SURFACE WATER SAMPLING

APPENDIX C -5

SUMMARY OF NONRADIOLOGICAL MONITORING DATA

Table C - 5. 1

West Valley Demonstration Project Environmental Permits Calendar Year 1989

Permit #	Issued by	Expiration	Type of Permit
042200–0114–00002 WC	NYSDEC	6/94	Certificate to Operate Air Contamination Source: boiler
042200–0114–00003 WC	NYSDEC	6/94	Certificate to Operate Air Contamination Source: boiler
042200–0114–00004 WR	NYSDEC	6/94	Certificate to Operate Air Contamination Source: incinerator**
042200–0114–0010 WI	NYSDEC	6/94	Certificate to Operate Air Contamination Source: Low-level Waste Treatment Facility Nitric Acid Storage Tank
042200–0114–014D1 WI	NYSDEC	6/94	Certificate to Operate Air Contamination Source: Nitric Acid Bulk Storage Tank
042200–0114–CSS01	NYSDEC	6/94	Certificate to Operate Cement Storage Silo Ventilation System
042200–0114–015F–1	NYSDEC	6/86*	Permit to Construct Vitrification Off-Gas System
042200–0114–CTS01	NYSDEC	3/90	Permit to Construct CTS Cold Chemical Makeup System
042200–0114–CTS02	NYSDEC	3/90	Permit to Construct CTS Cold Chemical Makeup System
042200–0114–CTS03	NYSDEC	3/90	Permit to Construct CTS Cold Chemical Makeup System
NY–0000973	NYSDEC	9/90	State Pollutant Discharge Elimination System (SPDES permit)
WVDP–187–01	EPA		Certificate to Operate Radioactive Air Source: Building 01–14 Ventilation System***
WVDP–287–01	EPA		Certificate to Operate Radioactive Air Source: Contact Size Reduction & Decontamination Facility***
WVDP–387–01	EPA		Certificate to Operate Radioactive Air Source: Supernatant Treatment Ventilation System***

Table C - 5. 1 *(continued)*

West Valley Demonstration Project Environmental Permits Calendar Year 1989

Permit #	Issued by	Expiration	Type of Permit
WVDP–487–01	EPA		Certificate to Operate Radioactive Air Source: Low-level Waste Supercompactor Ventilation system***
WVDP–587–01	EPA		Certificate to Operate Radioactive Air Source: Outdoor Ventilation System
WVDP–687–01	EPA		Certificate to Operate Radioactive Air Source: Liquid Waste Treatment System (modification of Process BuildingVentilation System)***
WVDP–687–01	EPA		Permit to construct or modify sources of atmospheric emissions of radionuclides : Analytical Chemistry Laboratories (modification of Process Building Ventilation System***

* Permit to construct was extended annually with submittal of semiannual report. Permit was discontinued in November 1989 when the testing phase was completed.

** Nonradioactive waste currently is removed to a commercial landfill and not incinerated.

*** National Emission Standard of Hazardous Air Pollutants (NESHAP) temporary permits are valid until the final permits are issued.

Table C - 5. 2

West Valley Demonstration Project State Pollutant Discharge Elimination System (SPDES) Sampling Program
Effective September 1, 1985

OUTFALL	Parameter	Limit	Sample Frequency
001 (PROCESS AND STORM WASTE WATER)	Flow	Monitor	2 per discharge
	Aluminum, total	14.0 mg/L	2 per discharge
	Ammonia (NH3)	*	2 per discharge
	Arsenic, dissolved	0.15 mg/L	2 per discharge
	BOD-5	**	2 per discharge
	Iron, total	**	2 per discharge
	Zinc, total recoverable	0.48 mg/L	2 per discharge
	Solids, suspended	45.0 mg/L	2 per discharge
	Cyanide, amenable to chlor/	0.022 mg/L	2 per discharge
	Solids, settleable	0.30ml/L	2 per discharge
	pH (range)	6.0 - 9.0	2 per discharge
	Oil & grease	15.0 mg/L	2 per discharge
	Sulfate	Monitor	2 per discharge
	Nitrate	Monitor	2 per discharge
	Chromium (hexavalent), total rec	0.016 mg/L	2 per discharge
	Cadmium, total recoverable	0.007 mg/L	2 per discharge
	Copper, total recoverable	0.03 mg/L	2 per discharge
	Lead, total recoverable	0.15 mg/L	2 per discharge
	Chromium, total	0.050 mg/L	annual
	Nickel, total	0.080 mg/L	annual
	Selenium, total	0.040 mg/L	annual
	Barium	0.5 mg/L	annual
	Antimony	1.0 mg/L	annual
	Chloroform	0.3 mg/L	annual
007 (SANITARY AND UTILITY WASTE WATER)	Flow	Monitor	3 per month
	Ammonia (NH3)	*	3 per month
	BOD-5	**	3 per month
	Iron, total	**	3 per month
	Suspended solids	45.0 mg/L	2 per month
	Settleable solids	0.3 ml/L	weekly
	pH (range)	6.0-9.0	weekly
	Chloroform	0.020 mg/L	annual
008 (FRENCH DRAIN WASTE WATER)	Flow	Monitor	3 per month
	BOD-5	**	3 per month
	Iron	**	3 per month
	pH (range)	6.0 - 9.0	3 per month
	Silver, total	0.008 mg/L	annual
	Zinc, total	0.100 mg/L	annual

* Reported as flow-weighted average of outfalls 001 and 007. Limit is 2.1mg/L
** Reported as flow-weighted average of outfalls 001, 007, and 008. Limits are 5.0 mg/L for BOD-5 and 0.31 mg/L for Fe. Iron data are net limits reported after background concentrations are subtracted.

Table C - 5. 3

West Valley Demonstration Project 1989 SPDES Noncompliance Episodes

DATE	OUTFALL	Parameter	Limit	Value	Comments
JAN 89	007	Settleable Solids	0.3 ml/L	0.35 ml/L	Plugged sludge line
JAN 89	Sum 001, 007, 008	Fe	0.31 mg/L daily maximum	0.38 mg/L	Natural variation
JAN 89	007	Settleable Solids	0.3 ml/L	0.5 ml/L	Re-suspension
JAN 89	Sum 001, 007, 008	Fe	0.31 mg/L daily maximum	0.87 mg/L	Natural variation
MAR 89	007	pH	6.0 - 9.0	3.9	Incorrect acid pump setting
APR 89	007	pH	6.0 - 9.0	10.46	Incorrect acid pump setting
MAY 89	007	pH	6.0 - 9.0	11.0	Incorrect acid pump setting
JUN 89	007	pH	6.0 - 9.0	9.2, 5.6, 5. 6, 4. 0	4 occasions reported
JUL 89	007	pH	6.0 - 9.0	3.7, 3.1	2 occasions reported
JUL 89	Sum 001, 007, 008	BOD-5	5.0 mg/L daily average	6.85 mg/L	Attributed to algae
JUL 89	Sum 001, 007, 008	Fe	0.31 mg/L daily maximum	0.53, 2.82 mg/L	Natural variation
AUG 89	Sum 001, 007, 008	BOD-5	5.0 mg/L daily average	8.44 mg/L	Attributed to algae
AUG 89	Sum 001, 007, 008	Fe	0.31 mg/L daily maximum	2.39, 5.47, 1.38, 2. 41 mg/L	Natural variation
SEP 89	Sum 001, 007, 008	Fe	0.31 mg/L daily maximum	5.11, 1.59 mg/L	Natural variation
OCT 89	Sum 001, 007, 008	Fe	0.31 mg/L daily maximum	1.13, 1.22, 1.00, 1. 03 mg/L	Natural variation
DEC 89	007	Settleable Solids	0.3 ml/L	3, 1.2, 0. 5, 0.5 ml/L	Scouring of basin
DEC 89	Sum 001, 007, 008	BOD-5	5.0 mg/L daily average	9.27 mg/L	Related to above

