



MAY 07 1990

Our File: PE-7178

DOUBLE REGISTERED

**BRITISH COLUMBIA HYDRO AND POWER AUTHORITY**

P. O. Box 8910  
970 Burrard Street  
Vancouver, British Columbia  
V6Z 1Y3

Gentlemen:

LETTER OF TRANSMITTAL

Enclosed is a copy of amended Permit No. **PE-7178** issued under the provisions of the Waste Management Act in the name of **BRITISH COLUMBIA HYDRO AND POWER AUTHORITY**. Your attention is respectfully directed to the terms and conditions outlined in the Permit. An annual fee for Permit No. PE-7178 will be determined on the basis of your industrial code and capacity in accordance with the Waste Management Fees Regulation.

The administration of this Permit will be carried out by staff from our Regional Office located at 15326 - 103A Avenue, Surrey, British Columbia, V3R 7A2, (telephone: 584-8822). Plans, data and reports pertinent to the Permit are to be submitted to the Regional Waste Manager at this address.

You will note that values have been expressed in the International System of Units (SI). These units are to be used in submitting monitoring results and any other information in connection with this Permit.

This Permit does not authorize entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorized by the owner of such lands or works. The responsibility for obtaining such authority shall rest with the Permittee.

Yours very truly,

Prad Khare  
Assistant Regional Waste Manager

Enc.



MINISTRY OF ENVIRONMENT

**PERMIT**

*Under the Provisions of the Waste Management Act*

**BRITISH COLUMBIA HYDRO AND POWER AUTHORITY**

P. O. Box 8910, 970 Burrard Street

Vancouver, British Columbia

V6Z 1Y3

is hereby authorized to discharge effluent  
from a thermal electric power generating plant  
located in Port Moody, British Columbia  
to Burrard Inlet.

This permit has been issued under the terms and  
conditions prescribed in the attached appendices:

01, 02, 03, 05, A-1, B-1, C-1, and C-2.

Assistant Regional Waste Manager

Permit No. PE-7178

Date Issued March 1, 1985

Date Amended July 19, 1985

MAY 07 1990



MINISTRY OF ENVIRONMENT  
Waste Management Branch

APPENDIX 01  
to Permit No. PE-7178

- (A) The discharge of effluent to which this appendix is applicable is stormwater from the dyked tank farm area serving a thermal generating plant and identified as "01" as shown on the attached Appendix A-1.
- (B) The maximum rate at which effluent may be discharged is 1 650 cubic metres per day.
- (C) The characteristics of the effluent at the outlet of the oil separator shall be:  
oil and grease, 5mg/L or less.
- (D) The works authorized are an oil separator, an outfall and related appurtenances approximately located as shown on the attached Appendix A-1.
- (E) The location of the facilities from which the effluent originates and to which this appendix is appurtenant is BURRARD THERMAL PLANT SITE & MICROWAVE PCL J DL 256 RP 15816 DL 219 EXCEPT PART SHOWN ON SK 4373 & EXCEPT PLAN 18279 ACC 11X40X.
- (F) The location of the point of discharge and to which this appendix is appurtenant is the Burrard Inlet near or adjacent to BURRARD THERMAL PLANT SITE & MICROWAVE PCL J DL 256 RP 15816 DL 219 EXCEPT PART SHOWN ON SK 4373 & EXCEPT PLAN 18279 ACC 11X40X.
- (G) The works authorized must be complete and in operation on and from the date of this appendix.

Date Issued March 1, 1985

Date Amended July 19, 1985

MAY 07 1990

  
Assistant Regional Waste Manager



MINISTRY OF ENVIRONMENT

**PERMIT**

*Under the Provisions of the Waste Management Act*

**BRITISH COLUMBIA HYDRO AND POWER AUTHORITY**

P. O. Box 8910, 970 Burrard Street

Vancouver, British Columbia

V6Z 1Y3

is hereby authorized to discharge effluent  
from a thermal electric power generating plant  
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This permit has been issued under the terms and  
conditions prescribed in the attached appendices:

01, 02, 03, 05, A-1, B-1, C-1, and C-2.

