
ALBERTA ENVIRONMENTAL APPEALS BOARD

Report and Recommendations

**Date of Hearing – July 21, 2005 and August 10, 2005
Date of Report and Recommendations – September 9, 2005**

IN THE MATTER OF sections 91, 92, 94, and 95 of the
Environmental Protection and Enhancement Act, R.S.A. 2000, c.
E-12;

-and-

IN THE MATTER OF an appeal filed by Ted Ganske with
respect to *Environmental Protection and Enhancement Act*
Approval No. 204916-00-00 issued to CCS Inc. by the Director,
Northern Region, Regional Services, Alberta Environment.

Cite as: *Ganske v. Director, Northern Region, Regional Services, Alberta Environment*
re: *CCS Inc.* (9 September 2005), Appeal No. 04-090-R (A.E.A.B.).

HEARING BEFORE:

Dr. Steve E. Hrudehy, Chair, and
Mr. Jim Barlishen, Board Member.*

APPEARANCES:

Appellant: Mr. Ted Ganske, assisted by Ms. Sally Ulfsten.

Director: Mr. Park Powell, Director, Northern Region, Regional Services, Alberta Environment, represented by Mr. Darin Stepaniuk, Alberta Justice.

Approval Holder: CCS Inc., represented by Mr. John Thompson, Vice-President, CCS Inc. and by Mr. Shawn Munro, Bennett Jones LLP.

Board Staff: Mr. Gilbert Van Nes, General Counsel and Settlement Officer, and Ms. Denise Black, Board Secretary.

WITNESSES:

Appellant: Mr. Ted Ganske; and Mr. Brian Grandbois, Councillor, Cold Lake First Nations.

Director: Mr. Park Powell, Director, Northern Region, Regional Services, Alberta Environment; Mr. Rasal Hossain, Northern Region, Regional Services, Alberta Environment; and Mr. Jason Pentland, Northern Region, Regional Services, Alberta Environment.

Approval Holder: Mr. John Thompson, Vice-President, CCS Inc.; Mr. David Engel, Senior Environment Regulatory Planner, CCS Inc.; Mr. Gary Perras, General Manager of Landfill Operations, CCS Inc.; Mr. Shane Harrison, NLR Consulting; Mr. Norm Richards, NLR Consulting; Mr. Daryl Johannesen, Golder Associates; and Mr. Richard Wright, HFP Acoustical Consultants Corp.

* Dr. Alan J. Kennedy, Board Member, took part in the first part of the Hearing but was unable to take part in the final part of the Hearing. The Board's legislation provides that a majority of the panel, in this case two Board Members, constitutes a quorum.

EXECUTIVE SUMMARY

Alberta Environment issued an Approval under the *Environmental Protection and Enhancement Act*, to CCS Inc., authorizing the construction, operation, and reclamation of the Bonnyville Waste Management Facility, a Class II Industrial Landfill designed to accept oilfield waste, near Bonnyville, Alberta. The Board received a Notice of Appeal from Mr. Ted Ganske appealing the Approval. The Board held a hearing and conducted a site visit.

At the hearing, Mr. Ganske expressed concern that the landfill would result in the contamination of groundwater and deterioration of air quality at his residence, negatively affecting his family's health. Based on the information before the Board, which included that there is a restriction on the type of waste that will be accepted and that the processing of waste is prohibited, the Board concluded that the landfill will not pose a risk to the air quality at Mr. Ganske's residence. The Board also concluded that the hydrogeological assessment on which the selection of the site was based and the design of the landfill meets or exceeds Alberta Environment's standards for landfills. These standards are designed to protect the environment and the public's health and safety. Accordingly, the Board determined that the landfill poses no health risks to the Ganske family.

Mr. Ganske also expressed concern with the landfill's surface water management. He was concerned that alterations to surface water drainage at the landfill will result in flooding on his land and contaminated surface water entering on to his land and into the creek and the Beaver River. The Board was satisfied that the design of the surface water management system, including a leachate collection system and a stormwater collection pond with prerelease sampling, adequately addresses these concerns.

Mr. Ganske also raised concerns about the effect of the landfill on wildlife in the area. The Board concluded the landfill is not part of a significant wildlife corridor in that it is not unique within the region and there are several other corridors in the area available to wildlife.

Mr. Ganske was also concerned that noise from the operation of the landfill will negatively affect his quality of life. The Board, based on CCS Inc.'s extensive operating experience of similar

landfills, concluded that the landfill is likely to have minimal noise impacts on Mr. Ganske. The Board noted that CCS Inc. has a formal complaint process in place should issues arise.

The Board recommended that the Approval be confirmed subject to several amendments. Several of these amendments were agreed to by Alberta Environment and CCS Inc. The Board recommended clarification of several conditions and the addition of a number of conditions related to the landfill's construction and operation. To respond to Mr. Ganske's concerns about groundwater, the Board recommended the Approval be amended to include monitoring of his water well and a water well belonging to the nearby Cold Lake First Nation, if the respective landowners agree to provide access. The Board also recommended Mr. Ganske and the Cold Lake First Nation be provided with the results of the groundwater monitoring programs undertaken at the landfill and that CCS Inc. be required to submit an investigative plan to Alberta Environment if a complaint related to the interference with a domestic water source is received.

Mr. Ganske expressed a lack of trust in the Approval's monitoring conditions, stating that such monitoring is susceptible to tampering. The Board accepts the rationale for Alberta Environment's self-monitoring approach. Moreover, there was no evidence presented to cause the Board to doubt the integrity of CCS Inc. To address the type of concern raised by Mr. Ganske, the Approval already contains a condition requiring an environmental compliance audit, to be conducted by an independent third party every three years. To improve this condition, the Board recommended the Approval be amended to require Alberta Environment's approval of the choice of a third party auditor.

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I. INTRODUCTION

[1] This is the Environmental Appeals Board's (the "Board") Report and Recommendations in the matter of an appeal filed by Mr. Ted Ganske (the "Appellant") with respect to a landfill that is being developed on a quarter section of land approximately one kilometre from his residence. The landfill is designed to accept oilfield waste consisting mainly of a by-product of heavy oil production known as produced sand.¹ The landfill site is said to have a 10 to 29 metre thick naturally occurring clay layer that will act as a barrier to the movement of contaminants from the site. The landfill is to be constructed with a composite liner system, consisting of a synthetic geo-membrane liner made of high-density polyethylene ("HDPE") over a one-metre thick compacted clay liner, and a leachate collection and removal system.

[2] The landfill site is located in the northeastern part of the Province, near Bonnyville, where there is extensive oil and gas development. The landfill is being developed in response to the need of the oil and gas industry to ensure the safe disposal of oilfield waste. The development of the landfill at this location will reduce the distance that oilfield waste that is produced in the area will have to be transported for proper disposal. The land surrounding the landfill has mainly been cleared for agricultural purposes, with oil and gas development obvious throughout; wells, batteries, and other oilfield facilities are visible from the landfill site.

[3] The Appellant objects to the landfill because he believes the location is not suitable; he believes a more suitable location, further away from his residence and farming operation, could be found. He is concerned about the potential for contaminants to be released from the landfill and the impact that such contaminants could have on his family. He also objects to the development of the landfill because he believes he was not adequately consulted which, according to the Appellant, is a "violation of his rights." The Appellant has opposed the landfill throughout its development, starting when it was originally proposed, through the

¹ Produced sand is also known as reservoir sand and is brought to the surface along with oil, water, and gas when heavy oil is pumped out of the oil-bearing formation. The sand is separated from the oil through the use of settling tanks. This sand is then transported to proper disposal sites, including certain Class II Landfills. The sand may contain small amounts of hydrocarbons or chlorides.

municipal approval process, through the environmental approval process, and now before this Board.

[4] The challenge facing the Board in addressing this appeal is balancing protection of the environment with the need for economic growth and prosperity, taking into account sustainable development principles. The requirement to take these various interests into account is specifically identified in the purpose section of the *Environmental Protection and Enhancement Act*, R.S.A. 2000, c. E-12 (“EPEA”).² In undertaking this balancing exercise, the Board recognizes the importance of the agricultural and oil and gas industries in Alberta.³

II. PROCEDURAL BACKGROUND

[5] On January 20, 2005, the Director, Northern Region, Regional Services, Alberta Environment (the “Director”), issued Approval No. 204916-00-00 (the “Approval”) under EPEA to CCS Inc. (the “Approval Holder”) authorizing the construction, operation, and reclamation of

² Section 2 of EPEA provides:

“The purpose of this Act is to support and promote the protection, enhancement and wise use of the environment while recognizing the following:

- (a) the protection of the environment is essential to the integrity of ecosystems and human health and to the well-being of society;
- (b) the need for Alberta’s economic growth and prosperity in an environmentally responsible manner and the need to integrate environmental protection and economic decisions in the earliest stages of planning;
- (c) the principle of sustainable development, which ensures that the use of resources and the environment today does not impair prospects for their use by future generations;
- (d) the importance of preventing and mitigating the environmental impact of development and of government policies, programs and decisions;
- (e) the need for Government leadership in areas of environmental research, technology and protection standards;
- (f) the shared responsibility of all Alberta citizens for ensuring the protection, enhancement and wise use of the environment through individual actions;
- (g) the opportunities made available through this Act for citizens to provide advice on decisions affecting the environment;
- (h) the responsibility to work co-operatively with governments of other jurisdictions to prevent and minimize transboundary environmental impacts;
- (i) the responsibility of polluters to pay for the costs of their actions;
- (j) the important role of comprehensive and responsive action in administering this Act.”

³ See: *Mountain View Regional Water Services Commission et al. v. Director, Central Region, Regional Services, Alberta Environment re: Capstone Energy* (26 April 2004), Appeal Nos. 03-116 and 03-118-121-R (A.E.A.B.).

the Bonnyville Waste Management Facility (the “Facility”), a Class II Industrial Landfill, located at NE 9-61-3-W4M, near Bonnyville, Alberta.

[6] On February 10, 2005, the Board received a Notice of Appeal from Mr. Ted Ganske appealing the Approval.

[7] On February 11, 2005, the Board wrote to the Appellant, the Approval Holder, and the Director (collectively the “Parties”) acknowledging receipt of the Notice of Appeal and notifying the Approval Holder and the Director of the appeal. The Board also requested the Director provide the Board with a copy of the records (the “Record”) relating to this appeal, and asked the Parties to provide available dates for a mediation meeting or a hearing.⁴

[8] According to standard practice, the Board wrote to the Natural Resources Conservation Board and the Alberta Energy and Utilities Board (“AEUB”) asking whether this matter had been the subject of a hearing or review under their respective legislation. Both boards responded in the negative.

[9] In consultation with the Parties, the Board scheduled a mediation meeting for April 27, 2005, in Bonnyville, Alberta. Mr. Ron Peiluck, Board Member, acted as mediator. The mediation meeting did not result in the resolution of the appeal.

[10] On May 12, 2005, the Board set out the process for the Parties to provide written submissions on the issues to be heard by the Board.⁵ Following the Board’s review of the written submissions, the Board notified the Parties on June 15, 2005, that the issues to be heard at the Hearing would be:

1. What effect, if any, will Approval No. 204916-00-00 issued to CCS Inc. for the construction, operation, and reclamation of the Bonnyville Waste Management Facility have on:

⁴ On March 3, 2005, the Board received a copy of the Record from the Director, and on March 8, 2005, forwarded a copy to the Appellant and the Approval Holder. During the course of the Hearing it became apparent that several documents were missing, in whole or in part, from the Record. The missing documents were provided to the Board and the other Parties during the course of the Hearing, and the Board is satisfied the Parties had a complete copy of the Record for the purpose of the Hearing.

⁵ On May 20, 2005, the Board received written submissions from the Director and the Approval Holder. On May 26, 2005, the Appellant provided a written submission responding to the submissions of the Director and the Approval Holder. On May 30, 2005, the Director and the Approval Holder advised the Board they had no further submissions regarding the determination of issues for the Hearing.

- i. air quality;
 - ii. water quality;
 - iii. surface run-off;
 - iv. drainage;
 - v. groundwater;
 - vi. wildlife and wildlife crossings;
 - vii. health; and
 - viii. noise?
2. What additional monitoring, if any, is required of the Bonnyville Waste Management Facility?

The Board advised the Parties it would not hear representations on land values or road safety, as these issues were not within the Board's jurisdiction.

[11] On June 16, 2005, the Board advised the Parties of the Hearing and set out the process for the Parties to provide written submissions in preparation for the Hearing.⁶ According to standard practice, the Board also published a Notice of Hearing. The Board's Notice of Hearing provided an opportunity for interested persons to file an application to intervene in the Hearing. No applications to intervene were received.

[12] The Hearing was held on July 21, 2005, in Bonnyville. Prior to receiving closing submissions from the Parties, the Board granted the Appellant's request for a site visit. The Hearing was adjourned pending the site visit.

[13] On July 26, 2005, the Board set out the process for the site visit. The Board provided the Appellant with two maps of the Facility and requested the Appellant note the features he wished the Board to view during its visit. On August 3, 2005, the Appellant submitted an annotated map. On August 5, 2005, the Director and the Approval Holder advised the Board they had no comments or additions in relation to the map or the notations provided by the Appellant.

[14] The Board visited the Facility on August 10, 2005, and viewed all of the features identified by the Appellant.⁷ Immediately following the site visit, the Parties were given the

⁶ Written submissions were received from the Approval Holder on July 7, 2005, and from the Appellant and the Director on July 11, 2005.

⁷ During the site visit, the Board was given free access to the Facility. The only contact the Board had with workers at the Facility was to: (1) advise of the Board's arrival; (2) receive a safety orientation; and (3) advise of the

opportunity to review a video recording made by the Board during the site visit. Following the review of the video recording, the Hearing reconvened to allow the Board to question the Parties and to receive closing arguments from the Parties.⁸

III. SUBMISSIONS OF THE PARTIES

A. Appellant

[15] The Appellant explained that he and his wife reside approximately one half mile (approximately one kilometre) south of the Facility, at NE 4-61-3-W4M. He advised they have lived and farmed there for 39 years.

[16] The Appellant stated he was involved with the Cold Lake Community Advisory Committee for 18 years, as a representative of the local hunters and trappers association, and was Chair for approximately 10 years. The Appellant indicated he has two registered trap lines, one trap line is to the north and the other trap line is east of Crane Lake. The Appellant attributes his success as a trapper and hunter to his knowledge of the wildlife in the area.

[17] The Appellant argued there is significant public concern with locating the Facility in an environmentally-sensitive area. The Appellant submitted the level of public concern is evident from the three statements of concern filed with the Director⁹ and the objections to the Facility filed with the Municipal District of Bonnyville No. 87 (the "M.D.") by the Appellant and his then neighbour, Mr. Kenneth Blake.¹⁰

Board's departure. The Board viewed the various features around the Facility identified by the Appellant, including the Appellant's lands and location of his residence.

⁸ One Board Member, Dr. Alan J. Kennedy, was present at the Hearing on July 21, 2005, but was not available for the site visit or continuation of the Hearing on August 10, 2005. The Board requested the Parties' permission to provide Dr. Kennedy with the video recording of the site visit and the transcript of the August 10, 2005 continuation of the Hearing in order to include him in this Decision. The Approval Holder and the Director granted their permission, but the Appellant declined to grant his permission. The Board therefore decided to proceed with only Dr. Hrudehy and Mr. Barlishen participating in the decision. This is permitted pursuant to section 6(3) of the *Environmental Appeal Board Regulation*, Alta. Reg. 114/1993, which provides: "Where a panel consists of more than one person, a majority of the panel shall constitute a quorum."

