



National Energy Board

Reasons for Decision

**AEC Suffield Gas
Pipeline Inc.**

GH-2-98

July 1998

Facilities

National Energy Board

Reasons for Decision

In the Matter of

AEC Suffield Gas Pipeline Inc.

Application dated 10 September 1997

GH-2-98

July 1998

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Abbreviations and Definitions

Act	<i>National Energy Board Act</i>
ADOE	Alberta Department of Energy
AEC Ltd.	Alberta Energy Company Limited
AEC Marketing	AEC Marketing Incorporated
AEC Suffield	AEC Suffield Gas Pipeline Incorporated
AEUB	Alberta Energy and Utilities Board
AFUDC	Allowance for Funds Used During Construction
Bcf	billion cubic feet
Board or NEB	National Energy Board
CEAA	<i>Canadian Environmental Assessment Act</i>
Channel Lake	Channel Lake Petroleum Limited
CSA	Canadian Standards Association
FAN	Federation of Alberta Naturalists
GEX	GEX Resources Limited
GJ/d	gigajoule per day
km	kilometre(s)
KP	kilometre post
kPa	kiloPascal(s)
m	metre
mm	millimetre
MMcfd	million cubic feet per day
MPa	megaPascal(s)
NGTL	NOVA Gas Transmission Ltd.
NPS	nominal pipe size (in inches)

psi	pounds per square inch
SCADA	supervisory control and data acquisition system
straddle plant	A natural gas processing plant located on a main gas transmission line that extracts natural gas liquids from the gas stream.
Tcf	trillion cubic feet
TCPL	TransCanada PipeLines Limited
10^6 m ³ /d	million cubic metres per day

Recital and Appearances

IN THE MATTER OF the *National Energy Board Act* ("the Act") and the Regulations made thereunder; and

IN THE MATTER OF an application dated 10 September 1997 by AEC Suffield Gas Pipeline Inc. for a Certificate of Public Convenience and Necessity pursuant to Section 52 of the Act and related toll and tariff authorizations; and

IN THE MATTER OF Hearing Order GH-2-98.

HEARD in Calgary, Alberta on 25, 26 May and 1 June 1998.

BEFORE:

G. Caron	Chair
R.J. Harrison	Member
D. Valiela	Member

APPEARANCES:

D.G. Davies T. Hughes	AEC Suffield Gas Pipeline Inc.
M. Pinney	Canadian Association of Petroleum Producers
M. Posey	Federation of Alberta Naturalists
J.J. Ruitenschild	Amoco Canada Petroleum Company Ltd.
P. Cochrane	Foothills Pipe Lines Ltd.
J. Liteplo	NOVA Gas Transmission Ltd.
D.M.K. Ellerton	Pacific Gas and Electric Company
A.C. Reid	TransCanada PipeLines Limited
C.J.C. Page	Alberta Department of Energy
S. Boucher-Chen	Pan-Alberta Gas Ltd.
P. Enderwick	Board Counsel

Chapter 1

Introduction

1.1 Background

On 10 September 1997, AEC Suffield Gas Pipeline Inc. ("AEC Suffield" or "the Applicant") applied to the National Energy Board (the "Board" or "NEB") for a Certificate of Public Convenience and Necessity pursuant to Section 52 of the *National Energy Board Act* ("the Act"), to construct and operate a pipeline in southeastern Alberta and southwestern Saskatchewan ("AEC Suffield Pipeline").

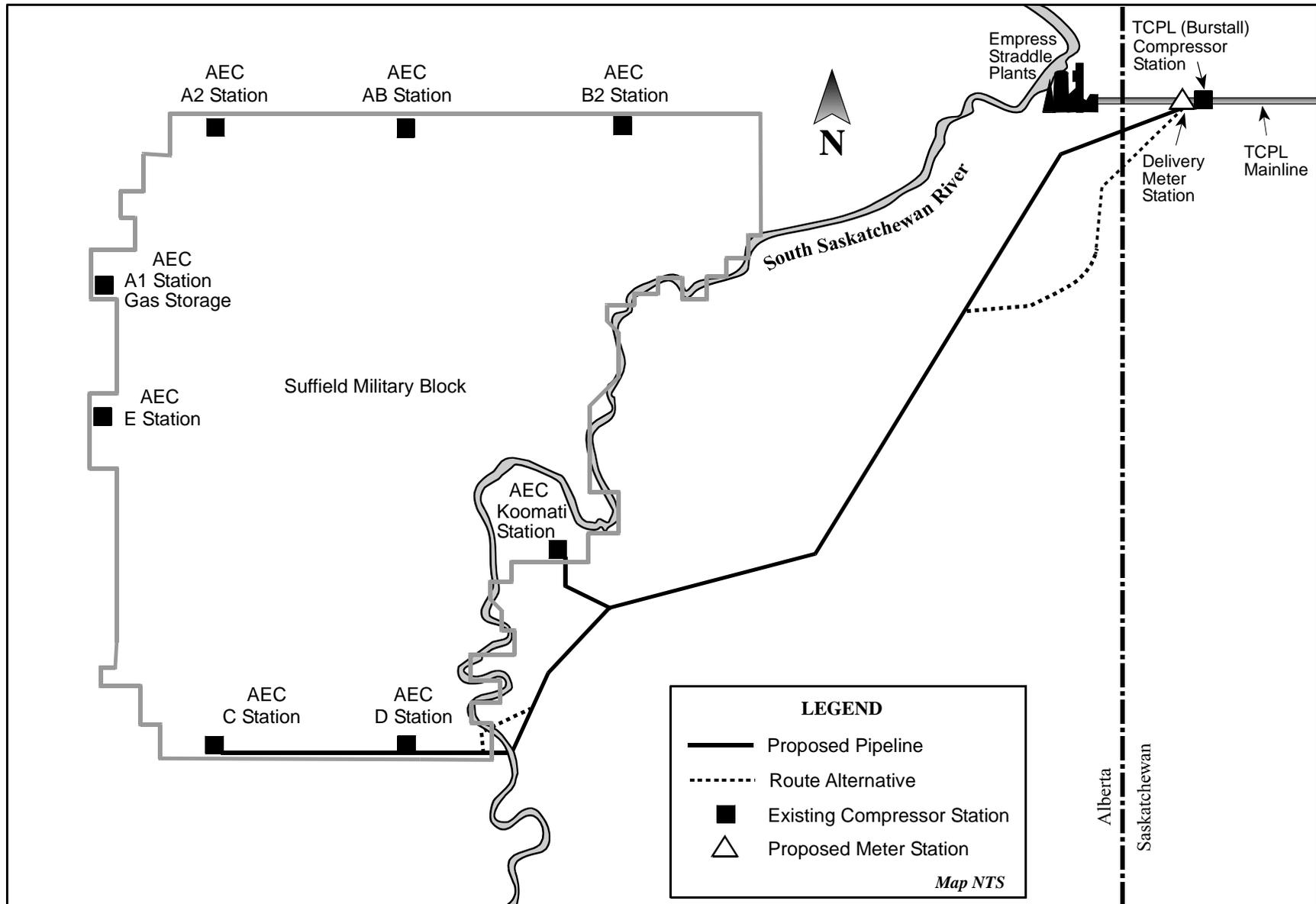
The proposed AEC Suffield Pipeline would be comprised of approximately 114 kilometres of new natural gas pipeline and associated control and measurement facilities, which would begin near the southwestern corner of the Suffield Military Block in Alberta, extend along the southern end of the Military Block and then extend northeast to join the TransCanada PipeLines Limited ("TCPL") system near Burstall, Saskatchewan (see Figure 1-1). The proposed pipeline would require approximately 40 kilometres of new right-of-way as most of the route would follow existing right-of-way. AEC Suffield estimates the cost of the project would be \$22.8 million.