Assistant Regional Waste Manager

Permit No. PE-7178

Date Issued March 1, 1985

Date Amended July 19, 1985

MAY 07 1990



MINISTRY OF ENVIRONMENT  
Waste Management Branch

APPENDIX 01  
to Permit No. PE-7178

- (A) The discharge of effluent to which this appendix is applicable is stormwater from the dyked tank farm area serving a thermal generating plant and identified as "01" as shown on the attached Appendix A-1.
- (B) The maximum rate at which effluent may be discharged is 1 650 cubic metres per day.
- (C) The characteristics of the effluent at the outlet of the oil separator shall be:  
oil and grease, 5mg/L or less.
- (D) The works authorized are an oil separator, an outfall and related appurtenances approximately located as shown on the attached Appendix A-1.
- (E) The location of the facilities from which the effluent originates and to which this appendix is appurtenant is BURRARD THERMAL PLANT SITE & MICROWAVE PCL J DL 256 RP 15816 DL 219 EXCEPT PART SHOWN ON SK 4373 & EXCEPT PLAN 18279 ACC 11X40X.
- (F) The location of the point of discharge and to which this appendix is appurtenant is the Burrard Inlet near or adjacent to BURRARD THERMAL PLANT SITE & MICROWAVE PCL J DL 256 RP 15816 DL 219 EXCEPT PART SHOWN ON SK 4373 & EXCEPT PLAN 18279 ACC 11X40X.
- (G) The works authorized must be complete and in operation on and from the date of this appendix.

Date Issued March 1, 1985

Date Amended July 19, 1985

MAY 07 1990

  
Assistant Regional Waste Manager



MINISTRY OF ENVIRONMENT  
Waste Management Branch

APPENDIX 02  
to Permit No. PE-7178

- (A) The discharge of effluent to which this appendix is applicable is blowdown from the boiler system and backwash effluent from the sand and carbon filters serving a thermal generating plant and identified as "02" as shown on the attached Appendix A-1.
- (B) The maximum rate at which effluent may be discharged is 550 cubic metres per day.
- (C) The characteristics of the effluent shall be:
- (i) At the end of each of the six boiler blowdown outfalls:  
temperature, 32°C or less;
  - (ii) At the outlet of the sand and carbon filters:  
total suspended solids (non-filterable residue), 50 mg/L or less.
- (D) The works authorized are six submerged outfalls and related appurtenances approximately located as shown on the attached Appendix A-1.
- (E) The location of the facilities from which the effluent originates and to which this appendix is appurtenant is BURREARD THERMAL PLANT SITE & MICROWAVE PCL J DL 256 RP 15816 DL 219 EXCEPT PART SHOWN ON SK 4373 & EXCEPT PLAN 18279 ACC 11X40X.
- (F) The locations of the six points of discharge and to which this appendix is appurtenant is the Burrard Inlet near or adjacent to BURREARD THERMAL PLANT SITE & MICROWAVE PCL J DL 256 RP 15816 DL 219 EXCEPT PART SHOWN ON SK 4373 & EXCEPT PLAN 18279 ACC 11X40X.
- (G) The works authorized must be complete and in operation on and from the date of this appendix.

Date Issued March 1, 1985

Date Amended July 19, 1985

MAY 07 1990

  
Assistant Regional Waste Manager



MINISTRY OF ENVIRONMENT  
Waste Management Branch

APPENDIX 03  
to Permit No. PE-7178

- (A) The discharge of effluent to which this appendix is applicable is cooling water from the turbines serving a thermal generating plant and identified as "03" as shown on the attached Appendix A-1.
- (B) The maximum rate at which effluent may be discharged is 1 700 000 cubic metres per day.
- (C) The characteristics of the effluent at the end of the cooling water outfall shall be:
- |                    |  |
|--------------------|--|
| residual chlorine, | 0.1 mg/L or less;                                    |
| temperature,       | 27°C or less;  |
| oil and grease,    | 2 mg/L above the cooling water intake level or less. |
- (D) The works authorized are a submerged outfall and related appurtenances approximately located as shown on the attached Appendix A-1.
- (E) The location of the facilities from which the effluent originates and to which this appendix is appurtenant is BARRARD THERMAL PLANT SITE & MICROWAVE PCL J DL 256 RP 15816 DL 219 EXCEPT PART SHOWN ON SK 4373 & EXCEPT PLAN 18279 ACC 11X40X.
- (F) The location of the point of discharge and to which this appendix is appurtenant is the Burrard Inlet near or adjacent to BARRARD THERMAL PLANT SITE & MICROWAVE PCL J DL 256 RP 15816 DL 219 EXCEPT PART SHOWN ON SK 4373 & EXCEPT PLAN 18279 ACC 11X40X.
- (G) The works authorized must be complete and in operation on and from the date of this appendix.

