



Province of
British Columbia

Ministry of
Environment

ENVIRONMENTAL APPEAL BOARD
Victoria
British Columbia
V8V 1X5

APPEAL NO. 84/04 WASTE MGT

J U D G E M E N T

Appeal against the decision of the Director of Waste Management to issue Permit No. P.A. 7041 under the Waste Management Act, in the name of Penticton Foundry Ltd., on December 29th, 1983.

APPELLANT

Mr. John Havelock
134 Adamson Place, R.R. 2,
S. 1, C-29,
Penticton, B. C. V2A 6J7

DECISION:

The Panel of the Environmental Appeal Board authorized under the Waste Management Act and the Environment Management Act to hear the appeal against the decision of the Director of Waste Management relative to the issuance of air pollution control Permit P.A. 7041 to Penticton Foundry Ltd. on December 29, 1983 -

- (a) has considered all of the evidence submitted to it in the appeal hearing heard in Penticton, B.C. on April 10th, 1984, and
- (b) has decided that the Director of Waste Management was correct in his assessment that the issuance of Permit No. P.A. 7041 under Section 8 of the Waste Management Act will not cause an unreasonable adverse effect which will result in danger to man or to the environment in the areas involved, and, therefore,
- (c) dismisses the appeal against the decision of the Director of Waste Management relative to the issuance of Permit No. 7041 to Penticton Foundry Ltd., dated December 29, 1983.

In reaching its decision, the Panel carefully examined the evidence submitted by the Appellant concerning the housekeeping shortcomings and environmental problems associated with the operation of the existing foundry and compared it to the foundry operating practices and waste management controls which can be expected when production commences at the new site. The result of this examination overwhelmingly supports the Director's decision to issue the Permit, notwithstanding that no absolute guarantee could be given that there would never be any detectable odor from the foundry operation.

When the new foundry commences operations, the environmental hazards and nuisance factors associated with the operation of the existing foundry will be eliminated and their chances of recurrence at the new site will be substantially lessened. Odor emissions, particulate emissions, ground vibration, and operating noise levels, will all be considerably reduced or completely eliminated.

The Panel accepts the evidence of the Appellant that should the environmental problems which have arisen from time to time in the operation of the existing foundry be repeated at the new site, the residents of the surrounding area might experience unwanted changes in environmental quality which could adversely affect the use and enjoyment of their properties.

It was clearly stated in the evidence of the Permittee that the existing foundry has exceeded its capacity to produce in a controlled fashion. Relocation provided the only realistic solution.

The site selected for relocation is considerably larger, thus eliminating the waste management problem associated with space constraints.

The design of the new foundry incorporates modern up-dated technology and enlarged production and storage area allocations. These features open the way for immediate improvements in molding and waste management practices not realistically obtainable at the old site. Odor-causing production conditions will be reduced through the use of elongated production lines, longer mold cooling periods, increased sand storage facilities and better air filtering and particulate collection procedures. Vibration causing foundry practices have been contained within the plant site through the construction of a carefully engineered mold equipment shake out foundation surrounded by a building vibration isolater.

The Panel also notes that the noises caused by foundry activities at the new site, while not a matter before it under the Waste Management Act, will be substantially contained within the greatly enlarged foundry building where many of the activities previously conducted outside will now be performed inside an insulated cement block structure. In addition, the mold shakerequipment is to be housed in a building within the foundry building.

The Panel does not accept the allegation of the Appellant that representatives of the Ministry of Environment had not acted in an unbiased manner in their investigation of

the permit application by holding a meeting of residents from the area near the relocation site, and by conducting an on-site tour of the foundry's premises. It was evident from investigation of the application that the proposed relocation of the foundry site and installation of improved facilities would reduce waste emissions, and would generally create an improved environmental situation for residents of the City of Penticton. It is a responsibility of Ministry representatives to promote improvement in environmental quality and to generally support proposals designed to achieve such objectives.

