



# Environmental Appeal Board

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## APPEAL NO. 2002-WAS-020(b), 023(a), 024(a)

In the matter of appeals under section 44 of the *Waste Management Act*, R.S.B.C. 1996, c 482.

<b>BETWEEN:</b>	Philip Fleischer Sliammon First Nation Paddy Goggins	<b>APPELLANTS</b>
<b>AND</b>	Assistant Regional Waste Manager	<b>RESPONDENT</b>
<b>AND:</b>	NorskeCanada, General Partnership	<b>THIRD PARTY</b>
<b>BEFORE:</b>	A Panel of the Environmental Appeal Board Alan Andison, Chair Cindy Derkaz, Member Dr. Robert Cameron, Member	
<b>DATES:</b>	December 9-13, 2002	
<b>PLACE:</b>	Powell River, B.C.	
<b>APPEARING:</b>	For the Appellants: Philip Fleischer Sliammon First Nation  Paddy Goggins For the Third Party:	
	Philip Fleischer Walter Paul Kurban Ali Keshvani William J. Andrews, Counsel Alan Blair, Counsel Diana Valiela, Counsel Christine Kowbel, Counsel	

## APPEALS

Philip Fleischer, the Sliammon First Nation and Paddy Goggins filed separate appeals against the October 17, 2002 temporary amendment made to Waste Management Permit PA-03149 (the "Permit") by R.H. Robb, the Assistant Regional Waste Manager (the "Assistant Manager")<sup>1</sup>. The temporary amendment authorizes the permit holder, NorskeCanada, General Partnership ("NorskeCanada") to

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<sup>1</sup> John Keays filed Appeal No. 2002-WAS-022. Mr. Keays participated in the hearing until he withdrew his appeal on December 10, 2002.

complete a Tire Derived Fuel ("TDF") trial on Power Boiler #19, at its pulp and paper mill in Powell River, B.C. The temporary amendment is for a total of 10 weeks between November 1, 2002 and April 1, 2003.

The Board has the authority to hear the appeals under section 11 of the *Environment Management Act*, R.S.B.C. 1996, c. 118, and section 44 of the *Waste Management Act*, R.S.B.C. 1996, c. 482 (the "*Act*"). Section 47 of the *Act* provides that on an appeal, the Board may:

- a. send the matter back to the person who made the decision, with directions,
- b. confirm, reverse or vary the decision being appealed, or
- c. make any decision that the person whose decision is appealed could have made, and that the board considers appropriate in the circumstances.

The appeals were heard together. The Appellants seek an order rescinding the temporary amendment, or in the alternative, an order adding certain conditions to the temporary amendment.

## **BACKGROUND**

The Permit authorizes the discharge of contaminants into the air from NorskeCanada's pulp and paper mill located in Powell River, B.C.

The mill's current operations include 5 lines of thermo-mechanical pulping, 3 paper machines, a biomass-fired bubbling fluidized bed power boiler ("Power Boiler #19"), 2 standby power boilers, and secondary fibre and Kraft repulping facilities that process pulp purchased off-site. The paper machines manufacture newsprint and various types of groundwood specialty paper.

In October 2001, the mill's groundwood pulping and woodmill operations were closed. The Kraft pulp mill was permanently shut down on November 26, 2001.

Power Boiler #19 was built in 1997 and commissioned in January 1998, at a project cost of \$120 million. It burns woodwaste from sawmills (hogfuel), dryland log sort debris, some land-clearing debris and some effluent treatment sludges from the mill to produce steam.

There has been a decline in the quality of hogfuel available to mills in B.C. Woodwaste from sawmills has a higher thermal value, and contains less rocks and sand, than log sort and land clearing debris. As sawmills shut down because of market conditions and trade disputes, there is less sawmill hogfuel available, and more log sort and land-clearing debris is burned. In the winter months, hogfuel has a high moisture content, requiring more auxiliary fuel to drive off moisture.

NorskeCanada compensates for poorer quality, wetter woodwaste, by burning natural gas as a supplemental fuel. The natural gas improves combustion and maintains the efficiency of Power Boiler #19.

NorskeCanada proposes to test TDF to determine if it can be substituted for natural gas as a supplemental fuel in Power Boiler #19. Tires are comprised of rubber, fibre and metal. TDF and tire derived product ("TDP") are produced by shredding scrap tires into chips or crumb, and removing the fibre and metal. Chips may be 19 to 25 mm (3/4" to 1") in size and are larger than the crumb. Chips retain some of the steel belts although some of this may be removed prior to burning. TDP uses the crumb and is used to manufacture various products including rubber mats, tiles, planters, outdoor furniture, playground equipment, and floor coverings for recreational and agricultural facilities. TDF is considerably less expensive than natural gas. The company estimates that, by using TDF instead of natural gas, it could save approximately one-half of its \$4 million annual expenditure for natural gas.