Date Issued March 1, 1985

Date Amended July 19, 1985

MAY 07 1990

  
Assistant Regional Waste Manager



MINISTRY OF ENVIRONMENT  
Waste Management Branch

APPENDIX 05

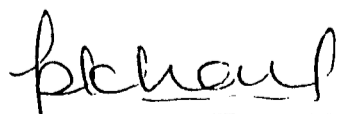
to Permit No. PE-7178

- (A) The discharge of effluent to which this appendix is applicable is from a water treatment plant demineralizer serving a thermal generating plant and identified as "05" as shown on the attached Appendix A-1.
- (B) The maximum rate at which effluent may be discharged is 72 cubic metres per day.
- (C) The characteristics of the effluent at the outlet of the neutralization tank shall be:  
pH range, 6.5 to 8.5.
- (D) The works authorized are a neutralizing tank, a submerged outfall and related appurtenances approximately located as shown on the attached Appendix A-1.
- (E) The location of the facilities from which the effluent originates and to which this appendix is appurtenant is BARRARD THERMAL PLANT SITE & MICROWAVE PCL J DL 256 RP 15816 DL 219 EXCEPT PART SHOWN ON SK 4373 & EXCEPT PLAN 18279 ACC 11X40X.
- (F) The location of the point of discharge and to which this appendix is appurtenant is the Burrard Inlet near or adjacent to BARRARD THERMAL PLANT SITE & MICROWAVE PCL J DL 256 RP 15816 DL 219 EXCEPT PART SHOWN ON SK 4373 & EXCEPT PLAN 18279 ACC 11X40X.
- (G) The works authorized must be complete and in operation on and from the date of this appendix.

Date Issued March 1, 1985

Date Amended July 19, 1985

MAY 07 1990

  
Assistant Regional Waste Manager

**SITE PLAN**

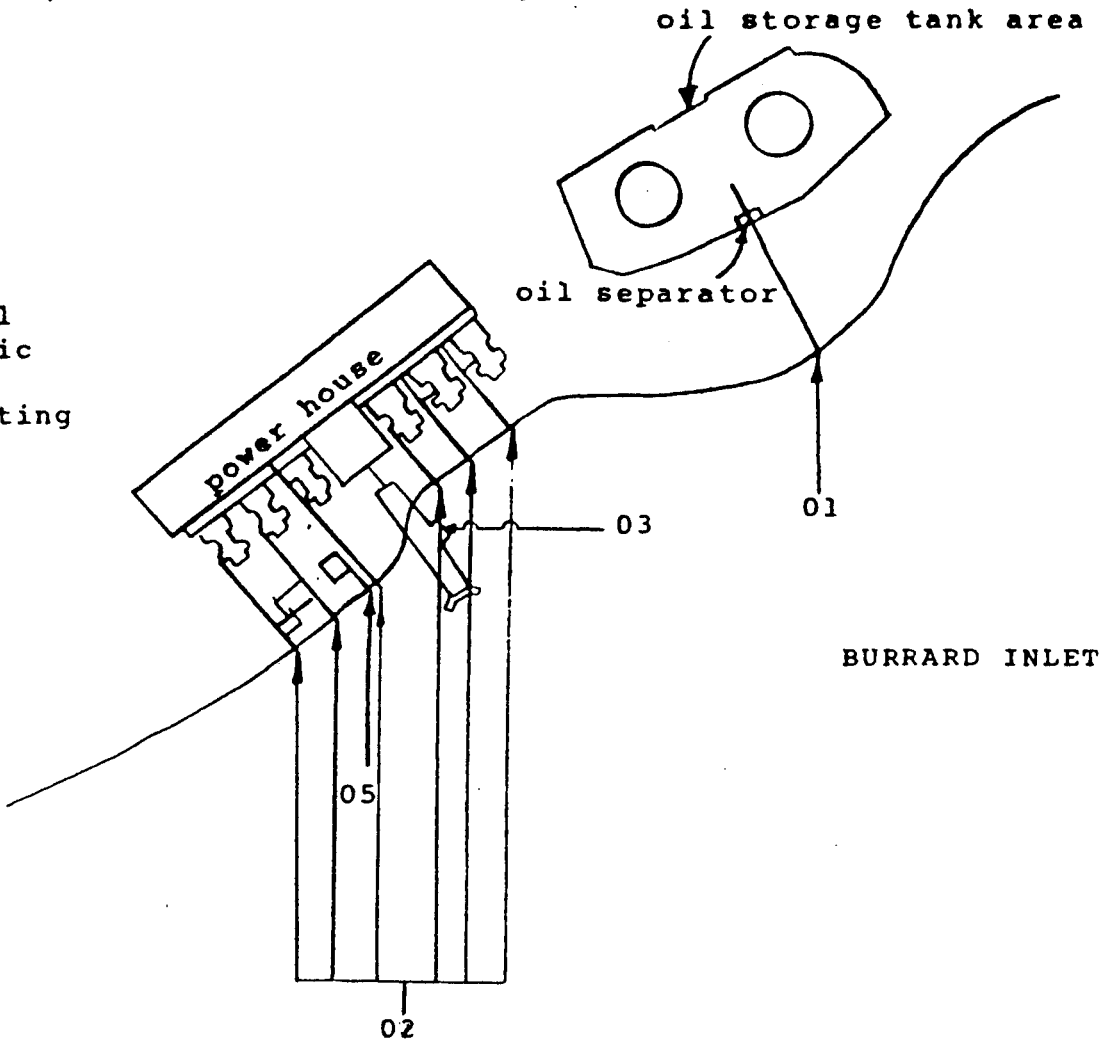
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**LEGEND**

