STATE OF VERMONT
ENVIRONMENTAL BOARD
10 V.S.A., CHAPTER 151

RE: Burlington Street Department
City of Burlington
339 Pine Street
Burlington, VT 05401

Land Use Permit #4C0516-1-EB
Findings of Fact,
Conclusions of Law and Order

On September 15, 1982 the City of Winooski filed an appeal with the Environmental Board (the 'Board') from Land Use Permit #4C0516 granted by the District #4 Environmental Commission (the "District Commission") to the City of Burlington, Burlington Street Department on August 5, 1982. A Motion to Reconsider filed with the District Commission pursuant to Board Rule 30(E) stayed the running of time in which to appeal to the Board.

Land Use Permit #4C0516 specifically authorizes construction of a resource recovery facility (the "Facility") that will convert municipal refuse into steam. The project, which consists of the Facility, related driveways, parking, utilities and steam transmission pipelines, will be located off Intervale Avenue in Burlington, Vermont, and will be operated in conjunction with the City of Burlington's landfill.

Lawrence H. Bruce, duly designated member of the Board, held a pre-hearing conference on this appeal on October 5, 1982 in Winooski, Vermont. At the pre-hearing conference the City of Burlington moved to dismiss portions of the City of Winooski's appeal. On October 13, 1982 the Board convened a public hearing on this appeal in Winooski, Vermont and heard oral argument on the motion to dismiss. After hearing oral argument and considering the parties' legal memoranda, the Board granted the City of Burlington's motion in part. The Board's decision and reasons therefor are set forth below.

The Board convened public hearings on this appeal on October 13 and 26, November 10 and December 8, 1982 and on January 26, and March 2 and 3, 1983.

The following parties were present at the hearings:

Appellant, City of Winooski, by William Wargo, Esq.:
Permittee, City of Burlington, by Joseph E. McNeil, Esq., Marsha J. Smith, Esq., and Richard Whittlesey, Esq.;
Chittenden County Regional Planning Commission by Arthur R. Hogan, Jr. and Michael Munson;
State of Vermont, Agency of Environmental Conservation by Dana Cole-Levesque, Esq.; and
Winooski Valley Park District by Jennifer Ely.

The City of Winooski was granted party status under Criteria 1 (air pollution), 1(B), 1(C), 1(E), and 1(F),4,and 8. Party status with respect to Subcriteria 9(A), 9(B),and 9(C) are-at issue in this appeal.

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The Winooski Valley Park District (the "Park District") was granted party status by the District Commission pursuant to Board Rule 14(B) under Criteria 1 (air pollution), l(B), l(D), 1(E), and 8 of 10 V.S.A. §6086(a). No party objected to the Park District participating before the Board with respect to the same criteria to the extent that such criteria are at issue.

The Board recessed the hearing on December 8, 1982 pending receipt of proposed Findings of Fact and Conclusions of Law, memoranda of law, a review of the record and deliberation. Requests for Findings of Fact, Conclusions of Law and memoranda were received on December 8, 17 and 21, 1982. On January 6, 1983 the Board reviewed the record in this matter and determined that additional information was necessary prior to reaching a decision. The parties were informed of this decision by memorandum dated January 12, 1983.

Further hearings were convened on January 26 and March 2 and 3, 1983. The Board recessed the hearings on March 3, 1983 pending receipt of revised Findings of Fact and Conclusions of Law, memoranda of law, a review of the record and deliberation. Such information was reviewed on March 9, 11, and 14, 1983. On April 13, 1983 the Board completed its deliberation, determined the record complete and adjourned the hearing. This matter is now ready for decision. Any Board members not present at any hearing reviewed the tapes of said hearing in order to be fully prepared to participate in this decision.

The Board makes its Findings of Facts and Conclusions of Law based on the record developed at the hearings. To the extent that the Board agreed with and found necessary any requests for findings or conclusions filed by the parties, they have been incorporated herein; otherwise, said requests are hereby denied.

Before addressing the substantive issues raised by this appeal, the Board will discuss its decisions relative to the City of Burlington's Motion to Dismiss Winooski's Assignments of Error Nos. 2, 3, 4, and 5 and the Board's decision of January 6, 1983 to request additional information in this proceeding.