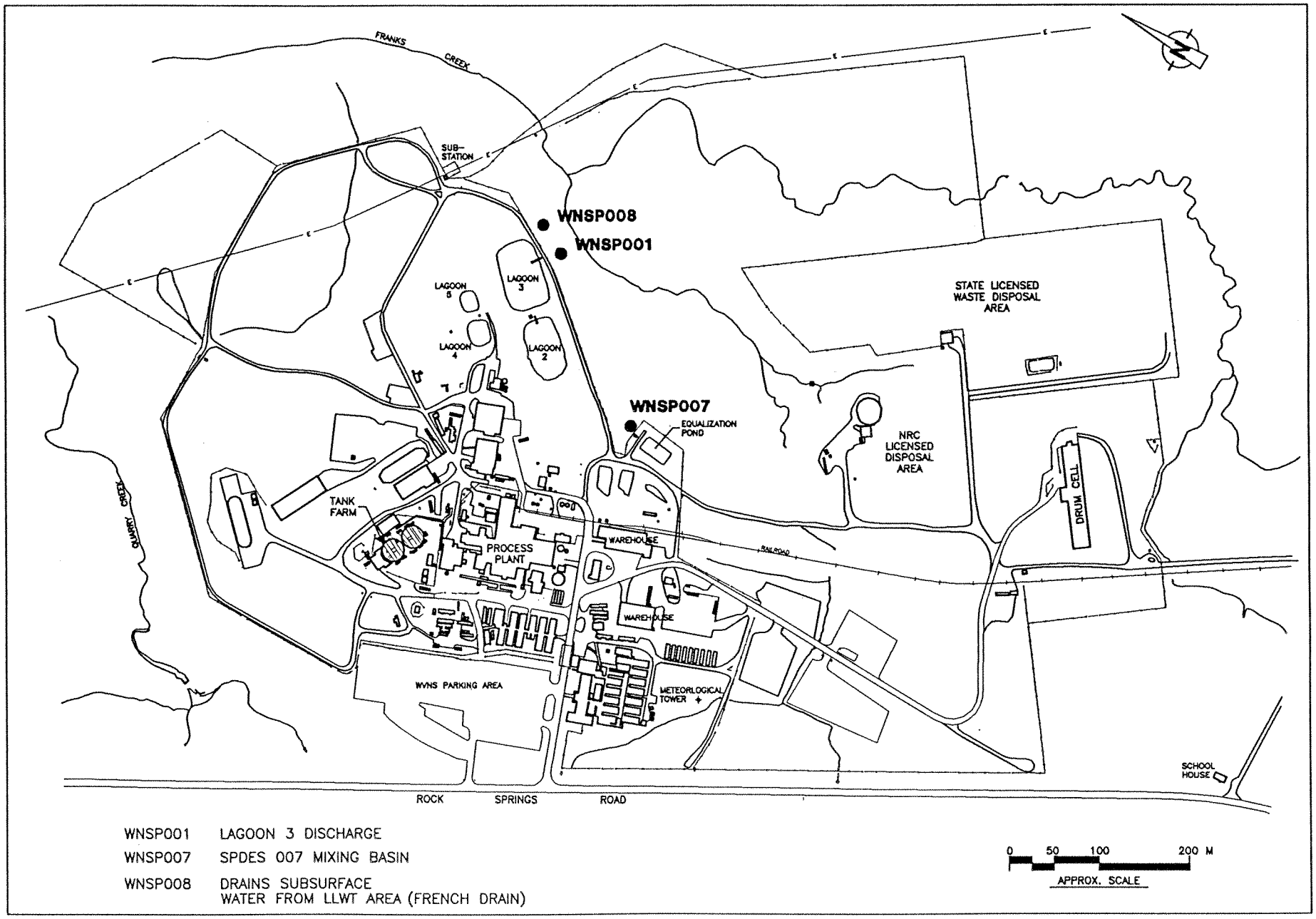

Figure C-5.1. SPDES Monitoring Points.