01,02,03,05 - Location of Discharges



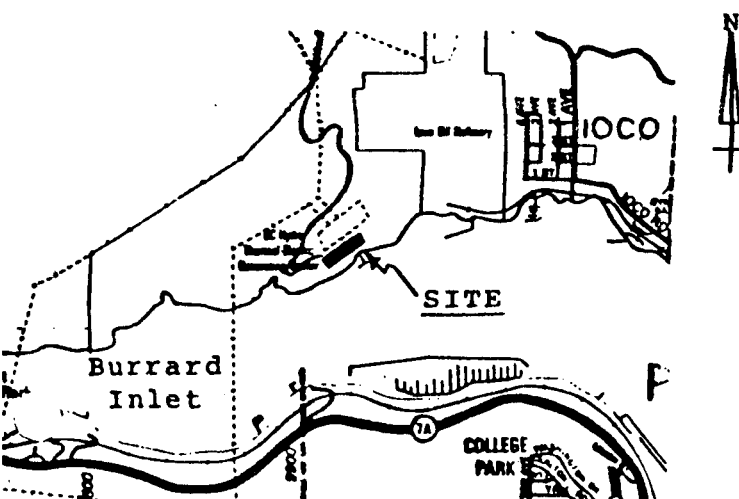
Thermal  
Electric  
Power  
Generating  
Plant



**LEGAL DESCRIPTION**

BURRARD THERMAL PLANT SITE & MICROWAVE PCL J DL 256 RP 15816 DL 219 EXCEPT PART SHOWN BK 4373 & EXCEPT PLAN 18279 ACC 11X40X

**LOCATION MAP**



BRITISH COLUMBIA HYDRO AND POWER AUTHORITY  
(Name of applicant(s))

(Date)

(Signature of applicant(s) or agent)

(FOR OFFICE USE ONLY)

March 1, 1985

Date Issued

July 19, 1985

Date Amended

MAY 07 1990

Assistant Regional Waste Manager

Appendix A-1 to Permit No. PE-7178

Approval No.

