



OCT 20 1998

File: PE-04459

REGISTERED MAIL

British Columbia Hydro and Power Authority
333 Dunsmuir Street
VANCOUVER BC V6B 5R3

Dear Permittee:

Enclosed is amended Permit PE-04459 issued under the provisions of the Waste Management Act. Your attention is respectfully directed to the conditions outlined in the permit. An annual permit fee will be determined according to the Waste Management Permit Fees Regulation.

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 rests with the permittee. It is also the responsibility of the permittee to ensure that all activities conducted under this permit are carried out with due regard to the right of the third parties and comply with other applicable legislation that may be in force.

This decision may be appealed to the Environmental Appeal Board. Notice of the appeal must (1) be in writing, (2) include the grounds for appeal, (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor, 836 Yates Street, Victoria, British Columbia, V8V 1X4, (4) be delivered within 30 days from the date notice of the decision is given, and (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

For further information on the appeal process, please phone the Environmental Appeal Board at (250) 387-3464.

Administration of this permit will be carried out by staff from our Regional Office located at #401-333 Victoria Street, Nelson, British Columbia, V1L 4K3, (telephone: (250) 354-6355). Plans, data and reports pertinent to the permit are to be submitted to the Regional Waste Manager at Nelson, British Columbia.

Yours truly,

Barry Wood, P.Eng.
Assistant Regional Waste Manager

RM/lkf/ENCLOSURE

cc: British Columbia Hydro and Power Authority, Box 100, South Slokan BC V0G 2G0

Ministry of
Environment,
Lands and Parks

Environment and Lands
Kootenay Region

Mailing/Location Address:
401 - 333 Victoria Street
Nelson BC V1L 4K3

Telephone: (250) 354-6333
Facsimile: (250) 354-6332
PP Facsimile:(250) 354-6367



MINISTRY OF ENVIRONMENT,
LANDS AND PARKS

**PERMIT
PE-04459**

Under the Provisions of the Waste Management Act

**BRITISH COLUMBIA HYDRO AND POWER AUTHORITY
333 DUNSMUIR STREET
VANCOUVER, BRITISH COLUMBIA
V6B 5R3**

is authorized to discharge effluent to the water from a **POWER GENERATING FACILITY** located in **SOUTH SLOCAN**, British Columbia, subject to the conditions listed below. Contravention of any of these conditions is a violation of the Waste Management Act and may result in prosecution.

This permit supersedes and amends all previous versions of Permit **PE-04459**, issued under Part 2 Section 10 of the Waste Management Act.

1. AUTHORIZED DISCHARGES

1.1. This subsection applies to the discharge of effluent from a **POWER GENERATION FACILITY.**

1.1.1. The maximum authorized rate of discharge is 3.2 m³/day.

1.1.2. The characteristics of the discharge shall not exceed:

Typical treated septic tank effluent

1.1.3. The authorized works are **SEPTIC TANK, OUTFALL, and related appurtenances approximately located as shown on attached Site Plan A.**

1.1.4. The authorized works must be complete and in operation on and from the date of this amended permit.

A handwritten signature in black ink, appearing to read "Barry Wood", with a long horizontal line extending to the right.

Barry Wood, P. Eng.
Assistant Regional Waste Manager

Date Issued: November 18, 1977

Date Amended:

(most recent) **OCT 20 1998**

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- 1.1.5. The location of the facilities from which the discharge originates and the location of the point of discharge is Lot 396, on Plan 9078 of the S.E. of Cominco's South Slokan Plant and on the Kootenay River.

2. **GENERAL REQUIREMENTS**

2.1. **Septic Tank Sludge and Scum Removal**

Sludge and scum shall be removed from the septic tank once every 5 years, or at other frequencies as the Regional Waste Manager may allow, for disposal at a suitable site. The disposal arrangements require the approval of the Regional Waste Manager. Records of sludge and scum removal shall be maintained for inspection.

