

ITEM	2
MANAGER'S REPORT #	25
COUNCIL MEETING	95/05/15

TO: CITY MANAGER 1995 MAY 08

FROM: CHIEF ENVIRONMENTAL HEALTH OFFICER

SUBJECT: NOISE FROM CHEVRON CANADA LIMITED REFINERY,
355 NORTH WILLINGDON AVENUE, BURNABY.

PURPOSE: TO INFORM COUNCIL OF ADDITIONAL NOISE MITIGATIVE
MEASURES TO BE IMPLEMENTED BY CHEVRON CANADA LIMITED
REFINERY AND STAFF' ACTION IN ADDRESSING NEIGHBOURING
RESIDENTS' CONCERNS.

RECOMMENDATION:

1. THAT a copy of this report be forwarded to:
 - a) Ms. R.L. Weber, c/o D.W. Skogstad Personal Law Corporation, 608 Baker Street, Nelson, B.C. V1L 4J4.
 - b) Ms. Eileen McLeod, 5171 Harbourview Road, Burnaby, B.C., V5B 1C9.
 - c) Mr. Svend Robinson, M.P., 4453 East Hastings Street, Burnaby, B.C., V5C 2K1.
 - d) Mr. Bob Gray, Manager Health Environment & Loss Prevention, Chevron Canada Limited Refinery, 355 North Willingdon Avenue, Burnaby, B.C., V5C 1X4.

REPORT

1.0 INTRODUCTION

At the regular Council Meeting on 1995 April 10, correspondence (Item 3(b) of the Council Agenda) was received from Ms. R.L. Weber expressing concerns regarding noise from Chevron Canada Limited Refinery located at 355 N. Willingdon Avenue in Burnaby.

NOISE FROM CHEVRON CANADA LIMITED REFINERY
355 NORTH WILLINGDON AVENUE
1995 MAY 082

ITEM	2
MANAGER'S REPORT #	25
COUNCIL MEETING	95/05/15

The following report responds to the aforementioned correspondence.

2.0 STATUS ON CHEVRON CANADA'S SHORT TERM NOISE MITIGATION STRATEGY.

At the regular Council Meeting on 1994 August 22, the Medical Health Officer submitted a report outlining noise mitigative measures that Chevron Refinery has committed to undertake in 1994. To date, Chevron Refinery has completed all of the short term noise reduction measures noted in the report.

3.0 EXCESSIVE NOISE FROM CHEVRON REFINERY ON 1995 MARCH 22

Ms. Weber, in her letter to Council, complained that she and her family were awakened from a sound sleep by the oil refinery letting of steam from the plant at 3:00 a.m. on 1995 March 22.

In discussing the said incident with Mr. Bob Gray of Chevron Refinery, the use of the refinery flare was necessary due to an unplanned shutdown of the FCC Unit wet gas compressor. The unplanned shutdown resulted in a pressure build-up and the excess gas was diverted to the refinery flare. The shutdown was automatically initiated to prevent compressor damage, lasted less than three minutes and is an infrequent event. The cause of the incident has since been corrected.

4.0 STAFF RESPONSE TO NOISE CONCERNS FROM CHEVRON REFINERY

Staff have inspected the short term noise reduction measures and took two sets of noise measurements from previously designated locations (see Attachment #1) in order to determine the effectiveness of these measures in reducing noise from the refinery.

Results of the noise measurements indicate minimal changes in noise levels at Chevron Refinery property line with four of the thirteen locations exceeding the Burnaby Noise or Sound Abatement Bylaw. As a result, staff met with Mr. Bob Gray of Chevron Refinery to discuss the need for additional noise attenuation measures.

In response, Chevron Refinery committed to undertake frequency analysis survey of noise generation from various units in their Burnaby refinery. During the shutdown of the refinery in March 1995, Chevron Refinery also increased the nozzle size to a grid in the FCC lower regenerator to further reduce the noise from the FCC unit.

ITEM	2
MANAGER'S REPORT #	25
COUNCIL MEETING	95/05/15

Results of noise surveys taken independently by Chevron Refinery and Environmental Health Services prior to, during and after the refinery shutdown are in agreement but with different conclusions.

Chevron Refinery's conclusions are:

1. Fence line noise levels are in the lower range expected from refineries;
2. Fence line noise levels have not increased since 1972 in spite of several major new equipment additions;
3. Use of low noise generating new equipment has been successful and should be continued;
4. Noise complaints are based on variations in sound levels due to unusual (operational) occurrences;
5. There are no practical technical solutions to further reduce noise levels that would be apparent to neighbouring residents.

The conclusions drawn by staff are:

1. There is very little reduction in noise levels from implementing all of the noise reduction measures to date;
2. Noise levels during normal refinery operations continue to exceed the Burnaby Noise or Sound Abatement Bylaw requirement.

5.0 FUTURE NOISE MITIGATION STRATEGY PROPOSED BY CHEVRON CANADA

Recognizing that noise reduction measures implemented to date are inadequate to fully address neighbouring residents' concerns, Chevron Refinery proposes to manage noise peaks and to improve personnel awareness as follows:

1. Correlate complaints received to specific incidents in order to implement appropriate corrective action;
2. Review use of temporary equipment and unusual procedures;
3. Install a continuous noise monitor on the refinery fence line and provide the noise data to Central Control House operators so that necessary operational adjustments may be made promptly;
4. Replace the FCC bypass stack with a new larger diameter stack with lower noise levels.


Items 1 and 2 will be ongoing, while item 3 will be implemented by July 1995 and item 4 will be completed by mid 1996.