TDF has been tested as a supplemental fuel in two hogfuel fired bubbling fluidized bed power boilers in B.C.: at NorskeCanada's mill in Port Alberni, and at Abitibi-Consolidated's mill in Mackenzie. The waste management permit for the Port Alberni mill was amended in 1999, to allow continuous use of TDF as a supplemental fuel. TDF has also been used to fire cement kilns at Lehigh Northwest Cement Ltd. ("Lehigh Cement") in Delta and Lafarge Canada Inc. ("Lafarge Cement") in Richmond.

In 1991, the Ministry of Environment in B.C., now known as the Ministry of Water, Land and Air Protection (the "Ministry") embarked on a program to divert scrap tires from landfill sites and to reduce stockpiles of scrap tires. It introduced the Financial Incentives for Recycling Scrap Tires program ("FIRST"). FIRST is partially financed by a \$3 per tire levy imposed on purchasers of new passenger and light-duty truck tires. The levy is paid to the provincial Sustainable Environment Fund, from which the Ministry pays transportation and end use credits to registered transporters and processors of scrap tires. When the program started, approximately 75% of the scrap tires recovered under FIRST were used for TDF and 25% for TDP. Now approximately 85% of the scrap tires recovered become TDP.

FIRST has been remarkably successful in diverting scrap tires from landfills. The Ministry estimates that the program captures approximately 90% of the passenger car and light truck scrap tires in the province.

On June 14, 2002, NorskeCanada wrote to the Assistant Manager seeking approval to conduct a TDF trial in Power Boiler #19. The Assistant Manager determined that NorskeCanada should apply for an amendment to the Permit, which it did, on July 24, 2002.

The notification and consultation carried out in respect to NorskeCanada's application to amend the Permit are set out in a technical report prepared by Susan Woodbine, Environmental Protection Officer with the Ministry. The application was circulated to Environment Canada; the Ministry of Health, the Powell River Regional District; the District Municipality of Powell River; and the Environment Section of the Ministry. Concerns expressed by Coast Garibaldi Health Unit and the Ministry's Environment Section are addressed in the temporary amendment. The other agencies did not object to the application.

NorskeCanada notified the public of the proposed TDF trial by a press release published in the Powell River Peak, a local newspaper. It also published notice of the application in the B.C. Gazette and posted it at the mill site.

The public was invited to a community stakeholder meeting held July 17, 2002. Approximately 50 residents attended the meeting.

On October 17, 2002, the Assistant Manager amended the Permit. The amendment states, in part:

Pursuant to Section 13 of the Waste Management Act, Permit PA-03149, issued October 12, 1977 and last amended April 29, 2002, in the name of NORSKECANADA, GENERAL PARTNERSHIP is hereby temporarily amended, for a total of 10 weeks between November 1, 2002 to April 1, 2003, for the purpose of completing a Tire Derived Fuel (TDF) trial on Power Boiler #19. The temporary amendments to the permit are as follows:

...

1.2.2 This subsection is temporarily amended by the addition of the following:

<u>Contaminant</u>	<u>Maximum Concentration</u>
Sulphur Dioxide	300 mg/m <sup>3</sup> (daily average)

2.12 This subsection is temporarily amended by the addition of the following:

For the purpose of the trial, TDF shall be metered into the boiler at a rate not to exceed 5% by weight of the woodwaste feed into the boiler, to a maximum of 55 tonnes of TDF/day. For a one week period a maximum feed rate of 62 tonnes of TDF/day is acceptable provided that the TDF does not exceed 5% of the fuel feed. The permittee shall ensure that the composition of the wood residue mixture used during the trial is consistent with the composition of the material typically burned (i.e. a combination of hogfuel, dryland logsort debris and land clearing debris).

...

The following sections were added to the Permit: 3.3.6 – TDF Monitoring Program; 3.3.7 – TDF Burn Records; and 3.3.8 – TDF Report. Relevant portions of these sections are set out in the Discussion and Analysis below.

Mr. Goggins and Mr. Fleischer appealed the temporary amendment on the grounds that scrap tires should not be used for fuel if they can be used for TDP. They also submit that the TDF trial in Power Boiler #19 will result in harm to human health and the environment.

The Sliammon First Nation appealed on the grounds that there was a lack of meaningful consultation with it about the temporary amendment by both the provincial government and NorskeCanada. It also raised concerns about the health risk to Sliammon residents.

The Assistant Manager did not file a statement of points, participate in the hearing or make any submissions to support his decision to issue the temporary amendment.

The Appellants all requested a stay of the temporary amendment until the Board made a decision on the merits of the appeals. The Board denied the requests for a stay on December 4, 2002 (see: *Philip Fleischer et al. v. Assistant Regional Waste Manager*, Appeal No. 2002-WAS-020(a), 022, 023, 024), [2002] B.C.E.A. No. 67 (Q.L.).

At the hearing, NorskeCanada stated that, although the trial period under the temporary amendment commenced November 1, 2002, the company would not begin burning TDF until January 2003.

