

13. Re: Shell Oil Refinery
Waste Water Treatment Facilities

The following is the report of the Planning Director dated May 10, 1972 in which he advises that Shell Oil is undertaking certain waste water treatment work.

This is for the information of Council.

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Planning Department
May 10, 1972

To: Municipal Manager.

From: Planning Director.

Re: Shell Oil Refinery
Waste Water Treatment Facilities

The Pollution Control Branch has established standards for water entering Burrard Inlet and the refineries must meet these requirements within a specified time.

Shell Oil has had discussions with the various Departments and they propose to meet the P.C.B. standards. Much of the work they propose does not require Preliminary Plan Approval, as it involves underground piping. There are, however, some surface installations which will require P.P.A. which we are prepared to grant. The purpose of this report is simply to acquaint Council with what is proposed in the way of water treatment and the installations required to provide this treatment. Preliminary Plan Approval will be granted as soon as we have completed the review of the detailed proposal.

DEVELOPMENT PROPOSAL

Shell Canada plans to install new waste water treating facilities at Shellburn Refinery. The project includes a new storm water sewer system, an air flotation unit, pH control for process water and storm water retention tanks. Estimated cost of these facilities is 1.9 MM dollars with completion of construction scheduled by year end. This project brings total planned expenditure for water treating facilities at Shellburn to 2.3 MM dollars in 1972.

These facilities are designed to upgrade the quality of process waste water to meet the objectives established by the B.C. Pollution Control Board. They will also provide substantial additional protection against the possibility of an accidental oil spill into Burrard Inlet.

Continued

13. Re: Shell Oil Refinery
Waste Water Treatment Facilities (Cont'd)

Storm Water Sewer and Retention System

The work envisages a new sewer system to collect storm water run off from the developed portion of the property and conduct it to retention tanks. The work includes installation of two 1.5 MM gallon (112 ft. x 24 ft.) tanks to retain the run off collected in the new storm water sewer. The system has been sized on the basis of a major storm and will allow retention and inspection of storm water before discharge into Burrard Inlet. Provision has also been made to allow treatment of this water should it ever become contaminated. Complete segregation of rain water from process waste water is required by the Pollution Control Board to prevent attaining waste water quality objectives by dilution with clean water. Further, complete segregation of clean water from process water will result in more efficient treatment of the water.

Air Flotation and pH Control

Process waste water is presently treated in a sour water stripper (currently being replaced with a new more efficient unit) and two parallel oil/water separators prior to discharge into Burrard Inlet. This project envisages adding two new air flotation units and pH control facilities. With the addition of air flotation, pH control and the new sour water stripper, waste process water quality will be suitable for biological oxidation or equivalent treatment. The water quality will be as good as or better than that required by the B.C. Pollution Control Board.

Location of New Facilities

The attached plot plan indicates the planned location of the air flotation unit and the water retention tanks which are located in a ravine in the north end of the plant close to Burrard Inlet. This location is chosen as it is the lowest point in the refinery and therefore the point where the greatest volume of water can be collected.

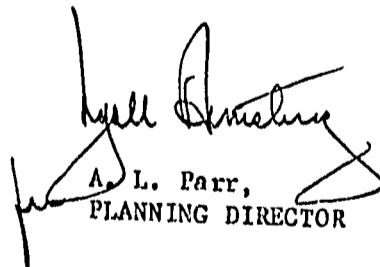
Similar facilities are operating in a number of Shell refineries. On the basis of this experience, Shell is certain this installation will not create any odour or noise.

Engineering

The project is being engineered by Wright Engineers Limited, a major Vancouver based firm of engineering consultants under the general direction of Shell engineering and technical personnel.

RECOMMENDATION:

THAT Council receive this information.


A. L. Parr,
PLANNING DIRECTOR

BURRARD INLET

PROPOSED WASTE WATER
TREATMENT PLANT

