



Environmental Appeal Board

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DECISION NO. 2017-EMA-005(a)

In the matter of an appeal under section 100(1) of the *Environmental Management Act*, S.B.C. 2003, c. 53

BETWEEN:	Steve Hallett and Amanda Hallett	APPELLANTS
AND:	Regional Director	RESPONDENT
AND:	Owen Fewer	THIRD PARTY
AND:	Northern Health Authority	PARTICIPANT
BEFORE:	A Panel of the Environmental Appeal Board: Maureen E. Baird, Q.C., Panel Chair	
DATE	October 12 and 13, 2017	
PLACE	Terrace, B.C.	
APPEARING:	For the Appellants: Steve and Amanda Hallett For the Respondent: Elisabeth Graff, Counsel For the Third Party: Owen Fewer For the Participant: Talina Almeida, representative	

APPEAL

[1] The Appellants, Steve and Amanda Hallett (the "Halletts"), appeal a pollution abatement order (the "Order") issued to them on March 6, 2017 by the Respondent, Brady Nelless, the Regional Director, Ministry of Environment (the "Ministry"). The Respondent issued the Order pursuant to section 83 of the *Environmental Management Act*, S.B.C. 2003, c. 53 (the "Act"), finding that there were reasonable grounds to believe that agricultural and wood waste on the property of the Halletts was escaping and causing pollution to the neighbouring property owned by the Third Party, Owen Fewer. The Order requires the Halletts to comply with a number of requirements by a specified date.

[2] The Environmental Appeal Board has the authority to hear this appeal under section 100(1) of the *Act*. The Board's powers on an appeal are set out in section 103 of the *Act* which provides that, on an appeal, the Board may:

- (a) send the matter back to the person who made the decision, with directions,
- (b) confirm, reverse or vary the decision being appealed, or

- (c) make any decision that the person whose decision is appealed could have made, and that the appeal board considers appropriate in the circumstances.

[3] The Halletts ask the Board to reverse the Order.

BACKGROUND

[4] The Halletts own farm property at 5625 Oscar Road, Terrace, BC, which they purchased in August 2016.

[5] Since September 2016, the Halletts have kept horses on their property. Prior to this, livestock had not been housed on the Halletts' property. Hog fuel or wood chips were placed by the Halletts in the paddock area, in part to remedy the wet conditions that were not good for the footing of the horses.

[6] Mr. Fewer owns the property directly to the west of the Halletts, at 5635 Oscar Road.

[7] Mr. Fewer takes his drinking and domestic water from a shallow, excavated well located in the north east corner of his property, approximately five meters from the property line dividing his property from the Halletts' property. The well head is located at the bottom of a steep slope, below the Halletts' paddock, barn and shed area.

[8] In about October or November of 2016, Mr. Fewer noticed a change in the quality of the water from his well. He obtained permission from the Halletts to bring equipment onto their property to address the manure that had accumulated from the horses and the hog fuel that was being used in the paddock. He removed much, but not all, of the hog fuel or wood chips from the paddock, piling it along the eastern side of the driveway. He also piled manure from the barn and paddock on the east side of the Halletts' driveway, further away from Mr. Fewer's property.

Ministry Inspection - Environmental Management Act

[9] In December 2016, the Ministry received a complaint from Mr. Fewer that his water quality had changed since October 2016. He attributed the change to manure escaping from the Halletts' property, which he believed was contaminating his well.

[10] The Ministry sent an advisory non-compliance letter report, dated January 20, 2017, to the Halletts detailing the results of an in-office review of information and photographs provided by Mr. Fewer, and a telephone conversation with the Halletts. That report found that the Halletts were not compliant with section 9 of the *Agricultural Waste Control Regulation*, B.C. Reg. 131/92, in that field stored agricultural waste (manure) on the property was not covered to prevent escape that causes pollution. The Halletts were directed to cover the manure pile. Section 9 of the *Code of Agricultural Practice for Waste Management* (the "Code") requires that agricultural waste be covered to prevent escape. The Halletts covered the manure pile on their property.

[11] The Ministry determined that an on-site inspection should be conducted to better assess the Halletts' compliance with the requirements of the *Agricultural Waste Control Regulation*. That inspection was conducted by Alexandra Glavina, an Environmental Protection Officer with the Ministry's Environmental Protection Division, on January 27, 2017. During the inspection, Ms. Glavina met with Mr. Hallett and also examined Mr. Fewer's well. Her observations and findings are contained in an inspection report dated February 17, 2017.

[12] The February 17, 2017 report noted that the three horses on the Halletts' property were confined to a fenced paddock area, bordered by Oscar Road to the north, the Halletts' driveway to the east and south, and a steep slope to the west. There is also a barn located on the west side of the Halletts' property near the steep slope that leads to Mr. Fewer's property and his well. At the time of the inspection, hog fuel was piled in the paddock and beside the driveway. The distance between the paddock and Mr. Fewer's well house was measured and found to be less than 30 metres. A covered manure pile was observed east of the driveway, in addition to manure in the paddock and barn areas.

[13] The soil in the paddock and barn areas was identified as permeable, consisting of gravel with organic material over a sandy layer. The surface water runoff from the paddock and barn areas was not confined. There was a drainage grate located in front of a shed also on the western side of the Halletts' property. During periods when the ground was not frozen, water would drain into the grate. At the time of the February 17, 2017 inspection, the grate was iced over and manure-laden water and staining were observed pooling in the area of the grate.

[14] Ms. Glavina noted on January 27, 2017 that a black drainage pipe had been installed to carry drainage flowing through the grate in front of the shed on the Halletts' property past Mr. Fewer's well house. This black piping captured water flowing through the drain in front of the shed and carried it past Mr. Fewer's well house, ultimately discharging in the northeast corner of Mr. Fewer's property. This discharge point emptied directly into a small stream that flows across Mr. Fewer's property and into a large pond. In addition, there was a drainage ditch or trench, approximately two feet wide by two to three feet deep, excavated at the bottom of the slope between the Hallett and Fewer properties to catch and direct runoff from the Halletts' property past Mr. Fewer's well. Mr. Fewer advised Ms. Glavina that he had installed the piping and excavated the ditch in order to catch and direct runoff from the Halletts' property away from his well.

[15] Photographs taken during the January 27, 2017 inspection clearly show dark brown water pooling at the end of the excavated drainage and pipe draining from the Halletts' property.

[16] During this inspection, Mr. Fewer provided an analysis of a water sample that he had taken from his kitchen tap on November 28, 2016 and submitted to an independent laboratory for testing, showing *E.coli* bacteria in the amount of 4 MPN/100 mL (most probable number per 100 ml). The reading for total coliforms in the sample exceeded 23 MPN/100 ml. The Northern Health Authority ("Northern Health") advised Mr. Fewer not to use the well water for any domestic or drinking purposes.

[17] Under the Canadian Drinking Water Quality Guidelines published by Health Canada, which establish standards for contaminants in drinking water that could lead to adverse health effects in humans, the maximum allowable concentration of total coliform bacteria and *E. coli* bacteria in drinking water is zero (or “non-detectable”).

[18] Ms. Glavina also had the results of a water sample taken from Mr. Fewer's tap on December 5, 2017, showing the presence of tannin and lignin in the water from Mr. Fewer's well in the amount of 1.2 mg/L. Tannin is found in plants, and lignin is a constituent of wood.

