

7. Re: Chevron Canada Limited.

Attached for Council's information are copies of each of the following pieces of correspondence:

1. Letter dated November 8, 1971, from Mr. T.S. Bremner to Dr. W.F. Sunderland stating that there is no evidence to show that employees at either the Burnaby Refinery or the Richmond California Refinery have a higher incidence of respiratory infection than the office group of employees in these respective areas. (The Confidential letter referred to is not attached.)
2. Letter dated November 8, 1971, from Mr. T.S. Bremner to the Municipal Manager attaching a copy of a newsletter recently mailed to residents on the postal walk immediately adjacent to the Refinery, by the Company, outlining the actions of the Company as far as the aesthetic side of the problem is concerned.
3. Letter dated November 9, 1971, from Mr. T.S. Bremner to the Municipal Manager outlining generally how the Burnaby plant conforms to the California Bay Area Air Pollution standards. The letter is important because:
 - (a) The Company maintains that there is a high degree of compatibility between its present operation and the standards set by the Bay Area Air Pollution Control District.
 - (b) The Company also points out that the mechanical design of the Rheniformer, the installation of which has been deferred, will be in compliance with the existing Bay Area Standards and that it is their intent that the mechanical specification covering any future equipment installed will be in compliance with the existing Bay Area standards.

The material attached to the letter is only some of the material shown to our delegation to California by the Standard plant in Richmond, California. It is certainly of general interest but it must be remembered that in most cases it applies specifically to the Bay Area. It does, however, give an indication of the loading of the atmosphere generally by all contributors (with the automobile being by far the major problem) and it does give an indication of the world wide atmospheric pollutants showing the percentage by weight relationship between "natural" and "manmade" pollutants as well as the calculated "life" of the various pollutants. Incidentally, we have transparencies of these charts so they can be shown with a projector at any meeting.

4. Letter dated November 9, 1971, from Mr. T.S. Bremner to the Municipal Manager to which is attached maps, one showing the origin and numbers of complaints that the refinery has received since 1955 in respect to noise and the other the same detail in respect to odour, etc. (We only have a limited number of maps.) The Company states that they presently have underway a noise reduction program by muffling existing equipment. The Company also urges that the pending anti-noise bylaw be altered such that noise levels be set for the nearest residential property line rather than the plant property line. This aspect should be considered by the Technical Sub-Committee on Noise, and will be as it was mentioned in one of the briefs presented to Council on November 8, 1971.

RECOMMENDATION:

THAT a copy of letter No. 4 be referred to the Technical Sub-Committee on Noise with direction to review and comment on it when the Committee comments on the briefs received by Council on November 8, 1971; and THAT the contents of this report be forwarded to Chevron and to all parties that expressed an interest in the general subject of refinery modernization and expansion when it was being debated.

ITEM 7.
MANAGER'S REPORT NO. 73
COUNCIL MEETING Nov. 15/71

16.7 (a) 71

November 8, 1971

RECEIVED

NOV 11 1971

MUNICIPAL MANAGER'S
OFFICE

Dr. W. F. Sunderland
Medical Health Officer
The Corporation of the District of Burnaby
Municipal Hall
4949 Canada Way
Burnaby, B. C.

Dear Dr. Sunderland:

For your information, I am enclosing a copy of a confidential report in respect to the question of respiratory illness amongst employees' working at our Burnaby Refinery.

As pointed out in the report, there is no evidence to show that employees at either the Burnaby Refinery or the Richmond California Refinery have a higher incidence of respiratory infection than the office group of employees in these respective areas.

I felt you might find the contents of this report interesting and wish to place it on file for future reference.

Yours very truly,

T. S. Bremner
T. S. BREMNER

Attach.

cc. Mr. M. J. Shelley, Municipal Mgr.
Mr. C. H. Armon, Chief Public Health Inspector

COPY - PLANNING DIRECTOR
- M. H. O.
- CLERK
- DR. McINTYRE

ITEM 7
MANAGER'S REPORT NO. 73
COUNCIL MEETING Nov. 15/71



T.S. Bremner
Vice-President & Refinery Manager

Chevron Canada Ltd.

