

TO: CITY MANAGER **DATE:** 2000 09 15
FROM: DIRECTOR ENGINEERING **FILE:** 10-08-11(01)
SUBJECT: ENVIRONMENT COMPLIANCE/PUBLIC SAFETY REVIEW -
CHEVRON CANADA LTD.
PURPOSE: To update Council on the latest discussion on the draft Terms of Reference for the environmental review/public safety assessment studies for the Chevron operation in Burnaby.

RECOMMENDATIONS:

1. **THAT** Council request the Ministry of Environment, Lands & Parks:
 - consider the inclusion of the comments as outlined in Appendix B in the final Terms of Reference, and
 - provide a copy of the final draft Terms of Reference to the City for review; and
2. **THAT** a copy of this report be forwarded to:
 - Honourable Joan Sawicki, Minister of Environment, Lands & Parks
 - Burnaby MLA's and MP's
 - Ministry of Environment, Lands & Parks
 - GVRD
 - Chevron Canada Ltd.

REPORT

INTRODUCTION

On Tuesday, 2000 September 12, staff received a copy of the revised Terms of Reference from the Ministry of Environment for the environmental review/public safety/groundwater review studies at the Chevron site. A copy of the Terms of Reference is included in Appendix A, **attached**. At the same time, staff were invited to attend a public meeting held on Thursday evening, September 14 to discuss the revised Terms of Reference.

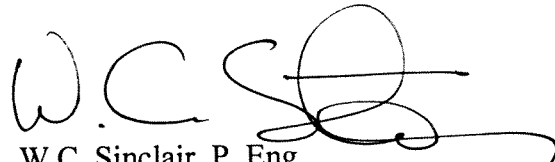
The purpose of this report is to provide Council with a summary of staff comments on the Terms of Reference dated 2000 September 12 and the recommended course of action.

DISCUSSION

Staff have reviewed the revised Terms of Reference and noted that some of the suggested changes previously identified by the City have been included in the current draft. However, there are still some key issues related to project timeline, establishment of a project steering committee to guide the study, database validation, groundwater investigation and tank assessment that need to be addressed in the final Terms of Reference. A summary of the staff comments is included in Appendix B, **attached**.

At the public meeting on September 14, staff had the opportunity of conveying the comments to the Ministry and Chevron. In the interest of bringing a closure to the preparation of the study's Terms of Reference, staff recommend that:

- a) the comments outlined in Appendix B be forwarded to the Ministry for inclusion in the final Terms of Reference, and
- b) the City be provided a copy of the final draft Terms of Reference for review prior to granting final acceptance by the Ministry.


W.C. Sinclair, P. Eng.
DIRECTOR ENGINEERING

LSC:jb
Attach.

cc: Director Planning & Building

APPENDIX A
DRAFT TERMS OF REFERENCE - CHEVRON
REC'D. FROM MELP 2000 SEPT. 12

BURNABY REFINERY - ENVIRONMENTAL COMPLIANCE

There will be an environmental review of the Chevron refinery focusing on air emissions, waste water discharges, solid waste disposal and spill management. The study will examine works and measures, those in place and those planned, for achieving permit compliance and prevention of accidental releases. The study will report on Chevron's compliance for all environmental permits and regulations.

This study has been voluntarily undertaken by Chevron with the assistance and input of the Ministry of Environment, Lands and Parks. Various stakeholders have contributed input to refine the study's terms of reference.

AIR EMISSIONS

- Identify permits and those agencies responsible for administration
- Report compliance status
- Identify emission inventory data for Common Air Contaminants and HAP's
- Compare with other Canadian refineries.
- Review emission trends from the refinery for common air contaminants (e.g. SO₂, NO_x) and hazardous air pollutants (NPRI data). Compare with Canadian refineries and GVRD trends. Assess the impact of this relative to the ambient air through a review of ambient air monitoring programs and data in the vicinity of other Canadian refineries where data is publicly available.

As part of the air emissions study, review equipment and procedures to manage discharges from stacks, specifically:

- Furnaces and boilers
- FCC stack
- SRU incinerator stack
- Flare stack

Review and assess volatile organic compounds (VOC's), specifically:

- Losses from storage tanks, holding ponds, equipment leaks, current and planned programs aimed at reducing losses
- Losses from marine and truck loading operations

WASTE WATER MANAGEMENT

- Review water effluent discharged to GVRD sanitary sewer system with respect to permit compliance and quality trends
- Conduct similar review for surface run-off water discharged to Burrard Inlet

SOLID WASTE MANAGEMENT

- Review solid waste handling at the refinery with respect to legal requirements

SPILL PREVENTION AND MANAGEMENT

Spill Prevention

- Evaluate marine loading/unloading facilities and procedures
- Evaluate containment of potential releases
- Evaluate work planned for future improvements

Examine spill response capabilities with respect to

- Equipment
- Response resources

Storage Tanks

- Review program to enhance spill prevention and odour reduction
- Review long term tank plan vs Waste Management Act regulations and CCME guidelines.
- Review proposed tank replacement in relation to each other.