[19] On February 17, 2017, Ms. Glavina issued Report Number 048053, which detailed the findings of the January 27, 2017 inspection of the Halletts' property. A copy of this inspection report was provided to the Halletts. The report found the following areas of non-compliance:

- (a) Agricultural waste from the barn and paddock area was discharging directly into both a watercourse (the small stream on Mr. Fewer's property and into a large pond on his property) and to groundwater, contrary to section 11 of the *Agricultural Waste Control Regulation*;
- (b) Runoff from the area in proximity to wood waste in the form of hog fuel stored on the Halletts' property in the paddock and driveway was flowing down the drain in front of the shed allowing the escape of particulate or solid matter or leachate into the small stream on Mr. Fewer's property and ultimately into the pond, contrary to section 21(b) of the *Agricultural Waste Control Regulation*;
- (c) The hog fuel stored on the Halletts' property was measured to be less than 30 meters from Mr. Fewer's well house, contrary to section 22(b) of the *Agricultural Waste Control Regulation*; and
- (d) Livestock (horses) were confined in the fenced paddock area in a manner that caused pollution contrary to section 29(1) of the *Agricultural Waste Control Regulation*.

[20] The February 17, 2017 inspection report directed the Halletts to ensure that runoff from agricultural waste was not being directly discharged into a watercourse or groundwater, to ensure that wood waste was stored or used on the property in a way that prevented the escape of particulate or solid matter or leachate into any watercourse or groundwater, and that it was stored at least 30 meters away from any source of water used for domestic purposes, and to operate the confined livestock in a manner that does not cause pollution.

The Order

[21] On March 6, 2017, the Respondent issued the Order pursuant to section 83 of the *Act*. The Order is made primarily on the basis of the February 17, 2017 inspection report. The Order requires the Halletts to comply with the following requirements:

1. Immediately make efforts to prevent waste travelling off the property, including:
 - a) Keeping the barn area free of manure by removing waste daily;
 - b) Where reasonable, removing manure from paddock area; and
 - c) Refraining from spreading wood waste in the paddock area.
2. Retain suitably qualified professionals to develop and submit for Director's approval, by April 7, 2017, a written plan to:
 - a) Cease pollution being generated from 5625 Oscar Road, Terrace, BC.

This report shall include:

1. Any analytical results obtained, including both field and lab QAQC [Quality Assurance/Quality Control] data;
 2. A description of proposed manure and wood waste storage measures that ensure sufficient storage, ensure appropriate setbacks from watercourses and drinking water wells, and ensure measures are protective of environmental and human health;
 3. A description of proposed drainage management measures to effectively control runoff to ensure that solids, leachate, and contaminated runoff do not enter watercourses, penetrate to groundwater, or leave the property; and
 4. A timeline for implementation of the plan.
3. Upon approval, implement the plan to the satisfaction of the Director.

The Appeal and Partial Stay of the Order

[22] On March 17, 2017, the Halletts appealed the Order. In their Notice of Appeal, the Halletts submitted that they are allowed to use their property for agricultural purposes, and hog fuel is needed as footing/bedding for livestock in the paddock because the ground is hard. They also submitted that Oscar Road is built on an underground spring that produces much runoff, and engineering firms have told them that diverting the spring or containing the runoff would be very costly and may not work. They suggested that Mr. Fewer may need to dig a deeper well or move the well head. In addition, the Halletts submitted that it was unreasonable to "suggest any work order" by April 5, 2017 because the ground would still be covered in snow. They requested that the Order be "removed" and they be allowed to use their property "as intended, using hog fuel in the paddock area."

[23] In a letter dated March 23, 2017, the Board noted the April 7, 2017 deadline in the Order for the Halletts to retain a suitably qualified professional to develop and submit for the Respondent's approval a written plan to cease pollution from being generated from their property, and the Halletts' position that this deadline

was unreasonable due to ground conditions. The Board requested that the Respondent advise whether he would consent to a voluntary stay of the Order until the appeal could be decided.

[24] In a letter dated March 24, 2017, the Respondent consented to a stay of item 2 in the Order (the requirement to retain a suitably qualified professional to develop and submit for the Respondent's approval a written plan to cease pollution from being generated from their property) until May 1, 2017. The Respondent did not consent to a stay of item 1 in the Order (the requirement to immediately make efforts to prevent waste travelling off the property).

[25] On March 27, 2017, the Board granted a stay of requirement 2 in the Order until May 1, 2017.

Northern Health Investigation - Drinking Water Protection Act

[26] Meanwhile, on December 5, 2016, Mr. Fewer requested that Northern Health conduct an investigation pursuant to section 29 of the *Drinking Water Protection Act*, S.B.C. 2001, c. 9.

[27] Northern Health conducted three on-site investigations at Mr. Fewer's property between November 29, 2016 and March 3, 2017, during which the well and well water were observed, field measurements made, and samples taken for testing. The results of these investigations were forwarded to Mr. Dave Tamblyn, Public Health Engineer, for assessment.

[28] Mr. Tamblyn issued a report dated April 10, 2017. The results of that report were summarized in an April 21, 2017 letter from Northern Health to Mr. Fewer as follows:

- Regional flow direction is almost due west (W 5°S) and the gradient is 7% slope.
- Any contaminated groundwater from the Hallet [sic] property would be expected to flow west towards the Fewer property.
- It is likely that the impact on the ultraviolet transmittance (UVT) Fewer well is from a relatively small, local organic contaminant source, located somewhere between the Hallet [sic] well and the Fewer well.
- Travel (groundwater flow) time from the waste storage area on the Hallet [sic] property to the Fewer well is estimated as between 1 day to 100 days. Different human pathogens can remain viable in groundwater for 200 days or more, so any pathogens in agricultural waste stored on the Hallet [sic] property would not likely be adequately inactivated before they reached the Fewer well.
- Raw well water from the Fewer well is unsafe for consumption, and may be unfit for other domestic purposes, such as bathing and laundering.

- Potential drinking water supply remedial options include:

...

In conclusion, our findings following Northern Health's Section 29 investigation at 5635 Oscar Road indicate that there is a risk of a drinking water health hazard as a result of the activities on the neighbouring property, which is likely contaminating your drinking water supply. Regarding removing the threat to your drinking water supply, Northern Health looks to the other Provincial Ministries who have specific legislation regarding the potential pollutants (hogfuel, manure), as well as best practices regarding their use and application.

Ministry Inspection after the Order was issued

[29] On June 21, 2017, Ms. Glavina conducted a second on-site inspection of the Halletts' property to determine compliance with the Order and the *Agricultural Waste Control Regulation*. This inspection resulted in two final inspection reports, both dated August 29, 2017.

[30] From her observations, it appeared to Ms. Glavina that the manure pile was too small to account for the waste she expected to have been produced by three horses, based on a calculation method set out in an article on the Alberta Ministry of Agriculture and Forestry website. Mr. Hallett told Ms. Glavina that no manure had been removed from the property since the arrival of the horses in September 2016. Based on that information, Ms. Glavina calculated that there should be about 21 cubic metres (m³) of manure, and she assessed the animal waste on the property at only 3.5 m³. This suggested to Ms. Glavina that the remaining animal waste had been trampled into the ground by the horses or carried off the Hallett property by ground or surface water.