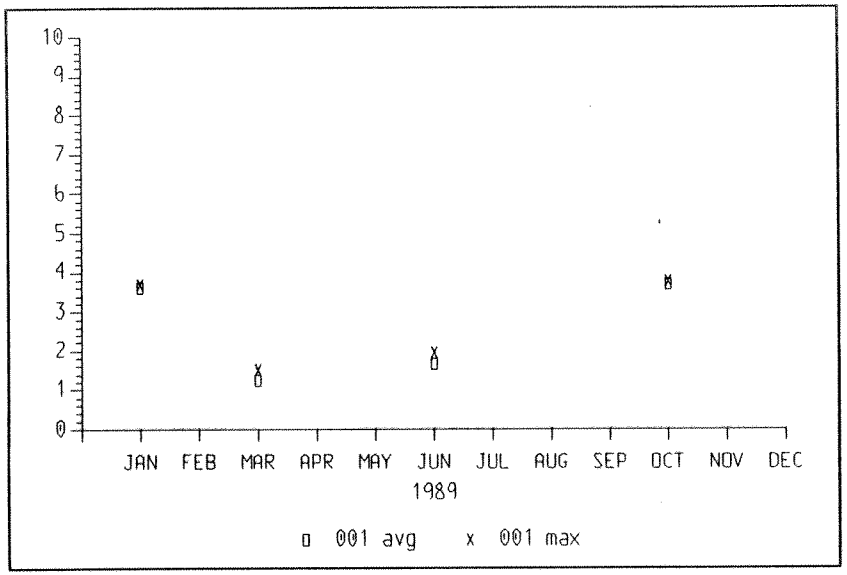

Figure C- 5. 2: Biochemical Oxygen Demand (mg/L), Outfall 001

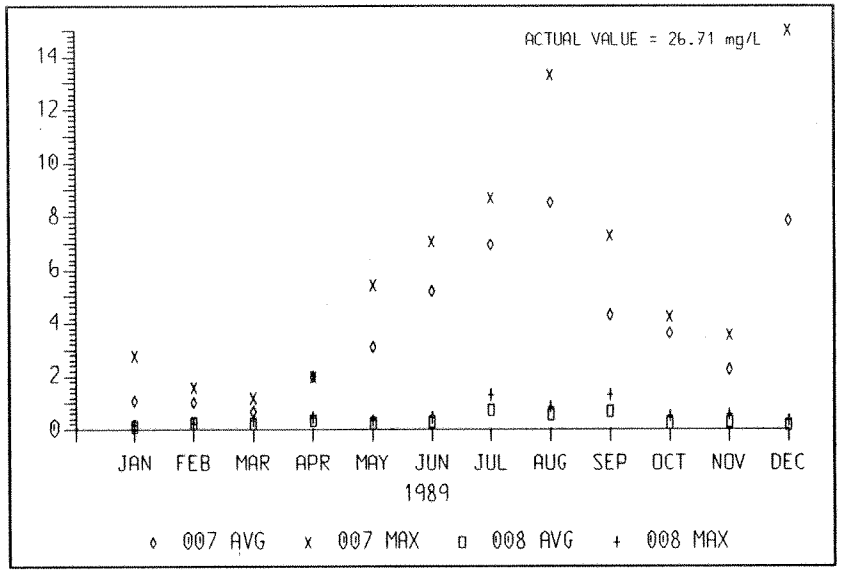

Figure C-5. 3: Biochemical Oxygen Demand (mg/L), Outfalls 007 and 008

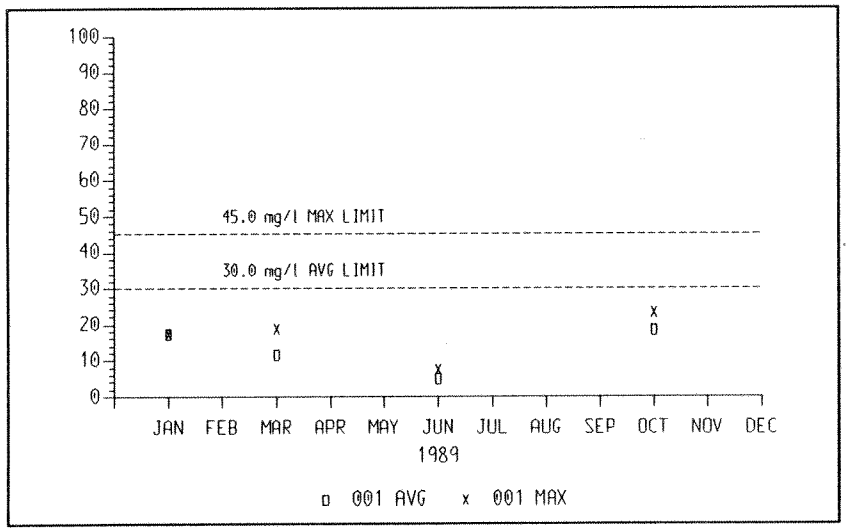

Figure C-5. 4: Suspended Solids (mg/L), Outfall 001

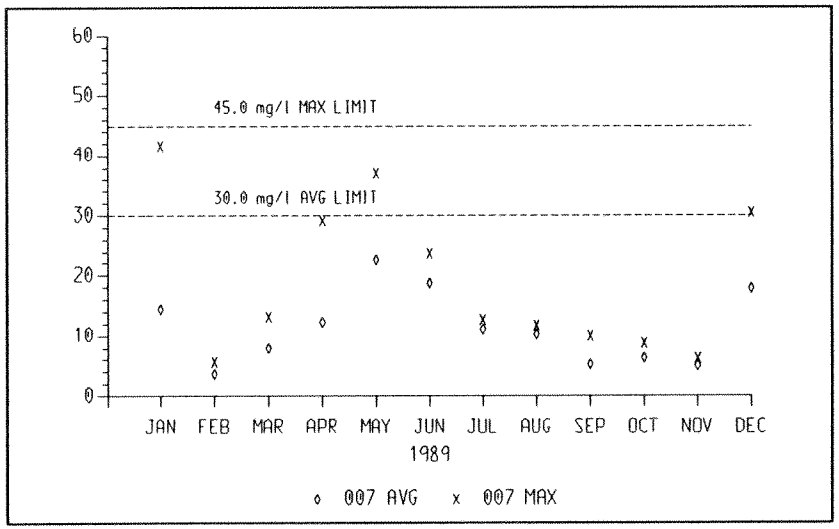

Figure C-5. 5: Suspended Solids (mg/L), Outfall 007

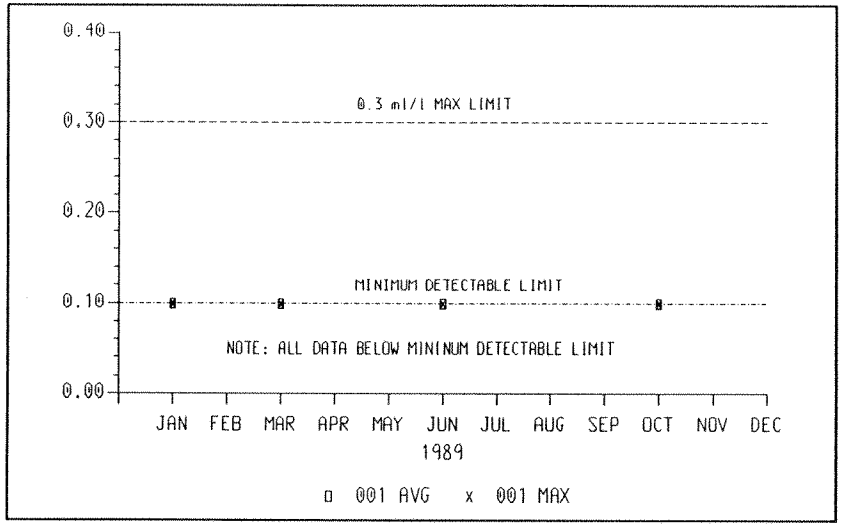

Figure C-5. 6: Settleable Solids (ml/L), Outfall 001