COMMUNITY IMPACT

There will be a review of the potential impact of the refinery on the community from a public safety point of view. The study will identify those areas of the refinery operation where there is potential for community impact as a result of accidental releases and from regular operation. It will include a review, update, and/or creation of public safety risk assessment studies. The Consultant will use the CCPA Risk Assessment Guidelines as a reference for this study. Emergency response and public notification processes will be examined and documented in the final report.

The study will review the roles and responsibilities of Burnaby Fire Dept, RCMP, City of Burnaby, BC MELP, GVRD, Simon Fraser Health Unit and others as they relate to emergency response and public notification.

This study has been voluntarily undertaken by Chevron with the assistance and input of the Ministry of Environment, Lands and Parks. Various stakeholders have contributed input to refine the study's terms of reference.

For those areas identified, the study will;

- Identify potential types of accidental releases and community impacts of such releases
- Identify community impacts from regular operations
- Compile information pertaining to all hazardous substances in the process and the potential for environmental impacts
- Review prevention measures
 - Design of equipment, including designs to withstand seismic events
 - review condition of infrastructure, specifically; storage tanks, processing units, piping between the refinery to the tank farm, the pipeline between Trans Mountain Pipeline Ltd and the refinery, spill containment facilities, marine facilities and fire protection facilities.
 - Safeguards in place
 - Review on-site traffic management as it relates to protection of tanks and equipment
- Assess the following elements
 - Procedures for informing the public and local emergency response agencies about accidental releases
 - Procedures and measures for emergency response after an accidental release of a hazardous substance
 - Co-ordination with the community emergency response plan
 - Monitoring and detection systems in use for hazardous releases

- Emergency Response and Contingency Plans will be examined and the roles and responsibilities of the following will be reviewed;
 - Chevron
 - Burnaby Fire Department
 - Other relevant agencies

- Conduct a general review of the public notification process
 - Roles of stakeholders
 - Identify and comment on current notification process
 - Review and comment on other public notification and response models (e.g. evacuation vs shelter in place)

DRAFT – For discussion purposes

Subsurface Groundwater Study

There will be a study of subsurface groundwater focusing on the perimeter of the Refinery. The investigation will determine whether contaminants originating from the Chevron site are migrating, or may in the future migrate, via groundwater, into Burrard Inlet.

Chevron will retain a consultant from the MELP approved list of professional consultants.

The consultant will develop a workplan detailing the number and location of groundwater wells and necessary analytical parameters required to determine if contaminants originating from the plant site are migrating, or may in the future migrate, via groundwater, into Burrard Inlet. The workplan shall be acceptable to the Regional Waste Manager.

The consultant will produce a report detailing the installation of the wells, sampling procedures, sampling results, and an interpretation of the results.



APPENDIX B

The following comments are provided upon reviewing the final Terms of Reference dated 2000 September 12 for Environmental Review / Public Safety Risk Assessment and Groundwater Investigation developed by Chevron Canada Refinery Ltd., Burnaby.

General Comments on the Administrative and Management Process for the Work Program:

1. The City is of the view that an interagency steering committee comprising of staff from the Ministry of Environment, GVRD, Simon Fraser Health Region, City of Burnaby and Chevron would benefit the consulting team and provide useful input to the consultant's work during the course of the study. The consulting team should provide progress reports to the Steering Committee on the study findings and progress.
2. A list of qualified, independent professionals acceptable to the Ministry to undertake the above studies needs should be prepared. The consultant selection process should be managed through the Steering Committee.
3. Timelines and key milestones for completing the studies need to be included in the Terms of Reference. The consultant should include a section on recommendations in the final reports.

Specific Comments on the Technical Work Program:

1. Environmental Compliance Section
 - Review of emission trends should include a review of methodologies applied to generating air emission data;
 - A condition survey of existing equipment should be included in the air emission study.
 - Clarification is required to ensure that effective management of contaminated soils and bio-beds is included under solid waste management.
 - Clarification is required to ensure that the evaluation of storage tanks under spill prevention and management component includes tanks which store crude oil and octane enhancers as well.
 - Assessment of existing staff training program on management of on-site environmental related matters.

- Assessment of resources available to address environmental issues.
- Review whether BACT is being applied by Chevron.
- Proximity of planned storage tanks to each other and size of tanks.

2. Community Impact Section

- Clarification is required to ensure that the condition of the cooling tower is also reviewed.
- The study should review the roles and responsibilities of Chevron as the primary responder on emergency response and public notification with Burnaby, RCMP, Fire, MELP, GVRD, SFHR and other Federal agencies as supporting agencies.

3. Subsurface Groundwater Study

- The Terms of Reference are noted to focus on assessing the groundwater at the perimeter of the Refinery. Additional requirement on evaluating the groundwater quality under the impoundment areas and or the spill containment ponds, should be added to determine the integrity of these structures.
- There is lack of detail regarding number of groundwater monitoring well being required to be installed, sampling frequency and sampling duration. Clarification is also required on whether the groundwater monitoring wells will be temporary or permanent.

It is noted that many of the comments previously expressed in the letters dated June 29, 2000, July 13, 2000 and July 18, 2000 from the City to the Ministry have been included in the above Terms of Reference. However, we hope that the Ministry will provide due consideration to the above comments and include them in the Terms of Reference prior to acceptance.