[31] During the inspection, Ms. Glavina observed manure runoff pooling in the Halletts' driveway and entering the drainage grate which discharges into the trench constructed by Mr. Fewer.

[32] The first inspection report assessed compliance with the Order, and found that the Halletts were in compliance with requirement 1(a) of the Order, in that the manure had been scraped from the barn area and relocated to a manure pile on the eastern side of the paddock. There was non-compliance with requirement 1(b) of the Order, in that manure had not been removed from the paddock area. Manure that had previously been located outside the paddock area had been moved into the paddock. Compliance with requirement 1(c) of the Order could not be determined. Wood waste was observed to be spread on the paddock, but it was not known whether this occurred before or after the date of the Order. There was non-compliance with requirement 2(a) of the Order, because no qualified professionals had been retained and no written plan developed or submitted, and the voluntary stay of requirement 2 had expired on May 1, 2017.

[33] The second inspection report of August 29, 2017 set out the findings with respect to the Halletts' compliance with the *Agricultural Waste Control Regulation*. The following breaches of the *Agricultural Waste Control Regulation* were noted:

- (a) S. 8(2)(a) which prohibits the storage of solid agricultural waste on a field for more than nine months. Ms. Glavina noted that on June 21, 2017, the horses had been on the Halletts' property for nine months and also that Mr. Hallett said that there were no immediate plans to remove the manure from the paddock area.
- (b) S. 8(2)(c) which prohibits the storage of solid agricultural waste on a field for more than 2 weeks unless the waste is stored in a manner that prevents the escape of the waste that causes pollution. Ms. Glavina observed that manure contaminated water was visibly pooling in the driveway and flowing through the drainage grate off the Halletts' property onto Mr. Fewer's property where the well water had been found to be non-potable by Northern Health.
- (c) S. 8(3) which requires that berms or other works be constructed around a field storage area if this is necessary to prevent the escape of agricultural waste that causes pollution. Ms. Glavina observed that there were no measures (berms or other works) taken in the field storage area to prevent the escape of agricultural waste and noted again the pooling of manure contaminated water flowing from the Halletts' property to Mr. Fewer's property.
- (d) S. 20 which provides that wood waste may only be used for (a) plant mulch, soil conditioner, ground cover, on-farm access ways, livestock bedding and areas where livestock, poultry or farmed game are confined or exercised, (b) berms for cranberry production or (c) fuel for wood fired boilers. Ms. Glavina noted that the wood waste (hog fuel) in the paddock was being used to landfill wet and low lying areas.
- (e) S. 22(a) which provides that wood waste used on the farm must not be used for landfill. Again, Ms. Glavina observed wood waste being used as landfill in wet and low lying areas.
- (f) S. 22(b) which provides that wood waste used on the farm must not be used on sites within 30 meters of any sources of water used for domestic purposes with the exception of existing sites under use prior to April 1, 1992, provided that this use is not causing pollution. Ms. Glavina observed that wood waste was being used as footing in a new pen area such that it was less than 10 meters away from the Halletts' well head.

[34] The Ministry referred this second inspection report of August 29, 2017 to the Conservation Officer Service for investigation.

Summary of the Parties' Positions on the Appeal

[35] The Halletts request that the Order be rescinded. They submit that the Ministry did not conduct a proper investigation, and that the initial inspection in

January 2017 was conducted when the ground was frozen and covered by snow. They also submit that the Ministry should have investigated other properties in the area as potential sources of pollution. In addition, the Halletts submit that Mr. Fewer's well is very shallow, and it is not surprising that it is easily contaminated. However, they advise that they are willing to take steps to properly store and periodically remove manure on their property, divert some surface water on their property, use sand and gravel instead of wood chips in the paddock, and respect water courses and well heads when using wood chips for landscaping.

[36] The Respondent submits that it was reasonable to issue the Order in the circumstances. He was satisfied on reasonable grounds that agricultural waste, in the form of horse manure, found on the Halletts' property was causing pollution of Mr. Fewer's domestic well, and the Halletts were within the three categories of persons set out in section 83(1) of the *Act*. Furthermore, the Respondent submits that the Halletts' proposed measures to remedy the situation are unlikely to be sufficient to stop the pollution from being generated on their property.

[37] Mr. Fewer submits that the Halletts' actions have resulted in contamination of his well, groundwater, and surface water on his property. As a result, he has had potable water delivered to his home since October 2016, and incurred the cost of drilling a new well and installing a water treatment system. He maintains that the only way to effectively deal with the problem is for the Order to be confirmed and implemented.

[38] Northern Health submits that health authorities are responsible for implementing the *Drinking Water Protection Act*, and the findings of its investigation in this case indicated that there was a risk of a drinking water health hazard as a result of the activities on the Halletts' property, which likely contaminated Mr. Fewer's drinking water supply. Regarding removing the threat to his drinking water supply, Northern Health looked to other Provincial Ministries with specific legislation regarding the potential pollutants (hogfuel, manure), as well as best practices regarding their use and application.

[39] As of August 29, 2017 and the hearing date, requirement 2 of the Order, which was subject to a stay until May 1, 2017 pursuant to the Board's letter dated March 27, 2017, had not been fulfilled.

ISSUES

[40] During the appeal hearing, an issue was raised regarding the admissibility of video evidence that Mr. Fewer presented. The Halletts objected to the admission of that evidence. The Panel has addressed this under Issue 1, below.

[41] The Respondent characterized the main issue in the appeal as "whether it was reasonable, in the circumstances, for the Respondent to issue the Order". However, the Panel finds that the appeal was not conducted as a review of the Respondent's decision-making process. Rather, the appeal was conducted as a new hearing of the matter, pursuant to section 102(2) of the *Act*. Some of the evidence presented to the Panel was not available to the Respondent before he issued the Order. Furthermore, the Board has broad remedial powers under section 103 of the

Act, including the power to make “any decision” that the Respondent could have made and that the Board “considers appropriate in the circumstances.”

[42] Consequently, although the Panel has discussed whether it was reasonable in the circumstances for the Respondent to issue the Order, the main issue in the appeal is whether the Order should be reversed, as requested by the Halletts, based on the admissible evidence that is before the Panel and the legislative requirements under section 83 of the *Act*.

1. Whether the video evidence presented by Mr. Fewer should be admitted into the record of evidence before the Panel.
2. Whether the Order should be reversed, based on the admissible evidence that is before the Panel and the legislative requirements under section 83 of the *Act*.

RELEVANT LEGISLATION

[43] The words “environment” and “pollution” are defined in section 1(1) of the *Act* as follows:

“environment” means air, land, water and all other external conditions or influences under which humans, animals and plants live or are developed;

...

“pollution” means the presence in the environment of substances or contaminants that substantially alter or impair the usefulness of the environment;

[44] Section 6 of the *Act* provides as follows:

Waste disposal

- 6** (2) Subject to subsection (5), a person must not introduce or cause or allow waste to be introduced into the environment in the course of conducting a prescribed industry, trade or business.
- (3) Subject to subsection (5), a person must not introduce or cause or allow to be introduced into the environment, waste produced by a prescribed activity or operation
- (4) Subject to subsection (5), a person must not introduce waste into the environment in such a manner or quantity as to cause pollution.
- (5) Nothing in this section or in a regulation made under subsection (2) or (3) prohibits any of the following:
- (a) the disposition of waste in compliance with this Act and with all of the following that are required or apply in respect of the disposition:
- (i) a valid and subsisting permit;
 - (ii) a valid and subsisting approval
 - (iii) a valid and subsisting order;
 - (iv) a regulation:

- (v) a waste management plan approved by the minister;

...