The Panel accepts the Permittee's evidence that all of the terms and conditions of Permit P.A. 7041 can be, and will be, fully complied with. The Appellant and other members of the public are, on the other hand, entitled to assurances that all of the requirements of the Permit will be monitored and enforced, and that any unforeseen problems affecting the quality of the environment arising out of the foundry's operations are promptly detected and remedied. In this regard, the Panel notes that Permit P.A. 7041 contains requirements for monitoring and testing for particulate matter and other emissions from the foundry, and recommends that such a program be instituted when production at the new site commences, and be continued as long as necessary to ensure full compliance with all of the terms and conditions of the Permit.



J.O. Moore,
Panel Chairman
Environmental Appeal Board

Victoria, B. C.
May 17th, 1984

Appeal: 84/04 WASTE MGT

SUMMARY

The following pages of this Judgement contain a summary of the hearing details and principal points advanced in the testimony of the parties to the appeal.



J.O. Moore
Panel Chairman
Environmental Appeal Board

May 17, 1984

HEARING DETAILS:

The hearing was held by a Panel of the Board in Penticton, B. C. in the Conference Room of the Pilgrim House Motor Hotel on April 10th, 1984.

The Panel of the Board in attendance were:

J.O. Moore Chairman
(Property Tax Consultant)

L. Osipov, P. Eng. Member
(Consulting Civil Engineer)

Ralph F. Patterson, Ph.D. Member
(Consultant - Cellulose
and Industrial Chemistry)

Miss Shirley Mitchell, Secretary to the Board, acted as Recorder of the Proceedings.

SUMMARY OF PRINCIPAL REASONS FOR APPEAL:

The appeal was taken under Sections 26 (b) and 28 of the Waste Management Act against the decision of the Director of Waste Management to issue air pollution control permit P.A. 7041 to Penticton Foundry Ltd. on December 29, 1983.

Permit P.A. 7041 authorizes emissions from the operations of an iron foundry in a municipally-approved new location within the City of Penticton, to be introduced into the environment under certain specified terms and conditions.

Some residents of the area in which the foundry is being relocated have expressed concern that the environmentally-objectionable characteristics associated with the operation of the existing foundry may reoccur or worsen when operations commence at the new location. If this should happen, both environment quality and property values in the area would be adversely affected.

One concerned resident near the relocation site appealed to the Board because he felt that neither the foundry owner nor the Ministry of Environment had provided satisfactory assurances that similar objectionable environmental conditions would not be permitted to occur when the foundry commenced operation at its new location. The grounds of appeal cited a number of factors which might adversely affect property owners and environmental quality in the vicinity of the foundry relocation site, including air-borne particulate wastes, offensive odors, ground vibrations, local air stagnation and inversion conditions, inadequate monitoring procedures and increased levels of objectionable noises.

The Appellant also included in his grounds of complaint a statement setting out his reaction to the manner in which the public were informed of the proposed relocation of the foundry operation within the City. It was the Appellant's view that the representatives of the Ministry of Environment had not acted impartially in their investigation of the Permit. Instead, they appeared to be acting as a public relations office, assisting the foundry management in presenting their proposal to the public.

APPELLANT'S REPRESENTATIVE:

Mr. John Havelock,
134 Adamson Place, R. R. 2,
S-1, C-29,
Penticton, B. C.
V2A 6J7

Appellant and
Spokesman

PERMIT HOLDER'S REPRESENTATIVES:

Penticton Foundry Ltd.,
420 - 604 Columbia Street,
New Westminster, B. C.
V3L 4X9

Permittee

(1) Mr. Brian Corbould,
Barrister & Solicitor,
420 - 604 Columbia Street,
New Westminster, B. C.
V3L 4X9

Spokesman

PERMIT HOLDER'S REPRESENTATIVES (Continued)

- | | | |
|-----|---|---------|
| (2) | Mr. Raye Thompson
General Manager,
Penticton Foundry Ltd.,
1363 Commercial Way,
Penticton, B. C.
V2A 3H4 | Witness |
| (3) | Mr. Robert Isted, President,
Madis Engineering Ltd.,
Calgary, Alta. | Witness |

