

ALBERTA ENVIRONMENTAL APPEAL BOARD

Decision

Date of Hearing: July 24 and 25, 2002

Date of Final Written Submissions: August 9, 2002

Date of Decision: August 31, 2002

IN THE MATTER OF sections 91, 92, 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 Ms. Linda J. Court with respect to Approval No. 150612-00-00 issued by the Director, Bow Region, Regional Services, Alberta Environment to Lafarge Canada Inc.

Cite as: *Court v. Director, Bow Region, Regional Services, Alberta Environment*, re: *Lafarge Canada Inc.* (31 August 2002), Appeal No. 01-096-D (A.E.A.B.).

EXECUTIVE SUMMARY

Alberta Environment issued an Approval to Lafarge Canada Inc. for the opening up, operation, and reclamation of a gravel pit in the Municipal District of Rocky View, Alberta. The Environmental Appeal Board received a Notice of Appeal from Ms. Linda J. Court appealing the Approval.

During the preliminary phase of this appeal, Lafarge challenged the standing of Ms. Court, arguing that she was not directly affected. The Board received submissions on this question and decided that it did not have sufficient information to determine if Ms. Court was directly affected. The Board decided that it needed to hear the substantive evidence in this appeal before it would be able to determine Ms. Court's directly affected status. The Board scheduled a hearing and in response to its public hearing notice, received 19 requests for intervenor status, including one from the Calgary Health Region.

The Board reviewed the intervenor requests and decided that the Calgary Health Region would have full party status at the hearing. The other individuals, companies, and organizations that filed intervenor requests were granted limited intervenor status and were allowed to provide written submissions only. Ten of these intervenors filed written submissions.

At the hearing of this appeal, the Board received evidence and arguments on these issues:

1. Ms. Court's directly affected status.
2. The effect that dust and other air pollutants from the Lafarge Operation may have directly on Ms. Court.
3. The effect that noise from the Lafarge Operation may have directly on Ms. Court.
4. The cumulative effects that dust, other air pollutants, and noise from the Lafarge Operation, as specifically regulated by the Approval, may have directly on Ms. Court.

Prior to considering the substantive issues in this appeal, the Board had to determine if Ms. Court was directly affected by the Approval issued to Lafarge. Based on the evidence received and the arguments of the parties, the Board determined that Ms. Court is not directly affected by the Lafarge Operation. As a result, the Board does not have the jurisdiction to consider the other issues raised in this appeal. The Board was of the opinion that Ms. Court's real concern is the impact of the other existing sand and gravel operations in the area.

HEARING BEFORE:

Dr. M. Anne Naeth, Panel Chair;
Dr. John P. Ogilvie; and
Fredrick C. Fisher, Q.C.

PARTIES:

Appellant: Ms. Linda J. Court, represented by Mr. Bradley Gilmour, Bennett Jones LLP.

Director: Ms. May Mah-Paulson, Director, Bow Region, Regional Services, Alberta Environment, represented by Ms. Charlene Graham, Alberta Justice.

Approval Holder: Lafarge Canada Inc., represented by Mr. Paul Cassidy and Ms. Janice Walton, Blake, Cassels & Graydon LLP (Vancouver).

Intervenors: Calgary Health Region, represented by Dr. Timothy Lambert.

Alberta Sand and Gravel Association; Burnco Rock Products Ltd.; Mr. Brian Evans; Mr. A.G. Soutzo; Alberta Roadbuilders and Heavy Construction Association; Ms. Joan and Mr. Gerald Marshall, represented by W. James Hope-Ross; Ms. Shirley and Mr. Rick Schmold; Ms. Kerry and Mr. Ulrike Kerrison; Mr. S. Andrews; Mr. Graham Sewell; Mr. Robert Neil; Ms. Wendy and Mr. Randy Hoflin; Ms. Pat and Mr. Dave Barron; Ms. Bev and Mr. Terry Grantham; Ms. Pat and Mr. George Hawkins; Ms. Barbara Burton; Ms. Carmen Miller; and Mr. Willis Olson.

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I. BACKGROUND

[1] On October 2, 2001, the Director, Bow Region, Regional Services, Alberta Environment (the "Director") issued Approval No. 150612-00-00 (the "Approval")¹ under the *Environmental Protection and Enhancement Act*, R.S.A. 2000, c. E-12 ("EPEA" or the "Act")² to Lafarge Canada Inc. (the "Approval Holder" or "Lafarge") authorizing the opening up, operation, and reclamation of a sand and gravel pit on N 7-22-28-W4M and NE 12-22-29-W4M (the "Lafarge Operation"), in the Municipal District of Rocky View, Alberta.

[2] On November 21, 2001, the Environmental Appeal Board (the "Board") received a Notice of Appeal from Ms. Linda J. Court (the "Appellant") appealing the Approval. The Appellant had previously filed a Statement of Concern³ with the Director and was found, for the Director's purposes, to be directly affected.⁴ The Board acknowledged the Notice of Appeal and requested a copy of the documents related to the appeal (the "Record")⁵ from the Director. The Board requested that all Parties⁶ provide available dates for a mediation meeting or a hearing.

[3] 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.

[4] Between January 8 and 22, 2002, the Board received and acknowledged receipt of letters from several persons interested in this appeal.⁷ After the mediation meeting the Board

¹ Director's Record, Tab 4.

² The *Environmental Protection and Enhancement Act*, R.S.A. 2000, c. E-12 replaced the *Environmental Protection and Enhancement Act*, S.A. 1992, c. E-13.3 on January 1, 2002.

³ Director's Record, Tab 28.

⁴ Director's Record, Tabs 24 and 25.

⁵ On December 11, 2001, the Board received a copy of the Record; on December 12, 2001, a copy was provided to the Appellant and the Approval Holder.

⁶ "Parties" in this decision refers to the Appellant, the Approval Holder, and the Director. The Calgary Health Region was added as a full party for the purposes of the hearing.

⁷ Mr. Graham Sewell, Ms. Ruth and Mr. Willis Olson, Ms. Bev and Mr. Terry Grantham, Mr. Ulrike (Ricky) Kerrison, Ms. C.L. (Kerry) Kerrison, Mr. Morley Walbaum, Ms. Wendy Hoflin, Mr. Rob Neil, Mr. Sol Andrews, Mr. John Davidson, Mr. Martin and Ms. Lillian Dyck, Mr. D.W. Barron, Mr. Pat Stier, Ms. Barbara Burton, and the Residents of Cottonwood Estates.

received letters from two other interested persons.⁸ All these interested persons were advised that should the matter proceed to a hearing, a Notice of Hearing would be published in the newspaper, and they would have an opportunity to apply to the Board for intervenor status.

[5] Pursuant to section 11 of the *Environmental Appeal Board Regulation*, A.R. 114/93 (the "Regulation"), the Board conducted a mediation meeting in Calgary, Alberta, on January 23, 2002, with Mr. Ron Peiluck, Board Member, presiding as the mediator.⁹ No resolution was reached, and the Board advised the Parties that a hearing date would be set. On January 31, 2002, the Board set a schedule to receive written submissions to determine the issues to be considered at the hearing of the appeal.¹⁰

[6] During the submission process to determine issues to be considered at the hearing of the appeal, the Board received a letter from the Approval Holder challenging the directly affected status of the Appellant.¹¹ The Board set a schedule to receive written submissions on the question of the Appellant's directly affected status. After reviewing these submissions, on March 21, 2002, the Board wrote to the Parties advising them that the Board would make its decision regarding the directly affected status of the Appellant at the substantive hearing of this appeal. The Board then proceeded to determine the issues to be considered in this appeal.

[7] On April 22, 2002, the Board released its decision regarding the issues to be heard at the hearing:¹² The issues to be considered at the hearing of the appeal were determined to be:

1. The effect that dust and other air pollutants from the Lafarge Operation may have directly on the Appellant.

⁸ Mr. Roger Shields and Ms. Carmen Miller provided letters subsequent to the mediation meeting.

⁹ Section 11 of the Regulation provides:

"Where the Board has determined the parties to the appeal, the Board may, prior to conducting the hearing of the appeal, on its own initiative or at the request of any of the parties, convene a meeting of the parties and any other interested persons the Board considers should attend, for the purpose of

(a) mediating a resolution of the subject matter of the notice of appeal, or

(b) determining any of the matters referred to in section 13."

¹⁰

Pursuant to section 95(2), (3), and (4) of EPEA, the Board is allowed to make a determination of issues prior to a hearing.

¹¹ Section 91(1)(a)(i) of EPEA states that in order to file a valid Notice of Appeal, an appellant must be directly affected.

¹²

Court v. Director, Bow Region, Regional Services, Alberta Environment, re: Lafarge Canada Inc. (22 April 2002), Appeal No. 01-096-ID (A.E.A.B.)

2. The effect that noise from the Lafarge Operation may have directly on the Appellant.
3. The cumulative effects that dust, other air pollutants, and noise from the Lafarge Operation, as specifically regulated by the Approval, may have directly on the Appellant.¹³

In its decision, the Board stated the operation of other facilities in the area were not before it and that these facilities were only relevant to the extent that they form part of the circumstances in which the Lafarge Operation is proposed to be constructed and contribute to the determination of cumulative effects as they directly affect the Appellant.¹⁴ The Board also reiterated that "... the threshold issue of the directly affected status of the Appellant remains outstanding, and this is a key preliminary issue that will be addressed at the hearing."¹⁵ The hearing was set for July 24 and 25, 2002.

[8] Notice of the hearing was published in local newspapers, and potential intervenors were requested to submit applications for intervenor status to the Board by June 14, 2002.¹⁶ The Board received 19 requests for intervenor status from Ms. Carmen E. Miller, Ms. Barbara J. Burton, Ms. Bev and Mr. Terry Grantham, Mr. Robert Neil, Mr. Sol Andrews, Mr. Graham Sewell, Ms. Wendy and Mr. Randy Hoflin, Ms. Kerry and Mr. Ulrike Kerrison, Mr. Willis Olson, Mr. D.W. Barron, and G.E. Hawkins (collectively the "Residents");¹⁷ the Calgary Health Region (the "CHR"); the Alberta Roadbuilders and Heavy Construction Association; the Alberta Sand and Gravel Association; Ms. Shirley and Mr. Rick Schmold; Ms. Joan and Mr. Gerald Marshall; Mr. Brian Evans; Mr. A.G. Soutzo; and Burnco Rock Products Ltd. ("Burnco").¹⁸

¹³ *Court v. Director, Bow Region, Regional Services, Alberta Environment, re: Lafarge Canada Inc.* (22 April 2002), Appeal No. 01-096-ID (A.E.A.B.), at paragraph 39.

¹⁴ *Court v. Director, Bow Region, Regional Services, Alberta Environment, re: Lafarge Canada Inc.* (22 April 2002), Appeal No. 01-096-ID (A.E.A.B.), at paragraph 40. The other sand and gravel operations in the area are Rolling Mix Ltd., Burnco Rock Products Ltd., and the Municipal District of Rocky View. See: Hearing Transcript, dated July 24 and 25, 2002, at page 22, lines 20 to 30.

¹⁵ *Court v. Director, Bow Region, Regional Services, Alberta Environment, re: Lafarge Canada Inc.* (22 April 2002), Appeal No. 01-096-ID (A.E.A.B.), at paragraph 41.

¹⁶ Notice of the Hearing was published in the *Calgary Herald*, the *Okotoks Western Wheel*, and the *Rocky View Times*. The notice indicated any person, other than the Parties, who wanted to make a representation to the Board was to submit their request to the Board by June 14, 2002.

¹⁷ The Board notes other parties who filed a request to intervene are also residents in the area, but this group will be referred to as the Residents for ease of distinguishing the different groups of intervenors. This group of individuals opposed the Lafarge Operation.

¹⁸ The Alberta Road Builders and Heavy Construction Association, the Alberta Sand and Gravel Association,

[9] The Board requested and reviewed submissions from the Parties regarding intervenor requests. On July 5, 2002, the Board advised the Parties and those requesting intervenor status that the Calgary Health Region had been granted full party status and that all others who requested intervenor status would be permitted to file written submissions only.¹⁹

[10] The Board received written submissions from the following intervenors: Mr. Ulrike and Ms. Kerry Kerrison;²⁰ Mr. George and Ms. Patricia Hawkins;²¹ Mr. Dave and Ms. Pat Barron;²² Ms. Barbara Burton;²³ the Alberta Roadbuilders and Heavy Construction Association

Ms. Shirley and Mr. Rick Schmold, Ms. Joan and Mr. Gerald Marshall, Mr. Brian Evans, A.G. Soutzo, and Bumco supported the Lafarge Operation.

¹⁹ Intervenor Decision: *Court v. Director, Bow Region, Regional Services, Alberta Environment, re: Lafarge Canada Inc.* (12 July 2002), Appeal No. 01-096-ID (A.E.A.B.).

²⁰ In their July 16, 2002 written submission, Mr. Ulrike and Ms. Kerry Kerrison stated: "Quite frankly, I was completely appalled and frightened by the results reported. According to these models, our air quality will be severely impacted by both the Lafarge mining operations and subsequent increase in exhaust from the gravel trucks. ... I firmly believe that my health and that of my family is at serious risk. I implore the board to revoke approval of this gravel mining operation and respectfully propose that Lafarge be required to conduct a regulated, mandatory air sampling study prior to any further discussions."

²¹ In their July 11, 2002 written submission, Mr. George and Ms. Patricia Hawkins indicated their support for the Appellant. They stated: "The proposed Lafarge site can be expected to greatly increase the existing noise levels presently being generated by the rock crushers, extraction equipment and the large volumes of truck traffic operating from the existing sites. Even without adding an additional gravel extraction plant, the noise is continuous, extreme, irritation [*sic*] and stressful during the hours of operation." They believed the dust generated by existing gravel extraction operations are "... a serious and ongoing problem, even though these operations have dust control plans in place." They indicated that, based on their experience, the Appellant "... is adversely affected by the existing noise, dust and other air pollutants from the existing gravel pits." They believed there was little doubt cumulative effects from Lafarge "...in respect to increased noise and dust pollution, will have an increased negative impact on the health and well being of the Appellant." They said it was their "...strongest belief that the Appellant and other residents in the immediate area, should reasonably expect to live in a manner where they can enjoy the peace and quiet of a rural environment, without the high level of noise and dust pollution, that will certainly increase significantly with the Lafarge operation. The effects from the existing operations are barely tolerable and the addition [of] the Lafarge site makes a very bad situation even worse."

²² In their July 15, 2002 written submission, Mr. Dave and Ms. Pat Barron stated they support the Appellant, and that through the Appellant they "...have been made aware of the health issues surrounding this project and gravel pits in general." They stated the "...presence of particulate matter is a hazard to people with heart problems." They indicated that "...several people on the 'hill' have this condition, myself included, and therefore with already high readings a new corner (Lafarge) would only exasperate this condition."

²³ In her written submission, dated June 12, 2002, and received by the Board on July 12, 2002, Ms. Barbara Burton stated: "The issues I have...are not just for myself...but also for the greater good of mankind." She was unable to say if noise would be a factor as they live 1.5 km from the proposed site. She was concerned cumulative effects of dust and other air pollutants and noise from Lafarge would "...seriously affect not just our physical well being but also our mental well-being. ... I personally have a great concern for the ecology and the environment.... These pollutants could seriously affect our food chain and water quality and ultimately affect the health of people downstream...Dust and pollutants are not airborne specific but also enter the water in a variety of ways."

and the Alberta Sand and Gravel Association;²⁴ Mr. A.G. Soutzo;²⁵ Ms. Carmen Miller;²⁶ Mr. Willis Olson;²⁷ Mr. Brian and Ms. Jan Evans;²⁸ and Mr. Gerald and Ms. Joan Marshall.²⁹

[11] Prior to the hearing, the Board received numerous affidavits and submissions.³⁰

²⁴ The Alberta Roadbuilders and Heavy Construction Association and the Alberta Sand and Gravel Association provided a joint written submission on July 12, 2002. They stated they "...concur with the Approval Holder that the anticipated noise, dust and other air pollutants from the Lafarge Operation, as well as the cumulative effects of these factors with existing operations, are within accepted standards and guidelines for operations of this kind." They believed current standards and guidelines and the approval process establish reasonable requirements for safe operation of gravel pits, and the criteria minimize adverse impacts on the environment. They were "...concerned that new or more stringent criteria for pit approvals relating to noise, dust, air pollutants and their cumulative effects will be imposed through the appeals process that unnecessarily restrict the availability of localized sources of aggregate." They continued that "...the proximity of aggregate sources to the consumer has a direct impact on the cost of such resources. The adoption or development of new or more stringent approval criteria beyond those in the legislated standards and guidelines would impact the ability of aggregate producers to provide localized sources for sand and gravel, limiting the supply of these products and adding significant transportation costs." They stated they recognize "...the need to balance the interests of development and industry with those of the community and the environment...", and that "...this balance has been struck through the application of the existing standards and guidelines in granting the Approval."

²⁵ Mr. A.G. Soutzo, in his July 12, 2002 written submission, stated he was a landowner in the project under appeal. He stated he "...lived on this ranch since 1948 and have had gravel operations on it for over 20 years." He believed Lafarge "...leads the field' in this industry for its comprehensive and all encompassing standards of quality...." He said "...air quality will never be compromised." Finally, he stated "...this is a very good project, properly planned, that will remove a much needed and valuable resource prior to approaching urbanization, without neglecting any appropriate standards...."

²⁶ In her July 11, 2002 written submission, Ms. Carmen Miller stated: "I understand that the emission levels in our community at the present time already exceed Canadian standards.... Obviously, another gravel pit would have a cumulative effect thus raising these dangerous values to an even higher level. I would request that everything be done to prevent ongoing exposure of our community to harmful pollutants. It is my preference to have Lafarge's approval denied on the grounds of public health and safety...." (Emphasis in the original.)

²⁷ In his July 11, 2002 written submission, Mr. Willis Olson stated "...I am very concerned the effects of dust and other pollutants may have on my wife and I health [*sic*] or the higher noise level which we will have to listen to. Further to the effects of noise, dust and view there will be an accumulative effect of devaluation of property...."

²⁸ In their July 11, 2002 written submission, Mr. Brian and Ms. Jan Evans stated: "As one of the landowners of this proposed pit we will be most affected as our residence overlooks and is adjacent to the area involved. We are fully cognizant of the effect that the existing Rolling Mix Pit, the Bumco Gravel Pit and this proposed project will have on our lives. We feel the terms put in place for the Lafarge Pit will ensure a quick and speedy excavation and reclamation of the land. The stringent controls dealing with noise and dust will make this new project the most advanced and environmentally sensitive gravel pit in Alberta...." They said that in their agreement with Lafarge "...a primary focus was to ensure that the project be sensitive to the needs of the environment and our neighbours." They stated their agreement included conditions: "...the pit must be completed within 4 years with one year to reclaim the site, the hours of operation will be from 7 a.m. to 6 p.m. Monday to Friday, safety of all traffic using the roadways must be addressed and the reclamation standards ... will be far above those imposed by the Alberta Government." They stated the "...effects of noise and dust from this additional pit will be too small to measure."

²⁹ In their July 11, 2002 written submission, Mr. Gerald and Ms. Joan Marshall stated: "...given the location of their residence, the Marshalls are more likely to be directly impacted by the Lafarge operations than is the Appellant. The Marshalls live down wind from the proposed pit and adjacent to the roadway over which the gravel will be moved. The Marshalls believe that Lafarge is taking all reasonable steps to mitigate the impacts of its operations.... If such is the case, then surely there should be even less direct effect upon the Appellant."

³⁰ The Board received the following affidavits: Dr. Donald Davies, dated February 22, 2002; Mr. Randy

[12] The hearing was held in Calgary, Alberta, on July 24 and 25, 2002. On July 31, 2002, the Appellant and the Calgary Health Region provided closing written arguments; on August 6, 2002, the Director and the Approval Holder provided closing written arguments; and on August 9, 2002, the Appellant provided final written arguments in response.

II. SUBMISSIONS

A. Appellant

[13] The Appellant stated that she owns and occupies land on the south side of the Bow River directly across the river from the proposed Lafarge Operation. The Lafarge Operation is approximately 645 meters from the northern boundary of her property.³¹ The Appellant filed a Statement of Concern with the Director within the specified time period.³²

[14] The Appellant submitted she is directly affected because she will see the proposed Lafarge Operation from her residence and will hear the excavation and equipment, including the truck traffic in and out of the pit. According to the Appellant "...the prevailing winds are from the north and northwest and dust, other particulate matter and diesel exhaust from the proposed pit will impact the air she breathes." She indicated she "...is asthmatic and substances such as dust, particulate matter and diesel exhaust irritate her condition."³³

[15] The Appellant argued noise and air emissions from the Lafarge Operation would "...unreasonably interfere with the use and enjoyment of her property..." and "negatively impact" her ability to pursue outdoor activities including "...gardening, walks down to the river,

Rudolph, dated July 16, 2002; Dr. Donald Davies, dated July 15, 2002; Mr. Darron A. Chin-Quee, dated July 12, 2002; Dr. Timothy Lambert, dated July 17, 2002; Mr. Alex Schutte, dated July 2, 2002; Dr. Donald Davies, dated June 12, 2002; Mr. Randy Rudolph, dated June 12, 2002; Dr. Douglas M. Leahey, dated June 12, 2002; Mr. Bruce L. Whale, dated July 18, 2002; Dr. Douglas M. Leahey, dated June 18, 2002; Mr. Jack L.G. Davis, dated June 18, 2002; Dr. Robert E. Rogers, dated June 19, 2002; and Dr. Brian W. Zelt, dated June 18, 2002.