[45] The activities and operations referred to in sections 6(2) and 6(3) of the *Act* are prescribed under the *Waste Discharge Regulation*, B.C. Reg. 320/2004. Section 2 of that regulation refers to the tables in Schedules 1 and 2 of the regulation. Section 1 of Schedule 2 includes "agricultural operations", which are defined as follows:

"agricultural operations" means operations or activities carried out on farms for purposes of agriculture, including, but not limited to,

- (a) producing or keeping livestock, poultry, farmed game, fur bearing animals, crops, grain, vegetables, milk, eggs, honey, mushrooms, horticultural products, trees, tree fruits or berries, and
- (b) operating machinery and equipment for agricultural waste management or for applying fertilizers and soil conditioners;

[46] For activities and operations which generate agricultural waste and which are not regulated through permits, the applicable regulation is the *Agricultural Waste Control Regulation*, which, in section 2(1), provides an exemption from sections 6(2) and 6(3) of the *Act* to persons who carry out their operations in accordance with the Code:

2(1) Subject to subsections (2) and (3), a person who carries out an agricultural operation in accordance with the Code is, for the purposes of carrying out that agricultural operation, exempt from section 6(2) and (3) of the *Environmental Management Act*.

[47] The purpose of the Code is to describe environmentally sound practices for the storage, handling and use of agricultural waste. An agricultural operation that is carried out in compliance with the Code is exempt from the prohibition in section 6 of the *Act* against introducing waste into the environment, to the extent that it is carried out in a manner that does not cause pollution (see section 6(4) of the *Act* and section 3 of the Code).

[48] Part 7 of the *Act* provides statutory decision-makers with powers in relation to managing the environment. Of particular relevance to this appeal is section 83. The Respondent issued the Order pursuant to section 83 of the *Act*, which provides as follows:

Pollution abatement orders

83 (1) If a director is satisfied on reasonable grounds that a substance is causing pollution, the director may order any of the following persons to do any of the things referred to in subsection (2):

- (a) a person who had possession, charge or control of the substance at the time it was introduced or escaped into the environment;

- (b) a person who owns or occupies the land on which the substance is located or on which the substance was located immediately before it was introduced into the environment;
 - (c) a person who caused or authorized the pollution.
- (2) An order under subsection (1) must be served on the person to whom it applies and may require that person, at his or her own expense, to do one or more of the following:
- (a) provide to the director information that the director requests relating to the pollution;
 - (b) undertake investigations, tests, surveys and any other action the director considers necessary to determine the extent and effects of the pollution and to report the results to the director;
 - (c) acquire, construct or carry out any works or measures that are reasonably necessary to control, abate or stop the pollution;
 - (d) adjust, repair or alter any works to the extent reasonably necessary to control, abate or stop the pollution;
 - (e) abate the pollution;
 - (f) carry out remediation in accordance with any criteria established by the director.
- ...
- (5) The powers given by this section may be exercised even though the introduction of the substance into the environment is not prohibited under this Act or is authorized under this Act.

[Emphasis added]

EVIDENCE AND SUBMISSIONS OF THE PARTIES

Evidence and Submissions of Steve and Amanda Hallett

[49] Mr. Hallett gave evidence at the hearing.

[50] The Halletts describe the property at 5625 Oscar Road as their dream home for their family of 11, which includes their three sons and five foster children. They wanted acreage where they could grow their own food and keep animals, including horses, chickens and goats. Mrs. Hallett owns and operates a licensed family daycare on the property. During the period of the events in this case, they were also dealing with a very ill child whose treatment required multiple trips to Vancouver.

[51] They confirmed with the Regional District of Kitimat-Stikine (the "Regional District") that they could keep animals on their property and use it for agricultural purposes.

[52] They brought three horses onto the property in September 2016. They discovered that the ground in the paddock was wet, and in some places very wet

and rocky, and therefore, unsuitable for horses footing. They brought in hog fuel or woodchips to spread in the paddock, which was a solution recommended by the pony club. They also made enquiries of Northern Health who advised them that they could keep horses on the property as long as they were not within 30 meters of the Hallett wellhead. The issue of the use of woodchips was not discussed with either the Regional District or Northern Health. They were unaware that either woodchips or hog fuel could cause pollution issues. Mr. Hallett testified that he did not know if there was a difference between hog fuel and woodchips, and he believed that the material on his property was woodchips.

[53] In their opening statement at the hearing, the Halletts admitted that they now knew that the woodchips are causing problems, and it was their intention to address these issues at a time in the future.

[54] The relationship between the Halletts and Mr. Fewer started amicably. Shortly after they moved in, Mr. Fewer visited them. He enquired about their intention to keep animals on their property.

[55] In the fall of 2016, Mr. Fewer told the Halletts about his concerns about runoff from their property adversely affecting his well and drinking water. They gave him access to their property to excavate a trench at the bottom of the slope between their properties, to install a pipe to the drain in front of their shed that would divert the runoff away from his well head, to remove horse manure, and to move the woodchips in the paddock further away from the slope leading down to his well.

[56] The Halletts and Mr. Fewer agreed to a plan that included a trench across the paddock area to dry it out, and a berm between their properties. He would start by removing the manure in the barn and paddock areas and relocating the woodchips. The Halletts submit that they made it clear that they did not have money to pay for the work or any equipment or necessary materials.

[57] Mr. Fewer worked on the Halletts' property but was unable to continue because the ground was so wet. The Halletts submit that they had no involvement or input into any work done by Mr. Fewer while he was on their property. They then received an invoice from Mr. Fewer, dated November 27, 2016, in the amount of \$2,048 for the work done on their property. This came as a surprise because they say they had told him they could not contribute to any cost of the work, and they also believed that the amount was excessive in light of the actual costs of running the equipment and the time spent. They did not pay the invoice. After presentation of the invoice, the relationship between the Halletts and Mr. Fewer became strained and communication between them stopped.

[58] Mr. Hallett says that shortly after the presentation of the invoice, the Halletts were contacted by Ministry staff, who wanted to conduct a site inspection.

[59] After receipt of the January 20, 2017 non-compliance advisory letter from the Ministry, a tarp was put on the manure pile as directed.

[60] After receiving the Order, Mr. Hallett removed the pipe that Mr. Fewer had installed to carry runoff from the drain past the Fewer wellhead. Mr. Hallett said that after receiving the Ministry letter, he wanted nothing more to do with the

arrangement with Mr. Fewer and he removed the pipe. Mr. Hallett said that after the Order was issued, they took measures to clean up the manure and to block the horses from the barn area where the water clearly flowed downhill to the drain. They tarped and protected both manure and woodchip piles to avoid leachate.