AEC Suffield also applied for an order pursuant to Section 59 of the Act approving a proposed toll methodology for transportation rates on the applied-for facilities and designating AEC Suffield as a Group 2 company for the purposes of toll and tariff regulation.

The Board decided to consider the application in an oral public hearing and issued Hearing Order GH-2-98 on 24 February 1998, which set out the Directions on Procedure for the hearing. The hearing was held in Calgary on 25, 26 May and 1 June 1998.

A motion was filed by the Alberta Department of Energy during the oral portion of the hearing in respect of the Board's jurisdiction over the pipeline. The motion was heard on 1 June 1998 and the ruling, which is incorporated as Chapter 2 of these Reasons, was issued on 18 June 1998.

Figure 1-1
AEC Suffield Gas Pipeline Inc. - Proposed Pipeline



Chapter 2

Board Ruling

2.1 Board Ruling on Alberta Department of Energy Motion

During the course of the hearing, the Alberta Department of Energy ("ADOE") verbally presented a motion in respect of the jurisdiction of the National Energy Board (the "Board" or "NEB") over the applied-for facilities. The Board directed the ADOE to file the motion in written format. The Board abridged the time for service of notice of the constitutional question, which was duly served on the appropriate attorneys general by the ADOE as required by the *Federal Court Act*. Argument on the motion was heard on 1 June 1998.

2.1.1 Arguments by Parties

2.1.1.1 Alberta Department of Energy

The ADOE position was that the proposed pipeline project was designed to avoid the Provincial regulator and therefore the National Energy Board does not have jurisdiction to approve the AEC Suffield Gas Pipeline Inc. ("AEC Suffield") application.

Counsel for the ADOE stated that the Provinces have the constitutional right to regulate their natural resources, including the right to regulate their internal transportation. The ADOE submitted that the Board may not sever a project into parts and that it must take the project as it finds it, unless the project is designed to avoid proper provincial jurisdiction. In such a case the project would fall within the colourability principle as set out in *A.G. Ontario v. Winner*, [1954] A.C. 541 at 582.

The ADOE submitted that the subject application represents both a work and an undertaking and that "works" and "undertakings" are to be read disjunctively. The ADOE argued that if the colourability principle does not apply to a work, it does apply to the undertaking and the work is subsumed by the undertaking.

The ADOE argued that the purpose of the proposed facility is to connect Alberta gas to the interprovincial carrier. This is not a situation where AEC Suffield is unable to connect in Alberta and is therefore forced to go over the border. AEC Suffield has not shown that Saskatchewan is a preferable place to interconnect technically. The evidence of AEC Suffield was that a connection in Alberta would require a shorter pipeline with less cost. Counsel argued that AEC Suffield said it did not look in Alberta because it wanted to avoid the Alberta regulator.

Counsel for ADOE argued that a carrier cannot artificially organize its business so as to acquire the interprovincial connection, yet that is what AEC Suffield has done. As a result, the ADOE submitted that the NEB should dismiss the AEC Suffield application for want of jurisdiction or, in the alternative, refer the question to the Federal Court of Appeal pursuant to Section 18.3 of the *Federal Court Act*.

2.1.2 Federation of Alberta Naturalists ("FAN")

Ms. Posey, on behalf of FAN, argued that AEC Suffield's placement of its terminal point just beyond the border was a clear attempt to evade provincial jurisdiction. Ms. Posey argued that the establishment of jurisdiction should consider which public has the most risk to assume and how the public would be better served. In this case, she maintained that the risk of environmental costs will only be borne by the Province of Alberta, as the Saskatchewan route is entirely in cultivated land. Ms. Posey submitted that Alberta had been totally shut out of the decision-making process by AEC Suffield's recourse to the NEB.

2.1.3 AEC Suffield Gas Pipeline Inc.

Counsel for AEC Suffield argued that the issue raised by the ADOE could be resolved very simply by observing that the pipeline will cross the Alberta/Saskatchewan Border and, therefore, it is an interprovincial work and subject to NEB jurisdiction.

Counsel submitted that, by virtue of section 92(10)(a) of the *Constitution Act, 1867*, ("section 92(10)(a)") Parliament has exclusive jurisdiction over works and undertakings that connect one province to another or that extend beyond the limits of the province. The words "works" and "undertakings" are to be read disjunctively with the result that if either a work or an undertaking crosses a provincial border, the Federal Government has jurisdiction over it.

