

ITEM	10
MANAGER'S REPORT NO.	46
COUNCIL MEETING	90/07/09

TO: MUNICIPAL MANAGER  
 FROM: DIRECTOR PLANNING & BUILDING INSPECTION  
 SUBJECT: PROPOSED INSTALLATION OF A VAPOUR RECOVERY SYSTEM FOR SHELL'S TANK TRUCK LOADING RACK AT 2751 UNDERHILL AVENUE, BURNABY  
 PURPOSE: To provide Council with information on Preliminary Plan Approval application #9744

DATE: 1990 July 04

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**RECOMMENDATION:**

1. THAT this report be received for the information of Council.

**1.0 INTRODUCTION:**

The Planning and Building inspection Department has received a Preliminary Plan Approval Application (#9744) from Morrow and Associates Engineering Inc. on behalf of Shell Canada Ltd. for the installation of a vapour recovery system for the existing tank truck loading rack at 2751 Underhill Avenue.

This report is submitted consistent with the long-standing direction of Council to report on proposed oil storage or processing facilities in the Municipality.

**2.0 GENERAL INFORMATION:**

2.1 Shell's current P.P.A. application (#9744) involves the installation of a vapour recovery system at the existing tank truck loading rack. The installation of this equipment will aid in reducing hydrocarbon emissions during the loading and unloading of petroleum products at this facility.

2.2 The hydrocarbon vapours at the tank truck loading rack have been identified as the source of several neighbourhood complaints.

One of the primary sources of these hydrocarbon vapours occurs at the point of discharge during the transferring of petroleum products.

Vapours are also released into the atmosphere through the tank vents when splashing occurs within the tank which then promotes vapour production.

The vapour Recovery System will be a closed system designed to contain and process all vapours generated through tank truck loading operations. The vapour space within the tank truck is coupled to the fixed vapour header pipe and during filling operations, the Vapour Recovery Unit will be operated to condense and absorb all displaced vapours.

2.3 Information obtained from the applicant, Morrow and Associates Engineering Inc., explains the operation of the Vapour Recovery Unit as follows:

ITEM	10
MANAGER'S REPORT NO.	46
COUNCIL MEETING	90/07/09

The proposed vapour recovery system is based on absorption of hydrocarbons on an activated carbon bed followed by regeneration of the carbon bed with air and recovery of the striped hydrocarbons into a circulating gasoline stream. The proposed facilities will substantially reduce these hydrocarbon emissions.

130

All condensed liquids within the vapor piping are collected upstream of the VRU in a 4 500 L underground condensate tank. The condensate tank is equipped with a high level system shut-off and alarm.

The system includes appropriate instrumentation and alarms to ensure proper and safe operation.

The complete system is protected by flame arrestors which are located to ensure that if a fire were to be encountered, the flame will be isolated in the originating area and not endanger any other part of the system.

- 2.4 This project has no effect on the amount of tank trucks loading at this terminal. Its sole purpose is to reduce hydrocarbon emissions to the atmosphere.
- 2.5 Shell's anticipated completion date for this project is 1991 January 01.

**3.0 MUNICIPAL DEPARTMENT REFERRALS:**

This application was referred to the Burnaby Fire Prevention Bureau and the Environmental Health Department for review and comment. Their comments are as follows:

3.1 Fire Prevention Bureau

"No comment"

3.2 Environmental Health Department

"This Department has reviewed the subject P.P.A. #9744 from Shellburn Refinery for installation of a vapour recovery system for tank truck loading rack at 2741 Underhill Avenue and have no objections to its approval in principle provided that the following noted requirements are met.

- 1. A detailed plan of the vapour recovery system along with a summary of its operation, generation of by-product and subsequent disposal (if any), and emergency procedures in an event of system failure must be provided to this Department.
- 2. The vapour recovery system shall be capable of collecting all organic vapours and gases, with a vapour return or disposal system capable of processing such vapours or gases so as to prevent their emissions to the atmosphere at an efficiency of at least 95 percent by weight.
- 3. All pipings, valves and fittings must be vapour tight."

3.3 The applicant has indicated that no more than 10 mg of hydrocarbon vapour per one litre of product loaded will escape to the atmosphere. They further indicate that the recovery rate of the subject system is 98% or better during normal operating capacity.

MUNICIPAL MANAGER  
2751 UNDERHILL - P.P.A. #9744  
VAPOR RECOVERY UNIT  
1990 JULY 04. . . . . PAGE 3

ITEM	10
MANAGER'S REPORT NO.	46
COUNCIL MEETING	90/07/09

4.0 CONCLUSION:

The installation of this proposed Vapour recovery system will substantially reduce hydrocarbon emissions to the atmosphere from tank truck loading operations. This project has no effect upon refinery throughput capacity.

This application has been reviewed by and has received favourable comments from the Environmental Health and Fire Departments. The Planning and Building Inspection Department will continue to work with the applicant to ensure that this proposal satisfies all other relevant Bylaw requirements prior to issuance of Preliminary Plan Approval.

This report is submitted for the information of Council.

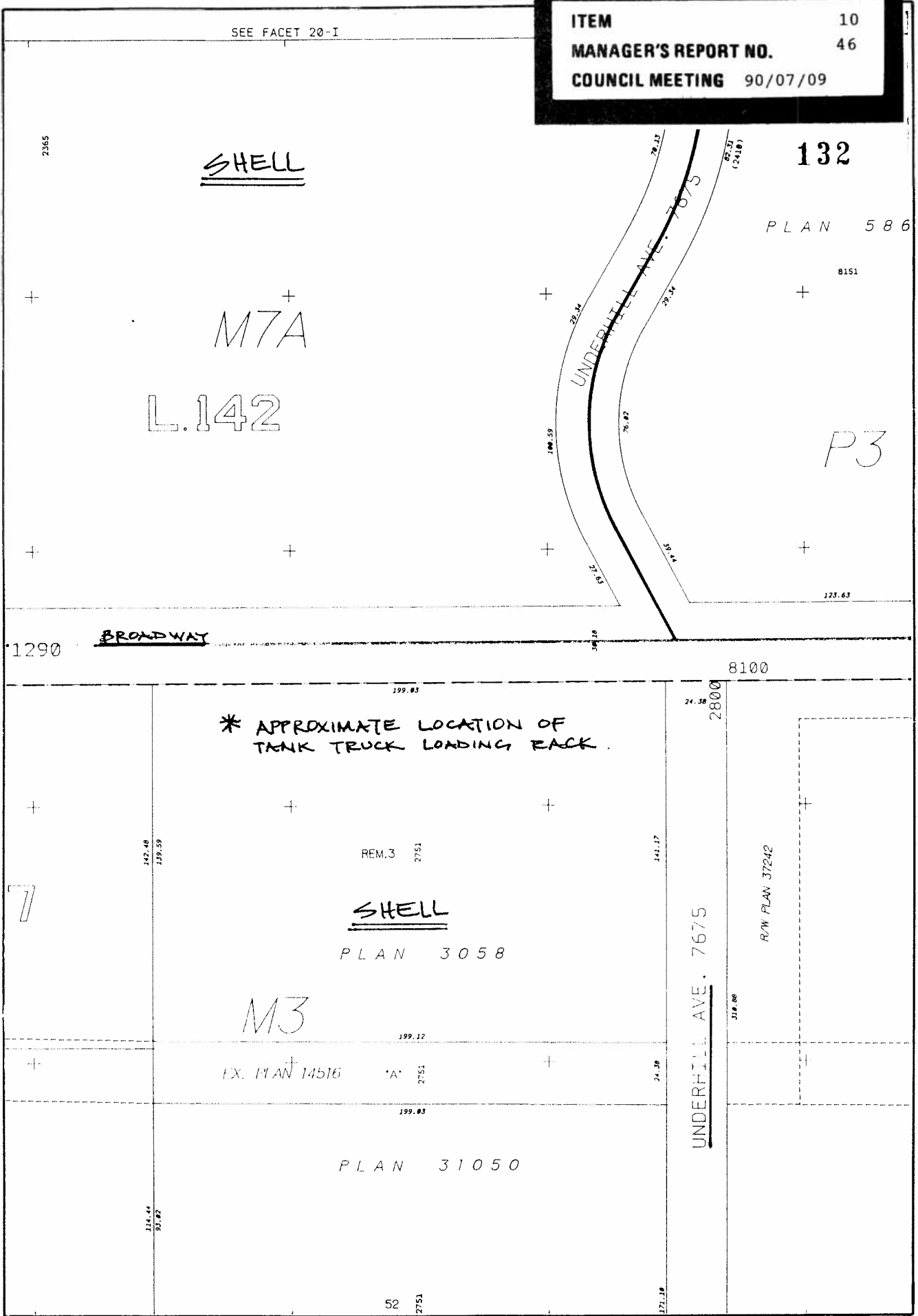
  
A. L. Parr,  
DIRECTOR PLANNING &  
BUILDING INSPECTION

TA/ds

Attachment

cc: Chief Public Health Inspector  
Chief Fire Prevention Officer

ITEM 10  
 MANAGER'S REPORT NO. 46  
 COUNCIL MEETING 90/07/09



Date:  
 90 - JULY - 04

Scale:  
 1:2000

Drawn By:  
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\* SKETCH SHOWING APPROXIMATE LOCATION OF PROPOSED NEW VAPOUR RECOVERY SYSTEM AT SHELL'S EXISTING TANK TRUCK LOADING RACK.  
 2751 UNDERHILL AVE.  
 PPA # 9744

