.100	.300	.300
1992 JAN	.	.	1.300	1.900	.300	.300	1.500	.100
1992 MAR	.	.	1.900	1.700	1.100	1.100	.	.
1992 MAY	.	.	1.300	1.100	.	.	.100	.100
1992 JUL	.	.	1.200	.	.400	.400	.	.
1992 SEP	.	.	1.000	.950	.	.	.100	.100
1992 NOV	.	.	1.800	1.100	.	.	.900	.100
FLD PH (DMNSLESS)			DET'N LIMIT = N/A		GUIDELINE = 6.5-8.5 (A4)			
1991 JAN	7.600	7.400	7.600	7.600	7.200	7.200	7.400	7.600
1991 FEB	7.600	7.600	7.000	7.600	7.600	7.600	7.600	7.600
1991 MAR	7.600	7.600	7.600	7.600	7.600	7.600	7.600	7.800
1991 APR	7.800	7.500	7.600	7.600	7.600	7.600	7.600	7.800
1991 MAY	8.000	7.400	7.600	7.400	8.000	8.400	7.400	7.600
1991 JUN	7.700	7.600	7.600	7.600	8.000	7.800	7.600	7.800
1991 JUL	.	.	7.800	7.600	7.800	7.800	7.400	7.600
1991 AUG	7.800	7.600	7.600	7.400	.	.	7.600	7.800
1991 SEP	7.700	7.600	7.600	7.600	7.600	7.600	7.600	7.600
1991 OCT	7.600	7.600	7.500	7.600	7.600	7.600	7.600	7.800
1991 NOV	.	.	.	.	7.400	7.600	7.800	7.800
1992 JAN	7.800	7.400	7.600	7.500	7.800	7.600	7.600	7.600
1992 MAR	7.500	7.500	7.600	7.500	7.600	7.400	.	.
1992 MAY	7.600	7.400	7.500	7.200	.	.	7.600	7.400
1992 JUL	7.700	.	7.700	.	7.600	7.600	.	.
1992 SEP	8.000	7.600	7.800	7.500	.	.	7.800	7.800
1992 NOV	8.000	7.400	7.900	7.600	7.800	7.800	7.600	7.800

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
CHEMISTRY (FIELD)								
FLD TEMPERATURE (DEG.C)			DET'N LIMIT = N/A		GUIDELINE = 15 (A3)			
1991 JAN	4.000	3.000	4.000	3.000	6.000	10.000	8.000	17.000
1991 FEB	6.000	8.000	5.000	9.000	4.000	12.000	6.000	17.000
1991 MAR	4.000	3.000	4.000	3.000	6.000	8.000	8.000	17.000
1991 APR	5.000	7.000	6.000	7.000	7.000	12.000	8.000	15.000
1991 MAY	11.000	9.000	10.000	10.000	11.000	16.000	10.000	18.000
1991 JUN	16.500	11.500	16.000	12.000	16.000	18.000	13.000	18.000
1991 JUL	.	.	.	.	18.000	18.000	14.000	19.000
1991 AUG	12.000	10.500	12.500	11.000	.	.	14.000	19.000
1991 SEP	14.000	12.000	15.000	12.000	16.000	20.000	17.000	19.000
1991 OCT	9.500	10.000	11.500	10.000	13.000	18.000	14.000	20.000
1991 NOV	.	.	.	.	11.000	16.000	12.000	20.000
1992 JAN	2.000	15.000	2.000	14.000	5.000	13.000	8.000	18.000
1992 MAR	1.000	5.000	2.000	5.000	7.000	10.000	.	.
1992 MAY	6.000	7.500	7.000	8.000	.	.	1.000	16.000
1992 JUL	10.000	.	11.000	.	18.000	18.000	.	.
1992 SEP	12.000	10.000	11.000	10.000	.	.	14.000	20.000
1992 NOV	3.000	6.000	5.000	6.500	8.000	1.700	8.000	16.000
FLD TURBIDITY (FTU)			DET'N LIMIT = N/A		GUIDELINE = 1.0 (A1)			
1991 JAN	.	.	.740	.	.	.	.	.
1991 FEB	.	.	.390	.	.	.	.	.
1991 MAR	.	.	.250	.	.	.	.	.
1991 APR	.	.	.530	.	.	.	.	.
1991 MAY	.	.	.290	.	.	.	.	.
1991 JUN	.	.	.480	.	.	.	.	.
1991 AUG	.	.	.240	.	.	.	.	.
1991 SEP	.	.	.150	.	.	.	.	.
1991 OCT	.	.	.370	.	.	.	.	.
1992 JAN	.	.	.130	.	.	.	.	.
1992 MAR	.	.	.550	.	.	.	.	.
1992 MAY	.	.	.540	.	.	.	.	.
1992 SEP	.	.	.130	.	.	.	.	.
1992 NOV	1.800	.	.380	.240	.	.	.	.

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
	CHEMISTRY (LABORATORY)							
ALKALINITY (MG/L)			DET'N LIMIT = 0.2		GUIDELINE = 30-500 (A4)			
1991 JAN	206.600	222.700	198.900	228.200	225.400	224.900	226.400	224.800
1991 FEB	207.200	158.900	199.800	192.600	228.000	228.000	204.400	201.400
1991 MAR	197.600	214.100	193.700	221.800	196.000	192.700	224.100	207.700
1991 APR	204.200	215.600	192.100	222.900	221.300	221.800	222.200	223.200
1991 MAY	199.500	222.200	193.900	221.000	200.400	198.700	222.900	221.800
1991 JUN	201.000	223.800	193.700	219.900	191.700	190.500	220.600	220.200
1991 JUL	189.300	206.800	185.000	219.000	185.700	186.600	220.100	220.800
1991 AUG	198.400	223.400	194.500	224.100	.	.	225.300	225.100
1991 SEP	193.600	227.200	188.100	223.900	224.100	188.900	196.700	199.700
1991 OCT	192.400	220.100	185.800	209.000	220.900	220.000	184.700	186.400
1991 NOV	204.900	207.300	199.700	225.200	223.800	206.800	201.200	226.500
1992 JAN	197.000	223.700	189.000	223.700	206.000	205.000	222.400	224.900
1992 MAR	204.500	.	201.700	.	222.600	223.600	.	.
1992 MAY	198.700	172.300	190.900	218.500	.	.	217.700	219.900
1992 JUL	183.100	.	!AW	.	177.200	177.500	.	.
1992 SEP	196.400	202.600	193.900	209.300	.	.	217.900	218.700
1992 NOV	209.000	221.000	207.600	220.100	207.000	203.200	222.300	219.700
CALCIUM (MG/L)			DET'N LIMIT = 0.20		GUIDELINE = 100 (F2)			
1991 JAN	97.200	95.800	96.200	95.500	96.100	99.800	95.200	97.400
1991 FEB	94.600	74.830	96.600	85.280	94.700	94.300	76.800	86.900
1991 MAR	91.800	84.400	90.000	91.200	92.200	90.000	97.200	92.200
1991 APR	87.600	85.500	89.200	88.000	85.500	87.500	87.600	90.400
1991 MAY	90.800	89.800	91.200	91.400	92.600	92.600	89.500	96.200
1991 JUN	84.800	88.500	86.600	88.400	86.200	86.200	90.800	94.800
1991 JUL	78.800	67.400	78.000	85.600	78.400	77.600	87.200	94.600
1991 AUG	80.200	88.500	81.000	90.900	.	.	88.800	91.100
1991 SEP	79.900	91.800	79.300	94.700	93.800	78.900	81.300	83.800
1991 OCT	82.100	88.400	80.300	85.200	89.800	93.200	80.600	80.100
1991 NOV	84.500	81.200	84.900	89.500	90.600	86.800	85.300	94.800
1992 JAN	85.400	88.000	83.000	91.000	81.500	82.100	88.600	93.200
1992 MAR	91.700	.	91.800	.	93.700	94.600	.	.
1992 MAY	89.800	67.850	87.400	86.500	.	.	86.400	90.250
1992 JUL	80.500	.	!AW	.	79.800	79.700	.	.
1992 SEP	83.300	90.500	84.550	90.650	.	.	91.200	90.550
1992 NOV	91.000	85.300	90.800	87.500	87.100	86.700	90.100	92.500
CYANIDE (MG/L)			DET'N LIMIT = 0.001		GUIDELINE = 0.2 (A1)			
54 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
	CHEMISTRY (LABORATORY)							
CHLORIDE (MG/L)			DET'N LIMIT = 0.20		GUIDELINE = 250 (A3)			
1991 JAN	16.500	52.200	25.700	53.400	53.400	52.000	53.300	53.800
1991 FEB	16.700	55.500	26.000	56.500	56.000	55.400	22.800	28.100
1991 MAR	16.100	53.700	20.800	54.500	27.800	25.200	54.600	24.600
1991 APR	16.200	53.600	30.100	54.700	54.300	54.900	54.400	53.500
1991 MAY	15.800	52.600	22.400	53.700	20.600	21.200	54.400	54.100
1991 JUN	16.300	51.800	22.900	53.300	21.500	21.500	52.600	52.700
1991 JUL	17.200	53.300	21.700	54.600	21.700	21.500	53.400	54.100
1991 AUG	16.500	51.800	23.300	53.300	.	.	53.200	50.700
1991 SEP	16.800	53.900	22.700	55.100	55.000	21.600	21.400	26.100
1991 OCT	17.600	54.300	23.000	55.400	55.600	55.400	22.200	22.100
1991 NOV	18.500	56.600	23.300	58.000	56.500	32.000	26.600	58.200
1992 JAN	18.100	58.500	23.100	60.000	56.900	55.500	59.400	60.100
1992 MAR	17.100	.	21.800	.	57.700	56.600	.	.
1992 MAY	16.200	56.000	21.300	56.900	.	.	55.900	57.400
1992 JUL	17.000	.	IAW	.	20.900	20.900	.	.
1992 SEP	18.100	56.300	24.500	56.500	.	.	56.400	57.000
1992 NOV	17.400	56.500	21.900	54.400	22.800	23.000	55.400	44.700
COLOUR (HZU)			DET'N LIMIT = 0.50		GUIDELINE = 5 (A3)			
1991 JAN	15.000	1.000 <T	5.500	1.000 <T	.500 <T	1.000 <T	.500 <T	1.000 <T
1991 FEB	13.000	.500 <T	3.500	BDL	BDL	.500 <T	5.000	5.000
1991 MAR	16.000	BDL	5.500	BDL	3.500	4.000	BDL	BDL
1991 APR	16.500	1.000 <T	4.000	.500 <T	BDL	.500 <T	BDL	1.000 <T
1991 MAY	16.500	1.000 <T	4.000	BDL	7.000	7.500	BDL	1.000 <T
1991 JUN	14.500	1.500 <T	5.500	.500 <T	7.500	7.000	BDL	.500 <T
1991 JUL	15.500	26.000	4.000	9.000	4.000	4.000	BDL	.500 <T
1991 AUG	12.500	1.500	5.000	1.000	.	.	.500 <T	1.500
1991 SEP	16.500	1.500	3.500	1.000 <T	1.000 <T	4.000	4.500	3.500
1991 OCT	12.000	1.000 <T	2.500	BDL	.500 <T	.500 <T	2.500	2.500
1991 NOV	10.500	.500 <T	3.500	BDL	.500 <T	3.000	4.500	.500 <T
1992 JAN	13.000	.500 <T	5.000	BDL	.500 <T	1.000	BDL	BDL
1992 MAR	13.500	.	4.000	.	.500 <T	.500 <T	.	.
1992 MAY	17.000	BDL	6.500	BDL	.	.	BDL	1.500
1992 JUL	10.000	.	IAW	.	5.000	5.000	.	.
1992 SEP	10.500	.500 <T	3.500	BDL	.	.	BDL	BDL
1992 NOV	11.500	1.500	4.000	1.500	4.500	5.000	BDL	1.500

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
CHEMISTRY (LABORATORY)								
CONDUCTIVITY (UMHO/CM)			DET'N LIMIT = 1.0		GUIDELINE = 400 (F2)			
1991 JAN	559	664	582	682	677	674	679	677
1991 FEB	554	684	579	687	687	682	573	590
1991 MAR	531	655	543	674	557	555	667	566
1991 APR	543	653	579	671	667	669	669	668
1991 MAY	513	639	534	646	534	534	647	647
1991 JUN	503	633	517	636	512	511	636	635
1991 JUL	513	657	528	683	528	529	691	692
1991 AUG	532	681	554	694	.	.	692	682
1991 SEP	495	657	509	664	664	504	510	531
1991 OCT	530	699	542	709	708	708	537	539
1991 NOV	547	670	564	706	700	600	575	708
1992 JAN	573	706	585	712	699	696	711	716
1992 MAR	563	.	580	.	699	703	.	.
1992 MAY	533	672	541	677	.	.	673	665
1992 JUL	491	.	!AW	.	501	502	.	.
1992 SEP	525	656	546	674	.	.	683	686
1992 NOV	547	663	569	666	564	559	669	640
DISS ORG CARBON (MG/L)			DET'N LIMIT = 0.10		GUIDELINE = 5.0 (A3)			
1991 JAN	4.200	.800	3.800	.900	.800	1.200	.700	.900
1991 FEB	3.300	.700	2.800	.700	.800	1.100	3.200	2.600
1991 MAR	4.000	.700	3.200	.700	2.700	3.500	.800	2.400
1991 APR	3.800	1.000	3.000	.900	.900	1.500	1.000	1.200
1991 MAY	3.500	.800	3.300	.900	3.700	3.700	.800	1.000
1991 JUN	3.400	.900	3.200	.900	3.100	3.200	1.000	1.200
1991 JUL	2.400	.900	2.300	1.000	2.400	2.500	.800	1.000
1991 AUG	3.100	.700	3.000	.700	.	.	.700	1.700
1991 SEP	2.100	.800	2.200	.800	.800	2.100	2.100	1.800
1991 OCT	2.300	.600	2.400	.700	.700	.900	1.800	1.800
1991 NOV	2.800	.600	2.900	.700	1.100	2.300	2.500	1.000
1992 JAN	3.400	.600	2.900	.800	.800	1.100	.700	.900
1992 MAR	3.400	.	3.100	.	.800	.800	.	.
1992 MAY	4.100	.800	3.700	.900	.	.	1.000	1.100
1992 JUL	2.600	.	!AW	.	2.300	2.400	.	.
1992 SEP	2.800	.700	2.800	.800	.	.	1.000	1.100
1992 NOV	2.900	.900	3.000	.900	2.800	2.800	.900	1.600

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
	CHEMISTRY (LABORATORY)							
FLUORIDE (MG/L)			DET'N LIMIT = 0.01		GUIDELINE = 1.5 (A1)			
1991 JAN	.120	.100	1.160	.780	1.140	1.060	1.220	1.220
1991 FEB	.100	.060	1.160	.760	1.080	1.020	1.180	1.220
1991 MAR	.100	.040 <T	1.040	1.220	.940	.960	1.140	1.080
1991 APR	.080	.060	1.000	1.060	1.020	1.000	1.060	1.040
1991 MAY	.080	.060	1.180	1.320	.940	1.020	1.300	1.340
1991 JUN	.100	.080	1.160	1.320	1.280	1.360	1.380	1.360
1991 JUL	.080	.040 <T	1.200	1.320	.820	.860	1.360	1.380
1991 AUG	.080	.100	1.320	1.260	.	.	1.260	1.120
1991 SEP	.080	.060	1.460	1.520	1.420	.960	.900	1.160
1991 OCT	.080	.080	1.120	1.060	1.060	1.080	1.040	1.140
1991 NOV	.100	.080	1.120	.920	.940	.980	1.100	1.020
1992 JAN	.080	.060	.580	.900	.820	.680	.940	.940
1992 MAR	.080	.	1.080	.	1.300	1.280	.	.
1992 MAY	.100	.080	1.040	1.000	.	.	1.060	1.060
1992 JUL	.080	.	!AW	.	1.360	1.360	.	.
1992 SEP	.100	.120	1.140	1.320	.	.	1.300	1.320
1992 NOV	.100	.140	1.260	.980	1.140	1.180	1.000	1.100
HARDNESS (MG/L)			DET'N LIMIT = 0.5		GUIDELINE = 80-100 (A4)			
1991 JAN	303.800	314.800	301.200	313.800	314.300	325.300	314.900	319.000
1991 FEB	297.000	263.000	302.000	289.000	313.000	310.000	266.000	281.000
1991 MAR	285.000	284.000	281.000	301.000	290.000	283.000	317.000	291.000
1991 APR	276.100	284.200	281.900	290.500	284.800	288.400	290.800	293.700
1991 MAY	285.000	296.600	288.000	302.000	289.000	288.000	299.100	311.000
1991 JUN	267.000	290.500	273.000	290.200	270.000	269.000	293.000	305.000
1991 JUL	258.000	243.000	256.000	289.000	257.000	255.000	293.000	310.000
1991 AUG	256.200	291.700	258.000	299.700	.	.	292.000	297.700
1991 SEP	257.000	300.200	256.400	308.200	305.000	254.300	262.300	269.300
1991 OCT	262.200	291.700	257.600	282.200	295.000	294.500	260.000	258.000
1991 NOV	272.400	277.300	273.700	298.500	298.800	281.500	276.600	311.100
1992 JAN	275.100	293.100	269.300	302.500	278.100	277.600	280.500	306.100
1992 MAR	289.000	.	289.000	.	308.000	310.000	.	.
1992 MAY	284.000	241.000	277.000	288.400	.	.	288.700	297.000
1992 JUL	263.000	.	!AW	.	262.000	261.000	.	.
1992 SEP	269.440	416.910	272.840	299.480	.	.	420.620	298.680
1992 NOV	288.000	286.000	288.000	290.000	277.000	276.000	297.000	299.000

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
CHEMISTRY (LABORATORY)								
IONCAL (DMNSLESS)			DET'N LIMIT = N/A		GUIDELINE = N/A			
1991 JAN	1.479	1.884 RID	1.721	.741 RID	1.800 RID	5.052 RID	1.453 RID	3.107 RID
1991 FEB	1.135	5.042	2.132	2.429	.907	1.566	.725	4.984
1991 MAR	2.281 RID	3.595 RID	1.167 RID	.570 RID	3.756 RID	2.265 RID	2.792 RID	.777 RID
1991 APR	3.944	4.277 RID	2.570	4.042 RID	5.081 RID	4.376 RID	4.054 RID	3.995 RID
1991 MAY	3.316	2.145	4.866	.582	2.360	3.393	2.626	1.820
1991 JUN	3.565 NAF	4.606 NAF	.034 NAF	3.527 NAF	.277 NAF	.167 NAF	2.707 NAF	.838 NAF
1991 JUL	.658	16.020	.141	3.765	.230	.925	1.994	2.143
1991 AUG	7.219	4.864	5.108	2.730	.	.	5.539	3.333
1991 SEP	2.681 NAF	4.164 NAF	.986 NAF	.155 NAF	1.261 NAF	3.029 NAF	1.398 NAF	.651 NAF
1991 OCT	.464	4.655	.086	3.909	3.507	3.337	1.755	.734
1991 NOV	4.178 NAF	3.440 NAF	1.982 NAF	2.675 NAF	3.117 NAF	3.119 NAF	2.183 NAF	.245 NAF
1992 JAN	3.988	4.709	3.452	2.059	3.756	4.125	3.006	.147
1992 MAR	1.580	.	.907	.	.087	.214	.	.
1992 MAY	2.140 NAF	4.741 NAF	2.240 NAF	3.733 NAF	.	.	2.727 NAF	1.739 NAF
1992 JUL	3.194	.	.000 NAF	.	3.784	3.945	.	.
1992 SEP	.938	4.539	1.864	3.430	.	.	1.719	.038
1992 NOV	.610	4.739	.399	2.653	4.038	2.900	.882	.315
POTASSIUM (MG/L)			DET'N LIMIT = 0.01		GUIDELINE = 10 (F2)			
1991 JAN	1.970	1.380	2.000	1.340	1.380	1.450	1.360	1.400
1991 FEB	2.050	1.450	2.100	1.450	1.450	1.550	1.500	1.500
1991 MAR	1.850	1.250	1.700	1.300	1.700	1.950	1.300	1.650
1991 APR	1.760	1.220	1.800	1.220	1.290	1.440	1.220	1.320
1991 MAY	1.310	1.160	1.480	1.140	1.520	1.550	1.120	1.170
1991 JUN	1.550	1.300	1.500	1.300	1.500	1.550	1.350	1.500
1991 JUL	1.150	1.350	1.200	1.450	1.350	1.300	1.300	1.300
1991 AUG	1.510	1.210	1.570	1.220	.	.	1.150	1.240
1991 SEP	1.480	1.390	1.520	1.330	1.370	1.510	1.580	1.530
1991 OCT	1.810	1.390	1.800	1.460	1.420	1.520	1.640	1.680
1991 NOV	1.840	1.410	1.890	1.370	1.570	2.010	1.820	1.420
1992 JAN	1.820	1.220	1.780	1.330	1.370	1.480	1.320	1.300
1992 MAR	1.890	.	1.880	.	1.450	1.550	.	.
1992 MAY	1.965	1.350	1.901	1.346	.	.	1.374	1.398
1992 JUL	1.360	.	!AW	.	1.370	1.390	.	.
1992 SEP	1.998	1.401	2.071	1.408	.	.	1.444	1.450
1992 NOV	1.924	1.417	1.937	1.409	1.983	2.028	1.391	1.648