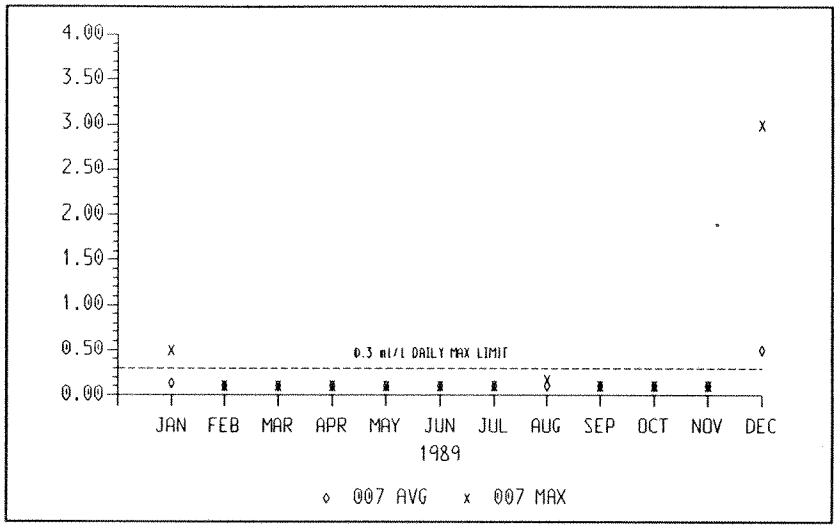

Figure C-5. 7: Settleable Solids (ml/L), Outfall 007

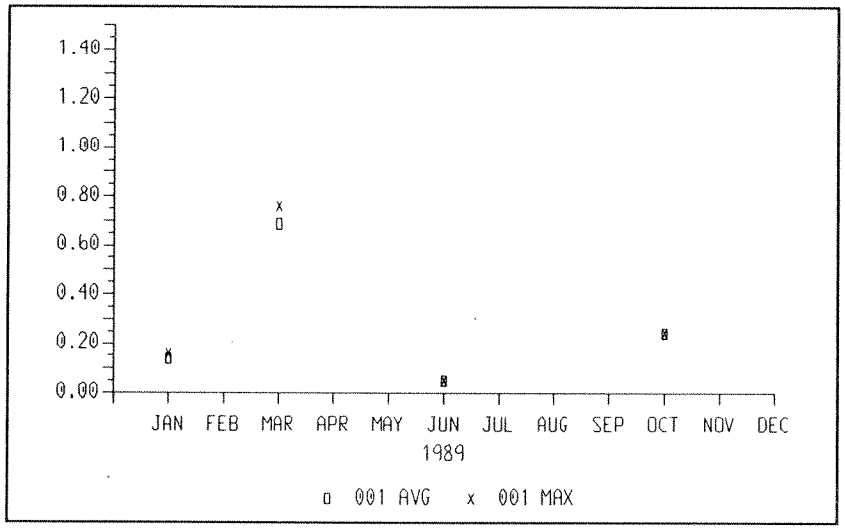

Figure C-5. 8: Ammonia (mg/L), Outfall 001

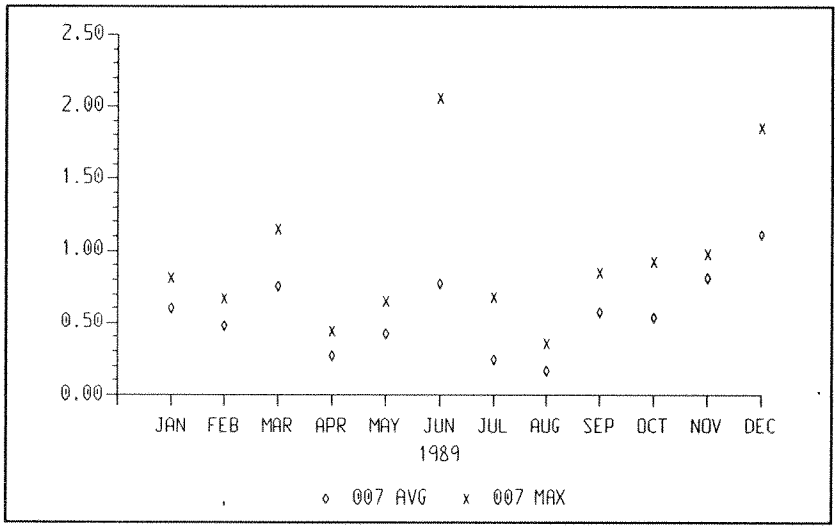

Figure C-5. 9: Ammonia (mg/L), Outfall 007

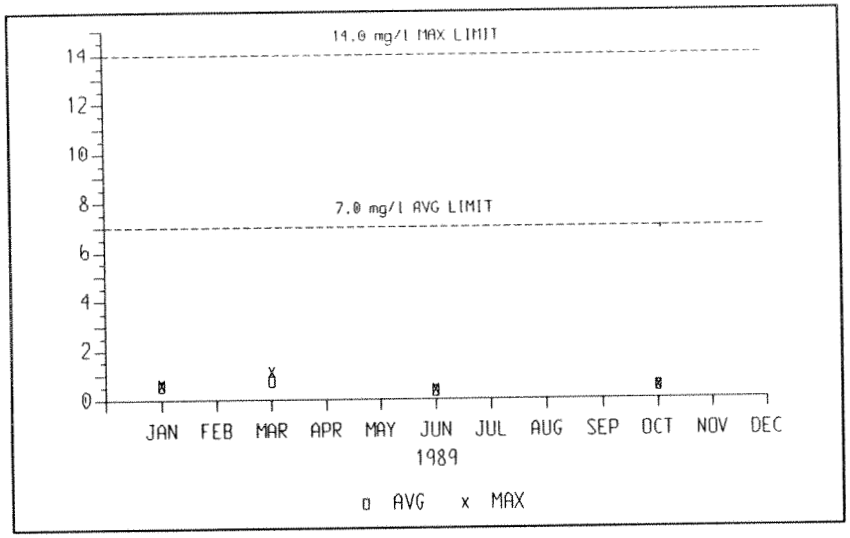

Figure C-5. 10: Aluminum (*Al*) (mg/L), Outfall 001

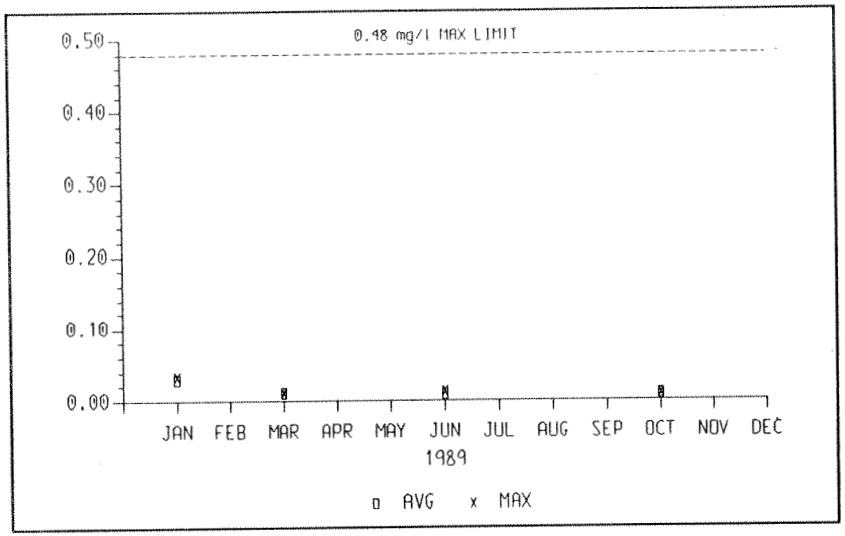

Figure C-5. 11: Zinc (*Zn*) (mg/L), Outfall 001

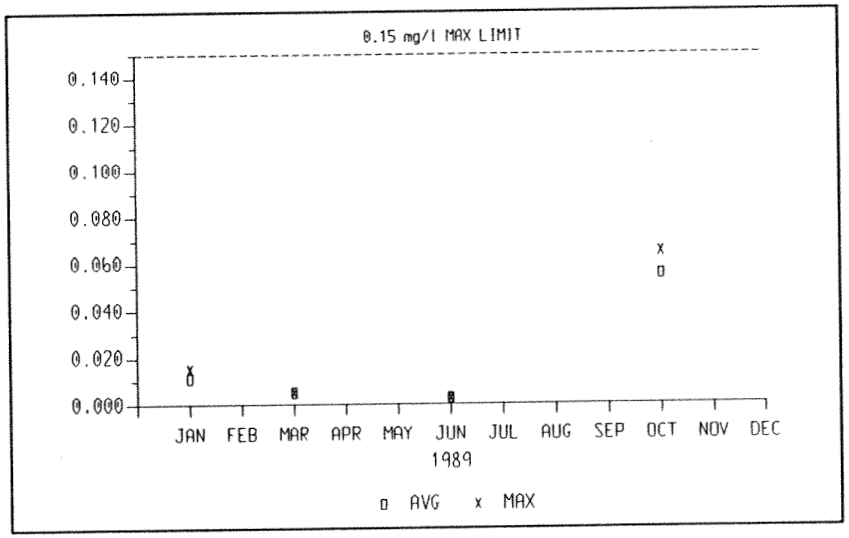