A. MOTION TO DISMISS

On September 15, 1982 the City of Winooski filed an appeal with the Board. The appeal raised the following issues for the Board's consideration:

1. Whether the emissions, especially of hydrochloric acid, from the Facility proposed by the City of Burlington meet the requirements of Criterion 1 (air quality) under 10 V.S.A. $6086(a);

2. Whether the application for the Facility should be dismissed in that final designs (to permit construction of the Facility to commence immediately) were not submitted as part of the application:

3. Whether the City of Winooski should have been allowed to participate before the District Commission on subcriteria 9(A), 9(B), and 9(C) of 10 V.S.A. §6086(a);

4. Whether the City of Burlington should have been required by the District Commission to submit additional evidence under Criterion 1 (air quality) after the presumption created by the City of Burlington's air quality order was rebutted by the City of Winooski; and

5. Whether the City of Winooski should have had and should now be given the opportunity to rebut a presumption created by submissions by the City of Burlington with respect to Subcriterion l(B) (waste disposal).

On October 5, 1982 the City of Burlington moved the Board to dismiss the City of Winooski's Assignments of Error 2, 3, 4, and 5 outlined above. At the October 13, 1982 public hearing the Board heard oral argument on the issues raised by the Motion to Dismiss and reached the following decisions:

1. The Substantive Issue of Air Quality

The Board's decision relative to the substantive issue of air quality will be discussed below.

2. Sufficiency of City of Burlington's Application and Design

The City of Winooski asked the Board to dismiss the application for the Facility as final construction designs were not submitted as part of the application. The City of Winooski bases its argument upon In re Agency of Administration, 141 Vt. 68 (1982).

The City of Burlington responds by citing Board Rule 10 which provides in pertinent part that once an application is deemed complete and a hearing on the merits of an application is convened, subsequent appeals may be made only on the merits of the project.

The Board agrees with the City of Burlington's argument that Rule 10 controls in this case and that if the Board is to review the project it will review the merits, not the completeness of the application. The Board reached a similar decision in an appeal regarding a subdivision. See Lee and Catherine Quaglia, Land Use Permit #1R0382-1-EB, decision dated October 20, 1981.

The Board does not agree with the City of Winooski's reliance upon the Supreme Court's decision in In Re Agency of Administration. In that case the Court addressed the question of whether a demolition project was subject to Act 250 review. In reaching its decision the Court found that the project was "not tied to any plan for construction" and, therefore, not subject to Act 250 jurisdiction. The Court's review did not involve or address the issue of completeness of an application.

3. Party Status

By order dated March 25, 1982 the District Commission found that the City of Winooski had "adequately demonstrated that the project may affect their interests under Criteria 1, Air Pollution, l(B), l(C), l(E) and l(F), 4 and 8." The District Commission also found "that participation by the City of Winooski will materially assist the Commission's findings on this application." Therefore, the City of Winooski was allowed to participate as a party pursuant to Rule 14(B) and to present evidence on the criteria delineated above.

By order dated June 10, 1982 the District Commission again explained that the City of Winooski had been granted party status only with respect to the specific criteria or subcriteria set forth.

The City of Winooski argues that it should have been allowed to participate before the District Commission on Subcriteria 9(A), 9(B), and 9(C) as the City was admitted as a party pursuant to Board Rule 14(B)(l) and Board Rule 14(B) (2). The City of Winooski further argues that admission as a party under Board Rule 14(B)(1) is made only with respect to specific criteria, however, admission under Board Rule 14(B) (2) is a general admission and allows participation under all criteria.

The City of Burlington argues that the City of Winooski's appeal of the party status issue is untimely in that it should have been made within 30 days of the party status decision of March 25, 1982 or at least within 30 days of the further decision of June 14, 1982.

Pursuant to Board Rule 40(A), any party aggrieved by an adverse determination by a district commission may appeal to the Board within 30 days after the date of the decision. The Board agrees with the City of Winooski that the 30-day appeal requirement provided by Board Rule 40(A) refers only to final decisions by a district commission or the Board. In reaching its decision the Board is mindful of the Supreme Court's discussion regarding interlocutory appeals in In Re Pyramid Co. of Burlington, 141 Vt. 294 (1982). In that case the Court reasserted the general principal that appeals are taken only

after final judgments. Interlocutory appeals or appeals from preliminary or procedural decisions are only advisable if three criteria are met:

1. The order must involve a "controlling question of law;" and

2. There must be a "substantial ground for difference of opinion" as to the correctness of the order; and

3. The appeal should "materially advance the termination of the litigation."

Id. at 301.

In the present case the Board does not agree that an interlocutory appeal would have been appropriate, therefore, the City of Winooski's request regarding party status was reviewed and decided as follows:

10 V.S.A. §6085(c) provides in pertinent part that: "[P]arties shall be those who have received notice, adjoining property owners who have requested a hearing, and such other persons as the board may allow by rule."

Pursuant to 10 V.S.A. §6084, notice of an application is provided "to a municipality, and municipal and regional planning commission wherein the land is located, and any adjacent Vermont municipality, municipal or regional planning commission if the land is located on a boundary." In addition the application is forwarded to any state agency directly affected by the project.