³¹ See: Appellant's Submission, dated July 17, 2002, at paragraph 4.

³² See: Director's Record, Tab 28.

³³ See: Appellant's Submissions, dated February 22, 2002, at paragraph 8, and dated July 17, 2002, at paragraph 6.

cycling, and running. Physical fitness and health, including respiratory health, are essential to the Appellant's enjoyment of life and her continued pursuit of her chosen employment."³⁴

[16] The Appellant said current levels of dust, particulate matter and diesel emissions from the three existing pits adversely affect her health. She said she hears "unacceptable levels of noise" from the Burnco pit, which is farther away than the proposed Lafarge pit. She said in her experience, air emissions and noise "...are not contained within the boundaries of gravel pits."³⁵ She clearly indicated the current conditions are unacceptable by stating the Lafarge pit will "...cause additional harm to her personal use of natural resources such as air, water, the Court Residence and the natural environment."³⁶ She submitted her evidence "...raises serious concerns about potential health impacts to the Appellant and others in the local community."³⁷

[17] The Appellant referred to a noise study prepared for the Approval Holder. She interpreted the report as stating she would be exposed to noise from the Lafarge Operation because it was suggested that a noise monitor be installed in the vicinity of her residence.³⁸

[18] To support her position, the Appellant provided affidavit and oral evidence from three experts.

1. Mr. Randy Rudolph, Air Dispersion Modeling

[19] Mr. Randy Rudolph provided evidence on air dispersion modeling. In his first affidavit of June 12, 2002, he stated that "...based on the available evidence, it is my opinion that air emissions from the proposed facility will reach the Court residence..." and "...these

³⁴ See: Appellant's Submission, dated February 22, 2002, at paragraph 8.

³⁵ See: Appellant's Submission, dated February 22, 2002, at paragraph 8, and dated July 17, 2002, at paragraph 10.

³⁶ See: Appellant's Submission, dated February 22, 2002, at paragraph 8.

³⁷ Appellant's Submission, dated February 22, 2002, at paragraph 13. Dr. Davies provided expert evidence, as an affidavit and orally, on human health risks associated with the proposed Lafarge operation. See: Appellant's Submissions, dated February 22, 2002, and July 15, 2002. The Appellant argued that the cases of *Bildson v. Acting Director of North Eastern Slopes Region, Alberta Environment* (19 October 1998), Appeal No. 98-230-D (A.E.A.B.), *Ash and Munroe v. Director of Southern East Slopes and Prairie Regions, Environmental Regulatory Service, Alberta Environmental Protection* (13 November 1997), Appeal Nos. 97-031 and 97-032 (A.E.A.B.), and *Hazeldean Community League v. Director of Air and Water Approvals, Alberta Environmental Protection* (11 May 1995) Appeal No. 95-002 (A.E.A.B.) support the position that she is directly affected.

³⁸ See: Appellant's Submission, dated February 22, 2002, at paragraph 18. The report referred to was prepared by Promet Environmental Group Ltd. and was submitted as part of the Approval Holder's application.

emissions will include: dust, fine particulate in size ranges including PM₁₀, PM_{2.5} and PM_{1.0}; SO₂, NO_x, CO, PAH and VOCs.³⁹ Mr. Rudolph believed "...air emissions from the proposed pit will reach the Court residence and will likely result in negative and direct effects on local air quality including air quality in proximity to the Court residence." He was of the opinion that "...the Court residence will be affected by cumulative emissions from the area including the proposed pit, the existing pits and other regional sources including the City of Calgary."⁴⁰

[20] After reviewing data provided by consultants for the Approval Holder and the Director, Mr. Rudolph determined "...the Lafarge operation will directly affect the Court residence and that the effect will be to reduce air quality." Mr. Rudolph stated the Approval Holder's consultant made a number of questionable assumptions that had the effect of understating Lafarge's contribution to the emission concentrations at the Appellant's residence.⁴¹

[21] Mr. Rudolph questioned the equation used by the Approval Holder's consultant to determine the unpaved roads emission and considered the omission of paved road sources "...a shortcoming in the...modeling." Mr. Rudolph stated emissions would increase with the amount of material hauled and since the Approval Holder's consultant underestimated production levels, and therefore emission levels, by 1000 percent, he considered their analysis invalid.⁴²

[22] Mr. Rudolph was of the opinion that mitigation could not eliminate 100 percent of the emissions from other sources, including dust from yard surfaces and stockpiles, as assumed

³⁹ Throughout this decision, the following terms are defined as: PM₁₀ — particulate matter less than 10 microns in diameter; PM_{2.5} — particulate matter less than 2.5 microns in diameter; PM_{1.0} — particulate matter less than 1.0 microns in diameter; VOCs — volatile organic compounds; PAH — polycyclic aromatic hydrocarbons; TSP — total suspended particulates; and NO_x — nitrous oxides. See Affidavit of Mr. Randy Rudolph, dated June 12, 2002, at page 1.

⁴⁰ See: Affidavit of Mr. Randy Rudolph, dated June 12, 2002, at page 3.

⁴¹ See: Appellant's Submission, dated July 17, 2002, Affidavit of Mr. Randy Rudolph, at pages 1 to 3. The consultant assumed gravel handling emissions would be zero "...because gravel will be hauled from the pit below the water line and therefore will always be considered wet." According to Mr. Rudolph this was not a conservative or reasonable assumption as some gravel would be extracted above the water line, and dust mitigation in the pit would not be 100 percent. The consultant did not list emission reduction efficiencies or factor in increased emissions as vehicles age. Therefore "...use of new-vehicle emission factors is not a conservative assumption." The consultant assumed the "...off-road portion of the haul trips will emulate on-road driving." According to Mr. Rudolph, this is not the case as exhaust emissions would be higher as products are hauled out of the river valley. Mr. Rudolph said it was unclear when 20 percent of the gravel will be crushed on-site and the estimate of the in-pit distance traveled appeared low. The consultant did not specify what "...emissions or concentrations were assumed in the season in which Lafarge will not operate, and how this impacted the annual average concentrations." If the assumption was zero, Mr. Rudolph believed that would not be conservative.

⁴² See: Appellant's Submission, dated July 17, 2002, Affidavit of Mr. Randy Rudolph, at page 4.

by the Approval Holder's consultant. He thought the assumptions about the existing facilities' mitigation efficiencies "...must be assumed to be unreliable at best." He questioned the predictions by the Approval Holder's consultants regarding the effectiveness of the reduction of emissions by maintaining moisture levels on unpaved roads. According to Mr. Rudolph, the emission levels would be 500 percent more than predicted by the consultant. Mr. Rudolph also identified emission sources not included or inadequately considered in the Approval Holder's consultant report. He stated transport of gravel from the pit to crushers in the pit, Lafarge and Burnco pit activities, wind blown dust and paved road traffic were underestimated.⁴³

[23] Mr. Rudolph had concerns the consultant did not consider background concentrations of particulate matter. He said "...baseline predictions suggest concentrations have already deteriorated to above the ambient guideline according to Levelton's model results for TSP and PM₁₀..." and argued the conservatism claimed by the Director's consultant.⁴⁴ Mr. Rudolph believed Levelton, by excluding secondary particulates, underestimated PM_{2.5} predictions. He summarized that "...while Levelton claims their emissions to err on the conservative side, in fact there are several ways in which they may have underestimated emissions and therefore concentrations at the Court residence." He argued the meteorological data used by Levelton was not as conservative as stated and "...better and more appropriate methods and models should have been applied."⁴⁵

[24] He concluded his submission by stating: "The modeling results provided by Levelton appear to approximate reasonable estimates of future air quality at the Court residence.

⁴³ See: Appellant's Submission, dated July 17, 2002, Affidavit of Mr. Randy Rudolph at page 7.

⁴⁴ See: Appellant's Submission, dated July 17, 2002, Affidavit of Mr. Randy Rudolph at page 8 to 9. Mr. Rudolph referred to the consultant's report where it was stated that the "ISC3 model has been recognized to over-predict concentrations particularly for area and volume sources in stable periods, normally by a factor of 2." Mr. Rudolph stated that in their "...experience the degree of over prediction decreases rapidly with distance and should not be an issue at the Court residence." He also believed the "...use of an initial dilution (source size) factor can overcome some of the near-source over prediction..." and that "...if the over-prediction was such an obvious issue to Levelton, it raises the question of why an alternative source characterization was not undertaken...." He summarized that "...various recent studies have examined ISC results for near-surface releases. None found evidence of the systemic factor of two over prediction noted by Levelton. All found ISC predictions to be both larger and smaller than observations."

⁴⁵ See: Appellant's Submission, dated July 17, 2002, Affidavit of Mr. Randy Rudolph, at page 10.

In summary, the most reliable estimates available indicate that air quality guidelines will be exceeded at the Court residence if the Lafarge pit operates."⁴⁶

2. Dr. Donald Davies, Health Risk Assessment

[25] Dr. Donald Davies, a health risk consultant, provided written and oral evidence after reviewing available information and doing a site visit. He said:

"In the absence of information concerning the current levels of air-borne emissions from the existing facilities...as well as estimates of the incremental contributions that could be made by the proposed facility to the 'loading' of the local airshed, it is impossible to predict with confidence the nature and significance of any health impacts that might be presented to Ms. Court."⁴⁷

He believed "...there is sufficient ancillary evidence to suggest that the proposed facility could reasonably be expected to cause a deterioration of the local air quality, extending to Ms. Court's residence..." and that this "...deterioration of air quality introduces the potential for her health to be adversely affected, with the possibility being heightened because of her asthmatic condition."⁴⁸

[26] Dr. Davies reached his conclusion because "... the operation of the facility will result in the formation of air-borne 'dust' that could easily present as a 'nuisance' factor and/or health hazard depending on its concentration and the sensitivity of the exposed individual." He believed the dust would be primarily crustal in nature including both fine and coarse material.⁴⁹

[27] He suggested the "...potential for dust production will exist throughout the life of the facility..." and "...despite the dust control measures to be implemented by the approval holder, the escape of some dust into the local airshed is inevitable." He believed this would only add to the current loading of the local airshed from already existing gravel pits. Dr. Davies stated the "potential impacts" of Lafarge on local air quality and health of the residents "...cannot be considered in isolation, but rather must be addressed in terms of the cumulative impacts presented by the combined facilities." He iterated that "...since 'visible' levels of dust

⁴⁶ See: Appellant's Submission, dated July 17, 2002, Affidavit of Mr. Randy Rudolph at pages 11 and 12.

⁴⁷ See: Appellant's Submission, dated February 22, 2002, Affidavit of Dr. Donald Davies, at page 6.

⁴⁸ See: Appellant's Submission, dated February 22, 2002, Affidavit of Dr. Donald Davies, at page 6.

⁴⁹ See: Appellant's Submission, dated February 22, 2002, Affidavit of Dr. Donald Davies, at page 5 and 6.

already exist in the nearby communities, the addition of the proposed facility will only add further to the dust burden, thereby increasing the potential for health effects to occur."⁵⁰

[28] Dr. Davies suggested the requirement for dust control in the Approval "...is ambiguous, provides little direction, and fails to address the need to specifically protect human health." He believes lack of specific regulatory requirements for dust control at provincial and municipal levels only heightens concern that "...any potential impacts of the proposed facility on local air quality and human health may not be adequately assessed nor properly managed." Since Lafarge presents the potential for a considerable increase in truck traffic, the exhaust presents "...the possibility of adverse health impacts on the nearby residents since it contains many 'toxic' constituents, exposure to which can result in serious and possibly irreversible health effects depending on concentration."⁵¹

[29] Dr. Davies said examination of wind speed and direction information gathered at Burnco showed "...winds to be predominately northerly in direction, with the highest wind speeds measured from the N, NNE and NNW directions...." Based on this information, he stated "...the potential for air-borne emissions from this facility to be 'carried' into the Bowview and Cottonwood communities is very real..." and "...applies especially to the 'fine' particulate matter, which can be carried over considerable distances owing to its very small size."⁵²

Dr. Davies stated that individuals in the area who suffer from cardio-pulmonary diseases and chronic respiratory conditions could possibly be "...more sensitive to particulate matter (PM) and other air-borne emissions, including diesel exhaust..." and reminded the Board that the Appellant "...suffers from asthma."⁵³

[30] Dr. Davies originally stated dust and diesel exhaust "...have been implicated in causing adverse health effects, depending on composition and concentration... Evidence continues to mount that particulate matter can cause adverse impacts on human health ... even at very low concentrations." He further stated that "...the local airshed is already burdened by the presence of three gravel pits in the area..." and "...dust 'loading' may already be significant and

⁵⁰ See: Appellant's Submission, dated February 22, 2002, Affidavit of Dr. Donald Davies, at pages 2 and 3.

⁵¹ See: Appellant's Submission, dated February 22, 2002, Affidavit of Dr. Donald Davies, at page 3.

⁵² See: Appellant's Submission, dated February 22, 2002, Affidavit of Dr. Donald Davies at page 4.

⁵³ See: Appellant's Submission, dated February 22, 2002, Affidavit of Dr. Donald Davies at page 4.

possibly in exceedance of ambient air quality guidelines." He believed "...any further addition of dust through the operation of the proposed facility will only act to increase the burden and heighten the prospect for further deterioration of local air quality." This, in turn "...could increase the potential for adverse health impacts affecting Ms. Court and/or other members of the communities."⁵⁴ In a subsequent affidavit, dated June 12, 2002, Dr. Davies reiterated his findings in the original affidavit.⁵⁵

[32] After reviewing reports by the Director's and Approval Holder's consultants, Dr. Davies provided a third affidavit, dated July 15, 2002. He concluded "...it remains my opinion that the Appellant's health could be directly affected by the emissions from the proposed Lafarge Operation." He stated this is "...not only obvious when potential health impacts are assessed on a cumulative basis, but also applies to emissions from the Lafarge Operation alone." He was of the opinion that air dispersion modeling by Levelton and Jacques Whitford Environmental Ltd ("JWEL") "...clearly demonstrates that the emissions from the proposed gravel pit will reach the Appellant's property."⁵⁶

[33] Dr. Davies went on to discuss cumulative effects indicating that "...while enroute to the Appellant's property, the emissions from the Lafarge Operation will combine with the emissions from the already existing gravel pits and from other sources to create a cumulative pollutant 'burden'." He believed the "...existing levels of dust are such that both nuisance and health impacts are indicated..." and any further addition of emissions "...will only increase the likelihood of health effects." He believed the Appellant's health to be "...especially at risk from any increased emissions given that she suffers from asthma." He concluded "...as a health professional, the only responsible position that I can take based on this evidence is to recommend that the Lafarge Operation not proceed at this time."⁵⁷

⁵⁴ See: Appellant's Submission, dated February 22, 2002, Affidavit of Dr. Donald Davies at page 5.

⁵⁵

See: Affidavit of Dr. Donald Davies, dated June 12, 2002, at page 3. Dr. Davies states: "...it remains my position that Ms. Court's health could potentially be directly affected by the emissions from the proposed facility, either alone or in combination with the emissions from other local sources. This position is strengthened by the fact that Ms. Court is known to suffer from asthma, which increases her susceptibility to air-borne pollutants such as PM, nitrous oxides and sulphur dioxide."

⁵⁶

See: Appellant's Submission, dated July 15, 2002, Affidavit of Dr. Donald Davies, at page 18.

⁵⁷

See: Appellant's Submission, dated July 15, 2002, Affidavit of Dr. Donald Davies, at page 18.

3. Mr. Darron Chin-Quee, Environmental Noise

[34] Mr. Darron Chin-Quee, an environmental noise expert stated: "I am of the opinion that the environmental noise assessment criteria and methodology are either inappropriate for this facility or have not been properly implemented. As a result, the potential noise impacts are understated and adverse noise impacts are likely at off-site noise-sensitive receptors." He believed audibility, disturbance and annoyance concerns were unaddressed and several issues required clarification or study to provide a complete indication of the potential impacts of the proposed plant.⁵⁸

[35] Mr. Chin-Quee evaluated various noise guidelines and their applicability to projects such as Lafarge. According to Mr. Chin-Quee, no Alberta guidelines specifically apply to aggregate pits and the pertinent municipalities have not established any guidelines. He did not consider Calgary noise by-laws appropriate as they were established on the basis of higher background levels than those expected at the Appellant's residence. Mr. Chin-Quee also commented on the Energy and Utility Board Guide 38.⁵⁹

[36] He explained the "preferred means" of assessing noise impacts is to determine the change in sound exposure from an additional project. He stated, based on industry practice and the literature, that changes in sound exposure and its effects are ranked as ≤ 3 dB (insignificant due to imperceptibility), 4 to 5 dB (just noticeable difference), 6 to 9 dB (marginally significant), and ≥ 10 dB (significant, perceived as a doubling (halving) of sound exposure). When source attributable levels and ambient levels are equal, the change in sound exposure is limited to 3 dB or less and insignificant effects result.⁶⁰

[37] Based on the testing completed by Mr. Chin-Quee, the "...change in sound exposure could be as high as 15 dBA, which is significant and would be perceived as being two to three times as loud." Mr. Chin-Quee also stated concerns regarding the noise testing

⁵⁸ See: Appellant's Submission, dated July 15, 2002, Affidavit of Mr. Darron Chin-Quee, at page 2.

⁵⁹ See: Appellant's Submission, dated July 15, 2002, Affidavit of Mr. Darron Chin-Quee, at page 3. "Guide 38 further defines the ambient as 'all noises that exist in an area and are not related to a facility covered by ID-99-8'. In other words, like facility noise should not be included in the surveyed ambient assessment. As such, if Guide 38 is to be applied to this application, existing noise generated by area pits and quarries should also be excluded in determining the ambient sound exposures."

⁶⁰ See: Appellant's Submission, dated July 15, 2002, Affidavit of Mr. Darron Chin-Quee, at page 4.

conducted by the Approval Holder's consultant, including that ambient levels were tested next to the road and not in the residential areas.⁶¹

[38] Mr. Chin-Quee concluded by stating "...noise studies and related data in support of the Lafarge E-P-S application lack sufficient detail to properly assess the potential impacts of the proposed pit operations on closest noise-sensitive receptors." He suggested Lafarge has the potential to be disturbing to nearest residences due to "...the quiet ambient noise levels..." and the "...orientation of residences which overlook the pit resulting in largely unmitigated high emission sources." He indicated predicted sound exposures of 52 dBA from the proposed pit exceeds permissible sound levels ("PSL") and AEUB guidelines. He was of the opinion that at least 3 dB of mitigation would be needed to comply with AEUB limits and additional mitigation beyond that required to meet AEUB guidelines was needed to reduce environmental impacts to just noticeable or insignificant effects. He indicated the "...potential for disturbance arises from the change in sound exposure which are as high as 10 to 15 dB ... when the pit is operating." He said the Calgary Noise By-Law and the 55 dBA property line conditions of the Development Permit "...ignore existing ambient noise environments at the noise-sensitive receptors..." and "...are not considered to be appropriate limits..." because "...the former inappropriately applies a high urban limit to a quiet rural environment." He said he "...would recommend a minimum reduction of 10 dB...."⁶²

B. Approval Holder

[39] In its original submission, the Approval Holder argued the Appellant is not directly affected because she failed to present any evidence to demonstrate any air-borne emissions from Lafarge "...will directly affect her property or the nearby lands she claims to use."⁶³

[40] The Approval Holder stated that to obtain standing the Appellant must show, on a balance of probabilities, that the proposed gravel pit itself will directly affect her and "...harm or

⁶¹ See: Appellant's Submission, dated July 15, 2002, Affidavit of Mr. Darron Chin-Quee, at page 7.

⁶² See: Appellant's Submission, dated July 15, 2002, Affidavit of Mr. Darron Chin-Quee, at pages 8 and 9.

⁶³ See: Approval Holder's Submission, dated March 1, 2002, at paragraph 14. The Approval Holder also argued that the Appellant had failed to establish how she would be directly affected as it applies to her water wells or the flora and fauna in the area. As the Board determined these concerns would not to be included as issues in this appeal, the full arguments regarding these concerns will not be discussed in this Decision.

impair her use of a natural resource."⁶⁴ Lafarge submitted its evidence demonstrates she will not be directly affected by the Approval and therefore has no standing. The Approval Holder argued the "...evidence provided by the Appellant's experts did not state she would be harmed by any air-borne emissions from the Lafarge Operation..." and "...merely reaching the Appellant's residence does not meet the element of harm inherent in the test for directly affected."⁶⁵⁻

[41] In the initial submission, the Approval Holder acknowledged Dr. Davies assertion that "...potential health effects of air-borne emissions are determined by the concentration and composition of a given emission." The Approval holder did not believe any evidence was presented "...on what concentrations of dust, particulate or diesel exhaust could reasonably be expected to cause direct effects on the Appellant, much less provide any evidence of ... concentrations of any air-borne emissions." Lafarge submitted "...this critical gap in the Appellant's evidence, which Dr. Davies acknowledges, is the 'link' needed to conclude that any emissions from the Site will be dispersed to the Court Residence in concentrations sufficient to cause her direct harm."⁶⁶ Lafarge stated the Appellant "...failed to provide the Board with evidence of the necessary link between any emissions from the Site and harm to the Appellant."⁶⁷

[42] The Approval Holder did not believe the Appellant provided the Board with any evidence to indicate the Lafarge Operation would harm her.⁶⁸ Later the Approval Holder argued that the RWDI Report provided by Mr. Chin-Quee "...fails to establish a level of adverse impact beyond an 'annoyance', 'disturbance' or 'audibility', which Lafarge submits is insufficient to meet the standard of 'directly affected' established by the Board."⁶⁹

[43] The Approval Holder stated the Director exercised her authority properly in issuing the Approval, considered the purpose of the Act, and balanced environmental protection and human health with economic prosperity.⁷⁰

⁶⁴ See: Approval Holder's Submission, dated July 17, 2002, at paragraphs 7 and 8.