Head Office: 355 Burrard Street, Vancouver 1, B.C.
Refinery: 355 North Willingdon Avenue, Burnaby 2, B.C.

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NOV 11 1971

MUNICIPAL MANAGER'S
CENTRE

November 8, 1971

File:

Mr. M. J. Shelley
Municipal Manager
The Corporation of The District of Burnaby
Municipal Hall
4949 Canada Way
Burnaby 2, B. C.

Dear Mr. Shelley:

For your information, I am attaching a copy of the newsletter we recently mailed to residents on the postal walk immediately adjacent to the refinery ie. Willingdon to Gilmore, Oxford Street to Burrard Inlet as a pilot project.

I will let you know in due ^{course} ~~cause~~ just what response if any, we receive to this mailing piece.

Yours truly,

T.S. BREMNER
per
F. G. MOORE

Attach.

COPY - PLANNING DIRECTOR
- M.H.O.
- CLERK
- ENGINEER
- DR. McINTYRE

ITEM 7

MANAGER'S REPORT NO. 73

COUNCIL MEETING Nov. 15/71

Chevron



Chevron Canada Ltd.

Head Office: 355 Burrard Street, Vancouver 1, B.C.
Refinery: 355 North Willingdon Avenue, Burnaby 2, B.C.

DEAR NEIGHBOUR:

We thought you might be interested in the activity that has been going on around our Refinery property recently.

As you have probably noticed, our Sales Office Building at the corner of Eton and Rosser Streets and our Refinery Office Building on Willingdon Avenue North of Eton Street, have been completely repainted in what we think is an attractive new colour scheme. The Garage Building at Eton and Willingdon and the Warehouse on Rosser Street are being repainted also as part of this overall co-ordinated colour scheme.

We have also been cleaning and scraping tanks adjacent to the McGill Street Park. Painting of these tanks will proceed as the weather permits in colour tones designed to compliment and harmonize with the colours and natural elements of the park and surrounding area.

You may have noticed also that the northerly half block of Eton Street between Rosser and Madison Avenues has been recently cleared. This clearing was carried out on a selective basis leaving certain of the natural growth undisturbed. We intend to fence this area in order to keep it clear of litter.

It is our intention to keep you acquainted with changes that develop from time to time but in the meantime, if you have any enquiries or comments please do not hesitate to either write us at 355 North Willingdon Avenue, Burnaby, B.C., or telephone 298-1353 and ask for Fred Moore.

STANDARD OIL COMPANY OF BRITISH COLUMBIA LIMITED
REFINING DIVISION OF CHEVRON CANADA LTD.

ITEM 7
MANAGER'S REPORT NO. 73
COUNCIL MEETING Nov. 15/71

16.7 (a) 71



Chevron Canada Ltd.

Head Office: 355 Burrard Street, Vancouver 1, B.C.
Refinery: 355 North Willingdon Avenue, Burnaby 2, B.C.

T.S. Bremner
Vice-President & Refinery Manager

November 9, 1971

BAY AREA AIR POLLUTION REGULATIONS
FILE: 321.11

Mr. M. J. Shelley, Municipal Manager
The Corporation of the District of Burnaby
Municipal Hall
4949 Canada Way
Burnaby, B. C.

Dear Mr. Shelley:

Pursuant to your request, during the recent tour of our Burnaby Refinery by members of the Burnaby Council etal, we have reviewed the Bay Area Air Pollution Regulations as they pertain to the San Francisco area for purposes of comparison with present emissions from our refinery and the level of air quality in North Burnaby. In spite of the voluminous nature of this legislation, something approximating 124 pages, we have completed to the best of our ability in the time available a digest of these regulations and offer the following observations for your information.

Sulphur Dioxide

The levels of sulphur dioxide in North Burnaby, based on surveys in 1961-62 and 1970, are below the standard set out in the Bay Area Regulations for ground level concentrations.

Particulate Matter

We presently meet the standards set by the Bay Area Regulations for particulate matter emission.