## **ISSUES**

1. Whether the Assistant Manager should have considered the impact that the use of TDF in Power Boiler #19 will have on the scrap tire recovery program and TDP market in B.C.
2. Whether there has been adequate consultation with the Sliammon First Nation in respect to the temporary amendment.
3. Whether the temporary amendment will cause an unacceptable adverse effect on human health or the environment and should be rescinded.
4. If not, whether the sulphur dioxide (SO<sub>2</sub>) emission limit authorized by the temporary amendment is excessive and should be reduced.
5. Whether other conditions proposed by the Appellants should be added to the temporary amendment or made the subject of specific recommendations or comment by the Panel.

## **RELEVANT LEGISLATION**

The Assistant Manager's power to amend a permit is found in section 13 of the *Act*.

### **Amendment of permits and approvals**

- 13** (1) A manager may, subject to this section and the regulations, and for the protection of the environment,

...

- (b) on application by a holder of a permit or holder of an approval, amend the requirements of the permit or approval.

...

- (4) A manager's power to amend a permit or approval includes all of the following:

...

- (e) authorizing or requiring a change in the characteristics or components of waste discharged, stored, treated, handled or transported;
- (f) authorizing or requiring a change in the quantity of waste discharged, stored, treated, handled or transported;

...

The definition of "environment" is found in section 1(1) of the *Act*:

**"environment"** means the air, land, water and all other external conditions or influences under which humans, animals and plants live or are developed.

## DISCUSSION AND ANALYSIS

### 1. Whether the Assistant Manager should have considered the impact that the use of TDF in Power Boiler #19 will have on the scrap tire recovery program and TDP market in B.C.

Mr. Goggins, supported by Mr. Fleischer, submits that the Assistant Manager failed to correctly assess the broad waste management implications of allowing NorskeCanada to burn TDF in Power Boiler #19. He argues that the Assistant Manager should have considered that, if the trial were successful, NorskeCanada would seek a permanent amendment to burn TDF.

In the long term, NorskeCanada may have options for obtaining tires for TDF. These are: tires collected under FIRST and diverted from TDP; tires collected outside of FIRST; imported TDF; or off-the-road (heavy industrial equipment) tires. Tires collected outside of FIRST could include those obtained in direct competition with FIRST and/or, recovery of those tires not currently being recovered by FIRST (about 10% of the total). The chemical composition of off-the-road tires is reported to be different from the TDF to be used in the trial. These tires also are reported to have a higher percentage of rubber than passenger and light truck tires.

Mr. Goggins submits that a permanent amendment to authorize the use of TDF in Power Boiler #19 would adversely affect the Ministry's scrap tire recovery program and the TDP market in B.C. It would also contravene the Ministry's long established waste management policy, known as the "5 Rs hierarchy": reduce, reuse, recycle, recover and manage residuals. He argues that recycling scrap tires into TDP is a higher and better use for scrap tires than TDF, which is energy recovery, and that the Assistant Manager should not approve any permit amendment that would ultimately result in a divergence from the 5Rs hierarchy. Mr. Goggins also notes

that there has not been any investigation into the jurisdictional issues that may arise from importing TDF.

Michael Roberge, Vice President Operations, Western Rubber Products Ltd., testified as a witness for Mr. Goggins. Western Rubber Products Ltd. was founded in 1989 and has grown to be the dominant scrap tire processor in B.C. It shreds 1.5 to 1.6 million passenger and light truck tires and 150,000 medium truck tires annually – approximately 85% of the scrap tires that are recovered under FIRST.

There are two other processors in B.C., accounting for 1% to 5% of the recovered scrap tires: Target Recycling on Vancouver Island, producing rubber mats from medium truck tires and TDF for NorskeCanada's Port Alberni mill, and a small company making TDP in Squamish. Lehigh Cement uses the remaining 10% to 14% of the recovered scrap tires for TDF.

Mr. Roberge explained that, over the years, 10 processors have "come and gone" in the industry. It is a very competitive and capital-intensive business. Western Rubber Products Ltd. has invested over \$5 million in equipment and now employs approximately 70 people.

Western Rubber Products Ltd. produces TDP. At present, there are 8 manufacturers in the province using TDP and the demand for TDP is strong. Mr. Roberge stated that the company could sell more TDP if it had access to more scrap tires. He asserted that Western Rubber Products Ltd. could handle 100%, or "even 200%", of the scrap tires recovered in the province. Any scrap tires used for TDF takes away from the TDP supply.

Lafarge Cement in Vancouver was burning TDF in its kiln and produced TDF on site. Mr. Roberge stated that Lafarge Cement has stopped using the TDF and wishes to dispose of its remaining TDF stockpile of 5,000 tonnes. Mr. Roberge stated that the Lafarge Cement TDF is unsuitable for TDP.

Kevin Gertken, Environment Specialist at NorskeCanada Powell River Division, testified that all of the 2400 tonnes of TDF to be used in the trial would come from the Lafarge Cement stockpile.

NorskeCanada's application to amend the Permit states:

**Background:**

TDF is produced by shredding tires after the bead wire has been removed. TDF has been successfully utilized as a supplemental fuel in a number of pulp & paper hogfuel boilers in North America. **The tires utilized in this process are sourced from the normal collection and waste streams in the community at large and would otherwise be landfilled or stockpiled.** (emphasis added)

...