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
CHEMISTRY (LABORATORY)								
LANGELIERS INDEX (DMNSLESS)			DET'N LIMIT = N/A		GUIDELINE = N/A			
1991 JAN	1.256	1.145 RID	1.213	1.193 RID	1.171 RID	1.206 RID	1.208 RID	1.255 RID
1991 FEB	1.186	.900	1.107	1.000	1.059	1.147	1.028	1.113
1991 MAR	1.225 RID	1.013 RID	1.146 RID	1.191 RID	1.231 RID	1.163 RID	1.294 RID	1.245 RID
1991 APR	1.168	.992 RID	1.025	1.088 RID	1.042 RID	1.093 RID	1.035 RID	1.140 RID
1991 MAY	1.146	1.027	1.033	.972	1.084	1.091	1.146	1.156
1991 JUN	1.020	.994	1.022	.936	.936	.943	.959	1.087
1991 JUL	1.082	.930	1.066	1.128	1.080	1.047	1.107	1.164
1991 AUG	1.138	1.091	1.091	1.163	.	.	1.205	1.177
1991 SEP	1.089	1.195	1.112	1.252	1.218	1.102	1.082	1.150
1991 OCT	1.055	1.103	1.049	1.044	1.071	1.105	1.018	1.049
1991 NOV	1.173	.941	1.062	1.098	1.091	1.063	1.076	1.175
1992 JAN	1.108	1.048	1.066	1.082	.969	1.070	.978	1.084
1992 MAR	1.316	.	1.289	.	1.343	1.299	.	.
1992 MAY	1.047	.783	.967	.941	.	.	.959	1.093
1992 JUL	1.149	.	.	.	1.110	1.070	.	.
1992 SEP	1.111	.989	1.139	1.123	.	.	1.163	1.231
1992 NOV	1.194	1.101	1.128	1.140	1.169	1.149	1.187	1.235
MAGNESIUM (MG/L)			DET'N LIMIT = 0.1		GUIDELINE = 30.0 (F2)			
1991 JAN	14.850	18.400	14.800	18.350	18.050	18.500	18.750	18.400
1991 FEB	14.700	18.420	14.700	18.520	18.580	18.080	18.200	15.420
1991 MAR	13.600	17.800	13.500	17.800	14.500	14.100	17.900	14.700
1991 APR	13.900	17.100	14.350	17.200	17.300	16.900	17.500	16.550
1991 MAY	14.300	17.500	14.600	17.900	14.000	13.900	18.300	17.200
1991 JUN	13.300	16.800	13.700	16.800	13.400	13.200	16.200	16.600
1991 JUL	14.800	18.200	14.900	18.300	15.000	14.900	18.200	18.000
1991 AUG	13.600	17.150	13.550	17.650	.	.	17.050	17.050
1991 SEP	13.950	17.250	14.150	17.450	17.200	13.900	14.400	14.600
1991 OCT	13.900	17.150	13.850	16.900	17.250	15.000	14.250	14.100
1991 NOV	14.850	18.100	15.000	18.200	17.600	15.700	15.450	18.100
1992 JAN	15.000	17.750	15.000	18.200	18.050	17.550	17.950	17.800
1992 MAR	14,500	.	14.600	.	18.000	17.900	.	.
1992 MAY	14.520	17.400	14.340	17.520	.	.	17.640	17.520
1992 JUL	15.100	.	!AW	.	15.100	15.100	.	.
1992 SEP	14.940	17.820	15.000	17.760	.	.	18.120	17.640
1992 NOV	14.800	17.700	14.800	17.300	14.500	14.500	17.500	16.600

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
CHEMISTRY (LABORATORY)								
SODIUM (MG/L)			DET'N LIMIT = 0.20		GUIDELINE = 200 (A4)			
1991 JAN	7.800	24.500	10.800	25.600	25.800	25.600	25.800	26.000
1991 FEB	7.200	24.400	10.200	25.400	25.000	24.600	24.600	25.200
1991 MAR	7.600	25.600	9.200	26.400	13.200	11.400	26.400	12.000
1991 APR	7.800	26.000	11.100	27.500	27.300	26.900	26.400	25.700
1991 MAY	7.800	25.200	11.200	25.000	10.000	10.000	25.000	25.600
1991 JUN	7.600	24.600	11.000	26.000	9.800	10.000	24.800	24.800
1991 JUL	8.000	24.200	10.600	25.600	10.600	10.600	25.800	25.600
1991 AUG	8.000	24.400	11.600	25.400	.	.	25.300	24.000
1991 SEP	8.400	24.000	11.700	26.200	26.500	10.400	10.200	12.500
1991 OCT	8.700	25.600	11.700	27.000	27.000	26.700	11.000	11.300
1991 NOV	9.300	28.500	12.000	29.600	27.400	15.100	12.900	29.800
1992 JAN	8.500	26.900	11.200	28.500	27.300	25.900	29.100	30.100
1992 MAR	8.110	.	10.800	.	28.500	27.500	.	.
1992 MAY	7.930	27.240	10.560	27.900	.	.	28.260	27.600
1992 JUL	8.200	.	!AW	.	10.100	10.100	.	.
1992 SEP	8.460	28.860	11.280	29.760	.	.	29.700	29.820
1992 NOV	8.250	27.200	10.880	27.400	11.540	11.500	28.400	22.300
AMMONIUM TOTAL (MG/L)			DET'N LIMIT = 0.002		GUIDELINE = 0.05 (F2)			
1991 JAN	.006 <T	.022	.008 <T	.006 <T	.006 <T	.006 <T	.004 <T	.006 <T
1991 FEB	.032	.004 <T	BDL	BDL	BDL	BDL	.004 <T	.006 <T
1991 MAR	.016	.016	.004 <T	BDL	.004 <T	.006 <T	BDL	.008 <T
1991 APR	.010	.022	.002 <T	BDL	BDL	.042	BDL	BDL
1991 MAY	.026	.014	.006 <T	BDL	BDL	BDL	BDL	BDL
1991 JUN	.086	.024	.004 <T	BDL	BDL	.002 <T	.004 <T	.006 <T
1991 JUL	.040	.026	.006 <T	.004 <T	.006 <T	.008 <T	.004 <T	.004 <T
1991 AUG	.002 <T	.038	.004 <T	.006 <T	.	.	.012	.020
1991 SEP	.010	.028	.010	.006 <T	.008 <T	.010	.018	.008 <T
1991 OCT	.038	BDL	BDL	BDL	BDL	.002 <T	.002 <T	BDL
1991 NOV	.002 <T	.014	BDL	BDL	.002 <T	BDL	BDL	BDL
1992 JAN	.014	.002 <T	.008 <T	BDL	BDL	BDL	BDL	BDL
1992 MAR	.012	.	.008 <T	.	BDL	.002 <T	.	.
1992 MAY	.006 <T	BDL	.002 <T	.004 <T	.	.	.002 <T	BDL
1992 JUL	.084	.	!AW	.	.008 <T	.008 <T	.	.
1992 SEP	.038	.010	.006 <T	.002 <T	.	.	.006 <T	.010
1992 NOV	.006 <T	.004 <T	.008 <T	.008 <T	.002 <T	.008 <T	.008 <T	.012

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
CHEMISTRY (LABORATORY)								
NITRITE (MG/L)			DET'N LIMIT = 0.001		GUIDELINE = 1.0 (A1)			
1991 JAN	.071	.011	.002 <T	.001 <T	.001 <T	.001 <T	.001 <T	.002 <T
1991 FEB	.023	.008	BDL	BDL	BDL	BDL	.001 <T	BDL
1991 MAR	.029	.012	.001 <T	BDL	.001 <T	.001 <T	BDL	.001 <T
1991 APR	.016	.010	.001 <T	BDL	BDL	.001 <T	BDL	BDL
1991 MAY	.015	.013	BDL	BDL	.001 <T	.002 <T	BDL	.001 <T
1991 JUN	.038	.016	BDL	BDL	BDL	BDL	BDL	BDL
1991 JUL	.018	.015	BDL	BDL	BDL	.001 <T	BDL	BDL
1991 AUG	.142	.026	.001 <T	BDL	.	.	BDL	.001 <T
1991 SEP	.079	.013	BDL	BDL	BDL	BDL	BDL	BDL
1991 OCT	.025	.004 <T	BDL	BDL	BDL	.001 <T	BDL	.001 <T
1991 NOV	.017	.009	.002 <T	BDL	.002 <T	.002 <T	BDL	.003 <T
1992 JAN	.029	.007	.002 <T	BDL	.002 <T	.002 <T	BDL	.003 <T
1992 MAR	.018	.	.002 <T	.	BDL	BDL	.	.
1992 MAY	.059	.009	.003 <T	.002 <T	.	.	.004 <T	.004 <T
1992 JUL	.020	.	!AW	.	.002 <T	.002 <T	.	.
1992 SEP	.029	.009	.001 <T	BDL	.	.	.001 <T	.001 <T
1992 NOV	.011	.005	.002 <T	.005	.001 <T	.002 <T	.001 <T	.002 <T
NITRATE (TOTAL) (MG/L)			DET'N LIMIT = 0.005		GUIDELINE = 10.0 (A1)			
1991 JAN	2.700	5.350	2.650	5.230	5.270	5.170	5.330	5.340
1991 FEB	2.440	5.250	2.350	5.220	5.270	4.910	2.200	2.520
1991 MAR	2.550	5.130	2.580	5.070	2.980	2.770	5.260	2.800
1991 APR	2.340	5.470	2.610	5.440	5.380	5.080	5.330	5.320
1991 MAY	2.010	5.170	1.960	5.200	1.550	1.670	5.310	5.160
1991 JUN	1.860	5.160	1.900	5.170	1.840	1.830	5.170	5.160
1991 JUL	2.400	5.290	2.300	5.300	2.260	2.220	5.300	5.340
1991 AUG	2.120	5.430	1.990	5.510	.	.	5.720	5.160
1991 SEP	2.370	5.330	2.260	5.310	5.340	2.270	2.150	2.530
1991 OCT	2.050	5.380	2.160	5.340	5.390	5.360	2.360	2.350
1991 NOV	1.940	5.120	1.870	5.170	5.100	2.760	2.200	5.220
1992 JAN	2.170	4.920	2.280	5.040	4.840	4.720	5.010	4.990
1992 MAR	2.320	.	2.360	.	4.740	4.650	.	.
1992 MAY	1.760	5.020	1.900	4.890	.	.	4.880	4.780
1992 JUL	1.980	.	!AW	.	2.000	2.020	.	.
1992 SEP	2.080	4.790	2.030	4.760	.	.	4.830	4.790
1992 NOV	2.080	4.520	2.100	4.520	2.160	2.170	4.600	3.780

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
CHEMISTRY (LABORATORY)								
NITROGEN TOT KJELD (MG/L)			DET'N LIMIT = 0.02		GUIDELINE = N/A			
1991 JAN	.440	.100	.280	.080 <T	.140	.170	.090 <T	.150
1991 FEB	.420	.110	.290	.090 <T	.100	.150	.330	.280
1991 MAR	.460	.130	.390	.090 <T	.290	.430	.110	.290
1991 APR	.520	.150	.350	.150	.180	.280	.190	.330
1991 MAY	.370	.160	.280	.130	.360	.540	.110	.230
1991 JUN	.490	.210	.350	.160	.410	.470	.160	.210
1991 JUL	.500	.160	.300	.140	.240	.340	.150	.290
1991 AUG	.280	.140	.230	.080 <T	.	.	.130	.170
1991 SEP	.340	.130	.230	.140	.100	.200	.220	.230
1991 OCT	.270	.120	.200	.080 <T	.090 <T	.110	.190	.200
1991 NOV	.370	.140	.240	.100	.190	.300	.290	.160
1992 JAN	.430	.160	.310	.170	.130	.170	.100	.250
1992 MAR	.420	.	.340	.	.140	.140	.	.
1992 MAY	.340	.140	.260	.120	.	.	.150	.190
1992 JUL	.340	.	!AW	.	.280	.250	.	.
1992 SEP	.310	.110	.290	.130	.	.	.130	.170
1992 NOV	.300	.150	.270	.160	.280	.320	.120	.210
PH (DMNSLESS)			DET'N LIMIT = N/A		GUIDELINE = 6.5-8.5 (A4)			
1991 JAN	8.420	8.290	8.400	8.330	8.310	8.330	8.350	8.390
1991 FEB	8.360	8.300	8.290	8.260	8.200	8.290	8.300	8.340
1991 MAR	8.430	8.230	8.370	8.360	8.440	8.390	8.430	8.430
1991 APR	8.380	8.200	8.260	8.270	8.240	8.280	8.220	8.310
1991 MAY	8.350	8.200	8.250	8.140	8.280	8.290	8.320	8.300
1991 JUN	8.250	8.170	8.260	8.120	8.180	8.190	8.130	8.240
1991 JUL	8.370	8.260	8.370	8.330	8.380	8.350	8.300	8.320
1991 AUG	8.400	8.270	8.360	8.330	.	.	8.380	8.340
1991 SEP	8.360	8.350	8.400	8.400	8.370	8.390	8.340	8.390
1991 OCT	8.320	8.290	8.340	8.270	8.250	8.270	8.310	8.340
1991 NOV	8.400	8.190	8.300	8.270	8.260	8.280	8.310	8.320
1992 JAN	8.350	8.230	8.340	8.250	8.220	8.320	8.160	8.240
1992 MAR	8.510	.	8.490	.	8.500	8.450	.	.
1992 MAY	8.260	8.190	8.210	8.140	.	.	8.160	8.270
1992 JUL	8.440	.	!AW	.	8.420	8.380	.	.
1992 SEP	8.360	8.200	8.390	8.320	.	.	8.340	8.410
1992 NOV	8.380	8.300	8.320	8.330	8.380	8.370	8.360	8.400

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
CHEMISTRY (LABORATORY)								
PHOSPHORUS FIL REACT (MG/L)			DET'N LIMIT = 0.0005		GUIDELINE = N/A			
1991 JAN	.003	BDL	.002 <T	.001 <T				
1991 FEB	.004	.001 <T	.003	.001				
1991 MAR	.003	BDL	.006	.003				
1991 APR	.002	.000 <T	.004	.004				
1991 MAY	.001 <T	BDL	.001 <T	.001 <T				
1991 JUN	.004	BDL	.000 <T	.001 <T				
1991 JUL	.002 <T	BDL	.001 <T	.001 <T				
1991 AUG	.010	BDL	.005	.002				
1991 SEP	.004	BDL	.001 <T	.002 <T				
1991 OCT	.000 <T	BDL	.000 <T	.002 <T				
1991 NOV	.000 <T	BDL	.000 <T	.003				
1992 JAN	.001 <T	BDL	.000 <T	.001 <T				
1992 MAR	.002 <T	.	.003 <T	.				
1992 MAY	.003 <T	BDL	BDL	.001 <T				
1992 JUL	.008	.	!AW	.				
1992 SEP	.001 <T	BDL	BDL	.001 <T				
1992 NOV	.001 <T	BDL	.002 <T	BDL				
PHOSPHORUS TOTAL (MG/L)			DET'N LIMIT = 0.002		GUIDELINE = 0.40 (F2)			
1991 JAN	.012	.005 <T	.006 <T	.005 <T				
1991 FEB	.012	BDL	.004 <T	.002 <T				
1991 MAR	.021	.002 <T	.013	.006 <T				
1991 APR	.023	.002 <T	.008 <T	.004 <T				
1991 MAY	.012	BDL	.004 <T	.002 <T				
1991 JUN	.030	BDL	.006 <T	.002 <T				
1991 JUL	.017	.002 <T	.007 <T	.004 <T				
1991 AUG	.020	BDL	.009 <T	.003 <T				
1991 SEP	.017	BDL	.003 <T	.002 <T				
1991 OCT	.021	.003 <T	.005 <T	.004 <T				
1991 NOV	.011	.003 <T	.006 <T	.004 <T				
1992 JAN	.009 <T	BDL	BDL	.002 <T				
1992 MAR	.012	.	.006 <T	.				
1992 MAY	.026	.004 <T	.008 <T	.004 <T				
1992 JUL	.023	.	!AW	.				
1992 SEP	.017	BDL	.007 <T	.007 <T				
1992 NOV	.010	.009 <T	.009 <T	.008 <T				

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
CHEMISTRY (LABORATORY)								
RESIDUE FILTRATE (MG/L)			DET'N LIMIT = N/A		GUIDELINE = 500 (A3)			
1991 JAN	363.000 CRO	432.000 CRO	378.000 CRO	443.000 CRO	440.000 CRO	438.000 CRO	441.000 CRO	440.000 CRO
1991 FEB	360.000 CRO	445.000 CRO	376.000 CRO	447.000 CRO	447.000 CRO	443.000 CRO	372.000 CRO	384.000 CRO
1991 MAR	345.000 CRO	426.000 CRO	353.000 CRO	438.000 CRO	362.000 CRO	361.000 CRO	434.000 CRO	368.000 CRO
1991 APR	353.000 CRO	424.000 CRO	376.000 CRO	436.000 CRO	434.000 CRO	435.000 CRO	435.000 CRO	434.000 CRO
1991 MAY	333.000 CRO	415.000 CRO	347.000 CRO	420.000 CRO	347.000 CRO	347.000 CRO	421.000 CRO	421.000 CRO
1991 JUN	327.000 CRO	411.000 CRO	336.000 CRO	413.000 CRO	333.000 CRO	332.000 CRO	413.000 CRO	413.000 CRO
1991 JUL	333.000 CRO	427.000 CRO	343.000 CRO	444.000 CRO	343.000 CRO	344.000 CRO	449.000 CRO	450.000 CRO
1991 AUG	346.000 CRO	443.000 CRO	360.000 CRO	451.000 CRO	.	.	450.000 CRO	443.000 CRO
1991 SEP	322.000 CRO	427.000 CRO	331.000 CRO	432.000 CRO	432.000 CRO	328.000 CRO	332.000 CRO	345.000 CRO
1991 OCT	345.000 CRO	454.000 CRO	352.000 CRO	461.000 CRO	460.000 CRO	460.000 CRO	349.000 CRO	350.000 CRO
1991 NOV	356.000 CRO	435.000 CRO	367.000 CRO	459.000 CRO	455.000 CRO	390.000 CRO	374.000 CRO	460.000 CRO
1992 JAN	372.000 CRO	459.000 CRO	380.000 CRO	463.000 CRO	454.000 CRO	452.000 CRO	462.000 CRO	465.000 CRO
1992 MAR	366.000 CRO	.	377.000 CRO	.	454.000 CRO	457.000 CRO	.	.
1992 MAY	346.000 CRO	437.000 CRO	352.000 CRO	440.000 CRO	.	.	437.000 CRO	432.000 CRO
1992 JUL	319.000 CRO	.	!AW	.	326.000 CRO	326.000 CRO	.	.
1992 SEP	341.000 CRO	426.000 CRO	355.000 CRO	438.000 CRO	.	.	444.000 CRO	446.000 CRO
1992 NOV	356.000 CRO	431.000 CRO	370.000 CRO	433.000 CRO	367.000 CRO	363.000 CRO	435.000 CRO	416.000 CRO
SULPHATE (MG/L)			DET'N LIMIT = 0.20		GUIDELINE = 500 (A3)			
1991 JAN	75.840	45.820	73.870	44.540	44.120	45.790	44.850	44.240
1991 FEB	69.140	44.490	71.830	45.170	44.790	45.450	72.320	68.250
1991 MAR	65.130	43.580	63.990	43.450	60.690	62.370	43.450	66.180
1991 APR	68.490	44.070	69.330	44.720	44.290	44.500	44.070	45.830
1991 MAY	62.880	43.450	64.280	42.680	67.460	64.590	43.440	43.190
1991 JUN	62.190	44.120	62.910	44.920	63.160	62.790	43.430	43.100
1991 JUL	54.040	42.640	54.900	42.860	54.900	55.190	41.290	41.940
1991 AUG	63.480	45.360	62.680	45.260	.	.	45.020	46.180
1991 SEP	56.360	44.840	55.860	45.010	46.260	57.300	53.670	52.620
1991 OCT	57.870	47.080	56.620	48.020	47.630	47.000	54.230	58.380
1991 NOV	66.240	45.470	66.170	46.790	47.750	62.200	64.340	47.630
1992 JAN	74.190	43.820	73.010	45.090	46.140	47.120	44.930	44.270
1992 MAR	73.530	.	74.010	.	49.130	50.240	.	.
1992 MAY	66.730	45.180	65.520	45.450	.	.	45.260	45.630
1992 JUL	57.610	.	!AW	.	58.400	57.440	.	.
1992 SEP	56.100	46.990	56.420	45.870	.	.	45.850	47.320
1992 NOV	63.010	44.510	66.240	45.490	67.350	66.370	44.940	52.520