DIRECTOR OF WASTE MANAGEMENT REPRESENTATIVES

- | | | |
|-----|---|-----------|
| (1) | Mr. W. G. Hamilton, P. Eng.,
Head, Industrial & Air Section,
Waste Management Branch,
Penticton, B. C. | Spokesman |
| (2) | Mr. R. A. Nickel,
Regional Manager,
Waste Management Branch
Penticton, B. C. | Witness |

EXHIBITS:

- | | | <u>Entered by</u> |
|---------|--|-------------------|
| Ex. "A" | City of Penticton map showing location of present and new foundry sites. | Permit Holder |
| Ex. "B" | Opening Statement of Permit Holder, dated April 9, 1984 | Permit Holder |
| Ex. "C" | Letter addressed to Concerned Residents near proposed relocation site, dated December 7, 1983 | Permit Holder |
| Ex. "D" | Penticton Foundry - Review of Systems Operations and Recommendations with respect to Environmental Concerns, Madis Engineering Ltd. November 10, 1983. | Permit Holder |

EXHIBITS (Continued)

Entered by

Ex. "E"	Sketch plan showing location of new foundry and Havelock residence on Adamson Drive. Part of Exhibit "D" - Madis Engineering Drawings PE-192-003.	Permit Holder
Ex. "F"	Photocopy of plan showing location of new foundry and documents entitled "Technical Assessment for Permit Application dated December 14, 1983, and "Resume for Permit Application", dated December 20, 1983.	Waste Management Branch

SUMMARY OF POINTS ALLEGED IN EVIDENCE OF APPELLANT:

Mr. John Havelock

- (1) A personal inspection of the premises of Penticton Foundry Ltd., located at 1363 Commercial Way, in the City of Penticton, revealed a number of unsatisfactory management practices which if permitted to reoccur at the new foundry site would unquestionably adversely affect environmental quality in the area. Housekeeping practices in evidence at the time of inspection could only be described as "atrocious". Excessive accumulation of waste materials was clearly visible both inside the foundry building and in the service yard areas. Caked layers of contaminated sand covered the service yard. Bag house hoppers were overflowing and open vents in the building permit an easy access for dust particles to enter the surrounding environment.
- (2) The best measure of foundry housekeeping practices that can be expected at the new location is based on the practices followed by the company in the past.

- (3) As the Waste Management Branch permitted poor housekeeping practices to be followed at the foundry in the past, there is no reason to not expect that they will continue to permit such unacceptable practices in the future.
- (4) Information relative to noise levels, both at the old and those anticipated at the new site was not available when the arranged inspections of the sites were made, and enquiries made at that time failed to establish which authority was responsible for monitoring and regulating any noise problems which arise in connection with the operation of the foundry in its new location.
- (5) Odor from the present foundry operations has been detected as far as three-quarters of a mile away.
- (6) The Waste Management Branch does not appear to have any effective procedures for dealing with or monitoring odor and particulate emission problems.
- (7) Adequate information relative to the structural integrity of the building and shaker equipment footings was not available upon which to evaluate whether the operation of the foundry at its new location posed any threat to soil stability or would accelerate erosion of the nearby benches.
- (8) Excessive odor build-up in summer months is likely to occur in the vicinity of the new foundry because of its location in a low-lying gully, and air inversion conditions characteristic of the area.
- (9) The Ministry of Environment officials did not act in an impartial manner during the inspections of the foundry sites. Instead, they appeared to be promoting the foundry relocation rather than providing the members of the public in attendance with answers to their questions. This lack of impartiality did not inspire confidence that the Waste Management Branch would hold the foundry operators accountable

for any environmental damage, or would fully enforce the terms and conditions of the permit, particularly in respect of monitoring odor and particulate emissions.