**Expected Benefits of TDF:**

The use of Tire Derived Fuel (TDF) is expected to:

...

- Reduction of used tire piles in B.C. with the resulting benefit of reduced risk of fires.

...

Mr. Roberge testified that there are no stockpiles of scrap tires in B.C. Ms. Woodbine stated in her Technical Report that there were "some stockpiles of tires existing at present." Duncan Ferguson, a Ministry employee with responsibility for FIRST, who was summoned to appear at the request of Counsel for Mr. Goggins, stated that FIRST captures 90% of the scrap tires in B.C. There is currently a shortage of scrap tires to meet the demand in the province.

The technical report, prepared by Ms. Woodbine, discusses concerns raised by various members of the public at the community stakeholder meeting held July 17, 2002. It states on page 5:

Paddy Goggins stated that TDF was not as good, environmentally as Tire Derived Products (TDP) and that all the scrap tires should go towards TDP.

*Duncan Ferguson described how the FIRST program worked. He mentioned that there is only one company, Western Rubber, currently creating TDP within the province and that it was risky to leave all of the scrap tires with only one destination. If the TDP company happened to go out of business we would be left with nowhere to send the tires except for landfills. For this reason the ministry was still supporting TDF. (italics in the original)*

Mr. Roberge agreed that there would be a large "gap" in the scrap tire recovery program if Western Rubber Ltd. were to shut down. However, he confirmed that it is presently a profitable company.

Mr. Ferguson explained that FIRST is being revised to comply with the British Columbia Industry Products Stewardship Business Plan dated September 30, 2002. The plan states on page 5:

**2.4.1. Outcomes**

The ministry will work with industry brand-owners and key stakeholders to develop appropriate outcomes for each product category. As a minimum, outcomes will be consistent with the pollution prevention hierarchy of

1. reduce at source
2. reuse



3. recycle
4. recover materials and/or energy
5. manage residuals in an environmentally responsible manner.

Mr. Ferguson stated that it is the Ministry's policy to facilitate both TDP and TDF. TDP receives more financial incentive than TDF under FIRST, because it costs more to process TDP. He opined that TDP may be "material recovery," rather than recycling, ranking with energy recovery on the 5Rs hierarchy.

Ms. Woodbine stated that she was aware of FIRST, in general terms, when she prepared the technical report. She added that the reference to FIRST in the technical report was included to address a question from Mr. Goggins. Ms. Woodbine said that she does not believe this issue is relevant in deciding whether to approve the temporary amendment. In her view, until the government makes a policy decision that TDF is not to be pursued or is prohibited, the only relevant consideration is the effect the temporary amendment will have on air quality.

NorskeCanada submits that the issue of the supply of scrap tires for TDP is irrelevant to the present appeal. The temporary amendment is for a trial burn of TDF. The source of TDF for the trial is the existing stockpile at Lafarge Cement and is unsuitable for TDP.

The Panel finds that the Assistant Manager has the discretion, under section 13 of the *Act*, to consider the broad waste management implications of an application to amend a permit. The purpose of the *Act* is to manage waste in an industrial society. The Assistant Manager may take into account the impact, if any, an amendment to an air emission permit would have on Ministry programs to manage solid waste.

The Assistant Manager did not testify and the Panel does not know if he considered the impact the use of TDF in Power Boiler #19 may have on FIRST and the management of scrap tires in the province.

The Panel notes that the May 1991 document "Provincial System for the Reuse and Recycling of Scrap Tires in British Columbia, Financial Incentives for Recycling Scrap Tires (FIRST) Program, Instructions to the Transportation and Storage Sectors" outlines the FIRST "Program Intent." It states:

The FIRST program is designed to assist tire collectors, processors and end users in British Columbia who use tire derived products to manufacture new products or who use tire derived fuel for energy recovery.

The evidence before the Panel is that all the TDF for the trial will be from the existing stockpile at Lafarge Cement and is unsuitable for TDP. The Panel finds that because the TDF for the trial will be from the stockpile at Lafarge Cement, the temporary amendment will have no impact on the scrap tire recovery program and the TDP market in B.C. The Panel concludes that it is appropriate that the

temporary amendment should state that the TDF to be used in this trial shall be from the stockpile at Lafarge Cement.

If the trial is successful, NorskeCanada may decide to apply for a permanent amendment to the Permit. In making a decision on an application for a permanent amendment, the Assistant Manager has the discretion to consider the long-term waste management implications, including the 5Rs hierarchy. The Panel does not make any finding in respect to the permanent use of TDF in Power Boiler #19.

**2. Whether there has been adequate consultation with the Sliammon First Nation in respect to the temporary amendment.**

The Sliammon First Nation's grounds of appeal include the failure of the B.C. government and NorskeCanada to meaningfully consult with it about the temporary amendment. It submits that the lack of consultation has resulted in an infringement on the First Nation's aboriginal rights and title.