Figure C-5. 12: Arsenic (*As*) Dissolved (mg/L), Outfall 001

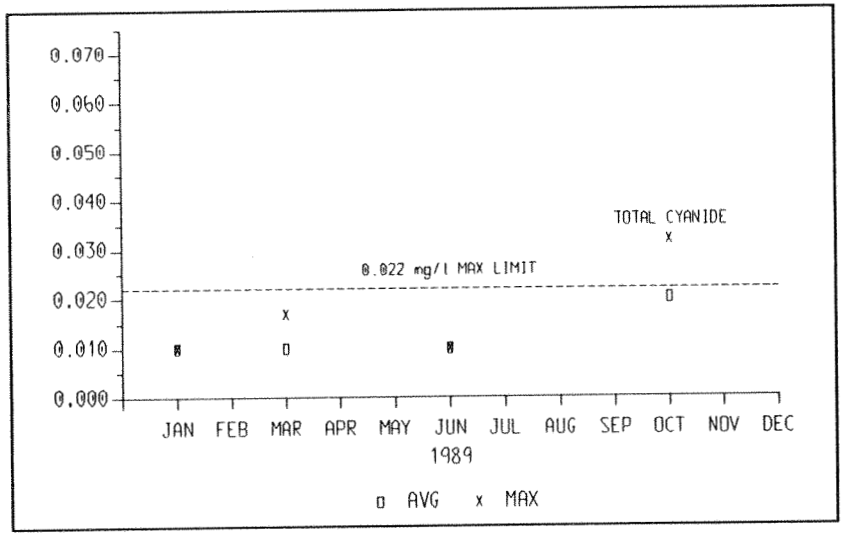

Figure C-5. 13: Cyanide Amenable to Chlorination (mg/L), Outfall 001

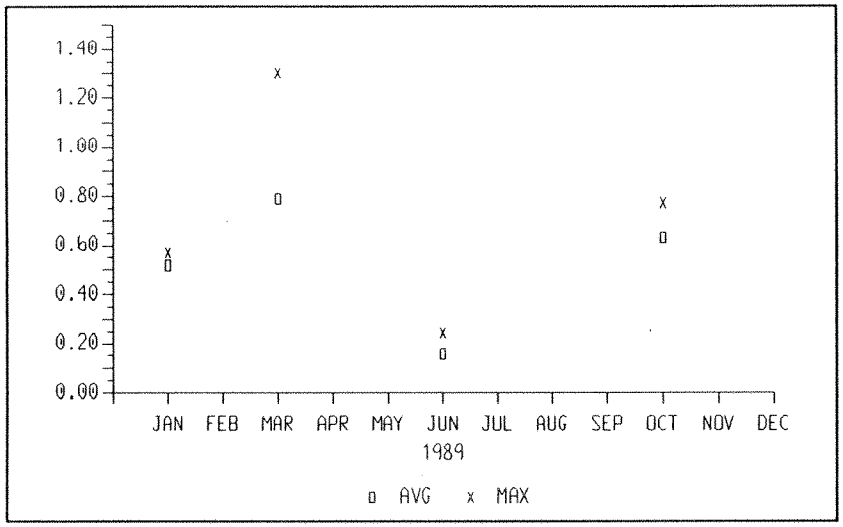

Figure C-5. 14: Iron (*Fe*) (mg/L), Outfall 001

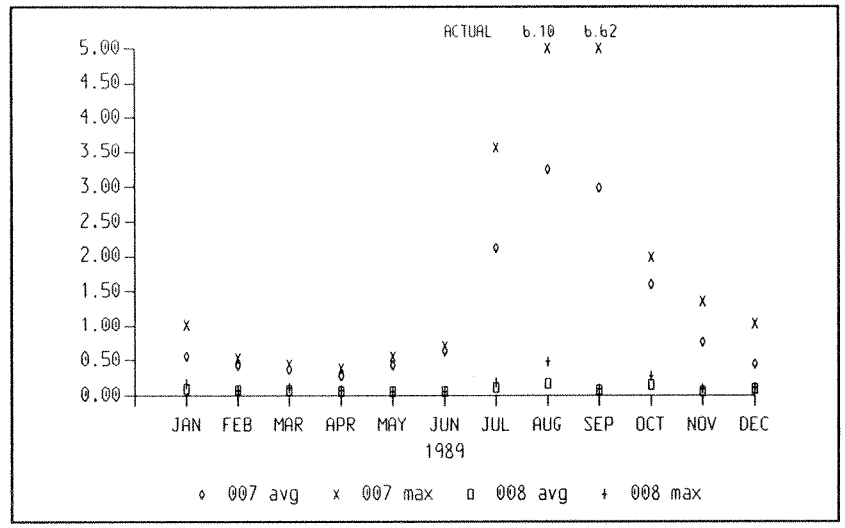

Figure C-5. 15: Iron (*Fe*) (mg/L) Outfalls 007 and 008

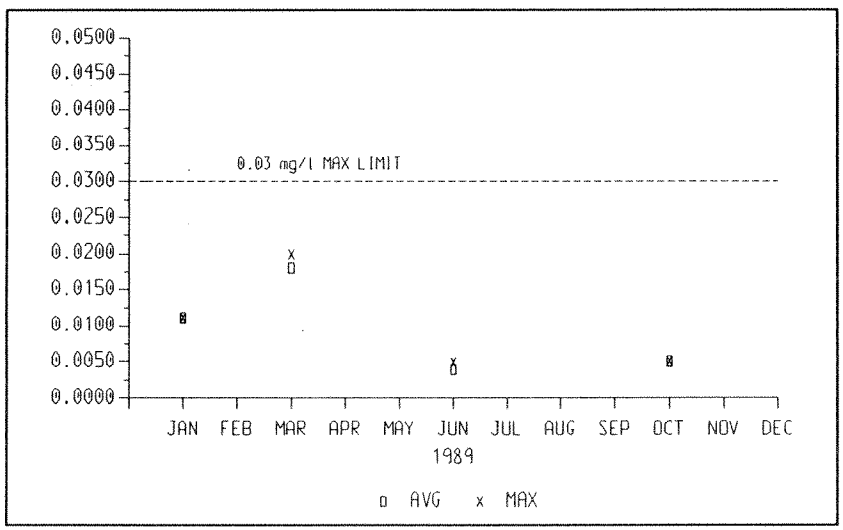

Figure C-5. 16: Copper (*Cu*) (mg/L), Outfall 001

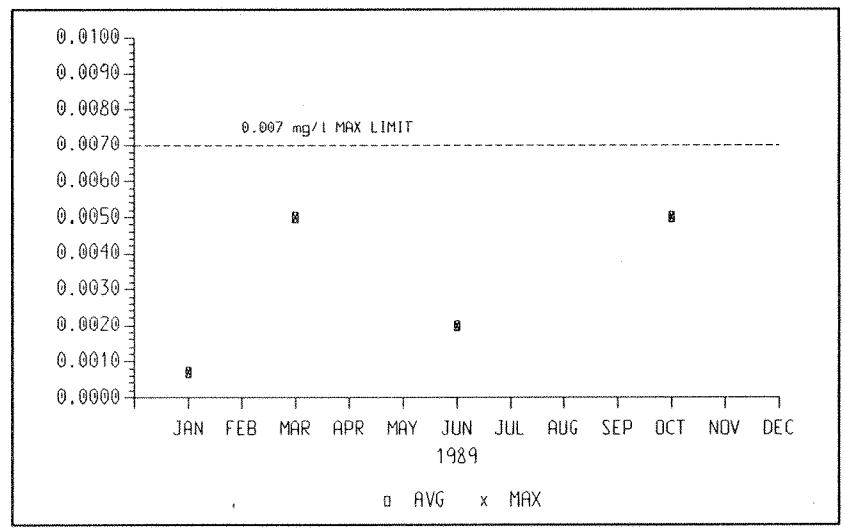

