



Item.....
Meeting..... 2011 January 24

COUNCIL REPORT

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**TO:** CITY MANAGER **DATE:** 2011 January 19

**FROM:** DIRECTOR PLANNING AND BUILDING **FILE:** 44000 20  
*Reference:* PPA #10-386

**SUBJECT: SHELL DIESEL ADDITIVE STORAGE & BLENDING SYSTEM,  
BURMOUNT TERMINAL  
2751 UNDERHILL AVENUE, BURNABY**

**PURPOSE:** To inform Council of an application for Preliminary Plan Approval (PPA) for the installation of a Shell diesel additive storage and blending system.

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**RECOMMENDATION:**

1. **THAT** a copy of this report be forwarded to Ms. Elaine Bell, Burmount Terminal Superintendent, Shell Canada Products, 2751 Underhill Avenue, Burnaby, B.C. V5A 3C3.

**REPORT**

**1.0 BACKGROUND**

On 2010 October 20, the City received an application for Preliminary Plan Approval (PPA) # 10-386 from Shell Canada Products for the installation of a new Shell Diesel Extra (SDX) additive blending system at their Burmount Terminal at 2751 Underhill Avenue (*see attachment #1*). The proposed system will facilitate direct addition of the SDX additive into diesel fuel at the facility's truck loading rack. The stated purpose of the additive is to differentiate Shell Canada Products from other fuel providers, and improve engine cleanliness and performance.

It is a long standing policy of Council for staff to report on PPA applications relating to petroleum facilities in Burnaby. In July 2008, Council adopted an information report which outlined a Shell proposal to construct a new ethanol storage tank, a blending system, warehouse, and ethanol unloading station. Subsequently, in April 2009 Council adopted an information report which outlined a further Shell proposal to construct a new biodiesel tank and ancillary equipment. The construction of both proposals has been now completed.

In the subject PPA submission, Shell is proposing to construct one small tank and a blending system for the SDX additive product, as well as the tank base for the future small tank. A separate PPA application will be required for the future tank before it may be constructed.

This report provides a summary of the application, the input received from other agencies, and the status of Shell's public notice process and the City's PPA review process.

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## 2.0 PPA PROPOSAL

The subject site is located at 2751 Underhill Avenue within the Lake City area and is currently developed for the storage of petroleum products (i.e., gasoline, biodiesel, ethanol, etc.) only. The existing zoning of the subject site is M3 (Heavy Industrial). The proposed SDX additive storage and blending system is a permitted use under the M3 zoning.

The proposed new facilities will allow Shell to receive, store and blend Shell Diesel Extra Additive (SDX) and future additives into tank trucks being loaded at the Terminal truck rack. The project will include storage, containment, piping and injection facilities. Approximately two "B" train type tank trucks per year will deliver the SDX additive to the Terminal. This is in addition to the current truck traffic amounts which are approximately eighty tank trucks per day and two semi trailer tank trucks per day.

Shell has advised staff that SDX is a clear light amber coloured hydrocarbon solvent containing a small amount of a detergent agent. Shell also informed staff that SDX is similar to the diesel fuel to which it is being added as it is a non-volatile substance. SDX has been exempted by Metro Vancouver from permitting under the GVRD Air Quality Management Bylaw No. 937, as such, there is no amendment required for Shell's existing Air Quality Permit.

### 2.1 Additive Tanks, Levee & Injection Facilities

Shell proposes to construct a new SDX additive tank and associated blending system, and provide the potential for a future additive storage tank be accommodated by enlarging the existing additive tank levee (*see attachment #1 for location*). The tank levee layout and tank spacing will conform with National Codes, as well as the City of Burnaby's guidelines for tank spacing and setbacks. The levee will have an impervious concrete floor and will be surrounded by a concrete wall. Storm water runoff from the levee will be managed via a valved piping system that will be routed to the existing Terminal storm water management system.

The new SDX tank and the future additive tank will be placed immediately west of the existing additive Tank 709 and Tank 710, previously approved and they will be designed to contain a similar capacity as Tank 709 and Tank 710. The new tanks will be an insulated carbon steel American Petroleum Institute (API) 650 cone roof tank 2.4 meters in diameter and 4.6 meters in height with a nominal capacity of 22,700 liters. The new tank design will include high level alarms and overflow protection, temperature sensors and special seals applied to vent joints, dip hatches and other appurtenances to prevent rainwater ingress to the tank. Fire alarms and fire fighting foam application systems that are currently being installed as part of the previously approved ethanol storage and blending application will also serve the new tank.

### 2.2 Additive Truck Unloading

SDX and future additives will be delivered to the Terminal via B-Train tank trucks. The tank trucks will enter the unloading area via the main gate on the Underhill Avenue and exit by

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driving through the existing Terminal load rack and then back through the main gate onto Underhill Avenue. The existing additive unloading station located next to the expended additive tank levee will be modified to include the SDX and future additive unloading lines, spill preventers and unloading pumps.

### **2.3 Storm Water Management**

Storm water from the expended additive tanks levee will be directed to the existing Terminal storm water management system (SWMS), which has been upgraded as part of the previously approved Ethanol and Biodiesel Projects. The previous upgrade included installation of a new double walled fibreglass oil/water separator installed in parallel with the existing terminal concrete oil/water separator to provide a second barrier in the event of a spill. The SWMS was designed and approved to meet the *BC Petroleum Storage and Distribution Facilities Storm Water Regulations* specifications. The plan has been reviewed and approved by the City.

### **2.4 Fire Protection Facilities**

A terminal Emergency Response Plan (BMT – 20005) has been prepared showing the location of all existing hydrants, extinguishers, monitors, standpipes, fire fighting foam bladder tanks and emergency alarm/shutdown facilities. A new Fire Fighting Foam Bladder Tank system has been installed to allow automated foam delivery throughout the terminal as part of the previously approved Biodiesel Project. The plan has been reviewed and approved by Burnaby Fire Department.

### **2.5 Environmental Controls**

Sediment control facilities and procedures once submitted and approved by the City, will be implemented prior to discharge of storm water from the construction sites into the Terminal's storm water collection system.

The project is set to be completed by April 2011. Work will be restricted to daytime, weekday hours, conforming to the City of Burnaby Noise Bylaws. Shell has indicated that there will be minimal impact on local traffic and efforts will be made to minimize any disruption to the community during construction.

Shell will engage a third party environmental consultant to analyze excavated soil. The disposal of soil will be in compliance with applicable BC Ministry of Environmental Regulations, including shipment to an appropriate permitted disposal site if required.

Shell has reviewed the project details with Metro Vancouver's Regulation and Enforcement staff. As a result of the review, Metro Vancouver determined that the project's VOC emissions do not require an amendment or addition to the existing permit under the GVRD Air Quality Management Bylaw No. 937.

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## 2.6 Project Cost and Schedule

Shell estimates the project cost to be \$500,000 dollars and the project would be ready for commissioning in the 2nd quarter of 2011.

## 3.0 PUBLIC NOTIFICATION PROCESS

While there is no requirement from any outside agency for a formal notification process, Shell has agreed to inform the surrounding residential and business neighbourhood of the installation of a new Shell Diesel Extra additive storage & blending system as they similarly did for the Ethanol and Biodiesel project. Shell Canada will inform the City of the responses received from residents or businesses to the information letters, which will be sent out prior to the release of the Preliminary Plan Approval.


## 4.0 CONCLUSION

The Planning and Building Department is in receipt of an application for PPA for the installation of Shell Diesel Extra additive storage & blending system at Shell Canada Products Burmount Terminal at 2751 Underhill Avenue.

A review of the PPA #10-386 application and all necessary reviews have been completed by staff. The application and construction drawings were circulated to applicable City departments for review.

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

With Council receipt of this report, staff will complete the process for issuance of the PPA to Shell to allow for the issuance of the other required permits for the installation of the Shell Diesel Extra additive storage & blending system.