The project in question is located on land wholly within the City of Burlington. Consequently, the City of Winooski is not a municipality or adjacent municipality as discussed in 10 V.S.A. §6084. Therefore, if the City of Winooski is to be a party to the proceedings it must come within the requirements of an appropriate Board Rule. See 10 V.S.A. §6085(c).

Board Rule 14(B) specifies permitted parties as allowed by 10 V.S.A. §6085(c). In general, individuals or groups may be accorded party status if they can demonstrate that a proposed project "may affect his interest under any of the provisions of section 6086(a)" or that "participation will materially assist the board or commission by providing testimony, cross-examining witnesses and/or offering other evidence relevant to the provisions of section 6086(a)."

The City of Winooski argues that admission as a Rule 14(B) (1) party is made only with respect to specific criteria but that admission pursuant to Rule 14(B) (2) is of a general

nature. The Board disagrees with this interpretation. Although there are two kinds of Rule 14(B) parties: those who are directly affected by a specific criterion (14(B)(l)) and those who can materially assist the board or commission (14(B)(2)); in either case party status should be granted on a criterion by criterion basis.

Therefore, the Board does not disagree with the District Commission's June 10, 1982 interpretation of its March 14, 1982 order that: 1) the City of Winooski had been granted party status with respect to Criteria 1, Air Pollution, l(B), l(C), 1(E), and l(F), 4, and 8, and 2) this grant was made both because the City of Winooski had shown that its interests were affected and that it would materially assist the District Commission on these criteria.

10 V.S.A. §6089(a) requires that the Board hold a de novo hearing on appeals from decisions by district commissions. "A de novo proceeding at an appellate level commonly designates a hearing as though no action whatever had been instituted in the District Environmental Commission below." In re Preseault, 130 Vt. 343, 348 (1982). See In re Poole, 136 Vt. 242 (1978); Bookstaver v. Town of Westminster, 131 Vt. 133 (1973); and In re Automobile Insurance Rates, 128 Vt. 73 (1969).

In 10 V.S.A. §6089(a) the legislature has specified that an appeal before the Board or Superior Court is to be a de novo review of district commission decisions. Under the de novo mandate, a court, or in this case the Board, has the duty to enforce and the power to condition or waive the statute or regulations in question in the same manner as the initial reviewing body. It cannot, however, merely make an order affirming or revising the decision of a reviewing body below. In re Poole, supra.

Thus, the City of Winooski's request in this case should have been framed as a renewed request for party status on Subcriteria 9(A), 9(B), and 9(C) for the Board's direct consideration. However, when offered this opportunity at the hearing held October 13, 1982, the City of Winooski declined to request party status on these subcriteria and to open these issues on appeal.

4. Applicant Meeting its Burden of Proof After the City of Winooski Rebutted Rule 19 Presumption

The City of Winooski argues that the City of Burlington should have been required to submit additional evidence under Criterion 1, air quality, after the City of Winooski had successfully rebutted the City of Burlington's presumption created by a Certification of Compliance pursuant to 10 V.S.A. 56086(d) and Board Rule 19.

The City of Burlington responds that it did not rely solely on the Certification of Compliance in meeting its burden under Criterion 1, air quality, but submitted testimony in addition to the Certification; thus no further evidence was necessary.

Again, 10 V.S.A. §6089(a) requires that the Board hold a de novo hearing on appeals from decisions made by a district commission. Thus, the Board in this case cannot merely make an order affirming or revising the decision or reviewing process of the District Commission but can only hear the issue raised for review as though the District Commission had never taken any action.

5. Opportunity to Challenge a Presumption

The City of Winooski also asks the Board to determine that it should have been given the opportunity to rebut a presumption relative to Subcriteria l(B), waste disposal.

The City of Burlington, however, argues that it did not rely upon other "permits" to meet its burden under Subcriterion l(B) but presented testimony to meet its burden on this issue: therefore, no presumption was created, and no opportunity for further cross-examination was necessary.

The Board agrees with the City of Winooski's general argument that as a party to Subcriterion l(B) the City should have been given the opportunity to rebut any presumption relied upon by the City of Burlington pursuant to Board Rule 19. However, as this is a de novo review of issues raised for appeal, the Board cannot direct the District Commission to take remedial steps, if necessary, but can only review and allow the opportunity to rebut any such presumptions at this time.

Therefore, at the City of Winooski's request Subcriterion l(B) will also be addressed substantively as part of this appeal.