Visible Emissions

We conform with the Bay Area Regulations regarding visible emissions under normal operating conditions except for one stack on the Fluid Catalytic Cracker. This stack meets the Bay Area Regulation during warm summer weather, but in the winter when ambient temperatures are lower, the water vapor in the flue gas from this stack condenses and becomes visible. As we interpret the Bay Area Regulation, this visible white emission does not meet the Regulation.

... 2.

Copy - Planning Director
- M. H. O.
- Clerk
- Engineer
- Dr. McLucy

ITEM 7
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Mr. M. J. Shelley

November 9, 1971

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Hydrocarbons

At the present time we have hydrocarbon emissions at the Refinery which do not comply to current Bay Area Standards. With respect to these emissions, we have been progressively working for many years toward reducing these emissions. As one example all new tanks for gasoline storage have been of the floating roof variety. For example our separators, while covers will be installed shortly, do not comply at this time. We have some small cone roof tanks in gasoline component service. Because of the vapor pressure and composition of the stocks, some may comply with the regulations. However, when the expansion program is implemented, additional floating roof tankage will largely eliminate this situation. The 100,000 bbl. floating roof tank, which we are now awaiting approval to install, is an example of this upgrading program.

The light ends recovery project, now under construction, has been designed and will meet the standard set out in the Bay Area Regulations in respect to hydrocarbon emission.

At the present time the Fluid Catalytic Cracker stack, does not meet the Bay Area Regulations for hydrocarbon emission.

After expansion, which will provide a further upgrading of facilities, we should be very close to the Bay Area Standards which were established in 1967. Further research at that time should determine if any further improvements are required to fit into the overall local environment, since the amount of hydrocarbon emission from the refinery should be insignificant compared to the total emission from natural sources.

General

Our analysis indicates there is a high degree of compatibility between our present operation and the standards set by the Bay Area Pollution Control District.

We take this opportunity of attaching copies of material shown to Council during their visit to the Richmond Refinery. A review of this information indicates the complexity of determining meaningful regulations in respect to air quality for a specific area.

The mechanical design of the Rheniformer, which is presently deferred, will be in compliance with the existing Bay Area standards, and it is our intent that the mechanical specification covering any future equipment installed will be in compliance with the existing Bay Area standards.

Yours very truly,

T. S. BREMNER
T. S. Bremner

Attach.

PHOTOCHEMICAL SMOG

COMPLEX CHEMICAL REACTION REQUIRING:

1. REACTIVE ORGANICS
2. NITROGEN OXIDES
3. SUNLIGHT
4. TEMPERATURE INVERSION
5. NATURAL VALLEY OR BASIN
6. LACK OF WIND

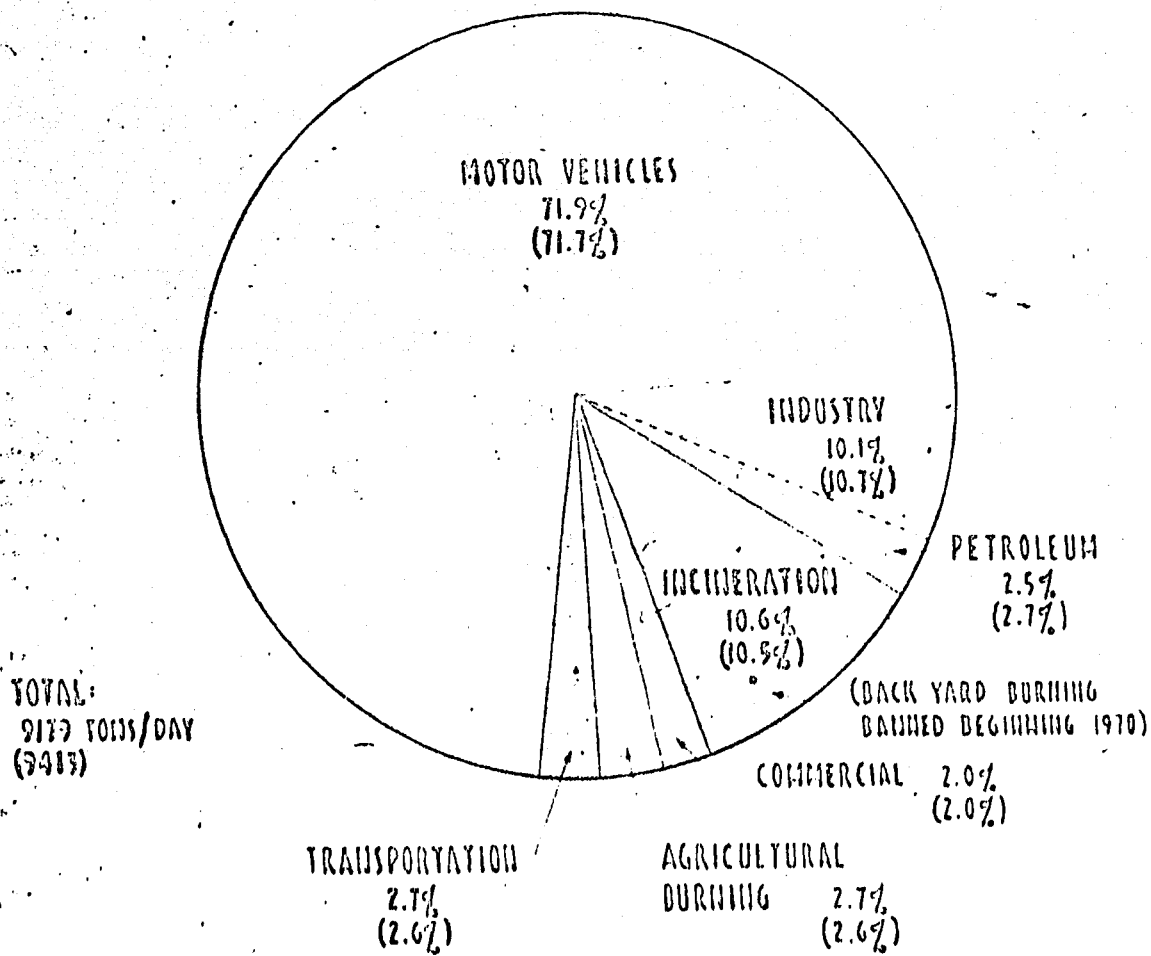
SOURCES OF REACTIVE ORGANICS:

MOTOR VEHICLE EXHAUST AND FUEL EVAPORATION	63%
BACK YARD BURNING	* 13%
AGRICULTURAL	8%
ALL INDUSTRY (PETROLEUM 3.3%)	16%

* BANNED JAN. 1. 1970

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1969
 TOTAL DAY AREA ATMOSPHERIC EMISSIONS
 % BY WEIGHT

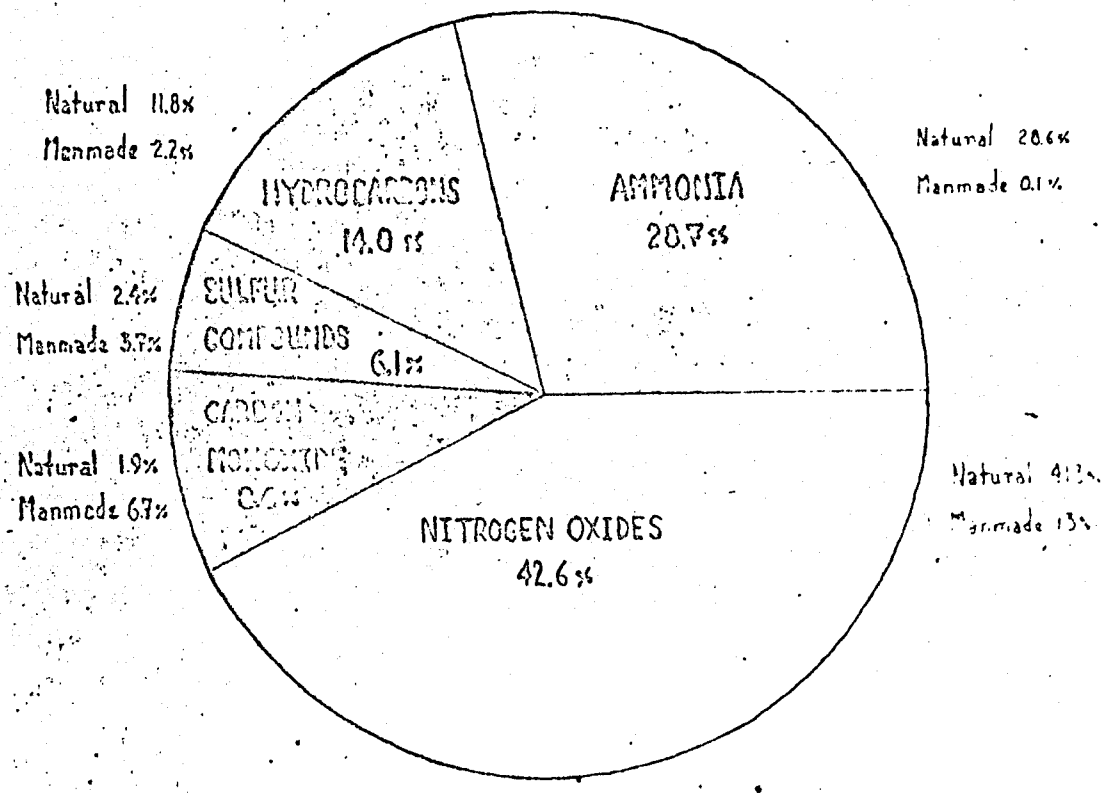


TOTAL:
 9177 TONS/DAY
 (9417)