Walter Paul, Councillor and Environmental Portfolio Holder, for the Sliammon First Nation, testified that the mill is situated at the mouth of the Powell River on the site of the original Sliammon village. When the mill was built in 1912, the village was relocated 3 kilometres to the north to provide the mill with river access.

Norman Gallagher is the First Nation's advisor on treaty and aboriginal rights, and is a senior field recognizance worker. He testified about the Sliammon First Nation's interests in the area.

Both Mr. Paul and Mr. Gallagher submit that the Sliammon First Nation is a governing body, similar to the provincial and federal governments, and must be consulted about any permit, or permit amendment, issued by the Ministry for the NorskeCanada mill.

No submissions or case law were provided on when the duty to consult arises or the content of that duty.

The Ministry did not circulate NorskeCanada's application for the temporary amendment to the Sliammon First Nation. Ms. Woodbine testified that the Ministry's policy requires consultation with a first nation if an activity is likely to infringe on aboriginal rights or title. She stated that the Ministry does not consider that air emissions resulting from the permit amendment are likely to infringe on aboriginal rights or title because air emissions are transitory. Ms. Woodbine also stated that the amendment is temporary, with no anticipated on-going environmental impact.

Mr. Gertken outlined NorskeCanada's contact with the Sliammon First Nation in respect to the temporary amendment. The company faxed its news release to the First Nation's office on June 14, 2002, and sent an invitation to attend the community stakeholder meeting on July 2, 2002. The company also left four telephone messages for the Sliammon Chief. No representative from the Sliammon First Nation attended the community stakeholder meeting and the Chief did not return the phone calls. After the temporary amendment was issued, the Sliammon

First Nation contacted the company and has met with company representatives on three occasions.

In the case of *Paul v. Forest Appeals Commission* (2001) 201 D.L.R.(4<sup>th</sup>) 251, the majority of the Court of Appeal held that the provincial legislature does not have the constitutional capacity to confer the jurisdiction to determine questions of aboriginal rights or title, on administrative boards. At the hearing, Mr. Paul acknowledged that the Board does not have the jurisdiction to determine aboriginal rights or title. No evidence in this regard was provided.

In a hearing before the Board, the onus is upon an appellant to prove its case, on the balance of probabilities. There is no dispute that consultation with a local first nation is not required for each and every decision made by a government official. Whether there was a duty to consult with the Sliammon First Nation, over and above the notification that is required for all members of the public, has not been established in this case. There is a significant body of law and government policy in this area. None of it was provided to the Panel. Without establishing that, in law, there was a duty to consult with the Sliammon First Nation on the temporary amendment, the Panel cannot make a finding that there should have been consultation prior to issuing the amendment, nor can it assess the extent of the consultation that was required if, in fact, this type of amendment should have evoked that form of unique consultation.

In light of the above, the Panel finds that the Sliammon First Nation did not prove, on the balance of probabilities, that there was a requirement for the Ministry to consult with it in respect to a possible infringement of its aboriginal rights or title. However, the concerns that the Sliammon sought to be raised through consultation, such as the quality of its air, food, water and general respiratory health of the Sliammon residents, are matters that will be considered and addressed in the next issue.

### **3. Whether the temporary amendment will cause an unacceptable adverse effect on human health or the environment and should be rescinded.**

Under section 13(1) of the *Act*, the Assistant Manager may make amendments to a permit "for the protection of the environment." If the TDF trial will cause an unacceptable adverse effect on human health or the environment, the temporary amendment cannot be "for the protection of the environment."

Mr. Fleischer submits that the TDF trial authorized by the temporary amendment will increase the risk of harm to human health and the environment. Mr. Goggins adopts and endorses Mr. Fleischer's submissions on this issue. The Sliammon First Nation also submits that there is a potential health risk to the Sliammon people.

Mr. Fleischer testified that since the Kraft mill closed in November 2001, air quality in Powell River has "greatly improved." He is concerned that the TDF trial will cause a deterioration in air quality.

During his testimony, Mr. Fleischer referred the Panel to analyses of the chemical components of hogfuel and TDF, results of stack emission tests for particulate and metals from the Port Alberni power boiler, and test results for Power Boiler #19 from January through April 1998. Based on his review of the analyses and test results, Mr. Fleischer is concerned about a possible increase in emissions of particulate and metals including sulphur, chromium, lead, and mercury. He referred the Panel to the Canada Wide Standards for Particulate Matter and Ozone, which states that the best strategy for avoiding future problems is "keeping clean areas clean."

Mr. Fleischer submits that there is a real likelihood of increased harmful emissions from TDF and the only benefit would be a reduction in the mill's operating costs. Mr. Fleischer and Mr. Goggins request that the temporary amendment be rescinded.

Mr. Paul and Mr. Gallagher testified about the health concerns of the Sliammon First Nation. Many of the Sliammon people have serious health problems and a substantial number are asthmatic. Mr. Paul acknowledged that the Sliammon people do not know if their health problems are related to the mill's emissions. He stated that the First Nation might need to conduct a health study of its people.