B. Memorandum of Decision of January 12, 1983

On January 6, 1983 the Board met to discuss and to review the record relative to this project. At that time the Board determined that additional information/from various parties was necessary before an informed decision could be made. Therefore, pursuant to, (1) the Board's general powers to compel the attendance of witnesses to require the production of evidence, to make independent investigations as provided by 10 V.S.A. §6027(a), Board Rule 20, and (2) the Board's general responsibility to find that a proposed development is not detrimental to the public health, safety or general welfare, additional information was requested and additional hearings held.

The Board's January 12, 1983 Memorandum of Decision in part requested a review by an independent authority of the cost differentials between a resource recovery facility including only an electrostatic precipitator and one including a dry scrubbing system to control acid gas emissions. The Board recognizes that the report prepared by Battelle Columbus Laboratories and submitted as Exhibit No. 27 in this proceeding does not specifically address the Board's question. Instead, Exhibit No. 27 is a review of various general issues relative to the criteria raised in this appeal. In fact only one page, Table 11 at page 30, responds to the Board's question and it is apparent from the testimony and the report itself that this information is more or less a compilation of other information already presented to the Board and not an independent assessment of the cost differentials, if any.

C. SUBSTANTIVE ISSUES RAISED BY THE APPEAL

Subsequent to oral arguments and decisions relative to the various procedural issues discussed above, it was agreed that two substantive issues were raised by the City of Winooski and are open for review by the Board.

The primary substantive issue raised by the City of Winooski is limited to whether the emissions from the proposed Resource Recovery Facility, so-called, meet the requirements of Criterion 1, air quality, under 10 V.S.A. §6086(a). In addition, the City of Winooski raises the issue of Subcriterion l(B), waste disposal, under 10 V.S.A. $6086(a) for review.

D. FINDINGS OF FACT

1. The City of Burlington proposes to construct a Resource Recovery Facility (the "Facility") that will convert municipal refuse into steam. The project, which consists of the Facility, relative driveways, parking, utilities and steam transmission pipelines, will be located off Intervale Avenue in Burlington, Vermont, and will be operated in conjunction with the City of Burlington's landfill.

2. The Facility will be located on a 4.29 acre site dedicated to the Burlington Street Department by a Resolution of the Burlington Board of Aldermen. The landfill site involves 34 acres of land and the steam transmission pipeline right-of-way totals 2.57 acres. Exhibit No. 23.

3. The proposed Facility includes two incinerators each designed to operate at a maximum capacity of 60 tons of refuse per day. The incinerators will be of mass burn design, each with an estimated heat input rate of 30 million BTUs per hour. The type of waste to be burned will be residential/commercial and discarded automobile tires.

4. The Facility will reduce the volume of solid waste that the City of Burlington deposits in its landfill by incineration. The incineration process will produce steam as a by-product that will be piped to the University of Vermont and the Medical Center Hospital of Vermont to be utilized for heating and cooling various buildings.

5. The City of Burlington's existing landfill will be the disposal site for the Facility's residual waste. When the Facility is operational, only ash residue.and non-processable waste will be brought to and disposed of in the landfill. Exhibits No. 18 and No. 19.

10 V.S.A. $6086(a) (1) Air Quality

6. Pursuant to 10 V.S.A. $56081 and 6086(a)(l), before granting a land use or Act 250 permit, the Board shall find that the project will not result in undue air pollution.

7. Pursuant to 10 V.S.A. §6086(d) the Board may by rule allow the acceptance of a permit or approval of any state agency with respect to 10 V.S.A. §6086(a)(1) in lieu of evidence. Board Rule 19(A) provides that obtaining a Certification of Compliance from the Agency of Environmental Conservation (the "Agency") under 10 V.S.A., Chapter 71 creates a so-called rebuttable presumption that no undue air pollution will result from a proposed project.

8. Under the State of Vermont's Air Pollution Control Act (10 V.S.A. §551, et seq.) and the Air Pollution Control Regulations adopted thereunder, the proposed incinerators are classified as Air Contaminant sources and as.such the City of Burlington is required to obtain approval from the Agency prior to construction of the Facility.

9. On March 5, 1981, as required by Sections 5-401 and 5-501 of the Vermont Air Pollution Control Regulations, the City of Burlington notified the Agency of its intention to construct two municipal refuse incinerators, to be fitted with heat recovery and vented to a common stack. On December 30, 1981 a final air quality Order was issued by the Agency.

10. The review conducted by the Agency was comprised of three components: (1) an emission standard/control technology review; (2) an air quality impact review; and (3) a review of nuisance and odor. Issues relative to nuisance and odor were not raised for consideration by the Board.

11. The incinerators proposed by the City of Burlington have the potential to emit the following pollutants in quantifiable amounts: particulate matter, sulfur dioxide,

carbon monoxide, nitrogen oxides, volatile organic compounds (measured as total hydrocarbons), lead, hydrochloric acid, sulfuric acid, total fluorides, cadmium, zinc, mercury, beryllium, and tetrachlorinated dioxins. Fugitive particulate matter and odors may also be emitted.