**SITE PLAN**

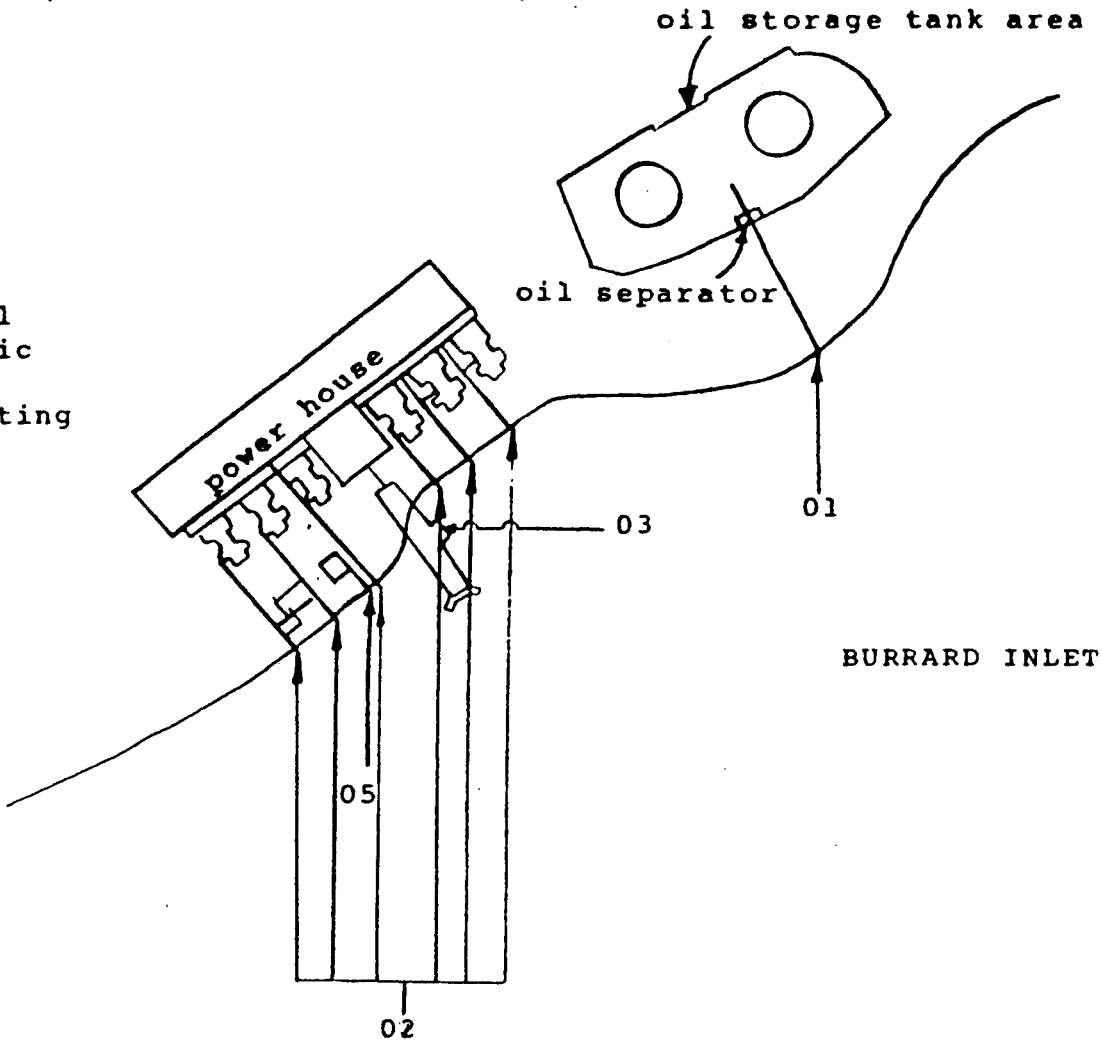
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**LEGEND**

01,02,03,05 - Location of Discharges



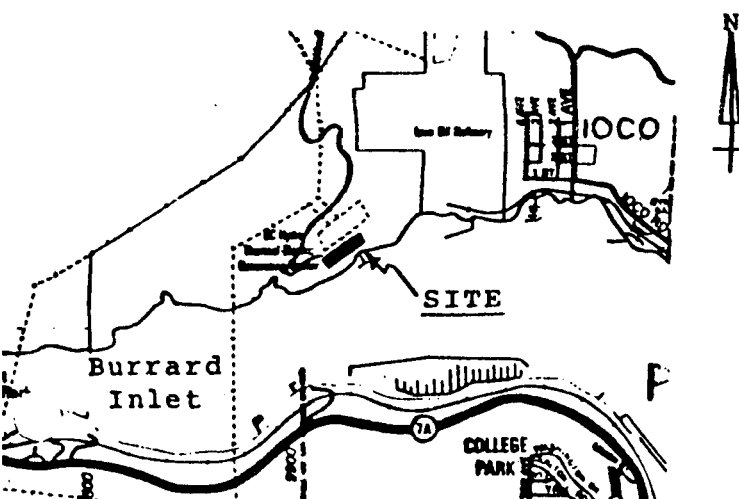
Thermal  
Electric  
Power  
Generating  
Plant



**LEGAL DESCRIPTION**

BURRARD THERMAL PLANT SITE & MICROWAVE PCL J DL 256 RP 15816 DL 219 EXCEPT PART SHOWN BK 4373 & EXCEPT PLAN 18279 ACC 11X40X

**LOCATION MAP**



BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

(Name of applicant(s))

(Date)

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March 1, 1985

Date Issued

July 19, 1985

Date Amended

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Assistant Regional Waste Manager

Appendix A-1 to Permit No. PE-7178

Approval No.