The Sliammon First Nation did not provide the Panel with any evidence that the emissions authorized by the temporary amendment are likely to cause, or to exacerbate, health problems in its people.

Mr. Gertken provided information about the TDF trial at Port Alberni. When TDF was used as a supplemental fuel, stack emissions of total particulate matter (PM), polycyclic aromatic hydrocarbons (PAHs), and dioxins and furans were reduced.

Evidence was also presented about the TDF trial at the mill in Mackenzie. Tests conducted in October 2001 and February 2002 found all test parameters to be within regulatory limits, with the exception of PM emissions at 5% TDF in October. The October tests were not considered representative due to problems caused by gravel and debris in the power boiler. However, there was an increase in some contaminants, including zinc, SO<sub>2</sub> and PM.

John Grace, Ph.D., a witness for NorskeCanada, was qualified as an expert in fluidized bed combustion and the function of power boilers. Dr. Grace stated that TDF is an ideal fuel for this type of application and should result in improved combustion. Power Boiler #19 has a 5-field electrostatic precipitator that is 99.9% efficient in removing particulate. The Port Alberni and Mackenzie mills' power boilers are equipped with 4-field and 2-field electrostatic precipitators, respectively.

Based on his review of test results where TDF has been used in other power boilers, Dr. Grace is of the opinion that emissions of nitrogen oxides, PAHs, and dioxins and furans will not increase, and may decrease, when TDF is used as a supplemental fuel in Power Boiler #19. There may be a slight increase in SO<sub>2</sub> emissions because sulphur is present in TDF. However SO<sub>2</sub> emissions are presently very low and Dr.

Grace expects that the SO<sub>2</sub> emissions, when firing with TDF, will still be well within the acceptable range.

NorskeCanada presented a number of other expert witnesses to address the effect of the TDF trial on human health and the environment. The witnesses all opined, within their respective fields of expertise, that the TDF trial as authorized by the temporary amendment, will not have an unacceptable adverse effect on human health or the environment. The Panel has considered the expert evidence in reaching its decision.

The Panel finds that the evidence before it does not prove, on the balance of probabilities, that the TDF trial authorized by the temporary amendment will cause an unacceptable adverse effect on human health or the environment. In particular, there is no evidence before the Panel that the use of TDF at other mills has resulted in any exceedances of regulatory standards. Additionally, the evidence is that Power Boiler #19 is even more efficient than the boilers at the other mills, which should result in lower emissions. Finally, the Panel finds that the purpose of the test is to determine whether TDF can be burned in a safe and efficient manner.

At the first sign of any exceedances the test can be terminated. Under these circumstances, the Panel is satisfied that human health and the environment will be protected.

Therefore, the Panel will not rescind the Permit for this reason.

#### **4. Whether the sulphur dioxide (SO<sub>2</sub>) emission limit authorized by the temporary amendment is excessive and should be reduced.**

If the Assistant Manager's decision to issue the temporary amendment is not rescinded, Mr. Goggins and Mr. Fleischer both submit that the SO<sub>2</sub> emission limit of 300 mg/m<sup>3</sup> (daily average) is excessive and should be reduced.

The temporary amendment adds a SO<sub>2</sub> emission limit of 300 mg/m<sup>3</sup> (daily average) to the Permit. Prior to the temporary amendment, the Permit did not have an SO<sub>2</sub> emission limit.

The *Sulphur Content of Fuel Regulation* (B.C. Reg. 67/89, March 21, 1989) (the "*Regulation*") provides:

#### **Interpretation**

##### **1 In this regulation:**

**"fuel"** means a fuel or a combination of fuels used in the Province for

- a. heating,
- b. generating steam or electricity, or
- c. combustion in industrial processes,

but does not include natural gas;

“sulphur content” means the amount of sulphur by weight as determined by methods approved by the director.

### Prohibitions

- 2 (1) Subject to section 3, on and after June 1, 1989, a person shall not use fuel that has a sulphur content in excess of 1.1%.

### Exemptions

- 3 (5) A pulp mill that is not exempted under subsection (2) is exempt from section 2 where a waste management permit is issued to the mill under section 10 of the *Waste Management Act*
- (a) after the coming into force of this section, or
- (b) before the coming into force of this section, and is amended after the coming into force of this section
- and the permit under paragraph (a) or the amendment under paragraph (b) limits sulphur dioxide emissions from the mill.

The sulphur content of TDF exceeds 1.1%. The addition of an SO<sub>2</sub> limit to the Permit provides the mill with an exemption under subsection 3(5) of the *Regulation*.

The mill continuously monitors SO<sub>2</sub> emissions at the stack of Power Boiler #19. Mr. Gertken testified that during the 8-month period immediately preceding the hearing, SO<sub>2</sub> emissions averaged approximately 40 mg/m<sup>3</sup>, and the peak SO<sub>2</sub> emission was 140 mg/m<sup>3</sup>.