12. Under Vermont's Air Pollution Control Regulations a distinction is made between a "major source" of pollution and a "minor source" of pollution. A major source is a facility that has allowable air pollution emissions equal to or greater than 50 tons per year, 1000 pounds per day or 100 pounds per hour, whichever is most restrictive, at maximum continuous operation. See Air Pollution Control Regs. §§5-101(6), (31). The designation of major source requires that a facility use air pollution control equipment to achieve the most stringent emission rate, see Id. §5-502(3), and perform an air quality impact analysis, see Id. §5-502(4), to demonstrate that it will not cause or contribute to a failure to meet an ambient air quality standard, or significantly impair an area that is not meeting the air quality standard ("nonattainment area"), or cause significant deterioration of air quality in areas meeting the air quality standard.

13. The incinerators proposed by the City of Burlington would emit the following quantities of the applicable pollutants, based on the maximum design capacity of the incinerators, the applicable emission standards and the conditions of the Air Quality Order:

Pollutant	Allowable Emissions (Total for Both Units)		
	Tons/year	Lbs./day	Lbs./hour
Particulate Matter	35.0	192.0	8.0
Sulfur dioxide	192.7	1056.0	44.0
Carbon monoxide	440.0	2400.0	100.0
Nitrogen oxides	78.8	432.0	18.0
Volatile organic compounds (measured as total hydrocarbons)	43.8	240	10
Lead	4.4	24.0	1.0
Hydrochloric acid	153.3	840.0	35.0
Sulfuric acid	4.4	24.0	1.0
Total fluorides	6.0	33.2	1.4

Pollutant	Allowable Emissions (Total for Both Units)		
	Tons/year	Lbs./day	Lbs./hour
Cadmium	0.4	2.4	0.1
Zinc	10.7	58.8	2.5
Mercury	0.3	1.7	0.07
Beryllium	0.00046	0.003	0.0001

Therefore, the proposed incinerators constitute a major stationary source for sulfur dioxide, carbon monoxide, nitrogen oxides and hydrochloric acid.

14. For sulfur dioxide, carbon monoxide, nitrogen oxides, and hydrochloric acid, the Agency performed a review to determine that the Facility incorporated air pollution control equipment that would achieve the most stringent emission rate (MSER) for that air contaminant as defined in Section 5-502(3) of the Air Pollution Control Regulations.

15. Sulfur Dioxide: The proposed incinerators are designed to burn only municipal refuse with no auxiliary fuels. Due to the low sulfur content of municipal refuse, an average of 0.22% by weight for this project, the Agency determined that the Facility as proposed constitutes the most stringent emission rate for sulfur dioxide. The operation of the Facility will also reduce sulfur dioxide emissions by offsetting current emissions of sulfur dioxide from the University of Vermont and the Medical Center Hospital of Vermont as the steam generated by the Facility will reduce or replace the use of oil.

16. Carbon Monoxide and Nitrogen Oxides: The air pollution control system for the Facility includes an automated combustion air delivery system. This system is designed to maintain combustion at a pre-determined temperature which will prevent fluctuations in furnace temperatures. By preventing large fluctuations in temperature and by regulating the introduction of excess air, the system will minimize emissions of carbon monoxide and nitrogen oxides. This combustion air delivery system and the modern furnace design achieve the most stringent emission rate for carbon monoxide and nitrogen oxides. The operation of the Facility will also reduce nitrogen oxide emissions by offsetting current emissions from the University of Vermont and the Medical Center Hospital of Vermont.

17. Hydrochloric Acid: The proposed Facility is planned to consist of two 60 ton per day heat recovery incinerators using municipal solid waste as fuel. The planned emissions

control, that of an electrostatic precipitator, would be for particulates only. The uncontrolled emission rate for hydrochloric acid in this case is not to exceed 250 ppm (parts per million) which would generate 14.76 ug/m^3 (micrograms per cubic meter) over a 24 hour average.

18. There are no federal or Vermont emission standards for hydrochloric acid ("HCL"). In Germany the ambienf air quality standard for HCL has been set at 200 ug/m^3. In the State of New York a level not to exceed 140 ug/m^3 is recommended.

19. Where no specific health or welfare criteria could be identified for a particular pollutant, the Agency compared the concentrations resulting from the Facility to one three-hundredths of the "threshold limit value" ("TLV") for that pollutant as set by the Occupational Safety and Health Administration ("OSHA"). For workmen in good health OSHA recommends that during an 8-hour working day the worker should not be exposed to a TLV of more than 5 ppm or 7000 ug/m^3. Using the TLV of 7000 ug/m^3 as a basis, the Agency considered sensitive populations and constanf exposure to come up with a Vermont standard of 23.3 ug/m.

