



January 6, 2010

BY EMAIL

Regional District of Fraser-Fort George
155 George Street
Prince George, BC V2L 1P8

Attention: Donna Belanger, Planner III

Dear Ms. Belanger,

Re: Comments on Application for Gravel Screening and Crushing – Parkline Place Holdings Ltd. (Your File TUP 7866/D) – Referral for Revised Proposal

Further to your correspondence of December 22, 2009, the Prince George Air Improvement Roundtable (PG AIR) thanks the Regional District of Fraser-Fort George for the opportunity to provide comment on the draft Temporary Industrial Use Permit No. 138 (Permit) for Parkline Place Holdings Ltd. (the Applicant) authorizing and regulating a proposed gravel processing operation located along Miworth Road in Prince George.

The primary role of PG AIR is to develop and implement the Air Quality Management Plan (Plan), which largely provides strategic direction on air quality management in the Prince George airshed. A key objective of the Phase I Plan and the current Phase II Plan is to prevent further degradation of local ambient air quality, especially increases of fine particulate matter (PM₁₀ and PM_{2.5}) levels, which are among the highest in British Columbia. In connection with this, PG AIR reviews and provides comment on permit applications on a case-by-case basis.

Gravel processing operations (including excavation, crushing, loading and removal) can create the emissions of fine particulate matter. The operation of vehicles and processing equipment can also be a source of fine particulate matter, as well as nitrogen oxides, sulphur dioxide and volatile organic compounds (which can react in the atmosphere to result in the secondary formation of fine particulate). Exposure to fine particulate matter has been linked to adverse human health impacts, including respiratory diseases (such as asthma, emphysema, pneumonia and bronchitis), cardiovascular problems, and premature death. While the preliminary dispersion model research conducted on behalf of the PG AIR Research Working Group estimates that dust from existing gravel processing operations contribute a relatively small proportion of total fine particulate matter emissions to the Prince George airshed (as measured at the downtown (Plaza)



monitoring site), management actions to reduce potential air quality impacts from the proposed gravel operation is recommended by PG AIR given the nature, scope and location of the proposed operation. In particular, the nature of gravel processing operations (which result in dust emissions near the surface) and the location of the proposed operation near the Nechako River (which carries pollutants downstream towards residential areas) may exacerbate air quality and noise issues at the neighbourhood level, which is of concern given the history of air quality and noise complaints from adjacent residential areas. Cumulative impacts from the proposed operation added to existing gravel operations may also lead to elevated levels of particulate matter in the airshed.

Having reviewed the draft Permit, the associated Regional District Report dated December 22, 2009 (Report), PG AIR is pleased to provide the following recommendations:

1. Dust Creation and Control

While the Report indicates that the Applicant has advised that the gravel resource is wet, it is possible for dust to be produced during periods of hot and dry weather such as experienced during the summer, when the Applicant proposes to carry out operations. As such, PG AIR recommends that, if the proposed operation is approved by the Regional District, provisions be included in the Permit requiring the Applicant to effectively reduce and control dust emissions from operation, through the use of site layout and operational practices that minimize the creation and reduce the escape of dust, as well as air quality measures that intercept airborne dust. In particular, PG AIR recommends that the Permit require the Applicant employ wet crushing and follow all appropriate best management practices (BMPs) for dust mitigation and control set out in the Ministry of Mines, Energy and Petroleum Resources *Aggregate Operators Best Management Practices Handbook* (Handbook) during all site development, processing, and reclamation activities, as these can reduce dust emissions by between 25 and 99 percent; such BMPs could be detailed in a dust control plan prepared by the Applicant and submitted to the Regional District for approval and should include, without limitation:

- a. using appropriate dust control measures and systems for crushing and screening to prevent or minimize dust generation and prevent the escape of dust emissions from these and other point sources;
- b. using appropriate dust control measures and practices to prevent or minimize fugitive dust emissions from non-point sources including any proposed excavation, loading and unloading, and stockpiling;
- c. reducing speeds and limiting movement of vehicles onsite, as well as limiting the duration vehicles and processing equipment are operating;



- d. ensuring that trucks transporting materials off site are not overloaded and are securely tarped and clean of loose material to prevent dust and debris from being tracked to roadways;
- e. using appropriate dust control measures on haul roads to minimize dust generation and carrying out road paving or continuous application of dust suppressant at the junction(s) of haul roads and paved roads to minimize dust generation or tracking onto the paved road(s);
- f. maintaining or establishing appropriate screening (including treed berms) near dust generators, receptors or at the perimeter of the site to prevent or reduce noise and dust impacts; and
- g. carrying out active reclamation of the site to reduce sources of windblown dust from open areas.

To assist the Applicant carry out dust mitigation planning, PG AIR recommends that the Permit also include a provision requiring the Applicant to prepare a site layout map, as discussed in the Handbook, that contains the following components:

- a. dust generating activities;
- b. off-site facilities that are sensitive to dust;
- c. prevailing wind direction(s) and onsite wind patterns;
- d. placement of berms, stockpiles and tree buffers to create or enhance wind shadows
- e. possible locations of dust-generating activities and haul roads in calm locations and far from dust sensitive facilities, and
- f. location of existing trees and shrubs to create wind breaks.

Alternatively, or in addition, a change in the Permit of the proposed operating times for aggregate screening and crushing to 9:00AM to 5:00PM (from from 6:00AM to 7:00PM) may alleviate potential impacts from dust and noise at residential areas near the proposed operation.

2. Air Quality Monitoring

PG AIR recommends that, if the proposed operation is approved by the Regional District, a provision be included in the Permit requiring the Applicant to work with Ministry of Environment to carry out dust fall monitoring downwind of the site or other ambient air quality monitoring in the neighbourhoods surrounding the site.

3. Air Quality Advisories

PG AIR recommends that, if the proposed operation is approved by the Regional District, provisions be included in the Permit requiring the Applicant to develop and submit to the



Regional District for approval an action plan detailing the measures that will and could be taken by the Applicant (including process changes, limiting production, scheduling changes, and change of works) during an Air Quality advisory. The Ministry of Environment has recently requested action plans for air quality advisories from its permit holders in the Prince George airshed. PG AIR also recommends that a provision be included in the Permit requiring the Applicant to temporarily curtail dust-generating activities, if ordered by the Regional District, during an Air Quality advisory.

4. Other

The Report indicates that a second, unidentified gravel processing company also plans to operate on the subject property and proposes to process and remove a greater amount of gravel than that proposed by the Applicant. As such, PG AIR recommends that, if the proposed operation is approved by the Regional District, this second company be named in the Permit or the Regional District otherwise clarify and confirm (in the Permit or by way of a separate permit) that the activities of this second company will be subject to any and all environmental conditions and restrictions contained in the Permit.

Finally, it is our understanding that, if the proposed operation is approved by the Regional District, a second Temporary Use Permit or a re-zoning application will be required upon expiry of the Permit for the Applicant to continue any operations at the subject property, either of which processes would require stakeholder consultation. Given that limited time was available to comment on this referral, PG AIR recommends that it and other appropriate stakeholders be consulted early in the process for future matters involving potential local air quality impacts.

PG AIR again thanks the Regional District for the opportunity to comment on this matter. Management actions to effectively and efficiently reduce the impact of particulate matter from gravel processing operations are one of the elements of an overall strategy to reducing environmental and health impacts from fine particulate matter and improving air quality in the Prince George airshed.

Yours truly,

Prince George Air Improvement Roundtable Society (PG AIR)

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Air Quality Management Coordinator