Mr. Gertken also provided the results of SO<sub>2</sub> stack emissions at the Port Alberni mill. The permit for the Port Alberni mill does not contain a limit for SO<sub>2</sub> emissions. The mill's average SO<sub>2</sub> emission when burning TDF at 5% of total fuel feed is approximately 75 mg/m<sup>3</sup>.

Dr. Grace stated that it is not certain that there will be an increase in SO<sub>2</sub> emissions from Power Boiler #19. There may be an incremental increase, but he would not expect it to exceed 50% of current SO<sub>2</sub> emissions. On the other hand, there may be a decrease as a result of the sulphur reacting with calcium in the sand bed of the power boiler. In Dr. Grace's opinion, the proposed TDF trial will provide “an excellent means of evaluating what happens to SO<sub>2</sub> emissions.”

Ms. Woodbine stated that an emission limit of 300 mg/m<sup>3</sup> (daily average) was set, taking into consideration that this is the same limit for the power boiler at the Howe Sound Pulp and Paper mill in Port Mellon, also on the Sunshine Coast.

The Panel is concerned that setting unnecessarily high emission limits, even though emissions at such levels may not cause an adverse effect on human health or the environment, impugns the regulatory system. As Counsel for Mr. Goggins noted,

emission limits in one permit are used as a justification for setting similar limits in other permits. Permit limits should be set with a view to the amount of anticipated discharge.

On the evidence before it, the Panel finds that the SO<sub>2</sub> emission limit of 300 mg/m<sup>3</sup> (daily average) is probably excessive given the evidence of Dr. Grace that Power Boiler #19 is a more efficient burner than those at other mills. However, the Panel finds that it does not have sufficient evidence upon which to base a lower limit and the Panel agrees that the TDF trial will provide a good means of determining *actual* SO<sub>2</sub> emission levels. Given that this is a short term "test" and that the SO<sub>2</sub> levels will be monitored during the test period, it is not unreasonable to authorize an SO<sub>2</sub> emission limit that may be somewhat higher than would be authorized over the long term. The evidence presented, and accepted by the Panel under the previous heading, is that the temporary amendment will not cause an unacceptable adverse effect on human health or the environment.

In the circumstances, the Panel has decided not to lower the SO<sub>2</sub> emission limit (daily average) for the TDF trial authorized by the temporary amendment.

**5. Whether other conditions proposed by the Appellants should be added to the temporary amendment or made the subject of specific recommendations or comment by the Panel.**

At the conclusion of the hearing the Appellants requested that, if the TDF trial were allowed to continue, a number of conditions be added to the temporary amendment and various recommendations or comments be made by the Panel.

The Panel has considered the Appellants' requests and responds to those requests that are not discussed above.

*(a) The TDF report required by section 3.3.8 of the temporary amendment should specify that its purpose is to compare test results for 2% and 5% TDF addition rates, to baseline data.*

The Appellants are concerned that the TDF report will compare test results with provincial and federal guidelines for emissions instead of with the actual performance of Power Boiler #19 when not burning TDF.

Section 3.3.8 of the temporary amendment states:

**3.3.8 Tire Derived Fuel (TDF) Report**

The permittee shall submit a report including, but not limited to, the following:

1. The results obtained from the monitoring conducted under subsection 3.3.6. and a summary of these results.
2. A comparison of the results based on the TDF addition rates of 0%, 2% and 5%.

3. An evaluation of the potential environmental effects from the burning of TDF.
4. The TDF burn records from section 3.3.7
5. For each day of monitoring, the 90<sup>th</sup> percentile total steam rate for the previous 90 days and the total steam rate at the time of testing.

The report is to be submitted to the Regional Waste Manager no later than June 30, 2003.

The Panel finds that under section 3.3.8(2), test results must be compared to baseline data (i.e. results at 0% TDF addition rate). The Panel notes that section 3.3.6, which establishes the monitoring program for the TDF trial, states "[i]f monitoring has been conducted at the 0% addition rate, prior to the TDF trial, the resulting data is acceptable."

Dr. Grace, in response to questions posed by Counsel for Mr. Goggins, stated that data from Power Boiler #19 for the winter months should be used for comparison in the TDF trial. These are the months when hogfuel is of poorer quality and requires more supplementary fuel for combustion. Dr. Grace noted that extensive data has been gathered in respect to the power boiler's performance during the winter months.

The Panel agrees that the best data for comparison of TDF at 0% addition rate is data from monitoring previously conducted during the winter months and that this should be clarified in the temporary amendment.

The Panel finds there is no need to include a statement about the purpose of the testing since the requirement for comparison of 0% addition rates is included. This requirement will provide the relevant data to meet the Appellants' objectives.

*(b) The baseline data and the TDF test results should be available to the public.*

The Appellants request that the baseline data for the TDF trial be made available to the public before the trial commences.

At the hearing, Counsel for NorskeCanada stated that the company is prepared to make the baseline data available to the public. It is possible to provide the data electronically and/or in written form at the public library.

The Panel directs that NorskeCanada forthwith make the baseline data available to the public in a manner acceptable to the Assistant Manager, so that the public has full access to the baseline parameters against which the TDF trial at 2% and 5% addition rates can be compared.