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
	CHEMISTRY (LABORATORY)							
TURBIDITY (FTU	)		DET'N LIMIT = 0.05		GUIDELINE = 1.0 (A1)			
1991 JAN	3.600	.320	1.310 RRV	.260	.360	.460	.250	.380
1991 FEB	3.300 RRV	.760	.930	.390	.180	.310	.410	.430
1991 MAR	4.600	.270	2.400 RRV	.220	.390	.990	.240	.450
1991 APR	2.900	.220	1.290 RRV	.200	.140	.570	.190	.360
1991 MAY	2.800	.470	.590	.520	.410	.690	.480	.490
1991 JUN	3.800	.520	.660	.310	1.700 RRV	.680	.540	.500
1991 JUL	1.070	.530	.350	.360	.520	.540	.270	.430
1991 AUG	2.400	.270	1.270 RRV	.150	.	.	.180	.190
1991 SEP	2.700	.310	.240	.310	.300	.330	.490	.280
1991 OCT	3.200	.200 <T	.230 <T	.430	.280	.190 <T	.130 <T	.370
1991 NOV	1.210	.250 <T	.730	.190 <T	.240 <T	.280	.270	.510
1992 JAN	1.620	.120 <T	.340	.200 <T	.210 <T	.230 <T	.300	.370
1992 MAR	3.200	.	1.500 RRV	.	.290	.410	.	.
1992 MAY	4.500	.810	.760	.550	.	.	.550	.940
1992 JUL	3.200	.	IAW	.	.340	.350	.	.
1992 SEP	1.750	.670	.490	.400	.	.	.340	.690
1992 NOV	1.920	.670	.980	.410	.140 <T	.310	.310	.560

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
METALS								
SILVER (UG/L)			DET'N LIMIT = 0.05		GUIDELINE = N/A			
1991 JAN	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 FEB	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 MAR	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 APR	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 MAY	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 JUN	BDL	.370 <T	BDL	BDL	BDL	BDL	BDL	.100 <T
1991 JUL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 AUG	BDL	BDL	BDL	BDL	.	.	BDL	BDL
1991 SEP	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 OCT	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 NOV	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 JAN	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 MAR	BDL	.	BDL	.	BDL	BDL	.	.
1992 MAY	BDL	BDL	BDL	BDL	.	.	BDL	BDL
1992 JUL	BDL	.	BDL	.	BDL	BDL	.	.
1992 SEP	BDL	BDL	BDL	BDL	.	.	BDL	BDL
1992 NOV	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
ALUMINUM (UG/L)			DET'N LIMIT = 0.10		GUIDELINE = 100 (A4)			
1991 JAN	26.000	2.700	280.000	1.800	13.000	26.000	5.100	17.000
1991 FEB	21.000	2.300	150.000	2.000	10.000	27.000	57.000	39.000
1991 MAR	46.000	1.800	620.000	3.400	27.000	140.000	5.900	46.000
1991 APR	28.000	2.300	420.000	2.000	14.000	29.000	11.000	35.000
1991 MAY	17.000	2.000	210.000	2.400	140.000	160.000	4.800	25.000
1991 JUN	22.000	34.000	230.000	2.600	520.000	110.000	6.900	44.000
1991 JUL	11.000	3.800	120.000	3.800	120.000	130.000	8.500	32.000
1991 AUG	23.000	1.600	270.000	1.900	.	.	7.900	33.000
1991 SEP	11.000	3.600	120.000	4.100	21.000	94.000	130.000	54.000
1991 OCT	21.000	4.100	370.000	4.900	16.000	36.000	70.000	55.000
1991 NOV	11.000	2.300	530.000	2.100	29.000	61.000	84.000	36.000
1992 JAN	19.000	.960 <T	190.000	1.200	22.000	33.000	4.800	29.000
1992 MAR	25.000	.	410.000	.	20.000	22.000	.	.
1992 MAY	29.000	6.600	180.000	6.800	.	.	15.000	25.000
1992 JUL	14.000	.	70.000	.	130.000	140.000	.	.
1992 SEP	12.000	4.600	110.000	5.200	.	.	9.700	34.000
1992 NOV	15.000	3.600	390.000 RRV	4.600	130.000	96.000	5.500	52.000

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
METALS								
ARSENIC (UG/L)			DET'N LIMIT = 0.10		GUIDELINE = 25 (A1)			
1991 JAN	1.900	BDL	.470 <T	BDL	.190 <T	BDL	BDL	BDL
1991 FEB	BDL	.370 <T	BDL	.160 <T	BDL	BDL	.390 <T	.270 <T
1991 MAR	.820 <T	BDL	.530 <T	BDL	.250 <T	.380 <T	BDL	.430 <T
1991 APR	.110 <T	BDL	.180 <T	.220 <T	.120 <T	BDL	BDL	.180 <T
1991 MAY	1.500	1.600	1.400	1.900	1.200	1.300	2.100	1.800
1991 JUN	1.100	BDL	.850 <T	BDL	1.200	.910 <T	BDL	BDL
1991 JUL	1.100	BDL	1.300	.420 <T	1.100	1.200	.770 <T	.560 <T
1991 AUG	1.100	.220 <T	1.100	.580 <T	.	.	.600 <T	.490 <T
1991 SEP	.740 <T	BDL	.650 <T	.570 <T	.540 <T	.670 <T	.620 <T	.530 <T
1991 OCT	.680 <T	.660 <T	.820 <T	.900 <T	1.100	.780 <T	.800 <T	.830 <T
1991 NOV	.840 <T	.460 <T	1.100	1.000 <T	1.200	.940 <T	.800 <T	.970 <T
1992 JAN	.570 <T	.370 <T	.460 <T	.990 <T	.870 <T	.410 <T	.970 <T	.920 <T
1992 MAR	BDL	.	BDL	.	BDL	BDL	.	.
1992 MAY	.860 <T	.110 <T	.630 <T	.380 <T	.	.	.410 <T	.450 <T
1992 JUL	1.200	.	.430 <T	.	.910 <T	.860 <T	.	.
1992 SEP	.580 <T	.310 <T	.430 <T	.660 <T	.	.	.520 <T	.490 <T
1992 NOV	.530 <T	BDL	.960 <T	.860 <T	.710 <T	.660 <T	.780 <T	.970 <T
BARIUM (UG/L)			DET'N LIMIT = 0.05		GUIDELINE = 1000 (A2)			
1991 JAN	56.000	58.000	56.000	53.000	56.000	54.000	56.000	61.000
1991 FEB	60.000	59.000	62.000	58.000	58.000	62.000	57.000	65.000
1991 MAR	57.000	53.000	52.000	56.000	52.000	49.000	58.000	64.000
1991 APR	60.000	57.000	56.000	58.000	56.000	58.000	59.000	60.000
1991 MAY	54.000	53.000	55.000	52.000	58.000	57.000	53.000	59.000
1991 JUN	53.000	54.000	51.000	58.000	53.000	54.000	55.000	61.000
1991 JUL	40.000	50.000	38.000	51.000	38.000	37.000	53.000	56.000
1991 AUG	56.000	60.000	50.000	59.000	.	.	57.000	60.000
1991 SEP	41.000	55.000	38.000	54.000	52.000	40.000	41.000	47.000
1991 OCT	47.000	56.000	45.000	54.000	55.000	55.000	42.000	49.000
1991 NOV	47.000	61.000	48.000	58.000	60.000	56.000	50.000	67.000
1992 JAN	67.000	62.000	65.000	62.000	65.000	64.000	62.000	74.000
1992 MAR	65.000	.	63.000	.	65.000	65.000	.	.
1992 MAY	61.000	55.000	59.000	58.000	.	.	59.000	66.000
1992 JUL	46.000	.	61.000	.	45.000	46.000	.	.
1992 SEP	53.000	62.000	52.000	63.000	.	.	65.000	65.000
1992 NOV	53.000	53.000	50.000	56.000	49.000	52.000	56.000	56.000

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
METALS								
BORON (UG/L)			DET'N LIMIT = 2.00		GUIDELINE = 5000 (A1)			
1991 JAN	24.000	23.000	22.000	27.000	28.000	28.000	29.000	29.000
1991 FEB	27.000	21.000	26.000	21.000	34.000	33.000	18.000 <T	19.000 <T
1991 MAR	18.000 <T	22.000	16.000 <T	20.000 <T	20.000 <T	21.000	23.000	20.000 <T
1991 APR	19.000 <T	21.000	27.000	34.000	34.000	25.000	35.000	23.000
1991 MAY	20.000 <T	23.000	20.000 <T	26.000	20.000 <T	14.000 <T	18.000 <T	25.000
1991 JUN	20.000 <T	19.000 <T	20.000 <T	21.000	21.000	16.000 <T	22.000	21.000
1991 JUL	21.000	22.000	21.000	21.000	20.000 <T	21.000	33.000	33.000
1991 AUG	22.000	25.000	22.000	23.000	.	.	26.000	23.000
1991 SEP	21.000	32.000	26.000	32.000	31.000	28.000	28.000	28.000
1991 OCT	16.000 <T	48.000	21.000	51.000	48.000	44.000	41.000	42.000
1991 NOV	12.000 <T	19.000 <T	17.000 <T	21.000	16.000 <T	21.000	15.000 <T	18.000 <T
1992 JAN	19.000 <T	23.000	19.000 <T	24.000	21.000	26.000	26.000	28.000
1992 MAR	47.000	.	33.000	.	52.000	26.000	.	.
1992 MAY	24.000	23.000	25.000	22.000	.	.	23.000	20.000 <T
1992 JUL	36.000	.	22.000	.	20.000 <T	18.000 <T	.	.
1992 SEP	38.000	42.000	33.000	47.000	.	.	44.000	45.000
1992 NOV	23.000	22.000	22.000	30.000	22.000	20.000 <T	31.000	30.000
BERYLLIUM (UG/L)			DET'N LIMIT = 0.05		GUIDELINE = 6800 (D4)			
1991 JAN	BDL	BDL	BDL	.060 <T	BDL	BDL	BDL	BDL
1991 FEB	BDL	BDL	BDL	BDL	.060 <T	.070 <T	BDL	BDL
1991 MAR	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 APR	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 MAY	BDL	BDL	BDL	BDL	BDL	.070 <T	BDL	.080 <T
1991 JUN	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 JUL	BDL	BDL	BDL	BDL	.080 <T	BDL	BDL	BDL
1991 AUG	BDL	BDL	BDL	BDL	.	.	.070 <T	.060 <T
1991 SEP	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 OCT	BDL	BDL	BDL	BDL	.060 <T	.060 <T	BDL	.060 <T
1991 NOV	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 JAN	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 MAR	.100 <T	.	BDL	.	BDL	BDL	.	.
1992 MAY	BDL	BDL	BDL	.080 <T	.	.	.080 <T	.060 <T
1992 JUL	BDL	.	BDL	.	BDL	BDL	.	.
1992 SEP	BDL	BDL	BDL	BDL	.	.	BDL	BDL
1992 NOV	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
METALS								
CADMIUM (UG/L)		DET'N LIMIT = 0.05		GUIDELINE = 5.0 (A1)				
1991 JAN	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 FEB	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 MAR	BDL	BDL	BDL	BDL	BDL	.080 <T	BDL	BDL
1991 APR	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 MAY	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 JUN	.060 <T	BDL	.060 <T	BDL	BDL	.090 <T	BDL	.070 <T
1991 JUL	.100 <T	.080 <T	.090 <T	BDL	.140 <T	.090 <T	.150 <T	.180 <T
1991 AUG	BDL	BDL	BDL	BDL	.	.	BDL	BDL
1991 SEP	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 OCT	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 NOV	BDL	BDL	BDL	BDL	.060 <T	BDL	BDL	BDL
1992 JAN	BDL	BDL	BDL	BDL	BDL	BDL	BDL	.060 <T
1992 MAR	BDL	.	BDL	.	BDL	BDL	.	.
1992 MAY	BDL	BDL	BDL	BDL	.	.	BDL	BDL
1992 JUL	BDL	.	BDL	.	BDL	BDL	.	.
1992 SEP	BDL	BDL	.070 <T	BDL	.	.	BDL	BDL
1992 NOV	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
COBALT (UG/L)		DET'N LIMIT = 0.02		GUIDELINE = N/A				
1991 JAN	.270 <T	.220 <T	.210 <T	.220 <T	.490 <T	.190 <T	.250 <T	.170 <T
1991 FEB	.190 <T	.180 <T	.190 <T	.180 <T	.160 <T	.200 <T	.180 <T	.200 <T
1991 MAR	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 APR	.380 <T	.300 <T	.350 <T	.400 <T	.320 <T	.280 <T	.370 <T	.340 <T
1991 MAY	1.100	1.100	1.100	1.200	1.000 <T	1.200	1.100	1.100
1991 JUN	.320 <T	.400 <T	.340 <T	.100 <T	.350 <T	.390 <T	.170 <T	.050 <T
1991 JUL	BDL	BDL	1.200	BDL	BDL	BDL	BDL	BDL
1991 AUG	.170 <T	.100 <T	.150 <T	.100 <T	.	.	.110 <T	.090 <T
1991 SEP	.060 <T	.030 <T	.090 <T	.060 <T	.070 <T	.050 <T	.070 <T	.040 <T
1991 OCT	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 NOV	.100 <T	.060 <T	.080 <T	.040 <T	.030 <T	BDL	.030 <T	.060 <T
1992 JAN	.080 <T	BDL	.070 <T	.080 <T	.030 <T	.050 <T	.080 <T	.040 <T
1992 MAR	.330 <T	.	.320 <T	.	.330 <T	.390 <T	.	.
1992 MAY	.360 <T	.270 <T	.270 <T	.170 <T	.	.	.250 <T	.120 <T
1992 JUL	.450 <T	.	.470 <T	.	.360 <T	.460 <T	.	.
1992 SEP	.270 <T	.310 <T	.260 <T	.310 <T	.	.	.500 <T	.300 <T
1992 NOV	.090 <T	BDL	.030 <T	BDL	.080 <T	.040 <T	.060 <T	.060 <T

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
METALS								
CHROMIUM (UG/L)			DET'N LIMIT = 0.50		GUIDELINE = 50.0 (A1)			
1991 JAN	3.200 <T	2.000 <T	2.500 <T	3.600 <T	3.900 <T	3.700 <T	3.900 <T	3.700 <T
1991 FEB	4.000 <T	1.100 <T	3.400 <T	.720 <T	5.100	4.800 <T	.640 <T	BDL
1991 MAR	2.000 <T	2.600 <T	1.200 <T	1.500 <T	2.400 <T	2.000 <T	3.200 <T	2.500 <T
1991 APR	.930 <T	1.600 <T	4.300 <T	5.600	5.500	1.700 <T	6.100	2.300 <T
1991 MAY	2.900 <T	3.800 <T	2.800 <T	4.100 <T	2.700 <T	BDL	1.300 <T	3.800 <T
1991 JUN	1.900 <T	.830 <T	1.500 <T	1.500 <T	1.700 <T	BDL	1.400 <T	1.300 <T
1991 JUL	3.200 <T	2.000 <T	3.000 <T	1.200 <T	2.800 <T	2.900 <T	6.100	6.300
1991 AUG	2.300 <T	2.200 <T	1.800 <T	.800 <T	.	.	3.000 <T	.900 <T
1991 SEP	1.000 <T	2.900 <T	1.700 <T	2.800 <T	2.500 <T	1.900 <T	1.900 <T	2.000 <T
1991 OCT	BDL	7.400	1.300 <T	8.000	7.800	6.600	5.900	6.200
1991 NOV	BDL	.830 <T	BDL	.710 <T	.710 <T	.590 <T	BDL	.740 <T
1992 JAN	BDL	1.100 <T	.660 <T	1.500 <T	.940 <T	2.600 <T	1.500 <T	1.700 <T
1992 MAR	5.900	.	3.100 <T	.	7.600	1.700 <T	.	.
1992 MAY	2.600 <T	1.500 <T	2.600 <T	1.300 <T	.	.	1.300 <T	.660 <T
1992 JUL	3.300 <T	.	1.100 <T	.	2.000 <T	BDL	.	.
1992 SEP	4.000 <T	4.800 <T	2.600 <T	5.400	.	.	5.200	5.400
1992 NOV	4.000 <T	2.600 <T	3.800 <T	7.800	3.500 <T	1.800 <T	8.100	7.900
COPPER (UG/L)			DET'N LIMIT = 0.50		GUIDELINE = 1000 (A3)			
1991 JAN	1.900 <T	1.200 <T	1.900 <T	1.100 <T	5.500	11.000	31.000	180.000
1991 FEB	1.300 <T	1.000 <T	.790 <T	1.100 <T	4.100 <T	14.000	20.000	230.000
1991 MAR	2.000 <T	.830 <T	8.200	1.200 <T	3.900 <T	8.800	27.000	250.000
1991 APR	2.000 <T	.960 <T	1.400 <T	.910 <T	5.100	14.000	29.000	160.000
1991 MAY	1.600 <T	1.500 <T	2.600 <T	1.600 <T	4.800 <T	24.000	45.000	370.000
1991 JUN	2.300 <T	1.300 <T	1.000 <T	1.600 <T	3.300 <T	9.300	23.000	150.000
1991 JUL	1.700 <T	.760 <T	.600 <T	1.100 <T	2.800 <T	7.200	38.000	290.000
1991 AUG	1.900 <T	1.800 <T	7.400	1.500 <T	.	.	34.000	270.000
1991 SEP	1.300 <T	.960 <T	.890 <T	1.100 <T	3.400 <T	13.000	31.000	200.000
1991 OCT	1.300 <T	1.200 <T	19.000	1.200 <T	3.900 <T	9.800	31.000	270.000
1991 NOV	2.100 <T	1.300 <T	15.000	1.800 <T	8.000	21.000	45.000	490.000
1992 JAN	2.100 <T	1.100 <T	11.000	1.100 <T	4.000 <T	9.800	49.000	570.000
1992 MAR	1.500 <T	.	6.200	.	4.200 <T	4.200 <T	.	.
1992 MAY	2.200 <T	1.100 <T	2.500 <T	.990 <T	.	.	38.000	220.000
1992 JUL	2.000 <T	.	2.000 <T	.	3.500 <T	7.400	.	.
1992 SEP	2.200 <T	1.700 <T	.850 <T	1.500 <T	.	.	33.000	590.000
1992 NOV	1.900 <T	1.800 <T	2.600 <T	2.100 <T	2.600 <T	8.500	29.000	340.000