⁶⁵ See: Approval Holder's Submission, dated July 17, 2002, at paragraph 10.

⁶⁶ See: Approval Holder's Submission, dated March 1, 2002, at paragraph 37.

⁶⁷ See: Approval Holder's Submission, dated March 1, 2002, at paragraph 40.

⁶⁸ See: Approval Holder's Submission, dated March 1, 2002, at paragraph 43.

⁶⁹ See: Approval Holder's Submission, dated July 17, 2002, at paragraph 15.

⁷⁰ See: Approval Holder's Submission, dated July 17, 2002, at paragraph 21.

[44] The Approval Holder submitted that Mr. Rudolph's opinion should be given no weight as it is "...based entirely upon speculation and hearsay information about the current air quality at the Appellant's residence, and not upon any empirical evidence regarding existing levels of air emissions." They argued Mr. Rudolph did not perform any "...recalculations of the data to provide proof of any assertion he may make as to the impacts on the Appellant, or to assist the Board in any way to make its determination in this matter."⁷¹

[45] In rebuttal to Dr. Davies, Lafarge argued no specific evidence was ever provided to show a "significant and adverse impact" upon the Appellant. It dismissed Dr. Davies' opinion as "...replete with generalities regarding the effect certain emissions can have upon human health..." but never reaching "...any concrete conclusion regarding the nature of those impacts."⁷²

[46] The Approval Holder also addressed evidence on the Appellant's health stating that although she claims "...the current air quality at her residence is compromised by the current nearby operations of Rolling Mix and Burnco, and that this in turn is affecting her health, she declines to provide the Board with any evidence or proof from a member of the medical profession regarding her health..." and that when asked "...she refused to answer questions posed by Lafarge's health expert regarding the specifics of her asthmatic condition or her lifestyle."⁷³

[47] The Approval Holder argued it would not be causing an adverse effect on the environment or the Appellant because Lafarge's mitigation strategies will minimize any potential emissions from machinery or dust from gravel movement; air quality assessment demonstrates there will be no harm; the health report demonstrates there will be no adverse health effects related to air quality; and Levelton confirms there will be no substantial impacts from the project.⁷⁴ Lafarge stated even though its operation added emissions to the airshed "...the

⁷¹ See: Approval Holder's Submission, dated July 17, 2002, at paragraphs 27 and 29.

⁷² See: Approval Holder's Submission, dated July 17, 2002, at paragraphs 31 and 32.

⁷³ See: Approval Holder's Submission, dated July 17, 2002, at paragraph 35.

⁷⁴ See: Approval Holder's Submission, dated July 17, 2002, at paragraph 37.

addition of the Project to the current air quality **will be barely perceptible.**"⁷⁵ (Emphasis in original.)

[48] Lafarge submitted the Appellant's concerns were applicable to existing facilities not its operation and stated "...it should not be penalized because of the uncontrolled emissions from Burnco and Rolling Mix, especially in light of the experts' reports which demonstrate that the contribution of the Project to the situation will be, under worst case conditions, minimal."⁷⁶

[49] The Approval Holder did not deny that there may be a risk to the Appellant, but stated that its mitigation strategies will reduce emissions to a level where they "...will not in any way increase the current risk to the Appellant related to air quality."⁷⁷

[50] In addressing noise, the Approval Holder submitted the AEUB Directive is an appropriate standard to use as it "...is a standard developed specifically in Alberta, for Alberta conditions." Lafarge submitted the AEUB directive "...is an entirely appropriate standard to guide the Board in its determination of whether there will be an adverse effect upon the Appellant."⁷⁸

[51] The Approval Holder argued the City of Calgary noise by-law would be an applicable standard as the Appellant's residence is not in a "quiet rural environment", but one of several subdivisions close to Calgary City Limits "...increasingly influenced by the City of Calgary, including commuter and recreational traffic, recreational use, aircraft landing and take off, and industrial uses." Further, Lafarge noted the Noise Study concludes the project will be in compliance with the Calgary By-Law nighttime levels.⁷⁹

1. Mr. Bruce L. Whale, General Manager, Lafarge Canada Inc.

[52] In his affidavit, Mr. Whale listed a number of mitigation measures the Approval Holder agreed to.⁸⁰

⁷⁵ See: Approval Holder's Submission, dated July 17, 2002, at paragraph 42.

⁷⁶ See: Approval Holder's Submission, dated July 17, 2002, at paragraph 44.

⁷⁷ See: Approval Holder's Submission, dated July 17, 2002, at paragraph 39.

⁷⁸ See: Approval Holder's Submission, dated July 17, 2002, at paragraph 55.

⁷⁹ See: Approval Holder's Submission, dated July 17, 2002, at paragraph 55.

⁸⁰ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Mr. Bruce L. Whale, at paragraph 6.

2. Mr. Jack L.G. Davis, Noise Consultant

[53] Mr. Davis discussed the Alberta Energy and Utilities Noise Control Directive (ID 99-8) and the City of Calgary Noise Bylaw (45M95). He stated the Permissible Sound Level ("PSL") set by the Alberta Energy and Utilities Board "...are among the most stringent found anywhere in the world." He explained PSL is the limit sound emanating from a facility may not exceed, over a specified time period, as measured in the yard of the nearest, most impacted, or complainant's residence." He believed new facilities for remote areas should be designed to meet a target sound level of 40 dBA Leq (nighttime) at 1.5 km.⁸¹

[54] Mr. Davis stated that in the case of the Lafarge Operation, the PSL for the Appellant's residence is 53 dBA daytime and 43 nighttime and The City of Calgary Noise Bylaw specifies the allowable industrial noise level at residences within the City is limited to 55 dBA Leq (1-hour) nighttime and 65 dBA Leq (1-hour) daytime.⁸² Mr. Davis indicated that, assuming a background noise level of 52.3 dBA Leq, the "...predicted noise level of 52.3 dBA Leq, complies with the AEUB PSL of 53 dBA at the Appellant's residence under worst-case conditions..." and is also "...well below the 65.0 dBA Leq (1-hour) daytime established by the City of Calgary for Urban Settings and is below the City's 55 dBA Leq (1-hour) nighttime levels."⁸³

These included restricted operating hours (7:00 a.m. to 6:00 p.m. weekdays, no weekend or holidays); maximum 5 year operation life; large amount of deposit to be processed offsite at an existing Lafarge facility at Deerfoot Trail and Southland Drive SE, Calgary; paved access road to the deposit; full time water truck onsite; weight scale located to minimize truck movements in the pit area; sequential reclamation to reduce the active area and just in time overburden removal using two 627 self loading scrapers; onsite enclosed crusher and no onsite washing; processing sites oriented to reduce transportation to plant, located in excavated area below original ground level with stockpiles to provide berming to the south; Lafarge mobile equipment to utilize current manufacturer specifications and be fitted with strobe back up alarms; utilize excavation techniques to maximize natural material dampness; and provide noise monitoring for the life of the operations.

⁸¹ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Mr. Jack L.G. Davis, at pages 1 and 2. Mr. Davis further explained the measurement scale saying: "Sound level is typically measured using the A-weighting scale, and expressed as a Leq value. The Leq is the A-weighted equivalent-continuous sound level. This index is an energy average of the varying sound level over a specified period of time. The Leq value considers both the sound level and the length of time that the sound level occurs."

⁸² See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Mr. Jack L.G. Davis, at pages 4 and 5.

⁸³ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Mr. Jack L.G. Davis, at page 7.

[55] Mr. Davis stated ambient noise in the Appellant's subdivision is "...influenced by Rolling Mix Concrete, Burnco Indus, aircraft fly-over, wildlife, train whistles, construction activity in the area, local traffic, recreational traffic, and golf course audio systems."⁸⁴

3. Dr. Brian W. Zelt and Dr. Robert E. Rogers, Health Risk Consultants

[56] The consultants for the Approval Holder defined risk assessment as "...the process of estimating the likelihood of undesired effects on human and ecological health resulting from exposure to a chemical or a contaminated source."⁸⁵ They continued by stating that due to the uncertainty and desire to protect human populations under a variety of exposure conditions, risk assessments are constructed in a way that tend to be overly conservative and overestimate risk.⁸⁶

[57] Dr. Zelt and Dr. Rogers stated that only limited information was available regarding PM emissions in rural areas. However, based on their research, background concentrations of PM_{2.5} are 3 to 6 µg/m³ compared to PM₁₀ of 24µ/m³. They noted background levels in the vicinity of the Lafarge Operation would "...likely to be greater than the remote rural concentrations because of proximity to the industrial gravel pit operations and the proximity of the large urban centre of Calgary."⁸⁷

[58] In the cumulative assessment analyses completed by the Approval Holder's consultants, they stated the cumulative assessment scenario was based on emissions from the Lafarge, Burnco, and Rolling-Mix. They said as a result of the screening process in the air quality modeling report by JWEL, the baseline assessment using uncontrolled emissions from the existing gravel pit operations resulted in unsatisfactory air quality predictions. The cumulative assessment was therefore presented only for the controlled emissions scenario.⁸⁸

[59] In assessing the potential effect of polycyclic aromatic hydrocarbons, the Approval Holder's consultants determined that since the source of PAH concentrations is from a

⁸⁴ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Mr. Jack L.G. Davis, at page 6.

⁸⁵ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Brian Zelt, 2002, at page 1-3.

⁸⁶ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Brian Zelt, at page 1-4.

⁸⁷ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Brian Zelt, at page 2-5.

⁸⁸ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Brian Zelt, at page 2-8.

small number of trucks (250:Lafarge, 500:Burnco, 25:RMC, 775/d peak) compared to the much larger source from Calgary and regional trucks the "...contribution to total daily intake of PAH from this pathway can safely be neglected."⁸⁹

[60] In the analyses completed on the background levels, the Approval Holder's consultants found that, based on the worst-case scenario where emissions are uncontrolled at the Rolling Mix and Burnco sites, but Calgary emissions were excluded, at the Appellant's residence "...PM_{2.5}, PM₁₀, TSP, silica emissions could be a source of concern based on the maximum predicted 24-hour average." However, they believed calculated values for 1 and 24-hour HQ_{ncs} are based upon maximum concentrations for each chemical and these values are rare events, occurring once every 5 years. Thus, although values exceed unity, the hazard to the Appellant would only occur infrequently. Although HQ_c for diesel exhaust (2.14) exceeds unity, exposure excluding background is approximately 10 times less than that observed in Calgary Central.⁹⁰

[61] According to the Approval Holder's consultants, if background contaminants, including Calgary, are added to uncontrolled conditions, background levels indicate an increased relative risk in the PM_{2.5}. The Approval Holder's consultants stated for PM_{2.5}, the relative risk, expressed as relative percent change in effect from simulated background to simulated background plus emissions from uncontrolled operations, would be 164.54 percent for a change in mortality / million people / year from 5.9 (background) to 15.5. They predicted if the population of Calgary were exposed to these concentrations, assuming a population of one million, then approximately 9.6 additional deaths per year could be attributed to industrial emissions. The risk of increased respiratory hospitalizations increased from 1:370,000 to 1:141,000, per person per year, equivalent to an increased risk above background of 1:230,000 per person per year. Over the five-year operation life of Lafarge, the increase in risk above background of RHA (respiratory hospital admissions) would be 1:45,000 per person.⁹¹

[62] They calculated that in the controlled scenario for background emissions, with no emissions from Calgary, the HQ_{ncs} and HQ_{cs} at the Appellant's residence "...do not exceed unity for any chemical, i.e., there are minimal (acceptable, according to regulatory standards) risks."

⁸⁹ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Brian Zelt, at page 3-8.

⁹⁰ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Brian Zelt, at page 4-4.

⁹¹ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Brian Zelt, at page 4-4.

However, in the controlled scenario with Calgary emissions included, silica, NO₂ and diesel emissions result in HQ_{nc} and HQ_c values exceeding unity "...reflecting the significant contribution background air quality has on the HQs." With emission controls, short and longterm contributions from industrial particulate emissions were strongly influenced by the Calgary background and the change in RHA was 0.1 per million per year or an increased risk above background of 1:10,000,000 per person per year. If predicted ambient concentrations affected the entire City of Calgary, they predicted the increase in mortality rate for PM₁₀ would be 1.3 cases per year and 0.2 cases per year for PM_{2.5}, assuming a population of one million.⁹²

[63] The Approval Holder ran the model for Lafarge alone and with background emissions. The model showed HQs at the Appellant's residence "...do not exceed unity for any chemical, except TSP, i.e. the risk is acceptable according to regulatory standards." For TSP, the predicted 24-hour average value may exceed the Alberta Ambient Air Quality Guidelines value of 100 µg/m³ on rare occasions. The ROC (reference concentrations) for the 24-hour TSP is based on nuisance dust fall. Therefore, they predicted "...the HQ_{nc} of 1.14 indicates a potential hazard for particles primarily in the PM₃₀ range."⁹³

[64] When the background was added, model results completed by the Approval Holder's consultants indicated the silica, NO₂ and diesel emission HQ_{nc} and HQ_c exceed unity reflecting the significant contribution long-term background concentrations have on HQs. The short-term particulate emissions from the project dominate over average annual background.⁹⁴

[65] When Lafarge and background emissions were included in the model, Lafarge emissions increased mortality rate for PM₁₀ and PM_{2.5} from 17.6 to 18.5.9/10⁶ and 5.9 to 6.0/10⁶ population/yr, respectively. For PM_{2.5} a negligible increase in RHA and CHA (cardiac hospital admissions) of 2.7 to 2.8/10⁶ and 2.3 to 2.4/10⁶ population/yr, respectively occurred. The increase in RHA rate was 0.1 per million per year or 1:10,000,000 per person per year. In the 5-year life of the project, the increased RHA risk above background is 1:2,000,000 per person.⁹⁵

⁹² See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Brian Zelt, at page 4-5.

⁹³ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Brian Zelt, at page 4-6.

⁹⁴ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Brian Zelt, at page 4-6.

⁹⁵ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Brian Zelt, at page 4-8.

[66] In modeling the three facilities under controlled conditions, without emissions from Calgary, the Approval Holder's consultants determined the HQs at the Appellant's residence do not exceed unity for any chemical, except for the 24-hr TSP HC_{nc} and HQ_c for diesel. For TSP, the HC_{nc} is slightly above unity at 1.01 reflects a calculated air concentration of 100.8 µg/m³. This TSP threshold is based on the 24-hr dust fall set by Alberta Ambient Air Quality Guidelines ("AAAQG"). The 1.29 HQ for diesel reflects a slight increase above unity and a slight hazard at the Appellant's residence.⁹⁶

[67] When these tests included emissions from Calgary, the consultants found the RHA rate increase for the cumulative scenario above the similar baseline scenario was 0.1 per million per year or a 1:5,000,000 risk per person. The typical acceptable risk level is 1:1,000,000 for U.S. EPA and Health Canada, although older Health Canada documents refer to a CCME policy of a 1:100,000 acceptable risk level. If the stringent risk level is adopted, increased risk for RHA is five times less than the acceptable risk level for cumulative above existing operations. This assumes existing operations with particulate emission controls.⁹⁷

[68] The Approval Holder's consultants stated that "...because the alignment of [the] three projects makes overlapping plumes unlikely for Receptor B [(the Appellant)], the change in incremental risk in RHA between worst-case and the proposed project is considered minimal!"⁹⁸

[69] For diesel emissions, modeling by the Approval Holder's consultants indicated "...the change in HQ_c from baseline to cumulative is from 19.98 to 20.62. This represents an increase in the HQ of 0.64 whereas the background HQ_c for Calgary is 19.33. This increment of risk (3%) is within the margin of uncertainty for exposures and toxicological effects."⁹⁹

[70] The consultants also assessed the risk of silica in the airshed when the background levels from Calgary are added to the controlled operations. They determined that "...the change in HQ from baseline to cumulative is from 21.35 to 21.70. This represents an increase in the

⁹⁶ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Brian Zelt, at page 4-9.

⁹⁷ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Brian Zelt, at page 4-10.

⁹⁸ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Brian Zelt, at page 4-10.

⁹⁹ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Brian Zelt, at page 4-10.

HQ_c of 0.35 whereas the background HQ for Calgary is 20.75. This increment of risk (<2%) is within the margin of uncertainty for exposures and toxicological effects.”¹⁰⁰

[71] For cumulative effects of NO₂, if emissions levels were controlled at the three facilities and background levels were included "...the Lafarge project has only a negligible (<1%) influence on the ambient annual concentrations... and the predicted values [of] NO₂ are less than the AAAQG.”¹⁰¹

[72] Dr. Zelt and Dr. Rogers stated the cumulative maximum 24-hr TSP concentration is 100 µg/m³ without the influence of Calgary. They said TSP contains larger particles and the contribution from Calgary is likely greatly overestimated due to settling of particulates. Therefore, the cumulative with background estimate for TSP of 153 µg/m³ represents a conservative estimate. The maximum 24-hr TSP concentration frequently exceeds the 100 µg/m³ AAAQG and represents an occasional nuisance.¹⁰²

[73] When assessing effect of the emissions on the Appellant, the Approval Holder's consultants stated that if her asthma condition is assumed mild intermittent and under relatively good control she would unlikely experience any short or long-term effects for the Lafarge alone scenario although she may experience some nuisance dust. They believed for mortality, RHA and CHA, her risk would be negligible and "...in isolation, therefore, the Lafarge operation would not be expected to impact significantly the Appellant's health condition.”¹⁰³

[74] The consultants further stated that when Calgary background air quality emissions are assumed additive "...potential health risks exist for non-cancer endpoints of silica and NO₂ and for current understanding of cancer endpoints for diesel exhaust emissions." They were of the opinion that potential health risks exist for Calgary air quality background alone and the "...incremental risk from the proposed Lafarge emissions is negligible." They thought the Appellant may experience infrequent asthma exacerbations depending on her particular susceptibility. For the cumulative scenario, they thought the Appellant may experience some

¹⁰⁰ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Brian Zelt, at page 4-10.

¹⁰¹ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Brian Zelt, at page 4-10 and 411.

¹⁰² See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Brian Zelt, at page 4-11.

¹⁰³ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Brian Zelt, at page 4-15.

nuisance dust. When Calgary background emissions are added her risk from silica, NO₂ and diesel particulate exposures exceed unity and she may experience infrequent asthma exacerbations depending on her particular susceptibility. The indicated the main contribution to these risks resulted principally from Calgary background emissions not from the three local gravel pit operations. They predicted the Appellant's relative and incremental risks for mortality, RHA and CHA were negligible. They concluded "...it would appear that Calgary emissions are the greatest source of risk to this particular situation and that the impact of the cumulative industrial sources, if properly controlled, would minimize the Appellant's health risks."¹⁰⁴

4. Dr. Douglas M. Leahey, Air Quality Modeling

[75] Dr Leahey studied the effect of the Lafarge Operation on air quality. He stated there are no guidelines to specify maximum acceptable levels of PM_{2.5} and PM₁₀. The United States National Ambient Air Quality Standards has set standards for daily and annual average concentrations for PM_{2.5} at 65 and 15 µg/m³, respectively, and for PM₁₀, 150 and 50 µg/m³.¹⁰⁵

[76] Dr. Leahey stated "...excavated materials associated with sand and gravel operations which have moisture content of greater than *[sic]* 1.5 percent are generally considered wet." He stated that "...as gravel pit operations at Lafarge's proposed E-P-S site will occur below the water table, moisture contents of the excavated material will have a high moisture content of about 9 percent and may therefore be considered to be very wet." He believed this "...important because particulate emissions associated with the handling of wet material at potential sources such as crushers, screen decks, product loading facilities, and stock piles are negligible." He iterated that operations of diesel engines and trucks should be "...the only sources of CO, NO₂, VOCs, PAHs and metals..." and "...particulate emissions will occur because of diesel exhausts, vehicular traffic and the stripping of topsoil."¹⁰⁶ Dr. Leahey noted the

¹⁰⁴ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Brian Zelt, at page 4-15 and 4-16.

¹⁰⁵ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Douglas Leahey, Jacques Whitford Environmental Report, dated June 14, 2002, at page 3.

