



Item.....
Meeting..... 2009 December 7

COUNCIL REPORT

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**TO:** CITY MANAGER **DATE:** 2009 December 02  
**FROM:** DIRECTOR PLANNING AND BUILDING **FILE:** 44000 20  
*Reference:* PPA #09-316  
**SUBJECT: BIOFUELS UPGRADES**  
**CHEVRON REFINERY 355 NORTH WILLINGDON AVE., BURNABY**

**PURPOSE:** To inform Council of an application for Preliminary Plan Approval (PPA) for the refurbishing of two existing storage tanks and installation of ancillary equipment in the truck loading rack area to facilitate the blending of biodiesel and ethanol.

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**RECOMMENDATION:**

1. **THAT** Council receive this report for information purposes.

**REPORT**

**1.0 BACKGROUND**

The Planning and Building Department is in receipt of an application for Preliminary Plan Approval (PPA) from the Chevron Refinery for the refurbishing of two existing storage tanks along with the installation of ancillary equipment at the tank truck loading rack to accommodate the storage and blending of ethanol and biodiesel at the Chevron Refinery located at 355 North Willingdon Avenue (*see Sketch #1*). The refurbished tanks and ancillary blending equipment is required in order for Chevron to meet biofuel mandates set by both the Federal and Provincial Governments which requires a 5% renewable content in fuel by 2010 January 01.

It is a long standing policy of Council for staff to report on PPA applications relating to the petroleum facilities in Burnaby. This report provides a summary of the application, any required input from other agencies, Chevron's public consultation process and the City's PPA review process.

**2.0 FEDERAL AND PROVINCIAL MANDATES**

Both the Federal and Provincial Governments require that diesel have an overall 5% renewable content by 2010 January 01. To meet government mandates, Chevron will import and blend biofuel stock into its base fuel stocks which are currently produced at the Burnaby refinery. Earlier this year, Council was informed of similar projects undertaken by both Shell Canada and Imperial Oil to meet this new mandate.

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### **3.0 SCOPE OF WORK**

Biodiesel and ethanol will be imported via tank trucks and unloaded at the existing tank truck loading terminal at the Refinery using a new offloading pump. The biodiesel will be stored in a refurbished existing storage tank (Tank #66). This existing cone roof tank has been retrofitted with a mixer and heater necessary for the storage and mixing of biodiesel. Biodiesel will be blended into diesel for shipment at the tank truck loading rack and the marine loading wharf.

The ethanol will be stored in a refurbished existing cone roof tank (Tank #24). Ethanol will be blended into base gasoline and shipped at the tank truck loading rack with the installation of new metering pumps, controls and instrumentation. There are currently no plans to load gasoline containing ethanol from the refinery wharf.

Chevron has informed staff that the minimal construction activities required to meet the legislated mandate are underway. All major construction materials required are currently on site. Work has been restricted to daytime hours and will continue to conform to the City of Burnaby's Noise or Sound Abatement Bylaw.

#### **3.1 *Environmental Controls and Emergency Response***

Chevron has indicated that the existing refinery spill containment and fire response systems related to biodiesel blending at the truck loading rack will not require modifications. The existing spill containment systems for the ethanol storage in Tank #24 are being upgraded with the installation of a new, impervious berm. Tank #24 improvements will consist of a new internal floating roof with new primary and secondary seals, a new floor with leak detection, internal coating, tank high level alarms and related instrumentation. Fire protection systems related to the ethanol blending facilities are also being upgraded to include foam fire suppression on Tank #24 and at the ethanol off-loading pump at the truck loading rack. Spill control measures will be required to meet the Canadian Council of Ministers of the Environment (CCME) prescribed 'over containment capacity' requirements.

#### **3.2 *Truck Traffic***

Both biodiesel and ethanol blend stocks will be imported to the refinery using semi-trailer trucks via Willingdon Avenue. It is estimated that the truck tanker traffic will be increased by an average of approximately six trucks per day over their baseline of 60 truck movements.

#### **3.3 *Refinery Capacity***

Chevron has indicated that meeting the biofuels mandate will not result in an increase in overall refinery throughput. Complying with the new Provincial Renewable Fuels Legislation will require the importation and blending of biodiesel and ethanol into existing product streams for finished diesel and gasoline products.

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### **3.4 Refinery Emissions**

The modifications being made to the tank farm fall within the existing air permit for the facility, including the upgrades to the existing storage tanks. There will be no changes to permitted refinery emissions under the Metro Vancouver Air Quality Management Bylaw as a result of the installation of the new biofuel facilities.

### **3.5 Public Consultation Process**

While there is no requirement from any outside agency for a notification process, Chevron has informed the surrounding neighbourhood and local community via its spring and Summer 2009 editions of the Burnaby Refinery Neighbourhood Newsletter distributed to about 7,500 North Burnaby residences and businesses.

Chevron has also reviewed these plans with the Chevron North Burnaby Community Advisory Panel (CAP) at its regular meeting on January 29, 2009 with a further updated provided to CAP at the May 7, 2009 meeting.

## **4.0 CITY REVIEW**

The City has completed the review of the application. The application and construction drawings were circulated to applicable City departments for review and comments. In conformance with the requirements of the Fire Prevention Office, the new production system will be incorporated into the existing Fire Safety Plan for the Terminal.

The Environmental Services Division has no objection to the issuance of the PPA. The proposal meets all City bylaw requirements.

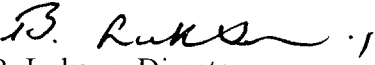
## **5.0 CONCLUSION**

The Planning and Building Department is in receipt of an application for Preliminary Plan Approval (PPA) for the refurbishing of Tank 66 and Tank 24 for the storage of biodiesel and ethanol and associated blending system equipment at Chevron's blending and shipping facilities located at 355 North Willingdon Avenue. This new equipment allows for the blending of biodiesel and ethanol into existing fuel streams in order to meet government biofuel mandates by 2010 January 01. There will be no external change to the appearance of this portion of the refinery and no increased throughput through this refurbishing project.

A review of the PPA application received has been completed by staff. Chevron has informed the surrounding neighbourhood of the work to be completed by 2010. Metro Vancouver has indicated that there is no requirement for an amendment to the existing Air Permit. The proposal meets all City bylaw requirements.

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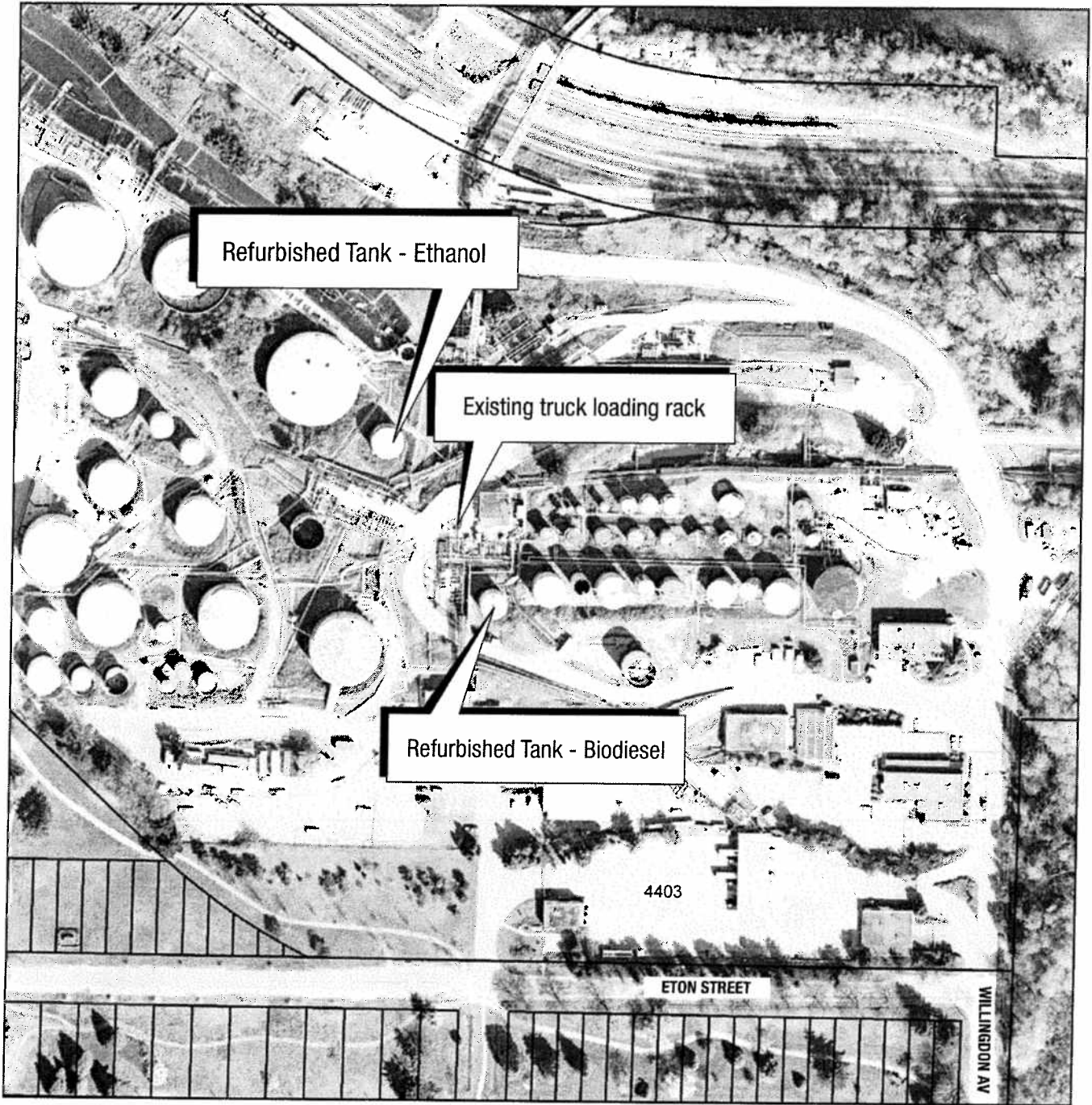
With Council receipt of this report, staff will complete the process for issuance of the PPA to record the required refurbishing and equipment installation for storage and blending of biodiesel and ethanol on the Chevron site in order to meet the 2010 biofuel mandate.

  
B. Luksun, Director  
PLANNING AND BUILDING

PJA:ll

***Attachments***

cc: Fire Chief  
Director Engineering  
Director Parks, Recreation and Cultural Services  
Chief Building Inspector



**Chevron Canada Ltd.**  
355 North Willingdon Avenue

**Sketch 1**