[61] The Halletts' position on this appeal is that the investigation leading to the January 20, 2017 non-compliance advisory letter and the Order was unfair and unreasonable. Both occurred during the winter months when the ability to make the required changes was hampered by winter conditions. Further, they felt that there was nothing that they could do to control the flow of water. They did not know where the groundwater came from or which way it travelled. They note that the Ministry did not take its own water sample from their property. Mr. Hallett admitted that when Ms. Glavina came for a water sample in June, 2017, he declined to give a sample. He referred to the fact that Northern Health had confirmed that the Halletts' water was safe on a number of occasions during this period.

[62] The Halletts also challenge the Order on the basis that they are not responsible for the pollution to Mr. Fewer's well. They submit that the trench excavation done by Mr. Fewer was not engineered, and therefore, not effective or proper. Further, they question the pipe installed by Mr. Fewer, suggesting that it directed the runoff from their drain toward his well and not away from it. They do not accept that the contamination of Mr. Fewer's well is caused by their activities on their property. They also submit that Mr. Fewer's well was shallow and old, and therefore, susceptible to pollution.

[63] Mr. Hallett submits that they have not complied with requirement 3 of the Order because they have been unable to do so. He testified that although telephone calls were made to a number of engineers, he was unable to retain anyone to fulfill this requirement of the Order for a variety of reasons. In general, the engineers that Mr. Hallett contacted told him that they could not give their stamp of approval on anything because they would not be able to guarantee that the water could be controlled, and therefore, they were not prepared to risk taking on this assignment. They told him that the work required to fulfil the requirements in the Order would likely be expensive. They all said that Mr. Fewer should dig a deeper well.

[64] The Halletts offered the following remedial plan in their Statement of Points:

1. They will remove all livestock manure semi-annually from the property until they can build a proper storage shed on site;
2. They will divert the drain behind the shop to their own pond to maximize the distance between the drain and Mr. Fewer's former well;
3. They will use gravel and sand in the paddock area in place of woodchips when they have the financial resources to do so;
4. They will only use woodchips for landscaping purposes, mindful of water courses and well heads.

[65] Their plan was to complete this work by September, 2017. Mr. Hallett said that they had moved all of the woodchip piles out of the paddock area and placed them elsewhere on their property. About one month before the hearing, he had

removed the manure piles from the property. He confirmed that their intention is to maintain and perhaps increase the livestock on the property.

[66] Mr. Hallett objected to introduction into evidence of a video that Mr. Fewer had taken on their property. In order to make the video, Mr. Fewer entered upon the Halletts' property. The Halletts took the position that this was a trespass, and therefore, the video should not be accepted into evidence as having been improperly obtained.

Evidence and Submissions of the Respondent

[67] Ms. Glavina gave evidence on behalf of the Ministry. At the relevant time of the events in this case, she was employed by the Ministry as an Environment Protection Manager. She conducted the January 27, 2017 and August 29, 2017 inspections at the Halletts' property and authored the reports on those inspections.

[68] She confirmed that the Ministry's involvement commenced as a result of a complaint received from Mr. Fewer. There was no on-site inspection prior to the issuance of the January 20, 2017 non-compliance advisory letter, it was an in-office review only.

[69] She described the January 27, 2017 inspection. She attended at the Halletts' property with Ms. Emily Bulmer of the Ministry of Forests, Lands and Natural Resources. Ms. Glavina confirmed the observations set out in the reports that she wrote, and she made reference to the pictures she took that are attached to the reports. During the inspection, she met with the Halletts and walked the property. She observed that the Halletts' property slopes from east to west, with a steep slope leading from the paddock on the Halletts' property down to Mr. Fewer's property. She observed the Fewer well and described it as a shallow excavated well with a tightly fitted lid. She walked along the excavated trench and down to the pond on the Fewer property.

[70] Ms. Glavina testified that she received an analysis of water that was taken from Mr. Fewer's well on December 5, 2016. The reference in that water analysis report to tannin and lignin in the well water sample was the source for her comment in the January 27, 2017 report about resin acids from the hog fuel in the Halletts' paddock raising a concern about leachate pollution to both groundwater and watercourses. Ms. Glavina was also in possession of the laboratory analysis of Mr. Fewer's tap water demonstrating *E.coli* and fecal coliform contamination in a water sample taken on November 28, 2016. She had a copy of a lab report on water from the Fewer well taken in 2006, at which time both the fecal and total coliforms were less than 1.1 MPN/100 mL, and the drinking water was safe for drinking according to the Guidelines for Canadian Drinking Water Quality in place at that time. She submitted that the laboratory report from the November 28, 2016 tap water sample was evidence of contamination since 2016.

[71] Mr. Fewer also provided Ms. Glavina with a laboratory report on the water samples he took on January 30, 2017 from the drainage ditch he excavated on the Halletts' property and from the outlet of the pipe he installed. The report showed that *E.coli* levels were 4 MPN/100 mL at the drainage ditch, and 140 MPN/100 mL at the pipe outlet. The report also showed that the total coliforms measured at

those two sources, respectively, were 920 MPN/100 mL and greater than 1600 MPN/100 mL. Ms. Glavina referred to The Guidelines for Canadian Drinking Water Quality (February, 2017), which state that the acceptable levels of *E.coli* and total coliforms for drinking water are “none detectable per 100 mL”.

[72] Mr. Glavina did a follow-up inspection at the Halletts’ property on June 21, 2017 to verify compliance with the Order and the *Agricultural Waste Control Regulation*. She met with Mr. Hallett and walked the property so that she could see drainages that could not be seen in January when the ground was frozen and there was snow cover. She prepared two reports dated August 29, 2017. The results of those reports are set out above.

[73] During her testimony, Ms. Glavina explained the calculation that she did to determine how much waste three horses would produce over several months. Mr. Hallett had confirmed that no waste had been removed from the property. Using this calculation, she expected to see approximately 21 m³ of animal waste, excluding dirt and bedding. The manure pile on the Halletts’ property was estimated to be 3.5 m³, or approximately 1/6 of the amount that she would have expected. She observed manure laden water flowing on the driveway and at the drain grate. This calculation and observation lead her to conclude that a large amount of manure had travelled off the Halletts’ property or been trampled into the ground.

[74] She did not investigate whether properties neighbouring the Halletts’ property kept animals. She said, however, that if there was contamination coming from above (in other words from parties to the east of the Halletts’ property), then it would be expected that the Halletts’ well would be contaminated, which it was not. In late July, she returned to the Halletts’ property to obtain a sample of the water from their well, but was unable to do so because the Halletts refused to provide a sample.

[75] In cross-examination, Ms. Glavina confirmed her measurement of the distance from the paddock fence on their property to Mr. Fewer’s well as being 28.5 meters, and also her measurement of the amount of waste that was expected from the three horses on the Halletts’ property.

[76] The Respondent, Mr. Nelless, also gave evidence. In 2017, he was the Regional Director of the Ministry’s Compliance Section. He received the February 17, 2017 inspection report prepared by Ms. Glavina. In addition, he had a summary from Ms. Glavina of her inspection. A draft pollution abatement order was prepared and sent to the Halletts, together with the February 17, 2017 inspection report. They were asked to provide their comments. An extension of the time for comments was requested by the Halletts, and granted by Mr. Nelless. Based on the information he had, including comments from the Halletts, he was satisfied that waste was leaving the Halletts’ property and causing pollution, and therefore, he issued the Order.

