



May 28, 1971

PROJECT PROPOSAL

To: The Corporation of the District of Burnaby,
Municipal Hall
4949 Canada Way
Burnaby 2, B.C.

Attention: Mr. George H. Arnson,
Chief Public Health Inspector

Subject: Project 2351: Environmental Quality - Chevron
Modernization Program

SUMMARY

Terms of reference for a proposed study of the environmental impact of the Chevron Canada modernization program are presented. The preferred approach is believed to be adequate and will require about two to three weeks' elapsed time.

INTRODUCTION

Public concern has been expressed to Burnaby Council regarding the possible environmental impact of a modernization program at the Chevron Canada refinery. This concern was presented in writing, as a series of questions, by Mr. Harry Fuller representing interested citizens, the Burnaby Pollution Removal Association, Burnaby S.P.E.C., and Vancouver Heights Ratepayers Association. While Chevron Canada Ltd. have replied to these questions, Burnaby Council moved to request an independent assessment of the questions, answers and other environmental aspects not considered in these. Before proceeding with this assessment, establishment of suitable terms of reference is essential. Three alternative levels of assessment are discussed below.

TERMS OF REFERENCE

Refining of oil is not a simple process; small refineries produce only 5 or 6 products most of which are sold for reprocessing by others, while some large, completely integrated refineries produce a variety of products sometimes totalling about 200. Complexity of potential environmental problems parallels the 30- to 40-fold product range, since each material produced generally requires one or more manufacturing steps.

A) The concept of "the best practical abatement procedures has been applied on a broad basis in highly populated areas of the United States and Europe. While the NEW CONSTRUCTION at Chevron Canada's refinery probably adheres to this criterion, the EXISTING refining capacity probably does not. However, in order to measure what is currently released to air and water, to determine whether the criterion is being met, will be a lengthy and costly process. Since recent measurements by the Provincial Health Department confirm our earlier measurements (1961-62) that air quality in the vicinity of the refinery is excellent, since the existing (and proposed) refinery capacity is small and since both the Provincial Pollution Control Branch and the Federal Fisheries Department have established

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a timetable for refinery effluent treatment, we feel that an "all-out" assessment is not justified at present.

B) All major oil companies recognized some years ago the need for a reduction in environmental impact of their refinery and petrochemical operations. They have reduced this environmental impact, and have established public relations groups to advise others of their efforts. Chevron Canada has access to such a group and we could merely assess its statements. This approach, however, would not bridge the "communications" gap that apparently exists, and would present an unacceptable approach to the assessment.

C) In our study for the Provincial Government, Project 2328 - "Air Quality in British Columbia", we estimated the atmospheric emissions of refineries in the Province. In addition, we have recently been involved in engineering studies to improve aqueous effluents from another Burrard Inlet refinery. We propose, therefore, that our assessment include the following:

1) Carry out a more detailed study to re-appraise the probable emissions to atmosphere and to sewer by the Chevron refinery in existing operations.

2) Estimate probable effect on emissions to atmosphere and sewer by the proposed modernization.

3) Evaluate environmental impact of potential increases in crude handling capacity at the refinery.

4) Develop a comparison between other sources of air and water pollution in Burnaby and the information obtained in 1) and 2).

5) Examine the questions presented by Mr. Fuller, representing interested citizens' groups, and the answers supplied by Chevron Canada Ltd.

6) Attempt to determine whether the complaints received by the Municipal Health Department as outlined by Dr. Sunderland in his report to the Municipal Manager on May 14, 1971 can be segregated into two groups: those possibly attributable to refinery operations and those unlikely to be so attributable.

The complete cooperation of Burnaby District staff and refinery personnel will, of course, be essential to successful completion of the survey.

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