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
METALS								
IRON (UG/L)			DET'N LIMIT = 6.00		GUIDELINE = 300 (A3)			
1991 JAN	280.000	7.500 <T	74.000	BDL	BDL	BDL	BDL	11.000 <T
1991 FEB	260.000	BDL	43.000 <T	BDL	BDL	BDL	11.000 <T	39.000 <T
1991 MAR	430.000	BDL	180.000	13.000 <T	BDL	30.000 <T	BDL	31.000 <T
1991 APR	290.000	BDL	55.000 <T	BDL	BDL	7.800 <T	BDL	14.000 <T
1991 MAY	230.000	BDL	23.000 <T	BDL	13.000 <T	37.000 <T	BDL	30.000 <T
1991 JUN	240.000	BDL	23.000 <T	BDL	83.000	15.000 <T	BDL	13.000 <T
1991 JUL	160.000	BDL	19.000 <T	BDL	26.000 <T	35.000 <T	BDL	16.000 <T
1991 AUG	260.000	7.600 <T	69.000	9.000 <T	.	.	7.700 <T	20.000 <T
1991 SEP	160.000	BDL	7.800 <T	BDL	BDL	BDL	32.000 <T	22.000 <T
1991 OCT	200.000	BDL	77.000	BDL	BDL	BDL	BDL	17.000 <T
1991 NOV	130.000	BDL	95.000	BDL	BDL	BDL	7.500 <T	37.000 <T
1992 JAN	210.000	6.500 <T	57.000 <T	7.500 <T	9.800 <T	15.000 <T	BDL	51.000 <T
1992 MAR	280.000	.	120.000	.	BDL	9.400 <T	.	.
1992 MAY	250.000	7.100 <T	32.000 <T	9.200 <T	.	.	13.000 <T	50.000 <T
1992 JUL	240.000	.	7.300 <T	.	35.000 <T	37.000 <T	.	.
1992 SEP	180.000	10.000 <T	6.400 <T	BDL	.	.	28.000 <T	25.000 <T
1992 NOV	140.000	BDL	74.000	BDL	11.000 <T	10.000 <T	BDL	18.000 <T
MERCURY (UG/L)			DET'N LIMIT = 0.02		GUIDELINE = 1.0 (A1)			
64 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
MANGANESE (UG/L)			DET'N LIMIT = 0.05		GUIDELINE = 50.0 (A3)			
1991 JAN	51.000	6.600	7.300	3.600	.810	1.100	1.200	1.900
1991 FEB	60.000	1.800	5.000	2.000	.840	.940	2.000	2.500
1991 MAR	130.000	2.700	31.000	9.400	1.700	4.200	1.500	1.900
1991 APR	70.000	2.500	7.200	3.200	.820	.820	1.500	2.000
1991 MAY	66.000	2.800	4.400	2.600	2.100	3.100	1.300	2.900
1991 JUN	260.000	3.800	12.000	2.600	38.000	3.600	1.500	3.400
1991 JUL	100.000	.060 <T	4.900	2.200	6.300	7.700	1.300	2.600
1991 AUG	160.000	5.200	19.000	6.500	.	.	3.000	2.900
1991 SEP	80.000	2.800	3.800	2.000	1.100	.910	14.000	5.000
1991 OCT	65.000	1.900	26.000	1.500	.950	.530	1.200	2.400
1991 NOV	28.000	1.500	24.000	1.200	.860	.730	1.600	2.200
1992 JAN	82.000	1.800	6.200	1.900	1.100	.810	1.000	2.700
1992 MAR	59.000	.	15.000	.	1.300	1.400	.	.
1992 MAY	74.000	3.000	5.500	1.600	.	.	1.500	2.200
1992 JUL	160.000	.	2.000	.	4.800	4.800	.	.
1992 SEP	62.000	2.500	1.200	2.300	.	.	4.200	2.900
1992 NOV	35.000	3.000	9.400	2.700	1.700	1.200	1.700	2.400

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
METALS								
MOLYBDENUM (UG/L)			DET'N LIMIT = 0.05		GUIDELINE = N/A			
1991 JAN	.930	.140 <T	.890	.150 <T	.110 <T	.160 <T	.100 <T	.180 <T
1991 FEB	.930	.330 <T	1.000	.140 <T	.070 <T	.210 <T	1.000	.950
1991 MAR	.850	.080 <T	.830	.120 <T	.220 <T	.780	.120 <T	.820
1991 APR	1.000	.130 <T	.930	.160 <T	.140 <T	.150 <T	.150 <T	.260 <T
1991 MAY	.810	BDL	1.000	.110 <T	.980	.930	.070 <T	BDL
1991 JUN	.780	.160 <T	.830	BDL	.830	.920	BDL	BDL
1991 JUL	.680	.140 <T	.710	.100 <T	.740	.720	.110 <T	.160 <T
1991 AUG	.850	.150 <T	.840	.130 <T	-	-	.130 <T	.220 <T
1991 SEP	.590	.130 <T	.620	.120 <T	.130 <T	.580	.530	.440 <T
1991 OCT	.570	.140 <T	.540	.110 <T	.100 <T	.110 <T	.550	.520
1991 NOV	.860	.160 <T	.810	.150 <T	.160 <T	.270 <T	.730	.250 <T
1992 JAN	1.000	.140 <T	.970	.140 <T	.130 <T	.280 <T	.120 <T	.200 <T
1992 MAR	1.000	-	.980	-	.230 <T	.240 <T	-	-
1992 MAY	.850	.100 <T	1.000	.130 <T	-	-	.170 <T	.200 <T
1992 JUL	.600	-	.230 <T	-	.700	.680	-	-
1992 SEP	.740	.120 <T	.780	.120 <T	-	-	.110 <T	.100 <T
1992 NOV	.750	.110 <T	.790	.100 <T	.790	.780	.090 <T	.460 <T
NICKEL (UG/L)			DET'N LIMIT = 0.20		GUIDELINE = 350 (D3)			
1991 JAN	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 FEB	.890 <T	.620 <T	1.100 <T	.910 <T	1.300 <T	1.300 <T	1.600 <T	2.000 <T
1991 MAR	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 APR	2.000 <T	1.300 <T	.970 <T	1.600 <T	1.800 <T	1.100 <T	2.300	2.600
1991 MAY	.770 <T	.680 <T	.840 <T	1.600 <T	1.500 <T	1.100 <T	2.000 <T	1.700 <T
1991 JUN	2.000 <T	1.200 <T	1.400 <T	BDL	1.600 <T	2.200	.840 <T	BDL
1991 JUL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 AUG	.730 <T	.460 <T	.770 <T	.410 <T	-	-	.450 <T	1.000 <T
1991 SEP	BDL	BDL	BDL	.310 <T	BDL	BDL	BDL	BDL
1991 OCT	BDL	BDL	BDL	BDL	BDL	BDL	.490 <T	.830 <T
1991 NOV	.730 <T	BDL	BDL	.730 <T	1.100 <T	BDL	.590 <T	1.600 <T
1992 JAN	BDL	BDL	BDL	BDL	BDL	BDL	BDL	.240 <T
1992 MAR	2.500	-	2.100	-	2.300	1.700 <T	-	-
1992 MAY	1.300 <T	BDL	1.400 <T	BDL	-	-	.870 <T	BDL
1992 JUL	3.700	-	3.500	-	3.000	3.200	-	-
1992 SEP	.970 <T	1.100 <T	.490 <T	1.200 <T	-	-	7.900	1.600 <T
1992 NOV	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
METALS								
LEAD (UG/L)			DET'N LIMIT = 0.05		GUIDELINE = 10 (A1)			
1991 JAN	.150 <T	BDL	.150 <T	.060 <T	.160 <T	.880	.440 <T	1.900
1991 FEB	.200 <T	.370 <T	.080 <T	BDL	.150 <T	.790	.200 <T	2.400
1991 MAR	.210 <T	BDL	4.100	BDL	BDL	1.300	.280 <T	2.300
1991 APR	.200 <T	BDL	.320 <T	BDL	.240 <T	.910	.290 <T	1.500
1991 MAY	.130 <T	BDL	.440 <T	.070 <T	.130 <T	1.500	.410 <T	3.600
1991 JUN	.180 <T	BDL	.200 <T	.080 <T	.240 <T	.410 <T	.360 <T	1.700
1991 JUL	.130 <T	BDL	.070 <T	BDL	.160 <T	.630	.550	2.500
1991 AUG	.180 <T	BDL	2.100	.060 <T	.	.	.530	2.800
1991 SEP	.110 <T	BDL	.340 <T	BDL	.230 <T	.510	.490 <T	2.500
1991 OCT	.140 <T	.070 <T	3.900	BDL	.170 <T	.470 <T	.280 <T	2.500
1991 NOV	.240 <T	.090 <T	3.100	.070 <T	.320 <T	.320 <T	.330 <T	2.900
1992 JAN	.170 <T	BDL	.960	BDL	.190 <T	.280 <T	.360 <T	3.300
1992 MAR	.150 <T	.	1.500	.	.200 <T	.280 <T	.	.
1992 MAY	.190 <T	BDL	.840	.080 <T	.	.	.460 <T	2.300
1992 JUL	.300 <T	.	.090 <T	.	.180 <T	.510	.	.
1992 SEP	.170 <T	BDL	.180 <T	.100 <T	.	.	.310 <T	2.900
1992 NOV	.190 <T	BDL	.510	.080 <T	.120 <T	.270 <T	.240 <T	1.800
ANTIMONY (UG/L)			DET'N LIMIT = 0.05		GUIDELINE = 146 (D4)			
1991 JAN	.340 <T	.270 <T	.280 <T	.250 <T	.990	.310 <T	.260 <T	.390 <T
1991 FEB	.310 <T	.800	.270 <T	.390 <T	.260 <T	.350 <T	.400 <T	.790
1991 MAR	.490 <T	.360 <T	.390 <T	.120 <T	.270 <T	.470 <T	.260 <T	.600
1991 APR	.450 <T	.340 <T	.320 <T	.260 <T	.310 <T	.390 <T	.320 <T	.270 <T
1991 MAY	.420 <T	.310 <T	.290 <T	.250 <T	.430 <T	.510	.240 <T	.630
1991 JUN	.480 <T	.450 <T	.350 <T	.300 <T	.660	.570	.350 <T	.610
1991 JUL	.720	.720	.500 <T	.610	.380 <T	.580	.410 <T	.830
1991 AUG	.450 <T	.370 <T	.400 <T	.380 <T	.	.	.350 <T	.470 <T
1991 SEP	.330 <T	.320 <T	.340 <T	.310 <T	.330 <T	.350 <T	.440 <T	.480 <T
1991 OCT	.430 <T	.440 <T	.260 <T	.320 <T	.270 <T	.300 <T	.370 <T	.430 <T
1991 NOV	.370 <T	.420 <T	.360 <T	.320 <T	.280 <T	.330 <T	.530	.630
1992 JAN	.440 <T	.740	.440 <T	.450 <T	.680	.540	.400 <T	.740
1992 MAR	.570	.	.330 <T	.	.370 <T	.330 <T	.	.
1992 MAY	.340 <T	.420 <T	.160 <T	.140 <T	.	.	.500 <T	.520
1992 JUL	.480 <T	.	.400 <T	.	.490 <T	.760	.	.
1992 SEP	.470 <T	.290 <T	.370 <T	.380 <T	.	.	.470 <T	.670
1992 NOV	.520	.360 <T	.370 <T	.440 <T	.450 <T	.390 <T	.320 <T	.500 <T

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
METALS								
SELENIUM (UG/L)			DET'N LIMIT = 1.00		GUIDELINE = 10 (A1)			
1991 JAN	BDL	BDL	BDL	BDL	1.100 <T	2.200 <T	1.300 <T	BDL
1991 FEB	BDL	BDL	BDL	BDL	1.900 <T	2.000 <T	BDL	BDL
1991 MAR	BDL	BDL	BDL	BDL	BDL	BDL	1.200 <T	BDL
1991 APR	BDL	1.300 <T	BDL	1.300 <T	1.800 <T	1.400 <T	2.100 <T	1.700 <T
1991 MAY	BDL	BDL	BDL	1.200 <T	BDL	BDL	1.100 <T	1.100 <T
1991 JUN	BDL	1.200 <T	BDL	2.400 <T	BDL	BDL	1.700 <T	1.700 <T
1991 JUL	BDL	BDL	BDL	1.500 <T	BDL	BDL	2.000 <T	2.100 <T
1991 AUG	BDL	1.600 <T	BDL	1.600 <T	.	.	1.600 <T	1.700 <T
1991 SEP	BDL	BDL	BDL	BDL	1.200 <T	BDL	BDL	BDL
1991 OCT	BDL	1.900 <T	BDL	1.300 <T	1.500 <T	1.800 <T	BDL	BDL
1991 NOV	BDL	2.000 <T	BDL	1.800 <T	1.300 <T	1.500 <T	BDL	1.200 <T
1992 JAN	BDL	BDL	BDL	BDL	BDL	1.200 <T	BDL	BDL
1992 MAR	BDL	.	BDL	.	1.500 <T	1.600 <T	.	.
1992 MAY	BDL	BDL	BDL	BDL	.	.	BDL	BDL
1992 JUL	1.700 <T	.	1.300 <T	.	1.400 <T	1.500 <T	.	.
1992 SEP	BDL	BDL	1.100 <T	1.100 <T	.	.	1.400 <T	1.200 <T
1992 NOV	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
STRONTIUM (UG/L)			DET'N LIMIT = 0.10		GUIDELINE = N/A			
1991 JAN	210.000	160.000	220.000	140.000	150.000	160.000	150.000	150.000
1991 FEB	230.000	150.000	230.000	150.000	160.000	180.000	210.000	200.000
1991 MAR	230.000	140.000	210.000	160.000	170.000	200.000	140.000	190.000
1991 APR	220.000	150.000	210.000	150.000	150.000	160.000	160.000	180.000
1991 MAY	200.000	140.000	200.000	140.000	210.000	200.000	130.000	140.000
1991 JUN	180.000	130.000	180.000	140.000	180.000	170.000	140.000	150.000
1991 JUL	170.000	130.000	170.000	130.000	160.000	170.000	140.000	140.000
1991 AUG	190.000	150.000	190.000	150.000	.	.	150.000	160.000
1991 SEP	160.000	140.000	150.000	140.000	140.000	160.000	150.000	140.000
1991 OCT	170.000	150.000	160.000	150.000	150.000	160.000	160.000	160.000
1991 NOV	190.000	150.000	200.000	160.000	160.000	210.000	180.000	160.000
1992 JAN	230.000	160.000	220.000	160.000	170.000	190.000	160.000	170.000
1992 MAR	260.000	.	250.000	.	190.000	180.000	.	.
1992 MAY	210.000	150.000	210.000	150.000	.	.	150.000	160.000
1992 JUL	190.000	.	150.000	.	180.000	180.000	.	.
1992 SEP	200.000	160.000	210.000	160.000	.	.	160.000	170.000
1992 NOV	220.000	140.000	210.000	150.000	200.000	200.000	150.000	180.000

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
METALS								
TITANIUM (UG/L)			DET'N LIMIT = 0.50		GUIDELINE = N/A			
1991 JAN	9.300	11.000	10.000	11.000	11.000	10.000	11.000	11.000
1991 FEB	12.000	10.000	12.000	10.000	15.000	15.000	10.000	10.000
1991 MAR	13.000	14.000	12.000	16.000	14.000	11.000	14.000	11.000
1991 APR	12.000	16.000	13.000	18.000	17.000	17.000	19.000	17.000
1991 MAY	9.900	16.000	9.900	17.000	8.600	10.000	17.000	17.000
1991 JUN	13.000	15.000	13.000	44.000	13.000	12.000	47.000	47.000
1991 JUL	16.000	22.000	17.000	22.000	17.000	18.000	22.000	22.000
1991 AUG	2.300 <T	1.700 <T	2.200 <T	1.800 <T	.	.	2.100 <T	1.600 <T
1991 SEP	2.900 <T	3.400 <T	2.900 <T	3.500 <T	3.500 <T	2.600 <T	3.500 <T	3.400 <T
1991 OCT	5.800	6.500	4.900 <T	6.800	6.400	6.600	5.000 <T	5.200
1991 NOV	5.900	7.900	7.400	9.200	6.800	7.700	6.600	8.100
1992 JAN	6.100	7.100	5.800	6.900	7.000	6.900	7.400	7.500
1992 MAR	8.300	.	7.600	.	8.900	9.000	.	.
1992 MAY	17.000	23.000	16.000	21.000	.	.	21.000	19.000
1992 JUL	14.000	.	16.000	.	13.000	13.000	.	.
1992 SEP	7.800	9.200	7.400	9.500	.	.	9.700	9.400
1992 NOV	6.400	7.200	6.700	7.600	6.100	6.500	7.400	6.600
THALLIUM (UG/L)			DET'N LIMIT = 0.05		GUIDELINE = 13 (D4)			
1991 JAN	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 FEB	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 MAR	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 APR	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 MAY	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 JUN	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 JUL	BDL	.090 <T	BDL	BDL	BDL	BDL	BDL	BDL
1991 AUG	BDL	BDL	BDL	BDL	.	.	BDL	BDL
1991 SEP	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 OCT	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 NOV	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 JAN	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 MAR	BDL	.	BDL	.	BDL	BDL	.	.
1992 MAY	BDL	BDL	BDL	BDL	.	.	BDL	BDL
1992 JUL	BDL	.	BDL	.	BDL	BDL	.	.
1992 SEP	BDL	BDL	BDL	BDL	.	.	BDL	BDL
1992 NOV	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
METALS								
URANIUM (UG/L)			DET'N LIMIT = 0.05		GUIDELINE = 100 (A1)			
1991 JAN	1.500	.490 <T	1.300	.510	.500 <T	.560	.540	.560
1991 FEB	1.300	.430 <T	1.100	.430 <T	.480 <T	.550	1.200	.920
1991 MAR	1.400	.350 <T	1.200	.360 <T	.480 <T	.990	.450 <T	1.100
1991 APR	1.400	.400 <T	1.100	.410 <T	.440 <T	.490 <T	.420 <T	.570
1991 MAY	1.100	.360 <T	1.100	.390 <T	1.000	1.000	.400 <T	.490 <T
1991 JUN	1.000	.340 <T	1.000	.470 <T	1.100	.940	.460 <T	.470 <T
1991 JUL	.630	.430 <T	.750	.370 <T	.740	.760	.410 <T	.430 <T
1991 AUG	1.000	.440 <T	1.000	.450 <T	.	.	.450 <T	.580
1991 SEP	.670	.430 <T	.660	.430 <T	.440 <T	.650	.620	.550
1991 OCT	.680	.400 <T	.610	.430 <T	.470 <T	.510	.590	.530
1991 NOV	1.000	.510	1.200	.510	.620	.860	.880	.560
1992 JAN	1.700	.520	1.500	.550	.570	.750	.530	.660
1992 MAR	1.700	.	1.700	.	.650	.750	.	.
1992 MAY	1.300	.350 <T	1.300	.480 <T	.	.	.490 <T	.690
1992 JUL	.850	.	.450 <T	.	.830	.770	.	.
1992 SEP	.960	.410 <T	1.100	.450 <T	.	.	.460 <T	.530
1992 NOV	1.200	.420 <T	1.300	.420 <T	1.200	1.200	.420 <T	.770
VANADIUM (UG/L)			DET'N LIMIT = 0.05		GUIDELINE = N/A			
1991 JAN	.380 <T	.080 <T	.170 <T	.110 <T	.140 <T	.090 <T	.120 <T	.130 <T
1991 FEB	.110 <T	.300 <T	BDL	.300 <T	BDL	BDL	.250 <T	.320 <T
1991 MAR	.570	BDL	.310 <T	BDL	.090 <T	.170 <T	.070 <T	.170 <T
1991 APR	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 MAY	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 JUN	.430 <T	.110 <T	.200 <T	BDL	.300 <T	.220 <T	.110 <T	.120 <T
1991 JUL	.230 <T	BDL	BDL	BDL	BDL	.080 <T	BDL	BDL
1991 AUG	.550	.270 <T	.430 <T	.260 <T	.	.	.260 <T	.300 <T
1991 SEP	.360 <T	.140 <T	.200 <T	.130 <T	.130 <T	.190 <T	.200 <T	.180 <T
1991 OCT	.310 <T	.140 <T	.230 <T	.150 <T	.140 <T	.120 <T	.120 <T	.160 <T
1991 NOV	.110 <T	.070 <T	.070 <T	BDL	BDL	BDL	BDL	BDL
1992 JAN	.220 <T	.140 <T	BDL	.130 <T	.090 <T	BDL	.110 <T	.180 <T
1992 MAR	.280 <T	.	.190 <T	.	BDL	BDL	.	.
1992 MAY	.350 <T	BDL	.130 <T	BDL	.	.	BDL	BDL
1992 JUL	.300 <T	.	.240 <T	.	.160 <T	.170 <T	.	.
1992 SEP	.410 <T	.180 <T	.260 <T	.230 <T	.	.	.160 <T	.200 <T
1992 NOV	.240 <T	.060 <T	.190 <T	.130 <T	.130 <T	.130 <T	.150 <T	.100 <T