() = 1960 FIGURE

SOURCE: DAY AREA AIR POLLUTION CONTROL DISTRICT
 1969 SOURCE INVENTORY OF AIR POLLUTION EMISSIONS

1969
 ATMOSPHERIC POLLUTANTS WORLDWIDE
 % by weight

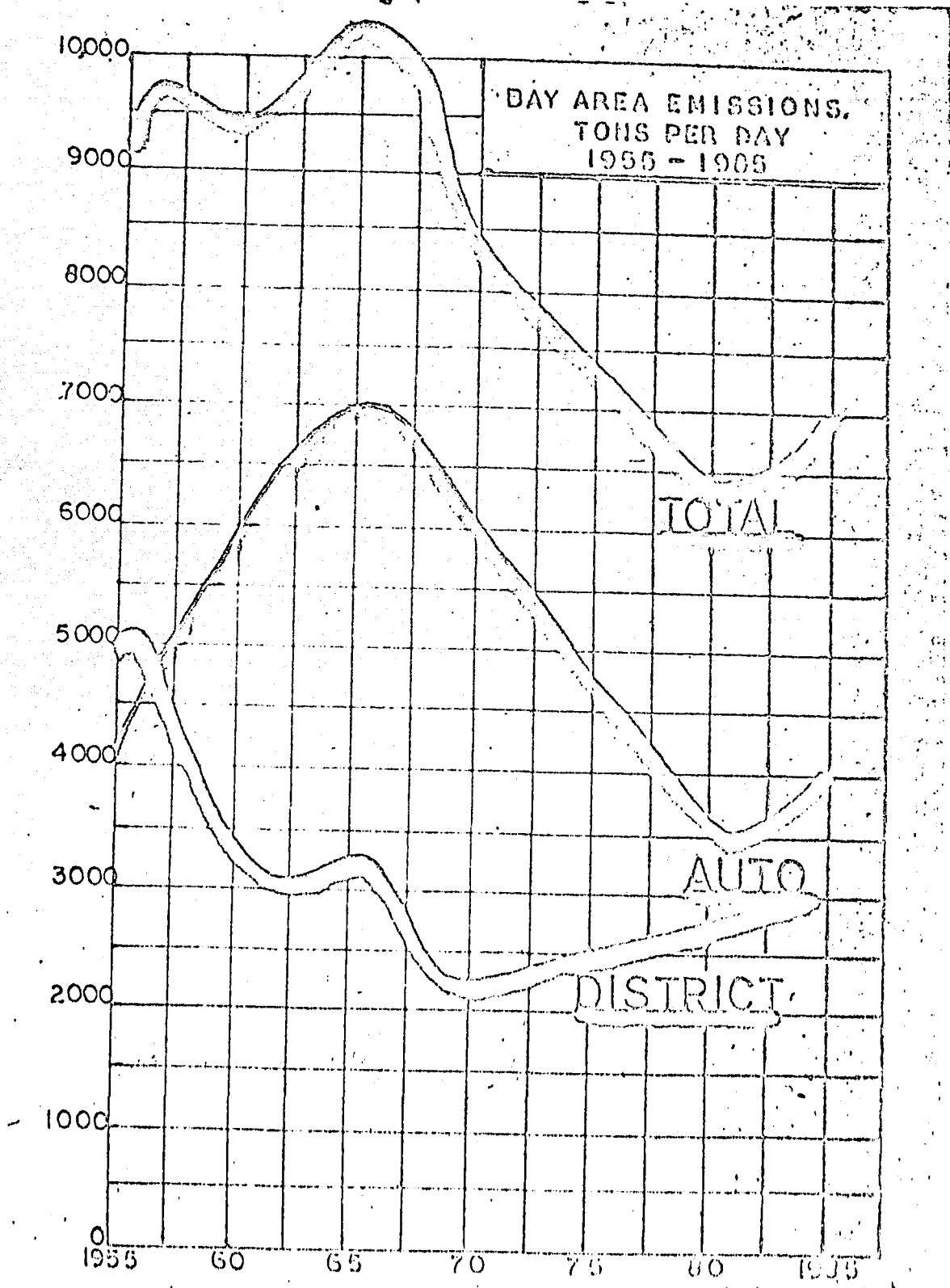


CALCULATED LIVES OF POLLUTANTS IN THE ATMOSPHERE

H ₂ S	2 DAYS	HYDROCARBONS	HOURS
SO ₂	4 DAYS	N ₂ O	4 YEARS
AMMONIA	7 DAYS	CO	< 3 YEARS
NO/NO ₂	5 DAYS	CH ₄	16 YEARS

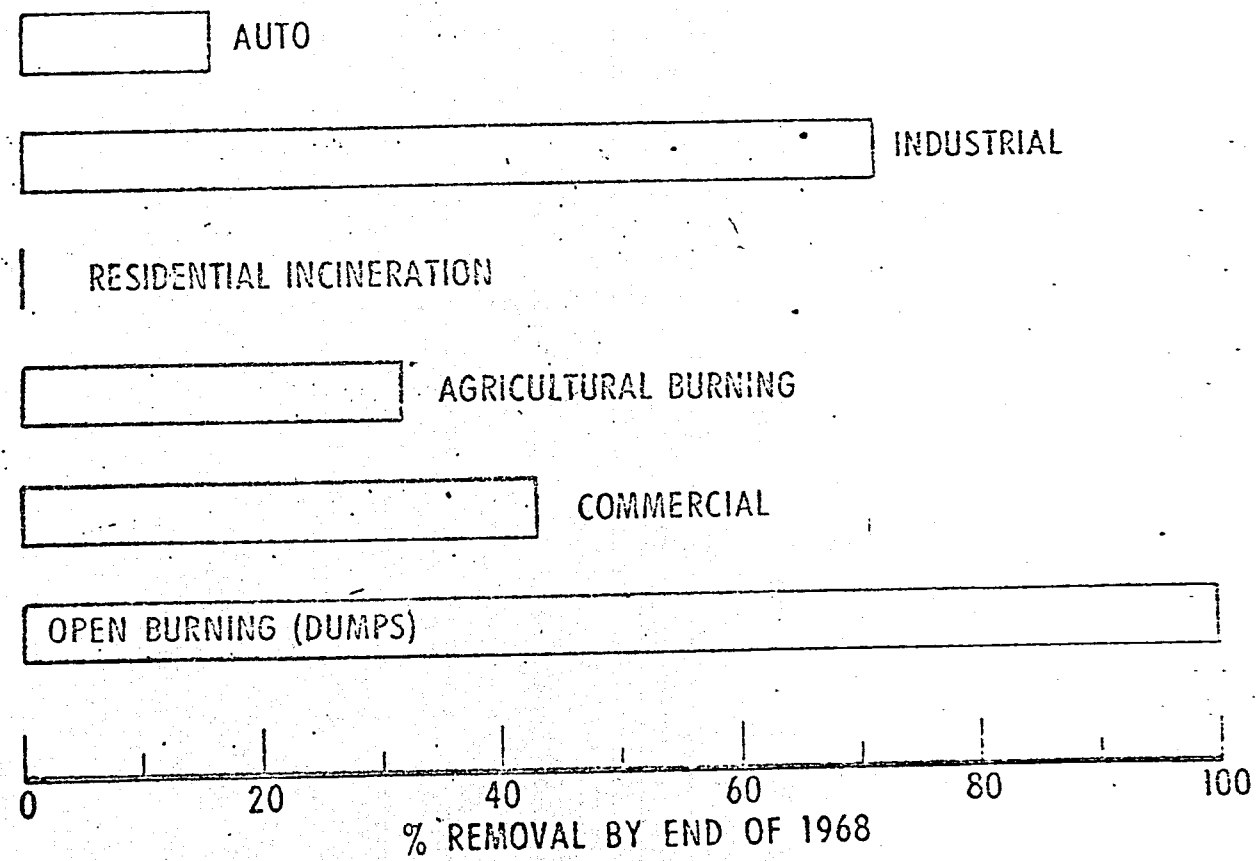
SOURCE: ERI, ROBINSON and ROBBINS
 June, 1969