The Appellants also request that the test results be made available to the public forthwith after each TDF test is conducted.

Counsel for NorskeCanada noted that continuous monitoring of a number of emissions at the mill is provided "in real time" to the Ministry and that the public



has access to this information through the Ministry. Counsel also confirmed that the raw data for all the TDF tests conducted during the trial would be included in the TDF report, and the report will be available to the public.

The Panel notes that the TDF report must be submitted to the Ministry by June 30, 2003. The Panel is not convinced that there would be any substantial benefit to the public if NorskeCanada were required to provide the raw data as it is collected. Further, as the public can obtain the information of interest from the Ministry, no amendment to the temporary amendment is justified.

*(c) The TDF report should include the number of days and the rates of TDF burned before and after the tests are conducted.*

Section 3.3.7 of the temporary amendment requires that, for every day that TDF is burned, NorskeCanada shall record the date, times and total weight of TDF burned, the total weight of hogfuel burned and the percentage of TDF burned. Section 3.3.8(4) stipulates that the company must include the TDF burn records in the TDF report.

Therefore, the Panel finds that the Appellants' concern in this regard has been addressed.

*(d) The monitoring program should require the measurement of total hydrocarbons at the 2% TDF addition rate.*

The monitoring program for the TDF trial is set out in section 3.3.6 of the temporary amendment. It requires source testing for most parameters at 0%, 2%, and 5% TDF addition rates. However it only requires source testing for dioxins and furans, PAHs and volatile organic compounds (VOCs)(as total hydrocarbons) at 0% and 5% addition rates.

At the hearing, Counsel for NorskeCanada advised the Panel that the company has agreed with the Ministry to measure total hydrocarbons at the 2% TDF addition rate.

The Panel notes that the Emission Testing Plan prepared for NorskeCanada by A. Lanfranco and Associates Inc. and Cirrus Consultants, dated December 2002, contemplates emissions testing for VOCs (as total hydrocarbons) at both the 2% and 5% TDF addition rates. The Plan does not propose to test for PAHs and dioxins and furans at 2% TDF addition rate.

For greater certainty, the Panel directs that section 3.3.6 of the temporary amendment be amended to require additional source testing for PAHs and VOCs, at the 2% TDF addition rate.

*(e) The TDF report should include the frequency and duration of any steam venting during the trial.*

Mr. Fleischer testified that steam venting is very noisy and annoying to residents, particularly when they are outside during the spring and summer. He is concerned that burning TDF will cause more steam venting.

Normally, the mill uses supplemental fuel to maintain the level of steam it requires for its operations. However, the temporary amendment authorizes a one-week period during which TDF may be burned in Power Boiler #19 for tests at the maximum volumetric flow rate allowed under the Permit. Steam produced in excess of the mill's requirements will be vented.

NorskeCanada submits that it is not possible to determine the quantity of steam vented related to burning TDF.

The Panel has decided not to require the reporting of the frequency and duration of steam venting during the trial. The trial is for a relatively short period of a total of 10 weeks during the winter months. It will give residents, as well as the Assistant Manager, an opportunity to assess the use of TDF in Power Boiler #19.

*(f) Other Matters*

Mr. Fleischer requested that the Panel add a provision to the amendment reducing the number of tonnes of TDF required for the trial and stipulating that NorskeCanada must not acquire any more TDF until it has used and tested the TDF presently at the mill site. The basis for this request appears to be a concern that NorskeCanada will want to use this type of fuel on a permanent basis. While the Panel understands that the Appellants do not want TDF to be used at this mill, either on a temporary or long term basis, it is not within the Board's jurisdiction to prevent a business from acquiring something it is otherwise legally entitled to acquire.

The Panel notes that the parties unanimously requested that the Panel comment on the lack of participation by the Assistant Manager in the appeal. Counsel for NorskeCanada commented that the process is flawed when the government does not attend an appeal hearing to support the permit amendments it has authorized. The Panel has recorded the parties' comments.

## **DECISION**

In making this decision, the Panel has considered all of the relevant documents and oral evidence, whether or not specifically reiterated herein.

For the reasons provided above, the Panel has decided to order that the temporary amendment be varied to add the following provisions to the sections identified:

Add to section 2.12

For the purpose of the trial, the TDF trial shall be from the existing TDF stockpile at Lafarge Cement. If, for some unforeseen reason, this stockpile has been depleted so that insufficient material is available from this source to complete the proposed tests, tires from another source within the Province of B.C. will be acceptable. The total mass of used tires is not to exceed the quantity outlined in the amended permit.

Add to section 3.3.6 - the TDF monitoring program

Data for TDF at the 0% addition rate shall be the baseline data collected for Power Boiler #19 during the winter months.

NorskeCanada shall forthwith make the baseline data available to the public in a manner acceptable to the Assistant Manager.

NorskeCanada shall also conduct source testing for PAHs and VOCs at the 2% TDF addition rate.

The appeal is allowed, in part.

Cindy Derkaz, Member  
Environmental Appeal Board

February 5, 2003