SURVEILLANCE NETWORK PROGRAM

Licence Number: **NWB1ULU9700**

Effective Date of Licence Renewal: **July 1, 1997**

SNP SAMPLING LOCATIONS, SAMPLING REQUIREMENTS, AND ANALYSIS REQUIREMENT.

Station Numbers	Description	Sampling Requirements	Analysis Requirements
100-1	Water Intake at West Lake	Annually	Total Arsenic, Total Copper, Total Nickel, Total Mercury, Total Cadmium, Total Lead, Total Zinc, Total Suspended Solid, Faecal Coliform, pH
200-1	Sewage Effluent Discharge Point at East Lake	Monthly	Faecal Coliform, Total Suspended Solids, BOD5, pH
200-2	Settling/Neutralization Pond 1	Monthly during open water season. Prior to discharge and weekly during discharge.	Total Arsenic, Total Copper, Total Nickel, Total Mercury, Total Cadmium, Total Lead, Total Zinc, Total Suspended Solid, pH
200-3	Settling/Neutralization Pond 2	Monthly during open water season. Prior to discharge and weekly during discharge.	Total Arsenic, Total Copper, Total Nickel, Total Mercury, Total Cadmium, Total Lead, Total Zinc, Total Suspended Solid, pH
200-4	Outflow East Lake	Monthly during open water season. Weekly during open water season, if receiving discharge from ore runoff collection ponds.	Total Arsenic, Total Copper, Total Nickel, Total Mercury, Total Cadmium, Total Lead, Total Zinc, Total Suspended Solid, pH, Faecal Coliform
200-5	Outflow Ulu Lake	Monthly during open water season. Weekly during open water season, if receiving discharge from ore runoff collection ponds.	Total Arsenic, Total Copper, Total Nickel, Total Mercury, Total Cadmium, Total Lead, Total Zinc, Total Suspended Solid, pH, Faecal Coliform

**The pH, temperature and specific conductivity of the sample shall be recorded at the time of sampling.*

B. SNP GENERAL REQUIREMENTS

1. All sampling, sample preservation and analysis shall be conducted in accordance with methods prescribed in the current edition of "Standard Methods for the Examination of Water and Wastewater" at the time of analysis, or by such other methods as approved by the Board.

2. The plan referred to in Part B, Item 1 of the SNP, shall be implemented as approved by the Board.

3. All sampling, sample preservation and quality control procedures shall be conducted in accordance with methods approved by the Board.

4. A quality assurance plan which includes analyses of field blanks and certified reference material, and replicate sampling in order to assess field contamination, accuracy, and precision, shall be submitted to the Board for approval.

5. All analyses shall be performed in a laboratory approved by the Board.

6. The following example is provided to illustrate the procedures for calculating the average concentration. If the effluent stream is sampled weekly for each substance, the following lead values may be obtained:

Week 1	Sample #1	.15
Week 2	Sample #2	.12
Week 3	Sample #3	.10
Week 4	Sample #4	.18
		Running Average= (.15+.12+.10+.18)/4=.137
Week 5	Sample #5	.20
		Running Average= (.12+.10+.18+.20)/4=.150
Week 6	Sample #6	.16
		Running Average= (.10+.18+.20+.16)/4=.160

C. FLOW MEASUREMENT REQUIREMENTS

1. The daily quantity of water pumped from West Lake for industrial purposes shall be recorded in cubic metres.

2. The daily quantity of waste discharged from the Sewage Treatment Facility shall be recorded in cubic metres.

3. The daily quantity of waste discharged from the shall be recorded in cubic metres.

4. The flow at Station Number 200-4 shall be measured and recorded as approved by the Board.

D. REPORTS

1. The Licensee shall submit to the Board within thirty (30) days following the month being reported, all data and information required by the "Surveillance Network Program", including the results of the approved quality assurance plan.

Witness

Thomas Kudloo, Chairman

Date

Date