Figure C-5. 17: Cadmium (*Cd*) (mg/L), Outfall 001

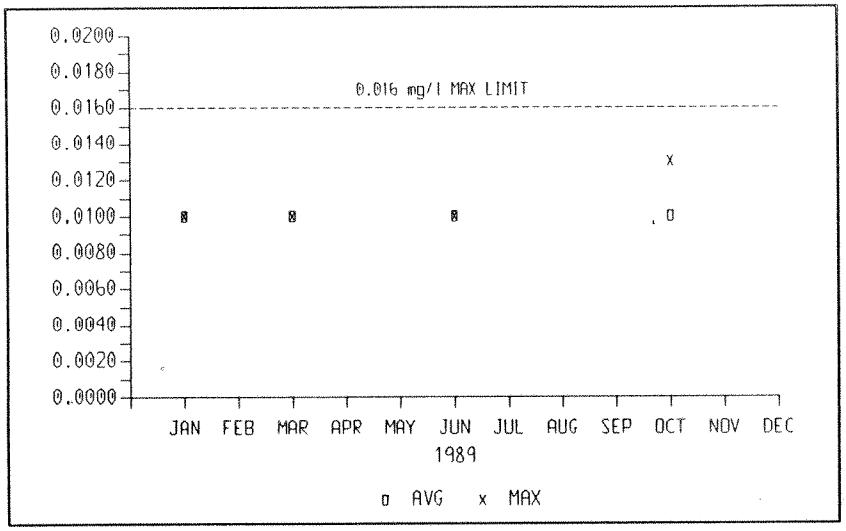

Figure C-5. 18: Chromium (*Cr,VT*) (mg/L), Outfall 001

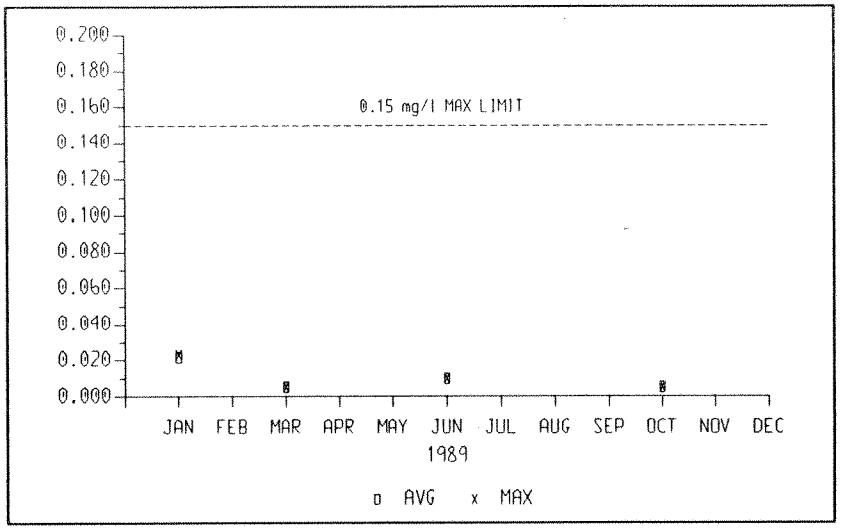

Figure C-5. 19: Lead(*Pb*)(mg/L), Outfall 001

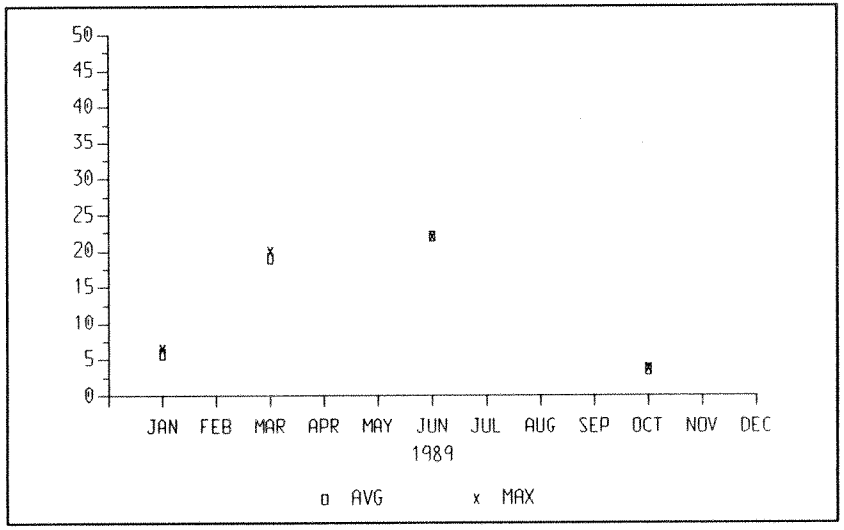

Figure C-5. 20: Nitrate (mg/L), Outfall 001

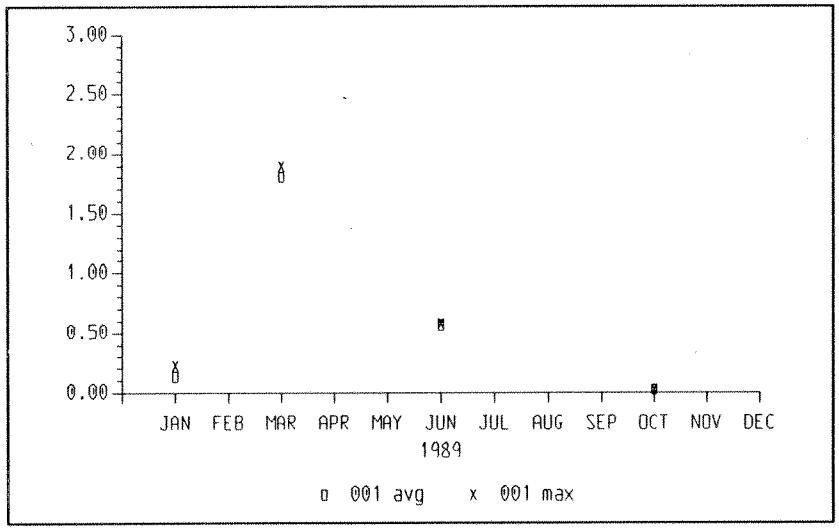

Figure C-5. 21: Nitrite (mg/L), Outfall 001

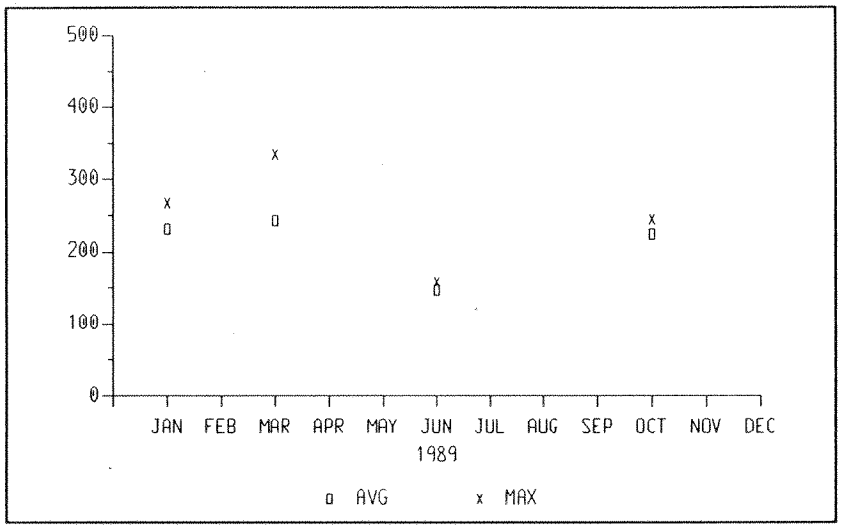

Figure C-5. 22: Sulfate (mg/L), Outfall 001