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
METALS								
ZINC (UG/L)			DET'N LIMIT = 0.20		GUIDELINE = 5000 (A3)			
1991 JAN	4.800	3.600	3.500	3.300	4.500	13.000	7.700	35.000
1991 FEB	4.800	3.000	3.400	2.100	4.700	19.000	4.300	61.000
1991 MAR	6.100	2.500	4.200	2.700	4.500	13.000	6.100	45.000
1991 APR	5.700	3.300	3.000	2.400	5.100	12.000	7.200	26.000
1991 MAY	5.000	4.300	4.200	5.300	5.200	23.000	10.000	80.000
1991 JUN	6.100	3.700	3.900	4.500	5.600	13.000	8.200	44.000
1991 JUL	4.200	2.700	3.200	2.800	4.100	8.100	8.300	48.000
1991 AUG	3.000	1.400 <T	2.600	1.300 <T	.	.	5.900	46.000
1991 SEP	1.400 <T	1.100 <T	.960 <T	.870 <T	4.800	4.200	4.900	53.000
1991 OCT	2.000 <T	1.200 <T	3.400	1.000 <T	1.600 <T	5.900	3.800	35.000
1991 NOV	5.000	3.100	6.300	2.500	5.500	5.300	7.400	70.000
1992 JAN	4.800	3.700	3.500	2.000 <T	3.400	5.800	8.900	99.000
1992 MAR	4.500	.	3.800	.	3.800	4.500	.	.
1992 MAY	6.000	3.500	4.500	3.800	.	.	13.000	34.000
1992 JUL	5.500	.	3.000	.	3.700	8.700	.	.
1992 SEP	5.300	4.000	2.800	2.900	.	.	7.000	50.000
1992 NOV	3.200	1.200 <T	1.600 <T	.840 <T	1.700 <T	4.500	5.000	38.000

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
CHLOROAROMATICS								
HEXACHLOROBUTADIENE (NG/L)			DET'N LIMIT = 1.000		GUIDELINE = 450 (D4)			
63 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
123-TRICHLOROBENZENE (NG/L)			DET'N LIMIT = 5.000		GUIDELINE = N/A			
66 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1234-TETCLOROBENZENE (NG/L)			DET'N LIMIT = 1.000		GUIDELINE = N/A			
63 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1235-TETCLOROBENZENE (NG/L)			DET'N LIMIT = 1.000		GUIDELINE = N/A			
66 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
124-TRICHLOROBENZENE (NG/L)			DET'N LIMIT = 5.000		GUIDELINE = 10000 (I)			
66 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1245-TETCLOROBENZENE (NG/L)			DET'N LIMIT = 1.000		GUIDELINE = 38000 (D4)			
63 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
135-TRICHLOROBENZENE (NG/L)			DET'N LIMIT = 5.000		GUIDELINE = N/A			
63 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
HEXACHLOROBENZENE (NG/L)			DET'N LIMIT = 1.000		GUIDELINE = 10 (C1)			
63 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
CHLOROAROMATICS								
HEXACHLOROETHANE (NG/L)		DET'N LIMIT = 1.000		GUIDELINE = 1900 (D4)				
1991 JAN	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 FEB	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 MAR	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 APR	BDL	BDL	BDL	BDL	!QU	.	BDL	.
1991 MAY	BDL	BDL	10.000 <T	BDL	BDL	.	BDL	.
1991 JUN	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 JUL	!AW	!AW	!AW	!AW	!AW	.	!AW	.
1991 AUG	!AW	!AW	!AW	!AW	.	.	!AW	.
1991 SEP	!AW	!AW	!AW	!AW	!AW	.	!AW	.
1991 OCT	!AW	!AW	!AW	!AW	!AW	.	!AW	.
1991 NOV	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1992 JAN	BDL	BDL	2.000 <T	BDL	BDL	.	BDL	.
1992 MAR	BDL	.	BDL	.	BDL	.	.	.
1992 MAY	BDL	BDL	BDL	BDL	.	.	BDL	.
1992 SEP	BDL	BDL	BDL	BDL	.	.	BDL	.
1992 NOV	BDL	BDL	2.000 <T	BDL	BDL	.	BDL	.
OCTACHLOROSTYRENE (NG/L)		DET'N LIMIT = 1.000		GUIDELINE = N/A				
63 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
PENTACHLOROBENZENE (NG/L)		DET'N LIMIT = 1.000		GUIDELINE = 74000 (D4)				
66 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
236-TRICHLOROTOLUENE (NG/L)		DET'N LIMIT = 5.000		GUIDELINE = N/A				
66 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
245-TRICHLOROTOLUENE (NG/L)		DET'N LIMIT = 5.000		GUIDELINE = N/A				
63 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
26A-TRICHLOROTOLUENE (NG/L)		DET'N LIMIT = 5.000		GUIDELINE = N/A				
66 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
CHLOROPHENOLS								
234-TRICHLOROPHENOL (NG/L)			DET'N LIMIT = 100.0		GUIDELINE = N/A			
7 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
2345-TETCHLOROPHENOL (NG/L)			DET'N LIMIT = 20.0		GUIDELINE = N/A			
7 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
2356-TETCHLOROPHENOL (NG/L)			DET'N LIMIT = 10.0		GUIDELINE = N/A			
7 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
245-TRICHLOROPHENOL (NG/L)			DET'N LIMIT = 100.0		GUIDELINE = 2600000 (D4)			
7 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
246-TRICHLOROPHENOL (NG/L)			DET'N LIMIT = 20.0		GUIDELINE = 5000 (A1)			
7 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
PENTACHLOROPHENOL (NG/L)			DET'N LIMIT = 10.00		GUIDELINE = 60000 (A1)			
7 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
PESTICIDES AND PCB								
ALDRIN (NG/L)			DET'N LIMIT = 1.000		GUIDELINE = 700 (A1)			
63 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
ALPHA BHC (NG/L)			DET'N LIMIT = 1.000		GUIDELINE = 700 (G)			
1991 JAN	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 FEB	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 MAR	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 APR	BDL	BDL	BDL	BDL	!QU	.	BDL	.
1991 MAY	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 JUN	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 JUL	!AW	!AW	!AW	!AW	!AW	.	!AW	.
1991 AUG	!AW	!AW	!AW	!AW	.	.	!AW	.
1991 SEP	!AW	!AW	!AW	!AW	!AW	.	!AW	.
1991 OCT	!AW	!AW	!AW	!AW	!AW	.	!AW	.
1991 NOV	BDL	BDL	2.000 <T	BDL	BDL	.	BDL	.
1992 JAN	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1992 MAR	BDL	.	BDL	.	BDL	.	.	.
1992 MAY	BDL	BDL	BDL	BDL	.	.	BDL	.
1992 SEP	BDL	BDL	BDL	BDL	.	.	BDL	.
1992 NOV	BDL	BDL	BDL	BDL	BDL	.	BDL	.
BETA BHC (NG/L)			DET'N LIMIT = 1.00		GUIDELINE = 300 (G)			
66 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
LINDANE (GAMMA BHC) (NG/L)			DET'N LIMIT = 1.000		GUIDELINE = 4000 (A1)			
63 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
ALPHA CHLORDANE (NG/L)			DET'N LIMIT = 2.000		GUIDELINE = 7000 (A1)			
66 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
GAMMA CHLORDANE (NG/L)			DET'N LIMIT = 2.00		GUIDELINE = 7000 (A1)			
66 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
DIELDRIN (NG/L)			DET'N LIMIT = 2.00		GUIDELINE = 700 (A1)			
66 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
METHOXYCHLOR (NG/L)			DET'N LIMIT = 5.0		GUIDELINE = 900000 (A1)			
66 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
PESTICIDES AND PCB								
ENDOSULFAN 1 (NG/L)			DET'N LIMIT = 2.00		GUIDELINE = 74000 (D4)			
63 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
ENDOSULFAN II (NG/L)			DET'N LIMIT = 5.000		GUIDELINE = 74000 (D4)			
66 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
ENDRIN (NG/L)			DET'N LIMIT = 5.000		GUIDELINE = 1600 (D3)			
63 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
ENDOSULFAN SULPHATE (NG/L)			DET'N LIMIT = 5.00		GUIDELINE = N/A			
63 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
HEPTACHLOR EPOXIDE (NG/L)			DET'N LIMIT = 1.000		GUIDELINE = 3000 (A1)			
46 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
HEPTACHLOR (NG/L)			DET'N LIMIT = 1.000		GUIDELINE = 3000 (A1)			
66 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
MIREX (NG/L)			DET'N LIMIT = 5.000		GUIDELINE = N/A			
66 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
OXYCHLORDANE (NG/L)			DET'N LIMIT = 2.000		GUIDELINE = N/A			
66 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
O,P-DDT (NG/L)			DET'N LIMIT = 5.000		GUIDELINE = 30000 (A1)			
66 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
PCB (NG/L)			DET'N LIMIT = 20.00		GUIDELINE = 3000 (A2)			
66 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
P,P-DDD (NG/L)			DET'N LIMIT = 5.000		GUIDELINE = 30000 (A1)			
63 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
P,P-DDE (NG/L)			DET'N LIMIT = 1.000		GUIDELINE = 30000 (A1)			
63 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
PESTICIDES AND PCB								
P,P-DDT (NG/L)			DET'N LIMIT = 5.000		GUIDELINE = 30000 (A1)			
63 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
TOXAPHENE (NG/L)			DET'N LIMIT = 500.0		GUIDELINE = 5000 (A1)			
43 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
AMETRINE (NG/L)			DET'N LIMIT = 50.0		GUIDELINE = 300000 (D3)			
44 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
ATRAZINE (NG/L)			DET'N LIMIT = 50.0		GUIDELINE = 60000 (A2)			
1991 JAN	BDL	BDL	BDL	BDL	.	.	.	.
1991 FEB	!PE	!PE	!PE	BDL	.	.	.	.
1991 MAR	!RE	BDL	BDL	BDL	.	.	.	.
1991 APR	BDL	BDL	BDL	BDL	.	.	.	.
1991 MAY	BDL	BDL	BDL	BDL	.	.	.	.
1991 JUN	120.000 <T	BDL	130.000 <T	BDL	.	.	.	.
1991 JUL	BDL	!AW	BDL	!AW	.	.	.	.
1991 AUG	!AW	!AW	!AW	!AW	.	.	.	.
1991 SEP	!AW	!AW	!AW	!AW	.	.	.	.
1991 OCT	!AW	!AW	!AW	!AW	.	.	.	.
1991 NOV	BDL	BDL	BDL	BDL	.	.	.	.
1992 JAN	140.000 <T	BDL	50.000 <T	BDL	.	.	.	.
1992 MAR	BDL	.	BDL	.	.	.	.	.
1992 MAY	BDL	BDL	BDL	BDL	.	.	.	.
1992 SEP	BDL	BDL	BDL	BDL	.	.	.	.
1992 NOV	BDL	BDL	BDL	BDL	.	.	.	.
ATRATONE (NG/L)			DET'N LIMIT = 50.0		GUIDELINE = N/A			
42 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
CYANAZINE (BLADEX) (NG/L)			DET'N LIMIT = 100.0		GUIDELINE = 10000 (A2)			
44 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
DESETHYL ATRAZINE (NG/L)			DET'N LIMIT = 200.0		GUIDELINE = 60000 (A2)			
44 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
DESETHYL SIMAZINE (NG/L)			DET'N LIMIT = 200.0		GUIDELINE = 10000 (A2)			
42 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
PESTICIDES AND PCB								
PROMETONE (NG/L)			DET'N LIMIT = 50.000		GUIDELINE = 52500 (D3)			
44 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
PROPAZINE (NG/L)			DET'N LIMIT = 50.000		GUIDELINE = 700000 (D3)			
44 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
PROMETRYNE (NG/L)			DET'N LIMIT = 50.000		GUIDELINE = 1000 (A2)			
44 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
METRIBUZIN (SENCOR) (NG/L)			DET'N LIMIT = 100.0		GUIDELINE = 80000 (A1)			
44 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
SIMAZINE (NG/L)			DET'N LIMIT = 50.00		GUIDELINE = 10000 (A2)			
44 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
ALACHLOR (LASSO) (NG/L)			DET'N LIMIT = 500.0		GUIDELINE = 5000 (A2)			
44 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
METOLACHLOR (NG/L)			DET'N LIMIT = 500.0		GUIDELINE = 50000 (A2)			
44 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
HEXACLCYCLOPENTADIEN (NG/L)			DET'N LIMIT = 5.00		GUIDELINE = 206000 (D4)			
1991 JAN	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 FEB	BDL	BDL	BDL	BDL	BDL	.	42.000 <T	.
1991 MAR	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 APR	BDL	BDL	BDL	BDL	!QU	.	BDL	.
1991 MAY	BDL	BDL	200.000	BDL	BDL	.	15.000 <T	.
1991 JUN	!QU	BDL	!QU	8.000 <T	!QU	.	8.000 <T	.
1991 JUL	!AW	!AW	!AW	!AW	!AW	.	!AW	.
1991 AUG	!AW	!AW	!AW	!AW	.	.	!AW	.
1991 SEP	!AW	!AW	!AW	!AW	!AW	.	!AW	.
1991 OCT	!AW	!AW	!AW	!AW	!AW	.	!AW	.
1991 NOV	BDL	BDL	196.000	BDL	20.000 <T	.	22.000 <T	.
1992 JAN	BDL	BDL	76.000	BDL	BDL	.	BDL	.
1992 MAR	BDL	.	150.000	.	40.000 <T	.	.	.
1992 MAY	!QU	!QU	!QU	!QU	.	.	!QU	.
1992 SEP	!QU	!QU	!QU	!QU	.	.	!QU	.
1992 NOV	!QU	!QU	!QU	!QU	!QU	.	!QU	.

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
PHENOLICS (UG/L	PHENOLICS)		DET'N LIMIT = 0.2		GUIDELINE = N/A			
1991 JAN	.800 <T	.600 <T	.600 <T	.400 <T	.	.	.	.
1991 FEB	1.000 <T	BDL	.400 <T	BDL	.	.	.	.
1991 MAR	.400 <T	BDL	.400 <T	BDL	.	.	.	.
1991 APR	.800 <T	.800 <T	BDL	BDL	.	.	.	.
1991 MAY	.400 <T	BDL	.400 <T	BDL	.	.	.	.
1991 JUN	1.400	BDL	.400 <T	BDL	.	.	.	.
1991 JUL	.400 <T	BDL	.400 <T	BDL	.	.	.	.
1991 AUG	2.000	BDL	.400 <T	BDL	.	.	.	.
1991 SEP	2.600	BDL	.400 <T	.800 <T	.	.	.	.
1991 OCT	1.200	BDL	.600 <T	BDL	.	.	.	.
1991 NOV	.400 <T	.400 <T	.400 <T	BDL	.	.	.	.
1992 JAN	BDL	BDL	BDL	BDL	.	.	.	.
1992 MAR	BDL	.	BDL	.	.	.	.	.
1992 MAY	BDL	BDL	.400 <T	BDL	.	.	.	.
1992 JUL	.600 <T	.	!AW	.	.	.	.	.
1992 SEP	BDL	BDL	.800 <T	BDL	.	.	.	.
1992 NOV	1.000 <T	.600 <T	.800 <T	.400 <T	.	.	.	.