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COUNCIL MEETING Nov. 15/71



ITEM 7
MANAGER'S REPORT NO. 73
COUNCIL MEETING NOV. 15/71

EFFECT OF CONTROL PROGRAMS
ON REMOVAL OF EMISSIONS IN S.F. BAY AREA



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COUNCIL MEETING Nov. 15/71



Chevron Canada Ltd.

Head Office: 355 Burrard Street, Vancouver 1, B.C.
Refinery: 355 North Willingdon Avenue, Burnaby 2, B.C.

T.S. Bremner
Vice-President & Refinery Manager

November 9, 1971

File: 322.11

Mr. M. J. Shelley, Municipal Manager
The Corporation of the District of Burnaby
Municipal Hall
4949 Canada Way
Burnaby 2, B. C.

Dear Mr. Shelley:

Arising out of last weeks Council Visit to our refinery, we have plotted on the attached maps the origin and numbers of complaints we have received since 1955 in respect to noise, odour etc.

Perhaps you might wish to distribute copies of this information to members of Council and Staff and therefore I have taken the liberty of enclosing sufficient copies for this purpose.

We would like to take this opportunity to draw to your attention the rather unique location of the refinery and the effect the topography of the area has with respect to noise in the area. You will note that on Penzance Drive the intensity of the noise peaks rather sharply up to 70 dbA at the bend of the road. Also you will recall that this section of the road is on top of a bluff overlooking the refinery and we believe this peaking of the noise is due to the same type of effect as is present in any amphitheatre. You will also note that the intensity as measured at the nearest residences on Scenic Drive and Harbour Drive are 46 dbA and 43 dbA respectively. These are readings taken on the road. Other readings taken in these areas at different times on such places as raised porches of houses of the residents and with different wind direction and weather conditions have been in the range of 50 dbA. We have also observed readings of 10 dbA higher than this when other intermittent sources of noise from near the water were clearly audible.

In our letter to you of May 13, 1971 we attached a rather extensive noise control specification which we are requiring for any equipment in future additions, and as discussed in our meeting of November 2 we presently have underway a program for muffling existing equipment. This will reduce the noise levels on Penzance Drive and what is of more importance it will reduce the noise in the Residential area.

... 2.

COPY - PLANNING DIRECTOR
- M. H. O.
- CLERK
- ENGINEER
- D. L. McLEOD

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Mr. M. J. Shelley

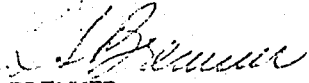
November 9, 1971

-2-

On the basis of the foregoing we strongly urge that the pending Noise Control By-law allow for measuring noise levels at the nearest Residential Property line rather than at the plant property line where this is an acceptable criteria.

If you have any queries with respect to this information please do not hesitate to telephone me at 298-1353.

Yours very truly,


T. S. BREMNER

FM:ah

Attach.