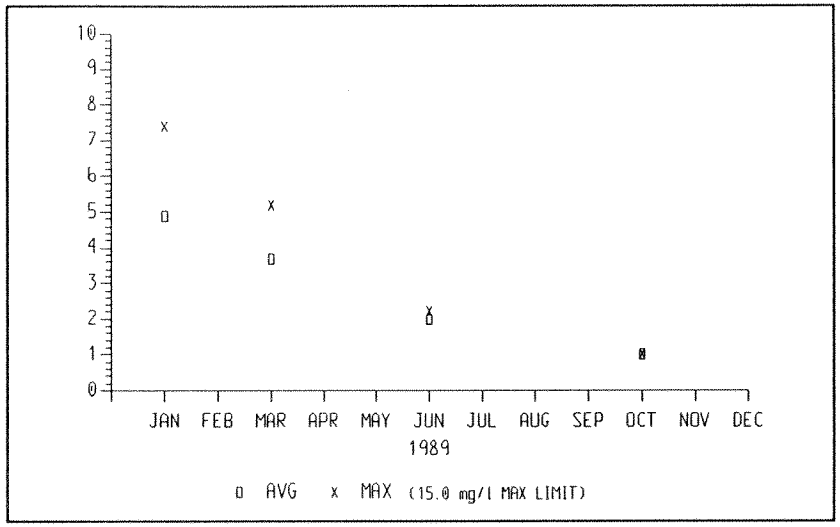

Figure C-5. 23: Oil and Grease (mg/L), Outfall 001

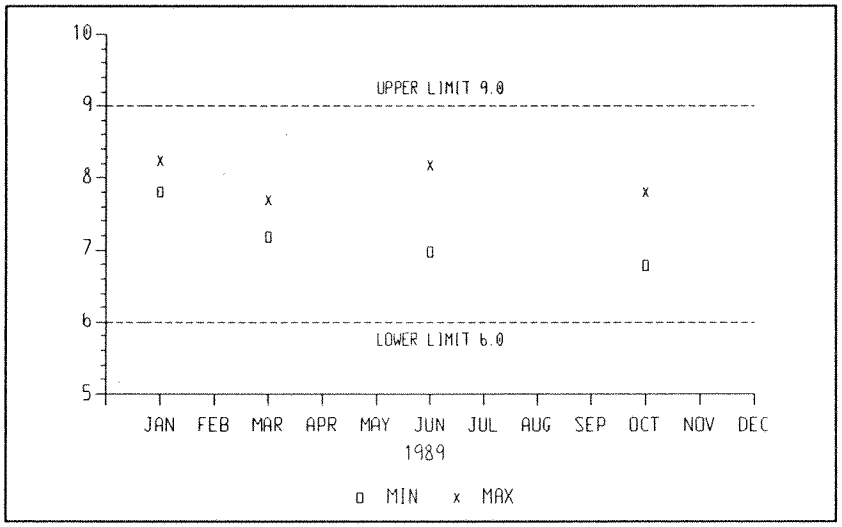

Figure C-5. 24: pH (standard units), Outfall 001

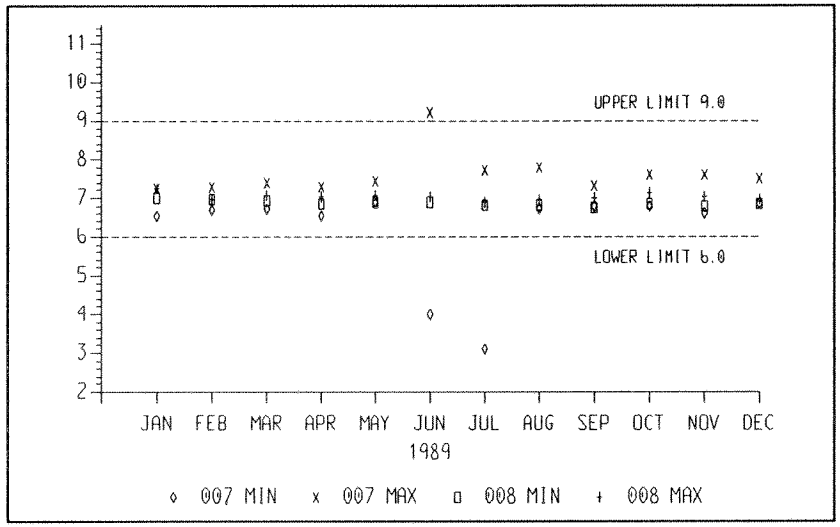

Figure C-5. 25: pH (standard units), Outfalls 007 and 008

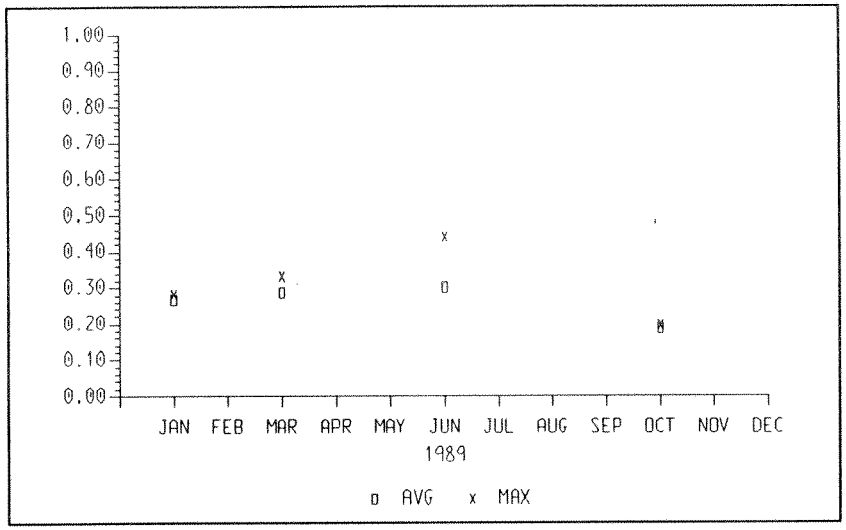

Figure C-5. 26: Discharge Rate (MGD), Outfall 001

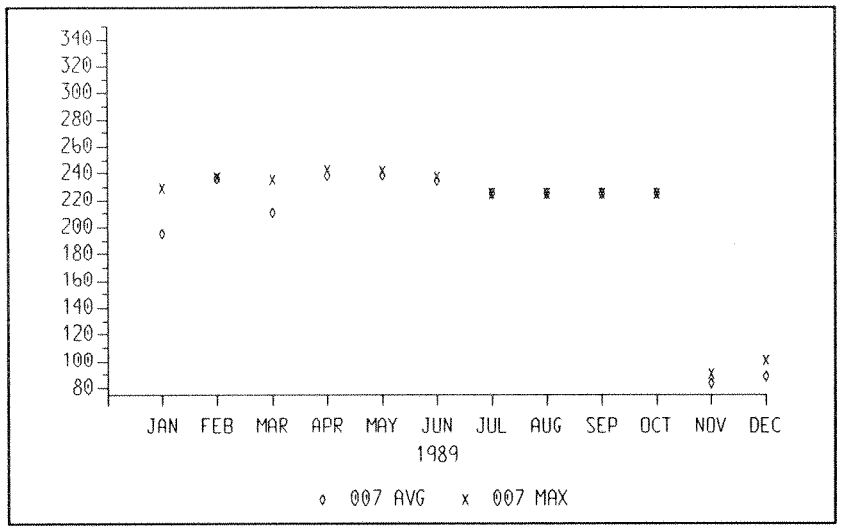

Figure C-5. 27: Discharge Rate (GPD x 1000), Outfall 007