2.2. **Bypasses**

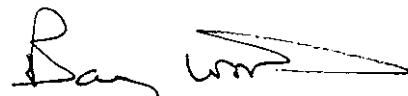
The permittee shall ensure that no waste is discharged without being processed through the authorized works unless prior written approval is received from the Regional Waste Manager.

2.3. **Maintenance of Works**

The permittee shall inspect the authorized works regularly and maintain them in good working order. Any malfunction which may affect the quality of the discharge shall be reported to the Regional Waste Manager within a specified time period.

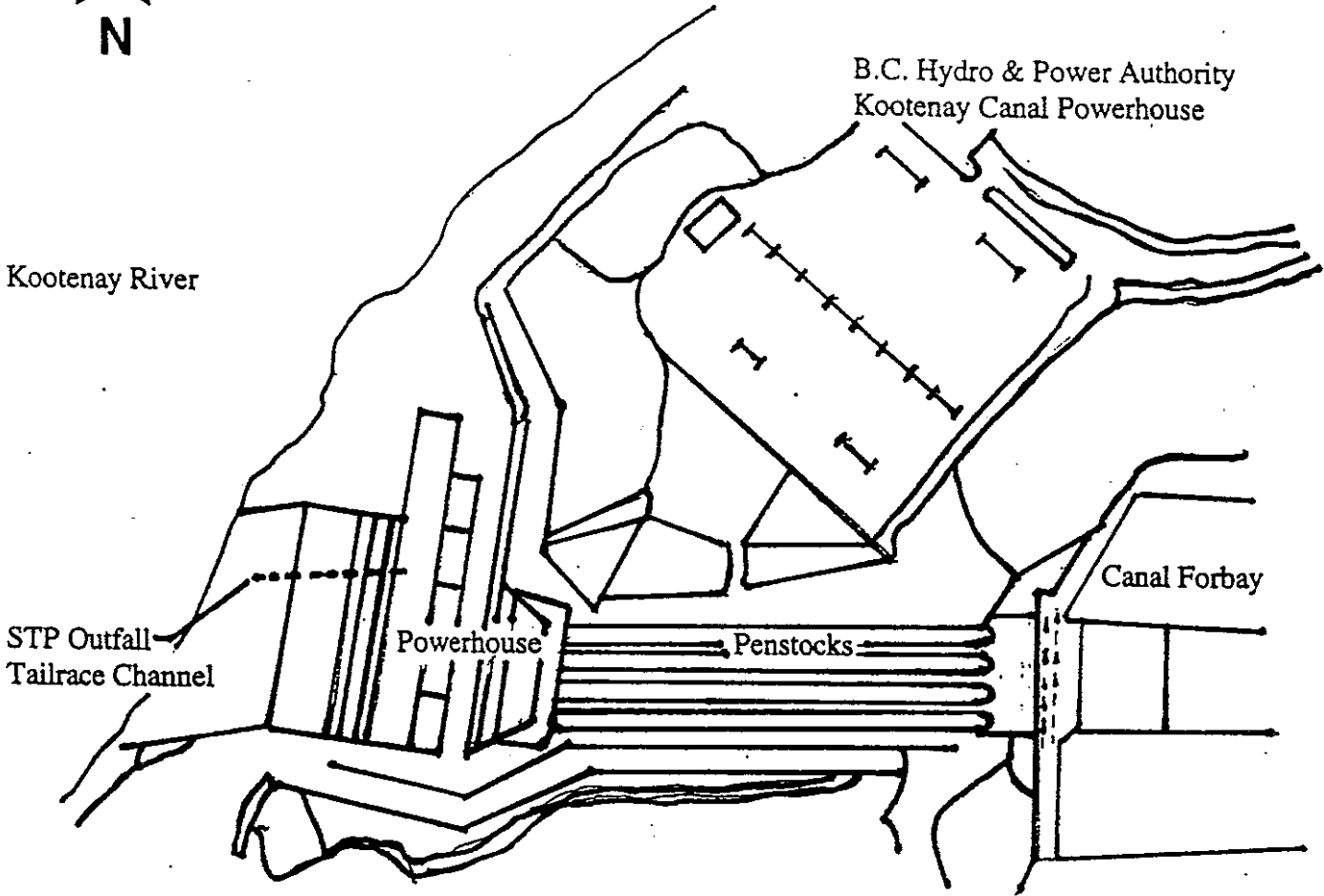
2.4. **Process Modifications**

The permittee shall have written approval from the Regional Waste Manager prior to implementing changes to the authorized works that may result in discharges exceeding the characteristics authorized under this permit.



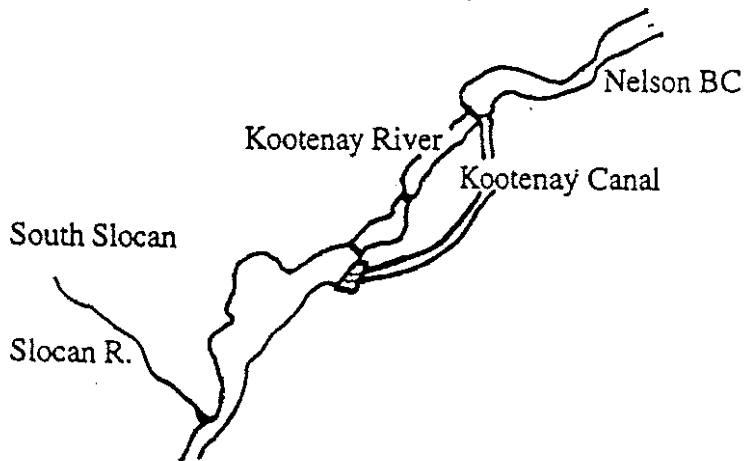
Barry Wood, P. Eng.
Assistant Regional Waste Manager

SITE PLAN A



Legal Description: Lot 396, Plan 9078, Kootenay District.

Location Map



Scale: Not to Scale

PERMIT: PE-04459

Date: OCT 20 1993

Barry Wood, P. Eng.
Assistant Regional Waste Manager
Kootenay Region

MINISTRY OF ENVIRONMENT, LANDS AND PARKS

Pollution Prevention