⁹ See: Statement of Concern Chart, Director's Record, at Tab 37.

¹⁰ See: Exhibit 8: Fax dated July 19, 2005, from Mr. Gordon Fullerton of the M.D., containing: a letter dated March 4, 2004, from CCS Inc. to the Blakes; a note from the Blakes advising they do not agree that CCS Inc. should

[18] The Appellant submitted the Director never consulted directly with him or his wife regarding the Statement of Concern they filed. The Appellant argued the Director consulted only with the Approval Holder regarding the Appellant's concerns. The Appellant stated the Director had no right to issue the Approval without first consulting with him regarding his family's concerns, and therefore, the Approval should be revoked.

[19] The Appellant argued the Director's granting of the Approval without consultation is a violation of his rights under the "*Charter of Rights*."¹¹ The Appellant further argued the Director should have exercised his discretion to require a formal environmental impact assessment ("EIA") of the Facility, particularly because the neighbouring Cold Lake First Nations ("CLFN") land is Federal jurisdiction. The Appellant stated the Director's failure to require an EIA denied the public the opportunity to participate in a review and to have their concerns considered.

[20] The Appellant stated he is concerned the Facility will subject his family to contaminants and to deteriorating air and water quality. The Appellant expressed concern for his wife's health and the health of his children and grandchildren when they visit the farm. He explained his wife suffers from allergies, and she is especially sensitive to chemicals. The Appellant stated that during the recent burning of brush at the Facility, his wife had a major problem with her allergies. He argued this is evidence the air quality at his residence will be affected when the wind is from the north.

[21] The Appellant argued the burning of brush demonstrates the Approval Holder's willingness to violate terms of the Approval, since condition 4.1.3(b) prohibits the Approval Holder from releasing fugitive emissions that cause or may cause "...material discomfort, harm or adversely affect the well being or health of a person." The Appellant further argued the Approval Holder failed to report the Approval violation in accordance with section 98(9) of EPEA.

put a landfill on Highway 659; a note from Mr. John Foy, the M.D. Development Officer stating he advised Mr. Blake of the open house scheduled for March 18, 2004; a letter dated May 17, 2004, from Mr. Ganske to the M.D.; and a letter dated May 27, 2004, and brief from Mr. Blake to the M.D. The Exhibit was filed by the Appellant as evidence that he and the Blakes opposed the development of the Facility.

[22] The Appellant submitted the site where the Facility is to be located has topographical features such that the surface drainage on the site, particularly during wet years, provides excellent bird and animal habitat. The Appellant explained the 20-metre variance in topography from the northwest to the southeast provides a natural wetland, which is the reason the site was not developed as cultivated farm land.

[23] The Appellant submitted there was evidence the surface drainage is causing construction problems for the Approval Holder. The Appellant provided the Board with a series of photographs and explained the photographs show the Approval Holder pumping surface water from the site to a culvert that drains to the opposite side of the road allowance, resulting in water accumulating on CLFN land.¹² The Appellant also expressed concern about water ponding between the highway and the Facility access road on the north side of the Facility.

[24] The Appellant explained the surface water on the Facility site, including run-off from muskeg in the northwest corner, drains naturally to a low point on the southeast corner of the site. The Appellant stated construction on the site has changed the surface drainage such that surface water will no longer naturally run through the culvert. The Appellant also stated the removal of trees and shrubs from the site has affected the natural drainage and has made the Facility more visible from the highway. The Appellant expressed concern that during spring run-off and in wet years, surface water will travel down the road, rather than being partially diverted through the culvert and across the road. He stated this will result in the flooding of his land. The Appellant was also concerned that this could result in potentially contaminated water flowing onto his land and draining into an unnamed creek, which is a tributary of the Beaver River.

[25] The Appellant did not accept that the stormwater collection pond, that is yet to be constructed, will be adequate to contain surface water run-off in wet years and during periods of heavy rain. He explained to the Board that during periods of heavy rain, he has experienced spill-over from his dugout. He expressed concern that spill-over or unplanned releases from the stormwater collection pond will occur at a time when the watertable is already high and the land

¹¹ The Appellant did not expand on his argument that issuing an approval without consultation is a violation of the "*Charter of Rights*."

¹² See: Exhibit 3: 10 pictures taken May 24 and 25, 2005.

is saturated, aggravating the run-off problem and posing a serious risk to his land at a time when it is already very wet.

[26] The Appellant submitted the Approval Holder's hydrogeological assessment is deficient. He stated the assessment relies on data from 98 drillers' records in the Alberta Groundwater Well Database without any field verification of the data, when it is well known the database is unreliable. The Appellant further submitted the groundwater well data did not include his well. The Appellant questioned the adequacy of the number of wells drilled on the site to assess the site's geology, and he argued the site specific data should have been reviewed by the Director, but was not. The Appellant argued this evidence demonstrates the Approval Holder was selective about the data it chose to use in its hydrogeological assessment, and the Director failed to question the quality of that data.

[27] The Appellant argued the Director's review of the Approval Holder's hydrogeological assessment did not meet the requirements of section 2.2 of the *Standards for Landfills in Alberta* (the "Landfill Standards"),¹³ because the Director's reviewer, Mr. Jason Pentland, is registered with the Association of Professional Engineers, Geologists and Geophysicists of Alberta ("APEGGA") as a Professional Engineer and not as a hydrogeologist.

[28] The Appellant explained he does not trust the Approval Holder to monitor groundwater and run-off. He submitted there is no guarantee the monitoring samples will not be tampered with. The Appellant acknowledged the Approval contains a requirement for a third party audit; however, he stated this does not provide him with a guarantee that water samples

¹³ Alberta Environment's *Standards for Landfills in Alberta*, May 2004. See: Director's submission, dated July 11, 2005, at paragraph 21 and Tab 1. During the Hearing, the Appellant questioned the difference between the AEUB requirements for approving landfills and Alberta Environment's Landfill Standard. The Board understands the responsibility for waste regulation in Alberta is shared with responsibility for the regulation of upstream oilfield waste belonging to the AEUB, and the responsibility for the regulation of all other waste generated in Alberta belonging to Alberta Environment. To harmonize and clarify the regulation of the management of oilfield waste in Alberta, the AEUB and Alberta Environment developed a Memorandum of Understanding (the "MOU") on each agency's responsibilities. One of the guiding principles of the MOU is an "...equivalent level of environmental protection and public safety will be achieved through either the [A]EUB's or [Alberta Environment's] requirements and enforcement practices." AEUB Interim Directive ID 2000-03, dated May 31, 2000, at page 2, located at <http://www.eub.gov.ab.ca/bbs/ils/ids/pdf/id2000-03.pdf>, as of August 8, 2005. The Director advised the Board the AEUB participated in the development of Alberta Environment's Landfill Standards and "...the requirements that the [A]EUB has set out, for example for Class II waste would be virtually identical to what Alberta Environment has." Hearing Transcript, at pages 4 to 5, lines 31 to 1. The Board notes the AEUB is recognized as a member of the Steering Committee responsible for the development of the standards.

will not be tampered with. The Appellant also stated Alberta Environment's compliance program, including unannounced site inspections, did not give him any comfort because contamination of the water could occur without being caught in an inspection.

[29] The Appellant objected to the Approval Holder's proposal to treat leachate by spraying it onto the landfill cell rather than trucking it offsite for disposal. The Appellant argued the leachate is not solid oilfield waste; therefore, spraying leachate back into the landfill is not consistent with the terms of the Approval. The Appellant submitted it is not acceptable for the Approval Holder to use leachate composition data from another facility (the Marshall Facility in Saskatchewan) that it operates in its application for this Facility. The Appellant argued the Approval Holder should have used leachate composition data from an Alberta site. The Appellant submitted the leachate may include toxic substances, such as lead or asbestos, which may become airborne if the Approval Holder is permitted to use evaporation as a means of disposal.

[30] The Appellant argued the Director did not consider the effects of the Facility on wildlife corridors in the area. The Appellant stated he has been an area resident for the past 39 years and has frequently observed animals crossing the site. The Appellant informed the Board that on the morning of the July 21 Hearing, he observed two deer inside the chain link fence erected around the Facility.

[31] The Appellant expressed concern the fence will disrupt deer, moose, and bear travel patterns. The Appellant explained that while deer and moose will find a way to travel around a barrier, bears will linger in the area. The Appellant believed this would increase the number of his calves killed by bears on his land adjacent to the Facility.

[32] The Appellant stated he did not agree with the Director and Approval Holder that the provincial compensation scheme for livestock killed by predators would provide adequate compensation for his loss of cattle. The Appellant acknowledged he has never applied for compensation under this program; however, he stated he was familiar with how the compensation scheme works. He believed compensation will not be provided because of the type of evidence that is required to prove livestock was killed by a bear, and the Fish and Wildlife Officers are too inexperienced to recognize that evidence.

[33] The Appellant explained to the Board that when the wind blows from the north, the heavy equipment noise from the construction at the Facility can be heard from his bedroom window. The Appellant stated there was no evidence the Approval Holder has taken any measures to mitigate construction noise. He argued the Director should have considered these types of effects on human beings prior to granting the Approval.

[34] The Appellant submitted it was unfair for the Director and the Board not to hear submissions on the issues of traffic and land valuation. The Appellant clarified he was not seeking compensation for a loss in land value. He also clarified his main concern with deferring a discussion of the traffic issues is that someone will be killed before the traffic concern issues related to the location of the Facility are addressed.

[35] The Appellant argued the application was incomplete because of the failure of the Director to consult with people who filed Statements of Concern. The Appellant also argued the application was incomplete because: it failed to consider the impact of the Facility on air quality, surface water quality, groundwater quality and the related impacts on health; there were inadequate provisions for monitoring of air quality and surface and groundwater quality; and it failed to consider the effects on wildlife. As a result, the Appellant was of the view the Director did not issue the Approval in accordance with the requirements of EPEA. According to the Appellant, the Approval should be revoked and other more suitable sites in the area, without the same impacts on residents and the environment associated with the current site, should be considered.

[36] The Appellant called on Mr. Brian Grandbois, Councilor for the CLFN, to provide evidence on the Appellant's behalf.¹⁴ Mr. Grandbois explained the Cold Lake First Nations Reserve Number 149 (the "Reserve"), located across the road from the Facility, was established in 1903 and CLFN people lived in that area long before the Reserve was established. According to Mr. Grandbois, there are between 2,200 to 2,400 members living on the Reserve.

¹⁴ The Board notes that much of Mr. Grandbois' testimony seemed to suggest that he was appearing on behalf of the CLFN, either as an appellant in their own right, intervenor, or other party in these proceedings. The Board notes that neither Mr. Grandbois nor the CLFN has filed an appeal or requested to be an intervenor or party to these proceedings. As a result, Mr. Grandbois is appearing solely as a witness for the Appellant in these proceedings.

[37] Mr. Grandbois stated the CLFN filed a Statement of Concern with the Director. Mr. Grandbois acknowledged the CLFN received a letter from the Director advising of the Approval and the right to appeal. He believed that had the CLFN been better informed on the technical and legal issues the CLFN may have filed an appeal. Mr. Grandbois submitted the CLFN was disregarded in the Approval process because their concerns were not substantiated by technical expertise and they lacked the resources necessary to engage lawyers and other consultants.

[38] Mr. Grandbois submitted the Approval was proof of the poor track record exhibited over 100 years of dealing with the CLFN people and their lands and the associated injustices.

[39] Mr. Grandbois stated the CLFN Reserve is located downhill from the Facility, and any contaminants flowing from the site will directly affect the Reserve. Mr. Grandbois expressed concern the scientific data and design of the Facility is not 100 percent certain, and contaminated surface and groundwater is a risk to their water sources. Mr. Grandbois explained the CLFN people have sustained themselves from land on and around the Reserve for eons. He explained that while water is now trucked to the Reserve for domestic use, in some cases people still resort to using the water directly from the lands on the Reserve. He stated some people on the Reserve supplement their incomes by hunting ducks, rabbits, and other wildlife on the Reserve.

[40] Mr. Grandbois explained the Reserve has one of the highest rates of cancer in the country, which Mr. Grandbois attributes to “industrial waste and fallout,” and the lifespan of the CLFN people is 10 to 15 years lower than the lifespan of the average Canadian. Mr. Grandbois believed the sole purpose of the Approval was to save money by providing a facility for dumping waste at Cold Lake, rather than requiring companies to truck the waste to Lloydminster. He argued it was unfair to trade the health of the CLFN people for profit.

[41] Mr. Grandbois stated the Reserve lands are under federal jurisdiction, and the proper protocol for dealing with federal issues was not followed. Mr. Grandbois argued the project should have been subjected to a federal environmental impact assessment. Mr. Grandbois also argued the Approval violates the “peace treaties of 1876.” Mr. Grandbois

questioned the Board's jurisdiction to deal with the aboriginal issues and the basic human rights of the CLFN people. Mr. Grandbois argued the *Haida* and *Taku* court decisions demonstrate that the Province has a duty to consult with First Nations people.¹⁵

[42] Mr. Grandbois explained the position of the CLFN is different from other landowners, because the Reserve land cannot be sold or expropriated. He stated that since there is no option for the CLFN to sell Reserve land and relocate, their land must be protected. He stated that while industry can leave in 25 to 30 years, the children and grandchildren of the people now living on the Reserve will be there long after the Facility closes.

[43] Mr. Grandbois also stated the social conditions and economic conditions on the Reserve are different from those of other Canadians. Mr. Grandbois argued the Board must take the rights of the indigenous people and the health and well-being of the CLFN people and their land into consideration when making its decision. He stated the CLFN will not tolerate any further abuse and "will do whatever is necessary" to stop encroachment on their land and poisoning of their water.

[44] Regarding wildlife, Mr. Grandbois stated that deer have been hunted by CLFN members at the Facility site and within the last two months, two or three moose were taken by CLFN members on the land where the Facility is located.

[45] Mr. Grandbois explained the CLFN people believe the Approval Holder demonstrated its disrespect for them when it drained surface water from its site onto the Reserve. Mr. Grandbois stated the position of the CLFN is the Approval should be revoked and the Facility moved away from the Reserve.

[46] Mr. Grandbois did not provide any evidence directly with respect to the impact of the Facility on the Appellant.

B. Approval Holder

¹⁵ See: *Haida Nation v. British Columbia (Minister of Forests)*, [2004] 3 S.C.R. 51, and *Taku River Tlingit First Nation v. British Columbia (Project Assessment Director)*, [2004] 3 S.C.R. 550.

[47] The Approval Holder submitted it is an experienced operator with eight industrial landfills in western Canada, including five in Alberta. The Approval Holder explained it submitted an application for a Class II Landfill for the purpose of disposing of non-hazardous, dry, solid, oilfield waste, primarily consisting of produced sand that is a by-product of heavy oil production in the area.¹⁶

[48] With respect to the Facility design and operation, the Approval Holder referred to a report prepared by a consultant for the Approval Holder entitled *Engineering Design Report* (the “Engineering Report”).¹⁷ The Approval Holder explained the Facility does not pose a risk to air quality because: the type of waste the landfill will accept do not produce gases like the gases produced by municipal waste; waste containing volatile organic compounds will not be accepted; and there will be no heating or processing of waste prior to disposal. Further, the Facility will accept only non-hazardous waste as defined by Alberta Environment and all waste that is accepted will be tested to ensure it meets appropriate criteria. The Approval Holder also explained that the Operations Plan for the Facility provides for applying daily cover to potentially odorous material.