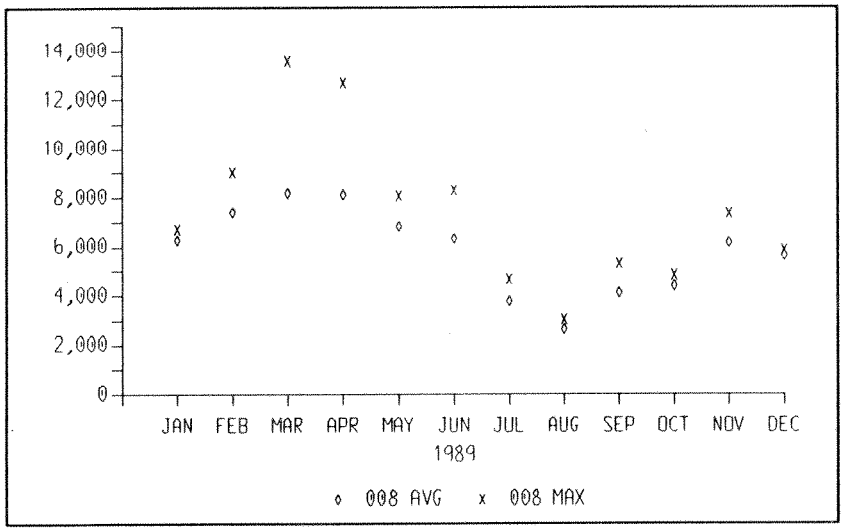

Figure C-5. 28: Discharge Rate (GPD), Outfall 008

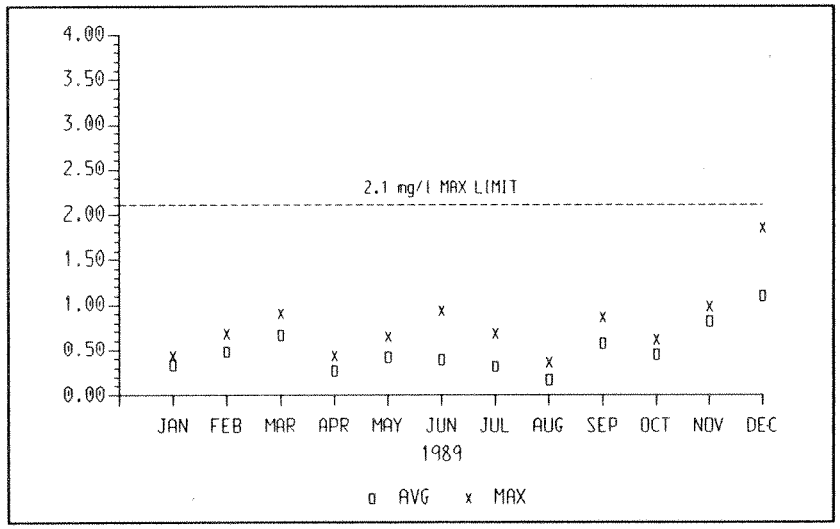

Figure C-5. 29: Flow-weighted Averages - Ammonia (mg/L), Outfalls 001 and 007

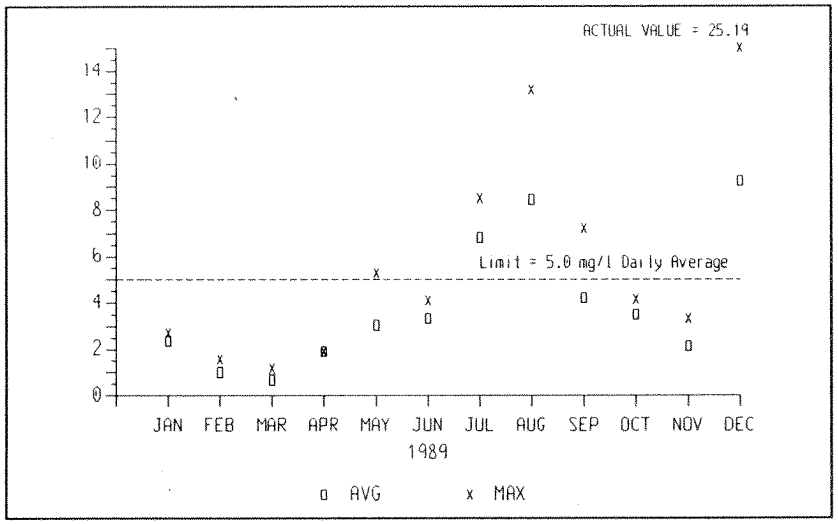

Figure C-5. 30: Flow-weighted Averages - Biochemical Oxygen Demand - 5 (mg/L), Outfalls 001, 007, and 008

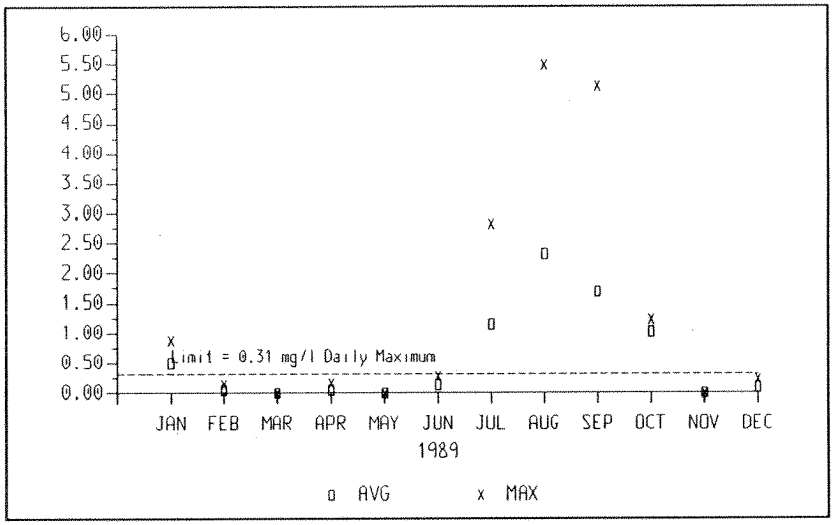

Figure C-5. 31: Flow-weighted Averages - Iron (Fe) (mg/L), Outfalls 001, 007, and 008