In considering the allegation by ADOE that AEC Suffield is attempting to avoid provincial jurisdiction, AEC Suffield argued that there is no legal or evidentiary basis for the ADOE motion. The evidence provided on the record indicated that AEC Suffield chose the tie-in location at Burstall, Saskatchewan because it was suitable from engineering, environmental, economic and infrastructure perspectives and was acceptable to both AEC Suffield and TCPL. Counsel also argued that had AEC Suffield decided to tie-in within the 300 metre Alberta portion of the TCPL line, it may have led to regulatory uncertainty because an argument might be made that the undertaking would be federal as all of the gas carried by the line would be removed from Alberta. This could have led to a project delay.

Counsel for AEC Suffield argued that there is no legal precedent to support the argument that a pipeline that crosses a provincial boundary is not under federal jurisdiction.

Views of the Board

The Board is of the view that, in the context of this motion, there is an important distinction between a "work" and an "undertaking". In *Montreal v. Montreal St. Ry*¹ it was held that a work is a physical thing. An undertaking, on the other hand, has been held to be an arrangement under which physical things are used.² A pipeline is clearly a "work" in the ordinary sense of that term. While the operation of the pipeline, and associated works, may constitute an "undertaking", there can be no

¹ [1912] A.C. 333, at 342

² Re Regulation and Control of Radio Communication in Can. [1932] A.C. 304, at 315.

dispute that a pipeline is a physical thing that is a "work" within the meaning of section 92(10)(a).

The Board is of the view that an application for the construction and operation of a pipeline which crosses a provincial boundary is *prima facie* within the Board's jurisdiction, as it is a work and undertaking as referred to in section 92(10)(a), "connecting the Province with any other or others of the Provinces, or extending beyond the Limits of the Province." The definition of pipeline in the *National Energy Board Act* ("NEB Act") also refers to a line that connects a province with any other province or provinces or extends beyond the limit of a province.

Counsel for the ADOE did not identify any precedent that found that a work that crossed a provincial boundary was not properly within federal jurisdiction, or that the colourability principle could apply to such a work.

The ADOE argued that, if the colourability principle does not apply to works, the work is subsumed by the undertaking and if the true character of the undertaking is found to be intraprovincial, the work and undertaking are intraprovincial. The Board was not directed to any case law where a court has found that there was a non-legitimate federal component to an interprovincial undertaking.

The Board notes however that if the ADOE's argument is correct, the first issue to be determined is the true character of the undertaking. Counsel for the ADOE stated in argument that the undertaking consisted of the operation of the pipeline but also included the work. The ADOE's argument that the proposed project is an intraprovincial undertaking was based on the evidence of AEC Suffield that although it was technically feasible, it had not considered an Alberta connection, because from a regulatory certainty point of view it had a preference to make its application to the NEB. AEC Suffield also submitted evidence regarding engineering, environmental, economic and infrastructure factors which were considered in choosing its route.

Even if the Board accepted that the colourability "principle" could apply to the AEC Suffield application, a party alleging the subterfuge would bear the evidentiary burden of establishing that the true character of the undertaking was intraprovincial. In the view of the Board, the ADOE has not provided sufficient evidence to support a finding of a subterfuge.

With respect to the submissions of the Federation of Alberta Naturalists (FAN), the Board notes that jurisdiction is not based on which province assumes the most risk environmentally.

The proposed AEC Suffield Pipeline is a federal work because it crosses a provincial border and clearly falls within the exceptions set out in section 92(10)(a) and the definition of "pipeline" in the NEB Act. In the view of the Board it is properly under NEB jurisdiction.

Having found the applied for facilities to be within its jurisdiction, it follows that the Board will not grant the alternative request to refer the questions raised by the ADOE to the Federal Court of Appeal.

The ADOE motion is therefore dismissed.

Chapter 3

Facilities

3.1 Facilities Description

The AEC Suffield Pipeline would consist of 103.9 km of mainline pipe and 11 km of connecting pipeline for a total of 114.9 km. The estimated design capacity of the AEC Suffield Pipeline would be 4.96×10^6 m³/d (175 MMcfd) and the proposed maximum allowable operating pressure would be 8 460 kPa (1227 psi). The mainline, which would consist of 19.9 km of 273 mm (NPS 10) pipe and 84 km of 406 mm (NPS 16) pipe, would originate at the Alberta Energy Company Limited ("AEC Ltd.") Station C and would interconnect with the TCPL system at the Burstall compressor station in Saskatchewan. The connecting pipeline which would consist of 11 km of 324 mm (NPS 12) pipe, would originate at the AEC Koomati station and would interconnect with the mainline at kilometre post ("KP") 51.

AEC Suffield stated that it would design, construct and operate the applied-for facilities in accordance with the requirements of the NEB *Onshore Pipeline Regulations*, the Canadian Standards Association ("CSA") Z662-96 Oil and Gas Pipeline Systems, and all applicable standards, specifications and codes that are incorporated by reference in that standard. The pipe would be fabricated in accordance with CSA Z245.1 Steel Line Pipe, Grade 448 MPa.

AEC Suffield indicated that it is evaluating the use of either fusion bonded epoxy or polyethylene jacket as an external coating for all of its buried pipelines. Field welded girth welds would be coated with either fusion bonded epoxy or polyethylene shrink sleeves. An impressed current cathodic protection system would supplement the external pipeline coating to provide corrosion protection for the entire pipeline system.

The estimated total capital cost of the proposed facilities is \$22.8 million (Table 3-1). Construction is scheduled to commence on 31 July 1998. The planned in-service date is 1 November 1998.

**Table 3-1
Cost of Proposed Facilities**

Description	Total Cost (\$000)
NPS 10, Mainline	1,749
NPS 16, Mainline	13,449
NPS 12, Connection Pipeline	1,243
Metering Station	964
Other Facilities	864
Engineering and Services	2,483
Insurance & Others	1,706
AFUDC	112
Overhead	228
Total	22,798

AEC Suffield originally indicated that, if the proposed project were approved by the Board, TCPL would design, construct and operate a delivery meter station at the terminus of the pipeline. During the oral portion of the hearing, AEC Suffield amended its application to include the construction and operation of the delivery meter station within the scope of its project. The proposed meter station would consist of pressure regulating facilities, one ultrasonic flow meter and associated facilities and would be housed in a 25 m x 30 m building located near TCPL's Burstall compressor station in Saskatchewan. AEC Suffield indicated that real time operating signals from the delivery meter station would be provided directly to TCPL. The existing measurement facilities located at the AEC Ltd. compressor stations and the other shippers facilities would be certified to custody transfer standards.

The operation of the proposed facilities would be monitored remotely using a supervisory control and data acquisition ("SCADA") system. The SCADA system would provide real time pressure, temperature and flow from all custody transfer metering facilities supplying the AEC Suffield Pipeline. AEC Suffield indicated that the control centre would be located at an existing office facility on the Suffield military base and that either communication services would be leased from Telus or a dedicated VHF radio network would be set up.

3.2 South Saskatchewan River Crossing

AEC Suffield intends to use horizontal directional drilling as the preferred method for the crossing of the South Saskatchewan River and is of the opinion that there is a very high likelihood of success. A geotechnical drilling program and ground penetrating radar survey were carried out at the proposed crossing site. AEC Suffield maintains that the results indicate that the soils under the river bed are conducive to directional drilling. The applicant also submitted that, if unsuccessful after exhausting all attempts to drill the crossing, it would seek authorization from the Board to conduct an open-cut crossing at that location.

3.3 Tie-in Location

AEC Suffield has chosen the TCPL Burstall, Saskatchewan compressor station as the location for the end of the pipeline and the connection to the TCPL system. AEC Suffield indicated that the tie-in location was chosen for a number reasons.

The product being transported is dry gas and, therefore, there is no need for it to pass through the Empress straddle plants near the Alberta/Saskatchewan border. As this project could be viewed as a competitor to the NOVA Gas Transmission Ltd. ("NGTL") system, AEC Suffield maintained that it made little sense to attempt to tie into the NGTL system between the Empress plants and the TCPL transmission system. During cross examination by ADOE, AEC Suffield indicated that one of the reasons it did not consider a connection to TCPL in Alberta was related to congestion of facilities in the area. The ADOE challenged the assertion that there is congestion in this area.

AEC Suffield was concerned that, if it connected to TCPL's 300 m of pipeline within Alberta and its application was made to the Alberta Energy and Utilities Board ("AEUB"), it might be viewed as an attempt to avoid NEB jurisdiction, considering that all the transported gas would be removed from the province. If jurisdictional questions were raised, the project could be delayed.

AEC Suffield was also concerned with the issue of "regulatory certainty". Specifically, AEC Suffield was concerned that potential delays could occur if the AEUB decided to defer consideration of any NGTL by-pass pipelines while it considered the possibility of changes from the current postage stamp rate.

In addition, AEC Suffield noted that connecting at the suction side of Burstall would be beneficial to the operation of the system and a metering facility could be easily accommodated. AEC Suffield also indicated that there was suitable infrastructure near the TCPL Burstall compression facility to support the location and operation of AEC Suffield facilities such as a gas metering facility and a main block valve. AEC Suffield stated that the pipeline would be approximately 1.5 km longer and cost an additional \$250,000 using the Burstall tie-in location as opposed to a TCPL connection location within Alberta. AEC Suffield also maintained that, since the additional length required for the longer route is all within agriculturally disturbed land, environmental impacts would not be a concern.

During the oral portion of the hearing, ADOE argued that there is opportunity to tie in to the TCPL system within Alberta and that the extra length and cost to tie in at Burstall would not be in the public interest, as it would be wasteful in terms of competing resources and competing uses for capital.

Views of the Board

The Board is satisfied that the proposed facilities would meet widely accepted standards for design, construction, testing, operation and maintenance.

The Board finds that it would be appropriate to condition any certificate which may be issued, to require AEC Suffield to directionally drill the proposed the South Saskatchewan River crossing. Therefore, in the event that AEC Suffield's directional drilling attempts fail, AEC Suffield would require an authorization from the Board prior to conducting an open-cut crossing of the South Saskatchewan River and would require a separate site specific assessment of the relevant environmental considerations.

With regard to the location of the tie-in at Burstall, the Board is satisfied that the location is appropriate. With regard to the requirement for additional capital to extend the pipeline to Burstall, the Board is of the opinion that the applicant is better able to judge where its capital is best utilized for at-risk ventures, particularly where the construction and operation of any additional facilities is not likely to cause significant adverse environmental effects.

Chapter 4

Supply, Transportation and Markets

4.1 Supply

AEC Suffield's gas supply would be provided by AEC Marketing Inc. ("AEC Marketing"), GEX Resources Ltd. ("GEX") and Channel Lake Petroleum Ltd. ("Channel Lake").

AEC Marketing indicated that most of the gas supply for the proposed project would originate from the Suffield Field which has remaining established reserves of approximately 18 704 10⁶m³ (664 Bcf). AEC Marketing would be required to deliver about 18 257 10⁶m³ (644 Bcf) of gas reserves over the 1998-2017 period to the proposed facility.

GEX would provide gas volumes from its corporate gas supply of 768 10⁶m³ (27 Bcf) to support its contracted volume of 619 10⁶m³ (22 Bcf), while Channel Lake would deliver a contracted volume of 1 558 10⁶m³ (55 Bcf) out of its corporate gas supply of 1 726 10⁶m³ (61 Bcf). The contracted volumes are over the same 20 year period as AEC Marketing.

AEC Suffield also provided estimates of undiscovered gas potential in the Suffield Field area that the proposed facility could draw upon for its future gas supply, in addition to its current supply. The remaining undiscovered gas potential is estimated to be about 94 000 10⁶m³ (3.3 Tcf). This estimate was based on an evaluation of 22 geological plays in the proposed facility's catchment area.

4.2 Transportation and Markets

The AEC Suffield Pipeline would interconnect with the mainline facilities of TCPL allowing the three shippers to serve existing markets in eastern Canada and the U.S. Midwest and Northeast. While no project-specific market evidence was filed, AEC Suffield relied on the long-term domestic and export macro market forecasts submitted by TCPL in the GH-2-97 proceeding¹. Those forecasts showed continued growth in gas demand to the year 2010.

AEC Suffield submitted that the existence of sufficient market demand is demonstrated by the commitment of the three shippers to the applied-for facilities and by the aforementioned macro gas market forecasts.

The applied-for facilities are supported by executed Precedent Agreements with three shippers totalling some 157 676 GJ/d (152.1 MMcfd)(Table 4-1).

¹ Refer to National Energy Board, Reasons for Decision, GH-2-97, TransCanada PipeLines Limited 1998 Facilities Application, November 1997, Chapter 3, page 12.

Table 4-1
Executed Precedent Agreements

Shipper	Volume		Term (years)
	(GJ/d)	(MMcfd)	
AEC Marketing	140 000	135.0	20
GEX	2 230	2.2	20
	1 870	1.8	10
Channel Lake	13 576	13.1	20
Total	157 676	152.1	

AEC Suffield noted that the proposed pipeline, which would have a design capacity of 4.96 10⁶m³/d (175 MMcfd), is 87 percent subscribed. AEC Suffield stated that at this level the economics would be sufficient to allow the pipeline project to proceed. Discussions are continuing with other prospective shippers for the remaining unsubscribed capacity.

Upon satisfying the conditions precedent, including those associated with obtaining all necessary regulatory approvals and securing all upstream and downstream transportation arrangements, AEC Suffield and the shippers would be expected to execute a Firm Service Agreement for the volumes and terms described above. A copy of the pro forma Firm Service Agreement was filed with the application.

Views of the Board

The Board is satisfied that the Applicant’s estimate of remaining established reserves, combined with undiscovered gas potential that could be made available to the project, will be adequate to support the proposed facilities.

The Board is satisfied that the long-term market forecasts provided by AEC Suffield in support of the applied-for facilities are reasonable. The Board notes that those forecasts were unchallenged by interested parties in these proceedings. The Board is similarly satisfied that the executed Precedent Agreements, once converted into Firm Service Agreements, would demonstrate the shippers’ commitment to those markets and to the applied-for facilities, thus ensuring that those facilities would be used and useful over the long-term.

Notwithstanding AEC Suffield’s submission that it will operate as a commercially at-risk pipeline, the Board finds that it would be appropriate to condition any certificate requiring AEC Suffield, prior to the commencement of construction and unless the Board otherwise directs, to submit an affidavit to the Board confirming that transportation service agreements have been executed for the subscribed capacity.

Chapter 5

Traffic, Tolls and Tariffs

5.1 Financial Matters

AEC Suffield proposes to finance the cost of the pipeline through a combination of equity and debt arranged by its parent company, AEC Ltd. AEC Suffield stated that the rate of return is expected to be adequate compensation for the risks assumed by the pipeline. The actual rate of return achieved would depend on AEC Suffield's ability to manage the initial development costs and future pipeline revenues and operating costs. AEC Suffield would be contractually committed to provide the appropriate transportation services regardless of the return that the project would generate.

Views of the Board

The Board is satisfied that AEC Suffield will be able to finance the proposed pipeline facilities.

5.2 Market-based Toll Methodology

AEC Suffield proposes to be a commercially at-risk pipeline with market-based tolls for transmission services. The toll design for Firm Service Transportation incorporates a long-term incentive approach, offering lower tolls for a longer-term commitment. AEC Suffield stated that its objective was to develop tolls that would attract sufficient quantities to ensure the viability of the project, while at the same time providing AEC Suffield with an acceptable return on its investment. AEC Suffield suggested that the appropriateness of its Firm Service tolls is demonstrated by signed Precedent Agreements for firm transportation service. The shippers that have signed Precedent Agreements would benefit from an estimated yearly saving of \$6.2 million compared to the current NGTL toll.

It was AEC Suffield's view that its proposed toll design creates an appropriate risk-sharing arrangement between the pipeline and its shippers. However, if the tolls were insufficient to generate a reasonable return, only AEC Suffield would be at risk.

The following are the proposed tolls for Firm Service on the AEC Suffield Pipeline, based on energy content rather than volume.

Table 5-1
November 1998 Firm Service Transportation Tolls

Term in Years	\$/GJ
20	0.147
15	0.153
10	0.162
5	0.175

AEC Suffield stated that Firm Service tolls for new shippers in future years would be determined by commercial arrangements made between itself and such shippers. AEC Suffield asserted that such arrangements would comply with the requirements of section 62 of the Act.

When capacity is not fully used by firm shippers, AEC Suffield stated that it may offer Interruptible ("IT") Service to make the most effective use of the system. AEC Suffield stated that prior to the in-service date and from time to time during operation it would establish IT tolls on a market basis. AEC Suffield had not designed its IT tolls or determined how it would offer IT service.

Views of the Board

In considering whether a tolling methodology would result in just and reasonable tolls, the Board takes into account the differing points of view of shippers and pipeline owners. Shippers will be concerned with the relative risk they bear because of uncertainty about future toll levels. The pipeline company would also be concerned about whether or not its proposed tolling methodology would allow it to attract sufficient volumes to its system, recover its costs, and provide an appropriate return on its investment.

The proposed Firm Service tolls on the AEC Suffield Pipeline are fixed for contract terms of 5, 10, 15 and 20 years. These tolls would not vary over their term and in contrast to traditional cost-of-service tolls, they are lower for longer contract terms. Toll rates for similar contract terms would be set, possibly at a different level, for services commencing at the start of each subsequent year.

Fixed tolls would involve a different sharing of risks and rewards between the pipeline company and its shippers than would the sharing under cost-of-service regulation. Shippers would be relieved from the risk of asset under-utilization or stranded costs and would benefit from rate certainty. The pipeline company would be responsible for any potential stranded assets and would assume any risk related to possible increases in costs due to inflation or rising financial costs.

Another impact of fixed tolls is that, in the early years of a new pipeline, shippers would not pay the relatively higher initial tolls resulting from cost-of-service regulation. High tolls in the early life of a pipeline are caused by the fact that a greater share of a pipeline's revenue requirement is return on a rate base which has yet to be depreciated. In the absence of a pipeline expansion, the pipeline's rate base would be depreciated each year causing a decline in the pipeline's revenue requirement which would eventually result in lower tolls in the later years of a pipeline's life. Fixed tolls would not allow shippers to be exposed to these lower tolls.

AEC Suffield's proposed Firm Service tolls would insulate shippers from changes in transportation cost and some of the risks associated with more traditional tolling methodologies. The pipeline company would assume those risks but in turn may be able to earn a return that would appropriately compensate it. The Board believes that a sharing of risks and rewards that is agreed to by a pipeline company and its shippers would be an appropriate way to achieve the goals of regulation without the direct involvement of the regulator. Indeed, because both parties have a better understanding

of their own circumstances and thus the most appropriate tradeoffs to make, the solution they agreed to may well be superior to the solution the regulator could make through a cost-of-service based toll. The Board also notes that shippers have the alternative of utilizing NGTL's system for transportation services. In light of the foregoing, it is the Board's view that the tolls on the AEC Suffield pipeline would be just and reasonable. Therefore, the Board accepts the Firm Service tolls proposed by AEC Suffield.

The Board notes that AEC Suffield has not included a specific toll or a tolling methodology for IT service in its applied-for tariff. Should AEC Suffield choose to offer IT service in the future, it would be required to file with the Board a tariff amendment which would include its proposed toll or tolling methodology for IT service.

5.3 Form of Regulation

For purposes of NEB toll and tariff regulation, AEC Suffield applied for an order designating it as a Group 2 company. AEC Suffield considered the Group 2 method of regulation to be the most appropriate having regard to the smaller size of the AEC Suffield Pipeline, the fact that AEC Suffield would likely transport gas for a limited number of shippers and the fact that the tolls for Firm Service have been established by commercial arrangements between AEC Suffield and its shippers. Such tolls are fixed for the duration of the terms of the Firm Service Transportation Agreements.

Views of the Board

Pursuant to the Board's Memorandum of Guidance on the Regulation of Group 2 Companies, issued on 6 December 1995, the financial regulation of Group 2 companies is carried out on a complaint basis with a consequential reduction in financial reporting requirements. The Board finds the Group 2 method of regulation would be acceptable for AEC Suffield having regard to its size, number of shippers and tolling methodology.

As it is the Board's normal practice to deal with the tolls and tariffs of Group 2 companies under paragraph 60(1)(a)¹ of the NEB Act, the Board does not consider it necessary to issue an order approving AEC Suffield's proposed tolls and tariffs. AEC Suffield will be required to file its tolls and tariff with the Board prior to the commencement of operation and will be required to file annual audited financial statements in accordance with paragraph 5(2)(b) of the *Gas Pipeline Uniform Accounting Regulations*.

¹ Subsection 60(1) provides that, "A company shall not charge any tolls except tolls that are
(a) specified in a tariff that has been filed with the Board and is in effect; or
(b) approved by an order of the Board."

Chapter 6

Environmental and Land Matters

6.1 Environmental Matters

The Board conducted an environmental screening of the applied-for facilities in compliance with the *Canadian Environmental Assessment Act* ("CEAA") and completed an Environmental Screening Report¹ (the "Report") pursuant to CEAA and the Board's own regulatory process. In addition to environmental matters, the Report also addresses matters pertaining to public consultation. The Board circulated the Report to those federal agencies that had provided specialist advice on the proposed facilities, to those parties who requested a copy and to the applicant. No comments on the Report were received.

Views of the Board

The Board has considered the Report and is of the view that, taking into account the implementation of AEC Suffield's proposed mitigative measures and those set out in the attached conditions, the AEC Suffield Pipeline is not likely to cause significant adverse environmental effects. This represents a decision pursuant to paragraph 20(1)(a) of the CEAA.

6.2 Routing and Lands

6.2.1 Criteria and Route Selection

AEC Suffield stated that early in 1997 it began evaluating possible routes to transport natural gas produced from the vicinity of the Suffield Military Block (the "Block") area to the TCPL's compressor station at Burstall, Saskatchewan. From a broad routing corridor perspective, only two choices were available which effectively utilized existing AEC Suffield infrastructure. The route would have to originate either near the northern boundary or the southern boundary of the Block. A route located across the centre of the Block was ruled out since it would not optimize the use of existing production infrastructure and would have significant impact on the operations of CFB Suffield. Based primarily on business considerations such as current and future gas production and development plans, AEC Suffield elected to transport the gas from existing facilities located on the southern boundary of the Block. Once this business decision was taken, a multidisciplinary team was assembled to develop a route and possible alternatives within a broad routing corridor between the initiation point at the 'C' Station within the Block to the TCPL's Compressor Station near Burstall, Saskatchewan.

AEC Suffield indicated that it restricted itself to the following control points:

- 'C' Station (Initiation Receipt Point);
- 'D' Station (Gas Receipt Point);

¹ Copies of the Report are available upon request from the Board's Regulatory Support Office.

Optimal (environmental, engineering, geotechnical) crossing location at the South Saskatchewan River;
 Koomati Station (Connection Gas Receipt Point); and
 TCPL Burstall Compressor Station (Deliver Endpoint).

Criteria for routing between the established control locations included:

- Maximizing the use of existing linear disturbances (roads, pipelines, powerlines);
- Reducing, to the extent possible, location of the route in High Conservation Value Native Prairie;
- Avoidance of permanent and larger seasonal wetland areas;
- Minimizing location of route in steep or erodible terrain (coulees);
- Minimizing potential conflict with special status wildlife species or species of management concern;
- Avoidance of rare plants or unique vegetation communities; and
- Avoidance of significant archaeological or palaeontological features.

The location and length where the proposed pipeline would be directly adjacent to existing rights of way are set out in Table 6-1.

**Table 6-1
 Use of Adjacent Rights of Way**

	Existing Rights of Way	Location (KP)	Length (km)
1	NGTL R.O.W. Koomati Lateral	KP 0.0 to KP 6.6	6.6
2	NGTL R.O.W.	KP 59.0 to KP 63.0	4.0
3	NGTL R.O.W.	KP 66.0 to KP 96.0	30.0
4	Gascan R.O.W.	KP 63.0 to KP 66.0	3.0
5	Gravel Road CFB Suffield	KP 0.0 to KP 28.0	28.0
	TOTAL		71.6

6.3 Land Requirements

AEC Suffield indicated that a 20 to 25 m wide right of way would be required for construction purposes, although permanent right of way requirements would vary within different sections of the line. For example, where the proposed route is contiguous with other pipeline systems, 5 m of the existing right of way would be requested from the operator of the other system to be used as temporary workspace during construction, and only 15 to 20 m of new right of way would be required. However, for the purposes of the application, AEC Suffield assumed that 20 to 25 m of right of way would be acquired for all portions of the route not paralleling the AEC Suffield road within the Block. It is anticipated that new right of way requirements would be substantially reduced in this area since the road surface can be used as the temporary work area for the right of way.

The specific requirements for both permanent right of way and temporary work space are set out in Tables 6-2 and 6-3.

**Table 6-2
Permanent Right of Way Requirements**

	Width (m)	Location (KP)	Length (km)
1	10.0	CFB Suffield - AEC Station C - KP 0.0 to South Saskatchewan River KP 30.8	30.8
2	15.0	KP 30.8 to Koomati Junction KP 51.0	20.2
3	15.0	Koomati Lateral - Koomati Station - KP 0.0 to Koomati Junction - KP 10.9	10.9
4	15.0	Koomati Junction - KP 51.0 to Burstall Station KP 104.0	53.0

**Table 6-3
Temporary Working Space Requirements**

	Width (m)	Location (KP)	Length (km)
1	8.0	KP 0.0 to KP 20.0	20.0
2	8.0	KP 20.0 to KP 31.0	11.0
3	20 x 60	West side South Saskatchewan River	
4	20 x 40	East side South Saskatchewan River	
5	8.0	KP 31.0 to KP 59.0	28.0
6	3.0	Koomati Lateral	10.9
7	3.0	NGTL R.O.W. KP 59.0 to KP 63.0	4.0
8	3.0	NGTL R.O.W. KP 66.0 to KP 96.0	30.0
9	5.0	East of NGTL R.O.W. KP 59.0 to KP 63.0	4.0
10	8.0	KP 63.0 to KP 66.0	3.0
11	5.0	East of NGTL R.O.W. KP 66.0 to KP 96.0	30.0
12	8.0	KP 96.0 to KP 104.0	8.0
13	15 x 40	HWY. 41 KP 90.4	
14	15 x 40	HWY 545 KP 99.5	
15	15 x 40	CP Railway KP 103.0	

Views of the Board

The Board finds the route selection criteria identified by AEC Suffield to be acceptable. The Board further finds that AEC Suffield's approach to route selection resulted in an appropriate general route for the pipeline.

The potential impacts of the construction of the pipeline on affected landowners, including the amount of land required for easements and temporary work space, have been considered by the Board. The Board finds that AEC Suffield's anticipated requirements for easements and temporary work space are reasonable and justified. The Board acknowledges AEC Suffield's commitment to parallel existing rights of way and to utilize those existing rights of way, where available, for temporary work space.

Chapter 7

Disposition

The foregoing chapters constitute our Decision and Reasons in respect of the application heard before the Board in the GH-2-98 proceeding. The Board is satisfied from the evidence that the applied-for facilities are and will be required by the present and future public convenience and necessity. The Board is also of the view that the design and location of the applied for facilities are satisfactory to ensure their safe and environmentally sound construction and operation. The Board will recommend to the Governor in Council that a Certificate be issued, subject to the conditions set out in Appendix II of these Reasons for Decision.

G. Caron
Presiding Member

R. J. Harrison
Member

D. Valiela
Member

Calgary, Alberta
July 1998

Appendix I

List of Issues

In the Directions on Procedure the Board identified, but did not limit itself to, the following issues for discussion during the hearing:

1. The economic feasibility of the applied for project.
2. The potential commercial impacts of the proposed project.
3. The need for the proposed facilities.
4. The potential environmental and socio-economic effects of the construction and operation of the applied-for facilities including those factors outlined in subsection 16(1) of the *Canadian Environmental Assessment Act*.
5. The appropriateness of the design of the applied-for facilities.
6. The appropriateness of the general route of the pipeline.
7. The method of toll and tariff regulation, including the request by AEC Suffield that it be regulated as a Group 2 company (as described by the Board's Memorandum of Guidance dated 6 December 1995 on the Regulation of Group 2 Companies).
8. The terms and conditions to be included in any certificate which may be issued.

Appendix II

Proposed Certificate Conditions

General

1. AEC Suffield shall cause:
 - (a) the approved facilities to be designed, manufactured, located, constructed and installed in accordance with those specifications, drawings and other information or data set forth in its application, or as otherwise adduced in evidence before the Board during the GH-2-98 proceeding except as varied in accordance with subsection (b) hereof; and
 - (b) no variation to be made to the specifications, drawings or other information or data referred to in subsection (a) without prior approval of the Board.
2. Unless the Board otherwise directs, AEC Suffield shall implement or cause to be implemented all of the policies, practices, recommendations, and procedures for the protection of the environment included in or referred to in its application, or as otherwise adduced in evidence before the Board during the GH-2-98 proceeding.