20. Emissions of hydrochloric acid and other gases could be reduced by the addition of some type of scrubbing system. Such a system could reduce the HCL level of 14.76 ug/m^3 expected from the Facility to 1.64 ug/m^3.

21. Both wet and dry scrubbing systems will theoretically reduce acid gas emissions. Dry scrubbing systems have been used to control emissions from industrial plants for a number of years but have not yet been applied to municipal resource recovery plants in this country. Such plants are in use in other countries and a United States municipal system without energy recovery uses dry scrubbing technology.

22. Evidence from other countries indicates that the use of those materials resulting in hydrochloric acid may be increasing, including the use of plastic in packaging, bottles, utensils and toys.

23. A technique used in major metropolitan areas to characterize air quality on a daily basis is the Pollutant Standard Index or PSI. The PSI is a method developed by the United States Environmental Protection Agency to evaluate ambient air quality and characterize the pollution level as "Good," "Moderate," "Unhealthy," "Very Unhealthy" or "Hazardous." Air quality data for the calendar year 1982 from the South Winooski Avenue monitoring station in

Burlington indicated levels of good to moderate for carbon monoxide, sulfur dioxide and total suspended particulate matter. The addition of the Facility and other projects proposed for the Intervale area would not change these pollution level characteristics. Exhibit No. 26.

24. Nationally, 5 to 10% of rainwater acidity is attributable to hydrochloric acid. There is evidence that acid rain negatively impacts certain plant species. Therefore, all sources contributing to acid rain must be reviewed carefully and controls for such sources considered. Exhibit No. 3.

25. Hydrochloric acid ("HCL") has the characteristic of inducing inflammation of surface tissue and as such is classified as a primary irritant. This irritant factor is attributable to its hydrogen ion concentration. There are no reports of tissue injury to man or to experimental animals following indefinite exposures to HCL in concentrates below 30 ppm. Exhibit No. 3.

26. The Facility as proposed, designed and permitted by the Agency will not result in undue air pollution pursuant to 10 V.S.A. §6086(a)(1). However, if the emission levels of hydrochloric acid exceed 23.6 ug/m^3 or any more restrictive level set by the State of Vermont or the federal government, or if the emission levels for any other gaseous pollutants from the Facility exceed standards set by the State of Vermont or federal government, additional pollution controls to reduce the emission of such pollutants to levels within the standards must be installed.

DISCUSSION: REBUTTABLE PRESUMPTIONS

10 V.S.A. §6088(a) places the burden of proof or persuasion relative to Criterion 1 of 10 V.S.A. §6086(a) upon the applicant. In this case, therefore, the burden of persuasion is upon the City of Burlington relative to the issues open for review by the Board. However, 10 V.S.A. §6086(d) provides that the Board may by rule allow the acceptance of a permit or approval of a state agency in lieu of evidence by the applicant under Criteria 1 through 5 of 10 V.S.A. §6086(a). Pursuant to this statutory authorization, the Board adopted Rule 19. Rule 19(A) provides that certain state permits when obtained create rebuttable presumptions that a proposed project will not result in undue air or water pollution.

During the proceedings before the Board in this matter the issue of rebuttable presumptions was frequently raised and the interaction of the permit creating the presumptions was often, if not always, challenged.

In fact, a presumption operates as indicated by 10 V.S.A. §6086(d) in lieu of evidence and therefore is not subject to the

same evidentiary requirements. In effect, the presumption merely operates to shift the burden of persuasion to an opposing party. Rutland Country Club v. City of Rutland, 140 Vt. 142 (1981); and City of Montpelier v. Town of Calais, 114 Vt. 5 (1944).
See also;
Gardner v. Department of Social Welfare, 135 Vt. 504 (1977); Town of Dorset v. Fausett, 133 Vt. 476 (1975); Estey v. Leveille, 119 Vt. 438 (1957); and Tyrrell v. Prudential Ins. co.. of America, 109 Vt. 6 (1937).

A rebuttable presumption is a creation of law. Therefore, to take advantage of the presumption created by the Air Quality Order issued by the Agency, the City of Burlington merely had to abide by the terms of Rule 19, which rule is authorized by a specific statute, 10 V.S.A. §6086(d). Pursuant to Rule 19, the presumption is created once the state permit or approval is obtained. As explained in Montpelier v. Calais:

> A presumption, of itself alone, contributes no evidence and has no probative quality. It takes the place of evidence temporarily, at least, but if and when enough rebutting evidence is admitted to make a question for the jury on the fact involved, the presumption disappears and goes for naught.