¹⁰⁶ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Douglas Leahey, Jacques Whitford Environmental Report, dated June 14, 2002, at page 6. Dr. Leahey stated that diesel trucks transporting material from the pit will generate CO₂, NO₂, and PM_{2.5} from their exhaust and PM_{2.5} from road dust. The major

largest emissions were in relation to particulate matter and estimated emissions for VOCs, PAHs, and metals were very small. The largest source of diesel emissions was the crusher plant. In his calculations, Dr. Leahey determined winds within the valley would be predominately from a west-east direction.¹⁰⁷

[77] In his modeling Dr. Leahey predicted concentrations of CO, NO₂ and SO₂ were less than the respective guideline values. For PM_{2.5}, Dr. Leahey stated the "...daily average concentrations at the ridge-top residences are about 2.5 µg m⁻³ and thus very small compared to the CWS [(Canada Wide Standard)] of 30 µg m⁻³." He said "...maximum predicted daily and annual averages for these residences of about 5 and 0.25 µg m⁻³, respectively are likewise appreciably less than USEPA's [(United States Environmental Protection Agency)] proposed respective ambient standards of 65 and 15 µg m⁻³." Dr. Leahey determined the predicted daily and annual average concentrations of PM₁₀ of about 20 and 0.5 µg/m³, would be less than the USEPA proposed national ambient air quality standards of 150 and 50 µg/m³.¹⁰⁸

[78] Dr. Leahey predicted for TSP concentrations, that the AAAQG of 100 and 60 µg/m³ for daily and annual average concentrations, would be exceeded near the vicinity of the gravel pits, but exceedances would be rare at the Appellant's residence "...occurring only about 0.05% of the time."¹⁰⁹

[79] Modeling completed by Dr. Leahey predicted hourly and annual average concentrations of VOCs, PAHs, and metals "...tend to be at least 100 times less than the relevant ESL [(Effect Screening Levels)] values."¹¹⁰ He considered the exceedances very small compared

sources of dust emissions, according to Dr. Leahey, would be the paved and unpaved roads, the removal of topsoil, and overburden replacement. See: Affidavit of Dr. Douglas Leahey, Jacques Whitford Environmental Report, dated June 14, 2002, at pages 7-8.

¹⁰⁷ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Douglas Leahey, Jacques Whitford Environmental Report, dated June 14, 2002, at page 11.

¹⁰⁸ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Douglas Leahey, Jacques Whitford Environmental Report, dated June 14, 2002, at pages 13 and 14.

¹⁰⁹ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Douglas Leahey, Jacques Whitford Environmental Report, dated June 14, 2002, at page 14.

¹¹⁰ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Douglas Leahey, Jacques Whitford Environmental Report, dated June 14, 2002, at page 14.

to those that "...occur routinely because of wind blown dust resulting from agricultural activities, traffic on unpaved municipal roads etc."¹¹¹

[80] Dr. Leahey summarized the effect of dust emissions by stating dust "...generated by vehicle traffic on the paved and unpaved roads and associated with the proposed pit operations and topsoil salvage, will be a source of fine ($PM_{2.5}$) as well as coarse particulate matter (PM_{10} , TSP)." He said predictions of air quality impacts of this dust, which will be minimized through regular water application and pavement sweeping, have shown ambient concentrations of $PM_{2.5}$ at area residences from a combination of emissions from roads plus diesel exhaust will remain well below values stipulated in the Canadian Wide Standard. He said operations at Lafarge's proposed pit should therefore not be of concern for ambient $PM_{2.5}$ concentrations."¹¹²

[81] Dr. Leahey completed further modeling after the release of the Levelton Report by the Director. The results for NO_2 and SO_2 remained the same. The predicted concentrations of $PM_{2.5}$ from diesel exhaust remained below the CWS."¹¹³

[82] When assessing $PM_{2.5}$ emissions from diesel exhaust and dust sources, Dr. Leahey completed modeling in controlled and uncontrolled conditions. He found the contrast in predicted concentrations considerable. If dust emissions were not controlled concentrations were predicted to exceed $100 \mu g/m^3$ over large areas including receptors at locations A, B, C and D. But if watering and sweeping measures are taken to control the dust then all concentrations should be within $65 \mu g/m^3$.¹¹⁴

[83] Under controlled conditions, Dr. Leahey found predicted $PM_{2.5}$ emissions less than $50 \mu g/m^3$ except adjacent to roads leading from existing operations. When adding background concentrations to the model, he found that it might be assumed typical background concentrations are similar to median $PM_{2.5}$ concentrations of about $8.5 \mu g/m^3$ as observed in

¹¹¹ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Douglas Leahey, Jacques Whitford Environmental Report, dated June 14, 2002, at page 20.

¹¹² See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Douglas Leahey, Jacques Whitford Environmental Report, dated June 14, 2002, at page 19.

¹¹³ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Douglas Leahey, Jacques Whitford Environmental Report, dated July 11, 2002, at pages 13 and 14.

¹¹⁴ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Douglas Leahey, Jacques Whitford Environmental Report, dated July 11, 2002, at page 14.

downtown Calgary. He considered this assumption "conservative" because winds at a given locations from the gravel pits do not usually align with the direction from Calgary. He indicated that even if this assumption is adopted, with appropriate implementation of dust control measures, emissions from the gravel pits should not result in exceedances of the CWS for PM_{2.5} in residential areas.¹¹⁵

[84] Dr. Leahey found the USEPA ambient air quality standards for the daily average of PK^o emissions would be "...exceeded over a large area surrounding the gravel pits unless there are controls on dust emissions." He suggested that "...if these controls are at the level which will be maintained at the Lafarge sand and gravel pit then there should be no exceedance of the standard except possibly at the 120 Street S.E. junction and on roads exiting the Burnco and Rolling Mix properties." He suggested the potential for minor exceedances in residential areas along the road exiting from the Rolling Mix operations may indicate a need for further control measures to reduce the dust generation.¹¹⁶

[85] When the assessment is done for annual average PK^o concentrations, Dr. Leahey found that without controls the USEPA standard of 50 µg/m will be exceeded surrounding the Burnco and Rolling Mix sand and gravel pits. If controls were applied, he suggested "...there should be no exceedances of the standard under existing conditions, even within Burnco property and also under future conditions when the Lafarge sand and gravel pit is operational."¹¹⁷

[86] Modeling completed by Dr. Leahey indicated TSP concentrations would be exceeded. He stated that predicted TSP concentrations for uncontrolled dust conditions "...show Alberta's daily average guideline value of 100 µg m⁻³ may be greatly exceeded in large areas surrounding the existing sand and gravel pits." He said predicted ambient concentrations of TSP for controlled dust emission situations "...show that exceedances of the 100 µg m⁻³ guideline are still predicted to occur over a wide area surrounding the three gravel pits including sites A, B and

¹¹⁵ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Douglas Leahey, Jacques Whitford Environmental Report, dated July 11, 2002, at page 15.

¹¹⁶ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Douglas Leahey, Jacques Whitford Environmental Report, dated July 11, 2002, at page 15.

¹¹⁷ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Douglas Leahey, Jacques Whitford Environmental Report, dated July 11, 2002, at page 16.

C." His additional calculations showed these "...exceedances would occur at receptors A, B and C only about 1.5, 1.0 and 0.6 percent of the time respectively."¹¹⁸

[87] When assessing the annual average TSP concentrations, Dr. Leahey found that under conditions of uncontrolled emissions the AAAQG value of $60 \mu\text{g}/\text{m}^3$ is predicted to be exceeded within a wide area surrounding the sources. If dust emissions are controlled, however, predicted areas of exceedance are greatly reduced to regions immediately to the main travel roads.¹¹⁹

[88] Dr. Leahey summarized his findings by stating "...plume dispersion estimates of $\text{PM}_{2.5}$, PK_0 and TSP concentrations resulting from operations at the existing Rolling Mix and Burnco pits under assumed uncontrolled conditions showed that they could appreciably exceed guideline values." He concluded "...cumulative effects of air emissions associated with these operations should result in acceptable air quality impacts provided that dust control measures are implemented to minimize emissions."¹²⁰

C. Director

[89] In her submission, the Director stated that, as a result of the initial letter from Dr. Davies, dated February 22, 2002, and with input from the Calgary Health Region, additional computer modeling was completed to determine $\text{PM}_{2.5}$ emission levels from the Lafarge Operation and diesel exhaust from the truck traffic. The Director retained an outside expert to perform the air emission modeling.

[90] In her submission dated July 17, 2002, the Director stated that she was willing to amend the approval. She said she was "...mindful of the concerns of the Appellant and believes that the proposed amending clauses to the Approval will permit a reasonable understanding of the background levels." She suggested if six months of background monitoring results show

¹¹⁸ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Douglas Leahey, Jacques Whitford Environmental Report, dated July 11, 2002, at page 16.

¹¹⁹ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Douglas Leahey, Jacques Whitford Environmental Report, dated July 11, 2002, at page 16.

¹²⁰ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Dr. Douglas Leahey, Jacques Whitford Environmental Report, dated July 11, 2002, at page 17.

cause for concern, she is aware of her authority under EPEA to undertake various actions to respond to that information with further amendments, orders, suspensions.¹²¹

[91] The Director recommended several amendments to the Approval. First, that "Lafarge will create and implement an ambient air monitoring program, subject to the Director's approval, that will monitor air quality in the approval area and create a response plan if the monitoring results exceed pre-determined values." Second, that "Lafarge will monitor for TSP, PM_{2.5} and PK₀ for six months prior to the start of gravel mining operations." Third, that "Lafarge will create and implement a dust suppression plan, subject to the Director's approval." Fourth, that "Lafarge will provide reporting to the Director and the Calgary Health Region for the monitoring." Fifth, that "...the disturbed area of the site will be restricted to 10 hectares." Sixth, that "...the types of equipment used by Lafarge will be specified."¹²²

[92] The Director stated that her jurisdiction to regulate traffic is limited as the municipality, the federal government as well as other provincial agencies have the authority to regulate traffic and the management of the roads.

[93] The Director submitted while she does have jurisdiction to regulate noise, she "...chose not to exercise it in this circumstance as the matter had been adequately dealt with by the local municipality through the terms of the Development Permit." She stated that the Development Permit issued to Lafarge sets "...quite stringent requirements in regards to noise."¹²³ She submitted if she had regulated noise in the Approval, it would not have provided further requirements than in the Municipal District of Rocky View's Development Permit as EPEA and regulations set no limits.¹²⁴

[94] The report prepared by the Director's consultant, Levelton Engineering Ltd. ("Levelton" or "Levelton Report"), was included as part of the Director's submission on July 3,

¹²¹ See: Director's Submission, dated July 17, 2002, at paragraph 29.

¹²² See: Director's Submission, dated July 17, 2002, at paragraph 24.

¹²³ Condition 19 of the Development Permit issued by the Municipal District of Rocky View provides:
"That noise control measures that limit noise to 55 dba₆₀ shall be followed including the crusher to be enclosed for noise attenuation, and continuous monitoring data shall be submitted with the annual report to the Development Officer and these are to be conducted from the property line."

¹²⁴ See: Director's Submission, dated July 17, 2002, at paragraphs 45 to 47. The Director also submitted arguments with respect to the Appellant's concerns regarding groundwater and the natural environment and wildlife. As these concerns were not included as issues in the hearing, they will not be discussed in this decision.

2002. Analyses were completed to determine the effect of vehicle emissions and dust from the pit operation and wind erosion from the road.

[95] The Levelton Report indicates baseline concentrations of total suspended particulates would exceed guidelines more than 90 percent of the time.¹²⁵ At the Appellant's residence, the 24-hour maximum would be exceeded five days each year. However, the annual level would be 22.2 percent of the guidelines.¹²⁶ When predicting emissions from Lafarge only, the Levelton Report indicates annual concentrations did not exceed the guidelines. At the Appellant's residence, the level was half the guideline limit.¹²⁷ When road traffic was added, the concentration of total suspended particulates was 64 percent of the guidelines. Road dust was a significant contributor to the predicted increase in total suspended particulate levels.¹²⁸ If all sources were considered, the 24-hour guideline levels were exceeded more than 50 days per year, but at the Appellant's residence, the level would be exceeded seven days per year. The Levelton Report predicted that the annual guidelines would not be exceeded at the Appellant's residence.

[96] Although predicted levels were calculated for PM₁₀, the Levelton Report indicated no guidelines were available to determine if the results fell within acceptable levels. However, for the PM_{2.5}, the baseline levels exceeded the guidelines at some of the measured sites but not at the Appellant's residence.¹²⁹ For the Lafarge Operation alone, the concentration of PM_{2.5} at the Appellant's residence would be 12 percent of the guideline level:¹³⁰ This level increases to 13.7 percent of the guidelines when traffic is included with the Lafarge Operation.¹³¹ When all sources are considered, including the existing facilities, the Lafarge Operation, and truck traffic, the level at the Appellant's residence reaches 87.8 percent of the guideline limits.¹³²

¹²⁵ See: Levelton Report, at page 26. As guidelines are not available specifically for gravel operations, different existing standards were used to determine if the emission levels were excessive. For Total Suspended Particulates, the Alberta Ambient Air Quality Guidelines limits were used which have a 24-hour limit of 100 ug/m³ and an annual limit of 60 ug/m³.

¹²⁶ See: Levelton Report, at page 27.

¹²⁷ See: Levelton Report, at page 30.

¹²⁸ See: Levelton Report, at page 33.

¹²⁹ See: Levelton Report, at page 41. The guidelines used for PM_{2.5} were the Canada Wide Standards that have a 24-hour limit of 30 ug/m³.

¹³⁰ See: Levelton Report, at page 44.

¹³¹ See: Levelton Report, at page 47.

¹³² See: Levelton Report, at page 50.

[97] The Levelton Report assessed predicted emissions of volatile organic compounds and polycyclic aromatic hydrocarbons. For all sources, predicted short-term concentrations were a "...small fraction of the respective ESL ..." and the "...maximum predicted concentrations for long-term concentrations are well below the ESL."¹³³

[98] The air quality assessment performed by Levelton was summarized. It indicated that predicted baseline ground-level concentrations of TSP and PM_{2.5} were above guideline levels in a small area on the South side of the Bow River. The "Project Alone" scenario predicted maximum 24-hour average ground-level TSP and PM_{2.5} concentrations above the guidelines at the Project boundary on the North side of the Bow River. The "Project with Traffic" scenario predicted levels above the guidelines for 24-hour TSP and 24-hour PM_{2.5} ground-level concentrations at two locations at the edge of the Project site on the North side of the Bow River. The "All Sources" scenario predicted results above the guidelines at several locations. Baseline sources were the primary contributors to maximum concentrations at the discrete receptors located on the South side of the Bow River, while the Project operations were the primary contributors to the maximum concentrations for the areas on the North side.¹³⁴

[99] The Director provided her submission on directly affected on March 4, 2002. She did not take a position as it relates to dust but noted the majority of the concerns raised by the Appellant related to existing facilities. The Director submitted the Appellant failed to show the regulated noise limit for the Lafarge Operation will potentially harm or impair her specifically and in a different manner from the general population.¹³⁵

D. Calgary Health Region

[100] The Calgary Health Region provided a submission to the Board on July 17, 2002, as an affidavit by Dr. Timothy Lambert. The CHR stated its primary concerns were health impacts from particulate matter and polycyclic aromatic hydrocarbons emitted into the air from

¹³³ See: Levelton Report at page 53.

¹³⁴ See: Levelton Report at pages 61 and 62.

¹³⁵ In the Board's Decision on the issues, it was clearly stated that the other facilities would not be an issue in the hearing as the Approval being appealed was with respect to the Lafarge Operation only. The Director did state that an approval amendment application had been filed by Rolling Mix, and part of the review process will include public notification. See: Director's Letter, dated March 4, 2002.

Lafarge. Based on the information available, Dr. Lambert did "...not support the Lafarge gravel pit application without additional conditions on the AENV [(Alberta Environment)] approval." The conditions listed included air monitoring, to measure present conditions as well as after the Lafarge Operation is operating, and a contingency plan to mitigate air impacts, including dust releases, PM_{2.5}, and secondary particle formation from the diesel combustion.¹³⁶

[101] Dr. Lambert stated the 24-hour average sulfur dioxide emissions concentrations given in the Approval Holder's report are within the acceptable range as determined by the Agency for Toxic Substances and Disease Registry.¹³⁷ He qualified this by stating the data had limited value as the Approval Holder's consultant had underestimated the number of trucks that would be used, and the study did not assess SO₂ emissions at a site where cumulative effects would be most noticeable.

[102] Dr. Lambert stated that "...PM_{2.5} has been linked to exasperation of asthma, hospital emissions and lung cancer. The Health Canada reference concentration for adverse health is 15 µg/m³ for 24 hours, even though a threshold has not been established."¹³⁸ He also referred to the Canada Wide Standard that set the limit at 30 ug/m³ for 24 hours. According to Dr. Lambert, the "...regional health authorities have suggested that airshed monitoring should begin at 10 ug/m³ PM_{2.5} and management of the airshed at 20 ug/m³ PM_{2.5}." Based on the data provided in the Director's report, Dr. Lambert stated that baseline conditions near the Appellant's residence are "...well above the Health Canada reference concentration of 15 ug/m³."¹³⁹ He further stated the Levelton Report indicates the

"...cumulative impact from all facilities and background air is well above the CWS guideline of 30 ug/m³ PM_{2.5}. If the contribution from the city of Calgary is excluded, PM_{2.5} levels are well above the Health Canada reference concentration, and approaching or above 30 ug/m³ PM_{2.5} at the residences."¹⁴⁰

¹³⁶ See: Calgary Health Region Submission, dated July 17, 2002, Affidavit of Dr. Timothy Lambert, at page 9.

¹³⁷ According to Dr. Timothy Lambert, the Agency for Toxic Substances and Disease Registry has determined that the level which adverse health impacts would not be expected is 26 ug/m³ SO₂ for periods between 1 day and 2 weeks See: Calgary Health Region Submission, dated July 17, 2002, Affidavit of Dr. Timothy Lambert, at page 3.

¹³⁸ See: Calgary Health Region Submission, dated July 17, 2002, Affidavit of Dr. Timothy Lambert, at page 3.

¹³⁹ See: Calgary Health Region Submission, dated July 17, 2002, Affidavit of Dr. Timothy Lambert, at page 4.

¹⁴⁰ See: Calgary Health Region Submission, dated July 17, 2002, Affidavit of Dr. Timothy Lambert, at page 4.

[103] In relation to PM₁₀, Dr. Lambert referred to Health Canada standards that state a reference concentration for PM₁₀ at 25 ug/m³ (24 hour average) for adverse health effects including morbidity and mortality. For asthma in Toronto, Yin et al. (2002) found coarse P₁₀ 2.5 with a mean concentration of 12.17 ug/m³ averaged over 5-6 days was significantly associated with asthma hospitalization of children. Desqueyroux et al. (2002) observed a significant effect of 26 ug/m³ (24 hour average) PM₁₀ on adult asthma attacks with a 3 to 5 day lag. The lag time in the effect is consistent with the current understanding of the biological plausibility of asthma attacks. The Health Canada (1999) PM₁₀ ambient air criteria of 25 ug/m³ maximum 24-hour average shows baseline conditions are problematic for adverse health effects to various receptors in the area of existing gravel pits.¹⁴¹

[104] Dr. Lambert compared levels with the British Columbia ambient air quality guideline of 50 ug/m³ and found the "...modeled maximum data show baseline exceedances at the Court [residence]."¹⁴²

[105] In his discussion of crustal particulate matter and crystalline silica, Dr. Lambert presented studies that refuted Health Canada's statement that "...crustal or soil-derived coarse particles are not associated with any great increases in respiratory disease in two studies carried out in western North America' (Health Canada 1999, p. 12-89)."¹⁴³ Dr. Lambert stated that crystalline silica, a component of crustal particulate matter, is a human carcinogen and associated with autoimmune disease and pulmonary fibrosis.¹⁴⁴ According to Dr. Lambert's calculations, the Lafarge Operation would result in an increase in the amount of crystalline silica by a factor of 10 over the estimated annual average in rural areas.¹⁴⁵ When assessing the carcinogenic effect, Dr. Lambert concluded that, if the background concentration of 2.5 ug/m³ of crystalline silica is added to the modeled emission concentrations, the "...cancer risk may become unacceptable."¹⁴⁶

¹⁴¹ See: Calgary Health Region Submission, dated July 17, 2002, Affidavit of Dr. Timothy Lambert, at page 5.

¹⁴² See: Calgary Health Region Submission, dated July 17, 2002, Affidavit of Dr. Timothy Lambert, at page 5.

¹⁴³ See: Calgary Health Region Submission, dated July 17, 2002, Affidavit of Dr. Timothy Lambert, at page 5.

¹⁴⁴ See: Calgary Health Region Submission, dated July 17, 2002, Affidavit of Dr. Timothy Lambert, at page 6.

¹⁴⁵ Dr. Lambert based this on studies done by the Environmental Protection Agency and Alberta Environment that reported rural background levels of crystalline silica was in the range of 0.2 to 0.3 ug/m³ and 0.2 to 0.5 ug/m³, respectively. Dr. Lambert compared these figures with the modeled estimates of 2.5 ug/m³ in the Director's report. See: Calgary Health Region Submission, dated July 17, 2002, Affidavit of Dr. Timothy Lambert, at page 6.

¹⁴⁶ See: Calgary Health Region Submission, dated July 17, 2002, Affidavit of Dr. Timothy Lambert, at page 7.

[106] The Calgary Health Region summarized its discussion regarding volatile carbons and polycyclic aromatic hydrocarbons by stating that the predicted annual averages were less than the 10^{-6} cancer risk level for lifetime exposure.

E. Closing Submissions

1. Appellant

[107] In closing arguments, the Appellant reiterated "...she clearly has a 'personal interest' in the Approval since it will result in the release of air pollutants and noise that will migrate from the Lafarge Operation to the Appellant's Residence."¹⁴⁷ She further submitted "...her interests relate to the purposes of the Act as set out in section 2(a), (b), (d), (f) and (g)."¹⁴⁸

[108] The Appellant submitted she "...is an asthmatic and asthmatics are generally more sensitive to exposures to Particulate Matter."¹⁴⁹ Based on the opinion of Dr. Davies, she stated that air pollutants migrating from Lafarge to her residence are "...harmful substances that will deteriorate air quality..." "...increase risk of health impacts...", and "...may cause health impacts, especially given the already existing air pollution burden affecting the local airshed."¹⁵⁰

[109] The Appellant submitted "...any further addition of air pollutants will only add to the already existing health risks and thereby increase the potential that the Appellant's health will be adversely affected." She submitted that proving direct health effects is not required to establish standing. She believed "...potential impacts to air quality and potential increased risk of adverse impacts to the Appellant are of relevance in establishing standing." In this case, she believed there was no doubt she will be exposed to substances from the Lafarge pit that will deteriorate the air she breathes and increase her risk of nuisance or health impacts.¹⁵¹ She submitted that based on the evidence of Mr. Chin-Quee and Mr. Davis, noise will migrate from

This was based on the "...estimate of the 10^{-6} cancer risk level for lifetime exposure to crystalline silica range between 0.0157 and 5.6 ug/m³."

¹⁴⁷ See: Appellant, Closing Arguments, dated July 31, 2002, at paragraph 8.

¹⁴⁸ See: Appellant, Closing Arguments, dated July 31, 2002, at paragraph 14.

¹⁴⁹ See: Appellant, Closing Arguments, dated July 31, 2002, at paragraph 16.

¹⁵⁰ See: Appellant, Closing Arguments, dated July 31, 2002, at paragraph 17.

¹⁵¹ See: Appellant, Closing Arguments, dated July 31, 2002, at paragraphs 20 and 21.

Lafarge to her residence. She said each of the assessments indicated the proposed Lafarge pit would result in adverse environmental noise levels at her residence.¹⁵²

[110] The Appellant argued it would be incorrect to assess Lafarge in isolation without recognition of the current state of the local environment. She said that when considering the existing baseline levels of air pollutants "...the Lafarge project will add to an unacceptable level of air pollution and will increase the risk of a health impact..." to her. She submitted Lafarge "...in and of itself, is a significant source of Particulate Matter at the Appellant's Residence."¹⁵³

[111] The Appellant questioned the Approval Holder's experts analyses and interpretation of results. She argued Lafarge inaccurately characterized incremental impacts of by comparing emissions from Lafarge alone to an exaggerated existing baseline emissions level. Relying on this comparison, she suggested Lafarge takes the position incremental impacts from its facility is small. The Appellant stated this may be true in an uncontrolled scenario where predicted concentrations of particulate matter significantly exceed all known or recognized guidelines or criteria it is not true when compared to other reference points such as the AAAQG, the CWS and the Health Canada Reference Levels. The Appellants argued that when the predicted levels are compared against these criteria, Lafarge alone is a significant source of harmful pollutants at her residence.¹⁵⁴

[112] In summary, the Appellant submitted that incremental risk is dependent upon what comparison is made. The Appellant stated: "If you compare the incremental contribution to emissions from existing facilities that are out of control in terms of emissions, then the relative contribution of the Lafarge operation may appear small in comparison." If the emissions of Lafarge are compared to other measures such as the relevant air quality guidelines or the tonnes per day emitted from the other facilities under a controlled scenario "...it is clear that the Lafarge operation will contribute significantly to air pollutants at the Appellant's Residence." The Appellant submitted the small incremental risks argued by Lafarge and its experts are the result of comparisons against exaggerated background risks. She said thus "...the arguments are

¹⁵² See: Appellant, Closing Arguments, dated July 31, 2002, at paragraphs 22 and 23. The "assessments" referred to are the measurements taken and compared to the AEUB Guide 38 and three other "widely accepted methods for assessing potential noise effects."

¹⁵³ See: Appellant, Closing Arguments, dated July 31, 2002, at paragraph 26.

¹⁵⁴ See: Appellant, Closing Arguments, dated July 31, 2002, at paragraph 31.

misleading, and as pointed out by Dr. Davis, the approach is misconstrued and in direct contradiction of convention.”¹⁵⁵

[113] The Appellant submitted the assessments completed by JWEL significantly underestimate fugitive emissions from Lafarge "...because they assume that the only sources of such emissions are from vehicular traffic and stripping of topsoil." She submitted "...JWEL's assumption that there will be no fugitive emissions of Particulate Matter from handling of pit material and from wind erosion is unsupportable.”¹⁵⁶

[114] The Appellant questioned the Director's decision based on available baseline data. The Appellant submitted that "...fundamental to the decision making process of the Director is to ascertain the suitability of the site for the proposed Lafarge operation." She submitted that the obligation of the Director is to determine whether existing air quality is suitable and then whether another source of the same pollutants can safely be added to the existing baseline. She stated that the evidence currently before the Board is that existing baseline air quality is such that the site is not currently suitable for the proposed Lafarge operation.¹⁵⁷

[115] In assessing cumulative effects of the emissions, the Appellant argued "...projects cannot be assessed in isolation if the risk to human health and safety is to be reasonably assessed." She said cumulative effects comparisons indicate recognized environmental and health thresholds are predicted to be exceeded even without including reasonable background concentrations of particulate matter assuming emissions from all 3 facilities are controlled.¹⁵⁸

[116] The Appellant also submitted the Board should "...require compliance with the AAAQG and other recognized criteria prior to allowing Lafarge to proceed...", and that "...the AAAQG and Health Canada Reference Levels be complied with and enforced with vigour.”¹⁵⁹

[117] The Appellant argued the threshold test for directly affected does not require proof of harm, stating the issues are whether she may be affected by the air pollutant from

¹⁵⁵ See: Appellant, Closing Arguments, dated July 31, 2002, at paragraph 35.

¹⁵⁶ See: Appellant, Closing Arguments, dated July 31, 2002, at paragraph 37.

¹⁵⁷ See: Appellant, Closing Arguments, dated July 31, 2002, at paragraphs 42 and 43.

¹⁵⁸ See: Appellant, Closing Arguments, dated July 31, 2002, at paragraph 58.

¹⁵⁹ See: Appellant, Closing Arguments, dated July 31, 2002, at paragraph 63.

Lafarge either independently or on a cumulative basis. She said the Imperial Decision¹⁶⁰ makes it clear that proof of risk or harm is not required for regulatory authorities to take action to protect the environment and human health. She submitted in this case there is compelling evidence she is currently "...at risk in respect of the existing air quality and that addition of more pollutants of the same kind from the Lafarge project will merely increase or heighten that risk."¹⁶¹

[118] The Appellant further submitted that "...in the face of existing conditions that indicate severe exceedances of relevant criteria, the Board cannot reasonably authorize any additional sources even if the Board concludes that the contribution from Lafarge will likely be small." She stated that "...once key thresholds have been exceeded, as is the present case, reasonable environmental and health management and the precautionary principle require that the existing condition be brought under control and assessed prior to any further sources being added." She suggested a decision to the contrary would allow regulators to continue to add other sources that individually are small, but cumulatively exacerbate an existing problem.¹⁶²

[119] The Appellant did not agree with the noise analyses by the Approval Holder's consultants, submitting "...the Patching Noise Study has disregarded the existing ambient in its assessment." She suggested: "As a result, Guide 38 has not been properly applied, noise impacts at the Appellant's Residence are significantly understated and Patching's reported permissible sound level (PSL) is overstated and pit operations will generate noise at her residence in excess of AEUB permissible sound levels." She indicated that "...the conclusions reached in the Patching Noise Study pertaining to compliance with AEUB guidelines are incorrect and cannot be relied upon."¹⁶³

[120] The Appellant stated that

"...given the topographical constraints coupled with the nature of the operations and types of equipment used, mitigating Lafarge E-P-S Pit noise to levels which could comply with these standards is highly unlikely. Pit operations would result in significant, continuous adverse noise impact, for extended periods during pit

¹⁶⁰ *Imperial Oil Ltd. and Devon Estates Ltd. v. Director, Enforcement and Monitoring, Bow Region, Regional Services, Alberta Environment* re: *Imperial Oil* (21 May 2002) Appeal No. 01-062-R (A.E.A.B.).

¹⁶¹ See: Appellant, Closing Arguments, dated July 31, 2002, at paragraph 65.

¹⁶² See: Appellant, Closing Arguments, dated July 31, 2002, at paragraph 67.

¹⁶³ See: Appellant, Closing Arguments, dated July 31, 2002, at paragraph 74.

operations and would fundamentally impair the noise environment at the Appellant's residence."¹⁶⁴

[121] The Appellant submitted that the response of the Director to noise issues raised by the Appellant was "wrong at law," because the Director failed to take relevant information into consideration, had no evidence before it to reasonably decide the matter, and fettered her discretion by relying on an inflexible policy. The Appellant further argued that the evidence indicates the Director failed to exercise her discretion reasonably.¹⁶⁵

[122] The Appellant indicated these arguments were put forth because the Director chose to allow the Municipal District of Rocky View to regulated noise by way of the Development Permit. She argued the Director's failure to address the issue, even though it was in her jurisdiction "...resulted in an error in law." She argued the Director did not have any noise assessment in front of her when she decided noise levels were adequately dealt within the Development Permit. She continued, stating "...the law is clear that if a regulator authority makes a discretionary decision without any evidence to support it, the decision is at risk of being found to be an arbitrary use of power and *ultra vires*." She suggested a "...failure to take relevant considerations into account is just as erroneous at law..." and that in this case "...the Director failed to assess the impacts of noise associated with the Lafarge pit, despite concerns in this regard being raised by the Appellant and others in the community."¹⁶⁶

[123] The Appellant argued the Director fettered her discretion regarding noise impacts because, in her testimony, she stated an assessment of noise impacts is "...not part of the standard review process."¹⁶⁷ The Appellant further stated the law is clear that "...general policies or 'rules of thumb' may be followed by regulators, provided each case is individually considered on its merits." She submitted Lafarge was not considered individually for the noise issues she raised.¹⁶⁸

[124] In response to the Director's amendments, the Appellant agreed that monitoring prior to the start of the Lafarge Operation is required. However, the Appellant did not think the

¹⁶⁴ See: Appellant, Closing Arguments, dated July 31, 2002, at paragraph 80.

¹⁶⁵ See: Appellant, Closing Arguments, dated July 31, 2002, at paragraph 82.

¹⁶⁶ See: Appellant, Closing Arguments, dated July 31, 2002, at paragraph 84.

¹⁶⁷ See: Appellant, Closing Arguments, dated July 31, 2002, at paragraph 85.

¹⁶⁸ See: Appellant, Closing Arguments, dated July 31, 2002, at paragraph 85.

proposed monitoring would be adequate in determining baseline data. She also stated "...the amendments are designed to collect information needed by the Director to make decisions considering whether, and under what conditions, Lafarge ought to be authorized to operate." She indicated this is fundamental information necessary to complete the application that should be subject to public review prior to the issuance of the Approval.¹⁶⁹

[125] The Appellant submitted monitoring should be continuous for at least one year prior to start of Lafarge to ensure representative data are collected. The Appellant agreed with the Calgary Health Region that "trigger levels" should be the Health Canada Reference Levels.¹⁷⁰

[126] The Appellant argued "...it is fundamental that the public have an opportunity to review a complete application prior to an approval being issued so that it can avail itself of its rights under the legislation to file statements of concerns and notices of appeal." (Emphasis in the original.) She stated that when the application was submitted by Lafarge to the Director, her position was that "...there was absolutely no evidence on air emissions, health impacts or noise impacts." She continues that "...the Director still does not have sufficient information to decide whether or not, and under what terms, the Lafarge project ought to proceed."¹⁷¹

[127] The Appellant submitted

"...the Director's proposal to amend the Approval to acquire information necessary to decide whether, or under what conditions, Lafarge may operate has the effect of subverting and bypassing the entire public review process. Taken to its extreme, it would allow the Director to bypass any public involvement by issuing an approval that required no information upfront, but made final authorization by the Director subject to fulfilling information requirements set out as pre-conditions in the Approval."¹⁷²

The Appellant submitted that "...such a process is wrong at law."¹⁷³ She stated the evidence of the Director clearly indicated more information is required to determine what existing baseline emissions are from the existing facilities and "...the evidence of the Director, and the suggested amendments to the Approval, provide clear evidence that until the information is available the

¹⁶⁹ See: Appellant, Closing Arguments, dated July 31, 2002, at paragraph 88.

¹⁷⁰ See: Appellant, Closing Arguments, dated July 31, 2002, at paragraph 90.

¹⁷¹ See: Appellant, Closing Arguments, dated July 31, 2002, at paragraph 92.

¹⁷² See: Calgary Health Region Submission, dated July 17, 2002, Affidavit of Dr. Timothy Lambert, at page 4.

¹⁷³ See: Appellant, Closing Arguments, dated July 31, 2002, at paragraph 93.

Director is unable to fulfill its obligation under the ARP Regulation to assess suitability of this location for the proposed Lafarge Operation."¹⁷⁴

[128] The Appellant stated the Approval Holder is being asked to pay to determine effects of existing facilities on her. She said it is Lafarge who made a decision to construct a pit in a residential area with 3 existing pits and with knowledge of her health and noise concerns. To obtain an approval Lafarge is obligated to establish their project is safe within the context of the existing circumstances including the existing pits and the nearby residential communities.¹⁷⁵

[129] The Appellant, in response to the Approval Holder's statement regarding her experts failure to provide data of their own, submitted her concerns were that the Director had no evidence prior to issuing the Approval on which to reasonably conclude the Lafarge project would not result in adverse effects to the environment. She believed "...it is not the obligation of a private citizen to spend tens of thousands of dollars conducting air dispersion models and health impact studies that clearly should have been undertaken by Lafarge and the Director prior to issuing an Approval." She asserted the problem is that Lafarge and the Director ignored legitimate concerns she and others in the community raised until forced to address them in response to the Calgary Health Region's review of Dr. Davies' opinion. She noted none of the air dispersion and health studies would be before the Board had it not been for the initial opinion of Dr. Davies. The studies and views of the CHR clearly indicated her concerns were legitimate. Further, she submitted the Board should note her efforts have benefited not only herself, but other members of the community. Moreover, the information led to the Director's decision to make amendments to the Approval.¹⁷⁶

[130] In response to the Approval Holder's statements that the Appellant does not have standing because she has not proven harm, the Appellant argued that establishing that an individual's health will be harmed by a project is not the threshold for establishing that a party has been directly affected. She submitted there is no basis in EPEA or in the decisions of the Board to support the view that for the Appellant to establish standing, she must prove the project will result in actual harm to her health. The Appellant submitted this would exceed the threshold

¹⁷⁴⁴ See: Appellant, Closin rguments, dated July 31, 2002, at paragraph 94.

¹⁷⁵ See: Appellant, Final Arguments, dated August 9, 2002, at paragraph 3.

¹⁷⁶ See: Appellant, Final Arguments, dated August 9, 2002, at paragraph 14.

set for the main issues of the hearing that are based on the effects that air pollutants and noise may have on her. She suggested requiring proof of actual harm would "...distort the regulatory process from one that requires an applicant and a regulator to ensure that a project poses acceptable risks to one that requires individual citizens to prove that they are unsafe and will cause them adverse health effects." She stated that as testified by Dr. Davies, health studies are done to measure risk of health impacts, not to predict whether there will be an actual health impact to any particular individual. She suggested that throughout EPEA it is clear decisions concerning the environment are not limited to circumstances where there is certainty of harm.¹⁷⁷

[131] The Appellant responded to the statement made by Dr. Leahey that there will not be any time when the emissions from all three facilities in the area will reach the Appellant's residence at the same time. Dr. Leahey's evidence was that no single wind condition could simultaneously carry emissions from each of the facilities at the same moment in time, given their respective proximity, to the Appellant's Residence. However, the Appellant submitted "...that winds change and during the 24 hour averaging period (which is the basis of many air quality guidelines for Particulate Matter), particles from all facilities and those from background sources can and will reach the Appellant's Residence."¹⁷⁸

[132] The Appellant, referring to the testimony of Dr. Rogers, stated there was "...the distinct possibility of health impacts from the existing gravel pits under uncontrolled conditions." She submitted "...there is no evidence to indicate Dr. Rogers is of the opinion that the emissions from the Lafarge operation in combination with the uncontrolled emissions from the existing gravel pits will **not** cause harm to the health of the Appellant." (Emphasis in the original.) The Appellant submitted "...that this condition is artificial, unrealistic and purely hypothetical since the proposed Lafarge facility will operate in close proximity to the 3 existing gravel pits."¹⁷⁹

[133] The Appellant further submitted that "...since Dr. Rogers does not contest the distinct possibility of health impacts from the emissions from the existing facilities based on the

¹⁷⁷ See: Appellant, Final Arguments, dated August 9, 2002, at paragraph 18.

¹⁷⁸ See: Appellant, Final Arguments, dated August 9, 2002, at paragraph 30.

¹⁷⁹ See: Appellant, Final Arguments, dated August 9, 2002, at paragraph 38.

unacceptable air quality predictions, it follows that any further addition of emissions from the Lafarge Operation will only add to the likelihood of health effects."¹⁸⁰

[134] In response to the Director's closing submissions, the Appellant stated her concerns on the "standard review process" accepted by the Director. She said the evidence of the Director during the hearing process was that despite these concerns being raised, and despite being aware that particulate matter was a health concern, the Director undertook a standard review process for gravel pits that did not include any requirement to provide information on the nature and extent of substances to be released, nor did it include any consideration of cumulative effects.¹⁸¹

[135] The Appellant submitted "...it was not necessary for the Director to be specifically advised of the Appellant's asthma condition to take action to respond to the concerns of the community and the Appellant." The Appellant's Statement of Concern was filed on behalf of several concerned residents, and as noted by the Director, she stated many concerned residents with chronic breathing problems seek refuge in the country, and currently, several of these individuals live in the affected area. The Appellant submitted that "...when these types of concerns are expressed, the Director is obligated to move out of the 'standard review process' and consider the concerns and the application on its own merits and not in accordance with an inflexible policy." She suggested the response of the Director was inappropriate because it failed to consider cumulative impacts despite knowing that major sources were already in existence and being regulated by her.¹⁸²

[136] The Appellant questioned the Director's actions, stating "...both the Appellant and the community may currently be exposed to unacceptable and unhealthy levels of air pollutants and noise, and now face the prospect of exposure to more air pollutants and more noise." The Appellant said she was "...required to take on this extraordinary role because of the Director's failure to address the concerns of the Appellant in any real or substantive manner [and] ...in fact fulfilled the role of the Director." The Appellant questioned why she was never contacted by the Director or anyone else at Alberta Environment to discuss her concerns directly,

¹⁸⁰ See: Appellant, Final Arguments, dated August 9, 2002, at paragraph 38.

¹⁸¹ See: Appellant, Final Arguments, dated August 9, 2002, at paragraph 54.

¹⁸² See: Appellant, Final Arguments, dated August 9, 2002, at paragraph 54.

and why Alberta Environment did not contact the Calgary Health Region for advice when her Statement of Concern was filed, instead of waiting until she hired Dr. Davies. The Appellant stated "...surely the Director should be expected to have a greater level of understanding and concern for potential health affects associated with gravel pit operations than members of the community."¹⁸³

2. Calgary Health Region

[137] In closing arguments, the Calgary Health Region submitted the test for directly affected status has been met. They said "...the project may pose adverse health impacts from dust and air pollution. Therefore the Calgary Health Region's, and resident's concerns, should have been formally addressed prior to issuance of Approval No. 150612-00-00."¹⁸⁴

[138] It continued its arguments by referring to reports provided by the Director and the Approval Holder, stating "...that virtually all air guidelines were exceeded at the residential properties, and the Levelton Report shows exceedence [*sic*] at Linda Court's residence for PM₁₀ and PM_{2.5} for the project alone with traffic and the cumulative effect scenario." The CHR is of the opinion that air dispersion modeling results by Levelton and JWEL, suggest the residents may be directly affected by existing gravel pits and the proposed Lafarge gravel pit operation. They both predicted that emissions from the Lafarge operations will reach the residents.¹⁸⁵

[139] The CHR submitted it would be willing to accept the amended approval if the CHR recommendations are adopted. It further argued all its recommendations were agreed to by the Director and Lafarge witnesses, with the exception of the second sentence of recommendation number 2. The CHR further noted that Lafarge stated it is willing to work with the CHR at improving air quality in this area and in Calgary generally.¹⁸⁶

[140] In response to the report provided by Dr. Zelt and Dr. Rogers, the Calgary Health Region questioned their interpretation of acceptable standards. They argued "Dr. Rogers and Dr. Zelt both agreed that the Health Canada reference concentrations are for a wide variety of health

¹⁸³ See: Appellant, Final Arguments, dated August 9, 2002, at paragraph 56.

¹⁸⁴ See: Calgary Health Region, Closing Arguments, received July 31, 2002, at page 2.

¹⁸⁵ See: Calgary Health Region, Closing Arguments, received July 31, 2002, at pages 2 and 3.

¹⁸⁶ See: Calgary Health Region, Closing Arguments, received July 31, 2002, at page 3.

endpoints: mortality, morbidity, exasperation of asthma, increased hospital emissions, and increased cardiopulmonary disease." They indicated "Dr. Zelt also correctly testified that these health effects occur below the Health Canada reference concentrations, i.e., there is no threshold, and that the Health Canada reference concentrations are the point at which the health effects become statistically significant." The CHR submitted Dr. Rogers and Dr. Zelt understood that the Canada Wide Standard of 30 ug/m³ (24 hours, 98th percentile) is not based on health effects but rather on other factors. Therefore, the CHR argued that the CWS is not an appropriate trigger concentration for air monitoring or a management guideline. The CHR understood Alberta Environment has recommended treating 30 ug/m³ (24 hours) as a maximum guideline, not a 98th percentile guideline, in the AAAQG process.¹⁸⁷

[141] The Calgary Health Region argued that any further contribution from the Lafarge Operation will increase levels of air pollutants above where health effects have been documented as statistically significant. They suggested "...it is actually the Lafarge contribution of air pollutants, which will increase the air to unacceptable levels, if we bring existing facilities under control to meet the target concentrations..." and that "Lafarge emissions are a significant contribution and very important source with respect to protecting public health."¹⁸⁸

[142] The Calgary Health Region recommended ambient air monitoring be completed prior to the start of the Lafarge Operation and continue after it is operational.¹⁸⁹

[143] The Calgary Health Region further submitted that given Lafarge and Alberta Environment "...would not agree to any targets for air monitoring in the hearing, nor propose any action targets for air monitoring, the Calgary Health Region has no assurance that future unspecified amendments to the approval will be acceptable from a public health perspective." They thus requested "...the Environmental Appeal Board either deny Approval No.150612-00- at this time, or grant the approval including the specific amendments recommended by the Calgary Health Region."¹⁹⁰

¹⁸⁷ See: Calgary Health Region, Closing Arguments, received July 31, 2002, at page 4.

¹⁸⁸ See: Calgary Health Region, Closing Arguments, received July 31, 2002, at page 4.

¹⁸⁹ See: Calgary Health Region, Closing Arguments, received July 31, 2002, at page 5.

¹⁹⁰ See: Calgary Health Region, Closing Arguments, received July 31, 2002, at page 5.

3. Director

[144] In closing arguments, the Director reiterated the recommendation to include the proposed amendments to the Approval as the experts at the hearing agreed that "...ambient air monitoring and management of air emissions are proper and necessary steps."¹⁹¹ The Director explained these amendments were recommended in response to modelled predicted exceedances and the need for control and management of the dust that all the experts agreed should take place.¹⁹²

[145] The Director continued with the position she was unaware of the Appellant's medical condition at the time the decision was made, as there was no indication of it in the Appellant's Statement of Concern. According to the Director, the first time she was advised, in writing, of the Appellant's medical condition was in an affidavit sworn by one of the Appellant's experts for the preliminary issue of directly affected."¹⁹³

[146] The Director stated the Approval was modified from the standard gravel pit approval to take into consideration issues raised by those who filed Statements of Concern. The additional clauses referred specifically to ground water and adverse effects caused by dust.¹⁹⁴

[147] The Director stated that modeling was completed by her expert to provide "...a conceptual idea of the potential magnitude of the air emissions and what this 'localized' airshed may look like." She continued: "It is the opinion of the Director that this localized airshed is a unique one in that it involves a number of gravel mining operations in relative close proximity to residential subdivisions and the city limits of Calgary."¹⁹⁵

[148] The Director stated the modeling indicated there is a potential for exceedances of the Alberta Air Ambient Quality Guidelines, and all the experts agreed these predictions were a cause for concern. The experts agreed the standard practice after a model predicts exceedance of a guideline is to require monitoring of those parameters. The Director stated: "The monitoring

¹⁹¹ See: Director, Closing Arguments, dated August 6, 2002, at paragraph 7.

¹⁹² See: Director, Closing Arguments, dated August 6, 2002, at paragraph 30.

¹⁹³ See: Director, Closing Arguments, dated August 6, 2002, at paragraph 15.

¹⁹⁴ See: Director, Closing Arguments, dated August 6, 2002, at paragraph 14.

¹⁹⁵ See: Director, Closing Arguments, dated August 6, 2002, at paragraph 21.

allows everyone to have the actual monitoring data so then one knows what the actual ambient air quality is vs. the various predictions we have now."¹⁹⁶

[149] The Director's recommendations require Lafarge to conduct additional monitoring at the site and the surrounding area. The Director stated that by requiring Lafarge to undertake these monitoring programs, she is requiring them to "...undertake actions which are not standard to the sand and gravel industry in Alberta but reflect the unique circumstances which exist in this situation."¹⁹⁷

[150] The Director referred to the "new" evidence obtained during the course of this hearing, including the reports provided by her consultant and the Approval Holder's consultant, plus the evidence of the experts. Based on this new information, the Director "...determined that she had before her sufficient information to draft the proposed amendments, which are a reasonable and considered response to the situation."¹⁹⁸

[151] A recommendation put forth by the Director requires Lafarge to complete six months of monitoring and data collection to determine ambient air quality. The Director stated "...this will give the Director and the other parties a reasonable set of data to determine the existing ambient air quality and evaluate possible trends so that a reasonable assessment can be made of the existing situation as well as the incremental effect of the Lafarge Operation on the local airshed." She said it is her "...intent that such existing ambient air data would include data from when the other existing pits are operating as well as when they are not." She said this monitoring data will be vital in her consideration of contingency dust suppression plans, other gravel pit operations and in determining when Lafarge can commence operations.¹⁹⁹

[152] The Director submitted the suggested amendments would put Lafarge on hold until the Director authorizes the construction of the project. She stated: "This will allow the Director to determine if 'other steps', involving Lafarge and / or the other operators, have to take place before Lafarge can commence operations."²⁰⁰

¹⁹⁶ See: Director, Closing Arguments, dated August 6, 2002, at paragraphs 26 and 28.

¹⁹⁷ See: Director, Closing Arguments, dated August 6, 2002, at paragraph 33.

¹⁹⁸ See: Director, Closing Arguments, dated August 6, 2002, at paragraph 35.

¹⁹⁹ See: Director, Closing Arguments, dated August 6, 2002, at paragraphs 42 and 43.

²⁰⁰ See: Director, Closing Arguments, dated August 6, 2002, at paragraph 61.

[153] The Director addressed cumulative effects by stating that in considering the original approval, the standard practice of Alberta Environment ("AENV") was not to do a detailed consideration of cumulative effects for sand and gravel operations. She said historically these operations are dealt with from the perspective of land conservation and reclamation. She noted that under the *Activities Designation Regulation*, gravel pits are listed under Division 3, Conservation and Reclamation. She said cumulative effects and air emissions are historically an issue for the large industrial projects and with large regional issues such as coal fired power plants and oil sands.²⁰¹

[154] The Director did note that, based on information provided by the consultants, the existing facilities will be reviewed. She stated that "...upon review of the Levelton Report and the Jacques Whitford reports, it is clear to AENV that the other operations in the area must be closely scrutinized. To that end, AENV is committed to meeting with the other operators to discuss their operations."²⁰²

[155] The amendments to the Approval proposed by the Director intend to provide data on the existing airshed. The Director stated: "Lafarge will provide further information which will be invaluable in the Department's and the CHR's review of the monitoring data." She said:

"Factors such as unusual events in the area, seasonal factors, meteorological factors, and operational factors of other facilities in the area etc. can be used to insure [*sic*] an informed evaluation of the data can take place. Care will have to be taken in the review of this information to recognize the multiple contributors to the airshed i.e. the operators, agricultural activities, construction, Calgary, 'mother nature' etc, before AENV takes any specific actions against any operator(s)."²⁰³

4. Approval Holder

[156] In closing arguments, the Approval Holder reiterated that the modeling showed any effect on the Appellant from the Lafarge Operation would be negligible.²⁰⁴

²⁰¹ See: Director, Closing Arguments, dated August 6, 2002, at paragraph 69.

²⁰² See: Director, Closing Arguments, dated August 6, 2002, at paragraph 70.

²⁰³ See: Director, Closing Arguments, dated August 6, 2002, at paragraph 73.

²⁰⁴ See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraph 60.

[157] The Approval Holder stated its concerns on why the appeal was filed and submitted that the underlying purpose was to have the operations at the existing facilities be brought to the Director's attention. The Approval Holder stated "Lafarge is concerned that this Appeal is being used as a mechanism for seeking change to the Other Operations." Lafarge submitted "...this is an entirely inappropriate manner in which to approach any problems which may exist in the neighbourhood due to the operations of Burnco and Rolling Mix." Lafarge stated,

"... the focus of the Appellants and CHR on further monitoring and assessment prior to start up has the effect of asking Lafarge to pay for determining what the risks are to the Appellant from Other operations, without reasonable assurance that at the end of the day, the Project will be able to proceed."²⁰⁵

[158] The Approval Holder argued that the Appellant provided little evidence the Board could use with any amount of reliability. It argued that "...the evidence presented by the experts for the Appellant amounted to nothing more than insignificant and inconsequential criticisms of the expert evidence presented on behalf of Lafarge and the Director." Lafarge submitted "...this evidence was of little value to the Board, as the Appellant's experts never presented any data or scientific assessments of their own, including any air quality or health risk assessments." Lafarge reminded the Board the onus is on the Appellant to show that she is directly affected and that Approval should be rescinded. Lafarge submitted "...the Appellant's experts did little to meet this onus, other than criticising the work of the other parties."²⁰⁶

[159] The Approval Holder submitted the Appellant had not provided sufficient evidence to show she was directly affected. They stated their evidence clearly demonstrated the Appellant will not be directly affected by the Approval, and therefore, she has no standing to bring the Appeal.²⁰⁷ Lafarge iterated,

"...after hearing all of the evidence presented at the Hearing, Dr. Davies is still not able to reach any conclusion that air-borne emission from the Project itself will harm the Appellant. Mr. Chin Quee admits that if the provisions of the

²⁰⁵ See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraphs 13 and 14.

²⁰⁶ See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraph 26.

²⁰⁷ See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraph 29.

Rocky View Order with respect to noise are met, the [A]EUB Directive will be complied with."²⁰⁸

[160] The Approval Holder criticized evidence provided by the Appellant's experts. It suggested Mr. Rudolph's evidence consisted almost entirely of critical and inaccurate analysis of the reports prepared by Dr. Leahey. Lafarge said "...in particular, there was disagreement between Mr. Rudolph and Dr. Leahey regarding the effect of wind on the creation of dust. This primarily related to the wetness of the gravel." Lafarge submitted "...the evidence of Dr. Leahey was more credible in this respect, as Mr. Rudolph's assertions are based upon visual assessments of the Other Operations, rather than the evidence at the Hearing and in the Director's record regarding the level of moisture in the gravel at the Project." Lafarge further submitted "...Mr. Rudolph's view should be given no weight, as he failed entirely to provide the Board with any reliable information on which it could conclude that the Appellant is likely to be harmed by emissions from the site."²⁰⁹

[161] In response to evidence provided by Dr. Davies, the Approval Holder submitted that

"...unlike Dr. Rogers, Dr. Davies did not provide any conclusive evidence regarding the presence or absence of harm to the Appellant from the Project, but based his opinion on generalities regarding the effect certain emissions can have upon human health, and analogies which, Lafarge submits, are of no assistance to the Board."^{53 210}

They said Dr. Davies repeatedly stated in his opinion "...there is the 'potential' for adverse impacts on the Appellant, but provided no data to show that there will in fact, be a significant and adverse impact upon the Appellant."²¹¹ The Approval Holder further stated "...the evidence presented by Dr. Rogers was in clear contrast to the unhelpful generalizing from Dr. Davies." They said "...Dr. Rogers demonstrated in a rational, professional, quantifiable and non confrontational manner that there will be no adverse health effects related to air quality caused

²⁰⁸ See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraph 30.

²⁰⁹ See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraphs 42 and 47.

²¹⁰ See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraph 48.

²¹¹ See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraph 48.

by the Project to the Appellant..." and "...his evidence ought to be preferred over Dr. Davies evidence."²¹²

[162] The Approval Holder argued that no evidence was presented to indicate current conditions of the airshed, even though the Appellant stated that the evidence before the Board was that air guidelines are currently being exceeded. Lafarge submitted "...there is no such evidence, and these arguments should be given no weight, as it ignores the fact that the so-called existing emission levels Dr Davies referred to are predictions based on worst case scenarios." Further, Lafarge submitted "...this is a misstatement of the evidence, as Dr. Davies and the Appellant are fully aware that predictions of emissions in worst case situations seldom, if ever, actually occur." Lafarge indicated there is no evidence presented at the hearing that there are any exceedances of any air quality guidelines currently, nor any evidence that any such exceedances are only attributable to the other operations.²¹³

[163] The Approval Holder brought forward the Appellant's failure to provide a medical opinion on her health. The Approval Holder stated "...the Appellant claims that the current air quality at her residence is compromised by the current nearby operations of Rolling Mix and Burnco, and that this in turn is affecting her health." However, they indicated she still "...failed to provide the Board with any evidence or proof from a member of the medical profession regarding her health, despite evidence that such information is crucial to a health risk assessment."²¹⁴

[164] The Approval Holder submitted "...it should not be penalised because of any uncontrolled emissions from Burnco and Rolling Mix, especially in light of the experts' reports which demonstrate that the contribution of the Project to the situation will be, under worst case conditions, minimal."²¹⁵

[165] The Approval Holder raised similar arguments for noise as with the other issues saying the Appellant has not presented any evidence to support an argument that the project will cause significant or adverse impact on sound levels and specifically, harm to the Appellant.

²¹² See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraph 54.

²¹³ See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraph 51.

²¹⁴ See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraph 53.

²¹⁵ See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraph 67.

Lafarge submitted "...the evidence supplied by Lafarge clearly demonstrates that, because of mitigation strategies committed to by Lafarge, there will not be any significant or adverse impact on noise levels and thus no impact upon the Appellant."²¹⁶

[166] In response to the Appellant's argument that the incremental approach to assessing the cumulative effect of Lafarge results in misleading results, the Approval Holder stated "...that applying an incremental approach is the most effective method of providing a prediction for the Board as to what the contribution of the Project will be to any cumulative impact."²¹⁷

[167] In response to the testimony provided by Mr. Chin-Quee, the Approval Holder stated the Appellant's argument that the Rocky View Order cannot be met ignores that Lafarge is required at law to meet requirements of any orders of the Municipal District to operate. Thus, they indicated, it is up to Lafarge to take whatever steps it must take to meet the requirements of the Rocky View Order for noise levels at the property line. Lafarge states that "...of utmost significance to the questions before the Board, Mr. Chin Quee agreed that if Lafarge can meet the requirements of the Rocky View Order, they will be in compliance with the [A]EUB Directive."²¹⁸

[168] In response to the Calgary Health Region's closing arguments, the Approval Holder submitted the evidence should be given little weight as it fails to account for provisions of EPEA that require the Director and the Board consider and balance the purposes of section 2 of the EPEA, which include but are not limited to health issues. Lafarge recognized that as a health authority, the CHR has as its principal focus the health of Calgary citizens, however, that does not alter the fact that this is an appeal under the EPEA, and its provisions must govern any decisions made by this Board and the Minister.²¹⁹

[169] The Approval Holder summarized its arguments of the Calgary Health Region's submission by stating that "...the submissions of the CHR are of no assistance to the Board in

²¹⁶ See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraph 71.

²¹⁷ See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraph 61.

²¹⁸ See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraph 79.

²¹⁹ See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraph 91.

making its determination of whether the Approval should be upheld, rescinded, or amended in accordance with the provisions of the EPEA."²²⁰

[170] In response to the Director's recommendation that the Board implement amendments to the Approval, the Approval Holder stated "Lafarge is prepared to agree to the Proposed Amendments, with the exception of some details."²²¹ The exceptions included "...there is no need for specific approval conditions to prescribe dust control measures associated with equipment." Lafarge submitted,

"...the onus should be on Lafarge to identify the best available technology or practice in the Dust Suppression Plan, which is then subject to the Director's authorization. Without specific clauses such as those which have been suggested, Lafarge will have greater flexibility to upgrade its equipment if the crushing plant is changed or a technology is changed (or does not exist)."²²²

Lafarge submitted only one sampling station is required to obtain the information needed and that if more are required, the Director should request the other two approval holders operating in the immediate vicinity to establish them. Lafarge also submitted that the monitoring station should be located at a representative location in the community and that three months of sampling should provide sufficient data to establish the ambient air conditions without the Lafarge Operation. Lafarge added that an implementation schedule for the air quality monitoring is not needed as it is being prescribed through the approval conditions.²²³

[171] The Approval Holder concluded by submitting the requirements of sand and gravel pits should be reviewed and higher standards implemented across the province. Lafarge suggested that although it understands the Board cannot make specific orders for other operations, it "...requests the Board to recommend a review of policy so that these types of requirements could be issued on a comprehensive basis throughout the province."²²⁴

²²⁰ See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraph 93.

²²¹ See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraph 88.

²²² See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraph 88.

²²³ See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraph 88.

²²⁴ See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraph 89.

III. DISCUSSION AND ANALYSES

A. Directly Affected - Generally

1. Section 91(1)(a)(i) of EPEA

[172] The Board first must determine if the Appellant is directly affected by the decision of the Director to issue an Approval for the Lafarge Operation. If the Board determines that an Appellant is not directly affected, the Board is without jurisdiction to hear the matter and the appeal must be dismissed. Pursuant to section 91(1)(a)(i) of EPEA, being directly affected is a prerequisite to filing a valid Notice of Appeal. Section 91(1)(a)(i) of EPEA provides:

"A notice of appeal may be submitted to the Board by the following persons in the following circumstances:

(a) where the Director issues an approval, makes an amendment, addition or deletion pursuant to an application under section 70(1)(a) or makes an amendment, addition or deletion pursuant to section 70(3)(a), a notice of appeal may be submitted (i) by the approval holder or by any person who previously submitted a statement of concern in accordance with section 73 and is directly affected by the Director's decision, in a case where notice of the application or proposed changes was provided under section 72(1) or (2)...."

2. Need for a Hearing

[173] In response to a preliminary motion by the Approval Holder arguing that the Appellant was not directly affected, the Board requested and received written submissions from the Parties.²²⁵ In most cases, the Board would review such submissions and make a decision on an appellant's directly affected status at this preliminary stage. Such a preliminary decision would determine whether a substantive hearing was required.

[174] Upon reviewing the submissions received from the Parties, the Board concluded that it required considerably more information to make the decision regarding the Appellant's directly affected status. The Board believed that in this case the issue of directly affected was

²²⁵ On February 15, 2002, the Board advised the Parties that it had decided to deal with the directly affected status of the Appellant and set out a schedule for written submissions on the directly affected issue. On February 22, 2002, the Board acknowledged receipt of the Appellant's Initial Submission with respect to her directly affected status. On March 4, 2002, the Board acknowledged receipt of the Response Submissions from the Approval Holder and the Director. The Board received the Appellant's Rebuttal Submission on March 11, 2002.

inextricably linked with the substantive issues of the appeal. In the preliminary motion, the Appellant argued she was directly affected because dust, other air pollutants, and noise from the Lafarge Operation impacted her.²²⁶ Conversely, the Approval Holder argued the Appellant was not directly affected because the dust, other air pollutants, and noise would either never reach her, or if they did reach her, the impact would be negligible.²²⁷ When considering that the main issue to be decided at the substantive hearing was the impact of the dust, other air pollutants, and noise on the Appellant, it became apparent that in this case the directly affected question and the substantive question are effectively the same.²²⁸

[175] The Board therefore decided to defer the decision on directly affected status until the substantive hearing to receive all of the evidence and arguments related to the Lafarge Operation and how it would affect the Appellant.²²⁹ Only through the evidence and arguments provided at the hearing, both oral and written, has the Board been able to properly assess the directly affected issue.

[176] If the Board had held a preliminary meeting solely to determine the Appellant's directly affected status, the Parties would have had to present much, if not all, of the case they presented for the substantive issues hearing. This would likely have been a two-day preliminary meeting at least duplicating the time and efforts of all Parties and the Board. Thus it was deemed impractical and redundant.

3. Director's Decision on Directly Affected

[177] At the beginning of the Director's approval process, the Appellant filed a Statement of Concern.²³⁰ Pursuant to section 73(1) of EPEA, the Director determined that the Appellant was directly affected and accepted the Statement of Concern.²³¹

²²⁶ See: Appellant's Submission, dated February 22, 2002.

²²⁷ See: Approval Holder's Submission, dated March 1, 2002.

²²⁸ See: *Court v. Director, Bow Region, Regional Services, Alberta Environment*, re: *Lafarge Canada Inc.* (22 April 2002), Appeal No. 01-096-ID (A.E.A.B.), at paragraph 39.

²²⁹ In its letter to the Parties dated March 21, 2002, the Board informed the Parties that the Board would make its decision regarding the directly affected status of the Appellant at the hearing.