[77] Mr. Nelless testified that, with respect to requirement 2 of the Order, a qualified professional was required to develop a remedial plan, because he considered this to be a complex site. He said that the actions proposed in the

Halletts' Statement of Points, as set out above, were not sufficient in light of the complexity of the site, including how wet it is and its drainage patterns.

[78] In addition, Mr. Tamblyn was called as a witness by the Ministry. Mr. Tamblyn is a professional engineer. He was qualified as an expert in hydrology, by consent of the parties and the participant. Mr. Tamblyn has been a Public Health Engineer with Northern Health since April 2009. In this capacity, he is a statutory decision-maker under the *Drinking Water Protection Act* and the *Public Health Act*.

[79] Mr. Tamblyn testified that Northern Health has jurisdiction over the regulation of water from the point the water enters the pipe, until it leaves the tap. Before the water enters the well, the provincial government and Northern Health share responsibility. He said that Northern Health became involved in this case as a result of Mr. Fewer's December 5, 2016 request for an investigation. Mr. Fewer had provided Northern Health with the results of the November 28, 2016 water sample results, which satisfied Mr. Tamblyn that an investigation was warranted.

[80] During his testimony, Mr. Tamblyn reviewed the various sources of information that he relied on in writing his report dated April 10, 2017. On-site inspections at Mr. Fewer's property were conducted by Northern Health on November 29, 2016, December 2, 2016, and March 3, 2017. An analysis of the data including local groundwater flow direction suggested to Mr. Tamblyn that any contaminated groundwater from the Halletts' property would be expected to flow west toward Mr. Fewer's property. Part of Mr. Tamblyn's analysis was a comparison of the water quality of the Halletts', Mr. Fewer's, and two neighbouring wells, including wells to the north of the Halletts' and Mr. Fewer's properties, and also a drilled well (the Rushton well) to the west of Mr. Fewer's well. This comparison disclosed an anomaly in the water from Mr. Fewer's well, which had significantly lower "UVT" than water from the other wells. Mr. Tamblyn explained that "UVT" is a measure of the amount of UV light travelling through the water. Mr. Tamblyn stated that, in his opinion, the low number recorded for water from Mr. Fewer's well was from "... a relatively small, local organic contaminant source, located somewhere between the Hallett well and the Fewer well." Mr. Tamblyn noted that water from the Rushton well, west of Mr. Fewer's property, was not affected by the low UVT percentage which was found only in water from Mr. Fewer's well. He also noted that the Halletts' well did not show signs of organic contamination. Mr. Tamblyn said that the most common organic compound is tannin. He explained that tannin is an organic compound found in coal and tree bark. It is resistant to breaking down and gives a yellowish brown colour.

[81] It was Mr. Tamblyn's opinion that the Halletts' well, Mr. Fewer's well, and one other well, all of which were shallow dug wells, were taking advantage of an unconfined aquifer, which made them more susceptible to inflows of agricultural waste. Mr. Tamblyn acknowledged the difficulties in calculating the speed of groundwater flow. Having considered the various factors, he calculated the groundwater velocity between the Halletts' property and Mr. Fewer's well as approximately 3.5 meters/day, although he acknowledged that it could be as much as ten times that number. Mr. Tamblyn said that 3.5 meters per day is fast for groundwater. He estimated that it would take about 11 days for groundwater to travel from the Halletts' paddock and barn to Mr. Fewer's well, acknowledging that

there was uncertainty in this estimate. Mr. Tamblyn explained that substances flowing from the Halletts' property to Mr. Fewer's well would only pose a health hazard if the pathogens in the source can survive long enough to reach the Fewer well. He said that it takes 160 to 220 days to achieve a level of reduction in the pathogens, and that some pathogens would have survived long enough to reach the Fewer well and be viable at the well.

[82] Mr. Tamblyn agreed that the water in the Fewer well was not potable based on the analysis of the October 28, 2016 sample, and a sample taken from Mr. Fewer's tap by Northern Health.

[83] Mr. Tamblyn stated that it was not necessary to review every well in the area to detect the likely source of contamination in the Fewer well. The reason for this is that there is no contamination in the Halletts' well, which leads to the focus on the circumstances between the Halletts' well and Mr. Fewer's well. In his opinion, it is unnecessary to continue the search further upslope, because the substances found in the Fewer well are consistent with the contamination in that area.

[84] Mr. Tamblyn elaborated on the comments in his report recommending monthly monitoring of the conditions around the Fewer well. He explained that this comment in his report was intended to convey that the investigation that resulted in the Order was not exhaustive, although it was sufficient to determine the likely source of contamination of the Fewer well. A period of monitoring would be needed for a conclusive determination.

[85] In cross-examination, Mr. Tamblyn said that the water flowing through the pipe from the Halletts' drain would travel much faster than the 3.5 meter/day groundwater velocity. He said that the Halletts' well is not affected by the woodchips because the groundwater flows downhill. If the woodchips were 10 meters to the east (upslope) of the Halletts' well, the wood chips would be likely to affect it as well. When asked if moving the horses to the eastern side of the Halletts' property would be an appropriate remediation, Mr. Tamblyn responded that it would be necessary to have a qualified professional assess all of the factors to determine if that would remediate the existing situation. When asked whether a drilled well on Mr. Fewer's property would resolve the water issue, Mr. Tamblyn said that if the well was drilled in a deeper aquifer, it would have a much lower vulnerability to contamination than the present shallow dug well. He confirmed that this would not solve the problem with contamination of Mr. Fewer's pond or groundwater.

[86] Mr. Tamblyn was also asked about the difference between hog fuel and woodchips in respect of tannins present in water. He said that the finer the wood waste and the higher the bark component, the more tannins that would be produced. In other words, the type of wood waste used matters. Hog fuel is usually finer, with smaller particles that tend to break down more quickly.

Evidence and Submissions of Mr. Fewer

[87] Mr. Fewer submits that the Order should be upheld, and the appeal dismissed. He asks that a term be added to the Order giving him a right to review and comment on any plan submitted under requirement 2 of the Order.

[88] Mr. Fewer testified that he purchased his property at 5635 Oscar Road in January 2007, and the December 2006 water analysis was done as part of his due diligence before purchasing his property to ensure that there was a safe water supply.

[89] Mr. Fewer also testified that, before October 2016, he experienced no problems with his well. He was aware that the shallow well was vulnerable to contaminants in surface runoff and that he must be careful in its maintenance. He was diligent and careful in the maintenance and monitoring of his well to ensure that water quality was maintained. He followed the instructions of an experienced water quality system provider. He followed the instructions in the "Water Well Disinfection using the Simple Chlorination Method Water Stewardship Information Series" and tested his water using what he referred to as a reliable test kit.

[90] Mr. Fewer stated that the previous owners of the Halletts' property had not kept livestock, and the presence of horses in September 2016 caused him concern about the potential for problems with his well.

[91] Mr. Fewer said that he installed the pipe and culvert on the Hallett's property in the fall of 2016 as a "last ditch" method to save his well. He said that there had been standing water near his well for many years, but that it had never caused any problem. He installed about 200 feet of pipe, which carried the water from the Halletts' property to an outlet about 15 feet past his well. The outlet of the pipe is downslope from his well. His goal was to take the polluted water away from his well. He said that he was not diverting water onto his property, but rather managing what was there. He disagreed with Mr. Hallett's evidence, saying that he told Mr. Hallett what he was going to do before he did it.