Montpelier v. Calais, supra, at 14.

Parties to a proceeding, however, have the opportunity to rebut the presumption. In this case, the City of Winooski presented evidence relative to acid gas emissions, specifically hydrochloric acid, in an attempt to rebut the presumption created by the Agency's Air Quality Order. During the hearing process the Board agreed that the presumption had been rebutted with regard to issues raised by the City of Winooski. In the Rutland Country Club case, the Vermont Supreme Court explained what type of evidence is necessary to overcome or rebut a presumption. In that case, the Court explained its use of the phrase "credible evidence":

> The use of the phrase "credible evidence," however does not require that the board sit as a trier of fact and determine whether the facts introduced to overcome the presumption are more believable than the facts supporting the board's assessment. '[I]f and when enough rebutting evidence is admitted to make a question for the jury on the fact involved, the presumption disappears and goes for naught' . . . . The standard for the facts sought to be used to overcome the burden,

> consequently, is not actually one of credibility, requiring a subjective evaluation of the evidence, but rather of admissibility: in other words, 'Does the fact offered in proof afford a basis for a rational inference of the fact to be proved?'

Rutland Country Club v. City of Rutland, supra, at 145 f.

In this case the Board determined that the City of Winooski had presented evidence sufficient to raise questions relative to the Air Quality Order as the Order relates to acid gas, specifically hydrochloric acid, emissions. Therefore, the burden of persuasion relative to this issue remained upon the City of Burlington and the City presented evidence in the nature of witnesses and exhibits to sustain its burden. In making its Findings on these issues, the Board relied upon the evidence submitted and not the presumption created by the Air Quality Order.

10 V.S.A. §6086(a) (1) (B) Waste Disposal

27. Pursuant to 10 V.S.A. §§6081 and 6086(a)(l) before granting a land use or Act 250 permit, the Board shall find that the project will meet any applicable health and water resources department regulations regarding the disposal of wastes, and will not involve the injection of waste materials or any harmful or toxic substances into groundwater or wells.

28. Pursuant to 10 V.S.A. §6086(d) the Board may by rule allow the acceptance of a permit or approval of any state agency with respect to 10 V.S.A. §6086(a)(1) in lieu of evidence. Board Rule 19(A) provides that the submission of a public building permit, under 18 V.S.A., Chapter 25, a discharge permit under 10 V.S.A., Chapter 47, and a sanitary landfill permit under 24 V.S.A., Chapter 61, from the Agency of Environmental Conservation, create a so-called rebuttable presumption that no undue water pollution will result from a proposed project.

29. On January 25, 1982 the Agency issued the City of Burlington Street Department a Treatment Facility Certification pursuant to 10 V.S.A. §6605 for the period between January 30, 1982 through January 30, 1987. Exhibit No. 18.

30. The Board accepts this Certification in lieu of evidence that the operation of the Facility will not result in undue water pollution provided that the City of Burlington complies with all of the conditions of the Certification.

31. On January 25, 1982, the Agency issued the City of Burlington Street Department a Disposal Facility Certification pursuant to 10 V.S.A. §6605 for the period between January 30, 1982 through January 30, 1987. Exhibit No. 19.

32. The Board accepts this Certification in lieu of evidence that the operation of the landfill will not result in undue water pollution, provided that the City of Burlington complies with all of the conditions of the Certification.

33. On March 20, 1982, the Agency issued the City of Burlington Street Department a Temporary Pollution Permit pursuant to 10 V.S.A. §1265 to expire July 1, 1985. Exhibit No. 20.

34. The Board accepts this Permit in lieu of evidence that stormwater runoff will not result in undue water pollution, provided that the City of Burlington complies with all of the conditions of the Permit.

35. The Facility will generate a total peak flow of 150 gallons per minute of so-called domestic or sanitary wastes and process water discharge. The anticipated flows are expected in the following categories:

a) domestic usage, 32 gallons per minute;
b) conveyor makeup water and equipment cooling, 35 gallons per minute;
c) equipment draining, 70 gallons per minute:
d) miscellaneous use, 15 gallons per minute.

Exhibit No. 23.

36. All sanitary waste and process water generated by the Facility will be treated at the City of Burlington's Riverside Avenue Treatment Plant. The sanitary waste and process water discharge will undergo a secondary waste-water treatment process at the Riverside Avenue Treatment Plant.

37. The biochemical oxygen demand, chemical oxygen demand and the total suspended solid concentrations of the anticipated sanitary waste and process water discharge generated by the Facility will be similar in composition to typical municipal wastes.