  
B. Luksun, Director  
PLANNING AND BUILDING

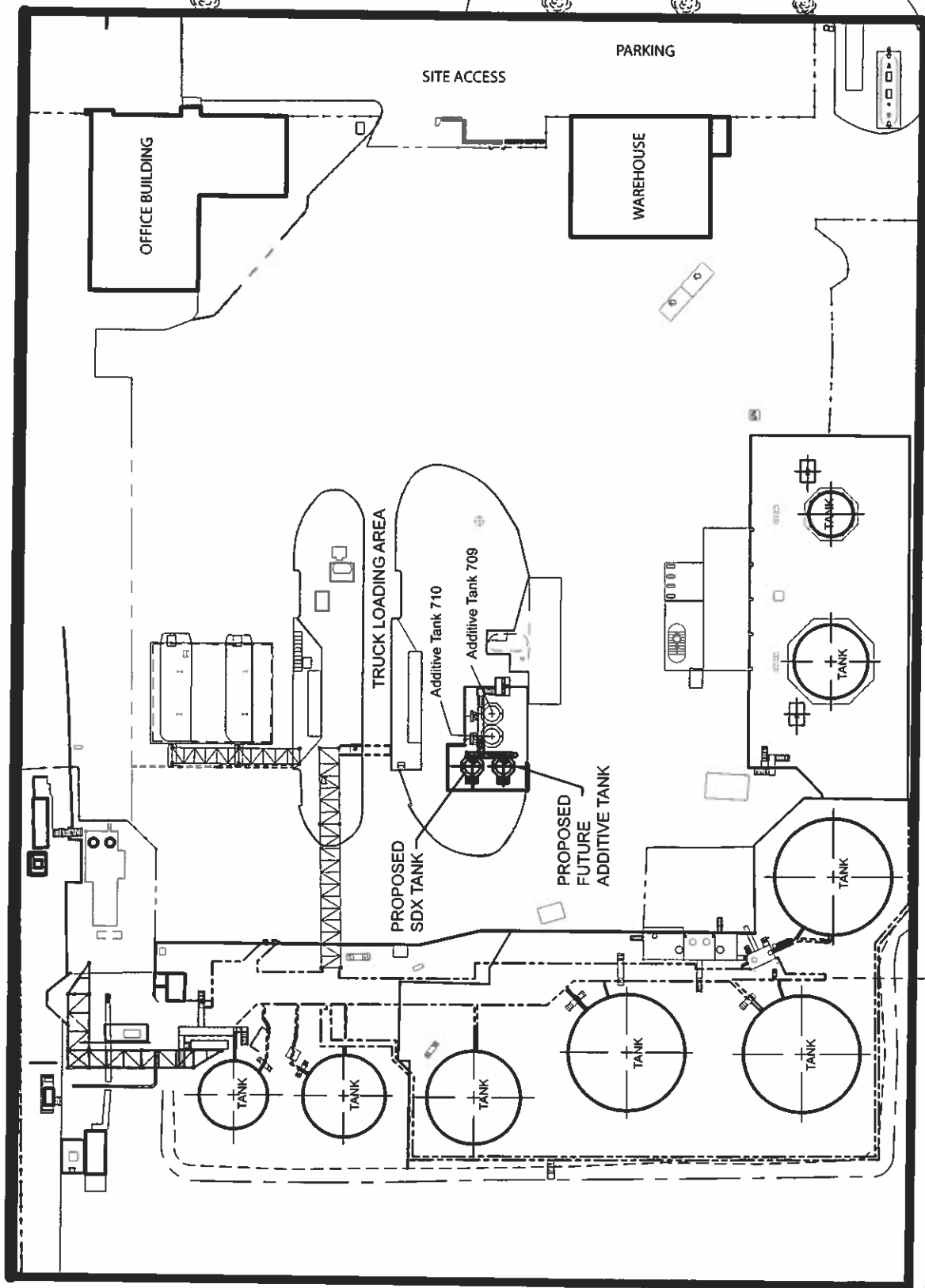
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### *Attachments*

cc: Director Engineering  
Fire Chief  
Chief Building Inspector

UNDERHILL AVENUE

BROADWAY



Site Plan - Burmount Terminal  
ATTACHMENT #1