MINISTRY OF ENVIRONMENT  
Waste Management Branch

APPENDIX B-1  
to Permit No. PE-7178

A. OIL SEPARATOR

Oil and settled residue removed from the oil separator shall be disposed of to a site and in a manner approved by the Regional Waste Manager.

B. MAINTENANCE OF WORKS

The Permittee shall inspect the pollution control works regularly and maintain them in good working order. Notify the Regional Waste Manager of any malfunction of these works.

C. EMERGENCY PROCEDURES

In the event of an emergency or condition beyond the control of the Permittee which prevents continuing operation of the approved method of pollution control, the Permittee shall immediately notify the Regional Waste Manager and take appropriate remedial action.

D. BYPASSES

The discharge of effluent which has bypassed the designated treatment works is prohibited unless the approval of the Director or the Regional Waste Manager is obtained and confirmed in writing.

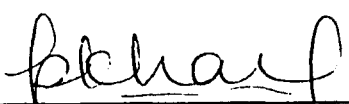
E. PROCESS MODIFICATIONS

The Permittee shall notify the Regional Waste Manager prior to implementing changes to any process that may affect the quality and/or quantity of the discharge.

Date Issued March 1, 1985

Date Amended July 19, 1985

MAY 07 1990

  
Assistant Regional Waste Manager



MINISTRY OF ENVIRONMENT  
Waste Management Branch

APPENDIX B-1  
to Permit No. PE-7178

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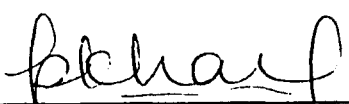
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Date Issued March 1, 1985

Date Amended July 19, 1985

MAY 07 1990

  
Assistant Regional Waste Manager



MINISTRY OF ENVIRONMENT  
Waste Management Branch

APPENDIX C-1

to Permit No. PE-7178

MONITORING

The following monitoring program shall be undertaken by the Permittee. The Regional Waste Manager may modify the monitoring program based on the results submitted as well as any other data obtained by Waste Management.

1. SAMPLING SITES

Sampling sites shall be located as follows:

<u>Site No.</u>	<u>Location</u>
00	Cooling water intake
01	Outlet of the oil separator
02	End of each of the six boiler blowdown outfalls
02-1	Outlet of the sand and carbon filters
03	End of the cooling water outfall
05	Outlet of the neutralization tank.

2. GRAB SAMPLING

The Permittee shall install suitable sampling facilities, obtain grab samples and analyze the samples as follows:

<u>Parameter</u>	<u>Site No.</u>					
	<u>00</u>	<u>01</u>	<u>02</u>	<u>02-1</u>	<u>03</u>	<u>05</u>
pH	---	---	---	---	---	D
temperature, °C	---	---	M	---	M	---
total suspended solids, mg/L	---	---	---	M	---	---
oil and grease, mg/L	M	Q	---	---	M	---
residual chlorine, mg/L	---	---	---	---	D*	---

D = daily

M = monthly


Q = quarterly

\* on weekdays

Date Issued March 1, 1985

Date Amended July 19, 1985

MAY 07 1990

  
Assistant Regional Waste Manager



MINISTRY OF ENVIRONMENT  
Waste Management Branch

APPENDIX C-2  
to Permit No. PE-7178

MONITORING Cont'd...

2. GRAB SAMPLING Cont'd...

Samples shall be taken on discharge days.

Proper care should be taken in sampling, storing and transporting the samples to adequately control temperature and avoid contamination, breakage, etc.

3. ANALYSES

Analyses are to be carried out in accordance with procedures described in the second edition (February, 1976) of "A Laboratory Manual for the Chemical Analysis of Waters, Wastewaters, Sediments, and Biological Materials", or by suitable alternative procedures as approved by the Regional Waste Manager.

Copies of the above mentioned manual are available for inspection at all Waste Management Offices.

4. RESIDUAL CHLORINE

The Permittee shall retain a qualified consultant to determine the residual chlorine level at the boundary of the initial dilution zone for the Appendix 03 discharge and submit the results of the study to the Regional Waste Manager by October 31, 1990.

5. FLOW MEASUREMENTS

Measure or estimate once per month the effluent volume discharged over a 24-hour period from each outfall.


6. REPORTING

Maintain data of analyses and flow measurements for inspection and submit the data, suitably tabulated, to the Regional Waste Manager for the previous quarter. The first report is to be submitted by July 31, 1990.

Date Issued March 1, 1985

Date Amended July 19, 1985

MAY 07 1990

  
Assistant Regional Waste Manager