[92] Mr. Fewer stated that he worked at the Halletts' property on November 24 and 25, 2016. He maintains that he spoke with Mrs. Hallett about the work he suggested on their property, which included filling the lower part of the paddock area, and she agreed with the plan. When he started work at the Halletts' property, he found that the hog fuel on the paddock was about three feet deep in some areas. He cleaned out the barn area, which he described as being filled with horse manure up to approximately 18 inches deep. On the second day at the Halletts' property, Mr. Fewer determined that the equipment he had rented was not big enough to deal with the large amount of hog fuel on site, nor was there sufficient fill on site to complete the project. That was the end of Mr. Fewer's attempt to move the hog fuel and manure on the Halletts' property. Mr. Fewer referred to a photograph that he had taken on November 25, 2016, showing the water flowing from the pipe that he had installed leading from the Halletts' property. The water is dark brown in colour. Mr. Fewer said that it smelled of horse manure and had an iridescent sheen on the surface.

[93] On January 28, 2017, the day after Ms. Glavina conducted her site investigation, Mr. Fewer noticed that the pond on his property had become discoloured. He concluded that the runoff from the Halletts' property was the cause of the discolouration. He was very upset. He took videos of the condition of the pond and stream, and went onto the Halletts' property to video the source. He sent these videos to Ms. Glavina and also showed them at the hearing. As noted above, the Halletts objected to these videos.

[94] On December 8, 2016, Mr. Fewer notified Northern Health that he was not drinking the water from his well because of the contamination issue, and he was also experiencing other health effects, including headaches and nausea. He received an email from Northern Health dated that same day, recommending that he not use the water in his well for any purpose except flushing toilets.

[95] Mr. Fewer detailed the hardships he experienced in the winter, spring and summer of 2017. This included his children not being able to stay with him because they could not shower or wash clothes.

[96] Mr. Fewer ultimately decided that it was necessary to move forward with drilling a new well and installing a water filtration system. He located the new well at the end of his pond. This entailed digging a trench 650 feet long for the pipe. He did the work himself to minimize the cost.

[97] When questioned about permission to take videos on the Halletts' property on December 3, 2016 and January 28, 2017, Mr. Fewer referred to the discussion with Mrs. Hallett in November 2016, at which time he was told, in relation to the planned remedial work on their property, that he could do anything he wished.

Evidence and Submissions of the Participant

[98] Ms. Talina Almeida, Drinking Water Officer and Environmental Health Officer, Public Health Protection, Northern Health, testified.

[99] Ms. Almeida described the jurisdiction of Northern Health as providing protection for all water systems where there is, was, or may be a threat to the drinking water provided by a water supply. Under the *Drinking Water Protection Act*, it helps individual homeowners address concerns from potential sources of contamination.

[100] Ms. Almeida confirmed that in late November 2016, Mr. Fewer dropped off a water sample, which he had taken from his kitchen tap, at the Terrace Health Unit for bacteriological analysis. She said that it is common practice for Northern Health to accept water samples and to pay the shipping charges to send them to the laboratory for analysis. The results from that water sample caused Northern Health to advise Mr. Fewer not to consume the contaminated water and recommended using an alternate source of drinking water or boiling the water for a minimum of 1 minute when used for drinking, cooking or brushing teeth.

[101] Following Mr. Fewer's formal request for an investigation, Ms. Almeida and Victoria Chatten, Drinking Water Officers and Environmental Health Officers, went to Mr. Fewer's home on December 5, 2016 to collect a water sample from the tap for chemical analysis. These results were provided to Mr. Tamblyn.

[102] On March 2, 2017, a team from Northern Health conducted field measurements of Mr. Fewer's well including GPS location and elevation, and sampled water from Mr. Fewer's well to determine its ultraviolet transmittance, turbidity, total dissolved solids, and pH. This data was also provided to Mr. Tamblyn.

[103] By letter dated April 21, 2017, Northern Health notified Mr. Fewer of the results and findings of its investigation, which indicated that there was a risk of a drinking water hazard as a result of the activities on the Halletts' property, which likely contaminated Mr. Fewer's drinking water supply.

[104] With respect to addressing the water contamination issue, Northern Health submitted that it deferred to the issuance of the Order.

DISCUSSION AND ANALYSIS

1. Whether the video evidence presented by Mr. Fewer should be admitted into the record of evidence before the Panel.

[105] At the hearing, the Panel decided that Mr. Fewer could show video clips that included images taken on the Halletts' property without their express approval. The Halletts argued that the video evidence should not be entered into the evidentiary record. The Halletts submitted that these videos were obtained by trespass, and therefore, should be excluded. Mr. Fewer maintained that he had permission to enter onto the Halletts' property in November 2016, and this permission was never retracted.

[106] The Panel finds that Mr. Fewer was on the Halletts' property without authority when he took some of the video that was viewed. However, no legal authority was provided to the Panel on the issue of the admissibility of the video evidence.

[107] The Panel has determined that accepting the video evidence does not bring the administration of justice into disrepute. The purpose of the video was to demonstrate the source of effluent leaving the Halletts' property and flowing to Mr. Fewer's property. The video images are consistent with photographs that were entered into evidence by the Ministry. There were no personal items in the video evidence.

[108] For all of these reasons, the Panel accepts the videos as evidence in this case.

2. Whether the Order should be reversed, based on the admissible evidence that is before the Panel and the legislative requirements under section 83 of the Act.

[109] None of the parties contest the fact that by late November 2017, Mr. Fewer's well had become polluted and the water was unusable for anything but flushing toilets. Nor is it contested that prior to October 2016, Mr. Fewer had never experienced any difficulty with the quality of the water from his well.

[110] The Halletts' submit that the Order is unreasonable, and they argue that the investigations underlying the Order could have been handled better, and that they were not well planned or executed.

[111] However, it was not disputed that the onus in this appeal is on the Halletts, as the appellants, to show that the Order should be rescinded, and that the civil standard of the balance of probabilities is to be applied.

[112] Although the Halletts submitted that other properties could be the source of the contamination in Mr. Fewer's well, they presented no evidence to support that submission. There is no evidence to contest the reports and evidence of either Mr. Tamblyn or the Ministry. There is also no evidence to contradict any of the test results on water samples from Mr. Fewer's well and tap. As such, the Panel finds that the source of the pollution that contaminated Mr. Fewer's well is runoff from the Halletts' property, which contains manure and leachate from either woodchips or hog fuel located on that property.

[113] Section 83(1) of the *Act* provides that, "if a director is satisfied on reasonable grounds that a substance is causing pollution", the director may order any of the persons described in subparagraphs (a) through (c) to abate the pollution.

[114] In *George E. Curtis and Kevin F. Curtis v. Delegate of the Director, Environmental Management Act*. (Decision No. 2016-EMA-121(a), June 1, 2017); [2017] B.C.E.A. No. 6 (Q.L.) [*Curtis*], the Board considered what constitutes "pollution" in the context of a pollution abatement order. That decision states at paragraphs 79 and 80:

... the Respondent was obliged to satisfy herself, on reasonable grounds, that the nitrates derived from the manure/wood shavings mixture deposited by the Appellants on their land had leached into the Aquifer and caused an elevation of the nitrate levels in the Aquifer, or contributed to the multiple sources of nitrates filtering into the Aquifer, such that it was causing "pollution".