38. The City of Burlington's Riverside Avenue Treatment Plant has the capacity to treat the Facility's sanitary wastes and process water discharge and treatment and discharge of these wastes will not violate the City of Burlington's permit for the Riverside Avenue Treatment Plant.

39. The Facility's sanitary waste and process water discharge will ultimately be discharged to the public waters of the state. Said discharge will not have an undue adverse effect upon said public waters.

40. Pending a review of final plumbing, heating and ventilation plans, a Certification of Compliance pursuant to 18 V.S.A., Chapter 25 is expected to be issued by the Agency.

41. The Facility as proposed and conditioned by the Agency will meet applicable Health and Water Resources Department regulations regarding the disposal of wastes and will not involve the injection of waste materials or any harmful or toxic substances into groundwater or wells. 10 V.S.A. §6086(a)(1)(B).

E. CONCLUSIONS OF LAW

1. 10 V.S.A. §6086(a)(1) requires that the Board find that a proposed project "will not result in undue water or air pollution." The City of Winooski has raised for the Board's consideration "undue air pollution" relative to the emissions from the Facility and limited even further arguably to acid gas, specifically hydrochloric acid emissions. The City of Winooski has also raised the issue of "undue water pollution" relative to various waste disposal issues.

2. Criterion 1, Air Quality: The Board has never clearly defined "undue air pollution." Generally, a district commission or Board in the Act 250 process is able to rely upon the technical review underlying various permits issued by the Agency as provided in 10 V.S.A. §6086(d) and Board Rule 19. In this case the presumption created by the Agency's Air Quality Order was rebutted by the City of Winooski with respect to hydrochloric acid gas emissions. As a result of this rebuttable presumption the Board heard a great deal of testimony relative to the necessity of additional pollution control devices in order to reduce the emissions of various acid gases.

The Board notes that the burden of persuasion on the issue of undue air pollution is upon the City of Burlington. The Board also notes that questions regarding the effects of acid gases upon the environment and human health have not yet been definitively answered. Furthermore the Board agrees that increased use of products generating increased emissions of hydrochloric acid gas should be expected. Therefore, although the Board concludes that no undue air pollution will result from the Facility as proposed, the land use permit for the Facility will be conditioned so that a) any reduction of allowable acid gas emissions set by either the State of Vermont

or the federal government must be met by the Facility and b) additional pollution control devices must be added if the hydrochloric gas emissions exceed the current Vermont standard of 23.3 ug/m.

In the absence of any specific definition of undue "air pollution" or a definitive analysis of the effects of emissions which exceed the State standards, the Board accepts the standards set by the Agency and the Agency's methodology in reaching those standards to the extent that the methodology is based upon a reliance of the "threshold limit values" set by the American Conference of Government and Industrial Hygenists and adopted by OSHA. The Board does not agree, however, with arguments that its analysis of "undue air pollution" must somehow consider the economics of a given system.

3. Criterion l(B), Waste Disposal: The Board also concludes that the project meets any applicable Health and Water Resource Department regulations and will not involve the injection of waste materials into groundwater or wells. In reaching this conclusion the Board was able to rely upon a number of state permits as provided by 10 V.S.A. §6086(d) and Board Rule 19, which permits were not rebutted by any other parties. In addition, the Board inquired into specific areas of concern to ensure that the permits addressed all pertinent questions and to ensure that no undue water pollution would result from activities not yet permitted by the Agency.

4. Land Use Permit Amendment: In accordance with these Findings of Fact and Conclusions of Law, the Board will issue an amendment to Land Use Permit #4C0516. The amendment will conditionally approve the project relative to Criteria 1, air quality and l(B), waste disposal. The approval previously issued by the District Commission in accordance with the remaining criteria of 10 V.S.A. §6086(a) will stand.

5. Based upon the foregoing Findings of Fact and Conclusions of Law, it is the conclusion of the Board that the project described in the application referred to above, if completed and maintained in accordance with all of the terms and conditions of that application and of Land Use Permit #4C0516, as amended herein, will not cause or result in a detriment to public health, safety or general welfare under the criteria described in 10 V.S.A. §6086(a).

F. ORDER

Land Use Permit Amendment #4C0516-1-EB shall be issued in accordance with the Findings of Fact and Conclusions of Law herein.

Dated at White River Junction, Vermont this 13th day of April, 1983.

FOR THE ENVIRONMENTAL BOARD:

Leonard U. Wilson, Chairman

Board members approving this decision:
Leonard U. Wilson
Melvin H. Carter
F. A. Bongartz
Roger N. Miller
Donald B. Sargent

Board members dissenting:
Warren M. Cone
Priscilla N. Smith
Lawrence H. Bruce, Jr.

Dissenting: