BHP Potash Export Facility At Fraser Surrey Docks

About BHP

BHP Billiton Canada Inc. (BHP) is a leading global resources company with assets and projects in iron ore, petroleum, copper and coal. BHP proposes to construct a potash export facility at Fraser Surrey Docks in Surrey, B.C. to export potash from the proposed Jansen mine in Saskatchewan.

Additional information about BHP is available on our corporate website www.bhp.com

What is Potash?

Potash, technically known as potassium chloride (KCl), is a naturally occurring mineral salt and a key ingredient in agricultural fertilizer, including common household garden fertilizers. Potash is non-flammable, non-combustible and is considered non-toxic to aquatic species. Similar to table salt, potash is mildly corrosive to metals, and is water-soluble so requires a dry location for storage. The world’s largest known reserves of potash are located in Saskatchewan, Canada. Potash is processed into solid particles that are approximately 3/16 inch (4 millimeters) in size and range from pink to red in colour.

About 95 per cent of potash consumption is for use in fertilizers, the remaining 5 per cent is used in a variety of chemical and manufactured products. Fertilizers are a major contributor to improving crop yields and resilience and helping to feed the growing global population.

About the Project

Subject to regulatory and internal approvals, BHP would construct an export facility to receive and store rail shipments of potash and load onto bulk ocean-going vessels. The proposed facility, with a throughput of 8 million tonnes per annum (Mtpa), will:

- Receive shipments of product by rail from the proposed Jansen mine
- Offload products from rail cars to the conveyor system
- Store potash in the storage building
- Transfer products from the potash storage building via conveyors to the ship loader and to a waiting vessel for export
- When throughput at the facility reaches the projected 8 Mtpa, 9 to 10 trains per week are expected. Vessels loading at the facility are expected to range from Handysize up to Kamsarmax size with three to four vessels loading per week.
Project Description

To develop the new facility, the following site preparation and construction activities are planned.

Site Preparation:

- Remove existing structures and asphalt within building footprints. Demolition will include the building southeast of Shed 4, the container truck gate, the diesel shop and a portion of Shed 5.
- Preload the facility footprint using clean fill

Construction:

- Rail car unloading facility and material handling and transfer system including dust collection units
- Rail loop and access improvements
- Fully enclosed potash storage building, including materials handling equipment
- Cascading style ship loader to minimize dust and maintain product quality
- Berth improvements
- Railcar loop

Maintenance dredging is anticipated to continue as part of the Fraser River dredging program administered by the port authority. No development dredging to deepen the berth is anticipated.

Project Status

We are in the preliminary review phase of the Project and Environmental Review Process for the Vancouver Fraser Port Authority. We look forward to sharing more information as it becomes available. A second round of public consultation will be conducted after the permit application is accepted for review by the port authority.
Technical Studies

As part of the permit application, technical studies are being undertaken in the following areas:

### ENGINEERING STUDIES

<table>
<thead>
<tr>
<th>Study Area</th>
<th>Details</th>
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<tbody>
<tr>
<td>Hazardous materials report for demolition</td>
<td>• Inventory of all hazardous materials currently stored on-site</td>
</tr>
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<td>• Asbestos and other materials surveys and planning</td>
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<tr>
<td>Lighting</td>
<td>• Review and define lighting requirements consistent with the port authority’s lighting guidelines, WorkSafeBC and Illuminating Engineering Society</td>
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<tr>
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<td>• Light level readings</td>
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<tr>
<td>Geotechnical Report</td>
<td>• Project-specific seismic and geologic hazards</td>
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<td>• Design requirements to meet national standards based on identified risks</td>
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<tr>
<td>Marine Structures</td>
<td>• Site plan specific to proposed marine works, load and seismic requirements</td>
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<tr>
<td>Energy Efficiency &amp; BATNEC report</td>
<td>• Assessment of Project effects to electrical energy consumption levels</td>
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<td>• Summary of the Best Available Technology Not Entailing Excessive Cost (BATNEC) for the proposed Project</td>
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### ENVIRONMENTAL ASSESSMENT STUDIES