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
POLYAROMATIC HYDROCARBONS								
PHENANTHRENE (NG/L)			DET'N LIMIT = 10.0		GUIDELINE = N/A			
39 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
ANTHRACENE (NG/L)			DET'N LIMIT = 1.0		GUIDELINE = N/A			
33 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
FLUORANTHENE (NG/L)			DET'N LIMIT = 20.0		GUIDELINE = 42000 (D4)			
39 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
PYRENE (NG/L)			DET'N LIMIT = 20.0		GUIDELINE = N/A			
39 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
BENZO(A)ANTHRACENE (NG/L)			DET'N LIMIT = 20.0		GUIDELINE = N/A			
39 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
CHRYSENE (NG/L)			DET'N LIMIT = 50.0		GUIDELINE = N/A			
39 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
DIMETH. BENZ(A)ANTHR (NG/L)			DET'N LIMIT = 5.0		GUIDELINE = N/A			
33 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
BENZO(E) PYRENE (NG/L)			DET'N LIMIT = 50.0		GUIDELINE = N/A			
39 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
BENZO(B) FLUORANTHEN (NG/L)			DET'N LIMIT = 10.0		GUIDELINE = N/A			
39 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
PERYLENE (NG/L)			DET'N LIMIT = 10.0		GUIDELINE = N/A			
39 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
BENZO(K) FLUORANTHEN (NG/L)			DET'N LIMIT = 1.0		GUIDELINE = N/A			
39 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
BENZO(A) PYRENE (NG/L)			DET'N LIMIT = 5.0		GUIDELINE = 10 (A1)			
33 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
POLYAROMATIC HYDROCARBONS								
BENZO(G,H,I) PERYLEN (NG/L)			DET'N LIMIT = 20.0		GUIDELINE = N/A			
39 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
DIBENZO(A,H) ANTHRAC (NG/L)			DET'N LIMIT = 10.0		GUIDELINE = N/A			
39 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
INDENO(1,2,3-C,D) PY (NG/L)			DET'N LIMIT = 20.0		GUIDELINE = N/A			
39 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
BENZO(B) CHRYSENE (NG/L)			DET'N LIMIT = 2.0		GUIDELINE = N/A			
39 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
CORONENE (NG/L)			DET'N LIMIT = 10.0		GUIDELINE = N/A			
39 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	

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DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
SPECIFIC PESTICIDES								
TOXAPHENE (NG/L)			DET'N LIMIT = 500.0		GUIDELINE = 5000 (A1)			
23 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
2,4,5-T (NG/L)			DET'N LIMIT = 50.0		GUIDELINE = 280000 (A1)			
7 SAMPLES	BDL	BDL	BDL	BDL				
2,4-D (NG/L)			DET'N LIMIT = 100.0		GUIDELINE = 100000 (A1)			
7 SAMPLES	BDL	BDL	BDL	BDL				
2,4-DB (NG/L)			DET'N LIMIT = 200.0		GUIDELINE = N/A			
7 SAMPLES	BDL	BDL	BDL	BDL				
2,4 D PROPIONIC ACID (NG/L)			DET'N LIMIT = 100.0		GUIDELINE = N/A			
7 SAMPLES	BDL	BDL	BDL	BDL				
DICAMBA (NG/L)			DET'N LIMIT = 50.0		GUIDELINE = 120000 (A1)			
7 SAMPLES	BDL	BDL	BDL	BDL				
PICHLORAM (NG/L)			DET'N LIMIT = 100.00		GUIDELINE = 190000 (A2)			
4 SAMPLES	BDL	BDL	BDL	BDL				
2,4,5-TP (SILVEX) (NG/L)			DET'N LIMIT = 20.00		GUIDELINE = 10000 (A1)			
7 SAMPLES	BDL	BDL	BDL	BDL				
DIAZINON (NG/L)			DET'N LIMIT = 20.0		GUIDELINE = 20000 (A1)			
8 SAMPLES	BDL	BDL	BDL	BDL				
DICHLOROVOS (NG/L)			DET'N LIMIT = 20.0		GUIDELINE = N/A			
8 SAMPLES	BDL	BDL	BDL	BDL				
CHLORPYRIFOS (NG/L)			DET'N LIMIT = 20.0		GUIDELINE = N/A			
8 SAMPLES	BDL	BDL	BDL	BDL				
ETHION (NG/L)			DET'N LIMIT = 20.0		GUIDELINE = 35000 (G)			
8 SAMPLES	BDL	BDL	BDL	BDL				

TABLE 4
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	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
SPECIFIC PESTICIDES								
AZINPHOS-METHYL (NG/L)	DET'N LIMIT = N/A				GUIDELINE = N/A			
2 SAMPLES	!NP	BDL	!NP	BDL	.	.	.	.
MALATHION (NG/L)	DET'N LIMIT = 20.0				GUIDELINE = 190000 (A1)			
8 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
MEVINPHOS (NG/L)	DET'N LIMIT = 20.0				GUIDELINE = N/A			
8 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
METHYL PARATHION (NG/L)	DET'N LIMIT = 50.0				GUIDELINE = 9000 (D3)			
8 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
METHYLTRITHION (NG/L)	DET'N LIMIT = 20.0				GUIDELINE = N/A			
8 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
PARATHION (NG/L)	DET'N LIMIT = 20.0				GUIDELINE = 50000 (A1)			
8 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
PHORATE (NG/L)	DET'N LIMIT = 20.0				GUIDELINE = 2000 (A2)			
8 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
RELDAN (NG/L)	DET'N LIMIT = 20.0				GUIDELINE = N/A			
8 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
RONNEL (NG/L)	DET'N LIMIT = 20.0				GUIDELINE = N/A			
8 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
CARBOFURAN (NG/L)	DET'N LIMIT = 2000.0				GUIDELINE = 90000 (A1)			
8 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
CHLORPROPHAM (CIPC) (NG/L)	DET'N LIMIT = 2000.0				GUIDELINE = 350000 (G)			
8 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
DIALLATE (NG/L)	DET'N LIMIT = 2000.0				GUIDELINE = N/A			
8 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.

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	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
SPECIFIC PESTICIDES								
EPTAM (NG/L)			DET'N LIMIT = 2000.0		GUIDELINE = N/A			
8 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
IPC (NG/L)			DET'N LIMIT = 2000.0		GUIDELINE = N/A			
8 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
PROPOXUR (NG/L)			DET'N LIMIT = 2000.0		GUIDELINE = 140000 (D3)			
8 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
CARBARYL (NG/L)			DET'N LIMIT = 200.0		GUIDELINE = 90000 (A1)			
8 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
BUTYLATE (NG/L)			DET'N LIMIT = 2000.0		GUIDELINE = 245000 (D3)			
8 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
VOLATILES								
BENZENE (UG/L)			DET'N LIMIT = 0.05		GUIDELINE = 5 (A1)			
93 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
TOLUENE (UG/L)			DET'N LIMIT = 0.05		GUIDELINE = 24 (A3)			
1991 JAN	BDL	BDL	.050 <T	BDL	BDL	.	BDL	.
1991 FEB	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 MAR	BDL	BDL	BDL	BDL	BDL	.	.050 <T	.
1991 APR	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 MAY	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 JUN	BDL	BDL	.100 <T	BDL	.100 <T	.	BDL	.
1991 JUL	BDL	BDL	.050 <T	BDL	.050 <T	.	BDL	.
1991 AUG	BDL	BDL	.300 <T	BDL	.	.	BDL	.
1991 SEP	BDL	BDL	.100 <T	BDL	BDL	.	BDL	.
1991 OCT	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 NOV	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1992 JAN	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1992 MAR	BDL	BDL	BDL	BDL	BDL	.	.	.
1992 MAY	BDL	BDL	.	BDL	.	.	BDL	.
1992 JUL	BDL	.	!AW	.	BDL	.	.	.
1992 SEP	BDL	BDL	.100 <T	BDL	.	.	BDL	.
1992 NOV	BDL	BDL	.050 <T	BDL	.050 <T	.	BDL	.
ETHYLBENZENE (UG/L)			DET'N LIMIT = 0.05		GUIDELINE = 2.4 (A3)			
1991 JAN	BDL	.100 <T	BDL	.100 <T	BDL	.	BDL	.
1991 FEB	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 MAR	.050 <T	.050 <T	.200 <T	.150 <T	BDL	.	.100 <T	.
1991 APR	BDL	BDL	.050 <T	BDL	BDL	.	BDL	.
1991 MAY	.050 <T	BDL	.100 <T	.050 <T	BDL	.	BDL	.
1991 JUN	BDL	BDL	.100 <T	.100 <T	.050 <T	.	BDL	.
1991 JUL	BDL	.100 <T	.200 <T	.150 <T	BDL	.	.100 <T	.
1991 AUG	BDL	.200 <T	.250 <T	.200 <T	.	.	.200 <T	.
1991 SEP	BDL	.100 <T	.100 <T	.150 <T	BDL	.	.050 <T	.
1991 OCT	BDL	.100 <T	.100 <T	.100 <T	BDL	.	BDL	.
1991 NOV	BDL	BDL	.050 <T	.050 <T	BDL	.	BDL	.
1992 JAN	BDL	BDL	.100 <T	.100 <T	.050 <T	.	BDL	.
1992 MAR	BDL	BDL	.100 <T	BDL	BDL	.	.	.
1992 MAY	BDL	.100 <T	.	.100 <T	.	.	BDL	.
1992 JUL	.050 <T	.	!AW	.	.200 <T	.	.	.
1992 SEP	BDL	BDL	.100 <T	BDL	.	.	.150 <T	.
1992 NOV	BDL	BDL	.100 <T	BDL	BDL	.	BDL	.
P-XYLENE (UG/L)			DET'N LIMIT = 0.10		GUIDELINE = 300 (A3*)			
93 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
VOLATILES								
M-XYLENE (UG/L)		DET'N LIMIT = 0.10		GUIDELINE = 300 (A3*)				
1991 JAN	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 FEB	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 MAR	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 APR	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 MAY	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 JUN	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 JUL	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 AUG	BDL	.200 <T	BDL	BDL	.	.	BDL	.
1991 SEP	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 OCT	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 NOV	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1992 JAN	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1992 MAR	BDL	BDL	BDL	BDL	BDL	.	.	.
1992 MAY	BDL	BDL	.	BDL	.	.	BDL	.
1992 JUL	BDL	.	!AW	.	.200 <T	.	.	.
1992 SEP	BDL	BDL	BDL	BDL	.	.	BDL	.
1992 NOV	BDL	BDL	BDL	BDL	BDL	.	BDL	.
O-XYLENE (UG/L)		DET'N LIMIT = 0.05		GUIDELINE = 300 (A3*)				
1991 JAN	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 FEB	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 MAR	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 APR	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 MAY	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 JUN	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 JUL	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 AUG	BDL	.150 <T	BDL	BDL	.	.	BDL	.
1991 SEP	BDL	.050 <T	BDL	BDL	BDL	.	BDL	.
1991 OCT	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 NOV	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1992 JAN	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1992 MAR	BDL	BDL	BDL	BDL	BDL	.	.	.
1992 MAY	BDL	BDL	.	BDL	.	.	BDL	.
1992 JUL	BDL	.	!AW	.	.100 <T	.	.	.
1992 SEP	BDL	BDL	BDL	BDL	.	.	BDL	.
1992 NOV	BDL	BDL	BDL	BDL	BDL	.	BDL	.

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

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VOLATILES								
STYRENE (UG/L)			DET'N LIMIT = 0.05		GUIDELINE = 100 (D1)			
1991 JAN	BDL	.150 <T	BDL	BDL	BDL	.	BDL	.
1991 FEB	BDL	.100 <T	BDL	BDL	BDL	.	.050 <T	.
1991 MAR	.100 <T	.150 <T	.300 <T	BDL	.050 <T	.	.150 <T	.
1991 APR	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 MAY	.100 <T	BDL	BDL	BDL	.050 <T	.	BDL	.
1991 JUN	BDL	.050 <T	.150 <T	BDL	.150 <T	.	BDL	.
1991 JUL	BDL	.150 <T	.350 <T	.050 <T	.100 <T	.	.250 <T	.
1991 AUG	BDL	.200 <T	.250 <T	.050 <T	.	.	.200 <T	.
1991 SEP	BDL	.250 <T	.100 <T	BDL	.150 <T	.	.100 <T	.
1991 OCT	.050 <T	.100 <T	.050 <T	BDL	.100 <T	.	.100 <T	.
1991 NOV	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1992 JAN	BDL	.250 <T	.200 <T	.200 <T	BDL	.	BDL	.
1992 MAR	BDL	BDL	.050 <T	BDL	BDL	.	.	.
1992 MAY	BDL	.150 <T	.	BDL	.	.	BDL	.
1992 JUL	.050 <T	.	!AW	.	.300 <T	.	.	.
1992 SEP	BDL	.100 <T	.150 <T	BDL	.	.	.350 <T	.
1992 NOV	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1,1-DICHLOROETHYLENE (UG/L)			DET'N LIMIT = 0.100		GUIDELINE = 7 (D1)			
93 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
METHYLENE CHLORIDE (UG/L)			DET'N LIMIT = 0.50		GUIDELINE = 50 (A1)			
93 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
T12-DICHLOROETHYLENE (UG/L)			DET'N LIMIT = 0.10		GUIDELINE = 70 (D1)			
1991 JAN	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 FEB	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 MAR	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 APR	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 MAY	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 JUN	BDL	BDL	BDL	.100 <T	BDL	.	.100 <T	.
1991 JUL	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 AUG	BDL	BDL	BDL	BDL	.	.	BDL	.
1991 SEP	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 OCT	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 NOV	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1992 JAN	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1992 MAR	BDL	BDL	BDL	BDL	BDL	.	.	.
1992 MAY	BDL	BDL	.	BDL	.	.	BDL	.
1992 JUL	BDL	.	!AW	.	BDL	.	.	.
1992 SEP	BDL	BDL	BDL	BDL	.	.	BDL	.
1992 NOV	BDL	BDL	BDL	BDL	BDL	.	BDL	.

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
VOLATILES								
1,1-DICHLOROETHANE (UG/L)			DET'N LIMIT = 0.100		GUIDELINE = N/A			
93 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
CHLOROFORM (UG/L)			DET'N LIMIT = 0.10		GUIDELINE = 350 (A1+)			
1991 JAN	BDL	.200 <T	78.900	5.500	1.700		.900 <T	
1991 FEB	BDL	.200 <T	82.900	4.600	1.500		39.200	
1991 MAR	BDL	.200 <T	42.900	4.600	4.300		1.200	
1991 APR	BDL	.200 <T	130.500	8.000	2.000		1.500	
1991 MAY	BDL	.300 <T	128.800	7.100	24.700		1.400	
1991 JUN	BDL	.400 <T	77.600	9.700	55.800		2.200	
1991 JUL	BDL	.400 <T	73.100	10.300	59.700		1.900	
1991 AUG	BDL	.400 <T	111.900	13.400	.		2.100	
1991 SEP	BDL	.400 <T	110.600	13.300	3.000		51.200	
1991 OCT	BDL	.200 <T	103.600	BDL	2.400		51.600	
1991 NOV	BDL	.200 <T	82.400	8.300	10.900		56.200	
1992 JAN	BDL	.200 <T	61.000	7.400	2.500		1.000	
1992 MAR	BDL	.200 <T	96.200	9.900	4.200		.	
1992 MAY	BDL	.300 <T	.	8.200	.		1.400 UNF	
1992 JUL	BDL	.	!AW	.	48.300		.	
1992 SEP	BDL	1.100	100.600	9.900	.		2.200	
1992 NOV	BDL	2.200	90.500	2.400	53.000		2.900	
111,TRICHLOROETHANE (UG/L)			DET'N LIMIT = 0.02		GUIDELINE = 200 (D1)			
1991 JAN	BDL	.160 <T	BDL	.140 <T	.140 <T		.140 <T	
1991 FEB	BDL	.180 <T	BDL	.180 <T	.180 <T		BDL	
1991 MAR	BDL	.180 <T	BDL	.180 <T	.180 <T		.220 <T	
1991 APR	BDL	.180 <T	BDL	.180 <T	.180 <T		.180 <T	
1991 MAY	BDL	.220	BDL	.260	BDL		.260	
1991 JUN	BDL	.280	BDL	.300	BDL		.300	
1991 JUL	BDL	.340	BDL	.300	BDL		.340	
1991 AUG	BDL	.340	BDL	.360	.		.360	
1991 SEP	BDL	.360	BDL	.400	.360		BDL	
1991 OCT	BDL	.340	BDL	.360	.360		BDL	
1991 NOV	BDL	.340	BDL	.320 APS	.320 APS		BDL	
1992 JAN	BDL	.400	BDL	.400	.380		.400	
1992 MAR	BDL	.360	BDL	.380	.340		.	
1992 MAY	BDL	.600	.	.660	.		.520 UNF	
1992 JUL	BDL	.	!AW	.	BDL		.	
1992 SEP	BDL	.720	BDL	.740	.		.800	
1992 NOV	BDL	.620	BDL	.640	BDL		.620	

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
VOLATILES								
1,2 DICHLOROETHANE (UG/L)			DET'N LIMIT = 0.05		GUIDELINE = 5 (A1)			
1991 JAN	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 FEB	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 MAR	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 APR	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 MAY	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 JUN	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 JUL	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 AUG	BDL	BDL	BDL	BDL	.	.	BDL	.
1991 SEP	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 OCT	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 NOV	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1992 JAN	BDL	BDL	.400 <T	.150 <T	BDL	.	BDL	.
1992 MAR	BDL	BDL	BDL	BDL	BDL	.	.	.
1992 MAY	BDL	BDL	.	BDL	.	.	BDL	.
1992 JUL	BDL	.	!AW	.	BDL	.	.	.
1992 SEP	BDL	BDL	BDL	BDL	.	.	BDL	.
1992 NOV	BDL	BDL	BDL	BDL	BDL	.	BDL	.
CARBON TETRACHLORIDE (UG/L)			DET'N LIMIT = 0.20		GUIDELINE = 5 (A1)			
93 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1,2-DICHLOROPROPANE (UG/L)			DET'N LIMIT = 0.05		GUIDELINE = 5 (D1)			
93 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
TRICHLOROETHYLENE (UG/L)			DET'N LIMIT = 0.10		GUIDELINE = 50 (A1)			
1991 JAN	BDL	14.700	BDL	14.400	14.100	.	14.500	.
1991 FEB	BDL	16.700	BDL	17.200	17.200	.	.400 <T	.
1991 MAR	BDL	15.800	BDL	15.800	14.500	.	19.400	.
1991 APR	BDL	21.500	BDL	21.100	21.200	.	21.600	.
1991 MAY	BDL	24.500	BDL	23.100	BDL	.	27.500	.
1991 JUN	BDL	22.100	BDL	23.200	BDL	.	25.200	.
1991 JUL	BDL	24.600	BDL	23.100	BDL	.	25.400	.
1991 AUG	BDL	25.300	BDL	25.100	.	.	25.800	.
1991 SEP	BDL	30.400	BDL	29.200	30.700	.	.200 <T	.
1991 OCT	BDL	27.400	BDL	26.800	27.800	.	.300 <T	.
1991 NOV	BDL	23.200	BDL	22.000	22.000	.	1.500	.
1992 JAN	BDL	28.700	BDL	27.300	25.800	.	26.900	.
1992 MAR	BDL	23.000	BDL	23.500	19.400	.	.	.
1992 MAY	BDL	29.100	.	28.400	.	.	23.600 UNF	.
1992 JUL	BDL	.	!AW	.	BDL	.	.	.
1992 SEP	BDL	34.400	BDL	33.500	.	.	30.600	.
1992 NOV	BDL	23.800	BDL	24.000	BDL	.	25.900	.

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
VOLATILES								
DICHLOROBROMOMETHANE (UG/L)		DET'N LIMIT = 0.05			GUIDELINE = 350 (A1+)			
1991 JAN	BDL	BDL	9.350	7.300	1.350	.	.750	.
1991 FEB	BDL	.100 <T	9.600	6.000	1.400	.	4.750	.
1991 MAR	BDL	BDL	6.200	6.250	1.400	.	1.000	.
1991 APR	BDL	.050 <T	10.650	8.500	1.900	.	1.300	.
1991 MAY	BDL	.100 <T	10.900	8.800	6.500	.	1.200	.
1991 JUN	BDL	BDL	9.700	9.400	6.600	.	1.900	.
1991 JUL	BDL	BDL	10.500	9.750	7.500	.	1.550	.
1991 AUG	BDL	.150 <T	12.300	11.350	.	.	1.650	.
1991 SEP	BDL	BDL	14.300	10.900	1.900	.	7.700	.
1991 OCT	BDL	BDL	11.900	9.100 APS	2.000	.	7.500	.
1991 NOV	BDL	BDL	10.050	8.950	9.600	.	7.700	.
1992 JAN	BDL	BDL	9.200	9.100	.700	.	1.500	.
1992 MAR	BDL	BDL	11.500	10.400	1.500	.	.	.
1992 MAY	BDL	BDL	. .	8.700	.	.	.900 UNF	.
1992 JUL	BDL	.	!AW	.	7.700	.	.	.
1992 SEP	BDL	.200 <T	14.300	9.600	.	.	2.500	.
1992 NOV	BDL	.500 <T	10.650	.550 <T	6.450	.	1.950	.
112-TRICHLOROETHANE (UG/L)		DET'N LIMIT = 0.05			GUIDELINE = 0.6 (D4)			
1991 JAN	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 FEB	BDL	.050 <T	BDL	.050 <T	.050 <T	.	BDL	.
1991 MAR	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 APR	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 MAY	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 JUN	BDL	.100 <T	BDL	.100 <T	BDL	.	.100 <T	.
1991 JUL	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 AUG	BDL	.100 <T	BDL	.100 <T	.	.	.100 <T	.
1991 SEP	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 OCT	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1991 NOV	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1992 JAN	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1992 MAR	BDL	BDL	BDL	BDL	BDL	.	.	.
1992 MAY	BDL	BDL	.	BDL	.	.	BDL	.
1992 JUL	BDL	.	!AW	.	BDL	.	.	.
1992 SEP	BDL	BDL	BDL	BDL	.	.	.100 <T	.
1992 NOV	BDL	BDL	BDL	.050 <T	BDL	.	.100 <T	.