²³⁰ Director's Record, Tab 28.

²³¹ Director's Record, Tabs 24 and 25. Section 73(1) of EPEA provides:

[178] The Appellant argued "...while the Director's decision in this regard is not binding on the Board, the Board should give considerable weight to the fact that the Director concluded that the Appellant was directly affected by the application."²³² The Approval Holder argued "...the acceptance of the letters of concern [by the Director] is irrelevant to the consideration by the Board of the Appellant's directly affected status."²³³

[179] The Board is not obligated to find an individual directly affected on the basis that the Director accepted the Statement of Concern. The criteria on which directly affected is determined by the Board and the Director are different. In a previous decision, *Ouellette Packers (2000) Ltd.*,²³⁴ the Board discussed these differences. The Board stated:

"The Board notes that the Director accepted Ms. Ouimet's [(the appellant)] Statement of Concern on the basis that in his view she was directly affected. As will be discussed shortly, the Board does not share the Director's view that Ms. Ouimet is directly affected — the Director's decision does not bind the Board. In making this determination, the Board is *not* of the view that the Director's decision to accept Ms. Ouimet's Statement of Concern, at that stage of the process, was incorrect. We believe the Director's more inclusive approach to directly affected, for the purposes of his decision, is entirely appropriate. In fact, it is to be encouraged and is in keeping with section 2(d) of the *Water Act*. [See also section 2(f) of the EPEA.]

The Board notes that the decision-making function of the Director and the appellate function of the Board are different and that in keeping with this, it is appropriate for the Director to apply a more inclusive test with respect to directly affected than is applied by the Board. The purpose of the directly affected test with respect to the Statement of Concern process, and the Director's decision, is to promote good decision-making taking into account a broad range of interests. The process that the Director is engaged in is non-adversarial information collection — he is collecting information regarding the views and concerns of a broad range of parties to assist him in making a decision....

The purpose of the directly affected test *vis-a-vis* the Board is somewhat different.

"Where notice is provided under section 72(1) or (2), any person who is directly affected by the application or the proposed amendment, addition, deletion or change, including the approval holder in a case referred to in section 72(2), may submit to the Director a written statement of concern setting out that person's concerns with respect to the application or the proposed amendment, addition, deletion or change."

²³² See: Appellant's Submission, dated February 22, 2002, at paragraph 16.

²³³ See: Approval Holder's Submission, dated March 1, 2002, at paragraph 13.

²³⁴ *Ouimet et al. v. Director, Regional Support, Northeast Boreal Region, Regional Services, Alberta Environment*, re: *Ouellette Packers (2000) Ltd.* (28 January 2002), Appeal 01-076-D (A.E.A.B.) ("*Ouellette Packers*").

While still promoting good decision-making, the Board's decision respecting directly affected determines whether the person (or in this case, a person and an organization) has a right to appeal. The Board is more strictly focused on the burden of proof and involves a more adversarial process. As a result, the Board's determination respecting an appellant's standing, must, by its very nature be more specific. We must also follow several Court of Queen's Bench precedents on standing that review the decisions of the Board, not the Director."²³⁵ (Footnotes not included.)

[180] As in the *Ouellette Packers* case, the Board does not share the Director's view that the Appellant is directly affected. In making this determination, the Board is *not* of the view that the Director's decision to accept the Appellant's Statement of Concern, at that stage of the process, was incorrect. The Board believes the Director's more inclusive approach to directly affected, for the purposes of her decision, is entirely appropriate and is to be encouraged in keeping with the purposes of EPEA.²³⁶

[181] The Board, in making its decision on directly affected, has had the benefit of substantially more evidence than the Director had when she made her decision. Further, the Board had the benefit of having this evidence challenged at the hearing in an adversarial process and receiving arguments from the Parties specifically on the question of the Appellant's directly affected status. Thus there is sufficient foundation for the Board to make a different determination than the Director.

²³⁵ *Ouimet et al. v. Director, Regional Support, Northeast Boreal Region, Regional Services, Alberta Environment*, re: *Ouellette Packers (2000) Ltd.* (28 January 2002), Appeal 01-076-D (A.E.A.B.), at paragraphs 23 to 25. See: *Graham v. Alberta (Director, Chemicals Assessment and Management, Environmental Protection)* (1997), 22 C.E.L.R. (N.S.) 141 (Alta. Q.B.) and (1997), 23 C.E.L.R. (N.S.) 165 (Alta. C.A.); and *Kostuch v. Alberta (Director, Air and Water Approvals Division, Environmental Protection)* (1997), 21 C.E.L.R. (N.S.) 257 (Alta. Q.B.).

Section 2(d) of the *Water Act* provides:

"The purpose of this Act is to support and promote the conservation and management of water, including the wise allocation and use of water, while recognizing ... (d) the shared responsibility of all residents of Alberta for the conservation and wise use of water and their role in providing advice with respect to water management planning and decision-making...."

Section 2(f) 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 ... (f) the shared responsibility of all Alberta citizens for ensuring the protection, enhancement and wise use of the environment through individual actions...."

²³⁶ See: section 2 of EPEA.

4. The Directly Affected Test

[182] The starting point for the Board's consideration of directly affected is found in the case of *Wessley*, which states "... the definition of which persons are 'directly affected' is flexible and will depend upon the circumstances of each case."²³⁷ This allows the Board flexibility in determining who has standing in an appeal. The Board has, in other decisions, discussed some of the factors it will consider in determining if a party is directly affected.

[183] In *Kostuch*, the Board stated "...that the word 'directly' requires the Appellant establish, where possible to do so, a direct personal or private interest (economic, environmental or otherwise) that will be impacted or proximately caused by the Approval in question."²³⁸

[184] The principle test for directly affected was stated in *Kostuch*:

"Two ideas emerge from this analysis about standing. First, the possibility that any given interest will suffice to confer standing diminishes as the causal connection between an approval and the effect on that interest becomes more remote. The first issue is a question of fact, i.e., the extent of the causal connection between the approval and how much it affects a person's interests. This is an important point; the Act requires that individual appellants demonstrate a personal interest that is directly impacted by the approval granted. This would require a discernible interest, i.e., some interest other than the abstract interest of all Albertans in generalized goals of environmental protection. 'Directly' means the person claiming to be 'affected' must show causation of the harm to her particular interest by the approval challenged on appeal. As a general rule, there must be an unbroken connection between one and the other.

Second, a person will be more readily found to be 'directly affected' if the interest in question relates to one of the policies underlying the Act. This second issue raises a question of law, i.e., whether the person's interest is supported by the statute in question. The Act requires an appropriate balance between a broad range of interests, primarily environmental and economic."²³⁹

[185] In coming to this conclusion in *Kostuch*, one of the considerations was that the directly affected person "...must have a substantial interest in the outcome of the approval that

²³⁷ *Fred J. Wessley v. Director, Alberta Environmental Protection* (2 February 1994), Appeal No. 94-001 (A.E.A.B.), at page 6 ("*Wessley*").

²³⁸ *Kostuch v. Alberta (Director, Air and Water Approvals Division, Environmental Protection)* (1995), 17 C.E.L.R. (N.S.) 246 (A.E.A.B.), at paragraph 28, E.A.B. Appeal No. 94-017 ("*Kostuch*").

²³⁹ *Kostuch v. Alberta (Director, Air and Water Approvals Division, Environmental Protection)* (1995), 17 C.E.L.R. (N.S.) 246 (A.E.A.B.), at paragraphs 34 and 35, E.A.B. Appeal No. 94-017. These passages are cited with approval in *Kostuch v. Alberta (Director, Air and Water Approvals Division, Environmental Protection)* (1997), 21 C.E.L.R. (N.S.) 257 (Alta. Q.B.) at paragraph 25.

surpasses the common interest of all residents who are affected by the approval."²⁴⁰ In *Kostuch* the Board considered its previous decision in *Ross*²⁴¹ saying directly affected "...depends upon the chain of causality between the specific activity approved... and the environmental effect upon the person who seeks to appeal the decision."²⁴²

[186] Further, in *Kostuch* the Board states that the determination of directly affected is a

"...multi-step process. First, the person must demonstrate a personal interest in the action taken by the Director. Assuming the interest is specific and detailed, a related question to be asked is whether that interest is a personal (or private) interest advanced by one individual, or similar interests shared by the community at large. In those cases where it is the latter, the group will still have to prove that some of its members will have their own standing. Finally, the Board must feel confident that the interest affected is consistent with the underlying policies of the Act."

The Board further stated that

"...if the person meets the first test, then they must go on to show that the action by the Director will cause a direct effect on the interest, and that it will be actual or imminent, not speculative. Once again, where the effect is unique to that person, standing is more likely to be justified."²⁴³

[187] A similar view was expressed in *Paron* where the Board held that the

"...Appellants are also concerned that the Approval Holder has been able to obtain an Approval to cut weeds and carry out beach restoration, while the Appellants have not been able to obtain similar approval to carry out such work on their property. While this argument goes to matters that are properly before the Board — the decision-making role of the Director — it does not demonstrate that the Appellants are directly affected, though they are probably generally affected by the Approval. But, the Appellants have not demonstrated that they are impacted by the decision to issue the Approval in a different way than any other lakefront property owner anywhere in Alberta that has been refused a similar approval. The Appellants have not demonstrated a unique interest that would make them entitled to appeal this decision."²⁴⁴

²⁴⁰ *Ross v. Director, Environmental Protection* (24 May 1994), Appeal No. 94-003 (A.E.A.B.) ("*Ross*").

²⁴¹ *Kostuch v. Alberta (Director, Air and Water Approvals Division, Environmental Protection)* (1995), 17 C.E.L.R. (N.S.) 246, at paragraph 33, E.A.B. Appeal No. 94-017.

²⁴² *Ross v. Director, Environmental Protection* (May 24, 1994), E.A.B. Appeal No. 94-003.

²⁴³ *Kostuch v. Alberta (Director, Air and Water Approvals Division, Environmental Protection)* (1995), 17 C.E.L.R. (N.S.) 246, at paragraph 38, E.A.B. Appeal No. 94-017.

²⁴⁴ *Paron et al. v. Director, Environmental Service, Northern East Slopes Region, Alberta Environment* (1 August 2001), Appeals No. 01-045, 01-046, 01-047-D (A.E.A.B.), at paragraph 22 ("*Paron*").

[188] *Paron* also reminds us that the onus to demonstrate this unique interest, to show they are directly affected, is on the Appellant. In *Paron*, the Board held that:

"Beyond these arguments, the Appellants have not presented any evidence — beyond a bare statement that they live in proximity to the proposed work — which speaks to the environmental impacts of the work authorized under the Approval. They have failed to present facts which demonstrate that they are directly affected. As a result, the Appellants have failed to discharge the onus that is on them to demonstrate that they are directly affected."²⁴⁵

The Board's Rules of Practice also make it clear that the onus is on the Appellants to prove that they are directly affected.²⁴⁶

[189] The Board notes that the Approval Holder stated that the Appellant does not present any evidence to show that there will be "...a significant and adverse impact upon the Appellant."²⁴⁷ Although the Appellant is required to show an adverse impact, she is *not* required to show a "significant" impact. Although the severity of the effect may be a consideration in determining if an individual is directly affected, the effect does not have to be "significant."

[190] The inquiry the Board is faced with is to determine whether the Appellant has discharged the onus placed upon her to demonstrate that she has a unique interest that is directly, proximately, and rationally connected to the Approval issued by the Director. In the Board's opinion, the Appellant has failed to meet this test.

5. The Appellant's Real Concern

[191] Having regard to all the evidence and arguments of the Parties before it, the Board is of the opinion that the Appellant's real concern is the impact of the other existing sand and gravel operations on her. In the Board's view, it is the impact of the other existing sand and

²⁴⁵ *Paron et al. v. Director, Environmental Service, Northern East Slopes Region, Alberta Environment* (August 1, 2001), Appeals No. 01-045, 01-046, 01-047-D (A.E.A.B.), at paragraph 24.

²⁴⁶ Section 29 of the Board's Rules of Practice provide:

"Burden of Proof

In cases in which the Board accepts evidence, any party offering such evidence shall have the burden of introducing appropriate evidence to support its position. Where there is conflicting evidence, the Board will decide which evidence to accept and will generally act on the preponderance of the evidence."

²⁴⁷ See: Approval Holder's Submission, dated July 17, 2002, at paragraph 32.

gravel operations — the Appellant's real concern or interest - that caused her to bring this appeal. In her testimony she was very clear that the existing situation is untenable. The Appellant stated:

"It seems like there is dust everywhere and more than what there used to be. My home is constantly in need of dusting, and windows always need cleaning.

Vehicles that sit for any period of time are coated in so much dust that you need to wash the windows before you can drive them, and they don't have to sit outside to be coated in this dust. If you bring your car home clean, within a few hours it is coated in a fine layer of dust."²⁴⁸

The Appellant went on to address the impact of the current situation on her health by saying: "In approximately the last five years I have noticed a distinct increase in the amount of dust, and hence, an increase in my asthmatic events."²⁴⁹ At times I have to curtail or change some of my activities in an attempt to minimize these events." While the Board accepts the Appellant's situation is difficult already, the Board believes it is so regardless of whether Lafarge is in the picture or not; thus there is no direct, proximate, and rational connection between the concerns of the Appellant and the matter under appeal - the Lafarge Approval.

[192] The Appellant went on to discuss mitigative measures at the existing operations. She stated:

"It has been suggested that the existing facilities have dust control measures in place such as watering trucks and enclosed crushers. First of all, I have never seen any water trucks, either at Burnco or Rolling Mix, and if they are using them, they are not effective.

I know that noise controls have been initiated at the existing facilities. Some of these include back-up strobes instead of beepers, special muffler systems, and enclosed crushers. It is still noisy. You can still hear the trucks. You can still hear the loading of the trucks, and you can still hear the operation of the pit. And it becomes increasingly stressful when these sounds carry into your home especially if you are trying to sleep. You are always aware of these sounds. You never get used to them. And you can usually tell where they are coming from."²⁵⁰

[193] In the Board's view, the Appellant's principle complaints relate to the impact of the existing operations, not to that of the Lafarge Operation. As stated in the Board's decision

²⁴⁸ Hearing Transcript, dated July 24 and 25, 2002, at page 23, lines 19 to 27.

²⁴⁹ Hearing Transcript, dated July 24 and 25, 2002, at page 23, lines 12 to 16.

²⁵⁰ Hearing Transcript, dated July 24 and 25, 2002, at page 23, lines 29 to 36 and page 24, lines 1 to 10.

setting the issues to be considered, the operation of the other facilities in the area are not before it.²⁵¹ Thus, there is no remedy the Board can grant to address the Appellant's real concern.

6. The Cumulative Effects Argument

[194] Beyond the Appellant's real concern, she attempted to argue that she is directly affected as a result of the cumulative effects of the Lafarge Operation on her existing situation. The Appellant stated: "The nights and weekends tend to be very tranquil. I cannot imagine another gravel operation in this area. Bruce Whale [of Lafarge] told me that there would be more dust, and there will be more noise."²⁵² She clearly stated: "I find the existing situation unacceptable and getting worse."²⁵³ The Board believes the current situation would certainly make the Appellant concerned about another operation in the area if she interpreted the effects from a new facility as being the same, of the same magnitude, and linear additive²⁵⁴ in impact. The Board believes this is her interpretation as she stated: "I cannot envision what will happen to my health and wellness with another facility located directly to the north of my home and in such close proximity."²⁵⁵ However, the Board is of the view that such concerns do not form the foundation for directly affected status. To be directly affected, an appellant has to have a unique interest that is directly, proximately, and rationally connected to the approval being appealed. In the Board's view the Appellant has not discharged the burden to demonstrate this connection.

[195] In this appeal, none of the Parties clearly discussed the type of impact expected from Lafarge, although the Approval Holder did quantify the potential impact. From the evidence presented, as discussed in more detail below, the Board is of the opinion that Lafarge will directly²⁵⁶ and indirectly²⁵⁷ affect the area in which it will operate and that the effects will be

²⁵¹ *Court v. Director, Bow Region, Regional Services, Alberta Environment, re: Lafarge Canada Inc.* (22 April 2002), Appeal No. 01-096-ID (A.E.A.B.), at paragraph 40.

²⁵² Hearing Transcript, dated July 24 and 25, 2002, at page 24, lines 11 to 15.

²⁵³ Hearing Transcript, dated July 24 and 25, 2002, at page 24, lines 16 to 17.

²⁵⁴ Linear impacts means each incremental addition or deletion has the same effect.

²⁵⁵ Hearing Transcript, dated July 24 and 25, 2002, at page 24, lines 17 to 20.

²⁵⁶ Direct impacts are changes in environmental components and processes that result immediately from a project action or activity; there is a clear link between an activity or action and the impact.

²⁵⁷ Indirect impacts are changes in environmental components and processes that are consequences of direct impacts.

cumulative.²⁵⁸ The Board has been convinced by the evidence of the Approval Holder that high standards, modern approaches, and mitigative measures will minimize that impact. The evidence before the Board, although not stated directly, indicates the impact will be linear additive. The Board has no evidence from any of the Parties that exponential effects²⁵⁹ or impact saturation / threshold effects²⁶⁰ will occur. Thus, in the Board's opinion, if Lafarge operates as it plans to, there will be no threshold crossed leading to a negative effect on the situation for the area. With the quantitative assessment evidence of the Approval Holder, the Board is of the opinion that the impact of Lafarge will be small and mitigated sufficiently to not worsen an already affected environment. The Board is also aware that potentiation impacts²⁶¹ can occur, but sees no evidence to suggest this in the case of Lafarge.²⁶²

[196] It is clear to the Board that the Appellant is impacted by these other operations, but as identified in the Board's issues decision, the operations of these existing facilities are not before the Board,²⁶³ and the impact of these other operations on the Appellant does not mean that she is directly affected by the Lafarge Operation.

[197] Further, the cumulative impact of the Lafarge Operation in conjunction with and primarily due to these existing operations is insufficient, alone, to grant the Appellant standing. The Board noted this in its issues decision when it stated:

"However, by including the matter of cumulative effects, the Board wishes to stress that the cumulative effects of a project are insufficient to form the basis for the directly affected status of an appellant. While the Board is prepared to consider the issue of cumulative effects in this case, the Appellant still has the preliminary jurisdictional hurdle of standing to overcome. In the Board's view she cannot do this merely by pointing to any cumulative effect of the Approval. In the Board's view, to be considered directly affected, an appellant must be directly

²⁵⁸ Cumulative effects are the aggregates of direct and indirect impacts resulting from two or more projects in the same area.

²⁵⁹ Exponential effects means each addition or deletion has a larger effect than the previous one.

²⁶⁰ Threshold effects means incremental additions and deletions have no apparent consequences until a threshold is crossed.

²⁶¹ Potentiation impacts means an addition to an environment is benign but with another addition becomes significant.

²⁶² For additional information on impacts see: L.W. Canter, *Environmental Impact Assessment*, 2^d ed. (New York: McGraw-Hill Inc., 1996).

²⁶³ *Court v. Director, Bow Region, Regional Services, Alberta Environment*, re: *Lafarge Canada Inc.* (22 April 2002), Appeal No. 01-096-ID (A.E.A.B.), at paragraph 40.

affected by the approval that is under appeal in and of itself There must be a direct nexus between the approval being appealed and the impacts that the appellant is using as the foundation for standing."²⁶⁴

[198] The Board has discussed in other decisions the responsibility of the Director to consider cumulative effects in decision-making processes. However, it appears that the Director did not include cumulative effects into her assessment of whether the Approval should be issued when she stated:

"In the consideration of the original approval, it was not the standard practice of AENV [(Alberta Environment)] to do a detailed consideration of cumulative effects for sand and gravel operations. Historically these operations are dealt with more from the perspective of land conservation and reclamation point of view. Note: under the *Activities Designation Regulation*, gravel pits are listed under Division 3 'Conservation and Reclamation'. Cumulative effects and air emissions are historically an issue for the large industrial projects and with large regional issues such as coal fired power plants, oil sands, etc."²⁶⁵

This position of the Director concerns the Board. Surely the Director is aware of the increasing environmental importance of cumulative effects.

[199] The Approval Holder stated the underlying purpose for the appeal being filed was to have the operations at the existing facilities brought to the Director's attention, again going to the Appellant's real concern. The Approval Holder stated: "Lafarge is concerned that this Appeal is being used as a mechanism for seeking change to the Other Operations..." and clearly submitted "...this is an entirely inappropriate manner in which to approach any problems which may exist in the neighbourhood due to the operations of Burnco and Rolling Mix."²⁶⁶ The Approval Holder further submitted:

"...that the focus of the Appellants and the CHR on further monitoring and assessment prior to start up has the effect of asking Lafarge to pay for determining what the risks are to the Appellant from the Other Operations, without any reasonable assurance that at the end of the day, the Project will be able to proceed."²⁶⁷

²⁶⁴ *Court v. Director, Bow Region, Regional Services, Alberta Environment*, re: *Lafarge Canada Inc.* (22 April 2002), Appeal No. 01-096-ID (A.E.A.B.), at paragraph 37.

²⁶⁵ See: Director, Closing Arguments, dated August 6, 2002, at paragraph 69.

²⁶⁶ See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraph 13.

²⁶⁷ See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraph 14.