Prior to Commencement of Construction

3. Unless the Board otherwise directs, wildlife surveys shall be conducted for the Burrowing Owl and Short-eared Owl in the year of construction and filed with the Board prior to the commencement of construction.
4. Unless the Board otherwise directs, AEC Suffield shall conduct all field construction activities within the 1 August to 15 November schedule and construction activities shall not be conducted:
 - (a) within 500 metres of a Burrowing Owl nest prior to 15 August;
 - (b) within 250 metres of a Burrowing Owl nest between 15 August and 15 September; and
 - (c) within 100 metres of a Short-eared Owl nest prior to 15 August.
5. Unless the Board otherwise directs, prior to filing the plans, profiles and books of reference pursuant to section 33 of the NEB Act, AEC Suffield shall submit, for Board approval, any modification requiring a deviation from the route described in its application. Any such request for approval shall include:
 - (a) the results of public consultation (where appropriate), a list of affected landowners and the status of the land acquisition process (if any);
 - (b) an air photo where the deviation exceeds 50 meters;

- (c) an environmental issues list identifying all relevant effects of the re-routes on, for instance, soils, vegetation, wildlife, hydrology and archeology; and
 - (d) the measures proposed to mitigate any significant adverse environmental effects.
- 6. Unless the Board otherwise directs, AEC Suffield shall, at least 15 days prior to commencement of construction of the approved facilities, demonstrate to the satisfaction of the Board that AEC Suffield has obtained the consent and necessary approvals for all federally regulated railway crossings under Transport Canada responsibility.
- 7. Unless the Board otherwise directs, AEC Suffield shall, prior to the commencement of construction of the approved facilities, submit an affidavit to the Board confirming that transportation service agreements have been executed for the subscribed capacity.
- 8. Unless the Board otherwise directs, AEC Suffield shall file with the Board for approval, at least 15 days prior to the commencement of directional drilling of the pipeline crossing of the South Saskatchewan River, the following information:
 - (a) the composition of the drilling mud;
 - (b) the identification of any additives which will be considered for use in the drilling fluids; a description of the potential environmental effects from their use; and any special considerations that may be required for disposal;
 - (c) the procedures for the containment of the drilling mud during the drilling procedure;
 - (d) the procedures for the monitoring of fluid/mud loss; and
 - (e) the potential effects of fluid/mud loss upon the aquatic ecosystem.
- 9. Unless the Board otherwise directs, AEC Suffield shall, at least 15 days prior to the commencement of construction of the approved facilities, file with the Board for approval:
 - (a) AEC Suffield's field joining program; and
 - (b) AEC Suffield's construction safety manual.
- 10. Unless the Board otherwise directs, at least 10 days prior to the commencement of construction of the approved facilities, AEC Suffield shall file with the Board a detailed construction schedule or schedules identifying major construction activities, such as water crossings, and shall notify the Board of any modifications to the schedule or schedules as they occur.
- 11. AEC Suffield shall file with the Board copies of any permits or authorizations which contain environmental conditions for the applied for facilities issued by federal, provincial, and other permitting agencies, as these authorizations are received. In addition, AEC Suffield shall maintain files containing any such information in the construction office(s).

12. Unless the Board otherwise directs, AEC Suffield shall, at least 15 days prior to the commencement of construction within any watercourse, provide a description of those watercourses where Department of Fisheries and Oceans - Habitat Management Division ("DFO-HMD") has required authorization pursuant to the *Fisheries Act*, confirmation that those authorizations have been obtained, and any conditions to the authorizations.
13. Unless the Board otherwise directs, AEC Suffield shall, at least 5 days prior to the commencement of construction, file with the Board:
 - (a) copies of the preconstruction archaeology surveys conducted at the 32 sites located along the proposed pipeline right of way; and
 - (b) copies of all correspondence from the provincial archaeological authorities regarding the acceptability of the archaeological surveys referred to in paragraph (a).

During Construction

14. Unless the Board otherwise directs, in the event that any specialized habitat for wildlife, significant plant communities, or any plants or wildlife with a designated status are discovered during construction, AEC Suffield shall, in consultation with the appropriate regulatory agencies, implement the appropriate mitigative measures.
15. Unless the Board otherwise directs, AEC Suffield shall directionally drill the South Saskatchewan River crossing.
16. In the event that there is a requirement to blast at any site along the pipeline right of way, AEC Suffield shall:
 - (a) prior to the commencement of any blasting activity:
 - (i) conduct a survey of the location of all water wells within 100 m of the proposed blasting location; and
 - (ii) complete a sampling and testing program of the well water for quality, quantity and any additional parameters requested by the provincial regulatory body;
 - (b) during blasting and rock removal operations, monitor the quality and quantity of the water in the water wells surveyed pursuant to section (a);
 - (c) if water quality or quantity is affected by blasting operations, provide each resident utilizing the affected well with a clear, potable water source in the quantity provided by the original source until the water in the affected well returns to its original condition; and
 - (d) after construction, conduct a survey of the water wells surveyed pursuant to paragraph (a) to ensure that there has been no change to the quality and quantity of the water in the wells and report the results of those surveys to the Board.

17. Unless the Board otherwise directs, AEC Suffield shall, at least 30 days prior to commencement of pressure testing the approved facilities, submit its pressure testing manual to the Board for approval.
18. Unless the Board otherwise directs, AEC Suffield shall, prior to the commencement of pressure testing of the approved facilities, provide confirmation that all required regulatory approvals have been obtained and local municipalities have been consulted.

Post Construction

19. Unless the Board otherwise directs, AEC Suffield shall file with the Board an emergency response plan at least 30 days prior to placing the approved facilities in service.
20. Unless the Board otherwise directs, AEC Suffield shall file with the Board an operation and maintenance manual at least 15 days prior to placing the approved facilities in service.
21. Unless the Board otherwise directs, AEC Suffield shall not conduct reclamation activities along the right of way during the April 15 to July 15 time period.
22. Unless the Board otherwise directs, AEC Suffield shall file with the Board a post construction environmental report within six months of the date that each approved facility is placed in service. The post construction environmental report shall set out the environmental issues that have arisen up to the date on which the report is filed and shall:
 - (a) where options have been provided for, provide a description of which practices, procedures and recommendations have been implemented during the construction process and the reasons for the choice of the option;
 - (b) indicate the issues resolved and those unresolved; and
 - (c) describe the measures AEC Suffield proposes to take in respect of the unresolved issues.
23. Unless the Board otherwise directs, AEC Suffield shall file with the Board on or before the 31 December that follows each of the two complete growing seasons following the filing of the post construction environmental report referred to in Condition 22:
 - (a) a list of the environmental issues indicated as unresolved in the report and any that have arisen since the report was filed; and
 - (b) a description of the measures AEC Suffield proposes to take in respect of any unresolved environmental issues.
24. Unless the Board otherwise directs prior to 31 December 1999, this certificate shall expire on the 31 December 1999 unless the construction and installation with respect to the applied for facilities has commenced by that date.