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
VOLATILES								
CHLORODIBROMOMETHANE (UG/L)			DET'N LIMIT = 0.10		GUIDELINE = 350 (A1+)			
1991 JAN	BDL	BDL	.600 <T	6.500	1.600	.	.900 <T	.
1991 FEB	BDL	BDL	.700 <T	5.500	1.400	.	.500 <T	.
1991 MAR	BDL	BDL	.500 <T	5.600	.800 <T	.	.800 <T	.
1991 APR	BDL	BDL	.500 <T	6.700	1.500	.	1.100	.
1991 MAY	BDL	BDL	.600 <T	6.600	.300 <T	.	1.200	.
1991 JUN	BDL	BDL	.700 <T	6.800	.400 <T	.	1.600	.
1991 JUL	BDL	BDL	.900 <T	7.500	.600 <T	.	1.400	.
1991 AUG	BDL	BDL	.800 <T	7.400	.	.	1.200	.
1991 SEP	BDL	BDL	1.500	7.900	1.900	.	.800 <T	.
1991 OCT	BDL	BDL	.900 <T	5.800	1.900	.	.700 <T	.
1991 NOV	BDL	BDL	.600 <T	6.900	6.800	.	.700 <T	.
1992 JAN	BDL	BDL	.800 <T	8.400	.500 <T	.	2.300	.
1992 MAR	BDL	BDL	.700 <T	8.400	1.700	.	.	.
1992 MAY	BDL	BDL	.	6.700	.	.	.900 <T	.
1992 JUL	BDL	.	!AW	.	.600 <T	.	.	.
1992 SEP	BDL	BDL	1.000	7.800	.	.	2.900	.
1992 NOV	BDL	BDL	.800 <T	BDL	.500 <T	.	1.700	.
TETRACHLOROETHYLENE (UG/L)			DET'N LIMIT = 0.05		GUIDELINE = 65 (A5)			
1991 JAN	BDL	.100 <T	BDL	.150 <T	.100 <T	.	.100 <T	.
1991 FEB	BDL	.100 <T	BDL	.150 <T	.150 <T	.	BDL	.
1991 MAR	BDL	.100 <T	BDL	.100 <T	.100 <T	.	.150 <T	.
1991 APR	BDL	.100 <T	BDL	.100 <T	.100 <T	.	.100 <T	.
1991 MAY	BDL	.100 <T	BDL	.100 <T	BDL	.	.150 <T	.
1991 JUN	BDL	.150 <T	BDL	.200 <T	BDL	.	.200 <T	.
1991 JUL	BDL	.150 <T	BDL	.150 <T	BDL	.	.200 <T	.
1991 AUG	BDL	.150 <T	BDL	.150 <T	.	.	.150 <T	.
1991 SEP	BDL	.150 <T	BDL	.150 <T	.150 <T	.	BDL	.
1991 OCT	BDL	.100 <T	BDL	.100 <T	.150 <T	.	BDL	.
1991 NOV	BDL	.200 <T	BDL	.200 <T	.200 <T	.	BDL	.
1992 JAN	BDL	.100 <T	BDL	.150 <T	.100 <T	.	.100 <T	.
1992 MAR	BDL	.050 <T	BDL	.100 <T	BDL	.	.	.
1992 MAY	BDL	.200 <T	.	.200 <T	.	.	BDL	.
1992 JUL	BDL	.	!AW	.	BDL	.	.	.
1992 SEP	BDL	.100 <T	BDL	.100 <T	.	.	.100 <T	.
1992 NOV	BDL	.100 <T	BDL	.100 <T	BDL	.	.100 <T	.

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
VOLATILES								
BROMOFORM (UG/L)			DET'N LIMIT = 0.20		GUIDELINE = 350 (A1+)			
1991 JAN	BDL	BDL	BDL	.800 <T	.200 <T	.	BDL	.
1991 FEB	BDL	BDL	BDL	1.400 <T	.400 <T	.	BDL	.
1991 MAR	BDL	BDL	BDL	1.200 <T	.400 <T	.	.400 <T	.
1991 APR	BDL	BDL	BDL	1.400 <T	.600 <T	.	.400 <T	.
1991 MAY	BDL	BDL	BDL	1.200 <T	BDL	.	.400 <T	.
1991 JUN	BDL	BDL	BDL	1.000 <T	BDL	.	BDL	.
1991 JUL	BDL	BDL	BDL	1.200 <T	BDL	.	BDL	.
1991 AUG	BDL	BDL	BDL	BDL	.	.	BDL	.
1991 SEP	BDL	BDL	BDL	1.000 <T	BDL	.	BDL	.
1991 OCT	BDL	BDL	BDL	.800 <T	BDL	.	BDL	.
1991 NOV	BDL	BDL	BDL	1.200 <T	1.200 <T	.	BDL	.
1992 JAN	BDL	BDL	BDL	1.400 <T	BDL	.	.800 <T	.
1992 MAR	BDL	BDL	BDL	1.000 <T	BDL	.	.	.
1992 MAY	BDL	BDL	.	1.200 <T	.	.	BDL	.
1992 JUL	BDL	.	!AW	.	BDL	.	.	.
1992 SEP	BDL	BDL	BDL	1.200 <T	.	.	BDL	.
1992 NOV	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1122-TETCHLOROETHANE (UG/L)			DET'N LIMIT = 0.05		GUIDELINE = 0.17 (D4)			
93 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
VINYL CHLORIDE (UG/L)			DET'N LIMIT = 0.100		GUIDELINE = 2 (D1)			
22 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
C12-DICHLOROETHYLENE (UG/L)			DET'N LIMIT = 0.100		GUIDELINE = 70 (D1)			
1992 MAR	BDL	BDL	BDL	BDL	BDL	.	.	.
1992 MAY	BDL	.100 <T	.	.100 <T	.	.	.100 <T	.
1992 JUL	BDL	.	!AW	.	BDL	.	.	.
1992 SEP	BDL	.100 <T	BDL	.100 <T	.	.	.100 <T	.
1992 NOV	BDL	BDL	BDL	BDL	BDL	.	BDL	.
CHLOROBENZENE (UG/L)			DET'N LIMIT = 0.10		GUIDELINE = 1510 (D3)			
93 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1,4-DICHLOROBENZENE (UG/L)			DET'N LIMIT = 0.10		GUIDELINE = 5 (A1)			
93 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.
1,3-DICHLOROBENZENE (UG/L)			DET'N LIMIT = 0.10		GUIDELINE = 3750 (D3)			
93 SAMPLES	BDL	BDL	BDL	BDL	BDL	.	BDL	.

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
VOLATILES								
1,2-DICHLOROBENZENE (UG/L)			DET'N LIMIT = 0.05		GUIDELINE = 200 (A1)			
93 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
ETHYLENE DIBROMIDE (UG/L)			DET'N LIMIT = 0.05		GUIDELINE = 50 (D1)			
93 SAMPLES	BDL	BDL	BDL	BDL	BDL		BDL	
TOTL TRIHALOMETHANES (UG/L)			DET'N LIMIT = 0.50		GUIDELINE = 350 (A1)			
1991 JAN	BDL	BDL	88.850	20.100	4.800 <T		2.500 <T	
1991 FEB	BDL	BDL	93.200	17.500	4.800 <T		44.400	
1991 MAR	BDL	BDL	49.600	17.750	6.850		3.250 <T	
1991 APR	BDL	BDL	141.600	24.600	6.050		4.400 <T	
1991 MAY	BDL	BDL	140.350	23.700	31.500		4.150 <T	
1991 JUN	BDL	BDL	88.000	26.900	62.800		5.700	
1991 JUL	BDL	BDL	84.500	28.750	67.800		4.850 <T	
1991 AUG	BDL	.550 <T	125.000	32.150	.		4.950 <T	
1991 SEP	BDL	BDL	126.400	33.000	6.800		59.700	
1991 OCT	BDL	BDL	116.400	26.000	6.300		59.800	
1991 NOV	BDL	BDL	93.050	25.350	28.500		64.600	
1992 JAN	BDL	BDL	71.000	26.300	3.700 <T		5.600	
1992 MAR	BDL	BDL	108.400	29.700	7.400		.	
1992 MAY	BDL	BDL	.	24.800	.		3.200 <T	
1992 JUL	BDL	.	!AW	.	56.600		.	
1992 SEP	BDL	1.300 <T	115.900	28.500	.		7.600	
1992 NOV	BDL	2.200 <T	101.950	2.950 <T	59.950		6.550	

TABLE 4
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 DELHI WTP

	TREATMENT PLANT RAW	SPRING RAW	TREATMENT PLANT TREATED	SPRING TREATED	DIST. SYSTEM MAIN ST FREE FLOW	DIST. SYSTEM MAIN ST STANDING	DIST. SYSTEM IMPERIAL ST FREE FLOW	DIST. SYSTEM IMPERIAL ST STANDING
RADIONUCLIDES								
COBALT 60 (BQ/L)			DET'N LIMIT = 0.70		GUIDELINE = N/A			
15 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
CESIUM 134 (BQ/L)			DET'N LIMIT = 0.70		GUIDELINE = N/A			
15 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
CESIUM 137 (BQ/L)			DET'N LIMIT = 0.70		GUIDELINE = 50 (A1)			
15 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
GROSS ALPHA COUNT (BQ/L)			DET'N LIMIT = 0.04		GUIDELINE = 0.55 (D1)			
1991 MAR	BDL	BDL	.050	BDL	.	.	.	.
1991 OCT	BDL	.040	BDL	.	.	.	.	.
1992 JAN	.130	.080	.140	.100	.	.	.	.
1992 JUL	BDL	.	BDL	.	.	.	.	.
1992 SEP	.	.070	.	.090	.	.	.	.
GROSS BETA COUNT (BQ/L)			DET'N LIMIT = 0.04		GUIDELINE = N/A			
1991 MAR	.080	.040	.080	BDL	.	.	.	.
1991 OCT	.050	BDL	.060	.	.	.	.	.
1992 JAN	.090	.050	.050	BDL	.	.	.	.
1992 JUL	.050	.	.050	.	.	.	.	.
1992 SEP	.	.090	.	.110	.	.	.	.
TRITIUM (BQ/L)			DET'N LIMIT = 7.00		GUIDELINE = 40000 (A1)			
15 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.
IODINE 131 (BQ/L)			DET'N LIMIT = 0.70		GUIDELINE = 10 (A1)			
15 SAMPLES	BDL	BDL	BDL	BDL	.	.	.	.

TABLE 5
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE	
BACTERIOLOGICAL				
FECAL COLIFORM MEMBRANE FILTRATION	CT/100ML	0	0	(A1)
STANDARD PLATE COUNT MEMBRANE FILT.	CT/ML	0	500/ML	(A3)
TOTAL COLIFORM BACKGROUND MF	CT/100ML	0	N/A	
TOTAL COLIFORM MEMBRANE FILTRATION	CT/100ML	0	5/100ML	(A1)
CHEMISTRY (FLD)				
FIELD COMBINED CHLORINE RESIDUAL	MG/L	0	N/A	
FIELD TOTAL CHLORINE RESIDUAL	MG/L	0	N/A	
FIELD FREE CHLORINE RESIDUAL	MG/L	0	N/A	
FIELD PH	DMNSLESS	N/A	6.5-8.5	(A4)
FIELD TEMPERATURE	DEG.C	N/A	15.0	(A3)
FIELD TURBIOITY	FTU	N/A	1.0	(A1)
CHEMISTRY (LAB)				
ALKALINITY	MG/L	0.20	30-500	(A4)
AMMONIUM TOTAL	MG/L	0.002	0.05	(F2)
CALCIUM	MG/L	0.20	100.0	(F2)
CHLORIDE	MG/L	0.20	250.0	(A3)
COLOUR	TCU	0.50	5.0	(A3)
CONDUCTIVITY	UMHO/CM	1.00	400.0	(F2)
CYANIDE	MG/L	0.001	0.2	(A1)
DISSOLVED ORGANIC CARBON	MG/L	0.10	5.0	(A3)
FLUORIDE	MG/L	0.01	1.5*	(A1)
HARDNESS	MG/L	0.50	80-100	(A4)
IONCAL	DMNSLESS	N/A	N/A	
LANGELIERS INDEX	DMNSLESS	N/A	N/A	
MAGNESIUM	MG/L	0.10	30.0	(F2)
NITRATES (TOTAL)	MG/L	0.005	10.0	(A1)
NITRITE	MG/L	0.001	1.0	(A1)
NITROGEN TOTAL KJELDAHL	MG/L	0.02	N/A	
PH	DMNSLESS	N/A	6.5-8.5	(A4)
PHOSPHORUS FIL REACT	MG/L	0.0005	N/A	
PHOSPHORUS TOTAL	MG/L	0.002	0.4	(F2)
POTASSIUM	MG/L	0.010	10.0	(F2)
RESIDUE FILTRATE (CALCULATED TDS)	MG/L	N/A	500.0	(A3)
SODIUM	MG/L	0.20	200.0	(A4)
SULPHATE	MG/L	0.20	500.0	(A4)
TURBIDITY	FTU	0.05	1.0	(A1)

* The Maximum Acceptable Concentration (MAC) for naturally occurring fluoride in drinking water is 2.4 mg/L.

CHLOROAROMATICS				
1,2,3-TRICHLOROBENZENE	NG/L	5.0	N/A	
1,2,3,4-TETRACHLOROBENZENE	NG/L	1.0	N/A	
1,2,3,5-TETRACHLOROBENZENE	NG/L	1.0	N/A	
1,2,4-TRICHLOROBENZENE	NG/L	5.0	10000	(I)
1,2,4,5-TETRACHLOROBENZENE	NG/L	1.0	38000	(D4)
1,3,5-TRICHLOROBENZENE	NG/L	5.0	N/A	
2,3,6-TRICHLOROTOLUENE	NG/L	5.0	N/A	
2,4,5-TRICHLOROTOLUENE	NG/L	5.0	N/A	
2,6A-TRICHLOROTOLUENE	NG/L	5.0	N/A	
HEXACHLOROBENZENE (HCB)	NG/L	1.0	10	(C1)
HEXACHLOROBUTADIENE	NG/L	1.0	450	(D4)
HEXACHLOROETHANE	NG/L	1.0	1900	(D4)
OCTACHLOROSTYRENE	NG/L	1.0	N/A	
PENTACHLOROBENZENE	NG/L	1.0	74000	(D4)
CHLOROPHENOLS				
2,3,4-TRICHLOROPHENOL	NG/L	100.0	N/A	
2,3,4,5-TETRACHLOROPHENOL	NG/L	20.0	N/A	
2,3,5,6-TETRACHLOROPHENOL	NG/L	10.0	N/A	

TABLE 5
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE	
2,4,5-TRICHLOROPHENOL	NG/L	100.0	2600000	(D4)
2,4,6-TRICHLOROPHENOL	NG/L	20.0	5000	(A1)
PENTACHLOROPHENOL	NG/L	10.0	60000	(A1)
METALS				
ALUMINUM	UG/L	0.10	100	(A4)
ANTIMONY	UG/L	0.05	146	(D4)
ARSENIC	UG/L	0.10	25	(A1)
BARIUM	UG/L	0.05	1000	(A2)
BERYLLIUM	UG/L	0.05	6800	(D4)
BORON	UG/L	2.00	5000	(A1)
CADMIUM	UG/L	0.05	5	(A1)
CHROMIUM	UG/L	0.50	50	(A1)
COBALT	UG/L	0.02	N/A	
COPPER	UG/L	0.50	1000	(A3)
IRON	UG/L	6.00	300	(A3)
LEAD	UG/L	0.05	10	(A1)
MANGANESE	UG/L	0.05	50	(A3)
MERCURY	UG/L	0.02	1	(A1)
MOLYBDENUM	UG/L	0.05	N/A	
NICKEL	UG/L	0.20	350	(D3)
SELENIUM	UG/L	1.00	10	(A1)
SILVER	UG/L	0.05	N/A	
STRONTIUM	UG/L	0.10	N/A	
THALLIUM	UG/L	0.05	13	(D4)
TITANIUM	UG/L	0.50	N/A	
URANIUM	UG/L	0.05	100	(A1)
VANADIUM	UG/L	0.05	N/A	
ZINC	UG/L	0.20	5000	(A3)
POLYNUCLEAR AROMATIC HYDROCARBONS				
ANTHRACENE	NG/L	1.0	N/A	
BENZO(A) ANTHRACENE	NG/L	20.0	N/A	
BENZO(A) PYRENE	NG/L	5.0	10	(A1)
BENZO(B) CHRYSENE	NG/L	2.0	N/A	
BENZO(B) FLUORANTHENE	NG/L	10.0	N/A	
BENZO(E) PYRENE	NG/L	50.0	N/A	
BENZO(G,H,I) PERYLENE	NG/L	20.0	N/A	
BENZO(K) FLUORANTHENE	NG/L	1.0	N/A	
CHRYSENE	NG/L	50.0	N/A	
CORONENE	NG/L	10.0	N/A	
DIBENZO(A,H) ANTHRACENE	NG/L	10.0	N/A	
DIMETHYL BENZO(A) ANTHRACENE	NG/L	5.0	N/A	
FLUORANTHENE	NG/L	20.0	42000	(D4)
INDENO(1,2,3-C,D) PYRENE	NG/L	20.0	N/A	
PERYLENE	NG/L	10.0	N/A	
PHENANTHRENE	NG/L	10.0	N/A	
PYRENE	NG/L	20.0	N/A	
PESTICIDES & PCB				
ALACHLOR (LASSO)	NG/L	500.0	5000	(A2)
ALDRIN	NG/L	1.0	700	(A1)
ALPHA HEXACHLOROCYCLOHEXANE (BHC)	NG/L	1.0	700	(G)
ALPHA CHLORDANE	NG/L	2.0	7000	(A1)
AMETRINE	NG/L	50.0	300000	(D3)
ATRATONE	NG/L	50.0	N/A	
ATRAZINE	NG/L	50.0	60000	(A2)
DESETHYL ATRAZINE	NG/L	200.0	60000	(A2)
BETA HEXACHLOROCYCLOHEXANE (BHC)	NG/L	1.0	300	(G)
CYANAZINE (BLADEX)	NG/L	100.0	10000	(A2)
DIELDRIN	NG/L	2.0	700	(A1)
ENDOSULFAN 1 (THIODAN I)	NG/L	2.0	74000	(D4)
ENDOSULFAN 2 (THIODAN II)	NG/L	5.0	74000	(D4)
ENDOSULFAN SULPHATE (THIODAN SULPHATE)	NG/L	5.0	N/A	