Date: September 24, 1998

File: PE-04459

From: POLLUTION PREVENTION
KOOTENAY REGION

By: R. MICKEL

TECHNICAL REPORT

LEGAL NAME(S): BC HYDRO & POWER AUTHORITY

LOCAL ADDRESS(S): 333 DUNSMUIR STREET
VANCOUVER, B.C. V6B 5R3

APPLICATION: Permit AMENDMENT

DATED: 12/24/96

OPERATION: POWER GENERATION
PLANT TREATED
DOMESTIC EFFLUENT

GEOGRAPHIC LOCATION: SOUTH SLOCAN B.C.

PRODUCTION CAPACITY: 3.2 CUBIC METERS PER DAY
SIC CODE: NC02

1. ADMINISTRATIVE ASPECTS

Administrative Requirement	Response
Publishing Requirement: British Columbia Gazette Pennywise	JULY 9, 1998 JULY 15, 1998
Posting Requirement	MARCH 4, 1998
Security Deposit	Not Required
Circulation to Agencies: Environment Canada Ministry of Health Central Kootenay Regional District Environmental Section	Response Sept 4 /98, No objection Comments as per Section 4.3 No Response Response September 24, 1998, No objection

2. APPLICATION REQUEST

The applicant is requesting an AMENDMENT to Waste Management Permit PE04459 authorizing discharge 4.6 m³/day of treated domestic effluent to the Kootenay River at South Slocan. The applicant proposes to reduce the discharge volume to 3.2 m³/d and remove chlorination.