... The phrase "substantially alter or impair the usefulness of the environment" does not compel the application of a particular standard; rather, in the context of this case, the phrase required the Respondent to consider whether the nitrates from the manure/shavings mixture deposited onto the Appellants' land substantially altered or impaired the usefulness of the water in the Aquifer. Further, while scientific certainty of causation is not required, the Respondent must be satisfied "on reasonable grounds" that the substance is causing pollution.

[115] In the *Curtis* decision, the Board also considered the meaning of "reasonable grounds" in section 83 of the *Act*, and the Board's findings in a previous appeal of a pollution abatement order (*Van Der Wal v. British Columbia (Ministry of Environment, Lands and Parks)*, Appeal No. 95/32, July 18, 1996; [1996] B.C.E.A. No. 30 (Q.L.) [*Van Der Wal*]). The Board concluded as follows at paragraphs 82 to 84 of *Curtis*:

The Board concluded [in *Van Der Wal*] that "the test is an objective test and that the standard of proof is not the criminal law standard but a standard more akin to the civil standard of 'balance of probabilities'". It then concluded:

39. The manager must, on the basis of plausible evidence, objectively considered, be satisfied that there will “likely” be release of a substance that will cause pollution of the environment.

...

41. At the very least then on the basis of objective evidence the manager must come to the conclusion that the operation or activity will probably cause a contamination that will substantially alter or impair the usefulness of the environment.

[Emphasis added]

In the present case, section 83 requires the Respondent and, on appeal, this Panel, to be satisfied on reasonable grounds that the substance “is causing” pollution. This means that there must be “plausible evidence, objectively considered” that the manure/wood shavings mixture applied by the Appellants is leaching nitrates into the Aquifer and “is causing” pollution. The standard of proof is on a balance of probabilities.

It is a question of fact whether the deposit of nitrates into water substantially alters or impairs the usefulness of the environment. In circumstances where a small deposit of nitrates is introduced into water, with no other sources of nitrates impacting it, that small deposit of nitrates might not “substantially alter or impair the usefulness of the environment”. However, if there are multiple sources of nitrates entering a body of water, that same small deposit of nitrates could substantially alter or impair the usefulness of the environment, by contributing to an elevated level of nitrates in the water such that it places human health or the health of the environment at risk. Consistent with the statutory test for issuing a PAO, this contribution must be based on plausible, objective evidence.

[116] The Panel has applied this framework and these principles to the evidence before the Panel.

[117] As of March 6, 2017, when the Order was issued, the Respondent had the January 20, 2017 non-compliance advisory letter, the February 17, 2017 investigation report including its attachments, and the comments of the Halletts in response to the report and draft pollution abatement order that had been sent to them.

[118] The Halletts presented no evidence to challenge Ms. Glavina’s observations and measurements set out in the February 17, 2017 report. Ms. Glavina was questioned in cross-examination about the measurements she made in support of her finding that the wood on the Halletts’ property was less than 30 meters from Mr. Fewer’s well. Ms. Glavina confirmed her measurement and the method she had used to take it. No evidence of any other measurement was entered into evidence.

The report described and enumerated the four breaches of the *Agricultural Waste Control Regulation* set out in her report (see paragraph [19] above). The February 17, 2017 report acknowledged that Ms. Glavina had not taken samples, but referred to the well water sample Mr. Fewer took on December 5, 2016, which demonstrated tannin and lignin in Mr. Fewer's well water.

[119] The Respondent was also in possession of the laboratory analysis of water from Mr. Fewer's tap taken on November 28, 2016, which showed *E. coli* at 4 MPN/100mL, with the maximum acceptable concentration being less than 1 (non-detected).

[120] The Panel finds that the Respondent properly relied on the February 17, 2017 report and the documents that were attached to it. There was no evidence of any alternate source or cause of the contamination to Mr. Fewer's well.

[121] The Panel finds that, based on the evidence available to the Respondent as of March 6, 2017, he had reasonable grounds to issue the Order, in that he had "plausible evidence, objectively considered" to support a finding that agricultural and wood waste was escaping from the Halletts' property and causing pollution to Mr. Fewer's property. Ms. Glavina concluded that particulate and solid matter from wood waste could be easily incorporated into the draining water. Ms. Glavina's observations:

- of water and manure from the paddock and barn area draining into the grate on the property and discharging on the northeast corner of Mr. Fewer's property, which flowed into a stream and, ultimately, into a large pond;
- the proximity of the wood waste to the Fewer well (less than 30 meters), and;
- the finding of *E. coli* and fecal coliform contamination in Mr. Fewer's well water

are a sufficient factual basis to support a finding that the activities on the Halletts' property resulted in substances or contaminants that substantially altered or impaired the usefulness of the environment. Here, Mr. Fewer's well water was no longer potable and there was uncontested evidence of manure laden water from the Halletts' property discharging into a stream and pond on the Fewer property. In the Panel's view, this meets the test of cogent evidence that the activities on the Halletts' property, in particular the presence of wood waste in proximity to the Fewer well and the discharge of manure laden water onto the Fewer property, substantially altered or impaired the water in the Fewer well. Scientific certainty of causation is not required. When the Respondent issued the Order, he had reasonable grounds based on the evidence, objectively considered, to be satisfied that the presence of the manure and/or the wood waste on the Halletts' property was causing pollution.

[122] The Panel also finds that the Respondent's conclusions were confirmed by subsequent inspections and analysis, including the report of Mr. Tamblyn.

[123] The Panel has the benefit of additional evidence which was not available when the Respondent issued the Order, including the background information and analysis set out in the report of Mr. Tamblyn. This report supports and confirms

the Respondent's conclusion that contaminants were flowing from the Halletts' property onto the Fewer property and have adversely impacted Mr. Fewer's well water, in the sense that its level of *E. coli* makes it unfit for consumption. The email from Northern Health goes further, stating that it is unfit for anything but flushing toilets. There is no evidence to contradict either Mr. Tamblyn's analysis and conclusions, or those of Northern Health.

[124] The Panel has considered the evidence that was before the Respondent, plus the new evidence that was presented at this hearing, and has considered whether to exercise any of its powers under section 103 of the *Act*, including the power to make any decision that the Respondent could have made under the *Act*.

[125] Based on the evidence, the Panel has determined that the appropriate outcome is to confirm the Order. However, due to the passage of time while the appeal process was underway, it is necessary to provide a new date for requirement 2 in the Order to be performed. The Order provided a one-month period for the Halletts to retain suitably qualified professionals to develop and submit a written plan for the Director's approval. The Halletts have given evidence of difficulties they have experienced in retaining a qualified professional to perform this work. In light of this and the fact that it is still winter, the Panel varies the Order to substitute April 13, 2018 for April 7, 2017.

DECISION

[126] In making this decision, the Panel has considered all of the relevant evidence and submissions of the parties, whether or not specifically reiterated in this decision.

[127] For the reasons stated above, the Panel confirms the Order, with the exception of the date for completion of requirement 2 in the Order, which is extended to April 13, 2018.

[128] The appeal is dismissed.

"Maureen E. Baird"

Maureen E. Baird, Q.C., Panel Chair
Environmental Appeal Board

February 14, 2018