[49] The Approval Holder believed ambient air monitoring is not required because of the minimal risk to air quality. The Approval Holder stated the risk to the Appellant’s air quality is furthered lowered because his residence is located approximately one kilometer to the south of the Facility and the prevailing winds are from the west.

[50] The Approval Holder submitted that it has not experienced air quality concerns or complaints regarding off-site odours from any of the other landfills it currently operates. However, in the event of a complaint, the Approval Holder explained it has an Environmental Management System, which discusses the procedure to be used to respond to such complaints, that includes conducting an investigation, development of an action plan to remedy the cause if

¹⁶ Section 1(j) of the *Waste Control Regulations*, Alta. Reg. 192/1996, defines a Class II Landfill as: “‘Class II Landfill’ means a landfill for the disposal of waste, not including hazardous waste.”

¹⁷ See: Exhibit 7: CCS Energy Services, Engineering Design Report, Proposed Bonnyville Class II Landfill, NE ¼ Sec. 9-61-3-W4M, Bonnyville Area, Alberta, Rev. 01, Issued March 25, 2004, Prepared by NLR/AE Consultants, March 2004. The Approval Holder filed this report with the Director; however, an incomplete copy was provided in the Director’s Record, at Tab 11. As stated, during the Hearing a complete copy of the report was provided to the Parties and the Board.

required, and communication of the outcome to the complainant. The Approval Holder stated the procedures are intended to proactively address odour and noise complaints and other landowner concerns. The Approval Holder stated Alberta Environment has a Mobile Air Monitoring Laboratory that may be utilized in the event a concern is not resolved.

[51] With respect to water quality, the Approval Holder referred to a report prepared by a consultant for the Approval Holder entitled *Hydrogeological Investigation Program Report* (the "Hydrogeological Report").¹⁸ The Approval Holder cited the conclusion in the Hydrogeological Report that, based on the characterization of geological, hydrogeological, and materials properties, the site is suitable for a Class II Landfill development. The Approval Holder submitted the combination of the clay and HDPE liner system, the leachate collection and removal system, and the capping structure, all of which are set out in the Engineering Report, exceeds Alberta Environment's standards for a Class II Landfill and ensures protection of groundwater.

[52] The Approval Holder submitted the direction of the groundwater flow at the site is towards the east-northeast, and the Appellant's well to the south and southeast is either up-gradient or cross-gradient and, therefore, is not at risk from the Facility. The Approval Holder further submitted the speed of the groundwater flow and the groundwater monitoring program required by the Director will permit the Approval Holder to identify any concerns prior to impacting the Appellant. The Approval Holder advised the Board that it had initiated groundwater monitoring in September 2003, and follow up monitoring has occurred in 2004 and 2005, pursuant to the monitoring program set out in the Engineering Report.

[53] The Approval Holder submitted water quality will be further protected by the stormwater collection pond. The water from the stormwater collection pond will be sampled and analyzed in accordance with applicable guidelines prior to any release. The Approval Holder explained that, in addition, the site will be contoured and a berm put in place to ensure run-off

¹⁸ See: Exhibit 5: CCS Energy Services, Prepared by NLR Consulting Ltd., Permit P-7471, Hydrogeological Investigation Program Report, Bonnyville Area, Alberta, NE 09-061-03 W4M, Associated Engineering, January 2004. The Approval Holder filed this report with the Director, however, an incomplete copy was provided in the Director's Record, at Tab 3. As stated, during the Hearing a complete copy of the report was provided to all of the Parties.

from the active areas of the site is directed to the stormwater collection pond. In response to concerns raised by the CLFN, the Approval Holder advised that it had redesigned and relocated the stormwater collection pond. It had originally been designed to contain a 1-in-25 year, 24-hour storm event, but was being redesigned to contain a 1-in-100 year, 24-hour storm event. The Approval Holder also stated that all precipitation that comes into contact with the waste will be collected and handled as leachate.

[54] The Approval Holder stated there are no significant permanent, naturally-occurring water bodies within 820 metres of the boundary of the site and within 1200 metres of the boundary of the landfill, which exceeds the Landfill Standard's requirement for a 300 metre minimum setback from surface water bodies. The Approval Holder argued baseline monitoring of surface water bodies is not necessary because of the distance to water bodies, the fact that surface water will be sampled before release, and any releases will not be into a surface water body.

[55] With respect to wildlife and wildlife crossings, the Approval Holder referred to a report prepared by a consultant for the Approval Holder in which the consultant concluded:

“The NE 9-61-3 W4M does not appear to be an integral parcel of land for wildlife movement in the area. Areas to the southwest, southeast and north appear to present better continuity between relatively undisturbed habitat types (including the Reserve) than does NE 9-61-3 W4M. This considers the presence of the existing Highway 659 disturbance corridor and clearing for agriculture, and oil and gas development.”¹⁹

The Approval Holder stated the site is not identified as an environmentally significant area by Alberta Environment, and the 1996 Cold Lake Integrated Resource Plan prepared by Alberta Environment does not identify the location as a significant wildlife crossing or habitat. The Approval Holder submitted the development of the Facility is consistent with surrounding land use, which consists of a mixture of cleared land for pasture and cultivation, oil and gas sites, and uncleared areas. The Approval Holder stated portions of the site, including the perimeter, will retain the existing trees and bushes throughout the life of the Facility.

¹⁹ See: Approval Holder's submission, dated July 7, 2005, at paragraph 29 and at Tab 7: Letter from Golder Associates to CCS Inc., dated June 29, 2005, Re: Proposed CCS Class II Landfill, Bonnyville Area, Alberta, (NE 9-61-3-4 W4M).

[56] On the issue of health effects, the Approval Holder stated that, since the Facility has no significant impacts on groundwater, surface water, or air quality, there will be no impact on the health of area residents. The Approval Holder also noted the site will be fenced to prevent unauthorized access.

[57] The Approval Holder identified truck traffic transporting waste to the Facility, as well as the operation of one loader on the site to unload waste, as the principal sources of noise from the Facility. The Approval Holder submitted that approximately 90 percent of the truck traffic will come from the west on Highway 659 and not pass by the Appellant's access road or residence. The Approval Holder referred to a report prepared by a consultant for the Approval Holder entitled *Professional Opinion of Noise Impacts Due to Landfill on Ganske Residence* (the "Noise Report").²⁰ The Approval Holder cited the Noise Report's determination of the expected effect of noise on the Appellant from the Facility operation:

"In summary, HFP [(the consultant)] does not believe the CCS Bonnyville landfill site will have a negative noise impact on the Ganske residence. It is possible that noise will become occasionally slightly audible at the Ganske residence under certain atmospheric or operating conditions. However, these occasional times will always be during the daytime period which significantly reduces the potential for negative noise impact."²¹

[58] The Approval Holder advised the Board that it has not received noise complaints from any of its other existing landfill facilities. The Approval Holder submitted that if a noise complaint is received, it is prepared to work with the individual to identify the source of the noise and take immediate reasonable steps to reduce excessive noise relating to its operations.

[59] On the issue of additional monitoring requirements, the Approval Holder submitted that having regard to the extensive design components to prevent the off-site migration of waste or substances coming into contact with waste, and the extensive monitoring requirements designed to ensure effective operation of the Facility, additional monitoring requirements are not necessary. The Approval Holder further submitted, having regard to the measures proposed to protect groundwater, the frequency of groundwater monitoring is

²⁰ See: Approval Holder's submission, July 11, 2005, at Tab 8: CCS Bonnyville Landfill Professional Opinion of Noise Impacts Due to Landfill on the Ganske Resident, prepared by HFP Acoustical Consultants Corp., dated June 30, 2005.

appropriate to protect the public. The Approval Holder reiterated it is an experienced operator committed to responding promptly and efficiently to address any concerns raised by the public.

[60] The Approval Holder summarized the consultation process it undertook with area residents. The Approval Holder stated consultation included one-on-one meetings with all landowners, occupants, and residents within a 2-kilometre radius of the site; an open house with invitations sent directly to those the Approval Holder had met with one-on-one and a notice published in both local papers; and the mailing out of information, such as copies of investigation reports and waste acceptance procedures, to interested people. The Approval Holder stated a number of follow-up meetings and telephone conversations were held with individuals who filed Statements of Concern. The Approval Holder stated it offered to conduct background testing and follow-up testing on the Appellant's water well, and it undertook additional assessments of noise and wildlife in response to the Appellant's concerns. The Approval Holder also stated it proposed to cover the cost of an independent review of the application to be conducted by a CLFN joint venture company, to provide the CLFN with monitoring results annually, and to take CLFN representatives to visit a similar landfill site operated by the Approval Holder.

C. Director

[61] The Director submitted he properly exercised his discretion, and the decision to issue the Approval is in accordance with EPEA. To support this position, the Director explained his consideration of each of the hearing issues and how they supported his decision to issue the Approval.

[62] The Director submitted the Facility is not expected to have significant effects on air quality because of restrictions on the types of waste the Facility is authorized to accept. The Director stated that pursuant to condition 4.2.7 of the Approval, wastes, such as domestic or municipal waste and hazardous wastes, most commonly associated with landfill odour, cannot be disposed of at the Facility without express authorization from the Director. The Director further

²¹ See: Approval Holder's submission, dated July 7, 2005, at paragraph 34.

relied on the Approval Holder's submission that no odour complaints were brought forward with respect to the other landfills operated by the Approval Holder.

[63] The Director submitted that air quality monitoring was not required because the draft operations plan calls for signage with 24 hour contact information for complaints, and the Approval Holder has the ability to respond to odour complaints using soil to cover material. Furthermore, the Director stated the Approval requires an operations plan that is periodically revised, and the Approval Holder must adhere to it.

[64] The Director argued the Approval Holder's compliance with the Landfill Standards, including requirements for natural environmental separation and site hydrogeological investigation, protects both surface and groundwater resources. He explained the Landfill Standards contain setback requirements for slope failure areas, water bodies, and community water supplies, and the Landfill Standards specify the requirements of a hydrogeological investigation program designed to determine if a site is suitable for a landfill. The Director stated the Approval Holder has met or exceeded the Landfill Standards, and the hydrogeological investigation showed the site to be suitable for a landfill. The Director noted in particular the presence of 10 to 29 metres of clay above the first major sand unit at the site, which acts as a natural barrier to any contamination transport.

[65] The Director stated conditions 3.1.3 to 3.1.6 of the Approval also require the use of minimum design features to protect water quality, including a one-metre compacted clay liner and requirements for the maintenance of the liner system during and post construction, a HDPE synthetic liner, a leachate collection system, and a run-on/run-off collection system. Furthermore, the Approval "...requires detailed monitoring and reporting relative to: Facility integrity (4.2.16); leachate collection (4.2.19); surface water run-off quality (4.3.6) and groundwater protection (4.4.1-4.4.11)."²² The Director submitted water quality is protected by the limits established by the Approval for the quality of surface run-off that may be released to off-site drainage. The Director believed that, overall, the water quality issues were treated appropriately and professionally.

²² See: Director's submission, dated July 11, 2005, at paragraph 23.

[66] The Director cited compliance with the Landfill Standards as evidence the surface water management plan for the facility is appropriate.²³ The Director stated several key water management design features, including a landfill drainage system and a stormwater collection pond sized to contain run-off from a 1-in-25 year, 24-hour storm event, met the Landfill Standards. (As discussed above, the Approval Holder has redesigned the stormwater collection pond to contain a 1-in-100 year, 24-hour storm event.)

[67] Regarding the issue of wildlife and wildlife crossings, the Director submitted he did not have any information to indicate there are significant wildlife crossings in the area of the Facility. The Director noted the information in the Approval Holder's written submission and advised the Board that biologists with Alberta Sustainable Resources and Development agree with the conclusion that this is not an area of particular significance for wildlife. The Director further noted Alberta Sustainable Resources and Development offers a livestock predation compensation program for livestock killed or injured through wildlife predation.²⁴

[68] On the issue of health, the Director submitted the expected minimal air quality effects and the Approval requirements related to surface and groundwater are, in his view, such that the Facility is not expected to pose health concerns.

[69] The Director stated noise was not raised as a specific issue in the Statements of Concern submitted during the application review process, nor did the Director expect noise to be a significant issue. The Director noted the Approval Holder's written submission contains information from a noise consultant that supports his view. The Director advised the Board that, while noise is not addressed in the Approval, noise may be addressed by a municipal by-law or conditions in a development permit.

[70] The Director stated the issue of the Director's consultation with the Appellant was not a specific appeal issue. The Director stated the legally required process for consultation as provided for in EPEA is the Director's consideration of the written Statements of Concern. The Director argued the Director's Record supports a finding that this requirement was met.

²³ See: Section 3.1(d)(ii), (f) and (g), *Standards for Landfills in Alberta*, May 2004, Director's submission, dated July 11, 2005, at Tab 1.

[71] The Director stated he also took extra steps to consult with the Appellant. The Director submitted this included asking the Approval Holder for additional information regarding the Appellant's Statement of Concern, asking the Approval Holder to connect with the Appellant regarding his Statement of Concern, a telephone conversation initiated by the Appellant with a member of the Director's staff, and a documented record of three of four unsuccessful telephone calls made on three different days by the Director's staff in an attempt to consult with the Appellant directly.²⁵ The Director argued these steps were taken in accordance with Alberta Environment's *Approval Program Policy for Statements of Concern - Public Consultation*, and demonstrates the Director and his staff met their obligation to consult with the Appellant.²⁶

IV. ANALYSIS

[72] The purposes of EPEA are set out by the Legislature in section 2.²⁷ These purposes are to support and promote the protection, enhancement, and wise use of the

²⁴ See: Subsections 14 to 16, *Wildlife Regulations*, A.R. 143/97, Director's submission, dated July 11, 2005, at paragraph 27.

²⁵ See: Policy 14-04A, dated August 2004.

²⁶ See: Director's Record, at Tabs 21, 36, 43, 56, and 57. Also see: Telephone Record Sheet, dated August 11, 2004, added to the Director's Record by letter dated July 12, 2005.

²⁷ Section 2 of the EPEA provides:

"The purpose of this Act is to support and promote the protection, enhancement and wise use of the environment while recognizing the following:

- (a) the protection of the environment is essential to the integrity of ecosystems and human health and to the well-being of society;
- (b) the need for Alberta's economic growth and prosperity in an environmentally responsible manner and the need to integrate environmental protection and economic decisions in the earliest stages of planning;
- (c) the principle of sustainable development, which ensures that the use of resources and the environment today does not impair prospects for their use by future generations;
- (d) the importance of preventing and mitigating the environmental impact of development and of government policies, programs and decisions;
- (e) the need for government leadership in areas of environmental research, technology and protection standards;
- (f) the shared responsibility of all Alberta citizens for ensuring the protection, enhancement and wise use of the environment through individual actions;
- (g) the opportunities made available through this Act for citizens to provide advice on decisions affecting the environment;
- (h) the responsibility to work co-operatively with governments of other jurisdictions to prevent and minimize transboundary environmental impacts;
- (i) the responsibility for polluters to pay for the costs of their actions;
- (j) the important role of comprehensive responsive action in administering this Act."

environment while recognizing a number of factors, including that the protection of the environment is essential to ensuring the integrity of ecosystems and human health and the well-being of society, and the need for Alberta's economic growth and prosperity in an environmentally-responsible manner and in accordance with the principle of sustainable development. The balancing of these factors is an essential part of this appeal.

[73] Paragraphs (f) and (g) of section 2 of EPEA also require decision-makers to recognize the shared responsibility of all Alberta citizens for ensuring the protection, enhancement, and wise use of the environment through individual action, and to afford citizens the opportunity to provide advice on decisions affecting the environment. The decision-maker's consultation with directly affected parties that have filed a statement of concern is also important to this appeal.

[74] The Board will first review the broader issues raised in this appeal, including consultation with the Appellant, the jurisdiction of the Board in cases of land-use conflict, and the Director's exercise of discretion in calling for an environmental impact assessment. The Board will then consider each of the specific appeal issues.

A. Director's Consultation with the Appellant

[75] It is the Board's view that meaningful consultation must involve an exchange of information. Inherent in the concept of consultation is an *exchange* of information that flows both ways. Consultation allows the decision-maker to provide relevant information about a proposed project to directly affected parties. Equally as important, consultation provides an opportunity for the decision-maker to gather information relevant to the decision from the directly affected parties. The main purpose of consultation is for the decision-maker to take into account the views of the directly affected parties, as required by the legislation, and in the end to make a "better" decision.

[76] This is not to understate the importance of the role of an approval holder in this consultation process. A prudent approval holder actively consults with potentially directly affected parties before, during, and even after the approval process. It is in the approval holder's best interest to attempt to address the concerns of the directly affected parties. Further, it is

appropriate for the decision-maker to expect, and even require, the approval holder to respond to concerns raised by directly affected parties. Such responses should be directed to both the Director and the directly affected parties.²⁸

[77] When balancing the various factors that are relevant to a specific decision, often much of the evidence considered by the decision-maker has been provided by scientific and technical experts. For example, in many appeals the Board is required to carefully consider the differing views of expert witnesses. However, the Board believes traditional knowledge, such as the knowledge of local wildlife provided by the Appellant in this case, also plays an important role in assessing the potential impacts of proposed projects. Moreover, individual appellants provide information to the Board about what is important to Albertans.

[78] The Board accepts that the Approval Holder made reasonable efforts, including both public and private meetings, to consult with the Appellant. The Board also accepts the Director's evidence that his staff made four attempts, three of which are documented by handwritten notations on the Director's record, on three separate days to contact the Appellant by telephone.²⁹ The evidence of the Director is that the Appellant did not have an answering machine on which a message could be left. The Appellant was not sure if his answering machine was working at the time. Based on this evidence, the Board concludes the Director recognized the need to consult directly with the Appellant and attempted, through his staff, to do so.

[79] Clearly, it would have been helpful in this situation if one of these attempts had been successful. The Board cannot help but wonder how a person filing a Statement of Concern can be confident that Alberta Environment is protecting the environment and that it will address the concerns raised in the Statement of Concern if there is no contact between Alberta Environment and the person who filed the Statement of Concern. How is a Statement of Concern filer going to be reassured that their concerns have been heard? With the benefit of hindsight, given the repeated, good faith but unsuccessful efforts to make contact by telephone, it

²⁸ The Board notes that in other cases, approval holders have responded to the Director's request for a response to concerns raised by directly affected parties by writing only to the Director. The Board does not view this as prudent behaviour on the part of an approval holder. When the Director asks an approval holder for a response to a concern raised by a directly affected party, a prudent approval holder should look at this as an opportunity to consult with the directly affected party.

²⁹ See: Director's Record, at Tabs 56 and 57.

might have been helpful to advise the Statement of Concern filer by mail of the difficulties encountered in trying to reach him. He could have been invited to call the Director's office by some reasonable deadline to provide him with the opportunity to have direct contact with someone from the Director's staff.

[80] The Board accepts that it need not be the Director that contacts a person filing a Statement of Concern and the contact need not be in person. The nature of the contact will certainly vary with individual circumstances. In some, if not most, cases, a letter or telephone call by a staff member fully briefed on the application at issue will be sufficient. If an Approval Holder is able to satisfy all of an individual Statement of Concern filer's concerns, then a simple confirmatory letter may be all that is in order. However, consistent with Alberta Environment's *Approval Program Policy for Statements of Concern - Public Consultation*, in exceptional circumstances the Director may need to convene a meeting with particular people or groups.³⁰ The Board believes that goals of consultation should be to ensure that a person filing a Statement of Concern knows that his concerns have been heard and that he has been afforded every reasonable opportunity to understand how Alberta Environment will ensure that the environment will be protected, including by way of the approval should one be issued.

[81] In this case it was clear the Approval Holder, despite its attempts to do so, was not able to resolve the Appellant's concerns.³¹ From the Director's Record it is clear the Director

³⁰ See: Policy No. 14-04A, dated August 2004, at page 2. This is consistent with section 5(1) of the *Approval and Registrations Procedures Regulation*, Alta. Reg. 113/1993, which sets out the consultation options available to the Director when an application made under EPEA is reviewed:

- “5(1) During the review of an application the Director may request oral information or additional written information from
- (a) an applicant or an agent of the applicant,
 - (b) a person who is directly affected by the application,
 - (c) a local authority, the Government, a Government agency or the Government of Canada or an agency or department of that Government, and
 - (d) any other source the Director considers appropriate.”

Paragraph 5(1)(b) clearly permits the Director to contact the Appellant directly. In addition, section 8 provides the Director with the authority to circulate a proposed decision or particulars of it to, among others, “...persons who have filed statements of concern in accordance with section 73 of the Act and any other persons the Director considers appropriate.”

³¹ In a letter dated August 12, 2004, the Approval Holder advised the Director of the difficulties being encountered in resolving the Appellant's concerns:

“All parties indicated to CCS during phone conversations (Mr. Blake – August 5, Mr. Ganske – August 10, and Chief Joyce Metchewais, CLFN – August 9) that the only possible resolution was

believed the circumstances warranted direct contact with the Appellant.³² The Board supports the Director's decision in this regard. However, given the circumstances, it is not surprising to the Board that the lack of successful contact between the Director and the Appellant resulted in the Appellant's belief that he had not been fully consulted and the Director had not adequately addressed his concerns.

[82] The Board understands the Director's view that the *Approval Program Policy for Statements of Concern - Public Consultation* is an attempt to balance public consultation with the available financial and human resources. However, the Board believes that more contact may be the best way to maximize the use of resources. The Board cannot help but wonder if the Appellant had felt he had been consulted, whether he might have approached this issue differently. The Board believes that if consultation between the Director and the Appellant could have avoided an appeal, or set the stage for a successful mediation to resolve the Appellant's

the relocation of the facility or in the case of Mr. Ganske and Mr. Blake, outright purchase of their properties. As no resolution has been reached, CCS formally requests that AENV complete the review of the application and issue an approval." (Director's Record, Tab 43, at page 1.)

³²

In an internal e-mail dated September 2, 2004, Mr. Hossain wrote:

"CCS Inc. has applied for a Class II industrial landfill. During the public advertisement process, we have received three statements of concerns regarding this landfill. CCS has consulted with the concerned parties throughout the project and has been unable to address their concerns. After meeting with them, CCS thought that the only possible resolution was relocation of the facility or outright purchase of their properties. As no resolution has been reached, CCS requested us to complete the review of the application and issue an approval. CCS is confident that such development would not cause any adverse impact on the environment. They are also prepared to contest the standing of the parties that have made submissions should the project proceed to appeal.

Asoke Weerasinghe, our team leader, and myself want to meet the concerned parties separately and try to resolve the issues. Prior to meet [sic] with them, we would like to have a meeting with you. For your information, one of the concerned parties is the Cold Lake First Nations (CLFN)." Director's Record, Tab 37, at page 2.

The Director's Record also contains a document titled "Meeting with Park Powell," dated November 10, 2004, written by an unidentified author, which states in bullet form:

- "Park went through the SOC.
- Park went through the SOCs addressed by CCS, Bonnyville.
- It seems we are on the right track
- He suggested giving a call to Gar[r]y Appelt, and Mr. Ganske. If possible arrange for a meeting.
- Advised to look at the Policy No. ES-99-PP3 to determine if the SOCs are directly affected.
- I went through the policy.
- It seems SOCs are directly affected." Director's Record, Tab 53, at page 1.

concerns, that would have been a better use of resources than the time and money the Director, the Appellant, and the Approval Holder, have expended on this Hearing.³³

[83] The Board's belief that the lack of direct consultation between the Director and the Appellant was a significant concern in this appeal should not be misconstrued to mean an individual filing a Statement of Concern has a right of veto over a development, or that imperfect consultation is necessarily a fatal flaw in the decision-making process. The Board addressed this issue in an earlier decision:

“A public participation program is not a subscription for group decision-making on the basis of individual veto. A public participation program will rarely completely satisfy all of the participants and it will never be perfect. The public interest is variegated and hard to define. As a result, unless it can be clearly demonstrated that there was a major flaw in the public participation process or that there was bad faith in the process, the Board will not revisit the public participation program....”³⁴

[84] The Board believes Alberta Environment has the legal tools in EPEA to protect the environment. While members of the public may not be convinced these tools are adequate, such a belief does not provide a basis for refusing to issue an approval. The Board believes it would be prudent for Alberta Environment to exercise reasonable efforts to work constructively with Statement of Concern filers to address their concerns and demonstrate Alberta Environment's commitment to protecting the environment. The Board hopes that effective communication of this nature will reduce unproductive conflict in the approval process and be a more effective use of resources in the long run. However, the Board recognizes that there will be cases where no amount of consultation will work and Alberta Environment cannot be expected to provide reassurance to a person who is simply opposed to a development regardless of the capability of the condition in the Approval to protect the environment.

³³ The Board wishes to be clear that, as its standard practice, the Board Members making this Report and Recommendations have no knowledge of what occurred in the mediation between the Parties in this matter. The only information the Board Members making this Report and Recommendations have is that mediation took place, and it was unsuccessful.

³⁴ *Bailey et al. v. Director, Northern East Slopes Region, Environmental Service, Alberta Environment re: TransAlta Utilities Corporation* (13 March 2001), Appeal Nos. 00-074, 075, 077, 078, 01-001-005 and 011 (A.E.A.B.), at paragraph 73.

[85] It is the Board's conclusion that there was no major flaw in the public consultation process in this appeal, primarily because there is evidence in the Director's Record that public and private consultation took place between the Approval Holder and the Appellant, the results of this consultation were communicated to the Director, and the Director made several attempts, albeit unsuccessful, to contact the Appellant.³⁵ In the circumstances, the Board strongly encourages the Approval Holder to follow through on the commitments it made before the Board for further, ongoing consultation with the Appellant and other affected parties.

B. Land-Use Conflict

[86] Through the course of the Hearing, the Appellant questioned the Director about his role in the site selection process. Site selection is principally a municipal planning decision, and it is not the role of the Director or the Board to oversee or review the municipal planning process. The Board discussed a similar land-use conflict, arising between area residents and industry as a result of rezoning, in a recent decision:

“The Board is also aware that the Director cannot compel local residents to cooperate with the Approval Holder, and the Director must be cognizant of putting the Approval Holder in a position where it is impossible to comply with the Amending Approval without the residents' cooperation. The Board agrees with the Director that resolving the land-use conflict is not within his, or Alberta Environment's, mandate, and this conflict must be dealt with through other processes. Similarly, the land-use conflict is not within the Board's jurisdiction.”³⁶

[87] While zoning is within a municipality's control and outside the jurisdiction of both Alberta Environment and the Board, a development that meets zoning requirements may not proceed unless the development is determined to be environmentally acceptable. As part of determining what is and is not environmentally acceptable, the Board is charged with considering the impacts of a development on the integrity of ecosystems, human health, and the well-being of society.³⁷ The Board believes this requires a consideration of the impact of the

³⁵ See: Director's Record, at Tab 43.

³⁶ *Smulski et al. v. Director, Northern Region, Regional Services, Alberta Environment re: Agrium Products Inc.* (29 April 2005), Appeal No. 04-074 – 04-082-ID (A.E.A.B.) at paragraph 125 [footnotes omitted].

³⁷ See: Section 2(a) of EPEA.

proposed development on the general quality of life of area residents. When the balancing of all of the factors to be considered by the Board results in an approval being confirmed, the Board may still recommend amendments to the approval to ensure any adverse effects, including effects that may impair the quality of life of local residents, are mitigated. This aspect of the environmental review process cannot be deferred to the municipal planning process.

C. Environmental Impact Assessment

[88] Before the Board considers the specific Hearing issues, the Board wishes to address a question raised by the Appellant regarding the Director's exercise of his discretion not to require a formal EIA.

[89] Through regulations, EPEA sets out a list of activities for which an EIA is mandatory and a list for activities which are exempt from an EIA. For projects, such as this Facility, that are not on either the mandatory or exempted list, section 43 of EPEA permits the Director to require an EIA when the Director of Environmental Assessment "...is of the opinion that the potential environment impacts of a proposed activity warrant further consideration..."

[90] The Board agrees fully with the Director that an EIA is not appropriate in this case. A formal EIA is not necessary for this Facility because the environmental impacts associated with Class II Landfills constructed and operated in the manner proposed by the Approval Holder are foreseeable. Further, the Approval Holder has extensive experience operating similar landfills in western Canada, and as a result, the environmental impacts of this Facility are understood. An EIA is not necessary in these circumstances.

[91] This is not to say that an environmental assessment, as distinct from a formal EIA, is not necessary. An environmental assessment, which is the general consideration of the environmental impacts of a development, is undertaken anytime the Director considers an application for an approval, and the Board is satisfied the Director undertook an environmental assessment in this case. An environmental assessment is, however, a process that is distinct from a formal EIA.

D. Hearing Issues

[92] As stated previously, EPEA requires the Board to balance a number of factors to ensure development necessary for economic growth and prosperity is environmentally acceptable. As discussed in detail below, the Board concludes, based on the geological characteristics of the proposed site, the state of the art design of the Facility, a good construction quality assurance program, and the value to environmental protection provided by a sound oilfield waste disposal service, the Facility is environmentally acceptable and the Approval, in general, should be confirmed. However, in response to the evidence provided at the Hearing, the Board has a number of recommendations for amendments to the Approval, many of which the Approval Holder and the Director have agreed to, that the Board believes will make this a better Approval. These recommended amendments provide for further mitigation of the potential adverse effects of the Facility, including the effects of the Facility that are of particular concern to the Appellant and that may affect his quality of life.

1. Air Quality

[93] The Board accepts the operation of the Facility will not pose a risk to the Appellant's air quality. This finding is based on the evidence of the Director and the Approval Holder, including their evidence regarding restrictions on the types of waste that will be disposed of at the Facility, there will be no heating or processing of waste, and that there will be a daily application of cover over potentially odorous material. This finding is further supported by the Approval Holder's evidence that it has not experienced air quality or off-site odour complaints at any of its eight existing industrial landfills.

[94] The Board also relies on condition 4.2.7 of the Approval, which specifically prohibits the disposal of hazardous and domestic or municipal waste, most commonly associated with odours. Reliance on condition 4.2.7 is strengthened by the Director's request, accepted by the Approval Holder, to the Board to amend condition 4.2.7 by deleting the words "...unless otherwise authorized in writing by the Director." These words seem to suggest the type of waste that can be accepted by the Facility could be modified by some sort of written authorization, such as a letter, issued by the Director. The Board agrees with the Director that such an

authorization by the Director is likely legally ineffectual because section 67(1) of EPEA clearly requires an amendment to the Approval in these circumstances.³⁸ The Director submitted the terms and conditions of the Approval, as it now exists, are insufficient to support a decision to authorize a change to the types of wastes disposed of at the Facility, and the Board agrees. Accordingly, the Board recommends that condition 4.2.7 of the Approval be amended by deleting the words “unless otherwise authorized in writing by the Director.” This amendment creates consistency between condition 4.2.7 and condition 3.1.7 of the Approval, which requires the Approval Holder apply for an amendment to the Approval prior to proceeding with certain activities, including acceptance of incompatible wastes, and section 67(1) of EPEA.

[95] Further, the Board believes the type of amendments contemplated in condition 3.1.7 of the Approval, and specifically any change in the Approval that would allow for the disposal of hazardous, municipal, or domestic waste, would not be routine as used in section 72(3) of EPEA.³⁹ Therefore, the use of an abbreviated approval process to make such an amendment to the Approval would not be appropriate.

[96] The Approval Holder also relies on its internal Environmental Management System to respond to odour and noise complaints and any other landowner concerns. The Board believes the Approval Holder will be proactive in responding to any landowner complaints and recommends to the Approval Holder that it provide the Appellant with a copy of the

³⁸ Section 67(1) of EPEA states:

“67(1) No person shall, with respect to an activity that is the subject of an approval, make any change to

- (a) the activity,
 - (b) the manner in which the activity is carried on, or
 - (c) any machinery, equipment or process that is related to the carrying on of the activity
- unless an approval or an amendment to an approval authorizing the change is issued by the Director.”

³⁹ Section 72(3) of EPEA provides:

“Notwithstanding subsection (1) or (2) [(the requirements to provided notice)], where the Director is satisfied that

- (a) there is an emergency,
 - (b) the activity to which the application relates or the proposed amendment, addition, deletion or change is a routine matter within the meaning of the regulations, or
 - (c) adequate notice of the subject-matter of the application or the proposed amendment, addition, deletion or change has already been given,
- the Director may waive the notice requirements set out in subsections (1) and (2).”

Environmental Management System to ensure the Appellant is fully aware of the process for responding to complaints.

[97] The Board notes that during the construction phase of the Facility, the air quality at the Appellant's residence was impaired at times because of "slash burning." In particular, the Appellant provided evidence that his wife suffers from allergies, is sensitive to changes in air quality, and experienced health impacts during these occurrences. The Appellant noted in his closing argument that this may have contravened condition 4.1.3(b) of the Approval. This condition provides: "Except as provided for by the Director in writing, the approval holder shall not release fugitive emissions that causes or may cause any of the following: ... (b) material discomfort, harm or adversely affect the well being or health of a person...." The Board notes there is no substantiated evidence before the Board on the issue of whether there was a violation of the Approval because the Appellant chose to wait until closing argument to raise this issue. As a result, neither the Approval Holder nor the Director had an opportunity to respond with evidence to the allegations made by the Appellant. However, the Board brings this condition to the attention of the Approval Holder and believes the Approval Holder must pay close attention to this matter in the future.⁴⁰

2. Water Quality

[98] The Board accepts the Director's evidence that the Approval complies with the requirements of the Landfill Standards, including natural environmental separation and the requirements of the site hydrogeological investigation. The Landfill Standards that have been met, as set out in the Hydrogeological Report, include the minimum setback requirements for slope failure areas, water bodies, and community water supplies. Specific surface and groundwater issues are discussed below.

3. Surface Water Run-off

⁴⁰ The Board notes the Approval Holder agreed that developing a policy to deal with this matter, including informing residents, is a good suggestion. See: Hearing Transcript, at page 78, lines 13 to 24.

[99] The Board is satisfied the design of the stormwater collection pond and run-off controls is adequate to protect surface water. The Board notes this system captures any precipitation that falls on the developed areas of the Facility and complements the leachate collection system, which is designed to capture any precipitation that comes into direct contact with the waste material.

[100] The Board understands the Appellant has concerns about two aspects of surface water drainage. His first concern is that changes to the site will result in an increase in surface water draining onto his land, particularly during spring thaw, periods of heavy rainfall, and when water is released from the stormwater collection pond. As part of this objection, the Appellant is also concerned that this water may be contaminated.

[101] The Board believes the stormwater collection pond and the collection of precipitation falling onto the landfill cells for disposal as leachate will reduce the volume of surface water which currently drains naturally from the Facility site onto the Appellant's land. The Board notes the stormwater collection pond, which is substantially larger and deeper than a typical farm dugout, was originally designed to accommodate at least a 1-in-25 year storm event (10,500 m³), but it is now designed to accommodate well in excess of a 1-in-100 year storm event. (According to the Approval Holder, a 1-in-100 year storm event would be between 12,000 and 13,000 m³, and the new design will hold 18,000 m³, which is almost 50 percent larger.) While some water from undisturbed areas will leave the site, as it does now, once the Facility is constructed the volume of water leaving the site will be less than currently occurs, particularly during spring thaw and periods of heavy rain.

[102] Subject to the following discussion on pre-release testing, the Board has no concerns with the Approval Holder's plan for the controlled release of water from the stormwater collection pond. With respect to the timing and rate of the release of the water, the Board encourages the Approval Holder to work toward minimizing any potential negative impacts and to notify the neighbours if a release might impact them. The Board also encourages the Approval Holder to revegetate the southeast corner of the site to expand and maximize the tree buffer zone. This will provide added natural protection with respect to the surface water flow and, at the same time, minimize the visual impact of the Facility.

[103] The Board notes there are other uses, such as irrigation, for water from stormwater collection ponds when the water meets release standards. The Board encourages the Approval Holder to look for these potential alternatives to the direct release of the water into the environment.

[104] The Appellant's second concern is the risk of contaminated surface water flowing from the site and reaching a local creek and the Beaver River. The Board notes the Facility's setback of greater than 800 metres from regional water bodies exceeds the Landfill Standards requirement of a 300 metre minimum setback, and no evidence was called to suggest that a larger setback was needed in this case. In addition, the Board accepts that the design for surface water management is adequate to prevent contaminated water from leaving the site.

[105] The Board also accepts the pre-release monitoring of surface water, as set out in Table 4.3-B of the Approval and the background standards set out in Table 4.3-A of the Approval, are adequate to protect regional water bodies. The Board does not believe it is necessary as an Approval condition to require the Approval Holder to meet with the Appellant to explain the monitoring results, but the Board is confident the Approval Holder will offer to do so, given the Approval Holder's commitment to being a good neighbour.

[106] The Appellant's evidence regarding the Approval Holder's pumping of surface water from the Facility site and the resulting accumulation of water on the Reserve, without permission from the CLFN, is a cause of concern for the Board. The Director acknowledged that at a site inspection conducted the day before the Hearing, the surface run-on/run-off control was not functional.⁴¹

[107] The Approval Holder explained to the Board that during construction clean surface water from a dugout was pumped into a roadside ditch; the water then flowed naturally from the ditch through a culvert and onto CLFN land.⁴² This occurred during dewatering of a dugout that was to be developed into the stormwater collection pond. While no physical damage appears to have occurred to Reserve land, the Board is concerned that construction practices of

⁴¹ See: Hearing Transcript, at page 15, lines 5 to 12.

⁴² See: Hearing Transcript, at page 35, lines 3 to 15.

this nature are not only potentially harmful to the environment but also serve to increase the animosity between the Approval Holder and its neighbours.

[108] The Board understands the Approval Holder acknowledged the mistake and ceased the pumping as soon as a complaint was received from the CLFN. It then met with and apologized to the CLFN Chief and Council for the incident.⁴³ Furthermore, in response to CLFN concerns about the location of the stormwater collection pond, the Approval Holder, with the agreement of the Director, has relocated the pond to the west of the dugout.⁴⁴ In addition, the Approval Holder advised the Board the area disturbed at the original site of the stormwater collection pond will be recontoured and reseeded, and a permanent berm will be added to further prevent water from flowing directly onto CLFN land.⁴⁵ The Board is satisfied this response from the Approval Holder, including the change of the location of the stormwater collection pond, adequately addresses this concern.

4. Drainage

[109] The Board is satisfied the design of the leachate collection system and the re-located stormwater collection pond adequately address the issue of site drainage. However, the Board is concerned with condition 4.2.14(a) of the Approval, which allows for the disposal of leachate collected from the landfill collection system through recirculation. While the recirculation of leachate may be appropriate for landfills where bioreaction processes are used to biodegrade waste, recirculating leachate at this Facility is contrary to the minimization of water contact with the waste and inconsistent with the primary goal of minimizing the leachate head standing over the liner.

[110] Rather than recirculation of leachate, the Approval Holder advised the Board its intention is to promote evaporation of leachate. The Approval Holder would like to spray the leachate over the landfill to maximize evaporation and to assist in dust control.⁴⁶ The goal is to

⁴³ See: Hearing Transcript, at page 35, lines 24 to 34.

⁴⁴ The Director concurred with the Approval Holder's evidence regarding relocating the stormwater collection pond. See: Hearing Transcript, at page 15, lines 11 to 22.

⁴⁵ See: Hearing Transcript, at pages 36 to 37, lines 32 to 12.

⁴⁶ See: Hearing Transcript, at page 65, lines 10 to 14.

reduce the amount of leachate that is trucked from the site and disposed of through deep well injection. The Approval Holder stated that only a small amount of leachate may inadvertently recirculate as a result of the evaporation process, but that is not the intent of the process.⁴⁷

[111] The Board's concern is that Approval condition 4.2.7(e) prohibits disposal of waste containing free liquids. This necessary condition, as currently worded, is not consistent with allowing liquid leachate to reenter the landfill, even if it occurs inadvertently as a result of the proposed evaporation process.

[112] The Director confirmed to the Board recirculation as a method of disposing of leachate is not appropriate for this Facility and is not the Approval Holder's intent. Accordingly, the Director recommended to the Board that condition 4.2.14(a) be amended to delete the reference to recirculation and replace it with permission to use evaporation as a method of leachate disposal.

[113] The Board recommends condition 4.2.14(a) of the Approval be amended by deleting the option to recirculate leachate water. The Board recommends this be replaced with permission to use evaporation, subject to the Approval Holder first submitting to the Director for approval a plan for the use of evaporation that does not conflict with the other requirements of the Approval, notably condition 4.2.7(e). While the Board does not believe there are air quality issues associated with the use of evaporation to dispose of leachate, the plan should also discuss, with reference to scientific evidence, the potential for air quality concerns with the use of evaporation.

[114] The Approval Holder also stated it may want to move to a more advanced filtration based treatment of leachate, such as reverse osmosis, as the technology develops. The Board believes there is insufficient evidence regarding these new technologies to recommend approval at this time. Approval for the use of new leachate disposal methods is appropriate only once the Approval Holder is able to fully support the use of these methods with scientific evidence. In those circumstances, condition 4.2.14(c) of the Approval allows the Director to authorize in writing other methods of leachate disposal.

⁴⁷ See: Hearing Transcript, at page 65, lines 15 to 20.

5. Groundwater

[115] The Board accepts the Hydrogeological Report, including the results from on-site bore holes and test pits, as evidence the site meets or exceeds the Landfill Standards and is a good location for the Facility. The Board also accepts the Approval Holder's evidence that the excavation of the site has confirmed the test data. The Board also agrees with the Approval Holder and the Director that the person reviewing the Hydrogeological Report on the Director's behalf meets the qualification requirements in the Landfill Standards.⁴⁸

[116] The Board agrees an important reason this site is suitable for a landfill is the existence of 10 to 29 metres of clay above the first major sand.⁴⁹ This acts as a natural barrier to any movement of contamination into the groundwater. Furthermore, the Board accepts that the design features to protect groundwater, including a composite liner system consisting of a one-metre compacted clay liner, a HDPE synthetic liner, and a leachate collection and removal system designed to minimize the leachate head on the liner, exceed the Landfill Standards and are, therefore, adequate to protect groundwater. This finding is subject to two concerns of the Board.

[117] The first concern the Board has regarding groundwater protection is the Approval Holder's approach in responding to sand lenses that may be discovered in the natural clay layer near the base of any landfill cell during excavation. The Approval Holder's evidence was that when a "small" sand lens is discovered, it is "dug-out and backfilled with clay," and when a "large" sand lens is discovered the landfill design requires that the compacted clay layer placed

⁴⁸ The Landfill Standards define a hydrogeologist as: "(dd) 'hydrogeologist' means a person who is registered with APEGGA [(the Association of Professional Engineers, Geologists and Geophysicists of Alberta)] with a specialization in hydrogeology." Director's submission, Tab 1, Alberta Environment's *Landfill Standards for Landfills in Alberta*, May 2004, at page 3. The Director identified Mr. Jason Pentland as his designate to review the Approval Holder's Hydrogeological Report. Mr. Pentland is registered with APEGGA as a Professional Engineer, he holds a Master's Degree in Civil Engineering, and he has extensive professional experience in the field of hydrogeology. (Director's submission, at Tab 2, Resume for Jason S. Pentland). The Board accepts this satisfies the criteria set out in the Landfill Standards. In response to the Appellant's concern that Mr. Pentland is not specifically registered as a hydrogeologist with APEGGA, the Board agrees with the Approval Holder and the Director that APEGGA regulates the practice of engineering, geology, and geophysics, but does not certify specialists, such as hydrogeologists, within these professions.

⁴⁹ The Landfill Standard requires in section 2.1(c) at least "...a 10 metre thick layer of clay deposit having equivalent vertical hydraulic conductivity less than 10^{-8} metres/second beneath all waste deposited below the original grade...."

over top of it “is increased from one metre to 1.6 metres.” With respect, the issue is not the size of the sand lens, but whether it is hydraulically connected to other layers, thereby removing the assurances that are tied to the expectation of having a 10 to 29 metre layer of natural clay underneath the composite liner.

[118] The Director advised the Board the thicker clay lining provides adequate protection because the sand lenses at the site are not connected and therefore do not provide for a continuous pathway for leachate to migrate beyond the landfill boundaries. However, the Director could not provide the Board with complete assurance the sand lenses on this site are not connected.⁵⁰

[119] The Approval Holder stated that it has a “relatively good understanding of sand lenses within this particular area” based on cross sections developed from the borehole data illustrating the distribution of the sands.⁵¹ The Approval Holder advised that, to date, the excavation of the first landfill cell has encountered sand lenses in the upper two to three metres but not at the base elevation where they may pose a problem. While the Board appreciates this is a very complex and site-specific matter, following its questions to the Approval Holder the Board was left with some uncertainty regarding how large sand lenses near the base of the landfill cells are to be dealt with during construction.

[120] The Board accepts the thickening of the compacted clay liner and the design of the composite lining system as a whole exceeds the minimum requirements. However, large-scale sand lenses that might be hydraulically connected are the antithesis of the security provided by the assurance the site has 10 to 29 metres of clay underlying the composite layer. The Board recognizes the construction of such a landfill, by its very nature, requires the exercise of professional judgment. However, to maintain the level of assurance upon which this Approval is based, the Board believes that a more detailed consideration of this issue is appropriate. Therefore, the Board will recommend that the Approval be amended to require the Approval Holder to develop and submit for the Director’s approval, a Best Practices Protocol for use when a sand lens is encountered at the base of the landfill cells during construction to ensure the

⁵⁰ See: Hearing Transcript, at pages 17 to 18, lines 19 to 8.

⁵¹ See: Hearing Transcript, at page 41, lines 9 to 16.

integrity of the groundwater protection measures are maintained. The protocol should include an implementation provision, but the requirements of the protocol should only be applied to construction that takes place after the protocol is implemented. Until the protocol is implemented, the Board will recommend that the Approval be amended to require the Approval Holder to document any decisions it takes regarding sand lenses encountered at the base of any of the cells during construction.

[121] The second concern the Board has regarding groundwater protection is maintaining the integrity of the liners. If the compacted clay liner is exposed to the elements after it is constructed, there is a risk it may desiccate and crack. The Approval Holder advised that the HDPE liner would protect the compacted clay liner from desiccation provided this impermeable liner is put in place soon after the compacted clay liner is constructed. The Board, with the Director's concurrence, recommends the Approval be amended to ensure that construction of the composite liner is carried out in such a manner so as to protect the integrity of the compacted clay liner from desiccation.⁵² The Board believes, given the potential significant harm that could result if desiccation of the clay liner was to occur, this addition simply codifies the Approval Holder's intentions, so the addition of this requirement is reasonable.

[122] Similarly, if the HDPE liner is exposed to sunlight for a length of time, ultraviolet rays may harm the liner's integrity. The evidence of the Approval Holder was that this was more of concern with a polyvinylchloride (PVC) liner than with a HDPE. According to the Approval Holder, for ultraviolet light to damage a HDPE liner, the liner would have to be exposed to sunlight for a long time, possibly years. The Board believes this potential harm would occur only if the Approval Holder decided to cease operation for an extended period. To avoid this risk, the Board also recommends the Approval be amended to ensure the protection of the HDPE liner from ultraviolet light and to ensure its continued effectiveness. The Board believes, given the potential significance of the harm that could occur if the HDPE liner is damaged due to lengthy exposure to ultraviolet light and that this requirement will not impact the Approval Holder if it operates as intended, the addition of this requirement is reasonable.

⁵² See: Hearing Transcript, at page 9, lines 13 to 19.

6. Wildlife and Wildlife Crossings

[123] The Board accepts the Appellant's evidence that wildlife commonly crosses the Facility site. The Board notes the Approval Holder also agreed with the Appellant that there is evidence of wildlife use on the site.⁵³ The Board acknowledges that the Facility and the fence surrounding it are barriers to wildlife movement. However, the relevant issue for the Board is the importance of the location to wildlife. Based on the evidence before us, the Board does not believe the site is part of a wildlife corridor such that it will impair the movement of wildlife and have a significant negative impact on wildlife in the region.

[124] The Facility has a comparatively minimal footprint of one quarter section that was previously disturbed from agriculture and oil and gas activity. There are alternate places which provide an equally-suitable crossing. Wildlife will adjust just as they would if the site were cleared for agricultural activity. Wildlife impacts must be viewed in a regional context. The Board agrees with the Approval Holder's evidence, as confirmed by the Director through Alberta Sustainable Resource Development, the site is not a significant wildlife crossing in that it is not unique within the region and there are several other suitable corridors in the area available for wildlife movement. For these reasons, the Board concludes the impact on wildlife is not sufficient reason to amend or deny the Approval.

[125] The Board recognizes the Appellant's primary concern with the Facility's impact on wildlife crossing is that he believes bears will be more likely to linger on his land, and this will cause an increase in his loss of livestock to bears. Alberta's *Wildlife Regulations* provide a compensation program for livestock lost to predation. The Board regrets the Appellant has chosen not to apply for compensation through this program when he has lost cattle to predators in the past. The Board cannot accept the Appellant's argument that the program is not helpful when he admits that he has never tried it in the past when he had an opportunity to do so. Every compensation program must have some requirements for providing credible evidence of loss and, with respect, the Appellant's concerns with the program appear to the Board to be anecdotal.

⁵³ See: Hearing Transcript, at page 47, lines 4 to 11.

The Board encourages the Appellant to consider using the program in the event he experiences livestock losses due to predation in the future.

[126] The Board notes there was some discussion about how the Approval Holder should respond to complaints about livestock losses due to predation. The Board does not believe that it would be appropriate to use the complaint process provided for in the Approval Holder's Environmental Management System to address concerns such as this, when there is an established compensation program in place. In the Board's view, it would be appropriate for the Approval Holder to respond to such complaints by referring the party to the provincial compensation program. This is not to say that the Approval Holder's Environmental Management System should not be used to address livestock losses that are the result of some other factors related to the Facility.

7. Health

[127] The Board respects the Appellant's concern for the health of his wife and his family. In particular, the Board recognizes that the Appellant's wife has significant allergies, and therefore, she is particularly sensitive to airborne contaminants. However, there is no evidence before the Board that the operation of the Facility will cause air quality problems that will pose a health risk to the Appellant, his wife, or his family.

[128] The Board is satisfied the site selection for and design of this Facility exceed the Landfill Standards that are designed to protect the environment and public safety. The environmental impacts of Class II Landfills are well understood, and there is no acceptance of hazardous waste or processing of waste taking place at this Facility. Furthermore, while the Board has found there is minimal risk to the Appellant's groundwater, the Appellant has the option of being included in the Approval Holder's groundwater monitoring program for added peace of mind.

[129] The Board acknowledges the construction period may have been difficult for the Appellant's wife. The Approval Holder has acknowledged the burning of brush, created smoke that that the Appellant reports had effects on his wife. However, the Approval Holder stated it was not aware of the specific health concerns of this resident at the time this took place. The

Approval Holder is now aware of these circumstances, and the Board expects that such an occurrence will not happen again.

8. Noise

[130] The Board accepts the Approval Holder's evidence the Facility should not have a negative noise impact on the Appellant's residence. The Approval Holder's assessment of the noise impact is based on there being no continuous operation of equipment on the site, the only on-site equipment is one front-end loader, and 90 percent of the estimated 20 trucks arriving at the Facility each day will approach from the west and, therefore, not pass by the Appellant's residence. The Board expects the existing traffic on Highway 659 will have more of an impact on the Appellant's residence with respect to noise than the normal activities proposed by the Approval Holder.

[131] The noise assessment is based on the Facility operating only during the daytime period when noise is masked by other activities and is unlikely to affect normal sleep. The Approval Holder's evidence is the Facility is expected to accept deliveries a maximum of 12 hours per day, from 7:00 a.m. to 7:00 p.m., with approximately an additional half hour required to close the Facility at the end of the day, the exception being in cases of an emergency.⁵⁴ The importance of maintaining daytime operations to noise management was emphasized by the Approval Holder in its conclusion that noise should not have a negative impact on the Appellant, stating, "This is because we have a daytime operation only, which should significantly reduce the possibility of any annoyance."⁵⁵ Given this evidence, the Board is of the view that if there is going to be any change in the operating hours, on a regular basis (i.e. not with respect to emergencies), it would be appropriate for the Director to oversee any such change. As a result, the Board will recommend a condition that requires the written permission of the Director to change the normal hours of operation.

[132] At the Hearing, the Approval Holder also identified a number of practical suggestions, including decreasing the sound of the back-up beeper on the loader or replacing the

⁵⁴ See: Hearing Transcript, at page 54, lines 16 to 29.

⁵⁵ Hearing Transcript, at page 48 to 49, lines 27 to 3.

beeper with flashing lights, and ensuring lights are directed and shaded to minimize direct light shining on neighbouring yards, that may be undertaken in response to complaints. The Board appreciates these suggestions and encourages the Approval Holder to take them into account when making lighting and noise control decisions. The Board also encourages the Appellant to make use of the Approval Holder's Environmental Management System complaint protocol to bring noise and lighting concerns to the attention of the Approval Holder.

9. Monitoring Requirements

[133] The Board accepts that the groundwater monitoring program set out in condition 4.4 of the Approval are adequate to ensure the Facility is working as expected. In response to the Appellant's general concern that self-monitoring is open to tampering, the Board recognizes the norm for monitoring in Alberta is self-monitoring and self-reporting. Moreover, there is no evidence before the Board to suggest the Approval Holder will not act in accordance with the monitoring requirements.

[134] To allay the Appellant's concern over reliance on self-monitoring programs, the Board believes it is important for the Appellant to understand the self-monitoring program is backed up by a strong compliance enforcement program. Alberta Environment's compliance enforcement program includes unannounced inspections. Tampering with monitoring results is an extremely serious offence and, in such instances, the Board would expect the Director to prosecute the matter to the fullest extent of the law.

[135] The Approval Holder advised the Board it has made an open offer to conduct base line monitoring of the Appellant's groundwater and the groundwater of other neighbours, including the CLFN, followed by on-going monitoring each spring and fall in conjunction with its Groundwater Monitoring Program, which is conducted by a third party consultant.⁵⁶ The Board recommends the Approval be amended to include the monitoring of the Appellant's and one representative water well of the CLFN in proximity to the Facility,⁵⁷ subject to the Approval

⁵⁶ See: Hearing Transcript, at page 37, lines 16 to 27, and at page 64, lines 13 to 24.

⁵⁷ A representative well in this case would be a downgradient CLFN water well selected in consultation with the CLFN.

Holder receiving the consent of the landowners. The monitoring is to include a reporting of the results for each of the landowner's wells to the landowner. The Board strongly encourages the Appellant, as well as other directly affected parties, to accept the Approval Holder's offer.

[136] In addition, the Board recommends the Approval be amended to require the Approval Holder to provide an annual summary of the results of its groundwater monitoring program not only to the Director, but also to the Appellant and the CLFN.⁵⁸ The Board expects that as part of the Approval Holder's efforts to be a good neighbour, the Approval Holder will meet with any interested landowners to discuss the results of the groundwater monitoring program, if requested to do so

[137] The Board also encourages the Appellant to make use of the Approval Holder's Environmental Management System complaint protocol if the Appellant has any concerns about his domestic water supply. Given the serious nature of these concerns, the Board recommends the Approval be amended to require the Approval Holder to notify the Director and provide a copy of any complaint regarding alleged interference with a domestic water supply within 5 days of receiving the complaint, and provide, within the time specified by the Director, a written plan for investigating and resolving the complaint with such a plan to be carried out to the satisfaction of the Director. This requirement is consistent with other authorizations issued by Alberta Environment.⁵⁹

[138] In addition to the specific monitoring requirements included in the Approval, the Approval also requires in condition 4.2.22 that once every three years, an environmental compliance audit be conducted by an independent third party. The Board believes the primary purpose of such a third party audit is to provide assurance to the general public that the terms and conditions of the Approval are being met. Therefore, and solely for the purpose of enhancing the Appellant's trust in the third party audit in this case, the Board believes it is important to enhance the third party audit procedure provided for in the Approval. Accordingly, the Board

⁵⁸ The Board notes the Approval Holder is willing to commit to this recommendation. See: Hearing Transcript, at page 55 to 56, lines 11 to 39.

⁵⁹ See: *Mountain View Regional Water Services Commission et al. v. Director, Central Region, Regional Services, Alberta Environment re: Capstone Energy* (26 April 2004), Appeal Nos. 03-116 and 03-118-121-R (A.E.A.B.).

recommends that the requirement for a third party audit to assess compliance with the terms and conditions of the Approval as set out in condition 4.2.22 be amended to require the Approval Holder to submit the qualifications of its choice of third party auditor to the Director for approval prior to the conduct of the audit. In the Board's view, the addition of this requirement will provide the public with additional confidence in the audit.

E. Issues Outside the Board's Jurisdiction

[139] Two issues raised by the Appellant, road safety and land values, are not within the Board's jurisdiction. Road safety is within the jurisdiction of Alberta Infrastructure and Transportation. Even if the Board did find there was an issue with road safety not related to the environment, the Board does not have any authority to make recommendations to the Minister responsible. The Board cannot consider land values, as land valuation is not within the Board's jurisdiction, and the Board does not award compensation to parties for loss of land value. For these reasons, the Board declined to include these matters in the Hearing issues even though the Board acknowledges these are valid and important concerns to the Appellant. Pursuant to section 95(4) of EPEA, which gives the Board authority to limit the representations that may be made on a matter, the Board advised the Parties that the Board would not hear representations on land values or road safety.⁶⁰

[140] The Board notes the Appellant submitted a copy of the Board's Report and Recommendations written for an appeal that involved the Beaver Regional Waste Management Services Commission.⁶¹ The Appellant's intent in submitting the Beaver Regional Report was to demonstrate the concerns financial institutions have with properties adjacent to landfills due to the potential for contamination. The Board reviewed the Beaver Regional Report, and it is important for the Appellant to realize the construction of the landfill allowed under the current Approval is significantly different than the landfill allowed in the Beaver Regional Report. The Board does not question the matter of land values is an issue when dealing with financial

⁶⁰ Section 95(4) of EPEA states: "Where the Board determines that a matter will not be included in the hearing of an appeal, no representations may be made on that matter at the hearing."

⁶¹ See: *Mizera et al. v. Director, Northeast Boreal and Parkland Regions #2, Alberta Environmental Protection* re: *Beaver Regional Waste Management Services Commission* (13 July 1999), Appeal Nos. 98-231-98-

institutions, but changes in land values as a result of economic development is not within the Board's jurisdiction. What may be necessary is to provide financial institutions with information on what has been done at the Facility to reduce the possibility of contamination, and the Board is confident the Approval Holder will provide this type of information should the Appellant encounter difficulties with the financial institutions as a result of the Facility being built.

[141] The Board also declines to consider the Appellant's arguments regarding a violation of his "Charter Rights" and whether there is some federal jurisdiction over the Approval. The Board acknowledges the Appellant was not represented by legal counsel, and for that reason, the Board accorded the Appellant some latitude in the presentation of evidence and argument. However, no substantive legal arguments were presented to advance either of these matters. More importantly for the Board's disposition of these issues, neither of the issues was identified in the Notice of Appeal or included in the Hearing issues.

[142] In addition, in evidence given on behalf of the Appellant, Mr. Grandbois raised aboriginal issues that were not properly before the Board. Mr. Grandbois and the CLFN were not appellants, nor were they intervenors in this matter. The CLFN filed a Statement of Concern with the Director, received a notice from the Director regarding the issuance of the Approval and about the appeal process, and with the advice of legal counsel made a decision not to appeal the Approval.⁶² The role of Mr. Grandbois at this Hearing was to provide evidence in support of the Appellant. The Board has taken his submissions in this regard into account and appreciates the CLFN efforts, as neighbours of the Appellant, to share their environmental concerns with the Board. However, the Board cannot deal with the type of concerns raised by Mr. Grandbois in the Hearing of this appeal. The sole course of action available to the Board in this context is to state its view that these concerns belong in a different forum.

233-R (A.E.A.B.) ("Beaver Regional Report").

⁶² See: Exhibit No. 6: Letter dated February 25, 2005 from Garry Appelt, Witten LLP, to Dave Engel, CCS Inc. Submitted by CCS Inc.

V. CONCLUSIONS

[143] The Board concludes that, based on the geological characteristics of the proposed site, the state-of-the-art design of the Facility, a good construction quality assurance program, and the value to environmental protection provided by a sound oilfield waste disposal service, the Facility is environmentally acceptable and the Approval, in general, should be confirmed. In response to the evidence provided at the Hearing, the Board is recommending a number of amendments to the Approval, many of which the Approval Holder and the Director have agreed to, that the Board believes will make the Approval better. These amendments provide for further mitigation of the potential adverse effects of the Facility, including effects of the Facility that are of particular concern to the Appellant.

1. Air Quality

[144] The Board accepts that the operation of the Facility will not pose a risk to the Appellant's air quality because of the type of waste that will be accepted. Condition 4.2.7 of the Approval specifically prohibits the disposal of hazardous and domestic or municipal waste, the types of waste most commonly associated with odours.⁶³ As discussed, condition 4.2.7 would be strengthened by deleting the words "...unless otherwise authorized in writing by the Director...", which was suggested by the Director and accepted by the Approval Holder. The Board agrees. Accordingly, the Board recommends that condition 4.2.7 of the Approval be amended by deleting the words "unless otherwise authorized in writing by the Director." This amendment creates consistency between condition 4.2.7 and condition 3.1.7 of the Approval, which requires the Approval Holder to apply for an amendment to the Approval before proceeding with certain activities, including accepting incompatible wastes.⁶⁴

⁶³ Condition 4.2.7 of the Approval provides:

"The approval holder shall not dispose of any of the following material into the landfill, unless otherwise authorized in writing by the Director:

- (a) any hazardous waste ...; or
- (h) domestic or municipal waste."

⁶⁴ Condition 3.1.7 of the Approval provides:

"The approval holder shall submit to the Director an application to amend this approval prior to proceeding with any of the following activities:

[145] The Board also accepts the Approval Holder's reliance on its Environmental Management System to respond to odour and noise complaints and any other landowner concerns. The Board believes the Approval Holder will be proactive in responding to any landowner complaints and suggests the Approval Holder provide the Appellant with a copy of the Environmental Management System to ensure the Appellant is fully aware of the Approval Holder's process for responding to complaints.

[146] As the Board has discussed, concerns were raised about air quality impacts because of "slash burning," with suggestions by the Appellant that this may have contravened condition 4.1.3(b) of the Approval.⁶⁵ The Board makes no findings on this suggestion other than to bring this condition to the attention of the Approval Holder.

2. Water Quality

[147] The Board accepts the evidence that the Approval complies with the requirements of Alberta Environment's Landfill Standards, including natural environmental separation and the requirements for a site hydrogeological investigation. Therefore, the Board makes no recommendations regarding water quality generally.

3. Surface Water Run-off

[148] The Board is satisfied that the design of the stormwater collection pond and the run-off controls to be used by the Approval Holder are adequate to protect surface water. The Board also has no concerns with the Approval Holder's plan for the controlled release of water from the stormwater collection pond, other than to encourage the Approval Holder to work toward minimizing any potential negative impacts and to notify the neighbours if a release might impact them.

-
- (a) an expansion of the landfill beyond the that authorized in the approval;
 - (b) acceptance of incompatible bases; or
 - (c) construction, operation or reclamation of pits, excavations, land treatment facilities and/or storage sites."

⁶⁵ Condition 4.1.3(b) of the Approval provides: "Except as provided for by the Director in writing, the approval holder shall not release fugitive emissions that causes or may cause any of the following: ... (b) material discomfort, harm or adversely affect the well being or health of a person"

[149] The Board accepts that the pre-release monitoring of surface water, as set out in the Approval, is adequate to protect regional water bodies. The Board does not believe it is necessary to require the Approval Holder to meet with the Appellant to explain the monitoring results, but the Board is confident the Approval Holder will offer to do so, given the Approval Holder's commitment to being a good neighbour.

[150] The Board encourages the Approval Holder to revegetate the southeast corner of the Facility to expand and maximize the tree buffer zone in order to provide added natural protection with respect to the surface water flow. The Board also encourages the Approval Holder to look at potential alternatives to the direct release of the water from the stormwater collection ponds into the environment.

[151] With respect to the release of water onto CLFN lands during construction, the Board understands the Approval Holder has met with and apologized to the CLFN Chief and Council for the incident. In response to the concerns of the CLFN, the Approval Holder, with the agreement of the Director, has relocated the stormwater collection pond and expanded the size of the pond from 10,500 m³ to 18,000 m³, which is considerably in excess of what would be required to contain a 1-in-100 year storm event (approximately 12,000 m³). The Approval Holder has also advised the Board that a permanent berm will be added to further prevent water from flowing directly onto CLFN lands. The Board is satisfied with the response by the Approval Holder to these concerns.

4. Drainage

[152] The Board is satisfied the design of the leachate collection system and the relocated stormwater collection pond will adequately deal with the issue of drainage on the site. However, as discussed, the Board is concerned with condition 4.2.14(a) of the Approval, which allows for the disposal of the leachate through recirculation.⁶⁶ The Approval Holder advised the

⁶⁶ Condition 4.2.14(a) of the Approval provides: "The approval holder shall dispose of leachate removed

Board that its intention is to promote the evaporation of leachate and reduce the amount of leachate that is trucked from the Facility and disposed of through deep well injection.

[153] The Board's concern is that Approval condition 4.2.7(e) prohibits disposal of waste containing free liquids.⁶⁷ This necessary condition is not consistent with allowing liquid leachate to reenter the landfill, even if it occurs inadvertently as a result of the proposed evaporation process. The Director confirmed to the Board that recirculation as a method of disposing of leachate is not appropriate for this Facility and is not the Approval Holder's intent. Therefore, the Board will recommend that condition 4.2.14(a) of the Approval be amended by deleting the option to recirculate leachate and replacing this option with permission to use evaporation, subject to the Approval Holder submitting to the Director for approval a plan for the use of evaporation that does not conflict with the other requirements of the Approval, notably condition 4.2.7(e). While the Board does not believe there are air quality issues associated with the use of evaporation to dispose of leachate, the plan should also discuss, with reference to scientific evidence, the potential for air quality concerns with the use of evaporation.

[154] The Approval Holder also stated it may want to move to a more advanced filtration based treatment of leachate, such as reverse osmosis, as the technology develops. The Board believes there is insufficient evidence regarding such new technologies to recommend approval at this time. Approval for the use of new leachate disposal methods is appropriate only once the Approval Holder is able to fully support the use of these methods with scientific evidence.

5. Groundwater

[155] The Board accepts the conclusions of the Hydrogeological Report that the site meets or exceeds Alberta Environment's Landfill Standards and is a good location for the Facility. An important reason why this site is suitable for a landfill is the existence of 10 to 29 metres of clay above the first major sand unit in the geology of the site, which acts as a natural

from the landfill leachate collection systems as follows: (a) recirculated through the cells until the cell is closed and capped"

⁶⁷ Condition 4.2.7(e) provides: "The approval holder shall not dispose of any of the following material into the landfill, unless otherwise authorized in writing by the Director: ... (e) waste containing free liquids"

barrier to the movement of contaminants. The Board also accepts the design features to protect groundwater, including a composite liner system and a leachate collection and removal system, exceeds the Landfill Standards and are, therefore, adequate to protect groundwater. However, these conclusions are subject to two concerns.

[156] The first concern that the Board has regarding groundwater protection is the Approval Holder's approach in responding to sand lenses that are discovered near the base of the landfill cells during construction. To maintain the level of assurance upon which this Approval is based, the Board believes a more detailed consideration of this issue is appropriate. Therefore, the Board will recommend that the Approval be amended to require the Approval Holder to develop and submit for the Director's approval, a Best Practices Protocol for use when a sand lens is encountered near the base of the landfill cells during construction. The purpose of the Best Practices Protocol is to ensure that the integrity of the natural clay layer that is found under the site is maintained. As a result, the protocol should include the testing requirements and criteria for assessing whether a sand lens is continuous or discontinuous and the quality assurance procedures to be followed if a sand lens is determined to be continuous. The protocol should include an implementation provision, but the requirements of the protocol should only be applied to construction that takes place after the protocol is implemented. Until the protocol is implemented, the Board will recommend that the Approval be amended to require that the Approval Holder document any decisions it takes regarding sand lenses encountered at the base of any of the landfill cells during construction.

[157] The second concern the Board has regarding groundwater protection is maintaining the integrity of the components of the composite liner. If the compacted clay liner is exposed to the elements after it is constructed, there is a risk it may desiccate and crack. To ensure that this is not a concern, the Board will recommend that the Approval be amended to ensure that construction of the composite liner is carried out in such a manner so as to protect the integrity of the compacted clay liner from desiccation. Similarly, if the HDPE liner is exposed to sunlight for a length of time, ultraviolet rays may harm its integrity. The Board believes this potential harm would occur only if the Approval Holder decided to cease operation for an extended period. To avoid the risk of the HDPE liner being degraded, the Board will also

recommend that the Approval be amended to ensure that the HDPE liner is protected from exposure to ultraviolet light for an extended period of time in order to ensure its continued effectiveness.

6. Wildlife and Wildlife Crossings

[158] Based on the evidence before us, the Board does not believe the Facility is part of a wildlife corridor such that it will impair the movement of wildlife and have a significant negative impact on wildlife in the region. Therefore, the Board will not be making any recommendations with respect to wildlife.

7. Health

[159] The Board respects the Appellant's concern for the health of his wife and his family. However, there is no evidence before the Board that the operation of the Facility will have environmental impacts that pose a health risk to the Appellant, his wife, or his family. Therefore, the Board will not be making any recommendations with respect to the issue of health.

8. Noise

[160] The evidence before the Board is that the Facility should not have a negative noise impact on the Appellant at his residence. The importance of daytime operations to noise management was emphasized by the Approval Holder in its evidence. Therefore, the Board is of the view that if there is going to be any change in the operating hours, on a regular basis (i.e. not with respect to emergencies), it would be appropriate for the Director to oversee such a change. As a result, the Board will recommend a condition be added to the Approval that requires the written permission of the Director to change the normal hours of operation.

[161] The Approval Holder also identified a number of practical suggestions, including decreasing the sound of the back-up beeper on the loader or replacing the beeper with flashing lights, and ensuring that lights are directed and shaded to minimize direct light shining on neighboring yards, that may be undertaken in response to complaints. The Board appreciates

these suggestions and encourages the Approval Holder to take them into account when making lighting and noise reduction decisions.

9. Monitoring Requirements

[162] The Board accepts that the groundwater monitoring program set out in section 4.4 of the Approval is adequate to ensure the Facility is working as expected.⁶⁸ However, the Board notes the Approval Holder has offered to conduct base line monitoring of the Appellant's groundwater and the groundwater of other neighbours, including the CLFN, followed by on-going monitoring each spring and fall in conjunction with its own Groundwater Monitoring Program, which is conducted by a third party consultant. In keeping with this offer, the Board will recommend that the Approval be amended to include the monitoring of the Appellant's water well and one representative water well in proximity to the Facility on CLFN lands, subject to the Approval Holder receiving the consent of the respective landowners. The monitoring is to include a reporting of the results to the landowner. The Board strongly encourages the Appellant and the CLFN to accept the Approval Holder's offer.

[163] In addition, the Board will also recommend the Approval be amended to require the Approval Holder to provide an annual summary of the results of its Groundwater Monitoring Program not only to the Director, but to the Appellant and the CLFN as well. The Board expects that as part of the Approval Holder's efforts to be a good neighbour, the Approval Holder will meet with any interested landowners to discuss the results of the groundwater monitoring program, if requested to do so.

[164] If the Appellant has any concerns about his domestic water supply, the Board encourages the Appellant to make use of the Approval Holder's Environmental Management System complaint process. However, given the potentially serious nature of these concerns, the Board will recommend that the Approval be amended to require the Approval Holder to notify the Director and provide a copy of any complaint regarding alleged interference with a domestic water supply within 5 days of receiving the complaint, and provide, within the time specified by the Director, a written plan for investigating and resolving the complaint with such a plan to be

carried out to the satisfaction of the Director. This approach is consistent with other authorizations issued by Alberta Environment.

[165] Finally, with respect to the Approval requirement for an environmental compliance audit to be conducted by an independent third party every three years detailed in condition 4.2.22, the Board will recommend that the Approval Holder be required to submit the qualifications of the third party auditor to the Director for approval prior to the audit being conducted.⁶⁹ The Board believes this additional requirement will provide additional assurance to the Appellant and the general public.

VI. RECOMMENDATIONS

A. Specific Recommendations

[166] In accordance with section 99 and 100 of the *Environmental Protection and Enhancement Act*, the Board recommends the Minister of Environment order that the Approval be confirmed subject to the following variations.⁷⁰

[167] The Board recommends that condition 4.2.7 of the Approval be amended by deleting the words “unless otherwise authorized in writing by the Director.”

[168] The Board recommends that condition 4.2.14(a) of the Approval be amended by deleting the option to recirculate leachate and replacing this option with permission to use

⁶⁸ Section 4.4 of the Approval details the management of groundwater.

⁶⁹ Condition 4.2.22 of the Approval provides: “The landfill shall be audited at least once every three years, commencing on or before January 1, 2009, by an independent third-party environmental consultant to assess compliance with the terms and conditions of the approval.”

⁷⁰ Section 99 of EPEA provides:

“(1) In the case of a notice of appeal referred to in section 91(1)(a) to (m) of this Act or in section 115(1)(a) to (i), (k), (m) to (p) and (r) of the *Water Act*, the Board shall within 30 days after the completion of the hearing of the appeal submit a report to the Minister, including its recommendations and the representations or a summary of the representations that were made to it.”

Section 100 of EPEA provides:

“(1) On receiving the report of the Board, the Minister may, by order,
(a) confirm, reverse or vary the decision appealed and make any decision that the person whose decision was appealed could make, ... and
(c) make any further order that the Minister considers necessary for the purpose of carrying out the decision.

evaporation, subject to the Approval Holder submitting to the Director for approval a plan for the use of evaporation that does not conflict with the requirements of the Approval, most notably condition 4.2.7(e), which prohibits disposal of wastes containing free liquids. While the Board does not believe there are air quality issues associated with the use of evaporation to dispose of leachate, the plan shall discuss, with reference to scientific evidence, the potential for air quality concerns with the use of evaporation.

[169] The Board recommends the Approval be amended to require the Approval Holder develop and submit for the Director's approval a Best Practices Protocol for use when a sand lens is encountered near the base of the landfill cells during construction. The protocol shall include the testing requirements and criteria for assessing whether a sand lens is continuous or discontinuous and the quality assurance procedures to be followed if a sand lens is determined to be continuous. The protocol shall include an implementation provision, and the requirements of the protocol should only be applied to construction that takes place after the protocol is implemented.

[170] The Board also recommends the Approval be amended to require that until the Best Practice Protocol for use with respect to sand lenses is implemented, the Approval Holder shall document any decisions that it makes regarding sand lenses encountered at the base of any of the landfill cells during construction. This documentation should be provided to the Director on an annual basis.

[171] The Board recommends the Approval be amended to require construction techniques and timing that protects the integrity of the compacted clay liner from desiccation.

[172] The Board recommends the Approval be amended to ensure that the HDPE liner is protected from exposure to ultraviolet light for any extended period of time, in order to protect its integrity, by requiring that the Director be notified if the Approval Holder ceases construction or operation for a period exceeding six months, and in such a case, to carry out any directions of the Director with respect to the protection of the HDPE liner.

[173] The Board recommends that if the Approval Holder wishes to change its normal operating hours, the written approval of the Director is required. This requirement should not limit the ability of the Facility to accept waste in the case of an emergency.

[174] The Board recommends the Approval be amended to include the monitoring of the Appellant's water well and one representative water well in proximity to the Facility on CLFN lands, subject to the Approval Holder receiving the consent of the respective landowners. The monitoring is to include a reporting of the results to the landowner.

[175] The Board recommends the Approval be amended to require the Approval Holder provide an annual summary of the results of its Groundwater Monitoring Program to the Appellant and the CLFN.

[176] The Board recommends the Approval be amended to require the Approval Holder notify the Director and provide a copy of any complaint regarding alleged interference with a domestic water supply within 5 days of receiving the complaint, and provide, within the time specified by the Director, a written plan for investigating and resolving the complaint with such a plan to be carried out to the satisfaction of the Director.

[177] The Board recommends the requirement for a third party audit to assess compliance with the Approval as set out in condition 4.2.22 be amended to require the Approval Holder submit the qualifications of its choice of third party auditor to the Director for approval prior to the audit being conducted.

B. General Recommendations

[178] The Board encourages the Approval Holder to provide the Appellant with a copy of its Environmental Management System to ensure the Appellant is fully aware of the Approval Holder's process for responding to complaints.

[179] With respect to the release of water from the stormwater collection pond, the Board encourages the Approval Holder to work to minimize any potential negative impacts on its neighbours and to notify any neighbours when a planned release may impact them. The Board also encourages the Approval Holder to revegetate the southeast corner of the Facility to provide

added natural protection with respect to surface water flow. The Board also encourages the Approval Holder to look at potential alternatives to the direct release of water from the stormwater collection pond into the environment.

[180] The Board encourages the Approval Holder to take into account any practical solutions in developing its operation with respect to reducing the impacts of noise.

[181] The Board strongly encourages the Appellant and the CLFN to accept the Approval Holder's offer to include a well in the Groundwater Monitoring Program.

C. Final Matters

[182] Attached for the Minister's consideration is a draft Ministerial Order implementing these recommendations.

[183] Further, with respect to section 100(2) and 103 of EPEA, the Board recommends that copies of this Report and Recommendations, and of any decision by the Minister, be sent to the following:

- Mr. Ted Ganske;
- Ms. Sally Ulfsten;
- Mr. Shawn Munro, Bennett Jones, representing CCS Inc.;
- Mr. Darin Stepaniuk, Alberta Justice, representing Mr. Park Powell, Director, Northern Region, Regional Services, Alberta Environment;
- Mr. Garry Appelt, Witten LLP, representing the Cold Lake First Nation; and
- Mr. Brian Grandbois, Councilor, Cold Lake First Nation.

VII. COSTS

[184] Before the close of the Hearing, the Appellant, the Approval Holder, and the Director each declined to reserve the right to apply for costs. Therefore, no costs shall be awarded in this appeal.

Dated on September 9, 2005, at Edmonton, Alberta.

“original signed by”

Dr. Steve E. Hruddy
Chair

“original signed by”

Mr. Jim Barlishen
Board Member

VIII. DRAFT ORDER

**Ministerial Order
/2005**

Environmental Protection and Enhancement Act
R.S.A. 2000, c. E-12

**Order Respecting Environmental Appeals Board
Appeal No. 04-090**

I, Guy Boutilier, Minister of Environment, pursuant to section 100 of the *Environmental Protection and Enhancement Act*, make the order in the attached Appendix, being an Order Respecting Environmental Appeals Board Appeal No. 04-090.

Dated at the City of Edmonton, in the Province of Alberta, this _____ day of _____, 2005.

Guy Boutilier
Minister

Draft Appendix

Order Respecting Environmental Appeals Board Appeal No. 04-090

With respect to the decision of the Director, Northern Region, Regional Services, Alberta Environment (the “Director”), to issue Approval No. 204916-00-00 (the “Approval”), under the *Environmental Protection and Enhancement Act*, R.S.A. 2000, c. E-12, to CCS Inc., I, Guy Boutilier, Minister of Environment order that:

1. The decision of the Director to issue the Approval is confirmed subject to the following variations.
2. Condition 4.2.7 of the Approval is amended by deleting the phrase “, unless otherwise authorized in writing by the Director”.
3. Condition 4.2.14 of the Approval is amended by deleting the phrase:
“(a) recirculated through the cell until the cell is closed and capped;”
and replacing it with the phrase:
“(a) subject to receiving the written approval of the Director pursuant to 4.2.14.1, spraying leachate over the surface of the active portion of the landfill for the purpose of evaporation;”
4. The Approval is amended by adding the following conditions immediately after condition 4.2.14:
“4.2.14.1 (a) Prior to disposing of any leachate pursuant to 4.2.14(a), the approval holder shall submit to the Director for approval, a plan for the use of evaporation to dispose of leachate that does not conflict with the other conditions of this Approval, including but not limited to the prohibition against the disposal of waste containing free liquids as specified in 4.2.7(e).
(b) The plan submitted in accordance with 4.2.14.1(a) shall include a discussion, with references to scientific evidence, of the potential for air quality concerns with the use of evaporation for the disposal of leachate.”
5. The Approval is amended by adding the following conditions immediately after condition 3.1.7:
“3.1.8 (a) The approval holder shall prepare a report (the Best Practices Protocol Report) to the satisfaction of the Director, detailing a Best Practices Protocol for use when a sand lens is encountered at the base of a cell during construction, and shall provide this report to the Director for the Director’s review and approval.
(b) The approval holder shall submit the Best Practices Protocol Report to the Director within 90 days of the Minister’s order in E.A.B.

Appeal No. 04-090, or by such other time as specified by the Director in writing.

(c) The Best Practices Protocol shall include the testing requirements and criteria for assessing whether a sand lens is continuous or discontinuous, and the quality assurance procedures to be followed if a sand lens is determined to be continuous such that the integrity of the natural clay layer found under the landfill is maintained, and such other requirements as specified by the Director in writing.

(d) The Best Practices Protocol shall include an implementation provision and the requirements of the Best Practices Protocol shall be applied to the construction of all cells following the implementation of the protocol.

(e) Until the Best Practices Protocol is implemented, the approval holder shall document all decisions made with respect to any sand lens encountered at the base of any of the cells during construction and a copy of this information shall be provided to the Director on or before March 31 of the year following the year in which the information was collected, unless otherwise authorized by the Director in writing.

- 3.1.9 The approval holder shall use construction techniques and timing that protects the CCL from desiccation.
- 3.1.10 The approval holder shall notify the Director if it ceases construction or operation of the landfill for a period of more than six months and, in such a case, carry out any written directions of the Director with respect to the protection of the HDPE geo-membrane liner from ultraviolet light.”
6. The Approval is amended by adding the following conditions immediately after condition 4.1.7:
- “4.1.8 (a) The approval holder is required to obtain the written authorization of the Director to change its normal operating hours.
- (b) Notwithstanding 4.1.8(a), the approval holder may receive waste outside its normal operating hours in case of an emergency situation.”
7. The Approval is amended by adding the following conditions immediately after condition 4.4.11:
- “4.4.12 The approval holder shall deliver by regular mail, a copy of the Annual Groundwater Monitoring Summary Report to the Cold Lake First Nation Council and to Mr. Ted Ganske on or before March 31 of the year following the year in which the information on which the report is based was collected, unless otherwise authorized in writing by the Director.”
- “4.4.13 (a) Within sixty days of the Minister’s order in E.A.B. Appeal 04-090, the approval holder shall make an offer to Mr. Ted Ganske to include his domestic water well in the Groundwater Monitoring Program.

(b) Within sixty days of the Minister's order in EAB Appeal 04-090, following consultation with the Cold Lake First Nation Council, the approval holder shall make an offer to the Cold Lake First Nation Council to include one representative water well in the proximity of the landfill on Cold Lake First Nation lands in the Groundwater Monitoring Program.

(c) The offers referred to in 4.1.13(a) and (b) shall be in writing, delivered by regular mail, be open for acceptance for a minimum of sixty days, and provide for a minimum of one week written notice prior to accessing the respective landowners' land to take any required samples.

(d) If Mr. Ted Ganske and/or the Cold Lake First Nation Council accept the offers, and grant the approval holder access to their respective land, the approval holder shall include the respective water wells in the Groundwater Monitoring Program.

(e) Where the approval holder includes the water wells of Mr. Ted Ganske and/or the Cold Lake First Nation, the approval holder shall provide the respective landowners with the information from the groundwater analysis of the respective well that is carried out as part of the Groundwater Monitoring Program within ten days of receiving the results.

(f) If at anytime, following the provision of one week written notice, either of the respective landowners refuses to grant the approval holder access to their land, the approval holder is no longer required to include the well of the respective landowner in the Groundwater Monitoring Program and the approval holder shall provided the Director with written proof of the refusal to grant access."

8. The Approval is amended by adding the following condition immediately after condition 2.1.8:

"2.1.9 The approval holder shall provide the Director with a copy of any complaint regarding alleged interference with a domestic water supply within 5 days of receiving the complaint, and provide, within the time specified by the Director, a written plan for investigating and resolving the complaint, and upon receiving the approval of the Director the plan shall be carried out to the satisfaction of the Director."

9. The Approval is amended by repealing condition 4.2.22 and replacing it as follows:

"4.2.22 (a) The landfill shall be audited at least once every three years, commencing on or before January 1, 2009, by an independent third-party environmental consultant to assess compliance with the terms and conditions of the approval.

(b) The approval holder shall submit the qualifications of the independent third-party environmental consultant to the Director for the Director's approval in writing, prior to the audit being undertaken."



ALBERTA ENVIRONMENT
Office of the Minister

**Ministerial Order
24/2005**

Environmental Protection and Enhancement Act
R.S.A. 2000, c. E-12

**Order Respecting Environmental Appeals Board
Appeal No. 04-090**

I, Guy Boutilier, Minister of Environment, pursuant to section 100 of the *Environmental Protection and Enhancement Act*, make the order in the attached Appendix, being an Order Respecting Environmental Appeals Board Appeal No. 04-090.

Dated at the City of Edmonton, in the Province of Alberta, this 11th day of October, 2005.

“original signed by”

Guy Boutilier
Minister

Appendix

Order Respecting Environmental Appeals Board Appeal No. 04-090

With respect to the decision of the Director, Northern Region, Regional Services, Alberta Environment (the “Director”), to issue Approval No. 204916-00-00 (the “Approval”), under the *Environmental Protection and Enhancement Act*, R.S.A. 2000, c. E-12, to CCS Inc., I, Guy Boutilier, Minister of Environment order that:

1. The decision of the Director to issue the Approval is confirmed subject to the following variations.
2. Condition 4.2.7 of the Approval is amended by deleting the phrase “, unless otherwise authorized in writing by the Director”.
3. Condition 4.2.14 of the Approval is amended by deleting the phrase:
“(a) recirculated through the cell until the cell is closed and capped;”
and replacing it with the phrase:
“(a) subject to receiving the written approval of the Director pursuant to 4.2.14.1, spraying leachate over the surface of the active portion of the landfill for the purpose of evaporation;”
4. The Approval is amended by adding the following conditions immediately after condition 4.2.14:
“4.2.14.1 (a) Prior to disposing of any leachate pursuant to 4.2.14(a), the approval holder shall submit to the Director for approval, a plan for the use of evaporation to dispose of leachate that does not conflict with the other conditions of this Approval, including but not limited to the prohibition against the disposal of waste containing free liquids as specified in 4.2.7(e).

(b) The plan submitted in accordance with 4.2.14.1(a) shall include a discussion, with references to scientific evidence, of the potential for air quality concerns with the use of evaporation for the disposal of leachate.”
5. The Approval is amended by adding the following conditions immediately after condition 3.1.7:
“3.1.8 (a) The approval holder shall prepare a report (the Best Practices Protocol Report) to the satisfaction of the Director, detailing a Best Practices Protocol for use when a sand lens is encountered at the base of a cell during construction, and shall provide this report to the Director for the Director’s review and approval.

(b) The approval holder shall submit the Best Practices Protocol Report to the Director within 90 days of the Minister's order in E.A.B. Appeal No. 04-090, or by such other time as specified by the Director in writing.

(c) The Best Practices Protocol shall include the testing requirements and criteria for assessing whether a sand lens is continuous or discontinuous, and the quality assurance procedures to be followed if a sand lens is determined to be continuous such that the integrity of the natural clay layer found under the landfill is maintained, and such other requirements as specified by the Director in writing.

(d) The Best Practices Protocol shall include an implementation provision and the requirements of the Best Practices Protocol shall be applied to the construction of all cells following the implementation of the protocol.

(e) Until the Best Practices Protocol is implemented, the approval holder shall document all decisions made with respect to any sand lens encountered at the base of any of the cells during construction and a copy of this information shall be provided to the Director on or before March 31 of the year following the year in which the information was collected, unless otherwise authorized by the Director in writing.

3.1.9 The approval holder shall use construction techniques and timing that protects the CCL from desiccation.

3.1.10 The approval holder shall notify the Director if it ceases construction or operation of the landfill for a period of more than six months and, in such a case, carry out any written directions of the Director with respect to the protection of the HDPE geo-membrane liner from ultraviolet light.”

6. The Approval is amended by adding the following conditions immediately after condition 4.1.7:

“4.1.8 (a) The approval holder is required to obtain the written authorization of the Director to change its normal operating hours.

(b) Notwithstanding 4.1.8(a), the approval holder may receive waste outside its normal operating hours in case of an emergency situation.”

7. The Approval is amended by adding the following conditions immediately after condition 4.4.11:

“4.4.12 The approval holder shall deliver by regular mail, a copy of the Annual Groundwater Monitoring Summary Report to the Cold Lake First Nation Council and to Mr. Ted Ganske on or before March 31 of the year following the year in which the information on which the report is based was collected, unless otherwise authorized in writing by the Director.”

“4.4.13 (a) Within sixty days of the Minister’s order in E.A.B. Appeal 04-090, the approval holder shall make an offer to Mr. Ted Ganske to include his domestic water well in the Groundwater Monitoring Program.

(b) Within sixty days of the Minister’s order in EAB Appeal 04-090, following consultation with the Cold Lake First Nation Council, the approval holder shall make an offer to the Cold Lake First Nation Council to include one representative water well in the proximity of the landfill on Cold Lake First Nation lands in the Groundwater Monitoring Program.

(c) The offers referred to in 4.1.13(a) and (b) shall be in writing, delivered by regular mail, be open for acceptance for a minimum of sixty days, and provide for a minimum of one week written notice prior to accessing the respective landowners’ land to take any required samples.

(d) If Mr. Ted Ganske and/or the Cold Lake First Nation Council accept the offers, and grant the approval holder access to their respective land, the approval holder shall include the respective water wells in the Groundwater Monitoring Program.

(e) Where the approval holder includes the water wells of Mr. Ted Ganske and/or the Cold Lake First Nation, the approval holder shall provide the respective landowners with the information from the groundwater analysis of the respective well that is carried out as part of the Groundwater Monitoring Program within ten days of receiving the results.

(f) If at anytime, following the provision of one week written notice, either of the respective landowners refuses to grant the approval holder access to their land, the approval holder is no longer required to include the well of the respective landowner in the Groundwater Monitoring Program and the approval holder shall provided the Director with written proof of the refusal to grant access.”

8. The Approval is amended by adding the following condition immediately after condition 2.1.8:
“2.1.9 The approval holder shall provide the Director with a copy of any complaint regarding alleged interference with a domestic water supply within 5 days of receiving the complaint, and provide, within the time specified by the Director, a written plan for investigating and resolving the complaint, and upon receiving the approval of the Director the plan shall be carried out to the satisfaction of the Director.”
9. The Approval is amended by repealing condition 4.2.22 and replacing it as follows:
“4.2.22 (a) The landfill shall be audited at least once every three years, commencing on or before January 1, 2009, by an independent third-party environmental consultant to assess compliance with the terms and conditions of the approval.

(b) The approval holder shall submit the qualifications of the independent third-party environmental consultant to the Director for the Director’s approval in writing, prior to the audit being undertaken.”