2.1. APPLICATION REVISION

none

3. HISTORY

Permit PE04459 was issued June 20, 1979. No concerns or issues have been raised regarding this discharge since that time. As part of an overall review of its facilities BC Hydro discussed this permit with BC Environment. The toxicity of the chlorine residual was identified as a concern. BC Hydro requested our consideration of removal of the chlorination requirements as per similar installations around the province.

4. TECHNICAL ASPECTS

4.1. SOURCE OF DISCHARGE

The source of discharge is the employee washrooms located within the Kootenay canal power generation facility.

4.2. TREATMENT OF DISCHARGE

Anaerobic treatment via a septic tank. The effluent is to be discharged into the highly turbulent and oxygenated tail race.

4.3. PUBLIC OR AGENCY CONCERNS

Health - objects in principle to the discharge of unchlorinated effluent to surface waters.

4.4. SITE INSPECTION REPORT

The Kootenay Canal power project is located just above the Slocan pools a well used recreational area. Use is primarily fishing but it is used occasionally for swimming also. There is no recreational use within 300m of the discharge.

4.5. COMPLIANCE STATUS AND ENVIRONMENTAL IMPACT

The following is an assessment of the environmental impact rating of the proposed discharge:

Criteria	Rating Factors	Rating
Quantity of Discharge	Effluent Discharge < 50 m ³ /d	0.0
Quality of Receiving Environment in Relation to Ministry Ambient Objectives	Airshed objective attained with more than a 20% safety factor	0.0
Dilution Capability and Sensitivity of Receiving Environment	Initial Dilution >= 2000:1	0.0
Actual or Intended Uses of Receiving Environment	Used for Water Contact Recreation such as Swimming, Water Skiing, etc. < 1000 m downstream	2.0
Public/Agency Sensitivity	Low Sensitivity	1.0
Potential and Actual Human Safety and Health	No Threat to Human Health Due to Contact with Discharged Effluent or Air Contaminants	0.0
	Total	3.0

4.6. RECEIVING ENVIRONMENT

The effluent is to be discharged into the highly turbulent and oxygenated tail race, where it will receive a instantaneous dilution of >200,000:1

4.7. PROPOSED MONITORING

none

4.8. COMPLIANCE WITH POLICY OR OBJECTIVES

Complies with Draft Sewage Regulations and Objectives

4.9. ASSESSMENT

Although the discharge of Septic tank effluent to surface waters is generally not acceptable the fact is that discharging such a low volume of waste into a turbulent super saturated oxygen environment will ensure that there will be no environmental impact.

4.10. FEES

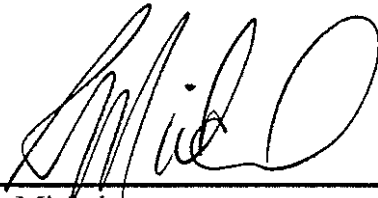
According to the current *Waste Management Fees Regulation*, the annual permit fee will be based on:

$$\begin{aligned} \text{BOD} &= 100\text{mg/l} \times 3.2 \text{ m}^3/\text{d} \times 365 \text{ d/yr} \times 10^{-6} = 1.5 \text{ t/yr} \times \$6.95/\text{t} = \$8.12 \\ \text{TSS} &= 100\text{mg/l} \times 3.2 \text{ m}^3/\text{d} \times 365 \text{ d/yr} \times 10^{-6} = 1.5 \text{ t/yr} \times \$4.50/\text{t} = \$5.26 \\ \text{Total annual variable fee} &= \$113.38 \end{aligned}$$

5. RECOMMENDATIONS

It is recommended that, pursuant to Section 13 of the Waste Management Act, the Regional Waste Manager amend Permit PE004459 subject to the following terms and conditions;

- Standard Clauses for Process Modifications, Maintenance of Works and Emergency Procedures, Bypasses, and Sludge Wasting and Disposal.



Ron Mickel

Environmental Technician
Kootenay Region



I agree with these recommendations
Barry Wood, P. Eng.
Assistant Regional Waste Manager
Kootenay Region