<table>
<thead>
<tr>
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| Noise        | • Baseline noise monitoring  
• Computer modeling  
• Future and construction noise prediction  
• Noise assessment  
• Mitigation measures for construction and operation |
| Air Quality  | • Level 1 Emission Estimation  
• Level 2 Atmospheric Dispersion Modelling  
• Air assessment for Project operations  
• Mitigation measures for construction and operation |
| View and Shade | • Review site design layouts, materials, graphics and documents  |
| Traffic Impact | • Review assessment guidelines and reports                                                   |
|              | • Current and anticipated site traffic (road and rail) and how they will interact on site   |
|              | • On-site road traffic circulation                                                           |
|              | • Site-generated traffic distribution throughout the day and impacts to adjacent and nearby roads |
|              | • An access/egress and storage analysis for vehicles accessing site including parking requirements |
|              | • Emergency access                                                                         |
| Archaeology and Heritage Resources | • Assess potential for archaeological resources in the Project area  
| | • Visual surface and drill core inspection  
| | • Archaeological Overview Assessment  
| | • Archaeological Potential Preliminary Assessment  
| | • Chance find procedure |
| Flood Protection | • Flood risk assessment for site infrastructure |
| Habitat Assessment | • Habitat assessments and mitigation for potential effects:  
| | • Fish and fish habitat  
| | • Terrestrial ecosystems and vegetation  
| | • Wildlife  
| | • Species at risk  
| | • Invasive species |

### PROJECT PLANS

| Stormwater Pollution Prevention Plan | • Project overview and site inventory including site activities and materials which may affect stormwater  
| | • Hydrological assessment  
| | • Issues identification and risk analysis  
| | • Housekeeping practices, preventative maintenance, reduction and containment activities, and treatment  
| | • Implementation and monitoring |
| Construction Environmental Management Plan | • Site environmental management during construction to avoid or minimize potential adverse impacts  
| | • Will include consideration for nesting birds |
| Soil and Groundwater Management Plan | • Site introduction, including background, history of use, and a summary of existing soil and groundwater conditions at the site  
| | • Management procedures that will be put in place during excavation work if contamination is identified |
| Rail Operations Plan | • Expected rail operations and interactions with other traffic on site |
| Marine Traffic Information Requirements | • Vessel design ranges and vessel traffic, anchorage and utilization  
| | • Operations for berthing/ unberthing |
| Fire safety plan | • Employee safety education and compliance with regulations  
| | • Identify potential hazards and procedures in the event of an emergency |
| Spill Prevention and Emergency Response Plan | • Measures to avoid spills  
| | • Contingency response planning and risk identification |
| Contaminated Sites | • Phase 2 environmental site assessment |

The Vancouver Fraser Port Authority’s website [https://www.portvancouver.com/development-and-permits/project-and-environmental-reviews/] provides information about the Project and Environmental Review Process, and technical guidelines for the above studies.
Your Input

BHP is committed to ensuring community interests are considered as part of the Vancouver Fraser Port Authority permit review process. Your input is important and we invite you to ask questions and provide comments.

At this time, we are specifically seeking feedback on the scope of studies that will be completed as part of our application to the Vancouver Fraser Port Authority. The 20-business day public comment period will take place from **12 October to 8 November, 2017**.

How To Participate

Visit our project website for information about the project, to complete our online feedback form and to sign up for project updates [www.bhp.com/fsdpotashexport](http://www.bhp.com/fsdpotashexport).

Attend a public information session where you can meet the project team and discuss your questions and comments:

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<th>New Westminster</th>
<th>Surrey / Delta</th>
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<td><strong>Thursday, 26 October, 2017</strong>&lt;br&gt;5:30 p.m. to 8:30 p.m.&lt;br&gt;Fraser River Discovery Centre&lt;br&gt;788 Quayside Drive&lt;br&gt;New Westminster, BC V3M 6Z6</td>
<td><strong>Saturday, 28 October, 2017</strong>&lt;br&gt;11:00 a.m. to 2:00 p.m.&lt;br&gt;Royal Height Elementary School&lt;br&gt;11665 97 Avenue&lt;br&gt;Surrey, BC V3V 2B9</td>
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Next Steps

The preliminary public comment period ends on 8 November, 2017 and input must be received by the closing date to be considered in refining the scope of the studies. Once the public comment period ends, we will prepare a Preliminary Review Phase Consultation Summary Report and a Preliminary Review Phase Input Consideration Report and, following approval by Vancouver Fraser Port Authority, post these to the project website and on the port authority website.

Once we have submitted our permit application, we will host a second phase of consultation. The Application Review Public Comment Period will include community open houses where we will provide further details about our project and participants can provide input on the results of our assessments.

We look forward to sharing more information as the permit review process moves forward. We welcome your questions by phone, mail or email.

Contact Us

**Email**: PotashPortPermit@bhpbilliton.com

**Mail**: BHP  
Attention: Jansen Outbound Logistics Project Team  
130 3rd Avenue South  
Saskatoon, SK S7K 1L3

**Phone**: 1-844-385-8581

For questions regarding the Vancouver Fraser Port Authority’s Project and Environmental Review process, please email Jessica Mehigan, Senior Planner at permit.comments@portvancouver.com or call 604.665.9570.