It was established in cross-examination that -

- (1) The inspections of the foundry site referred to in the Appellant's evidence occurred December 15, 1983.
- (2) The Appellant's residence is located on a bench above the site of the new foundry.
- (3) The buildings at the site of the new foundry are not visible from the Appellant's residence.
- (4) Odor from the existing foundry operations was detected on the date the inspection occurred and on previous occasions during the summer months when the Appellant was visiting friends in the area nearby.
- (5) The Appellant considered the odors which he detected from the existing foundry's operations to be offensive.
- (6) The industrial park in which the foundry is being relocated was established some time prior to the Appellant taking up residence in the area.
- (7) The Appellant has no objection to the relocation of the foundry taking place provided assurances are given that -
 - (a) no offensive odor will be discharged into the surrounding residential area;
 - (b) proper steps are taken to ensure that ground surrounding the site is stable enough to withstand the vibration associated with the operation of the shakerequipment, and,
 - (c) adequate monitoring of emissions from the foundry is maintained at all times.

- (8) Neither regulation of noise nor zoning of land-use falls within the jurisdiction of the Ministry of Environment.
- (9) The Appellant has not detected any offensive odor emitted from industries currently operating in the industrial park in which the foundry is being relocated.
- (10) The Appellant identified several clauses in Permit No. PA-7041, which were unclear, particularly with reference to monitoring and enforcement. The clauses included Appendix No. 1 - Clause (d), Appendix No. 2 - Clauses (b) and (d), Appendix No. B-1, Clause D, Appendix No. B-2, Clauses F, G & H, and Appendix No. C-1, Clause B.

SUMMARY OF PRINCIPAL POINTS ALLEGED IN EVIDENCE OF THE PERMIT HOLDER

The evidence by the witnesses for the Permittee was presented to the Panel of the Board in written form and was identified for the record as Exhibits "B", "C" and "D".

The written submissions summarize from the viewpoint of the Permittee the events which lead up to the decision to relocate the foundry and the steps which are being taken to ensure that no damage to the environment will result from the operation of the foundry at its new location.

Additional points made on behalf of the Permittee were as follows:

Mr. Raye Thompson:

- (1) The present foundry premises are inadequate to meet production objectives and current environmental standards.

- (2) The new foundry has been designed to incorporate a number of features which will enable more effective management of environmental pollutants than was possible at the old site.
- (3) The operation of the new foundry will incorporate a number of changes designed to reduce the causes of adverse environmental effects including longer mold cooling periods, increased sand storage, within-building containment and filtering of mold gases and particulate wastes, enlarged number and length of production lines, and adequate space to enable proper housekeeping practices.
- (4) Reduced noise levels in the vicinity of the new premises are anticipated because the foundry operation will be under cover in an insulated steel-cement block structure.
- (5) No foundry-produced fly ash is emitted as the smelting process utilizes electrical rather than coke-fired energy sources.
- (6) Particulate matter emissions from the foundry will be eliminated through vacuum collection and baghouse filter processes.
- (7) Odor emissions are expected to be 89% lower than those emitted from the existing foundry under similar levels of production.
- (8) Vibration from mold shake-out equipment has been eliminated through construction of a concrete foundation, 3 feet x 11 feet x 48 feet, weighing 110 tons. No vibration of the foundry building on the surrounding site is expected to occur as a result of the operation of the shaker equipment as both foundations and soil conditions are excellent.
- (9) The Permittee made expenditures totalling \$175,000 during 1980 to 1983 to reduce or eliminate adverse environmental effects associated with the operation of the existing foundry and is committed to spending a further \$250,000 at the new foundry to meet Permit requirements.

- (10) The space problems associated with ineffective waste removal practices and poor plant house-keeping at the existing foundry have been eliminated at the new foundry premises.
- (11) Accesses have been provided at the new foundry to enable monitoring but installation of monitoring equipment is not planned.
- (12) The City of Penticton did not raise any objections to the proposed relocation of the foundry nor did they request any special environmental impact studies be conducted relative thereto.

Mr. Robert Isted:

- (13) The increased horizontal and vertical distances between the new foundry and closest residential area further lessens the susceptibility for offensive odor build-up and represents an improvement over the situation existing at the present foundry site.
- (14) The 3-foot thick concrete slab foundation constructed to eliminate soil and building vibration caused by the shaker equipment at the new foundry has a vibration isolator around it to separate it from the building floor.
- (15) The existing foundry has exceeded its capacity to produce in a controlled fashion.
- (16) The catalyzed chemical in the sand used in the molds becomes inert following the combustion and cooling process and thereafter poses no environmental hazard. It is during the combustion phase that the odor is produced.
- (17) No studies were undertaken to determine rate of depletion of any odor emitted from the foundry operation as there are no scientific methods of detecting odor other than by the use of a Panel.
- (18) The design of the new foundry is technologically very modern when compared to other foundries operating in Canada.