TABLE 5
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE	
ENDRIN	NG/L	5.0	1600	(D3)
GAMMA CHLORDANE	NG/L	2.0	7000	(A1)
HEPTACHLOR	NG/L	1.0	3000	(A1)
HEPTACHLOR EPOXIDE	NG/L	1.0	3000	(A1)
HEXACHLOROCYCLOPENTADIENE	NG/L	5.0	206000	(D4)
LINDANE (GAMMA BHC)	NG/L	1.0	4000	(A1)
METHOXYCHLOR	NG/L	5.0	900000	(A1)
METOLACHLOR	NG/L	500.0	50000	(A2)
METRIBUZIN (SENCOR)	NG/L	100.0	80000	(A1)
MIREX	NG/L	5.0	N/A	
P,P-DDD	NG/L	5.0	30000	(A1)
O,P-DDT	NG/L	5.0	30000	(A1)
P,P-DDT	NG/L	5.0	30000	(A1)
P,P-DDE	NG/L	1.0	30000	(A1)
OXYCHLORDANE	NG/L	2.0	N/A	
PCB	NG/L	20.0	3000	(A2)
PROMETONE	NG/L	50.0	52500	(D3)
PROMETRYNE	NG/L	50.0	1000	(A2)
PROPAZINE	NG/L	50.0	700000	(D3)
SIMAZINE	NG/L	50.0	10000	(A2)
DESETHYL SIMAZINE	NG/L	200.0	10000	(A2)
TOXAPHENE	NG/L	500.0	5000	(A1)
PHENOLICS				
PHENOLICS (UNFILTERED REACTIVE)	UG/L	0.2	N/A	
SPECIFIC PESTICIDES				
2,4 D PROPIONIC ACID	NG/L	100.0	N/A	
2,4,5-TRICHLOROPHENOXY ACETIC ACID	NG/L	50.0	280000	(A1)
2,4-DICHLOROBUTYRIC ACID (2,4-D)	NG/L	100.0	100000	(A1)
2,4-DICHLORORPHENOXYBUTYRIC ACID (2,4-DB)	NG/L	200.0	N/A	
2,4,5-TP (SILVEX)	NG/L	20.0	10000	(A1)
BUTYLATE (SUTAN)	NG/L	2000.0	245000	(D3)
CARBARYL (SEVIN)	NG/L	200.0	90000	(A1)
CARBOFURAN	NG/L	2000.0	90000	(A1)
CHLORPROPHAM (CIPC)	NG/L	2000.0	350000	(G)
CHLORPYRIFOS (DURSBAN)	NG/L	20.0	N/A	
DIALLATE	NG/L	2000.0	N/A	
DIAZINON	NG/L	20.0	20000	(A1)
DICAMBA	NG/L	50.0	120000	(A1)
DICHLOROVOS	NG/L	20.0	N/A	
EPTAM	NG/L	2000.0	N/A	
ETHION	NG/L	20.0	35000	(G)
IPC	NG/L	2000.0	N/A	
MALATHION	NG/L	20.0	190000	(A1)
METHYL PARATHION	NG/L	50.0	9000	(D3)
METHYLTRITHION	NG/L	20.0	N/A	
MEVINPHOS	NG/L	20.0	N/A	
PARATHION	NG/L	20.0	50000	(A1)
PHORATE (THIMET)	NG/L	20.0	2000	(A2)
PICHLORAM	NG/L	100.0	190000	(A2)
PROPOXUR (BAYGON)	NG/L	2000.0	140000	(D3)
RELDAN	NG/L	20.0	N/A	
RONNEL	NG/L	20.0	N/A	
VOLATILES				
1,1-DICHLOROETHANE	UG/L	0.10	N/A	
1,1-DICHLOROETHYLENE	UG/L	0.10	7	(D1)
1,2-DICHLOROBENZENE	UG/L	0.05	200	(A1)
1,2-DICHLOROETHANE	UG/L	0.05	5	(A1)
1,2-DICHLOROPROPANE	UG/L	0.05	5	(D1)
1,3-DICHLOROBENZENE	UG/L	0.10	3750	(D3)
1,4-DICHLOROBENZENE	UG/L	0.10	5	(A1)
1,1,1-TRICHLOROETHANE	UG/L	0.02	200	(D1)
1,1,2-TRICHLOROETHANE	UG/L	0.05	0.6	(D4)
1,1,2,2-TETRACHLOROETHANE	UG/L	0.05	0.17	(D4)

TABLE 5
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE	
BENZENE	UG/L	0.05	5	(A1)
BROMOFORM	UG/L	0.20	350	(A1+)
CARBON TETRACHLORIDE	UG/L	0.20	5	(A1)
CHLOROBENZENE	UG/L	0.10	1510	(D3)
CHLORODIBROMOMETHANE	UG/L	0.10	350	(A1+)
CNLOROFORM	UG/L	0.10	350	(A1+)
CIS 1,2-DICHLOROETHYLENE	UG/L	0.10	70	(D1)
DICHLOROBROMOMETHANE	UG/L	0.05	350	(A1+)
ETHYLENE DIBROMIDE	UG/L	0.05	50	(D1)
ETHYLBENZENE	UG/L	0.05	2.4	(A3)
M-XYLENE	UG/L	0.10	300	(A3*)
METHYLENE CHLORIDE	UG/L	0.50	50	(A1)
O-XYLENE	UG/L	0.05	300	(A3*)
P-XYLENE	UG/L	0.10	300	(A3*)
STYRENE	UG/L	0.05	100	(D1)
TETRACHLOROETHYLENE	UG/L	0.05	65	(A5)
TRANS 1,2-DICHLOROETHYLENE	UG/L	0.10	70	(D1)
TOLUENE	UG/L	0.05	24	(A3)
TOTAL TRIHALOMETHANES	UG/L	0.50	350	(A1)
TRICHLOROETHYLENE	UG/L	0.10	50	(A1)
VINYL CHLORIDE	UG/L	0.10	2	(D1)
RADIONUCLIDES				
TRITIUM	BQ/L	7.0	40000	(A1)
GROSS ALPHA COUNT	BQ/L	0.04	0.55#	(D1)
GROSS BETA COUNT	BQ/L	0.04	N/A	
COBALT 60	BQ/L	0.70	N/A	
CESIUM 134	BQ/L	0.70	N/A	
CESIUM 137	BQ/L	0.70	50	(A1)
IODINE 131	BQ/L	0.70	10	(A1)

Equal to 15.0 Picocuries/litre

Appendix A

DRINKING WATER SURVEILLANCE PROGRAM
PROGRAM DESCRIPTION

The Drinking Water Surveillance Program (DWSP) for Ontario monitors drinking water quality at municipal water supply systems. The DWSP Database Management System provides a computerized drinking water quality information system for the supplies monitored. The objectives of the program are to provide:

- immediate, reliable, current information on drinking water quality;
- a flagging mechanism for guideline exceedance;
- a definition of contaminant levels and trends;
- a comprehensive background for remedial action;
- a framework for assessment of new contaminants; and
- an indication of treatment efficiency of plant processes.

PROGRAM

The DWSP officially began in April 1986 and is designed to eventually include all municipal water supplies in Ontario. In 1992, 109 systems were being monitored. Water supply locations have been prioritized for surveillance based primarily on criteria such as population density, probability of contamination and geographical location.

An ongoing assessment of future monitoring requirements at each location will be made. Monitoring will continue at the initial locations at an appropriate level and further locations will be phased into the program as resources permit.

A major goal of the program is to collect valid water quality data in context with plant operational characteristics at the time of sampling. As soon as sufficient data have been accumulated and analyzed, both the frequency of sampling and the range of parameters may be adjusted accordingly.

Assessments are carried out at all locations prior to initial sampling, in order to acquire complete plant process and distribution system details and to designate (and retrofit if necessary) all sampling systems and locations. This ensures that the sampled water is a reflection of the water itself.

Samples are taken of raw (ambient water) and treated water at the treatment plant and of consumer's tap water in the distribution system. In order to determine possible effects of distribution on water quality, both standing and free flow water in old and new sections of the distribution system are sampled. Sampling is carried out by operational personnel who have been trained in applicable procedures.

Comprehensive standardized procedures and field test kits are supplied to sampling personnel. This ensures that samples are taken and handled according to standard protocols and that field testing will supply reliable data. All field and laboratory analyses are carried out using "approved documented procedures". Most laboratory analyses are carried out by the Ministry of Environment and Energy (MOEE), Laboratory Services Branch. Radionuclides are analyzed by the Ministry of Labour.

DATA REPORTING MECHANISM

When the analytical results are transferred from the MOEE laboratory into the DWSP system, printouts of the completed analyses are sent to the MOEE District Officer, the appropriate operational staff and are also retained by the DWSP unit.

PROGRAM INPUTS AND OUTPUTS

There are four major inputs and four major outputs in the program.

Program Input - Plant and Distribution System Description

The system description includes plant specific non-analytical information acquired through a questionnaire and an initial plant visit. During the initial assessment of the plant and distribution system, questionnaire content is verified and missing information added. It is intended that all data be kept current with scheduled annual updates.

The Plant and Distribution System Description consists of the following seven components:

1. PROCESS COMPONENT INVENTORY
All physical and chemical processes to which the water is subjected, from the intake pipe to the consumers' tap (where possible), are documented. These include: process type, general description of physical structures, material types, sizes, and retention time for each process within the plant. The processes may be as simple as transmission or as complex as carbon adsorption.

2. TREATMENT CHEMICALS
Chemicals used in the treatment processes, their function, application point, supplier and brand-name are recorded. Chemical dosages applied on the day of sampling are recorded in DWSP.

3. PROCESS CONTROL MEASUREMENTS
Documentation of in-plant monitoring of process parameters (eg. turbidity, chlorine residuals, pH, aluminum residuals) including methods used, monitoring locations and frequency is contained in this section. Except for the recorded Field Data, in-plant monitoring results are not retained in DWSP but are retained by the water treatment plant personnel.

4. DESIGN FLOW AND RETENTION TIME
Hydraulic capacity, designed and actual, is noted here. Retention time (the time that a block of water is retained in the plant) is also noted. Maximum, minimum and average flow, as well as a record of the flow rate on the day of sampling, are recorded in DWSP.

5. DISTRIBUTION SYSTEM DESCRIPTION
This area includes the storage and transmission characteristics of the distribution system after the water leaves the plant.

6. SAMPLING SYSTEM

Each plant is assessed for its adequacy in terms of the sampling of bacteriological, organic and inorganic parameters. Prime considerations in the assessment and design of the sampling system are:

i/ the sample is an accurate representation of the actual water condition, eg. raw water has had no chemical treatment;

ii/ the water being sampled is not being modified by the sampling system;

iii/ the sample tap must be in a clean area of the plant, preferably a lab area; and

iv/ the sample lines must be organically inert (no plastic, ideally stainless steel).

It is imperative that the sampled water be a reflection not of the sampling system but of the water itself.

The sampling system documentation includes: origin of the water; date sampling was initiated; size, length and material type (intake, discharge and tap); pump characteristics (model, type, capacity); and flow rate.

7. PERSONNEL

This section contains the names, addresses and phone numbers of current plant management and operational staff, distribution system management and operational staff, Medical Officer of Health and appropriate MOEE personnel associated with the plant.

Program Input - Field Data

The second major input to DWSP is field data. Field data is collected at the plant and from the distribution system sites on the day of sampling. Field data consists of general operating conditions and the results of testing for field parameters. General operating conditions include chemicals used, dosages, flow and retention time on the day of sampling, as well as, monthly maximum, minimum and average flows. Field parameters include turbidity, chlorine residuals (free, combined and total), temperature and pH. These parameters are analyzed according to standardized DWSP protocols to allow for interplant comparison.

Program Input - Laboratory Analytical Data

The third major input to DWSP is Laboratory Analytical Data. Samples gathered from the raw, treated and distribution sampling sites are analyzed for the presence of approximately 180 parameters at a frequency of two to twelve times per year. Sixty-five percent of the parameters are organic. Parameters measured may have health or aesthetic implications when present in drinking water. Many of the parameters may be used in the treatment process or may be treatment by-products. Due to the nature of certain analytical instruments, parameters may be measured in a "scan" producing some results for parameters that are not on the DWSP priority list, but which may be of interest. The majority of parameters are measured on a routine basis. Those that are technically more difficult and/or costly to analyze, however, are done less frequently. These include Specific Pesticides and Chlorophenols.

Although the parameter list is extensive, additional parameters with the potential to cause health or aesthetic related problems may be added provided reliable analytical and sampling methods exist.

All laboratory generated data is derived from standardized, documented analytical protocols. The analytical method is an integral part of the data and as methods change, notation will be made and comparison data documented.

Program Input - Parameter Reference Information

The fourth major input to DWSP is Parameter Reference Information. This is a catalogue of information for each substance analyzed on DWSP. It includes parameter name and aliases, physical and chemical properties, basic toxicology, world-wide health limits, treatment methods and uses. The Parameter Reference Information is computerized and can be accessed through the Query function of the DWSP database. An example is shown in figure 1.

Program output - Query

All DWSP information is easily accessed through the Query function, therefore, anything from addresses of plant personnel to complete water quality information for a plant's water supply is instantly available. The DWSP computer system makes relatively complex inquiries manageable. A personal password allowing access into the DWSP query mode in all MOEE offices is being developed by the DWSP group.

Program Output - Action Alerts

Drinking Water quality in Ontario is evaluated against provincial objectives as outlined in the Ontario Drinking Water Objectives publication. Should the reported level of a substance in treated water exceed the Ontario Drinking Water Objective, an "Action Alert" requiring resampling and confirmation is issued. This assures that operational staff, health authorities and the public are notified as soon as possible of the confirmation of an exceedance and remedial action taken. This report supplies a history of the occurrence of past exceedances at the plant plus a historical summary on the parameter of concern.

In the absence of Ontario Drinking Water Objectives, guidelines/limits from other agencies are used. The Parameter Listing System, published by MOEE (ISBN 0-7729-4461-X), catalogues and keeps current guidelines for 650 parameters from agencies throughout the world. If these guidelines are exceeded, the results are flagged and evaluated by DWSP personnel. An "Action Alert" will be issued if warranted.

Program Output - Report Generation

Custom reports can be generated from DWSP to meet MOEE Regional needs and to respond to public requests.

Program Output - Annual Reports

It is the practice of DWSP to produce an annual report containing analytical data along with companion plant information.

FIG.1

PARAMETER REFERENCE INFORMATION

NAME:	BENZENE
CAS#:	71-43-2
MOLECULAR FORMULAE:	C_6H_6
DETECTION LIMIT:	(FOR METHOD POCODO) 0.05 µg/L
SYNONYMS:	BENZOL; BENZOLE; COAL NAPHTHA; CARBON OIL (27) CYCLOHEXATRIENE (41)
CHARACTERISTICS:	COLOURLESS TO LIGHT-YELLOW, MOBILE, NONPOLAR LIQUID, OF HIGHLY REFRACTIVE NATURE, AROMATIC ODOUR; VAPOURS BURN WITH SMOKING FLAME (30)
PROPERTIES:	SOLUBILITY IN WATER: 1780-1800 mg/L AT 25C (41) THRESHOLD ODOUR: 0.5 - 10 PPM IN WATER THRESHOLD TASTE: 0.5 mg/L IN WATER (39) ENVIRONMENTAL FATE: MAY BIOACCUMULATE IN LIVING ORGANISMS AND APPEARS TO ACCUMULATE IN ANIMAL TISSUES THAT EXHIBIT A HIGH LIPID CONTENT OR REPRESENT MAJOR METABOLIC SITES, SUCH AS LIVER OR BRAIN; SMALL QUANTITIES EVAPORATE FROM SOILS OR ARE DEGRADED RATHER QUICKLY (80)
SOURCES:	COMMERCIAL: PETROLEUM REFINING; SOLVENT RECOVERY; COAL TAR DISTILLATION (39); FOOD PROCESSING AND TANNING INDUSTRIES; COMBUSTION OF CAR EXHAUST. ENVIRONMENTAL: POSSIBLE SOURCE IS RUNOFF.
USES:	DETERGENTS; NYLON; INTERMEDIATE IN PRODUCTION OF OTHER COMPOUNDS, SUCH AS PESTICIDES; SOLVENT FOR EXTRACTION AND RECTIFICATION IN RUBBER INDUSTRY; DEGREASING AND CLEANSING AGENT; GASOLINE.
REMOVAL:	THE FOLLOWING PROCESSES HAVE BEEN SUCCESSFUL IN REMOVING BENZENE FROM WASTEWATER: GAC ADSORPTION, PRECIPITATION WITH ALUM AND SUBSEQUENT REMOVAL VIA SEDIMENTATION, COAGULATION AND FLOCCULATION, SOLVENT EXTRACTION, OXIDATION
ADDITIONAL PROPERTIES:	MOLECULAR WEIGHT: 78.12 MELTING POINT: 5.5°C (27) BOILING POINT: 80.1°C (27) SPECIFIC GRAVITY: 0.8790 AT 20°C (27) VAPOUR PRESSURE: 100 MM AT 26.1°C (27) HENRY'S LAW CONSTANT: 0.00555 ATM-M3/MOLE (41) LOG OCT./WATER PARTITON COEFFICIENT: 1.95 TO 2.13 (39) CARBON ADSORPTION: K=1.0; 1/N=1.6; R=0.97; PH=5.3 (41) SEDIMENT/WATER PARTITION COEFFICIENT: NO DATA

Appendix B

DWSP SAMPLING GUIDELINE

i) Raw and Treated at Plant

General Chemistry	-500 mL plastic bottle (PET 500) -rinse bottle and cap with sample water three times -fill to 2 cm from top
Bacteriological	-220 mL plastic bottle with white seal on cap -do <u>not</u> rinse bottle, preservative has been added -avoid touching bottle neck or inside of cap -fill to top of red label as marked
Metals	-500 mL plastic bottle (PET 500) -rinse bottle and cap three times -fill to 2 cm from top -add 10 drops nitric acid (HNO_3) (**Caution:** HNO_3 is corrosive)
Volatiles (duplicates) (OPOPUP)	-45 mL glass vial with septum (teflon side must be in contact with sample) -do <u>not</u> rinse bottle -fill bottle completely without bubbles
Organics (OWOC),(OWTRI)	-1 L amber glass bottle per scan -do <u>not</u> rinse bottle -fill to 2 cm from top
Specific Pesticides (OWCP),(PEOP),(PECAR)	-as per Organics -three extra bottles must be filled
Polyaromatic hydrocarbons (OAPAHX)	-1 L amber glass bottle per scan -do <u>not</u> rinse bottle -fill to 2 cm from top -add 25 drops of sodium thiosulphate
Cyanide (Treated only)	-500 mL plastic bottle (PET 500) -rinse bottle and cap three times -fill to 2 cm from top -add 10 drops sodium hydroxide (NaOH) (**Caution:** NaOH is corrosive)
Mercury	-250 mL glass bottle -rinse bottle and cap three times -fill to top of label -add 20 drops each nitric acid (HNO_3) and potassium dichromate ($K_2Cr_2O_7$) (**Caution:** HNO_3&$K_2Cr_2O_7$ are corrosive)

Phenols	-250 mL glass bottle -do not rinse bottle, preservative has been added -fill to top of label
Radionuclides (as scheduled)	-4 L plastic jug -do not rinse, carrier added -fill to 5 cm from top
Organic Characterization (GC/MS - once per year) (PBVOL),(PBEXT)	-1 L amber glass bottle; instructions as per organic -250 mL glass bottle -do not rinse bottle -fill completely without bubbles

Steps:

1. Let sampling water tap run for an adequate time to clear the sample line.
2. Record time of day on submission sheet.
3. Record temperature on submission sheet.
4. Fill up all bottles as per instructions.
5. Record chlorine residuals (free, combined and total for treated water only), turbidity and pH on submission sheet.
6. No smoking in area of sample location.

ii) Distribution Samples (standing water)

General Chemistry	-500 mL plastic bottle (PET 500) -rinse bottle and cap with sample water three times -fill to 2 cm from top
Metals	-500 mL plastic bottle (PET 500) -rinse bottle and cap three times -fill to 2 cm from top -add 10 drops nitric acid (HNO_3) **(Caution:** HNO_3 is corrosive)

Steps:

1. Record time of day on submission sheet.
2. Place bucket under tap and open cold water.
3. Fill to predetermined volume.
4. After mixing the water, record the temperature on the submission sheet.

5. Fill general chemistry and metals bottles.

6. Record chlorine residuals (free, combined and total), turbidity and pH on submission sheet.

iii) Distribution Samples (free flow)

General Chemistry	-500 mL plastic bottle (PET 500) -rinse bottle and cap with sample water three times -fill to 2 cm from top
Bacteriological	-250 mL plastic bottle with white seal on cap -do <u>not</u> rinse bottle, preservative has been added -avoid touching bottle neck or inside of cap -fill to top of red label as marked
Metals	-500 mL plastic bottle (PET 500) -rinse bottle and cap three times -fill to 2 cm from top -add 10 drops nitric acid HNO_3 (**Caution:** HNO_3 is corrosive)
Volatiles (duplicate) (OPOPUP)	-45 mL glass vial with septum (teflon side must be in contact with sample) -do <u>not</u> rinse bottle, preservative has been added -fill bottle completely without bubbles
Organics (OWOC)	-1 L amber glass bottle per scan -do <u>not</u> rinse bottle -fill to 2 cm from top
Polyaromatic Hydrocarbons (OAPAHX)	-1 L amber glass bottle per scan -do <u>not</u> rinse bottle -fill to 2 cm from top -add 25 drops of sodium thiosulphate

<u>Steps:</u>

1. Record time of day on submission sheet.

2. Let cold water flow for five minutes.

3. Record temperature on submission sheet.

4. Fill all bottles as per instructions.

5. Record chlorine residuals (free, combined and total), turbidity and pH on submission sheet.