[200] Although the concerns of the Appellant may have been the operational practices at the existing facilities, the Approval Holder was aware of the environment in which it was seeking to establish another gravel pit. If there were existing concerns, the Approval Holder must surely have realized the potential of its operation exacerbating the problem.

[201] The Board does not believe a new applicant for an approval should be denied that approval because the existing situation is saturated, if that new applicant can show its operation will not have a cumulative effect of worsening an already bad situation. This by no means reduces the importance of cumulative effects in the Board's view. It does, however, indicate the importance of presenting evidence to indicate the type of potential impact, the magnitude of the potential impact, and the clear separation of the direct, indirect, and cumulative effects as well as the nature of the potential cumulative impacts. The Board believes this type of evidence, which should routinely be analyzed in these cases, will greatly assist in allowing it to uphold the purposes of the Act that requires balancing economic and environmental issues.

[202] While such cumulative effects are a concern identified by the Appellant, and it is a concern of the Board, it is a different issue to being directly affected by the Lafarge operation and is insufficient to grant the Appellant standing. She must still be directly affected by the Lafarge operation, which in the Board's view she is not.

B. Directly Affected - Dust and Other Air Pollutants

[203] The Appellant stated that she "...is an asthmatic and asthmatics are generally more sensitive to exposures to Particulate Matter."²⁶⁸ The Board accepts that the Appellant does have asthma. While there is no medical evidence before the Board to demonstrate this, the statements of the Appellant are uncontroverted and the Board accepts them. No additional evidence was brought forward by a medical doctor to confirm her degree of asthma nor any specific information as to the rate or extent an asthmatic such as the Appellant could be affected by the air borne particulates. The Board notes, however, that it is irrelevant that the Appellant is asthmatic if she will not be impacted.

²⁶⁸ See: Appellant, Closing Arguments, dated July 31, 2002, at paragraph 16.

[204] The Board also accepts the principle of law known as the "thin skull rule."²⁶⁹ In other words, the Appellant must be taken as she is, including any conditions that may increase her sensitivity to or increase the likelihood of being affected. The evidence provided showed the Appellant was an asthmatic and that dust and other air-borne particulates could affect those with compromised respiratory conditions. However, the evidence presented failed to show that the level of dust and other air pollutants coming from the Lafarge Operation would affect this particular Appellant. Without this crucial link, to demonstrate a unique interest that is directly, proximately, and rationally connected to the Approval issued by the Director to Lafarge, the Board finds that the Appellant is not directly affected.

[205] The evidence the Board has before it on dust and other air pollutants and their impact on the Appellant comes from Dr. Davies and Dr. Rogers. The evidence of Dr. Davies is based on a "walk about" and a criticism of other people's work, and he concluded he is concerned there is an existing problem and speculates it may be made worse by Lafarge (the drinking glass theory exhibited at the hearing). In contrast, the evidence of Dr. Rogers was quantitative. He worked with numerical data and concluded that the impact from the Lafarge Operation will be negligible. In weighing the evidence, the Board can use the quantitative assessment of Dr. Rogers, but finds no firm footing with the qualitative interpretations of Dr. Davies. Thus, the Board accepts the evidence of Dr. Rogers that the impacts will be negligible, and therefore, the Appellant is not directly affected.

[206] The Board notes that Lafarge is willing to work with the Director to deal with the problems in the area. This is appropriate and commendable, as every effort should be made to avoid or mitigate any environmental impacts. However, this does not change the fact that the Appellant is not directly affected.

[207] In cross-examination, Dr. Leahey, the witness for the Approval Holder, stated that particulate matter from the Lafarge facility will migrate to the Appellant's residence but "...the resultant ambient concentrations will be small."²⁷⁰ He indicated there was no question in his mind that particulate matter is currently migrating from the Burnco and Rolling Mix facilities to the Court residence and that if the Lafarge project goes ahead, all of those emissions will

²⁶⁹ See: A.M. Linden, *Canadian Tort Law*, 7th ed. (Markam: Butterworth, 2001).

combine on a cumulative basis and arrive at the Appellant's residence. He qualified this by stating "...but in our assessment, the cumulative impact of Lafarge will be very minimal and will not make much by way of material difference in the maximum concentrations."²⁷¹

[208] In further cross-examination, the Appellant asked if "...in terms of the substances from the three facilities, the particulate matter from those facilities will mix in the air, and they will arrive at the Court residence as a mixture."²⁷² Dr. Leahey answered: "Insofar as the sources align, they tend not to align with wind direction. ... I don't believe that they would align to give a combined concentrations at the Linda Court residence ... they will experience influences from Lafarge in the morning and from the Rolling Mix in the afternoon."²⁷³ The Appellant persisted in asking if "...there is no circumstance under which you think that all three facilities could contribute particulate matter to the Court residence on a single time."²⁷⁴ Dr. Leahey answered:

"Just let me check my map. Certainly not in the configuration that we have shown in figure one of our reports. That shows the gravel mining pit, the crushing plant area of the proposed Lafarge EPS gravel pit. Now, to have emissions from those two pits align with Rolling Mix and Burnco, in such a way as to impact at the same time at Linda Court's residence, no, I don't think that would happen."²⁷⁵

[209] When asked in cross-examination if "...on a longer-term basis ... the airshed will be filled with particulate from Lafarge and it may be contributed to by the other facilities, and those sorts of events is what you are expecting...", Dr. Leahey indicated "I haven't given any expectations."²⁷⁶

[210] The Board is of the opinion that it is unlikely that the effects of all three facilities would reach the Appellant's residence at the same time. The location of the facilities is such that the wind will not transport air-borne particles from the three facilities at the same time. If this analysis is correct, and the evidence suggests it is, the cumulative impacts calculated would be conservative. Dr. Leahey clearly stated:

²⁷⁰ Hearing Transcript, dated July 24 and 25, 2002, page 254, line 11.

²⁷¹ Hearing Transcript, dated July 24 and 25, 2002, page 254, lines 26 to 29.

²⁷² Hearing Transcript, dated July 24 and 25, 2002, page 254, lines 30 to 33.

²⁷³ Hearing Transcript, dated July 24 and 25, 2002, page 255, lines 1 and 2 and 7 to 12.

²⁷⁴ Hearing Transcript, dated July 24 and 25, 2002, page 255, lines 13 to 15.

²⁷⁵ Hearing Transcript, dated July 24 and 25, 2002, page 255, lines 16 to 23.

²⁷⁶ Hearing Transcript, dated July 24 and 25, 2002, page 255, lines 24 to 29.

"There will be contributions — over an extended period, there will be contributions from each of these sources. But as I visualize it, they will not align so that impacts from Rolling Mix, for example, and Lafarge occurring at the same time as — at the Linda Court residence. It will not happen, given the configuration we have shown in figure one of our report."²⁷⁷

C. Directly Affected - Noise

[211] The Board received less evidence on noise than on other issues at the hearing.

[212] The Appellant's principle concerns with respect to noise centred on the existing levels at her residence. She stated "...noise from gravel pit operations are not contained within the boundaries of gravel pits."²⁷⁸

[213] Mr. Davis, on behalf of the Approval Holder, stated that the predicted noise levels would be below the standards of the AEUB and the City of Calgary noise by-law.²⁷⁹ Mr. Davis also referred to the other noises in the vicinity of the Appellant's residence to show that the ambient noise level is above that found in a pristine rural setting.²⁸⁰

[214] According to the Approval Holder, the Appellant's own expert admitted that, if the Lafarge Operation met the provisions of the Rocky View Development Order, the AEUB noise standards would be met.²⁸¹ The Approval Holder stressed its arguments that the Appellant had not provided any evidence to support her arguments that the Lafarge Operation "...will cause any significant or adverse impact on sound levels...." ²⁸² The Approval Holder further submitted that the mitigation measures that it was implementing would prevent any significant or adverse impact on noise levels.²⁸³

[215] The Board accepts the evidence that was brought forward that noise from the existing facilities and other noise sources in the area, such as golf courses, clearly created a

²⁷⁷ See: Transcript of Hearing, July 24-25, 2002, at pages 255-256, lines 34 and 1 to 7.

²⁷⁸ See: Appellant's Submissions, dated February 22, 2002, at paragraph 8, and dated July 17, 2002, at paragraph 10.

²⁷⁹ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Mr. Jack Davis, dated June 18, 2002, at page 7.

²⁸⁰ See: Approval Holder's Submission, dated July 17, 2002, Affidavit of Mr. Jack Davis, dated June 18, 2002, at page 6.

²⁸¹ See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraph 30.

²⁸² See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraph 71.

situation that would not be significantly impacted directly or indirectly by Lafarge. There was no clear evidence that the Appellant will be impacted by noise any more so than she is now. Therefore, it is the Board's opinion that the Lafarge Operation will not change things from their current situation. As a result, the concerns expressed by the Appellant do not demonstrate a unique interest that is directly, proximately, and rationally connected to the Approval issued by the Director to Lafarge, and the Appellant is therefore not directly affected.

D. Additional Observations

[216] While the Board is dismissing this appeal because it finds that the Appellant is not directly affected, the Board has a number of observations to bring forward.

1. The Director's Considerations Regarding Cumulative Effects

[217] Based on the evidence received by the Board, it appears that the Director failed to take the cumulative effects of the other operations in this area into account based on a policy. This is a matter that concerns the Board. The Director stated repeatedly in her evidence that she applied the standard procedure to the issuance of this approval, and that she did not consider the impacts of the other facilities.²⁸⁴

[218] The Board notes that a standard approval provides applicants with a firm appreciation of what may be expected of them. However, in the Board's view, the Director, in deciding whether or not to issue an approval, is required to take into account the environmental circumstances in which the proposed activity is to take place. This requirement is consistent

²⁸³ See: Approval Holder, Closing Arguments, dated August 2, 2002, at paragraph 71.

²⁸⁴ See: Hearing Transcript, dated June 24 and 25, 2002, at page 203, lines 15 to 32:

"Mr. Fisher: Now, obviously before you gave this approval, and I take it from your comments that you looked only at the Lafarge application, you did not look at the other gravel pits in the area that we're dealing with. Would that be fair to say?"

Ms. Mah-Paulson: With regards to the specific review of this application and the matter before the Board today, Lafarge, yes, it was just that application. However, I am aware and I was aware that there are other gravel pits in the area.

Mr. Fisher: And obviously the amendments that you are asking the Board to attach to the approval are now based upon the fact that there appears to be a problem coming from the other operations in the area. Would that be fair to say?"

Ms. Mah-Paulson: Not that there appears to be a problem, but there is the potential for a problem. Again, I don't have any data right now to be able to assess that one way or the other."

with the purposes of EPEA found in section 2 where it speaks of the integrity of ecosystems and the principles of sustainable development, with the Statement of Concern process requesting the involvement of local stakeholders in decision-making, and with section 6 of the *Approvals and Registration Procedure Regulation*, A.R. 113/93 where it requires consideration of the impacts of the activity on the environment and requires consideration of site suitability.²⁸⁵

[219] While, the Board notes that the Director responded to the Statement of Concern filed by the Appellant and made modifications to the Approval in response, the Board is of the view that the Director failed to take into account all of the environmental circumstances in which the proposed activity was to take place prior to issuing the approval.

[220] In her final submission, the Director recognized the unique nature of this airshed. The Director stated: "It is the opinion of the Director that this localized airshed is an unique one that involves a number of gravel mining operations in relatively close proximity to residential subdivisions and the city limits of Calgary." "Unique" is defined as "...of which there is only one; unequalled; having no like, equal, or parallel...."²⁸⁶ If this airshed is "one of a kind," how can applying the standard procedure in the issuance of an approval, without considering the impacts of the other operations, be appropriate?

²⁸⁵ Section 6 of the *Approvals and Registrations Procedure Regulation* provides:

"6(1) The review of an application shall be conducted to determine whether the impact on the environment of the activity, the change to the activity or the amendment, addition or deletion of a term or condition of an approval is in accordance with the Act and the regulations made under the Act.

(2) A review may address the following matters, without limitation:

- (a) proposed methods of minimizing the generation, use and release of substances and any available alternative technologies;
- (b) design plans and specifications for the activity, the change to the activity or the amendment, addition or deletion of a term or condition of an approval;
- (c) site suitability, including soils, air and water quality, groundwater conditions, site drainage, water supply quantity and wastewater disposal alternatives;
- (d) the proposed monitoring programs to determine emissions and their effect on the environment;
- (e) proposed methods of management of the storage, treatment and disposal of substances;
- (f) the adequacy of the quality and quantity of the potable water used in or produced by the activity to which the application relates;
- (g) proposed plans to complete the conservation and reclamation required in connection with the activity;
- (h) the past performance of the applicant in ensuring environmental protection in respect of the activity."

²⁸⁶ *The Concise Oxford Dictionary*, 8th ed. (Oxford: Clarendon Press, 1990).

[221] In the Board's opinion, it is important for a decision maker to consider whether a "standard procedure" is appropriate in a given circumstance. When a statutory decision-maker, such as the Director, makes a decision, she can certainly refer to a standard policy (i.e. a policy of Alberta Environment) to assist her in making that decision.²⁸⁷ However, she cannot just summarily defer to that policy. Before she applies the standard policy she must consider whether the policy is applicable in the particular circumstances. If it is, she can apply the policy. However, if it is not, then she must apply her own site-specific judgment.²⁸⁸

[222] The Board is unclear why an assessment of the local airshed did not take place prior to the issuance of the Approval. There are records of the approvals issued to the existing facilities, and in this age of technology, retrieving that information should be a relatively simple task. The Director should have been alerted that an issue might exist. The "unique" nature of the airshed due to the existing facilities in the area and location of the proposed project should have been a signal to the Director that the standard procedure may not have been appropriate in this circumstance. The existence of these other facilities should have been signs to the Director to delve deeper into the issue before granting the approval. The Appellant also identified in her

²⁸⁷

See: *Wimpey Western Ltd. et al. v. Director of Standards and Approvals of the Department of Environment et al.* (1983), 28 Alta. L.R. (2d) 193 (Alta. C.A.), affirming (1982), 21 Alta. L.R. (2d) 125 (Alta. Q.B.).

²⁸⁸

See: D.J. Mullen, *Administrative Law*, (Toronto: Irwin Law, 2000), at page 116, where it states:

"...the courts demand that more informal policies and guidelines (whether publicized or simply used internally) must not become invariable rules applied automatically in every case. Individual matters are entitled to individual attention, and the discretion of the statutory authority should not be so fettered that it prevents the possibility of individualized consideration of particular cases. In *Brown v. Alberta*, [(1991), 82 D.L.R. (4th) 96 (Alta. Q.B.)] the Alberta Court of Queen's Bench set aside the suspension of a driver's licence as the product of the automatic application of a minimum period of suspension policy with no consideration given to whether it was appropriate to apply that policy to the particular case."

In *Brown v. Alberta*, Madame Justice Bielby wrote:

"The Applicant conceded that it is open for an administrative tribunal to adopt a general policy provided that each application is individually considered on its merits. In his written brief he cites the case of *A. v. Port of London Authority; Ex parte Kynock Ltd.*, [1919] 1 K.B. 176 (C.A.) at 184.... The Applicant argues ... that the Driver Control Board essentially refused to hear him, in that it applied its policy without giving any real or genuine consideration to his particular circumstances. ... The Respondent argues that the Board did not fetter its discretion but simply applied its policy after considering the Applicant's case on its merits....

I find that the Board made no honest exercise of its discretionary power in hearing the applicant's case. It gives the appearance of having inflexibly applied its policy to him. It is insufficient for the Board to simply state that it found no exceptional reasons to exempt him from the application of its policy without going on to show that it considered his case against what might be considered to be exceptional reasons and found it to be lacking."

Statement of Concern filed with the Director that there were two gravel pits operating in the area already.²⁸⁹ Other individuals who filed Statements of Concern also expressed their concerns regarding the operation of the two existing facilities plus the proposed Lafarge Operation.²⁹⁰ The Director therefore knew of the potential for issues in the area, but apparently chose to follow the standard approval process. If the Director did take the Statements of Concern fully under advisement prior to issuing the Approval, the Board is unclear why the cumulative effects of a third major gravel operation in the vicinity were not considered in greater detail.

[223] If the Director had undertaken this consideration, she may have come to the same conclusion and issued the Approval under the same terms and conditions. However, given the proposed amendments included in the Director's submission, it appears this may not have been the case.

2. Amendments to the Approval

[224] To her credit, in hindsight, the Director admits that had she fully appreciated the "potential problem,"²⁹¹ she would likely have done things differently and as a result, has suggested a number of amendments to the Approval. Given that the Board has determined that the Appellant is not directly affected, the Board is not empowered to make recommendations to amend the Approval.

[225] However, the Board notes that the Director does have the ability to amend the existing Approval in certain circumstances and in particular with respect to monitoring.²⁹² In her

²⁸⁹ See: Director's Record, Tab 28, Statement of Concern filed by the Appellant, dated July 2, 2001.

²⁹⁰ See: Director's Record, Tab 31, Statement of Concern filed By Mr. George Hawkins, dated June 28, 2001.

²⁹¹ See: Hearing Transcript, dated June 24 and 25, 2002, at page 203, lines 29 to 32.

²⁹² Section 70(3)(a) of EPEA provides:

"If the Director considers it appropriate to do so, the Director may on the Director's own initiative in accordance with the regulations

(a) amend a term or condition of, add a term or condition to or delete a term or condition from an approval

(i) if in the Director's opinion an adverse effect that was not reasonably foreseeable at the time the approval was issued has occurred, is occurring or may occur,

(ii) if the term or condition relates to a monitoring or reporting requirement,

submission, she recommended amendments that would require additional monitoring by the Approval Holder. Therefore, if she chooses, the Director can take steps to make this Approval more appropriate for this unique area and the existing environment in which this facility is to be constructed. The Board also notes that one of the existing facilities has applied for an amendment to its approval, and in making her decision on that approval the Director will no doubt be cognizant of the issues raised during this appeal. Clearly this is an area in which the current state of environmental impacts needs to be addressed.

[226] The Board notes that the Director stated in her closing arguments that by "...requiring Lafarge to undertake these monitoring proposals/ programs, the Director is requiring Lafarge to undertake actions which are not standard to the sand and gravel industry in Alberta but reflect the unique circumstances which exist in this situation."²⁹³ The Board interprets some aspects of the monitoring program as a method of providing the Director with information that she should be obtaining to understand what is going on in the airshed. What the Director is asking, is to now make Lafarge responsible for obtaining data she should have had prior to issuing the Approval, and she should be obtaining to address the concerns of the residents in the area, principally with respect to the other operations in the area.

[227] Although the other facilities were not an issue in this appeal, the Director indicated the information that Lafarge would be responsible for obtaining, if the amendments proposed in the Director's submission were enacted, would be used to assess the existing operations. In her closing arguments, the Director stated: "This monitoring data will be vital in the Director's consideration of the contingency plans / dust suppression plans, consideration of the other gravel pit operations as well as in determining when Lafarge can commence

(iii) where the purpose of the amendment, addition or deletion is to address matters related to a temporary suspension of the activity by the approval holder, or

(iv) where the approval is transferred, sold, leased, assigned or otherwise disposed of under section 75,

(b) cancel or suspend an approval or registration, or

(c) correct a clerical error in an approval or registration."

²⁹³ See: Director, Closing Arguments, dated August 6, 2002, at paragraph 33. The Director reiterated that there were "unique" facts in this situation in her conclusion. See: Director, Closing Arguments, dated August 6, 2002, at paragraph 78.

operations."²⁹⁴ The Board is of the opinion that requesting Lafarge to undertake such work at this time is inappropriate and ill timed.

[228] The Board also notes that many of the mitigation measures the Approval Holder stressed it would be taking are actually required under the Development Permit issued by the Municipal District of Rocky View. The Board is hopeful that the Director will take the required steps to ensure some measure of enforcement remains available to her respecting these issues. It is also the Board's hopes that Lafarge will voluntarily take additional steps to mitigate potential impacts and demonstrate that it is committed to being a good corporate neighbour.

3. Standards

[229] During the hearing, the Board was presented with a number of different "permissible standards" for the various emissions and sound levels. The Board notes that Alberta does not have guidelines for gravel operations, however, the Board is of the view that the Director should be able to tell potential approval holders, as well as the public, what levels she will use to determine the feasibility of a project.

[230] The Director stated in her closing arguments that it is the Science and Standards Branch of Alberta Environment that recommends the standards that should be followed in the province. The Director argued that it is "...not the Director's decision on the issuance of an approval, as to what are the official guidelines/limits etc. of Alberta Environment."²⁹⁵ The Board believes the Director should know the permitted levels in the province, otherwise it would appear virtually impossible for the Director to make an informed, and fair, decision.

²⁹⁴ See: Director, Closing Arguments, dated August 6, 2002, at paragraphs 42 to 43.

²⁹⁵ See: Director, Closing Arguments, dated August 6, 2002, at paragraph 51.

IV. DECISION

[231] The Board has determined that the Appellant is not directly affected by the Approval issued by the Director. The Appellant's appeal is therefore dismissed pursuant to section 95(5) of the Act.

Dated on August 31, 2002, at Edmonton, Alberta.

“original signed by”

Dr. M. Anne Naeth

“original signed by”

Dr. John P. Ogilvie

“original signed by”

Fredrick C. Fisher, Q.C.