NOISE FROM CHEVRON CANADA LIMITED REFINERY
355 NORTH WILLINGDON AVENUE
1995 MAY 08 4

ITEM	2
MANAGER'S REPORT #	25
COUNCIL MEETING	95/05/15

6.0 CONCLUSION

While staff recognize that Chevron Refinery has implemented numerous noise reduction measures in their Burnaby refinery and proposes to implement additional measures, noise generated during normal refinery operations continue to exceed the Burnaby Noise or Sound Abatement Bylaw which cannot be ignored. As such, staff are in the process of presenting summary of charges to the Provincial Crown Counsel for violations of the Burnaby Noise or Sound Abatement Bylaw. The above information has been relayed to Mr. Bob Gray of Chevron Refinery.

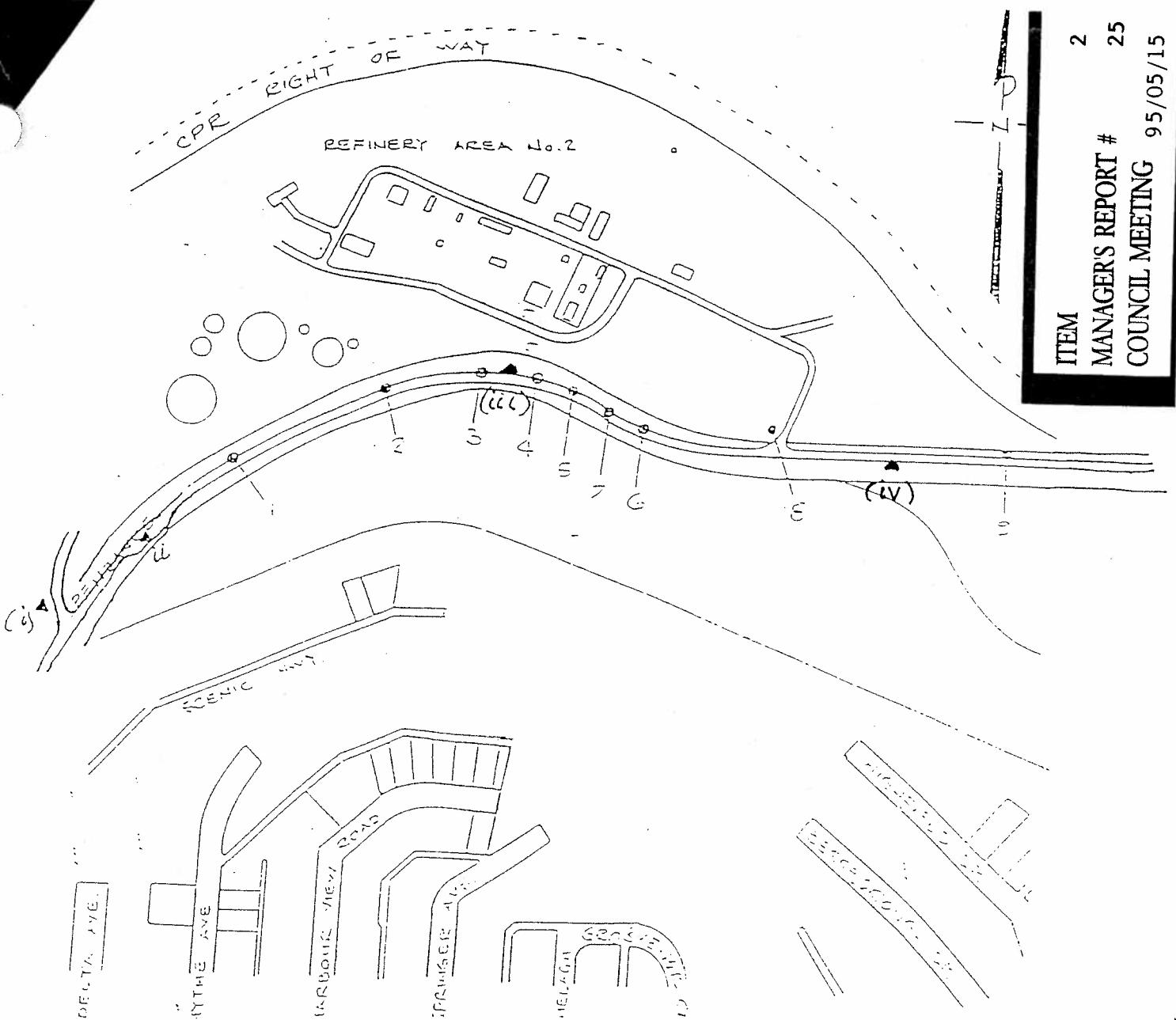


T. Shum
CHIEF ENVIRONMENTAL HEALTH OFFICER

TS/gl

Attachment

- cc: () Deputy City Manager Corporate Services
- () Medical Health Officer



Property line stations 1 - 9

- Station 1 - near the bypass valve sign
- Station 2 - across from fin fan cooler
- Station 3 - across from furnace
- Station 4 - across from pole # 9
- Station 5 - across from culvert
- Station 6 - near entrance to main gate at water valve flush box
- Station 7 - west of Station 6 at fire hydrant
- Station 8 - by the entrance to main gate between the upper and lower level parking lot
- Station 9 - east end of Penzance Drive by the contractor's gate

* Noise levels at Stations 2, 3, and 4 are in excess of the Burnaby Noise or Sound Abatement Bylaw

Approximate locations of where additional noise measurements were taken:-

- Station i - dirt road entrance
- Station ii - first road shoulder
- Station iii - hydro pole (B.C. flag)