The investigations conducted by the Waste Management Branch predict the possible occurrence of detectable foundry odor under unusual stagnating air conditions.

Those conditions are most likely to occur during the summer months but are not expected to produce odors at levels considered to be objectionable. Careful monitoring is planned and wind sensing instruments are currently being installed at the new foundry by the Waste Management Branch. Other monitoring programs will be instituted as deemed necessary, using accesses incorporated into the new foundry design.

The Director of Waste Management is empowered to hold public information meetings and does so from time to time in the process of investigating applications to discharge wastes into the environment.

Mr. W. G. Hamilton:

- (1) The Waste Management Branch follows a well established procedure to thoroughly investigate each application to discharge waste products into the environment before issuing any permit under the Waste Management Act. In the case of the Penticton Foundry Ltd. application, this procedure was carefully applied and resulted in the recommendation that pursuant to Section 8 of the Waste Management Act, Penticton Foundry Ltd. be granted a Permit to discharge emissions into the air as per the application subject to the following conditions:
 - (a) include standard clauses related to by plans; emergency procedures; maintenance of works; and process modifications;
 - (b) suppress fugitive dust, to maintain ambient air quality of 1.75 mg/dm.³/day above background;
 - (c) insert a specific odor control clause;
 - (d) provide suitable sampling facilities;
 - (e) direct that bag house underflow be properly disposed of;
 - (f) require a monitoring program covering emission particulate, phenol, formaldehyde, isocyanate, and carbon monoxide.

The recommendations reflected the findings of a detailed technical assessment dated December 14, 1983, and a resume of the factors evaluated and reactions of agencies and members of the public, dated December 20, 1983.

Permit No. P.A. 7041 reflecting the recommendations was issued by the Director of Waste Management on December 29, 1983.

- (19) The Permittee will be able to meet all of the odor and particulate emission requirements of the Permit as actual emissions are expected to be considerably below the permit levels.
- (20) Pollution guidelines in place in British Columbia will achieve the same level of environmental quality as that sought elsewhere in Canada, particularly in the Provinces of Alberta and Ontario.
- (21) The bag house method of removing particulate matter is considerably superior to electrostatic methods because of difficulties associated with operating the latter.
- (22) Sand used in the molding process is dry scrubbed before it is reused, and the powdery waste material removed during the scrubbing process is collected in a particulate filter.
- (23) In the event that unanticipated odor problems occur in the operation of the new foundry, the Permit provides for enforcement of remedial action. Reduced or curtailed operations of the foundry during sensitive times when air stagnation may occur is a practical and effective remedy.

SUMMARY OF POINTS ALLEGED IN EVIDENCE OF THE REPRESENTATIVE OF THE DIRECTOR OF WASTE MANAGEMENT

The evidence of the representative of the Director of Waste Management was presented to the Panel of the Board in written form and was identified for the record as Exhibit "F".

The written submissions provide a summary of technical investigations and resume of factors considered in arriving at the decision to recommend that the application for Permit P.A. 7041 be approved.

The following are points highlighted by the Director's representative during his presentation of evidence.

The investigations conducted by the Waste Management Branch predict the possible occurrence of detectable foundry odor under unusual stagnating air conditions.

Those conditions are most likely to occur during the summer months but are not expected to produce odors at levels considered to be objectionable. Careful monitoring is planned and wind sensing instruments are currently being installed at the new foundry by the Waste Management Branch. Other monitoring programs will be instituted as deemed necessary, using accesses incorporated into the new foundry design.

The Director of Waste Management is empowered to hold public information meetings and does so from time to time in the process of investigating applications to discharge wastes into the environment.
